

# HUBBELL Power Systems

FULL LINE CATALOG

# Communications



**Aerial Installation**



**Underground Enclosures**



**Pedestals**



**Splice Closures**



**Bonding & Grounding**

# Terms and Conditions

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Effective March 1, 2023

These terms and conditions of sale apply to the purchase by Buyer (as identified on the purchase order or purchase agreement) of any and all Hubbell Power Systems, Inc. (“HPS”) products. HPS hereby gives notice of its rejection of any different or additional terms and conditions other than as stated herein or otherwise specifically agreed to in writing by HPS. Buyer’s acceptance of the provisions of these terms and conditions shall be conclusively presumed upon Buyer’s receipt of the product(s) or if no written objection is received by HPS within fifteen (15) days from the date on HPS’s order acknowledgment, whichever event shall first occur.

## PRICING

Refer to [www.myhubbell.com](http://www.myhubbell.com) or appropriate price sheet provided by HPS customer service, unless otherwise quoted. Unless otherwise agreed to in writing by HPS, orders will be billed at prices in effect at the time the order is shipped by HPS.

## TERMS

Unless otherwise noted on the invoice, payment terms are net 30 days from the invoice date. Invoices will be dated the day of shipment. A service charge of 1.5% per month or, if such rate exceeds the maximum lawful rate, the maximum lawful rate shall be assessed on all past due accounts and shall be payable on demand.

## QUOTATIONS

Unless otherwise stated in writing by HPS, HPS quotations remain valid for thirty (30) days from the date of issue.

## SALES AND SIMILAR TAXES

Prices do not include any sales, use, excise or similar taxes. Consequently, in addition to the price specified herein, the amount of any present or future sales, use, excise or other similar tax applicable to the sale or use of the equipment sold hereunder, shall be paid by the Buyer unless prior to shipment Buyer provides HPS with a current tax exemption certificate acceptable to the relevant taxing authorities.

## ACCEPTANCE OF ORDERS

All orders are subject to final acceptance by HPS. Any other terms proposed by Buyer are rejected unless expressly accepted in writing signed by Buyer and HPS. Acceptance of any order is subject to availability of product and the ability of HPS to deliver.

## SALES BY AGENTS

Sales facilitated by agents or through overseas representatives shall be made directly by and between HPS and Buyer at prices, terms and conditions of sale specified by HPS. All invoices will be issued by, and payment remitted to HPS.

## SHIPPING DEFERMENT

Buyer requests for shipping deferment must be approved by HPS and are subject to revised pricing and storage costs.

## LIMITED WARRANTY

HPS warrants to Buyer that the products sold will be free of defects in workmanship and material for a period of one (1) year from the date of original shipment by HPS when stored, installed, operated and maintained in accordance with recommendations of HPS and standard industry practice and when used under proper and normal use. HPS shall in no event be responsible or liable for damages or injuries resulting from modifications, alterations, misapplication or repairs made to its products by Buyer or others, or for damage caused or injuries resulting from negligence, accident or improper use by Buyer or others. This warranty does not include reimbursement for the expenses of labor, transportation, removal, installation or reinstallation of the products. This warranty shall run only to the first Buyer of the product from HPS or the first buyer of that product from that HPS Buyer (which may include an original equipment manufacturer reselling an HPS product for the first time) and is non-assignable and non-transferable and shall be of no force and effect if asserted by any person other than such first buyers. HPS shall, whenever possible, pass the original manufacturer’s warranty to Buyer, for any third-party sourced or non-HPS products and/or parts provided to HPS or required by Buyer, including those in packaged or assembly solutions, including cabinets, control enclosure structures and systems, panels or box containers.

BECKWITH ELECTRIC PRODUCTS: Subject to the provisions set forth above, Beckwith Electric warrants (i) the following products to be free of defects in workmanship and material for a period of ten (10) years: (a) M-3425A Generator Protection



# Terms and Conditions

Effective March 1, 2023

Relay (b) M-2001D Digital Tapchanger Control (c) M-3311A Transformer Protection Relay (d) M-6280A Digital Capacitor Bank Control (e) M-6200A Digital Voltage Regulator Control (f) M-6283A Digital Capacitor Bank Control 3 Phase with Independent Phase Switching, and (g) M-4172/M-4272 Digital Motor Bus Transfer System and all M76XX Protection and Control Products; and (ii) all other Beckwith's Products will be free of defects in workmanship and material for a period of five (5) years from the date of original shipment.

**RIPLEY AND MILLER PRODUCTS:** Subject to the Limited Warranty and Limitations of Liability stated herein, HPS warrants Ripley and Miller products against defective materials and workmanship for a period of two (2) years from the date of shipment. The warranty excludes devices which have been mishandled, destroyed, disassembled, or otherwise abused. The warranty covers only items with serial numbers (non-consumable items). HPS will cover shipping costs one-way ground for returned items covered under warranty; repair and replace warranty capped at value of the purchase amount. Buyer has a duty to warn.

Miller branded fiber test and inspection products may be returned for one free recalibration during the warranty period. Buyer prepays shipping both ways for the calibration services. Calibration services rendered beyond the warranty period or after the first recalibration will be subject to a fee of \$75 per item. Recalibration of three or more items in the same order may be eligible for a discounted fee per item. Other RIPLEY and Miller branded products are excluded from this allowance.

**SOFTWARE (INCLUDING FIRMWARE) WARRANTY:** HPS warrants to Buyer that during the warranty period and under normal use, the software (including firmware) shall be free from defects in material and workmanship and will perform substantially in accordance with its published documentation. If during the warranty period, an error occurs (where "error" is defined as a failure of the unmodified (except as contemplated in the instructions or documentation), HPS will use commercially reasonable efforts to correct such error, provided that Buyer furnish HPS with the following: (i) written notice of the warranty claim, including a description of the failure to perform in accordance with the instructions or documentation and a specific description of the operating conditions (including the specific software/hardware configuration) under which the failure occurred, and (ii) to the extent feasible, a representative sample of inputs for repairing and analyzing the failure. HPS does not warrant that the software or the documentation (or Buyer's use of it) will be free from errors or that its use will be uninterrupted. HPS's software (including firmware) is owned by HPS (or its licensors) and is licensed, not sold, to Buyer. Buyer may use software (including firmware) only with products and only as intended and permitted by HPS. This warranty is conditioned upon proper storage and shall be void in its entirety if Buyer modifies software products without written consent to and subsequent approval of such modifications by HPS. Buyer shall not reverse-engineer, decompile, disassemble, translate, copy, modify, alter, or otherwise change any software (including firmware) provided by HPS. This warranty does not apply to any software (including firmware) that is misused or not used in accordance with HPS's instructions and/or documentation provided to Buyer.

**ENGINEERING ANALYSIS OR STUDY BY HPS:** HPS does not warrant the accuracy of or results from product or system performance recommendations resulting from any engineering analysis or study. This applies regardless of whether or not a charge is made for the recommendation. Responsibility for selection of the proper product for any application rests solely with the Buyer. In the event of errors or inaccuracies determined to be caused by HPS, its liability will be limited to the re-performance of any such analysis or study.

**BUYER INSPECTIONS:** Tests, inspections and acceptance of all material must be made at the HPS factory. Upon reasonable notice, Buyer's inspectors are welcome at the factories and are provided with the necessary facilities for carrying out their work. Name and phone number of who should be contacted for Buyer's inspection should be given to HPS no later than two weeks prior to scheduled shipment date. Buyer's inspectors may be required to execute a confidentiality agreement prior to such a visit.

**DISCLAIMER OF WARRANTY: THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES WHETHER WRITTEN, ORAL, EXPRESSED OR IMPLIED. THERE ARE NO WARRANTIES OF MERCHANTABILITY OR FITNESS OF ANY PRODUCT FOR A PARTICULAR PURPOSE.**

## HUBBELL POWER SYSTEMS, INC. TERMS & CONDITIONS OF SALES

All shipments are F.O.B. origin. Risk of loss and title of products shall pass to Buyer upon delivery to the designated carrier. Freight is prepaid and allowed on all HPS shipments of products with a net order value of \$5,000 and above to destinations within the Continental U.S.A and Canada, with the exception of USCO brand products. Freight is prepaid and allowed on all shipments of USCO brand products with a net order value of \$20,000 and above. An 8% shipping and handling charge will be added to all standard shipments under the minimum net order value. Customer expedited orders will be billed at actual freight cost plus \$50.00 handling. Shipments to Alaska and Hawaii are F.O.B. Pacific Coast docks, collect beyond. Tool trailers will be F.O.B. HPS' dock - no freight allowed. HPS reserves the right to route all qualified freight allowed shipments via least expensive surface route within the Continental United States and Canada. Buyer will assume all charges for transportation specified via more expensive means. Acceptance of a specified routing does not constitute a guarantee of ship date, transit time or arrival date. HPS will not be responsible for any cartage or storage charges at destination. HPS' responsibility for exception-free delivery ceases when the transportation company receives shipment in good condition. Claims for loss or damage must be reported directly to the carrier. HPS's willingness to assist does not indicate liability for claim or replacement.

**EXCLUSIVE REMEDY:** Any claim by Buyer that a product is defective or non-conforming shall be deemed waived by Buyer unless submitted to HPS in writing within thirty (30) days from the date Buyer discovered, or by reasonable inspection should have discovered the alleged defect or non-conformity. Any warranty claim must be brought within the applicable warranty period by

# Terms and Conditions

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*Effective March 1, 2023*

Buyer or third party. Upon prompt written notice by the Buyer that a product is defective or non-conforming, HPS liability shall be limited to repairing or replacing the product, at HPS' option.

## **LIMITATION OF LIABILITY**

IN NO EVENT SHALL HPS BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, EXEMPLARY, MULTIPLE OR PUNITIVE DAMAGES, EVEN IF INFORMED OF THE POSSIBILITY OF SUCH DAMAGES, WHETHER AS THE RESULT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR ANY OTHER THEORY, INCLUDING WITHOUT LIMITATION LABOR OR EQUIPMENT REQUIRED TO REMOVE AND/OR REINSTALL ORIGINAL OR REPLACEMENT PARTS, LOSS OF TIME, PROFITS OR REVENUES, LACK OR LOSS OF PRODUCTIVITY, LOSS OF USE OF THE PRODUCTS OR ANY ASSOCIATED EQUIPMENT INTEREST CHARGES OR COST OF CAPITAL, COST OF SUBSTITUTE EQUIPMENT, FACILITIES, SYSTEMS, SERVICES OR DOWNTIME COSTS, DAMAGE TO OR LOSS OF PROPERTY OR EQUIPMENT, ANY INCONVENIENCE, COST OR DAMAGE ARISING OUT OF ANY DELAY IN PERFORMING, FAILURE TO PERFORM OR OTHER BREACH OF THE WARRANTY SET FORTH IN HEREIN OR OBLIGATIONS UNDER SUCH WARRANTY, OR CLAIMS OF THIRD PARTIES AGAINST BUYER, ARISING OUT OF OR IN CONNECTION WITH THE SALE, INSTALLATION, USE OF, INABILITY TO USE, OR THE REPAIR OR REPLACEMENT OF THE PRODUCTS SOLD PURSUANT TO THESE TERMS. IN NO EVENT SHALL HPS'S TOTAL LIABILITY IN RESPECT OF ANY AND ALL CLAIMS OF ANY KIND WHETHER IN CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE ARISING OUT OF OR IN CONNECTION WITH, OR RESULTING FROM HPS'S SALE, DELIVERY, RESALE, REPAIR, REPLACEMENT OR FURNISHING OF ANY PRODUCTS, INCLUDING PERFORMANCE OR BREACH OF THE WARRANTY SET FORTH HEREIN OF THESE TERMS, EXCEED THE PURCHASE PRICE ALLOCABLE TO THE GOOD(S) THAT GIVE RISE TO THE CLAIM, AND ANY AND ALL SUCH LIABILITY SHALL TERMINATE UPON THE EXPIRATION OF THE APPLICABLE WARRANTY PERIOD FOR SUCH GOOD(S).

## **INTELLECTUAL PROPERTY RIGHTS**

The sale of products or provision of services hereunder does not convey any express or implied license under any patent, copyright, trademark or other proprietary rights owned or controlled by HPS (beyond the use of the product in the manner intended by HPS). Buyer agrees not to infringe, directly or indirectly, any patents of Hubbell Power Systems, Inc. or its affiliates through any combination or system incorporating a product sold hereunder. In the event a product is made or modified in accordance with Buyer's drawings, samples, manufacturing specifications, or the like, Buyer agrees to indemnify, defend, and hold HPS harmless from any and all damages, costs and expenses (including attorney's fees) related to any claim of patent infringement arising from such manufacture or modification. Buyer agrees, at HPS's sole discretion, to undertake the defense of such suit at its own expense.

## **SOFTWARE AND LEASED EQUIPMENT**

With respect to any software incorporated in or forming a part of the Products hereunder ("Software"), HPS and Buyer intend and agree that such Software is being licensed and not sold. HPS hereby grants to Buyer a royaltyfree, non-exclusive, nontransferable license, without power to sublicense, to use Software provided hereunder solely in connection with the products and to use the related documentation solely for Buyer's own internal business purposes. This license terminates when Buyer's lawful possession of the products ceases, unless earlier terminated as provided herein. Buyer agrees to not to sell, transfer, license, loan or otherwise make available in any form the Software to any third party. Buyer may not disassemble, decompile or reverse engineer, copy, modify, enhance or otherwise change or supplement the Software without HPS's prior written consent. Buyer will not export the software in violation of export control laws. HPS may terminate this license if Buyer fails to comply with any term or condition herein. For avoidance of doubt, title to all software and any leased equipment remains with HPS.

## **DELIVERY, TITLE AND RISK OF LOSS**

**SHIPMENTS WITHIN CONTINENTAL UNITED STATES:** All shipments within the continental United States, excluding Alaska and Hawaii are F.O.B. Origin as defined by the Uniform Commercial Code, with risk of loss and title to products passing to Buyer upon delivery to the designated carrier.

**SHIPMENTS TO ALASKA AND HAWAII:** Freight terms for shipments to Alaska and Hawaii are F.C.A., Hubbell Facility (Incoterms® 2020), with risk of loss and title to products passing to Buyer upon delivery to the designated carrier. Freight will be paid by HPS in cases where freight allowance has been met, to the Pacific Coast docks; collect beyond

**SHIPMENTS OUTSIDE THE UNITED STATES (EXCLUDING CANADA):** All shipments destined for locations outside of the United States are F.C.A., Hubbell Facility (Incoterms® 2020) with risk of loss and title to products passing to Buyer upon delivery to the designated pre-carrier in the United States. Freight to the carrier will be paid by HPS in cases where freight allowance has been met as indicated below. When eligible, HPS will also assume the taxes, duties & clearing of the goods through customs.

**SHIPMENTS TO CANADA:** All shipments destined to locations in Canada shall be F.C.A., Hubbell Facility (Incoterms® 2020) with risk of loss and title to products passing to Buyer upon delivery to the designated carrier in the United States. Freight will be paid by HPS in cases where freight allowance has been met. When eligible, HPS will also assume the taxes, duties & clearing of the



# Terms and Conditions

Effective March 1, 2023

goods through customs.

GENERAL SHIPPING NOTES: HPS reserves the right to route all qualified freight allowed shipments via least expensive surface route within the Continental United States and Canada. Buyer will assume all charges for transportation specified via more expensive means. Acceptance of a specified routing by HPS does not constitute a guarantee of ship date, transit time or arrival date. HPS will not be responsible for any cartage or storage charges at destination.

HPS's responsibility for exception-free delivery ceases when the carrier receives the products for shipment in good condition. Claims for loss or damage occurring during shipment must be reported directly to the carrier by the Buyer. HPS's willingness to assist in claims against a carrier does not indicate liability for such claim or replacement product.

HPS will use reasonable efforts to meet shipment or delivery dates specified by HPS, but such dates are estimates only. In no case will HPS be liable for any special, consequential, liquidated or other indirect (including loss of profits) or direct damages due to any delay in delivery or shipment or non-delivery, whether or not excused hereunder. Until Buyer fully discharges all payment obligations for the Products under these Terms, however, Seller shall retain title to them. Seller's responsibility for exception-free delivery ceases when the transportation company receives shipment in good condition. Claims for loss or damage must be reported directly to the carrier. Seller's willingness to assist the Buyer with such claims does not indicate liability on the part of the Seller for the claim or replacement of the Products. Seller will use reasonable efforts to meet shipment or delivery dates specified by Seller or Buyer, but such dates are estimates only and are not a firm commitment. Seller will not be liable for any delay in shipping or performance or non-delivery beyond Seller's reasonable control, including, without limitation: act or omission of Buyer; flood, hurricane, or other act of God; epidemic or quarantine restriction; strike, slowdown, or labor dispute; inability to obtain necessary labor, materials or manufacturing facilities; accident, civil commotion, riot, war, embargo or other governmental act, regulation order or request, whether or not it later proves to be invalid, or from any other cause or causes (whether or not similar to any of the foregoing) beyond HPS's control. In the event of any such delay, the date of performance shall be extended for a period equal to the time lost by reason of delay, plus a reasonable time for resuming performance. If shipping is delayed or interrupted for any cause for which Buyer is directly or indirectly responsible and additional costs (including storage costs) are incurred by Seller due to such delays, Buyer shall reimburse Seller for such added costs.

## FREIGHT ALLOWANCE and SHIPPING CHARGES

Freight allowances for shipments to HPS customers are as set forth below. For orders not meeting the minimum net order amounts, freight charges will be added to the order. All customer expedited orders will be billed freight charges plus an administrative fee of USD\$100. This excludes Special Shipping Requirements. As used herein "Special Shipping Requirements" shall mean shipping methods that include but are not limited to the use of expedited freight; flatbed trailers; side load trailers; or other "non-standard" transportation requirements.

STANDARD ORDERS: Freight is prepaid and allowed on all HPS shipments of products with a net order amount of USD \$12,500 and above to designated stocking locations within the continental United States and Canada, with the exception of tool trailers, Civil and Construction products, and RFL®, USCO™ and Turner Electric® brand products, and Ripley and Miller branded Products. Notwithstanding the foregoing, except for full truckload and/or project material, as designated by HPS, and in addition to freight and other relevant charges for Special Shipping Requirements, a surcharge of 10% of the net order amount will be added to all purchase orders requesting delivery to a location other than a recognized Buyer stocking warehouse.

CIVIL AND CONSTRUCTION PRODUCTS (NON-UTILITY): Freight is prepaid and allowed on all HPS Civil and Construction products (non-utility) with a net order amount of USD \$10,000 and above to designated stocking locations within the continental United States and Canada.

USCO™ AND TURNER ELECTRIC® BRAND PRODUCTS: Except for orders with Special Shipping Requirements, the following freight allowance applies for USCO™ and Turner Electric® products: (i) Transmission switches (both USCO™ and Turner Electric® brand, all unitized, phase over phase and transmission live parts) freight is excluded and not allowed; (ii) Substation switches (both USCO™ and Turner Electric® brand and substation live parts) will have a freight allowance minimum of \$35,000; and (iii) individual accessory line items (interrupters, motor operators and switch components) freight is excluded and not allowed. Notwithstanding the foregoing, dollar amounts from transmission switches, individual accessories, and other product types cannot be added to increase the value of a substation switch order to get freight allowed shipment. Freight is excluded and not allowed for orders with Special Shipping Requirements.

For all Turner Electric® and USCO™ brand products shipping to Canada, freight is excluded and not allowed.

RFL® BRAND PRODUCTS: Freight is excluded and not allowed.

BECKWITH ELECTRIC PRODUCTS: For all Beckwith Electric products, freight is excluded and not allowed.

RIPLY® AND MILLER® BRAND PRODUCTS: For Miller and Cablematic® Brand products, excluding Fiber Test and Inspection equipment, freight is prepaid and allowed on shipments of orders of USD \$750 and above to destinations within the continental US. For Ripley Tools, MWS, and Miller Fiber Test and Inspection equipment, freight is not allowed.

# Terms and Conditions

---

Effective March 1, 2023

## PARTIAL RELEASE

If an order has multiple releases specified by the Buyer, each release will be treated as an individual order, relative to freight allowance and minimum billing.

## MINIMUM BILLING

The following minimum order amounts shall apply to all orders:

Standard Orders\* -- USD\$750 net per order; USD\$75 surcharge for below minimum orders.

Tools & Parts Orders -- For Lineman Tools & Equipment and Versa-Crimp repair parts; USD\$250 net per order; USD\$25 surcharge for below minimum orders.; For RIPLEY® and MILLER® BRAND PRODUCTS, USD\$100 net per order; USD\$25 surcharge for below minimum orders.

\*As used herein, Standard Orders are all orders with the exception of Tools and Part Orders.

## ORDER ADD-ON POLICY

HPS "Add-On" policy allows you to add items to an existing unshipped order for up to fifteen (15) days from the entry date of the original order. The minimum value for added products is USD\$250 and for tools or parts is USD\$100.

## DELIVERY SCHEDULE

Shipping dates provided by HPS are estimates only. HPS shall make every reasonable effort to meet Buyer's shipping requirements provided HPS promptly receives all necessary information from Buyer and approved drawings, if required by HPS. HPS will not assume liability because of delayed shipment for any reason.

## CANCELLATIONS

Orders may not be cancelled unless HPS gives its prior written consent, which consent shall be at HPS' sole discretion. Cancellation of an order for current stock product requires a minimum of thirty (30) days' notice prior to actual ship date and is subject to a minimum cancellation fee of 25%. Stock item orders shipped after cancellation notice is received, but before expiration of the thirty (30)-day requirement, will be subject to all standard Returned Goods conditions, noted below. Blanket orders are non-cancelable. Customer agrees to take delivery of total order quantity for RIPLEY and Miller branded products within one (1) year of acceptance of order by HPS.

Cancellation of non-stock items may be made only if no work has been performed or material purchased. If cancellation is requested after work is in progress, cancellation will be allowed only upon agreement as to applicable cancellation charges.

## RETURNED GOODS

GENERAL CONDITIONS applying to all product return transactions:

Product is not returnable without the prior written consent of HPS.

Request for permission to return product must be made in writing within one year from date of original shipment by HPS, and Buyer must provide original HPS invoice number.

Product to be returned must be considered standard product by HPS.

HPS reserves the right to refuse returns of any special or made-to-order product, regardless of condition.

All returned products must be in excellent, re-saleable condition and packaged in the original carton. Products will be inspected upon return; and any service or repair needed to place them in first class, saleable condition will be charged and added to the restocking charge.

A 25% restocking charge will be deducted from all credits issued on authorized returns.

Return Material Authorization (RMA) Packing List, supplied by HPS, must accompany the return shipment.

Return freight must be prepaid. Product must be received by HPS within sixty (60) days of issuance of the RMA.

Net value of the return must not be less than USD\$750 for products and USD\$250 for tools and/or parts.

HPS reserves the right to deduct for any damage sustained in transit.

Unauthorized returns will be refused. Equipment returned without proper authorization from HPS will, at the sole option of HPS, be returned to the Buyer freight collect, or scrapped immediately with no issuance of credit. Unauthorized product included in a return will not be credited.



# Terms and Conditions

Effective March 1, 2023

## **BROKEN PACKAGE POLICY**

Shipments will be made in standard package quantities or multiples thereof. HPS Customer Service will notify the Buyer of any orders that do not comply with this policy, and Buyer shall authorize an adjustment to comply with standard package quantities before the order will be entered.

## **DROP SHIPMENT POLICY**

A shipment charge of 10% of the net order amount will be added to all purchase orders requesting delivery to a location other than a recognized Buyer stocking warehouse, with the exception of full truckload and/or project material. This is in addition to any other charges to the net order.

## **ORDERS**

All orders are taken, and prices quoted, only with the understanding that each order shall be subject to the acceptance of HPS upon such terms as we may specify when order is received. Invoice will include a charge for any sales or excise tax which now or hereinafter may be imposed by any taxing authority upon this product or the sale or manufacture thereof.

## **PRODUCT SPECIFICATION**

HPS reserves the right to discontinue products, modify designs, and change specifications or prices without incurring obligation.

## **INVOICING**

All invoices are due and payable per the standard terms stated herein. In the case of an apparent discrepancy in a line-item charge, Buyer is obligated to advise HPS Customer Service in writing of the nature of the claimed discrepancy within five (5) days of receipt of the invoice. This includes all requests for proof of delivery. A claim of discrepancy does not relieve Buyer of the absolute obligation to pay the remaining balance of the invoice in accordance with the standard terms of payment. Upon review, HPS will have sole discretion to resolve the discrepancy; and the Buyer expressly agrees to abide by the HPS decision. HPS will promptly advise Buyer of its decision regarding any disputed items or charges.

## **OSHA**

HPS warrants that at time of shipment, the products will conform to the applicable occupational safety and health standards promulgated pursuant to the Federal Occupational Safety and Health Act of 1970, which are in effect on the date that HPS enters its acknowledgment of Buyer's order. Buyer's exclusive remedy and HPS's sole liability for breach of this warranty is limited to replacement of the nonconforming products.

## **EXPORT REGULATIONS**

Buyer acknowledges that the products, and all related technical data, that have been or will be purchased from HPS are subject to the Export Administration Regulations (EAR) and the U.S. Department of Commerce. Buyer further agrees that, except as permitted by applicable U.S. laws and regulations, the export, re-export, resale, or transfer of HPS products will NOT involve (i) persons or entities included on Restricted Parties Lists published by the U.S. Government or any entities 50% or more owned by any such designated persons or entities; (ii) any country or region subject to comprehensive or significant U.S. trade sanctions; or (iii) any other person or entity if Buyer knows or has reason to believe the Products are intended or likely to be used for any restricted purpose (i.e. chemical, biological, or nuclear weapons, terrorism, sanctioned military uses). Buyer also agrees that HPS products will be used in compliance with all applicable laws and regulations of the country(s) in which Buyer does business.

## **FAIR LABOR STANDARDS ACT AS AMENDED**

HPS represents that any goods to be delivered hereunder will be produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended.

## **CONFIDENTIAL INFORMATION**

HPS may provide Buyer with Confidential Information in connection with this Contract. Confidential Information includes all non-public, confidential or proprietary information of HPS, including, but not limited to, specifications, samples, patterns, designs, plans, drawings, documents, data, business operations, customer lists, pricing, discounts, rebates, or elements of coding or computer programs (including related documentation and media), including as applicable, the object code and/or source code, whether or not the software is operating system software, application software, tools, firmware or otherwise installed on or supplied with the Equipment or product and necessary for its operation. Such Confidential Information disclosed by HPS to Buyer, that is marked or otherwise identified as confidential or proprietary, or that would otherwise appear to a reasonable person to be confidential or proprietary in the context and circumstances in which the information is known or used in connection with this Agreement shall be solely used for performing this Agreement and may not be disclosed or copied unless authorized by HPS in writing. Upon HPS' request, Buyer shall promptly return all documents and other materials received from HPS. HPS shall be entitled to injunctive relief for any violation of this Section. This Section shall not apply to information that is: (a) in the public domain; (b) known to the Buyer at the time of disclosure; or (c) rightfully obtained by the Buyer on a non-confidential basis from a third party.

# Terms and Conditions

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*Effective March 1, 2023*

## NOTICES

Any notices required under these terms shall be in writing, in the English language, and shall for all purposes be deemed to be fully given and received if sent by registered or certified mail, postage prepaid, to the respective parties at the addresses set forth on face of a quotation or order acknowledgement issued by HPS. Such addresses are subject to change by the respective parties upon written notice as herein provided.

## GOVERNING LAW

These terms shall be governed by and construed in accordance with the laws of the State of Missouri, USA without giving effect to any choice of law rules that would cause the application of laws of any other jurisdiction.

## NOTE

These above terms and conditions supersede all those published and previously issued by: Anderson Electrical Products, Inc., Beckwith Electric Co., Inc., Chardon Electrical Components, Fargo Manufacturing Company, Inc., Fiber and Cable Accessories, Inc., Hubbell Canada LP, Hubbell Power Systems, Inc., RFL Electronics Inc., Ripley Tools, LLC, Ripley ODM, LLC, Multiwave Sensors, The A.B. Chance Company, The Ohio Brass Company, all entities for Turner Electric® brand products, and USCO Power Equipment Corporation



## AERIAL INSTALLATION: SECTION A

Anchor Selection and Application .....	A2
Power-Installed Screw Anchors (PISA®).....	A4
Tough One® Anchor Helix Assemblies .....	A5
Tough One® Anchor Helix Assemblies .....	A6
PISA® Anchor Helix Assemblies .....	A7
PISA® 6 and PISA 7 Anchor Helix Assemblies.....	A8
PISA® Anchor Rods, Eye-nuts and Couplings.....	A9
RR (Round Rod) Screw Anchors.....	A11
SS5 (Square Shaft) Screw Anchors .....	A12
High-Strength SS Anchors for Heavy Tension Loading .....	A13
No-Wrench Screw Anchor .....	A16
Bust Expanding Anchor .....	A17
Cross-Plate Anchor .....	A18
Galvanized Anchor Rods.....	A19
Expanding Rock Anchors.....	A21
Grouted Rock Anchors .....	A23
Expanding Pole Key Anchor.....	A25
Corrosion-Resistant Anchor.....	A26
Bumper Posts .....	A28
How to Match Anchors and Installing Wrenches.....	A29
Standard and Hybrid PISA® Anchor Installing Tools .....	A30
Screw Anchor Drive Tool Strings.....	A32
Tough One® Anchor Installing Tools .....	A34
Anchor Installing Tool Bent Arm Pin with Coil Lock .....	A35
Adapters.....	A36
CHANCE® Torque Indicators.....	A37
Expanding & Tamping Bar .....	A39
Portable Anchor Installers for Small Foundations.....	A41
2,500 ft-lb Portable Anchor Installers .....	A42
<b>Pole Line Hardware</b>	
Banding, for Pole Attachments .....	A44
Bolts .....	A46
Brackets .....	A57
Clamps .....	A67

# Table of Contents

---

Clamps and Clips ..... A72

Clamps, Clips and Eyes ..... A75

Deadends, Guy Wire ..... A77

Deadends Formed Wire Guy Wire ..... A78

Deadends Formed Wire Guy Wire Alumoweld® ..... A79

Deadends Formed Wire Guy Wire False Deadends ..... A80

Deadends Automatic Guy Wire ..... A81

Deadends Automatic Guy Wire Heavy Duty ..... A82

Eyes ..... A83

Eyelets and Eyes ..... A84

Eyenuts ..... A85

Guards ..... A86

Guy Attachments ..... A89

Guy Markers ..... A92

Hangers and Hooks ..... A94

Molding ..... A95

Nails and Nuts ..... A96

Plates ..... A97

Screws ..... A98

Sleeves and Fittings ..... A99

Splices Formed Wire Guy Wire ..... A100

Staples ..... A102

Steps ..... A104

Washers ..... A105

**Drop Line Hardware**

Drop Attachments ..... A111

Clamps, Drop ..... A113

Clamps, Drop/Span ..... A114

Clamps, Mid-Span ..... A115

Clamps, Span ..... A116

Hook ..... A118

**ADSS Hardware**

ADSS Wedge Deadends ..... A121

Aluminum ADSS Suspension Clamps ..... A122

ADSS Suspension Clamps ..... A123



# Table of Contents

---

ADSS Hanging Suspension Clamps .....	A124
Spiral Vibration Dampers .....	A125

## **OPTI-LOOP™ Storage Systems**

Aluminum Fiber Optic Storage System .....	A127
Plastic Fiber Optic Storage System .....	A128
ADSS Direct Attach Fiber Optic Storage System .....	A129
OptiLoop™ FOS Aluminum ADSS Storage System .....	A130

## **UNDERGROUND ENCLOSURES: SECTION U**

Quazite: Available Size Chart .....	U4
Quazite FRP: Available Size Chart .....	U5
PenCell: Available Size Chart .....	U6
“ANSI Tier” Selection and Placement in Non-Deliberate Vehicular Traffic Applications .....	U7
“ANSI Tier” Selection and Placement in Non-Deliberate Vehicular Traffic Applications .....	U8
ANSI/SCTE Tier Selection Guide .....	U9
PenCell: Available Size Chart .....	U10

### **Underground Enclosures - Quazite**

Quazite Selection Guide .....	U13
Quazite: Available Size Chart .....	U15
Dimensions / Data .....	U16
Quazite® Cover Options .....	U54
Cover Options .....	U55
EZ AUGER™ Upgrade Kits .....	U57
Polymer Concrete Enclosure Options .....	U58
Specifications / Data .....	U61
Quazite® Color Options .....	U62
Quazite® In The Field .....	U63

### **Underground Enclosures - Quazite FRP**

FRP Selection Guide .....	U67
Quazite FRP: Available Size Chart .....	U68
Dimensions / Data .....	U69
Quazite® FRP Cover Options .....	U133
Quazite FRP Color Options .....	U134
FRP Enclosure Options .....	U135

# Table of Contents

---

Typical Features and Details of FRP Enclosures .....	U137
FRP Enclosure Specifications / Data .....	U138
FRP Enclosure Options .....	U139

## **Underground Enclosures - Pence Plastic**

PenCell Selection Guide .....	U143
PenCell : Available Size Chart .....	U144
Dimensions / Data .....	U146
Penell Cover Options .....	U180
Optional Accessories .....	U181
PenCell Enclosure Options (polymer concrete only) .....	U183
PenCell Color Options (polymer collar, ring, covers only) .....	U184
PenCell Option System .....	U185
Installation .....	U186
Hole Cutting Instructions .....	U188
EZ-Nut and Self-Aligning Nut Cleaning & Replacement Instructions .....	U190
Concrete Collar Application .....	U191
Internal Bracing : Polymer Concrete .....	U192
Internal Bracing : FRP .....	U193
Polymer Concrete Catalog Numbering System for Boxes and Covers .....	U194
FRP & Corrugated Catalog Numbering System for Boxes and Covers .....	U196
PenCell Catalog Numbering System for Boxes & Covers .....	U198
Cobra Locks – Proven Security .....	U200
Cobra Locks – Installation Instructions .....	U201
Pulling-In Irons .....	U202
Markers .....	U203

## **PEDESTALS: SECTION P**

Service Pedestals Product Selection Guide .....	P2
Dimensions / Data .....	P3
Catalog Numbering System .....	P15

## **SPLICE CLOSURES: SECTION S**

### **Hubbell Fiber Splice Closures**

Dielectric Closures .....	S2
Grounded Closures .....	S3

# Table of Contents

---

Isolated Ground Closures .....	S4
OPGW Closures .....	S5
Splice Trays .....	S6
Closure Mounts .....	S7
Coil Brackets .....	S8

## **GROUNDING AND BONDING: SECTION G**

Ground Rods .....	G2
Bonding & Grounding Straps, Harnesses & Braid .....	G7

### **Connectors**

Connectors – Pedestal Ground Brackets .....	G34
Connectors .....	G35
Connectors – Pedestal Ground Brackets .....	G36
Connectors – Screw-on Terminals .....	G38
Connectors – Self-Tapping Terminals .....	G42
Connectors .....	G43
Connectors – Ground Lugs .....	G44
Connectors – Ground Blocks .....	G50
Connectors .....	G55
Clamps – Bronze Vise Type Connectors .....	G63
Clamps – Trailer I-Beam Clamps .....	G71
Ground Rod Clamps .....	G73
Clamps .....	G86
Meter Box Clamps .....	G87
Intersystem-Bonding .....	G90
Underground Hardware .....	G93
B Bonds .....	G95
Underground Hardware .....	G96
RS Shield Connectors .....	G97
TS Shield Connectors .....	G100
U-Shaped BSW Shield Connectors .....	G101
BSW Shield Connectors .....	G120
Rocket 88 Shield Connectors .....	G121
Rocket 88 Cat 5 Cable Shield Connectors .....	G123
Shield Connectors .....	G124
Rocket 88 Shield Connectors .....	G125



# Table of Contents

---

Shield Connectors ..... G129

Fiber Optic Cable Shield Connectors..... G133

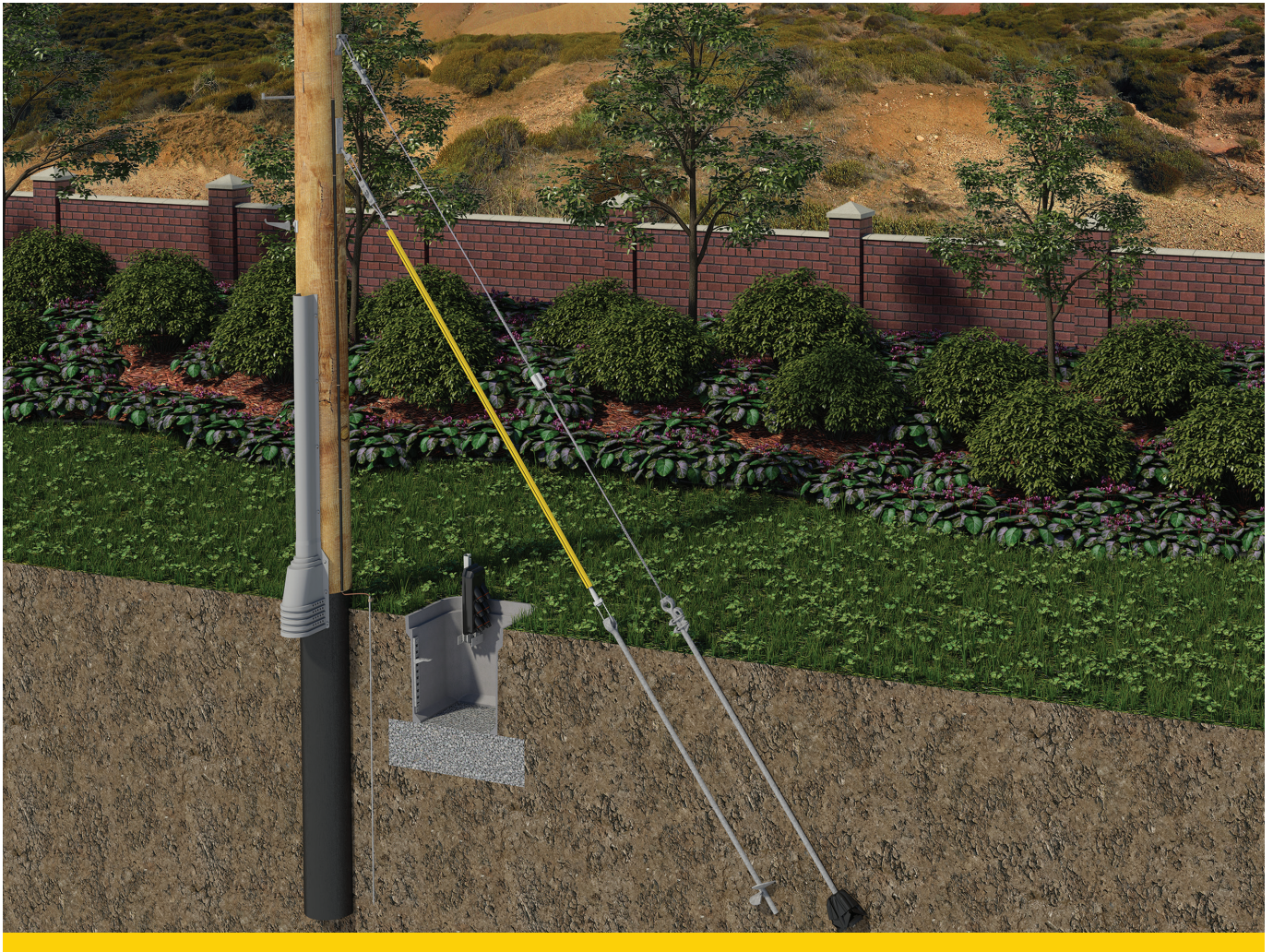
Miscellaneous ..... G137

Miscellaneous – Ground Bars ..... G140

Miscellaneous ..... G147

Pole Line Hardware ..... G163

Fiber to the Premise – FFTP..... G165



# Dependable Anchoring Solutions

Hubbell Power Systems is the proud manufacturer of CHANCE® Anchors and Anchor Installing Tools. Employing lean manufacturing principles, continuous improvements, and unmatched customer service, HPS delivers these internationally renowned products to electric utility and communications providers around the globe.

Engineered for dependability and long-term stability, our anchoring systems feature exclusive anchoring techniques, tools, designs, and sizes. Our precision production and meticulous quality assurance produce reliable products that adhere to the strictest industry standards and perform in even the most challenging soil conditions, landslides, floods and time.



## Anchor Selection and Application (continued)



### Torque Ratings

CHANCE® Screw Anchors are designed and manufactured for maximum torsional strength. During installation, some of the torque applied by the digger and measured by installation torque indicators is dissipated by friction along the wrench and not applied to the anchor itself, so it is possible to apply more torque than the anchor alone can withstand. CHANCE anchors are rated by maximum working torque or, for the more recent designs, by the 5 percent exclusion limit which is a more explicitly defined criterion based on statistical analysis of on-line quality control testing. Both ratings take into consideration the variation to be expected in anchor torsional strength due to normal variations in materials and manufacturing processes. Customers should consider this variation along with the wide variation that can be seen in the frictional loss along the wrench in deciding how much torque can be applied safely during installation. The fact that CHANCE ratings are set near the minimum credible torsional strength also should be considered in comparing CHANCE ratings to those of manufacturers who rate their anchors based on average strength.

### Application Information

Where applicable, anchors manufactured by Hubbell Power Systems, Inc. are made from steel produced in accordance with ASTM A575 and/or ASTM A576. Where galvanized, items are galvanized in accordance with ASTM A153. Call your Hubbell representative for conformance of particular items to the above specifications.

### Soil Classification Data

Class	Common Soil Type Description	Geological Soil Classification	Probe Values ft-lb (nm)	Typical Blow Count "N" per ASTM-D1586
0	Sound hard rock, unweathered (bedrock)	Granite, Basalt, Massive Limestone	—	—
1	Very dense and/or cemented sands; coarse gravel and cobbles	Caliche, (Nitrate-bearing gravel/rock)	Over 60 (85 - 181)	60-100+
2	Dense fine sands; very hard silts and clays (may be preloaded)	Basal till; boulder clay; caliche; weathered laminated rock	Over 50 (68 - 85)	45-60
3	Dense sands and gravel; hard silts and clays	Glacial till; weathered shales, schist, gneiss and siltstone	42 - 50 (56 - 68)	35-50
4	Medium dense sand and gravel; very stiff to hard silts and clays	Glacial till; hardpan; marls	33 - 42 (45 - 56)	24-40
5	Medium dense coarse sands and sandy gravels; stiff to very stiff silts and clays	Saprolites, residual soils	25 - 33 (34 - 45)	14-25
6	Loose to medium dense fine to coarse sands to stiff clays and silts	Dense hydraulic fill; compacted fill; residual soils	17 - 25 (23 - 34)	7-14
7 <sup>(1)</sup>	Loose fine sands; Alluvium; loess; medium - stiff and varied clays; fill	Flood plain soils; lake clays; adobe; gumbo, fill	8 - 17 (11 - 23)	4-8
8 <sup>(1)</sup>	Peat, organic silts; inundated silts, fly ash very loose sands, very soft to soft clays	Miscellaneous fill, swamp marsh	Under 8 (0 - 11)	0-5

NOTE: Class 1 soils are difficult to probe consistently and the ASTM blow count may be of questionable value.

(1) It is advisable to install anchors deep enough, by the use of extensions, to penetrate a Class 5 or 6, underlying the Class 7 or 8 soils.

## Anchor Selection

### Soil Mechanics and Holding Capacity

During the early stages of the screw anchor, the load resistance of an installed anchor could not be predicted with reasonable accuracy. Specific information on soil conditions was lacking, making anchor selection more or less a guess. With little consideration for soil variations and the effects of seasonal weather changes or drainage, soils were classified as “sand, clay, hardpan or swamp.” There wasn’t any definitive explanation for such soil conditions.

CHANCE® soil classification data opened new horizons in predicting anchor holding capacity. Initially, it was necessary to obtain soil samples from the projected anchor depth in order to classify the soil and to make anchor recommendations. However, this method was inconvenient, costly and time-consuming.

### Soil Probe, A Logical Development

CHANCE engineers developed the “Soil Test Probe,” a mechanical tool that makes it possible to infer subsoil conditions from the surface of the earth. The Soil Test Probe is screwed into the soil. As it displaces the soil, probe installation torque is measured in inch-pounds on a torque gauge, which is an integral part of the installing tool. Probe torque readings are then compared with the information on the CHANCE Soil Classification Data Chart and translated into the appropriate soil classification.



### PISA®: Power-Installed Screw Anchors

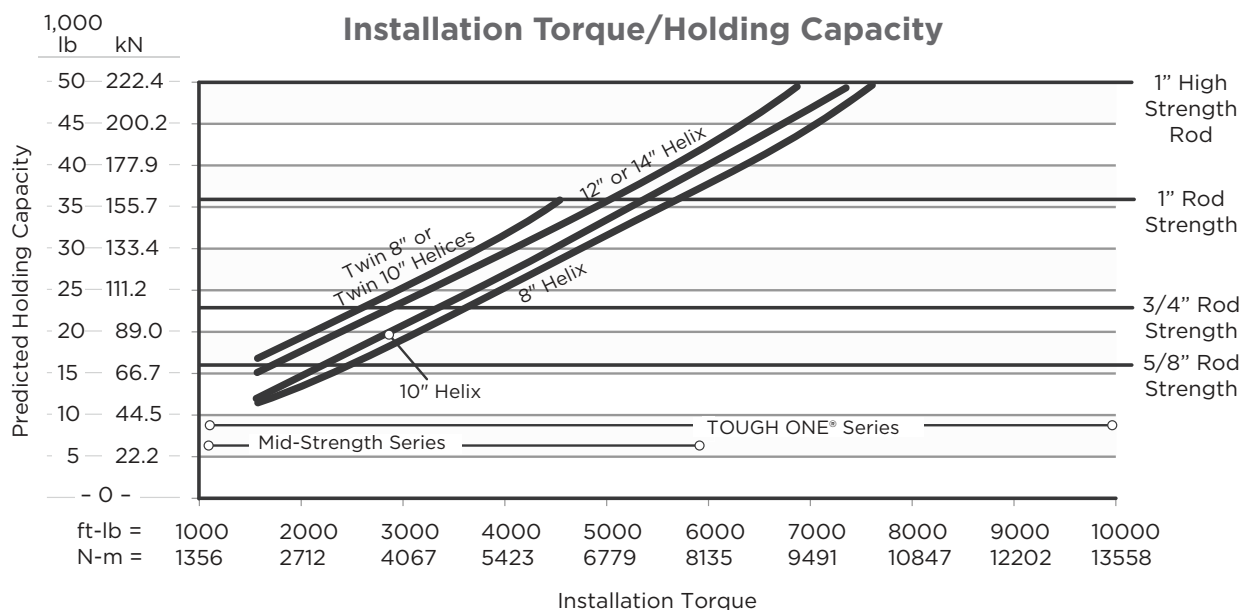
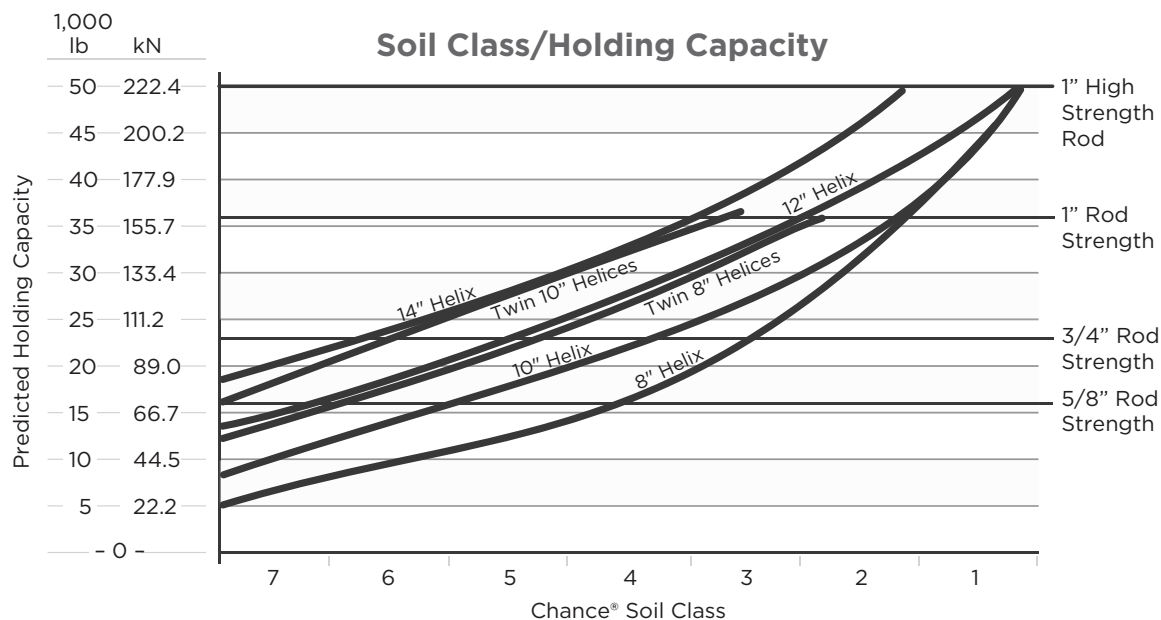
More than 50 years ago, A.B. Chance Company introduced this system of utilizing the power of digging equipment to install screw anchors. The system consists of a screw anchor, anchor rod and a special installing wrench. Each anchor has a galvanized steel threaded anchor rod with an upset hex, single or twin helices, and a galvanized guy wire nut that is screwed to the anchor rod end. PISA Anchors can be installed in a matter of minutes.



### Torque and Performance

Later this method was improved with the development of CHANCE Torque Indicators and sets of holding capacity values for given anchor types. This did not obviate the soil classification data, but strengthened and simplified it so the utility employee could install a PISA Anchor or other CHANCE anchor to a given torque value and predict with relative accuracy the holding capacity of the installed anchor. Actually, the correlation between installing torque and anchor performance required thousands of tests throughout the United States and in every conceivable soil condition. It is much labor, engineering research and investment that have made possible the development of this reliable and predictable anchoring philosophy.

# Power-Installed Screw Anchors (PISA®)



Helix Diameter	Rod Diameter	Rod Strength
8" = 203.2 mm	5/8" (0.625") = 15.9 mm	16,000 lb / 71.2 kN
10" = 254.0 mm	3/4" (0.756") = 19.1 mm	23,000 lb / 102.3 kN
12" = 304.8 mm	1" = 25.4 mm	36,000 lb / 160.1 kN
14" = 355.6 mm	1" High Strength = 25.4 mm	50,000 lb / 222.4 kN

NOTE: Predicted ultimate holding capacities are based on results of extensive CHANCE® tests and interpretation and are offered as an application guide only. They do not represent a guarantee of holding capacity in a particular soil class. A user must factor in his individual, appropriate safety factor. Torque values shown are steady values in homogenous soils, not peak values that might occur in non-homogenous soil. Torque values shown were obtained by averaging readings from the last 2 feet of anchor penetration. The anchor shaft must be aligned with the guy load to prevent premature failure of the rod. Under no circumstance should the rod and guy strand join at an angle of departure exceeding  $\pm 5^\circ$  on PISA anchors.



Torque Ratings: 10,000 ft-lb

Small Hub (2-1/4" Square Inside)

- The C10252xx series of Tough One anchors have a smaller inside hub diameter than our C10250xx series. The smaller hub is designed to be installed with the CHANCE® Anchor Wrench C1021583.
- Tough One anchors give users high-strength anchor capability in all soils. You get a better anchor at an economical price.
- The anchor's sloped lead point improves penetration and helps soil flow from below the hub to above the anchor.
- Tough One anchors use standard PISA® rods (see pages 8-9).
- Tough One anchors are painted with black paint.

Use High-Strength 10,000 ft-lb Tough One Anchor in soft and medium-hard soils.



10,000 ft-lb Tough One Anchor  
2-1/4" Square Inside Hub

Install with the CHANCE Standard (10,000 ft-lb) Wrench (see page 31)

	8" Diameter	Standard Pkg/Pallet	10" Diameter	Standard Pkg/Pallet
For 5/8" Diameter Rods For 3/4" & 1" Diameter Rods	C1025208	4/144	C1025209	4/144
	C1025200	4/192	C1025201	4/144
For 5/8" Diameter Rods For 3/4" & 1" Diameter Rods	12" Diameter	Standard Pkg/Pallet	14" Diameter	Standard Pkg/Pallet
	C1025210* C1025202	2/72 2/72	- C1025203**	- 2/48

\*\*RUS Pending

\*RUS Listed

# Tough One® Anchor Helix Assemblies

## Torque Ratings: 10,000 ft- lb and 15,000 ft- lb

### Large Hub (2-1/2" Square Inside)

- Tough One anchors give users high-strength anchor capability in all soils. You get a better anchor at an economical price. With Tough One anchors, there's little concern about anchor breakage when encountering hard soils.
- The anchor's sloped lead point improves penetration and helps soil flow from below the hub to above the anchor.
- Tough One anchors use standard PISA® rods (see pages A9-A10).
- It's easy to upgrade your entire program with Tough One anchors.
- If soil conditions require installations above 10,000 ft-lb, you will need our Tough One wrench system consisting of Drive-End Assembly, Kelly Bar Adapter and Locking Dog Assembly. The high-strength system will also install PISA 6 and 7 anchors. See pages A33-A34 for high-strength anchor installing wrench information.
- Tough One Anchors are painted with black paint.

### 10,000 ft-lb Tough One Anchor 2-1/2" Square Inside Hub

Install with the CHANCE® Hybrid or Tough One Wrench  
(see pages A30-A31)

	8" Diameter	Standard Pkg/Pallet	10" Diameter	Standard Pkg/Pallet
For 5/8" Diameter Rods	<b>C1025008</b>	4/144	<b>C1025009</b>	4/144
For 3/4" & 1" Diameter Rods	<b>C1025004</b>	4/144	<b>C1025005</b>	4/144
	12" Diameter	Standard Pkg/Pallet	14" Diameter	Standard Pkg/Pallet
For 5/8" Diameter Rods	<b>C1025010</b>	2/72	-	-
For 3/4" & 1" Diameter Rods	<b>C1025006</b>	2/72	<b>C1025007</b>	2/48



Use 10,000 ft-lb Tough One anchor in soft and medium-hard soils.

### 15,000 ft-lb Tough One Anchor 2-1/2" Square Inside Hub

Install with the CHANCE® Tough One Wrench System  
(see pages A30-A31)

	8" Diameter	Standard Pkg/Pallet	10" Diameter	Standard Pkg/Pallet
	<b>C1025000</b>	4/144	<b>C1025001</b>	3/108
	12" Diameter	Standard Pkg/Pallet	14" Diameter	Standard Pkg/Pallet
For 3/4" & 1" Diameter Rods	<b>C1025002</b>	2/72	<b>C1025003</b>	2/48



Use high-strength 15,000 ft-lb Tough One in very hard soils short of solid rock.

## Mid Strength



CHANCE® Mid-Strength 6,000 ft-lb anchors have curvilinear leading edges to help penetrate rocky soils and to reduce damage during installation. These anchors are available in single and twin-helix designs. The same installing wrench installs Mid-Strength anchors as well as Tough One® C10252xx series anchors. See pages A30-A31 for installing wrench information. Anchors are painted with black paint.



PISA anchor installation takes about five minutes with two workers.

### Mid-Strength Anchor Series

#### 1-3/8" Core - 6000 ft-lb Typical Working Torque - Squared Helix - 3" Helix Pitch

Single Helix	Catalog Number							
	8" Diameter	Standard Pkg/Pallet	10" Diameter	Standard Pkg/Pallet	12" Diameter	Standard Pkg/Pallet	14" Diameter	Standard Pkg/Pallet
For 5/8" Diameter Rods	<b>E1021629</b>	8/240	<b>E1021630</b>	4/144	<b>E1021631</b>	4/96	—	—
For 3/4" & 1" Diameter Rods	<b>E1021632</b>	8/240	<b>E1021633</b>	4/144	<b>E1021634</b>	4/96	<b>E1021801</b>	2/32

Twin Helix	Catalog Number					
	4" Diameter	Standard Pkg/Pallet	8" Diameter	Standard Pkg/Pallet	10" Diameter	Standard Pkg/Pallet
For 3/4" & 1" Diameter Rods	<b>E1021635</b>	1/30	<b>E1021636</b>	1/30	<b>E1021637</b>	1/30

NOTE: See pages A9-A10 for PISA anchor rods and eye nuts.

# PISA® 6 and PISA 7 Anchor Helix Assemblies

- CHANCE® PISA-6 6000 ft-lb anchors and PISA -7 7000 ft-lb anchors have curvilinear leading edges to help penetrate rocky soils and to reduce damage during installation. These anchors are available in single and twin-helix designs.
- PISA-6 and PISA-7 anchors have a 1-1/2" square solid core  
See pages A29-A34 for installing wrench information for the 1-1/2" PISA 6 and 7.
- Anchors are painted with black paint.



## PISA 6 Anchor

### 1-1/2" Core - 6000 ft-lb Typical Working Torque - Squared Helix - 3" Helix Pitch

Single Helix	Catalog Number							
	8" Diameter	Standard Pkg/Pallet	10" Diameter	Standard Pkg/Pallet	12" Diameter	Standard Pkg/Pallet	14" Diameter	Standard Pkg/Pallet
For 5/8" Diameter Rods	<b>E1020816</b>	8/240	<b>E1020817</b>	4/144	—	—	—	—
For 3/4" & 1" Diameter Rods	<b>E1020819</b>	8/240	<b>E1020820</b>	4/144	<b>E1020821</b>	4/80	<b>T1022142</b>	2/32

Twin Helix	Catalog Number			
	Two 8" Diameter	Standard Pkg/Pallet	Two 10" Diameter	Standard Pkg/Pallet
For 3/4" & 1" Diameter Rods	<b>E1020822</b>	1/30	<b>E1020823</b>	1/30

## PISA 7 Anchor

### 1-1/2" Core - 7000 ft-lb Typical Working Torque - Squared Helix - 3" Helix Pitch

Single Helix	Catalog Number							
	8" Diameter	Standard Pkg/Pallet	10" Diameter	Standard Pkg/Pallet	12" Diameter	Standard Pkg/Pallet	14" Diameter	Standard Pkg/Pallet
For 3/4" & 1" Diameter Rods	<b>E1021223</b>	8/240	<b>E1020250</b>	4/96	<b>T1022143</b>	4/80	<b>T1022319</b>	2/32

Twin Helix	Catalog Number					
	Two 8" Diameter	Standard Pkg/Pallet	Two 10" Diameter	Standard Pkg/Pallet	Two 4" Diameter	Standard Pkg/Pallet
For 3/4" & 1" Diameter Rods	<b>E1021219</b>	1/30	<b>E1021220</b>	1/30	<b>V1021428</b>	1/30

NOTE: See pages A9-A10 for PISA anchor rods and eye nuts.

# PISA® Anchor Rods, Eyenuts and Couplings

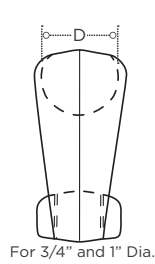
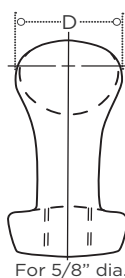
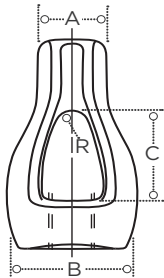
## Eyenut

	Catalog Number					
	Thimbleye®	Standard Pkg/Pallet	Twineye®	Standard Pkg/Pallet	Tripleye®	Standard Pkg/Pallet
For 5/8" Diameter Rods	<b>12587</b>	25/2250	<b>12589</b>	25/1200	<b>12593</b>	25/750
For 3/4" & 1" Diameter Rods	<b>6512</b>	25/1200	<b>6562</b>	25/1200	<b>12585</b>	25/1200
For 1" Diameter HS <sup>(1)</sup>	—	—	<b>6562H</b>	25/1200	<b>12585H</b>	25/1250
For 5/8" Diameter Rod - Communication Market Stamp	—	—	<b>12589BS</b>	25/1200	—	—
For 1" Diameter Rod - Communication Market Stamp	—	—	<b>6562BS</b>	25/1200	—	—

(1) HS Eyenuts are galvanized and painted orange.

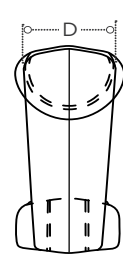
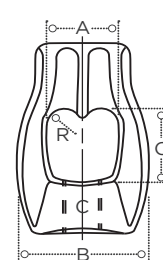
## Thimbleye Nuts

	A Inches	B Inches	C Inches	D Inches	R Inches
For 5/8" Diameter Rods	7/8	1-7/8	1-3/8	1-11/64	1/4
For 3/4" & 1" Diameter Rods	1-1/8	2-25/64	1-19/32	1-5/8	13/32



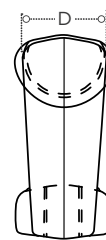
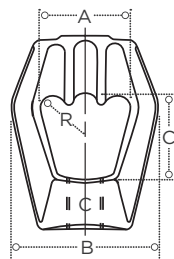
## Twineye Nuts

	A Inches	B Inches	C Inches	D Inches	R Inches
For 5/8", 3/4" & 1" Diameter Rods	1-13/32	2-25/64	1-27/64	1-1/2	5/16



## Tripleye Nuts

	A Inches	B Inches	C Inches	D Inches	R Inches
For 5/8", 3/4" & 1" Diameter Rods	1-3/4	2-13/16	1-5/8	1-1/2	1/4

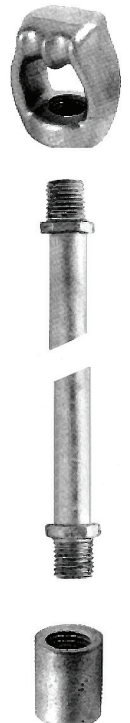


## Rod

	3-1/2-ft Rod		7-ft Rod		Ultimate Strength lb <sup>(1)</sup>
	Catalog Number	Standard Pkg/Pallet	Catalog Number	Standard Pkg/Pallet	
For 5/8" Diameter	<b>12336P</b>	5/50	<b>12332P</b>	5/50	16,000
For 3/4" Diameter	<b>12634P</b>	5/50	<b>12632P</b>	5/50	23,000
For 1" Diameter	<b>12338P</b>	5/50	<b>12334P</b>	1/50	36,000
For 1" Diameter HS	<b>C1021987</b>	5/50	<b>C1021986</b>	2/50	50,000

(1) Ultimate strength ratings apply to properly installed anchors only. Failure to install within 5° of alignment with the guy load will significantly lower strength.

NOTE: All components shown on this page are hot-dip galvanized per ASTM A153.





# PISA® Anchor Rods, Eyenuts and Couplings (continued)

## Coupling

Coupling	Catalog Number	Standard Pkg/Pallet	Ultimate Strength
For 5/8" Diameter Rods	<b>12245P</b>	50/1950	16,000 lbs
For 3/4" & 1" Diameter Rods	<b>12247P</b>	50/2400	50,000 lbs

NOTE: Couplings are required only when it is necessary to add additional rods of 3-1/2 ft or 7 ft to form an extension.

## Extension Rod & Coupling Combinations

Extension Rod & Coupling Combinations	3-1/2- ft Rod		7-ft Rod	
	Catalog Number	Standard Pkg/Pallet	Catalog Number	Standard Pkg/Pallet
5/8" Diameter	<b>12249A</b>	5/50	—	—
3/4" Diameter	<b>12250A</b>	5/50	<b>C1022328</b>	5/50
1" Diameter	<b>12251A</b>	5/50	<b>12255A</b>	2/50

## PISA Rod & Eyenut Combinations

Catalog Number	Rod & Eyenut
<b>E1020031</b>	5/8" x 3-1/2' Rod & Thimbleye Nut
<b>E1020047</b>	5/8" x 3-1/2' Rod & Tripleye Nut
<b>E1020035</b>	5/8" x 7' Rod & Thimbleye Nut
<b>E1020043</b>	5/8" x 7' Rod & Twineye Nut
<b>E1020051</b>	5/8" x 7' Rod & Tripleye Nut
<b>E1020032</b>	3/4" x 3-1/2' Rod & Thimbleye Nut
<b>E1020040</b>	3/4" x 3-1/2' Rod & Twineye Nut
<b>E1020036</b>	3/4" x 7' Rod & Thimbleye Nut
<b>E1020044</b>	3/4" x 7' Rod & Twineye Nut
<b>E1020052</b>	3/4" x 7' Rod & Tripleye Nut
<b>E1020041</b>	1" x 3-1/2' Rod & Twineye Nut
<b>E1020049</b>	1" x 3-1/2' Rod & Tripleye Nut
<b>E1020037</b>	1" x 7' Rod & Thimbleye Nut
<b>E1020045</b>	1" x 7' Rod & Twineye Nut
<b>E1020053</b>	1" x 7' Rod & Tripleye Nut

## Corrosion-Protected PISA Rod & Coupling

Rod Catalog Number	Fits Rod Size	Standard Pkg/Pallet
<b>C1021996</b>	1" x 7'	2/50
<b>C1022061</b>	1" x 3-1/2'	5/50
Coupling Catalog Number	Fits Rod Size	Standard Pkg/Pallet
<b>C1025240</b>	1"	50/2400

NOTE: Rod is galvanized and then covered with protective paint. A plastic tube and heat shrink sleeve is then added to rod.

NOTE: All components shown on this page are hot-dip galvanized per ASTM A153.



# AERIAL INSTALLATION

## RR (Round Rod) Screw Anchors

The Round-Rod (RR) multi-helix anchors are used in areas where weak soil conditions exist and moderate holding capacities are required. All helix lead sections are 7-ft long. Extension shafts may be required for installation to proper depth. RR Screw Anchors consist of three galvanized components: Lead Section, Extension Shaft (which includes an integral coupling), and the Guy Adapter. Each extension and guy adapter includes a high-strength bolt and nut. Type RR anchors torque rating is 2,300 ft-lb. Ultimate tension rating for RR mechanical strength is 70,000 lb. Failure to install within 5° of alignment with the guy load will significantly lower strength.

### Lead Sections

Catalog Number	Length ft	Helix Combinations Inches	Standard Pkg/Pallet	Holding Capacity vs Soil Class lb		
				Class 7	Class 6	Class 5
012690AE	7	8 - 10	1/20	19,000	23,000	27,000
012690AEJ	7	8 - 10 - 12	1/20	26,000	32,000	39,000
V1090007	7	10 - 10 - 10	1/15	25,000	31,000	—
V1090006	7	10	1/20	17,000	21,000	24,000

### Extensions

Catalog Number	Nominal Length ft	Standard Pkg/Pallet
12696	3-1/2	1/50
12697	5	1/50
12698	7	1/30
12699	10	1/50

### Guy Adapters

Catalog Number	Nominal Length Inches	Description	Standard Pkg/Pallet
C1020023	18	Thimbleye*	5/175
C1020024	18	Twineye*	5/250
C1020025	18	Tripleye*	5/250
C1100026	20	Threaded Stud	5/130
C1100041	18	Ovaleye	5/200

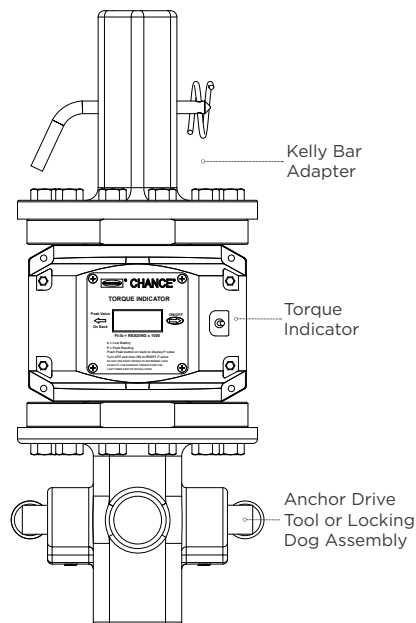
### Load Capacity<sup>(1)</sup> Based on Installation Torque<sup>(2)</sup> Load Capacity of RR Anchors in Soil (Pounds Tension)

Helix Combinations Inches	Installation Torque		
	1,500	2,000	2,300
10	16,000	22,000	28,000
8 - 10	17,000	23,000	29,000
10 - 10 - 10	19,000	25,000	31,000
8 - 10 - 12	19,000	25,000	31,000

(1) Load capacities listed above are ultimate values based on average test data and are offered as an application guide. Typical deflection at ultimate load ranges between 2 and 4 inches. The listed values should be reduced by an appropriate factor of safety. More specific data on soils and anchor performance in any site condition can be obtained by contacting Hubbell Power Systems, Inc.

(2) The torque values shown are steady values in homogeneous soils, not peak values that can occur in non-homogeneous soils such as glacial till or other rocky soils. The torque values shown are obtained by averaging the readings from the last 2 feet of anchor penetration.

### Typical "RR" Drive String



## SS5 (Square Shaft) Screw Anchors

Square-Shaft (SS) multi-helix screw anchors are designed for heavy-guy loading. They have 1-1/2" square steel shafts. Extension shafts must be coupled to the helix section for installation to the proper depth. For installation tool options, see page A36. SS Screw Anchors consist of three galvanized components: Lead Section, Extension Shaft (which includes an integral coupling) and Guy Adapter. Extensions and Guy Adapters include a high-strength bolt and nut. Typical working torque is 5,500 ft-lb and minimum ultimate tension strength is 70,000 lb. Ultimate strength ratings apply to properly installed anchors only. Failure to install within 5° of alignment with the guy load will significantly lower strength.

### Lead Sections<sup>(1)</sup>

Catalog Number	Length ft	Helix Combinations Inches	Standard Pkg/Pallet	Holding Capacity - lb vs Soil Class					
				Class 7	Class 6	Class 5	Class 4	Class 3	Class 2
012642AE	3	8 - 10	1/20	19,000	23,000	27,000	32,000	36,000	41,000
012642EJ	3-1/2	10 - 12	1/20	21,000	26,000	31,000	36,000	41,000	46,000
012642AEJ	5-1/2	8 - 10 - 12	1/20	26,000	32,000	39,000	46,000	51,000	58,000
012642EJN	7	10 - 12 - 14	1/20	29,000	37,000	45,000	53,000	61,000	69,000
012642AEJN	10-1/2	8 - 10 - 12 - 14	1/20	31,000	40,000	49,000	58,000	67,000	—
012642EJNS	10-1/2	10 - 12 - 14 - 14	1/20	40,000	51,000	62,000	70,000	—	—

(1) Lead sections are banded to wood blocks to facilitate forklift handling.

NOTE: Other lengths available upon request. Holding capacity based on Helix Combination, not Lead Length

### Extensions

Catalog Number	Nominal Length ft	Helix Dia Inches	Standard Pkg/Pallet
12655	3-1/2	—	1/50
12656	5	—	1/50
12657	7	—	1/40
12658	10	—	1/30
12656N	5	14	1/20
12655J	3-1/2	12	1/20

NOTE: Extension shafts are banded to wood blocks to facilitate forklift handling.

NOTE: Load capacities listed above are ultimate values based on average test data and are offered as an application guide. Typical deflection at ultimate load ranges between 2 and 4 inches. The listed values should be reduced by an appropriate factor of safety. More specific data on soils and anchor performance in any site condition can be obtained by contacting Hubbell Power Systems, Inc. The torque values shown are steady values in homogeneous soils, not peak values that can occur in non-homogeneous soils such as glacial till or other rocky soils. The torque values shown are obtained by averaging the readings from the last 2 feet of anchor penetration. Minimum depth is five x diameter of largest helix.

### Extra Bolt & Nut for Extensions & Guy Adapters Standard Package: 10 each

Catalog Number	Description
P0010041P	Extra SS5 Bolt
055449P	Extra SS5 Nut

### Guy Adapters

Catalog Number	Nominal Length Inches	Description	Standard Pkg/Pallet
C1020023	18	Thimbleye*	5/200
C1020024	18	Twineye*	5/200
C1020025	18	Tripleye*	5/200
C1100026	20	Threaded Stud	5/200
C1100041	18	Ovaleye	5/200

NOTE: Guy adapters are shipped in corrugated cartons.



Guy Adapter



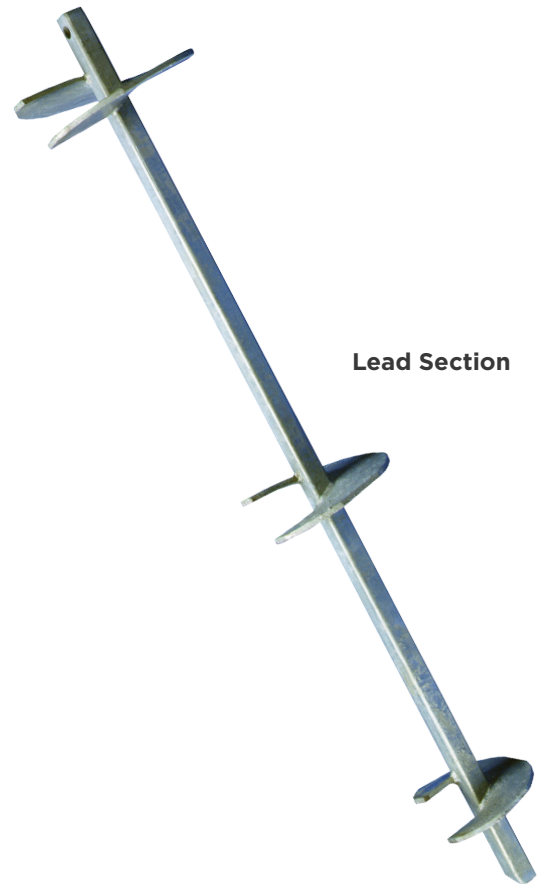
Extension

# SS5 (Square Shaft) Screw Anchors (continued)

## Lead Section & Guy Adapter Combinations<sup>(1)</sup>

Catalog Number	Guy Adapter	Helix Combinations Inches
126541AE	Thimbleye®	8 - 10
126541EJ	Thimbleye®	10 - 12
126541AEJ	Thimbleye®	8 - 10 - 12
126541EJN	Thimbleye®	10 - 12 - 14
126541EJNS	Thimbleye®	10 - 12 - 14 - 14
126542AE	Twineye®	8 - 10
126542EJ	Twineye®	10 - 12
126542AEJ	Twineye®	8 - 10 - 12
126542EJN	Twineye®	10 - 12 - 14
126542EJNS	Twineye®	10 - 12 - 14 - 14
126543AE	Tripleye®	8 - 10
126543EJ	Tripleye®	10 - 12
126543AEJ	Tripleye®	8 - 10 - 12
126543EJN	Tripleye®	10 - 12 - 14
126543EJNS	Tripleye®	10 - 12 - 14 - 14

(1) Lead sections are banded to wood blocks to facilitate forklift handling. Guy adapters are shipped in separate corrugated cartons.



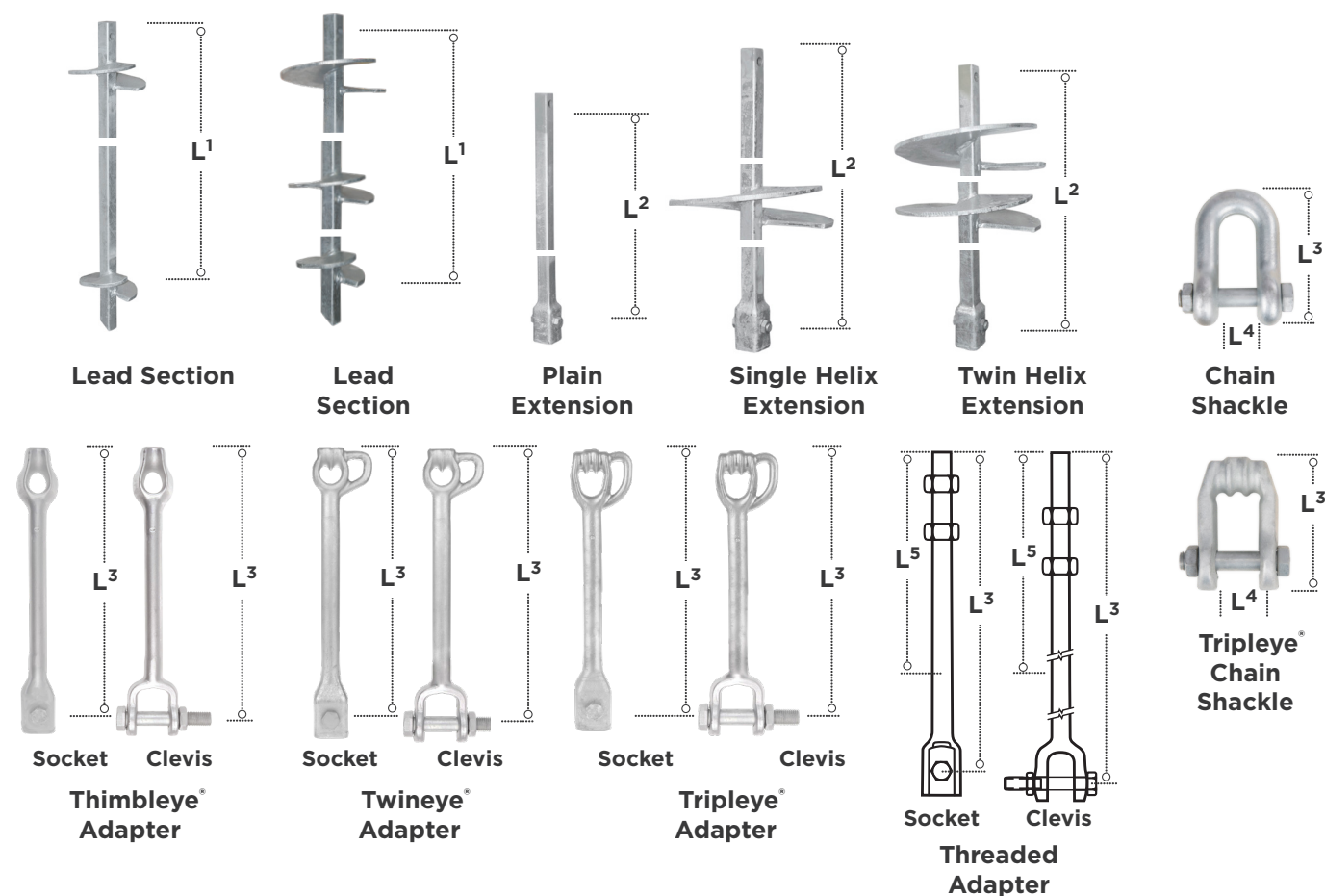
## Load Capacity<sup>(1)</sup> Based on Installation Torque<sup>(2)</sup> Load Capacity of SS Anchors in Soil (Pounds Tension)

Helix Combinations Inches	Installation Torque								
	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000	5,500
8 - 10	17,000	23,000	29,000	34,000	40,000	46,000	52,000	58,000	63,000
10 - 12	18,000	24,000	30,000	36,000	42,000	48,000	54,000	60,000	66,000
8 - 10 - 12	19,000	25,000	31,000	38,000	44,000	50,000	56,000	62,000	68,000
10 - 12 - 14	20,000	26,000	32,000	39,000	46,000	52,000	58,000	65,000	70,000
8 - 10 - 12 - 14	20,000	27,000	34,000	40,000	47,000	54,000	61,000	68,000	70,000
10 - 12 - 14 - 14	21,000	28,000	35,000	42,000	49,000	56,000	63,000	70,000	70,000

(1) Load capacities listed above are ultimate values based on average test data and are offered as an application guide. Typical deflection at ultimate load ranges between 2 and 4 inches. The listed values should be reduced by an appropriate factor of safety. More specific data on soils and anchor performance in any site condition can be obtained by contacting Hubbell Power Systems, Inc.

(2) The torque values shown are steady values in homogeneous soils, not peak values that can occur in non-homogeneous soils such as glacial till or other rocky soils. The torque values shown are obtained by averaging the readings from the last 2 feet of anchor penetration. Minimum depth is five x diameter of largest helix.

# High-Strength SS Anchors for Heavy Tension Loading



## Ratings

Mechanical Properties	SS 150 1-1/2" Square Shaft	SS 175 1-3/4" Square Shaft	SS 200 2" Square Shaft	SS 225 2-1/4" Square Shaft
Max Installation Torque	7,000 ft-lb	10,500 ft-lb	16,000 ft-lb	21,000 ft-lb
Min Ultimate Tension Strength	70,000 lb	100,000 lb	150,000 lb	200,000 lb

## Lead Sections - Hot-Dip Galvanized

Helix Configuration Inches	SS 150		SS 175		SS 200		SS 225	
	Catalog Number	L <sup>1</sup> Inches	Catalog Number	L <sup>1</sup> Inches	Catalog Number	L <sup>1</sup> Inches	Catalog Number	L <sup>1</sup> Inches
8 & 10	C1100385	30	C1100227	30	—	—	—	—
10 & 12	C1100871	42	C1100884	58	—	—	—	—
6, 8 & 10	—	—	—	—	C1100569	60	C1100543	54
8, 10 & 12	C1100386	57	C1100235	60	C1100570	60	C1100544	75
10, 12 & 14	C1100838	84	C1100923	84	C1100791	84	—	—
14, 14 & 14	C1100504	120	C1100505	124	C1100572	122	C1100545	114
8, 10, 12 & 14	T1100521	120	C1100247	124	C1100573	122	C1100591	115



# High-Strength SS Anchors for Heavy Tension Loading (cont'd)

## Extensions - Hot-Dip Galvanized

Helix Configuration	SS 150		SS 175		SS 200		SS 225	
	Catalog Number	L <sup>2</sup> Inches	Catalog Number	L <sup>2</sup> Inches	Catalog Number	L <sup>2</sup> Inches	Catalog Number	L <sup>2</sup> Inches
None	C1100388	37	C1100136	37	C1100563	37	C1100645	33
None	C1100470	59	C1100137	59	C1100564	58	C1100646	60
None	C1100389	80	C1100138	80	C1100565	80	C1100647	80
None	C1100440	122	C1100140	124	C1100566	123	—	120
Single 14" Helix	C1100471	48	C1100472	48	C1100577	45	C1100650	39
Twin 14" Helices	C1100454	80	C1100450	80	C1100581	80	C1100652	78
Triple 14" Helices			C1100476	124	C1100586	123	—	120

## Termination Adapters - Hot-Dip Galvanized

Description	SS 150			SS 175		
	Catalog Number	Notes	L3 Inches	Catalog Number	Notes	L3 Inches
Thimbleye Adapter	C1020023	—	17	T1100311 <sup>(1)</sup>	—	17
Twineye Adapter	C1020024	—	17	T1100964 <sup>(1)</sup>	—	—
Tripleye Adapter	C1020025	—	17	T1100465 <sup>(1)</sup>	—	17
Ovaleye Adapter	C1100041	—	17	—	—	—
Threaded Adapter	C1100026	L5=13-1/2	20	T1100352 <sup>(1)(3)</sup>	L5=36"	48
Chain Shackle	C1100574 <sup>(4)</sup>	L4=1-1/2	5-1/8	T1100134	L4=1-13/16	6-5/8

Description	SS 200			SS 225		
	Catalog Number	Notes	L3 Inches	Catalog Number	Notes	L3 Inches
Thimbleye Adapter	T1100312 <sup>(2)</sup>	—	17	—	—	—
Twineye Adapter	—	—	—	—	—	—
Tripleye Adapter	T1100629 <sup>(2)</sup>	—	—	—	—	—
Ovaleye Adapter	—	—	—	—	—	—
Threaded Adapter	—	—	—	—	—	—
Chain Shackle	C1100557	L4=2-1/4"	8-1/4	C1100558	L4=2-3/8"	9

(1) Clevis fitting. Others have Socket fitting.

(2) Rated at 70,000 lb.

(3) T1100352 includes two nuts.

(4) Tripleye shackle.

## Extra Bolt & Nut- Hot-Dip Galvanized

for Extensions & Guy Adapters (socket and clevis types) Standard Package: 10 each

Description	SS5/SS 150	SS 175	SS 200	SS 225
Extra Bolt-Extension	PSZ0012415P	PSZ0012405P	PSZ0012407P	P0011771P
Extra Bolt-Adapter	PSZ0012415P <sup>(5)</sup>	PSZ0012406P <sup>(6)</sup>	PSZ0012404P <sup>(7)</sup>	P0011448P
Extra Nut-Both	PSZ0012416P	PSZ0012408P	PSZ0012410P (Ext) / PSZ0012409P (Adpt) <sup>(7)</sup>	056292P

5) Extra bolt for Tripleye Chain Shackle C1100574 is P0010031P

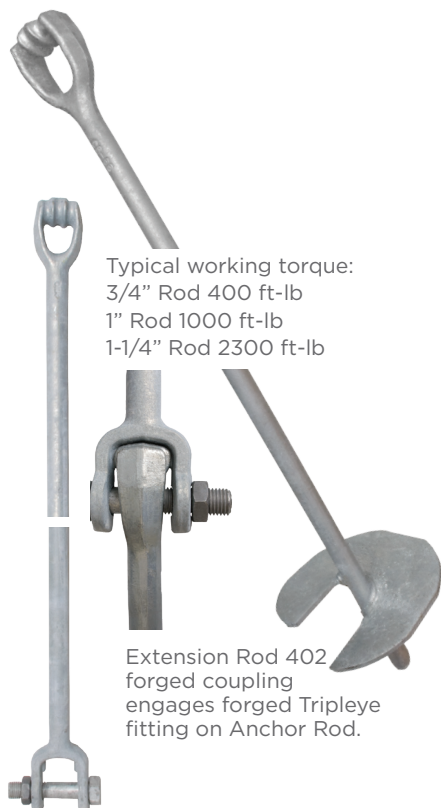
6) Extra bolt for SS175 threaded adapter T1100352 is P0011444P.

(7) Extra bolt and nut for SS200 chain shackle adapter C1100557 are P0011446P and PSZ0012410P.

# No-Wrench Screw Anchor

## For Hand or Machine Installation

CHANCE® No-Wrench Screw Anchors may be installed by hand or machine. The Thimbleye® Eye or Tripleye® Eye on the rod has a large opening to admit a turning bar for screwing the anchor down. The eye will also fit into an adapter available from most hole-boring machine manufacturers so the anchor may be power-installed. The No-Wrench Screw Anchor consists of a drop-forged steel Thimbleye Eye or Tripleye Eye rod welded to a steel helix. The entire anchor is hot-dip galvanized for long resistance to rust. No-Wrench Screw Anchors can be installed to a greater depth to reach a firmer soil by using an extension rod. Maximum installing torque is 2,300 ft-lb for 1-1/4" diameter rod. Catalog numbers 4345, 6346 and PS816 may be ordered with a forged Thimbleye rod rather than the standard Tripleye rod. To order a Thimbleye rod simply add "1" to the suffix of the catalog number. Example: Catalog Number 63461.



### Application and Ordering Information

Catalog Number	Description	Anchor Size Dia Inches	Rod Dia & Length Inches	Standard Pkg/Pallet	No-Wrench Screw Anchor Holding Capacity lb vs Soil Class		
					Class 5	Class 6	Class 7
<b>4345</b>	Tripleye	4	3/4 x 54	1/100	4,500	3,000	1,500
<b>6346<sup>(1)</sup></b>	Tripleye	6	3/4 x 66	1/100	6,500	5,000	2,500
<b>PS816</b>	Tripleye	8	1 x 66	1/60	11,000	9,000	6,000
<b>10146</b>	Tripleye	10	1-1/4 x 66	1/20	13,000	10,000	7,000
<b>10148</b>	Tripleye	10	1-1/4 x 96	1/20	13,000	10,000	7,000
<b>12537</b>	Tripleye	14	1-1/4 x 96	1/20	16,000	15,000	12,000
<b>15148</b>	Tripleye	15	1-1/4 x 96	1/20	19,000	17,000	14,000
<b>43451</b>	Thimbleye	4	3/4 x 54	1/100	4,500	3,000	1,500
<b>63461</b>	Thimbleye	6	3/4 x 66	1/100	6,500	5,000	2,500
<b>8161</b>	Thimbleye	8	1 x 66	1/60	11,000	9,000	6,000
<b>Extension Rod</b>							
<b>402</b>	Tripleye	—	1-1/4 x 72	1/50	—	—	—

(1) RUS accepted.

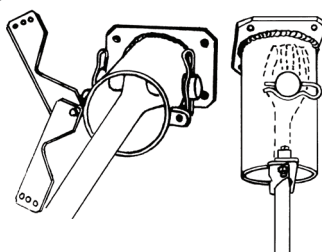
NOTE: If hand installed, holding capacity may be reduced by as much as 10% to 20%. Capacity ratings apply to properly installed anchors only. Failure to install within 5° of alignment with the guy load will significantly lower strength.

## No-Wrench Power Installation Tool

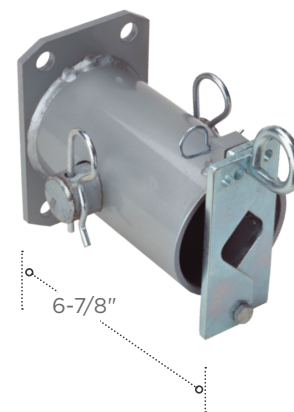
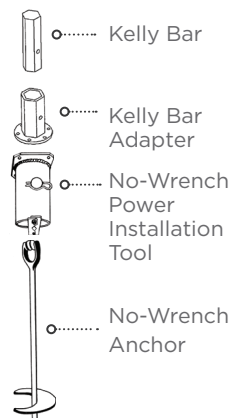
This tool bolts directly to the installer's output flange or appropriate Kelly Bar Adapter. Adjustable pivot plates accept rods from 3/4" to 1-1/4" diameter. Through-pin with retainer clip passes through the eyenut.

It has 4 holes on a 5-1/4" bolt circle for attachment and includes four 1/2" x 1-1/2" bolts, nuts, and lockwashers.

Tool can be attached to any CHANCE Torque Indicator.



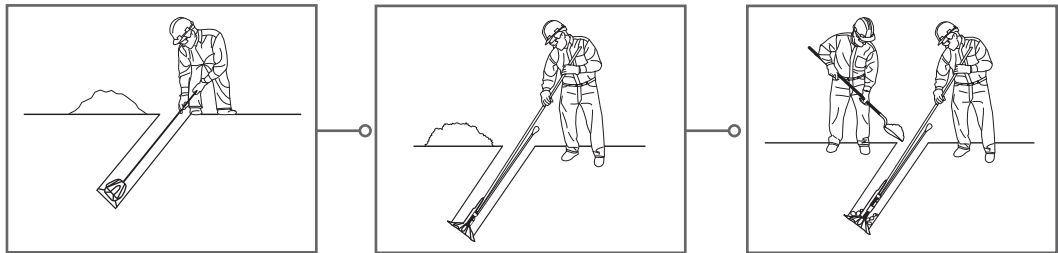
### No-Wrench Typical Drive String



Catalog Number	Weight lb
<b>E3030255</b>	9

## More Holding Capacity for Less

- Four different sizes are available with holding capacity as high as 40,000 pounds.
- CHANCE® Bust Expanding Anchors expand to take full advantage of the available area. All eight blades wedge into undisturbed earth and there is no wasted space between blades.
- This anchor should be installed in relatively dry and solid soils. The effectiveness of the anchor is dependent upon the thoroughness of backfill tamping.



### Application and Ordering Information

Catalog Number	Anchor Hole Size Inches	Area Square Inches	Rod Size <sup>(1)</sup> Inches	Standard Pkg/ Pallet	8-Way Anchor Holding Capacity - lb vs Soil Class				
					Class 3	Class 4	Class 5	Class 6	Class 7
6870	6	70	5/8	12/288	16,000	14,000	11,000	8,500	5,000
88135	8	135	5/8 or 3/4	6/150	26,500 <sup>(2)</sup>	22,000 <sup>(2)</sup>	18,000 <sup>(2)</sup>	15,000	10,000
1082	10	200	1	2/48	31,000	26,500	21,000	16,500	12,000
108234	10	200	3/4	2/48	31,000 <sup>(2)</sup>	26,500 <sup>(2)</sup>	21,000	16,500	12,000
1283	12	300	1-1/4	2/36	40,000	34,000	26,500	21,500	16,000
12831	12	300	1	2/36	40,000 <sup>(2)</sup>	34,000	26,500	21,500	16,000

NOTE: Capacity ratings apply to properly installed anchors only. Failure to install within 5° of alignment with the guy load will significantly lower strength.

(1) Order separately.

(2) Ultimate strength of rod may limit holding capacity. See pages 19-20 for rod ratings and selection. Add suffix "G" for galvanized. Example: 88135G.

## Expanding and Tamping Bar

The improved CHANCE fiberglass handle Expanding and Tamping Bar simplifies the job of expanding anchors. The curved tamper and expander head distributes the weight of the bar evenly around the anchor rod to reduce handle vibration. The hook of the Expanding and Tamping Bar wraps around the anchor rod to keep the expanding head from slipping off the anchor top plate. This tool is also effectively used for tamping in soil above the installed anchor. The base casting is attached directly to the Epoxiglas® handle. To order fiberglass replacement handles or expander head, see page A40.

Catalog Number	Description	Length ft	Weight lb
C3020003	Expanding & Tamping Bar	10	22
C3020004	Expanding & Tamping Bar	12	24



## Cross-Plate Anchor

The Cross-Plate Anchor is made for installation in holes drilled by power diggers. Because the size of the hole does not affect holding capacity, the hole can be dug by the same auger that is used to dig the pole holes on transmission projects. Cross-Plate Anchors are installed in a diagonal bored hole which is undercut so the anchor is at right angles to the guy. A rod trench is either cut with a trenching tool or drilled with a small power auger. Both anchor and rod trench should be refilled and tamped.

### Application and Ordering Information

Catalog Number	Hole Size Inches	Standard Pkg/Pallet	Approx Wt per Carton <sup>(1)</sup> lb	Area Sq In	Rod Size <sup>(2)</sup> Inches	Holding Capacity <sup>(3)</sup> lb (No Safety Factors Included) vs Soil Class				
						Class 3	Class 4	Class 5	Class 6	Class 7
<b>X16</b>	16	3/162	62	150	5/8 & 3/4	26,500 <sup>(3)</sup>	22,500 <sup>(3)</sup>	18,500 <sup>(3)</sup>	14,500	9,500
<b>X20</b>	20	2/64	64	250	5/8 & 3/4	34,000	29,000 <sup>(3)</sup>	24,000 <sup>(3)</sup>	19,000 <sup>(3)</sup>	14,000
<b>X201</b>	20	2/64	64	250	1	34,000	29,000	24,000	19,000	14,000
<b>X2434</b>	24	1/48	34	400	5/8 & 3/4	45,000 <sup>(3)</sup>	37,000 <sup>(3)</sup>	30,000 <sup>(3)</sup>	23,500 <sup>(3)</sup>	18,000 <sup>(3)</sup>
<b>X24<sup>(1)</sup></b>	24	1/48	34	400	1	45,000 <sup>(3)</sup>	37,000 <sup>(3)</sup>	30,000	23,500	18,000
<b>X241<sup>(1)</sup></b>	24	1/48	34	400	1-1/4	45,000	37,000	30,000	23,500	18,000

NOTE: Capacity ratings apply to properly installed anchors only. Failure to install within 5° of alignment with the guy load will significantly lower strength.

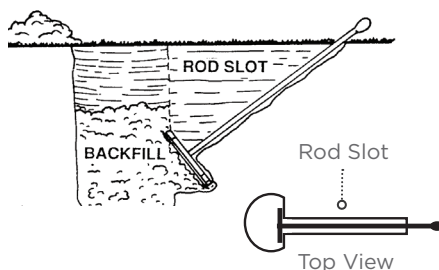
(1) X24 Series are not available in cartons and are shipped as individual pieces.

(2) Order separately.

Holding capacities are ultimate values. An appropriate factor of safety should be used to determine the allowable or service load. Hubbell Power Systems, Inc. recommends a factor of safety of at least 2 for permanent structures.

For Class 3, 4, 5, and 6 soils, the depth required to achieve the holding capacities listed in the table is 5 vertical feet to the center of the plate. For Class 7 soils, the depth required is 7 vertical feet to the center of the plate.

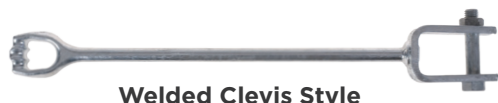
(3) Ultimate strength of rod may limit holding capacity. Add suffix "G" for galvanized. Example: X20G.



**\*Order Anchor Rod Separately**

## Anchor Rod Extensions

These Anchor Rod Extensions are primarily for making above-grade connections between installed anchors and guy wires. Each extension's forged eye is designed to distribute pulling stresses uniformly over individual strands of guy wire and keep the guy wire from spreading, kinking or bending. The drop-forged eye of each extension rod is stronger than the rod itself. Rod length and diameter are stamped below each rod eye. Each extension rod is hot-dip galvanized and includes a high-strength bolt and nut.



**Welded Clevis Style**



**Forged Clevis Style**

Catalog Number	Description	Rod Dia & Length Inches	Clevis Bolt Dia Inches	Standard Pkg/Pallet	Strength lb
<b>PSC1022176</b>	Tripleye*	3/4 x 24	3/4	5/50	23,000
<b>PSC1022177</b>	Tripleye*	3/4 x 36	3/4	1/50	23,000
<b>PSC1022178</b>	Tripleye*	3/4 x 72	3/4	1/50	23,000
<b>PSC1022183</b>	Twineye*	1 x 24	7/8	5/50	36,000
<b>PSC1022305</b>	Tripleye*	1 x 24	7/8	1/50	36,000
<b>PSC1022184</b>	Twineye*	1 x 36	7/8	1/50	36,000
<b>PSC1022306</b>	Tripleye*	1 x 36	7/8	1/50	36,000

Catalog Number	Description	Rod Dia & Length Inches	Clevis Bolt Dia Inches	Standard Pkg/Pallet	Strength lb
<b>4022</b>	Tripleye*	1-1/4 x 24	1	1/50	40,000
<b>PS4023</b>	Tripleye*	1-1/4 x 36	1	1/50	40,000
<b>402</b>	Tripleye*	1-1/4 x 72	1	1/50	40,000

- Available for one, two or three guys for use with Expanding or Cross Plate Anchors.
- Thimbleye®, Twineye® and Tripleye® rods distribute pulling stresses uniformly over individual strands of guy wire and keep the guy wire from spreading, kinking or bending.
- The drop-forged eye of each anchor rod is stronger than the rod itself.
- Rod length and diameter are stamped below each rod eye.
- Each rod is threaded 3-1/2" minimum length.
- Nuts are included.

Catalog Number				Size	Communication Market Product		
Thimbleye® Adapter	Twineye® Adapter	Tripleye® Adapter	Ovaleye Adapter		Thimbleye® Adapter	Twineye® Adapter	Tripleye® Adapter
5305	—	—	—	1/2" x 5'	—	—	—
5306	—	—	—	1/2" x 6'	—	—	—
5315	—	—	—	5/8" x 5'	—	—	—
5316 <sup>(1)</sup>	5346	—	—	5/8" x 6'	—	—	—
5317 <sup>(1)</sup>	5347 <sup>(1)</sup>	—	PS6417	5/8" x 7'	—	—	—
5318 <sup>(1)</sup>	5348 <sup>(1)</sup>	—	—	5/8" x 8'	—	400260980	—
5326 <sup>(1)</sup>	5356 <sup>(1)</sup>	—	—	3/4" x 6'	—	—	—
5327 <sup>(1)</sup>	5357 <sup>(1)</sup>	7557 <sup>(1)</sup>	—	3/4" x 7'	—	—	—
5328 <sup>(1)</sup>	5358 <sup>(1)</sup>	7558	—	3/4" x 8'	—	—	—
—	5359 <sup>(1)</sup>	7559	—	3/4" x 9'	—	—	400261038
—	5360	—	—	3/4" x 10'	—	—	—
5338 <sup>(1)</sup>	5368 <sup>(1)</sup>	7568	—	1" x 8'	—	—	—
—	5369	—	—	1" x 9'	—	—	—
5340 <sup>(1)</sup>	5370 <sup>(1)</sup>	7570	—	1" x 10'	—	400261004	400261046
—	—	C2000028	—	1-1/4" x 8'	—	—	—
—	15129	7574	—	1-1/4" x 10'	—	400261012	—

(1) IEEE standard.

#### Tensile Strength <sup>(1)</sup>

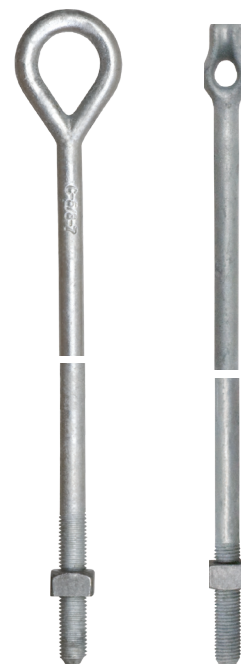
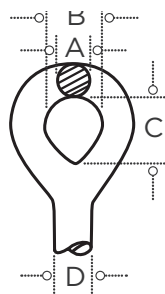
Rod Size inches	Strength lb	Nut Part Number
1/2	10,000	55058P
5/8	16,000	55006P
3/4	23,000	55312P
1	36,000	55320P
1-1/4	58,000	56001P

(1) Ultimate strength ratings apply to properly installed anchors only. Failure to install within 5° of alignment with the guy load will significantly lower strength.

# Galvanized Anchor Rods (continued)

## Ovaleye Adapter

D Inches	A Inches	B Inches	C Inches
5/8	9/16	1-1/2	2
1	7/8	1-1/2	2

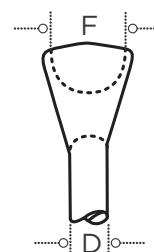
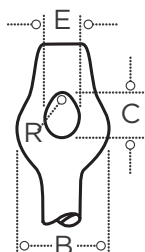


Ovaleye

## Thimbleye Adapter

D Inches	R <sup>(1)</sup> Inches	B Inches	C Inches	E Inches	F Inches
1/2	3/16	1-1/4	9/16	1/2	1-1/4
5/8	1/4	1-1/2	11/16	9/16	1-3/8
3/4	9/32	1-5/8	13/16	11/16	1-1/2
1	13/32	2-1/16	1-1/8	15/16	1-5/8

(1)  $2 \times R$  or  $2 \times R1$  = maximum-diameter guy strand.

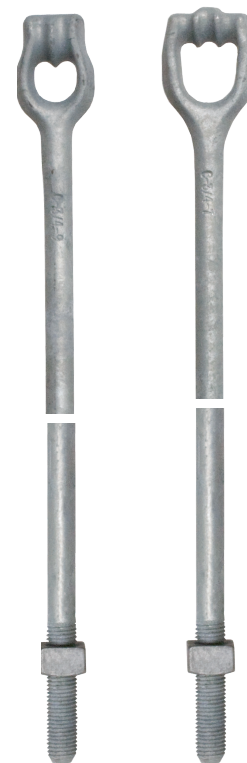
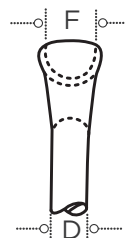
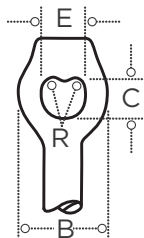


Thimbleye

## Twineye Adapter

D Inches	R <sup>(1)</sup> Inches	B Inches	C Inches	E Inches	F Inches
5/8	7/32	1-3/4	7/8	1-5/16	1-1/4
3/4	1/4	2	1	1-1/16	1-3/8
1	5/16	2-5/8	1-3/16	1-5/16	1-1/2
1-1/4	3/8	2-15/16	1-1/4	1-9/16	1-5/8

(1)  $2 \times R$  or  $2 \times R1$  = maximum-diameter guy strand.

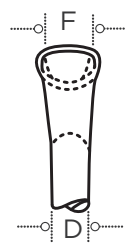
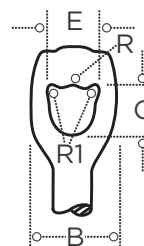


Twineye

## Tripleye Adapter

D Inches	R <sup>(1)</sup> Inches	R1 <sup>(2)</sup> Inches	B Inches	C Inches	E Inches	F Inches
3/4	1/4	7/32	2-1/2	1-11/16	1-1/2	1-1/4
1	1/4	1/4	2-9/16	1-11/16	1-5/8	1-1/2
1-1/4	9/32	1/4	2-7/8	1-11/16	1-11/16	1-5/8

(1)  $2 \times R$  or  $2 \times R1$  = maximum-diameter guy strand.



Tripleye



### Saves Time, Labor and Money.

The CHANCE® Expanding Rock Anchor saves time, labor, and money, because in most cases, there is no need to mix concrete, melt lead or carry extra bulky equipment to the job. Generally, the cost of installing the Expanding Rock Anchor is about 35% less than the old-fashioned grouting method.

### Expands and Wedges.

This anchor expands and wedges against solid walls of rock. And once it is expanded, the harder the pull on the rod, the tighter it wedges. Wedges are made of malleable or ductile iron with a rust-resistant coating. Rod should be in line with the guy.

### 1, 2 or 3 Guy Strands.

The large drop-forged Tripleye® rod of high-test steel holds up to three guy strands. The contour of the eye grooves keeps the guy strands from spreading, kinking and bending. And it allows slack to be pulled up without binding, damaging or weakening the guy.

Catalog Number	Rod Dia Inches	Rod Length Inches	Anchor Size Inches	Anchor Fully Expanded	Hole Size Inches	Approx Wt Per 100	Number in Bundle
R315	3/4	15	1-3/4	2-3/8	2	500	5
R330	3/4	30	1-3/4	2-3/8	2	700	5
R353	3/4	53	1-3/4	2-3/8	2	960	5
R360	3/4	60	1-3/4	2-3/8	2	1,040	5
R372	3/4	72	1-3/4	2-3/8	2	1,200	4
R384	3/4	84	1-3/4	2-3/8	2	1,300	4
R396	3/4	96	1-3/4	2-3/8	2	1,460	3
R130L	1	30	2-1/4	3-1/8	2-1/2	1,166	3
R153L	1	53	2-1/4	3-1/8	2-1/2	1,833	3
R172L	1	72	2-1/4	3-1/8	2-1/2	2,133	2
R196L	1	96	2-1/4	3-1/8	2-1/2	2,666	2

NOTE: 3/4" rod minimum ultimate strength of 23,000 pounds.

1" rod minimum ultimate strength of 36,000 pounds. Ultimate strength ratings apply to properly installed anchors only. Failure to install within 5° of alignment with the guy load will significantly lower strength. Recommended minimum installation depth is 12" in solid rock. Rods and wedges are hot-dip galvanized.



### Extendable Rock Anchor

The CHANCE® Extendable Rock Anchor uses standard PISA® couplings and rods to install the rock anchor at depths greater than standard Expandable Rock Anchors (96"). For rods, couplings and eyenuts, see pages A9-A10. Hot-dip galvanized.

Catalog Number	Rod Diameter Inches	Rod Length Inches	Standard Pkg/Pallet
R84LE	1	84	2/50



## Expanding Rock Anchors (continued)

### Socket Style Rock Anchor

New Style Rock Anchor For Guying Applications

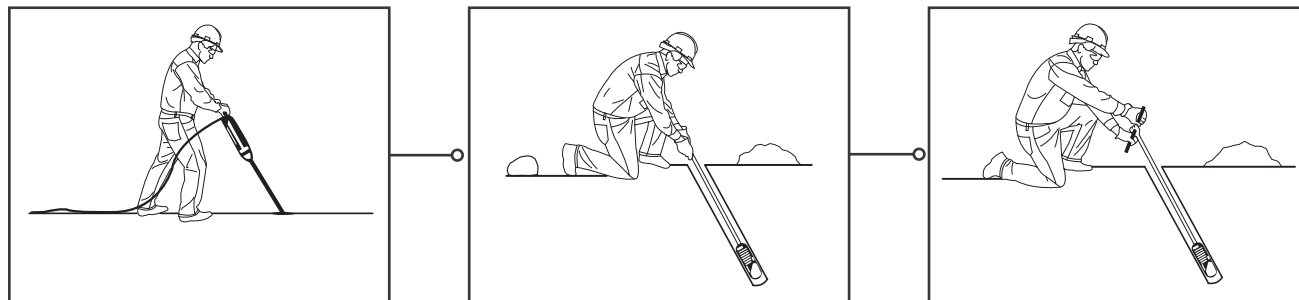
- Socket makes 360 degrees of contact with rock
- Socket will tighten as load increases
- Spin socket by hand to adjust to hole size before installation
- After anchor is installed, finish tightening by applying torque through rod
- Max tension rating
- 3/4 rod = 23,000 lbs
- 1" rod = 36,000 lbs
- Steel rod and ductile iron socket
- Galvanized per ASTM A-153

Hubbell SKU	Rod Diameter	Rod Length	Hole Size Required
R315H	3/4"	15"	2"
R330H	3/4"	30"	2"
R353H	3/4"	53"	2"
R360H	3/4"	60"	2"
R372H	3/4"	72"	2"
R384H	3/4"	84"	2"
R396H	3/4"	96"	2"
R130LH	1"	30"	2.5"
R153LH	1"	53"	2.5"
R172LH	1"	72"	2.5"
R196LH	1"	96"	2.5"



### Installation is quick and simple.

- Bore the hole with hand or power drill, making sure that the diameter of the hole is 1/4-inch larger than the diameter of the unexpanded anchor.
- Drop the anchor in the hole. Put a bar through the large eye of the anchor rod.
- Turn the rod until the anchor is firmly expanded against the sides of the hole. Grouting should be done if protection of the rock against weathering is a concern.
- This wedging force holds the anchor securely in place to stay.



# AERIAL INSTALLATION

## Grouted Rock Anchors

The CHANCE® Grouted Rock Anchor is designed to be used in situations where the soil is too rocky to use screw anchors, but the rock is fractured preventing the use of wedge style rock anchors. The forged knob on the end of the anchor along with any extension couplings provides the interference fit with the grout. The holding capacity of the anchor is dependent on the bond stress between the rock and the grout. The Grouted Rock Anchor is designed to be used inline with the guy. Failure to install within 5° of alignment with the guy load will significantly lower strength.

Installing a Grouted Rock Anchor requires first drilling a 6" diameter hole. Then insert the anchor, assembled with any Round Rod Extensions and Guy Adapter needed. Portland Cement grout pumped in to completely fill the hole around the anchor takes approximately 5 days to cure.

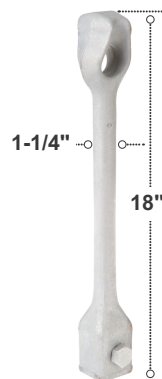
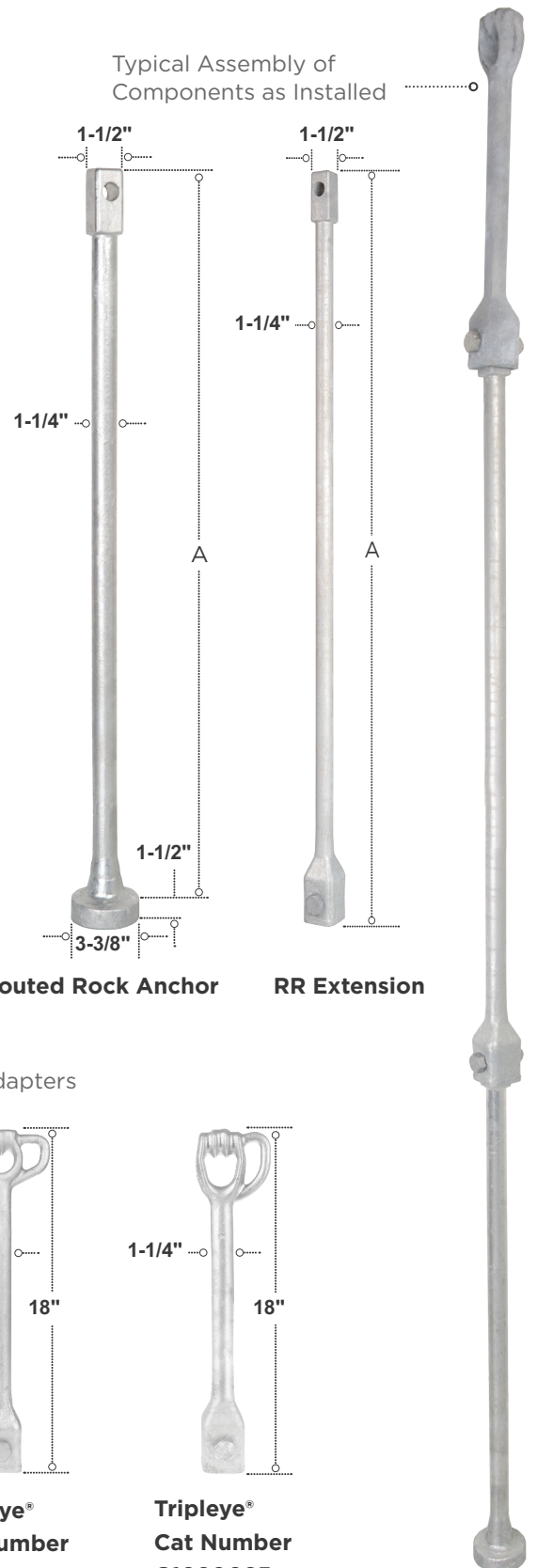
### Grouted Rock Anchor - 1-1/4" Diameter Rod

Catalog Number	Length A Inches	Approx Ship Wt Each lb	Standard Pkg/Pallet
W1040004	36	17.6	1/40
W1040055	84	38.0	1/30

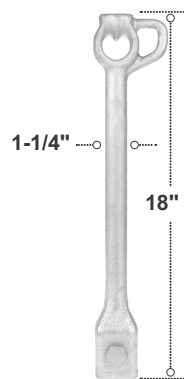
### Round Rod Extension - 1-1/4" Diameter Rod

Catalog Number	Length A Inches	Approx Ship Wt Each lb	Standard Pkg/Pallet
12696	42	17.6	1/50
12697	60	38.0	1/50
12698	84	24.0	1/30
12699	120	46.8	1/50

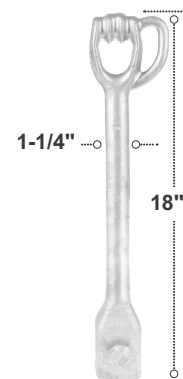
NOTE: Galvanized per ASTM A-153. SS5 and SS150 extensions can be used in place of the RR extensions listed above.



**Thimbleye®**  
Cat Number  
C1020023



**Twineye®**  
Cat Number  
C1020024



**Tripleye®**  
Cat Number  
C1020025

# Grouted Rock Anchors (continued)

**Application Table for Catalog Numbers W1040004 and W1040055**

<b>Rock</b>	<b>Ultimate Bond Stress Between Rock &amp; Grout psi <sup>(1) (2) (3)</sup></b>	<b>Allowable Load Capacity for 6" Dia x 1' Long Grout Column lb/ft of Length <sup>(4)</sup></b>
Granite Basalt Dolomitic Limestone	200	15,000
Soft Limestone Slates & Hard Shales Sandstones	100	7,500
Soft Shales	30	1,800
Soil <sup>(5)</sup> Class 5	8	600

1. Ultimate bond stress values from the PTI (Post Tensioning Institute) and the grout to ground bond values from the FHWA (Federal Highway Administration) were used to arrive at the indicated ultimate bond stress between rock and grout used in the above chart.
2. Identification of the rock and application of the chart values is the responsibility of those designing the rock anchor.
3. The values in the chart are intended to provide conservative results.
4. Higher bond stress values may be obtainable, but the associated investigation to determine appropriate values and the use of those values is left to those designing the rock anchor.
5. The given ultimate stresses were applied over the surface of a 6" diameter x 1' long grout column, then divided by 3 to obtain the recommended allowed load per foot of length in the indicated rock or soil.
6. Actual capacities will depend on the strength of the rock, the grout strength and the quality of the installation.
7. A rough surface in the drilled hole is preferred as well as a clean hole free of loose material, soil, dust, etc.
8. A 6" diameter hole is recommended for the use of the W1040004 and W1040055 rock anchors.
9. The minimum bond length of the rock anchor to be engaging the rock is 5 feet.
10. It is recommended that field testing be accomplished to confirm capacities.
11. Anchor grout is to be made using Type I, II, III, or V Portland Cement conforming to ASTM C-150 specifications. Pre-packaged blended mixes per ASTM C-595 are also acceptable.
12. The compressive strength of the grout shall be a minimum 3000 psi at the time of stressing.
13. The grout should be flowable to reach the bottom of the drilled hole or pumpable if it is to be placed via a grout pump.
14. The ultimate mechanical strength of the W1040004 and W1040055 rock anchors and associated extensions and terminations is 70,000 lbs when Chance/Hubbell anchor components are used.
15. Water used in the grout mix should be potable (suitable for public consumption), clean and free of substances known to be harmful to portland cement or steel.
16. It is recommended that grout be placed in the hole prior to inserting the rock anchor.
17. When using pre-packaged grout mixes follow directions and use the water cement ratio recommended by manufacturer.
18. For recommendations concerning bonded lengths and unbonded lengths, reference the PTI specifications.
19. The rock anchor is to be installed in line with the guywire. Any misalignment is to be no more than  $\pm 5$  degrees

**NOTE:**

- The given ultimate stresses were applied over the surface of a 6" diameter x 1' long grout column, then divided by 3 to obtain the recommended allowed load per foot of length in the indicated rock or soil.
- Actual capacities will depend on the strength of the rock, grout strength and quality of the installation.
- A rough surface in the drilled hole is preferred as well as a clean hole free of loose material, soil, dust, etc.
- A 6" diameter hole is recommended for the use of the W1040004 and W1040055 rock anchors.
- The minimum bond length of the rock anchor to be engaging the rock is 5 feet.
- It is recommended that field testing be accomplished to confirm capacities. Anchor grout is to be made using Type I, II, III, or V Portland Cement conforming to ASTM C-150 specifications or pre-packaged blended mixes per ASTM C-595.
- The compressive strength of the grout shall be a minimum of 3000 psi at the time of stressing.
- Grout should be flowable to reach the bottom of the drilled hole or pumpable if it is to be placed via a grout pump.
- The ultimate mechanical strength of the W1040004 and W1040055 rock anchors and associated extensions and terminations is 70,000 lb when CHANCE/Hubbell anchor components are used.
- Water used in the grout mix should be potable (suitable for public consumption), clean and free of substances known to be harmful to Portland Cement or Steel.
- It is recommended that grout be placed in the hole prior to inserting the rock anchor.
- When using pre-packaged grout mixes, follow the directions and use the water cement ratio recommended by the manufacturer.
- The rock anchor is to be installed in line with the guy wire. Any misalignment is to be no more than  $\pm 5$  degrees.



Closed

### Quicker Installing, More Efficient Than Wood Key

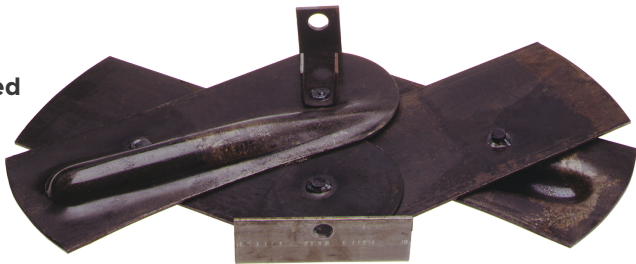
The CHANCE Pole Key can be used to reinforce poles in soft soils where the load is unbalanced and the pole must resist the load. However, it is recommended that Pole Keys only be used where a proper guy wire and guy anchor cannot be used, since a guy and anchor will generally provide more resistance to lateral movement. The Pole Keys will not withstand the same load, or perform as well as a proper guy and anchor.

The CHANCE Pole Key can be installed next to the distribution pole butt to help hold it in place against light overturning loads such as service drops, prevailing winds or small line angles.

The additional lateral load and resulting overturning moment which can be resisted by Pole Keys depends on the height of the load, the locations of the Pole Keys, the allowable lateral deflection of the pole at ground line and the quality of the installation.

The % capacity increase shown in the table is based on analyses that used 2" lateral deflection at the ground line as the upper capacity limit.

Expanded



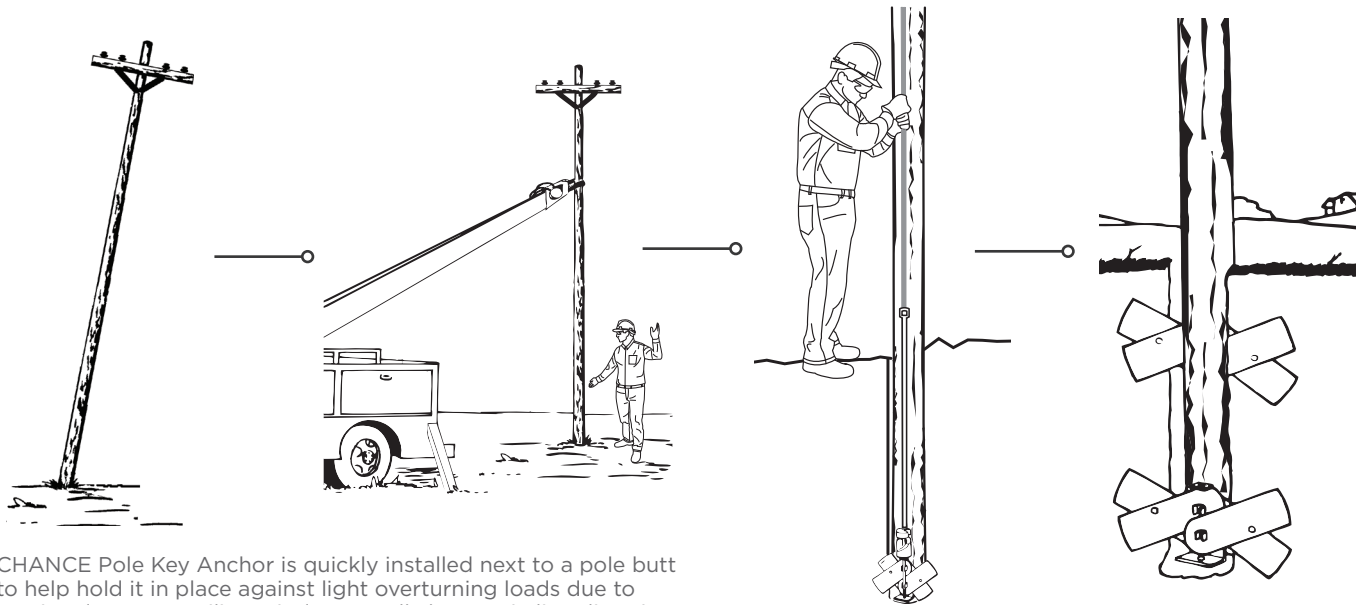
### Application and Ordering Information

Catalog Number	Width Expanded Inches	Blade Width Inches	Area Expanded sq in	Approx Weight lb
P4817 <sup>(2)</sup>	27-1/4	7	276	24-1/2

(1) The lateral load and overturning moment, which can be resisted, depends on the height of the load above ground level, the depths of the two opposing pole keys, and the allowable lateral deflection of the pole at ground line.

(2) RUS accepted. Accommodates any 3/4" diameter rod on page A19.

Pole Height and Class	% Capacity Increase by adding two Pole Keys
35' CI 5	30
40' CI 4	24
60' CI 3	13



CHANCE Pole Key Anchor is quickly installed next to a pole butt to help hold it in place against light overturning loads due to service drops, prevailing winds or small changes in line direction.

AERIAL INSTALLATION

Corrosion-Resistant Anchor

CHANCE® Design Offers Many Advantages.

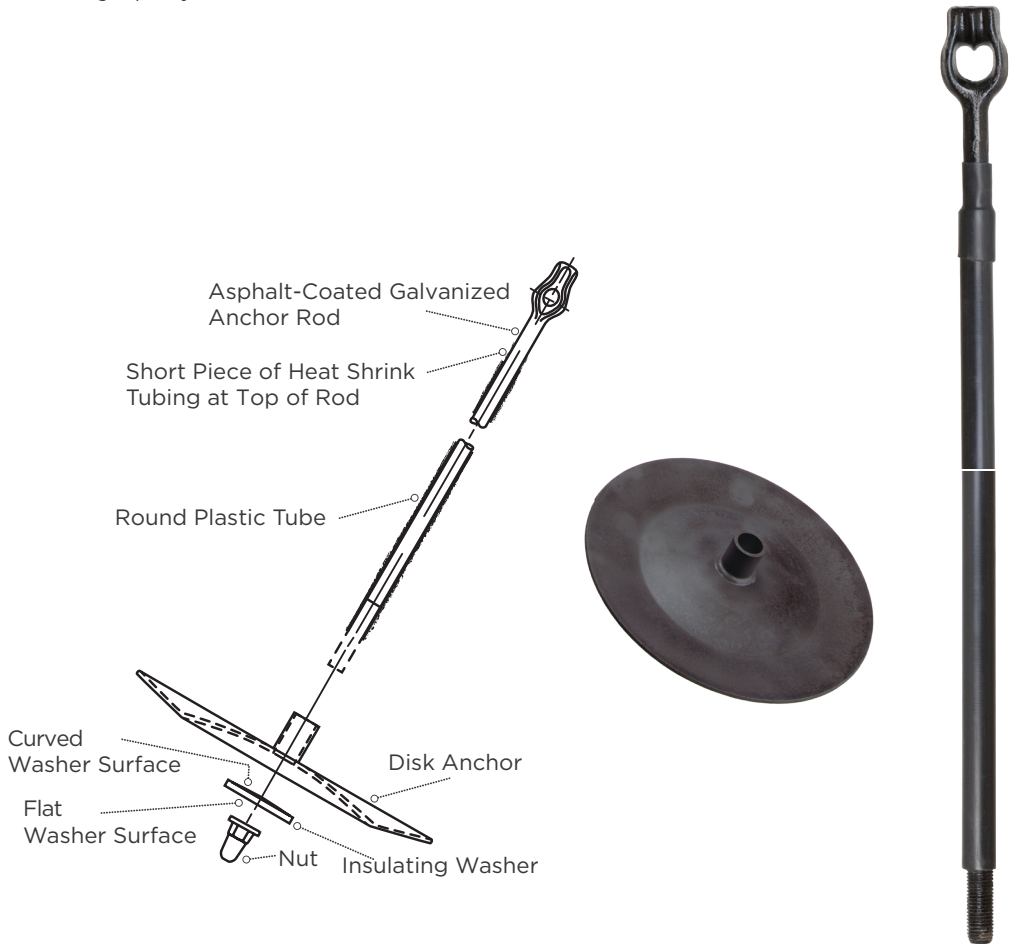
The CHANCE Corrosion-Resistant Disc Anchor is designed for low resistivity, alkaline and acidic soils with electrolyte combinations. The anchor eye is forged directly to the rod, so the eye is an integral part of the anchor. The anchor's flanged cap nut is cast. It's large and heavy for greater protection. The heat-shrink sleeve over the galvanized anchor rod helps prevent moisture from going down the rod. The insulating washer is fiberglass-reinforced thermoset material for better load-bearing properties compared to thermoform materials.

Corrosion-Resistant Anchor

Catalog Number	Description	Hole Size Inches	Fits Protected Rod Size Inches	Holding Capacity <sup>(1)</sup> - lb (No Safety Factors Included) vs Soil Class				
				Class 3 500-600 in-lb	Class 4 400-500 in-lb	Class 5 300-400 in-lb	Class 6 200-300 in-lb	Class 7 100-200 in-lb
C1022008	16" Anchor .187" Thick	16	3/4	31,000 <sup>(1)</sup>	26,500 <sup>(1)</sup>	21,000	16,500	12,000
C1022009	16" Anchor .187" Thick	16	1	31,000 <sup>(1)</sup>	26,500	21,000	16,500	12,000
C1022011	20" Anchor .187" Thick	20	1	40,000 <sup>(1)</sup>	34,000	26,000	21,500	16,000
C1022012	20" Anchor .250" Thick	20	1	40,000 <sup>(1)</sup>	34,000	26,000	21,500	16,000
C1022054	24" Anchor .187" Thick	24	1	50,000 <sup>(1)</sup>	41,000 <sup>(1)</sup>	33,500	26,000	20,000
C1022050	24" Anchor .250" Thick	24	1	50,000 <sup>(1)</sup>	41,000 <sup>(1)</sup>	33,500	26,000	20,000
C1022381	30" Anchor .375" Thick	30	1-1/4	78,100	64,000	52,300	40,600	31,200

NOTE: Capacity ratings apply to properly installed anchors only. Failure to install within 5° of alignment with the guy load will significantly lower strength.

(1) Ultimate strength of rod may limit holding capacity.





## Corrosion-Resistant Anchor (continued)

### Fiber-Reinforced Washer

Catalog Number	Fits Rod Size Inches	Approx Wt lb Per 100 Pcs
C2100033	3/4	23
C2100034	1	19
C2100050	1-1/4	30



### Cap Nut

Catalog Number	Fits Rod Size Inches	Approx Wt lb Per 100 Pcs
C2050407	3/4	242
C2050408	1	242
C2050590	1-1/4	300



These rods include a fiber-reinforced washer and heavy-forged cap nut. Nut and washer are attached to the rod.

Galvanized rod meets NEMA specification PH2 and has a paint coating, polyethylene tube and heat shrink collar. For additional sizes of rods, contact Hubbell Power Systems, Inc.

### Protected Rod for Corrosion-Resistant Anchor

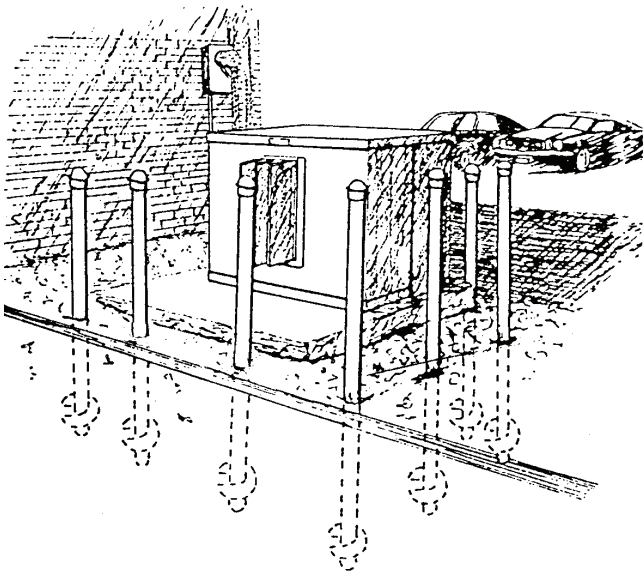
Rod Size	Rod Tensile Strength lb	Thimbleye® Adapter		Twineye® Adapter		Tripleye® Adapter	
		Catalog Number	Lb Per 100 Pcs	Catalog Number	Lb Per 100 Pcs	Catalog Number	Lb Per 100 Pcs
3/4" x 6'	23,000	C2000047AW	1,330	C2000053AWL	1,362	C2000106	1,630
3/4" x 7'	23,000		-	C2000054AW	1,470	—	—
3/4" x 8'	23,000	C2000049AW	1,566	C2000055AW	1,650	C2000061AW	1,783
3/4" x 9'	23,000	—	—	C2000056AW	1,750	C2000062AW	1,883
3/4" x 10'	23,000		-	C2000057AW	1,910	—	—
1" x 7'	36,000	—	—	C2000114AW	2,254	—	—
1" x 8'	36,000	C2000051AW	2,500	C2000108AW	3,087	C2000063AW	2,730
1" x 9'	36,000	—	—	C2000058AW	2,800	—	—
1" x 10'	36,000	C2000052AW	3,005	C2000059AW	3,050	C2000064AW	3,270
1-1/4" x 15'	58,000			C2000141	5,000	C2000140*	7,500

\* Two piece rod with coupler.

# Bumper Posts

## For Instant Equipment Protection

- Protect transformers, switchgear and guys.
- Any equipment needing bumper protection is an ideal candidate.
- Cheaper than concrete.
- Installation in minutes regardless of weather conditions.
- Available power diggers can install through blacktop surfaces.
- Hot-dip galvanized corrosion-resistant finish



### Power-Installed Design

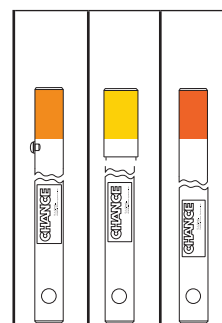
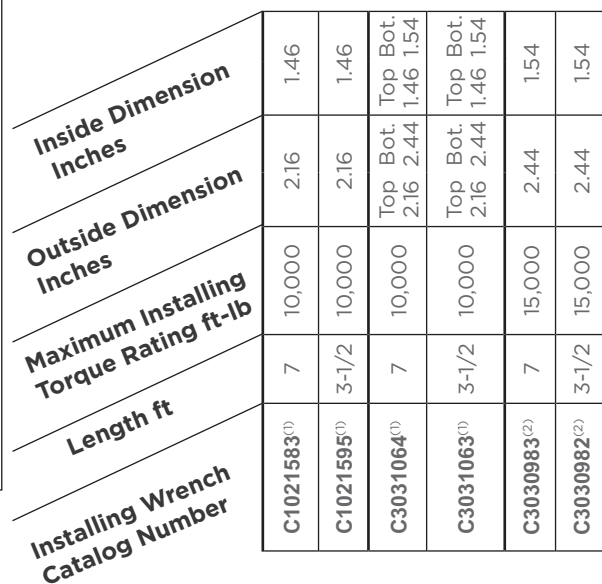


### Installing Tools

- Additional tools may not be required for Bumper Post if Kelly Bar can be inserted into the 3.06" inside diameter of the post and pinned by a Bent Arm Pin.
- Tools are available which bolt directly to CHANCE® Kelly Bar Adapters or which can be used with CHANCE Locking Dog Assembly.
- Order catalog number **C3030737** for Kelly Bar attachment or **C3030739** for use with Locking Dog Assembly. Bumper Post is inserted into the drive tool and held by the provided Bent Arm Pin.

### 8,000 ft-lb Typical Working Torque

Catalog Number	Standard Pkg/Pallet	Weight Each lb	Description
T1120192	1/12	45	8" Helix, 3-1/2" O.D. x 60" Shaft
T1120224	1/12	53	8" Helix, 3-1/2" O.D. x 75" Shaft
C1120275	1/12	61	8" Helix, 3-1/2" O.D. x 84" Shaft



	1	2	3	4	5	6	7
C102-50XX Series Tough One® Anchor - Large Hub							
C102-50XX Series Tough One® Anchor - Large Hub							
C102-52XX Series Tough One® Anchor - Large Hub							
C102-52XX Series Tough One® Anchor - Small Hub							
Mid-Strength PISA® Anchor							
PISA® 7 Anchor							
PISA® 6 Anchor (formerly PISA® 5 Anchor)							

## Maximum Installation Torque Rating ft-lb

(1) Fits Locking Dog Assembly C3030069HD.

(2) Fits Locking Dog Assembly C3030981.

# Standard and Hybrid PISA® Anchor Installing Tools

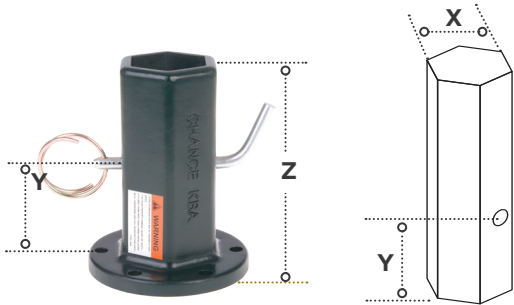
## For Installing Torques up to 10,000 ft-lb

A complete tool system consists of: Kelly Bar Adapter, Torque Indicator, Locking Dog Assembly and Drive-End assembly. For instructions for selecting the proper Kelly Bar Adapter, see page A32.

### Convertible to Extension Use

Extension assemblies can be added where soil conditions dictate that anchors be set more than one rod length deep or where digger to ground clearances are limited.

Each Standard Kelly Bar Adapter has six holes for 1/2" bolts on a 5-1/4" bolt circle and comes with six 1/2" Grade 5 bolts, nuts, lockwashers and Bent Arm Pin with Coil Lock.



Kelly Bar Adapter

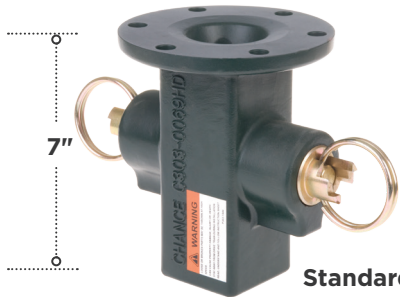
Kelly Bar

### Standard Kelly Bar Adaptor with Bent Arm Pin (5" Bolt Circle)

Part Number	Kelly Bar Shape	Kelly Bar Dimension			Wt Each lb
		X	Y	Z	
630013	Hex	2"	5'	6-1/8"	10
630011HD	Hex	2-1/2"	4-1/4"	8-1/8"	18
630012HD	Hex	2-5/8"	4-1/4"	8-1/8"	18

### Additional Bolts, Nuts, and Lockwashers

Part Number	Description
P0010259P	Hex Bolt
C3031722	Six 1/2" bolts, nuts, and lockwashers.



Standard Locking Dog Assembly C3030069HD

Standard Locking Dog Assembly has six holes for 1/2" bolts on a 5-1/4" bolt circle, comes with six 1/2" Grade 5 bolts, nuts and lockwashers.

### Standard Locking Dog Assembly

Catalog Number	Description	Wt Each lb
C3030069HD	Complete Standard Locking Dog Assembly	20
C3030070	Locking Dog replacement Kit includes parts needed to replace both Locking Dogs	4
P1300007P	Replacement ring only	0.10

# Standard and Hybrid PISA® Anchor Installing Tools (continued)

## For Installing Torques up to 10,000 ft-lb

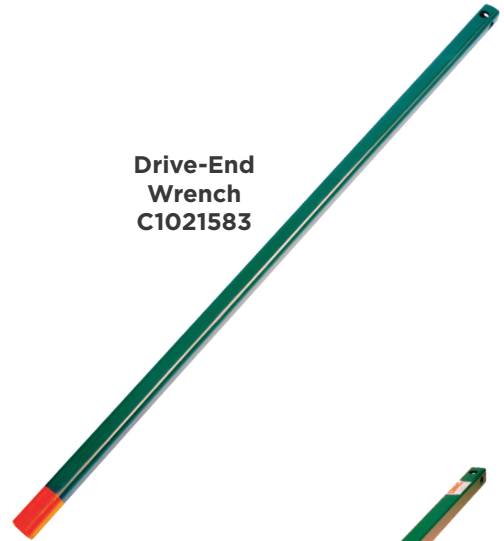
### Transmits Torque to Anchor Core

The wrench transmits the torque from the Kelly Bar of the digger to the hub of the Power-Installed Screw Anchor so that the anchor rod need be only large enough in diameter to support the guy load.

### 7-ft Drive-End Wrench

Catalog Number	Description	Wt Each lb
<b>C1021583</b>	Standard Drive-End Wrench Installs 10,000 ft-lb (small-hub) Tough One Anchors 6,000 ft-lb Mid-Strength PISA Anchors	57
<b>C3031064</b> <sup>(1)</sup> (2)	Hybrid Drive-End Wrench Installs 10,000 ft-lb (large-hub) Tough One Anchors 6,000 ft-lb PISA 6 Anchors 7,000 ft-lb PISA 7 Anchors	64

**Drive-End  
Wrench  
C1021583**



### 3-1/2-ft Drive-End Wrench

Catalog Number	Description	Wt Each lb
<b>C1021595</b>	Standard Drive-End Wrench Installs 10,000 ft-lb (small-hub) Tough One Anchors 6,000 ft-lb Mid-Strength PISA Anchors	29
<b>C3031063</b> <sup>(1)</sup> (2)	HYBRID Drive-End Wrench Installs 10,000 ft-lb (large-hub) Tough One Anchors 6,000 ft-lb PISA 6 Anchors 7,000 ft-lb PISA 7 Anchors	28

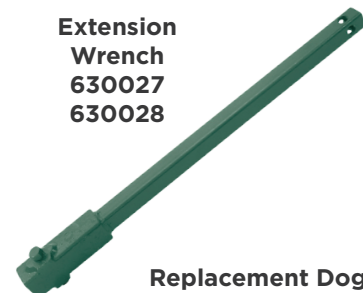
**Drive-End  
Wrench  
C3031064**



### Extension Wrench for Standard and Hybrid Drive-End Wrenches

Catalog Number	Description	Wt Each lb
<b>630027</b>	3-1/2 ft Extension	42
<b>630028</b>	7 ft Extension	70

**Extension  
Wrench  
630027  
630028**



**Replacement Dog Bolt  
630002P (2 per wrench)**

(1) These wrenches will fit 15,000 ft-lb Tough One Anchors dimensionally, but must not be used for torques in excess of 10,000 ft-lb.

(2) The old-style Hybrid wrenches C3031063 and C3031064, having a collar welded around the drive end, fit only PISA 6 and PISA 7 anchors.



## Screw Anchor Drive Tool Strings

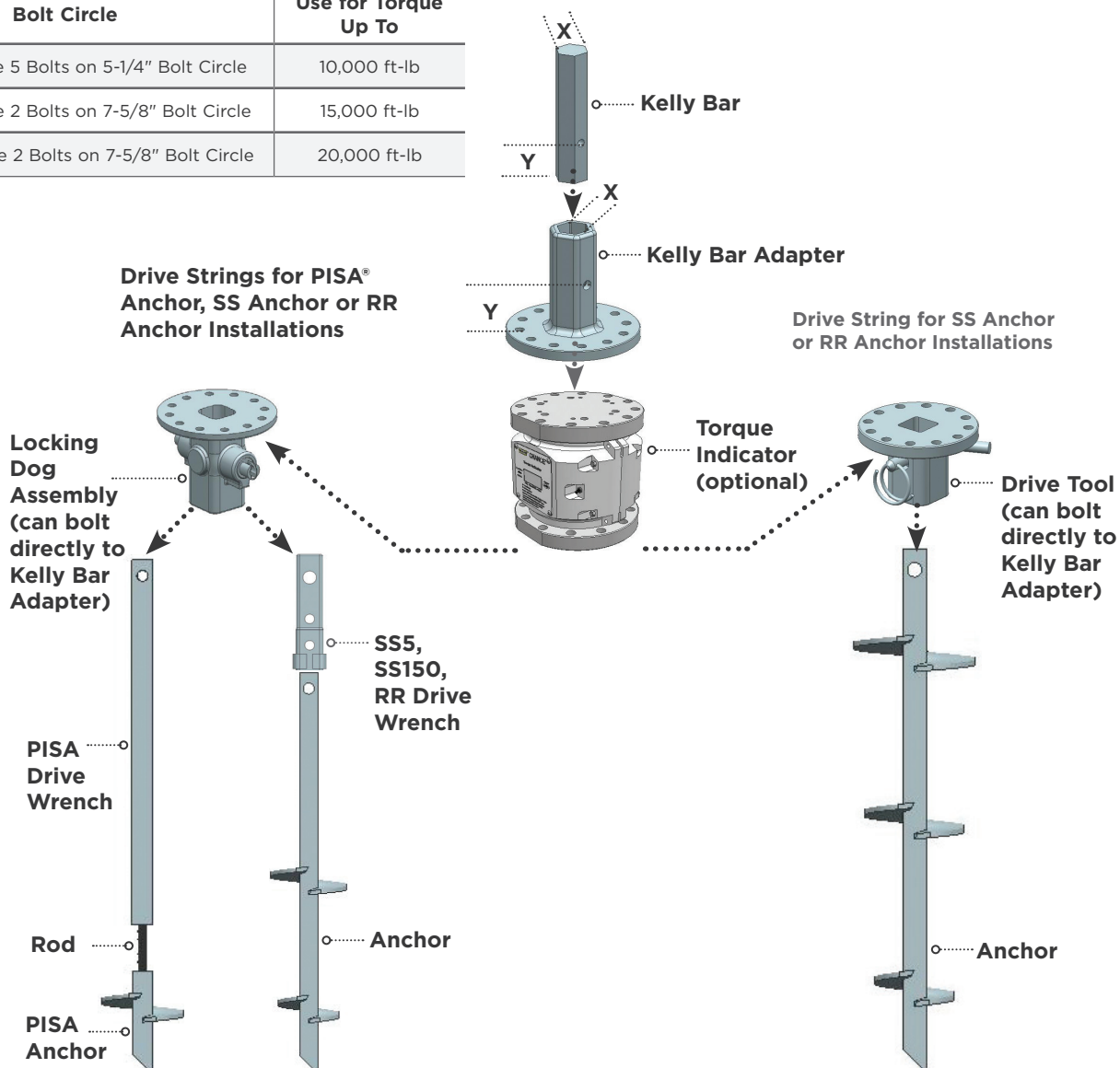
Selecting the correct Kelly Bar Adapter is key to building a successful Drive String. Follow these two easy steps:

1. Remove the auger from the digger and carefully measure the X and Y dimensions of the Kelly Bar.
2. Match the shape of the Kelly Bar and the X and Y dimensions with the Kelly Bar Adapter chart provided on pages A30 and A33. The Y dimension on the Kelly Bar Adapter must be equal to or greater than the Y dimension on the Kelly Bar itself.

### Bolt Circles

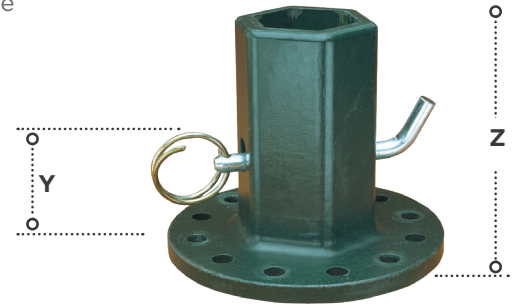
CHANCE® anchor installing tools are provided with appropriate bolt circles for the expected service. The torque limitations for the three standard bolt circles are give below. Never exceed the rated torque of any CHANCE installing tool.

Bolt Circle	Use for Torque Up To
(6) 1/2" Grade 5 Bolts on 5-1/4" Bolt Circle	10,000 ft-lb
(6) 5/8" Grade 2 Bolts on 7-5/8" Bolt Circle	15,000 ft-lb
(12) 5/8" Grade 2 Bolts on 7-5/8" Bolt Circle	20,000 ft-lb



## For Installing Torques up to 15,000 ft-lb

A complete tool system consists of: Kelly Bar Adapter, Torque Indicator, Locking Dog Assembly and Drive-End Assembly. For instructions for selecting the proper Kelly Bar Adapter, see page A32.



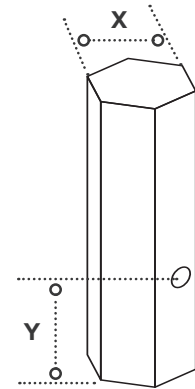
**Kelly Bar Adapter**

### Tough One Kelly Bar Adapter with Bent Arm Pin

(7-5/8" Bolt Circle)

Part Number	Kelly Bar Shape	Torque Ratings (ft-lb)	Kelly Bar Dimensions Inches			Wt lb	5/8" Grade 2 Bolts Included	Bent Arm Pin Included
			X	Y	Z			
C3030936	Hex	12,000	2-1/2	3-7/8	8-1/4	23	12	C3031223
C3030937	Hex	15,000	2-5/8	3-7/8	8-1/4	23	12	C3031223
C3030940	Hex	25,000	3	4-1/2	8	27	12	C3031222
C3030955	Square	17,000	2-1/2	4-3/4	7	22	12	C3031227
C3030958	Square	20,000	3	3-1/2 & 2-1/16	7	23	12	C3031227
C3031571	Square	30,000	3-1/2	2 & 4	6-11/16	33	12	C3031227

NOTE: Each Tough One Kelly Bar Adapter has twelve holes for 5/8" bolts on a 7-5/8" bolt circle, comes with twelve 5/8" Grade 2 bolts, nuts & lockwashers and Bent Arm Pin with Coil Lock.



**Kelly Bar**

### Digital Torque Indicator<sup>(1)</sup>

Catalog Number	Description	Weight lb
C3031836	Torque Indicator adaptable to 5-1/4" BC or 7-5/8" BC	65

(1) See pages A38 for additional information on Torque Indicators.



**Torque Indicator**

# Tough One® Anchor Installing Tools (continued)

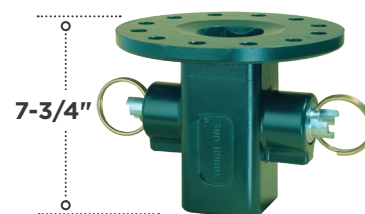
## For Installing Torques up to 15,000 ft-lb

### Tough One Locking Dog Assembly

Catalog Number	Description	Weight lb
<b>C3030981</b>	Complete Tough One Locking Dog Assembly	28
<b>C3031026</b>	Locking Dog Replacement Kit Includes all parts less casting, bolts, nuts, washers	5

NOTE: Tough One Locking Dog Assembly has twelve holes for 5/8" bolts on a 7-5/8" bolt circle and comes with twelve 5/8" Grade 2 bolts, nuts and lockwashers.

Part Number	Description
<b>056653P</b>	Hex Bolt
<b>055827P</b>	Lock Washer
<b>055803P</b>	Hex Nut



**Locking Dog Assembly**

### Tough One Drive-End Wrenches

Catalog Number	Length ft	Description	Weight lb
<b>C3030982</b>	3-1/2	Installs 15,000 ft-lb (large hub) Tough One anchors, 10,000 ft-lb (large hub) Tough One and all 1-1/2" Core Anchors	36
<b>C3030983</b>	7		73

NOTE: Tough One Drive Ends are painted with a red band on the bottom.

### Extension Assemblies for Tough One Drive-End Wrenches

Catalog Number	Length ft	Description	Weight lb
<b>C3030987</b>	3-1/2	Extension attaches to drive-end wrench when additional depth is required	53
<b>C3030988</b>	7		89

NOTE: For SS and RR Anchor Tool options when using the Tough One Drive String System, see pages A35-A36.



**Drive Wrench**

# Anchor Installing Tool Bent Arm Pin with Coil Lock

## Use with Standard and Tough One® Kelly Bar Adapters, SS, RR and Bumper Post Installing Tools

Each CHANCE® plated-steel Bent Arm Pin is designed to attach a Kelly Bar Adapter to a Kelly Bar, and to secure SS, RR and Bumper Post Anchors to Anchor Drive Tools.

Bent Arm Pins with Coil Locks are included with new tools as required. Order Pins and Coil Locks for existing tools as shown below.

Kelly Bar Adapter	Bent Arm Pin and Coil Lock Assembly
630010 <sup>(1)</sup>	C3031227
630011 <sup>(1)</sup>	C3031223
630011HD	C3031223
630012 <sup>(1)</sup>	C3031223
630012HD	C3031223
630013	C3031223
630013A	C3031223
630014 <sup>(1)</sup>	C3031222
630015 <sup>(1)</sup>	C3031222
630016 <sup>(1)</sup>	C3031227
630017 <sup>(1)</sup>	C3031227
C3030936	C3031223
C3030937	C3031223
C3030940	C3031222
C3030955	C3031227
C3030958	C3031227
C3031571	C3031227

SS/RR Tools	Bent Arm Pin and Coil Lock Assembly
639001	C3031226
C3030195	C3031225
C3030201	C3031224
C3030202	C3031224
C3030020	C3031226

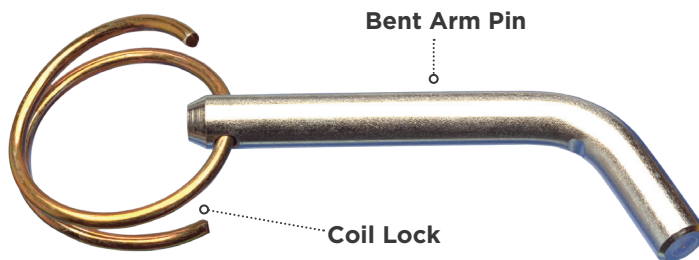
Bumper Post Tools	Bent Arm Pin and Coil Lock Assembly
C3030737	C3031227
C3030739	C3031227

(1) Old-style Kelly Bar Adapters are no longer available.



**Bent Arm Pin and Coil Lock Assembly**

Catalog Number	Size Inches
C3031226	3 x 5/8
C3031225	3-1/2 x 3/4
C3031224	4-1/2 x 1
C3031227	5 x 3/4
C3031223	4-1/2 x 1/2
C3031222	5 x 5/8



To order Coil Lock only, order Part Number **P3031215P**.

### WARNING

Always use the approved combination of Coil Locks and Bent Arm Pins. Never attempt to use any other combinations, such as hair pins, cotter keys, etc., with Bent Arm Pins.

### WARNING

CHANCE Bent Arm Pins with Coil Locks are the only tested and approved means for through-pin attachment of drive tools. Do not attempt to use any other means of attachment.

## Adapters

### For Torques up to 10,000 ft-lb

#### Bolt Circle Adapters

These adapters are used to connect two tools having incompatible bolt circles. The C3030115 is for use between two tools having tapped 5-1/4" bolt circles. The T3030166 is for use between a tool having a 5-1/4" bolt circle and one having a 7-5/8" bolt circle. Both are limited to 10,000 ft-lb.

Catalog Number	Description	Weight lb
<b>C3030115</b>	Bolt Circle Adapter with two 1/2" x 5-1/4" bolt circles	11
<b>T3030166</b>	Bolt Circle Adapter with one 1/2" x 5-1/4" bolt circle and one 5/8" x 7-5/8" bolt circle	18

**C3030115****T3030166**

### For Installing SS or RR Anchors

These Drive Tools require the appropriate Kelly Bar Adapter. Each comes with bolts, nuts and lockwashers.

Catalog Number	Description	Bolt Circle	Approx Wt lb
<b>639001</b>	SS5/SS150/RR Drive Tool	(6) 1/2" holes on 5-1/4" BC	7
<b>C3030195<sup>(1)</sup></b>	SS175 Drive Tool	(12) 5/8" holes on 7-5/8" BC	18
<b>C3030201<sup>(1)</sup></b>	SS200 Drive Tool	(12) 5/8" holes on 7-5/8" BC	30
<b>C3030202<sup>(1)</sup></b>	SS225 Drive Tool	(12) 5/8" holes on 7-5/8" BC	30

*(1) Requires use of T3030166 adapter, and limited to 10,000 ft-lb when used with Standard Kelly Bar Adapter (with a 5-1/4" bolt circle).*

**639001**

Catalog Number	Description	Unit Fits	Approx Wt lb
<b>C3030020</b>	SS5/SS150/RR Drive Tool	Standard Locking Dog Assembly	8
<b>C3031035</b>	SS5/SS150/RR Drive Tool	Tough One® Locking Dog Assembly	11
<b>T3031403</b>	SS175 Drive Tool	Tough One Locking Dog Assembly	26
<b>C3031077</b>	SS200 Drive Tool	Tough One Locking Dog Assembly	23

*NOTE: These tools slide into Locking Dog Adapter and are retained by spring loaded dogs.*

Catalog Number	Description	Bolt Circle	Approx Wt lb
<b>C3031650</b>	SS5/SS150 Drive Tool with Locking Dogs	(6) 1/2" holes on 5-1/4" BC	10
<b>C3031645</b>	SS175 Drive Tool with Locking Dogs	(12) 5/8" holes on 7-5/8" BC	21

**C3030020****C3031650**



## For Installing No-Wrench Anchor and Manual Foundation Tool

Designed for use with the CHANCE® Portable Anchor Installer. This tool bolts directly to the installer's output flange or Kelly Bar Adapter having six 1/2" diameter holes on a 5-1/4" bolt circle. Adjustable pivoting plates accept rods from 3/4" to 1-1/4" diameter.

For manually-installed foundations, eyenut must be temporarily installed for installation. Has four holes on 5-1/4" bolt circle for attachment. Includes four 1/2" x 1-1/2" bolts, nuts and lockwashers.



**E3030255**

Catalog Number	Weight lb
E3030255	9

## Shear Pin Torque Limiter Catalog Number C3030044 for Installing Torques up to 10,000 ft-lb

- Protection for anchors and installing tools by disconnecting the power when the installing torque reaches a preselected level.
- Useable in very rocky soil.
- Durable – does not require special storage or handling.
- Top and bottom each have six holes tapped 1/2"-13 on a 5-1/4" bolt circle.



**C3030044**

Catalog Number	Description	Wt lb
<b>C3030044</b>	Shear Pin Torque Indicator	54
<b>C3030045<sup>(1)</sup></b>	One Carton of Shear Pins (approx 1700 pins)	50
<b>T3031420<sup>(1)</sup></b>	One Box of Shear Pins (approx 510 pins)	15

*(1) Each Shear Pin provides 500 ft-lb of torque.*



**C3030045**

AERIAL INSTALLATION

CHANCE® Torque Indicators

Digital Torque Indicator

Catalog Number C3031836  
Avoid excessive torsional loading

Using the wireless CHANCE® Torque Indicator, you can install screw anchors to a pre-determined torque value, which gives a positive indication of anchor holding capacity in any soil type.

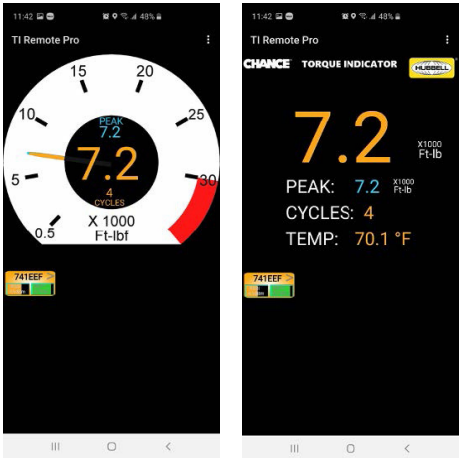
The Indicator mounts between the Kelly bar adapter and drive tool (or locking dog assembly). The LCD display is easy to read in full daylight and gives the operator a direct readout of installation torque at all times.



Base Unit

Features & Benefits

- Measuring torque is the most accurate way to determine the capacity of helical piles and anchors
- Torque is displayed on Base Unit and transmitted via Bluetooth® to Android and iOS phones and smart devices
- Multiple Bluetooth display devices can be linked to Base Unit
- Download free Torque Indicator Remote Pro app from Apple App Store or Google Play Store
- Torque Indicator Remote Pro app allows torque readings to be sent via email to be downloaded
- Certificate of Calibration supplied with each new unit in case
- Operational temperature range: -30° to 70°C (-22° to 158° F)
- Measures torque up to 30,000 ft-lb
- Accuracy: ±500ft-lb at any reading
- Torque is measured using strain gauges mounted inside the Base Unit.
- No shear pins to replace
- Powered by two standard 9V batteries
- Solid one-piece spool design to withstand most bending loads.
- Top and bottom flange, each provides six holes tapped 1/2"- 13 on a 5-1/4" bolt circle and twelve holes tapped 5/8"- 11 on a 7-5/8" bolt circle.
- Supplied with Twelve (12) 1/2 - 13 UNC - 2A bolts, 1-3/4" long, grade 5, with lock washers and Twenty-four (24) 5/8 - 11 UNC - 2A bolts, 2" long, grade 5, with lock washers.



Digital Display

Catalog Number	Description
C3031836	Torque Indicator Base Unit

The CHANCE® fiberglass handle Expanding and Tamping Bar simplifies the job of expanding anchors. The curved expander and tamper head distributes the weight of the bar evenly around the anchor rod to reduce handle vibration. The hook of the Expanding and Tamping Bar wraps around the anchor rod to keep the expanding head from slipping off the anchor top plate. This tool is also effectively used for tamping in soil above the installed anchor. The base casting is attached directly to the fiberglass handle.

Catalog Number	Description	Length ft	Weight lb
C3020003	Expanding & Tamping Bar	10	22
C3020004	Expanding & Tamping Bar	12	24
E3020001P <sup>(1)</sup>	Fiberglass Handle	10	7
E3020006P <sup>(1)</sup>	Fiberglass Handle	12	8
P3020002P	Expander and Tamper Head	—	14

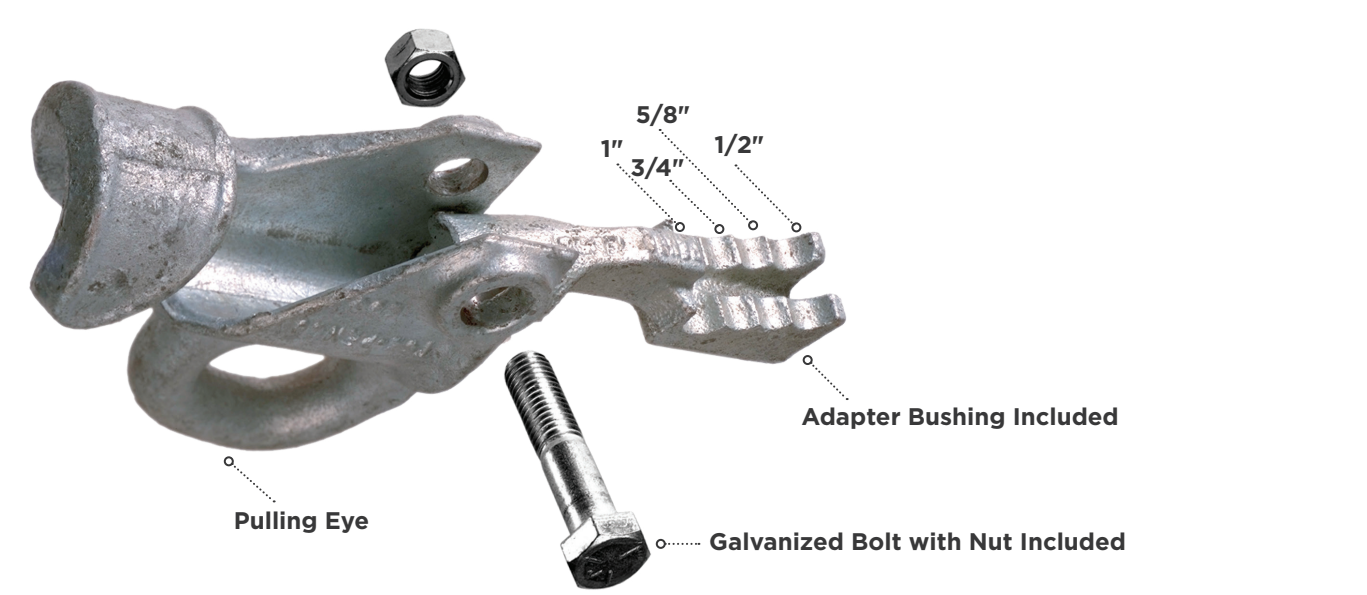
(1) Includes plug mix to reset handle.



### Standard Pulling Eye

This inexpensive cost-cutter provides a large offset eye to accommodate three-ton chain hoist hooks, and leaves the anchor eye free with plenty of clearances for attaching formed wire grips. By removing the adapter bushing, the E96 Pulling Eye fits 1-1/4" rods. The E96 Pulling Eye is inexpensive and easy to use. One person can assemble and hook up in minutes. For working loads to approximately 6,000 pounds (ultimate strength - 18,000 pounds).

Catalog Number		Weight lb
E96	Pulling eye with adapter bushing, boll & nut	5
C3031661	Adapter bushing, bolt & nut	1



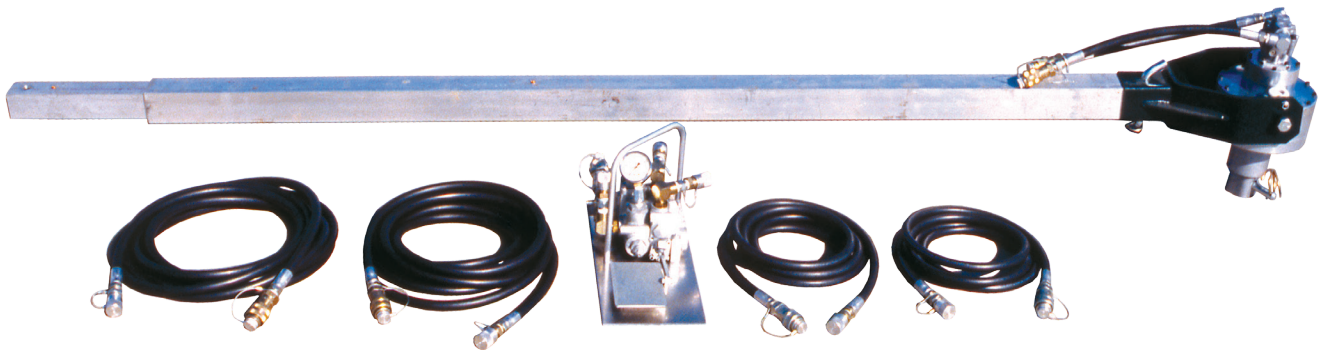
## Portable Anchor Installers for Small Foundations

### 2,500 ft-lb Torque Capacity Hydraulic Power Drive

#### Economical Manual Operation and Portability for Remote Sites, Common Anchor Installations.

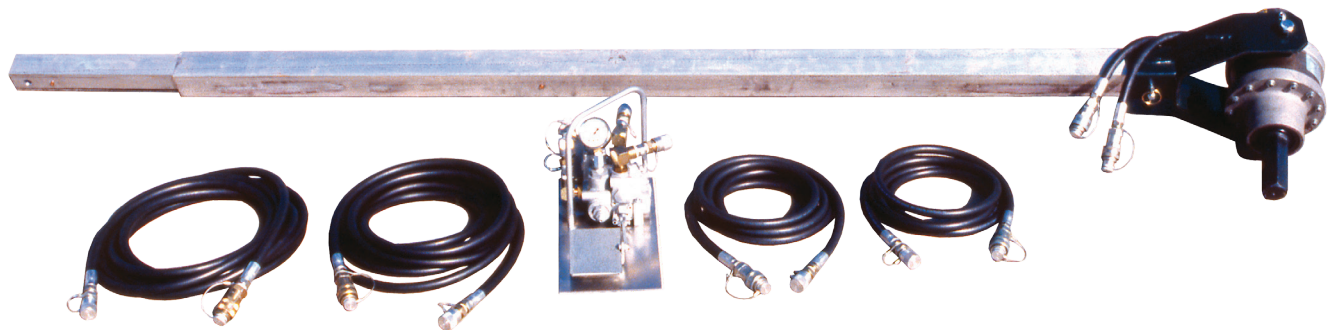
For most shaft-driven guy anchors and smaller screw foundations, these compact drivers get into areas where large equipment cannot go or is impractical. Operator does not need to resist the torque generated by anchor installation. Countertorque transmits through a torque bar from the drive head to the earth or other restraint. This frees the operator for the task of guiding the anchor path.

- Built-in bypass valve limits output to 2,500 ft-lb maximum.
- Two-way foot pedal gives operator direct control over drive and reverse directions.
- Hoses (two 12-ft and two 25-ft) come with quick couplers for all connections from power supply to foot control to drive head.
- Pivoting drive-head yoke connects with Bent Arm Pin to square-tubular torque bar which telescopes from 8 feet to 10 feet as needed.



Catalog Number **C3031032**

Medium-Duty Installer requires 1550 psi at 8 gpm flow rate to deliver 2,500 ft-lb maximum torque.



Catalog Number **C3031244**

Heavy-Duty Installer requires 1,900 psi at 8 gpm flow rate to deliver 2,500 ft-lb maximum torque.



## 2,500 ft-lb Portable Anchor Installers

### Medium-Duty<sup>(1)</sup> – Catalog Number C3031032

**Grease-filled gear case. Single catalog number above includes all items below. Each item also may be ordered by separate number.**

Hydraulic Control Valve <sup>(1)</sup>	<b>C3031031</b>
Two 25-ft. Hydraulic Hoses	<b>C4176121</b> (each)
Hydraulic Drive Head <sup>(1)</sup>	<b>C3031180</b>
Yoke Assembly	<b>E3030680</b>
Two 12-ft. Hydraulic Hoses <sup>(1)</sup>	<b>E3030876</b> (pair)
Square Torque Bar Assembly	<b>E3031041</b>

*NOTE: Output shaft is 1-1/2" square socket and can only be used to install 1-1/2" square and 1-1/4" round shaft anchors..*

*(1) Hydraulic components are not interchangeable between **C3031032** and **C3031244**.*

### Heavy-Duty – Catalog Number C3031244

**Sealed oil-filled gear case. Single catalog number above includes all items below. Each item also may be ordered by separate number.**

Hydraulic Control Valve <sup>(1)</sup>	<b>C3031247</b>
Two 25-ft. Hydraulic Hoses	<b>C4176121</b> (each)
Hydraulic Drive Head <sup>(1)</sup>	<b>C3031233</b>
Yoke Assembly	<b>E3030680</b>
Two 12-ft. Hydraulic Hoses <sup>(1)</sup>	<b>E3031253</b> (pair)
Square Torque Bar Assembly	<b>E3031041</b>

*NOTE: Output shaft is 2" Hex. – Requires Kelly Bar Adapter and flanged drive tool (order separately) to install all anchors.*

*(1) Hydraulic components are not interchangeable between **C3031032** and **C3031244**.*

### Optional Hydraulic Power Unit Catalog Number C3031201

For easy wheeling to worksite, hydraulic drive head and foot control are secured by a rubber strap. Unit includes two angle braces atop the cart frame. Hoses may ride on the handles.

Cart-mounted on 5/8" diameter axle with two 4.8" x 8" inflatable (30 psi) tires; 27-1/4" wide x 34-1/2" high x 36" long; shipping weight with oil: 275 lb.

Operating instructions are included with anchor installer and hydraulic power unit.

#### Hydraulic Pump with Fan Cooling System:

- Typical output pressure —○ 2500 psi
- Pump displacement —○ 8 gpm @ 3400 rpm
- Reservoir capacity —○ 5 gallons US
- Shipping cap and vented fill cap provided

#### Gasoline Engine System:

- 16 hp Briggs & Stratton
- Industrial/Commercial Model 326437, Type 2527
- 12-Volt push-button start, 3600 rpm (maximum)

Drive head and foot control shown in photo are not included with **C3031201**





# Pole Line Hardware

When support and timeliness count, Hubbell Power Systems delivers the product breadth and hardware solutions you need to make your complex project more manageable and cost efficient. Constructed to deliver the reliability you depend on from the name you know and trust, our aerial pole product offering utilizes the latest technologies in manufacturing.

From aerial to burial, HPS products provide both innovative and cost-effective solutions for telecommunication and utility providers.

# Banding, for Pole Attachments

## A no-drill method to attach components to a pole of any size or shape.

- Attaches to steel, concrete, composite or wood poles of any shape and size.
- Easily installs with standard hand tools
- Adjustable for any sized pole
- Can be cut to length at installation or ordered in pre-cut lengths
- Two buckle styles offered: folded or adjustable

### Material

- Fittings - Aluminum 6061-T6
- Bands - 201 Stainless steel bands with 95,000 P.S.I. min. tensile and 45,000 P.S.I. min. yield
- Bolt - Galvanized steel per ASTM A-153



Assembled band with adjustable buckle clamp

When determining band length, add 6" to the circumference of the structure.

### Stainless Steel Bands - 100' Coils

Catalog Number	Band Width (in)	Thickness (in)	Length (ft)	Approx Ship Wt Each (lbs)
C12201SSB100	1/2	.03	100	5.3
C58201SSB100	5/8	.03	100	6.0
C34201SSB100	3/4	.03	100	7.8
C34201SSB100G	3/4	.04	100	8.0
C100201SSB100	1	.04	100	14.5
C114201SSB100	1-1/4	.04	100	21.1

NOTE: Order quantity 1 for 100' coil

### Folded Buckles for Bands

Catalog Number	Band Width (in)	Type	Approx Ship Wt Each (lbs)
PSC2080557	1/2	Standard	0.02
PSC2080558	5/8	Standard	0.03
PSC2080559	3/4	Standard	0.04
PSC2080560	3/4	Heavy Duty	0.04
PSC2080561	1	Heavy Duty	0.10
PSC2080562	1-1/4	Heavy Duty	0.14

SS Band Coil



Folded Buckle

### Stainless Steel Band Kits

#### Standard Lengths - includes pre-cut band and adjustable buckle

Catalog Number	Band Width (in)	Length (in)	Approx Ship Wt Each (lbs)	Clamp Catalog No.
CBAB3836	3/4	36	2	CBAB38
CBAB3840	3/4	40	2	CBAB38
CBAB3848	3/4	48	2	CBAB38
CBAB3860	3/4	60	2	CBAB38
CBAB3872	3/4	72	2	CBAB38
CBAB3884	3/4	84	2	CBAB38
CBAB5836	1-1/4	36	3	CBAB58
CBAB5840	1-1/4	40	3	CBAB58
CBAB5848	1-1/4	48	3	CBAB58
CBAB5860	1-1/4	60	3	CBAB58
CBAB5872	1-1/4	72	3	CBAB58
CBAB5884	1-1/4	84	3	CBAB58
CBAB58132	1-1/4	132	3.5	CBAB58
CBAB58180	1-1/4	180	5.4	CBAB58

### General Purpose Mounting Brackets

Catalog Number	Description	Band Width	Approx Ship Wt Each (lbs)
CHDBB1511H	Bracket with standard 5/8" x 2" bolt	3/4"	.65
CHDBB1511H3H	Bracket with Grade 5, 5/8" x 3 bolt	3/4"	.7
CD4080	Heavy duty galvanized steel bracket	1-1/4"	2.3

### Adjustable Buckles for Bands

Catalog Number	Band Width (in)	Approx Ship Wt Each (lbs)
CBAB38	3/4	8
CBAB58	1-1/4	20



Kits contains band, adjustable buckle, and 5/8 x 7-1/2" carriage bolt

Adjustable Buckle



CHDBB1511H or CHDBB1511H3H



CD4080

## Bands, Universal Pole Type

3/16" x 4" flat steel bands, shipped assembled with one 3/4" x 4" curved bolt and one 3/4" x 2-1/2" cone head bolt (PS6280). Hot dip galvanized.

Catalog Number	Fits pole circumference (in)	Approx Ship Wt Each (lbs)
6276	6 to 10	10.67
6277	8 to 14	11.72



Universal Pole Band



Pole Band Guy Clip,  
No. 6278

## Pole Band Guy Clip

Guy clips, two piece. Top piece is 5/16" x 2-1/2", bottom is 3/16" x 2-1/2". A 3/4" x 2-1/2" machine bolt with cotter pin fastens thimble.

### Ordering information:

Hubbell Catalog No. 6278

## Stainless Steel Lashing Straps

3/4" wide, 430 stainless steel. Part numbers end in suffix SSLC. Integral loop buckle.

## Plastic Lashing Straps

3/4" wide, black acetal homopolymer.

Part numbers end in suffix PLLC.

Buckles are black acetal plastic with stainless steel locking barbs. Additional buckles can be ordered as CBPLLC

Stainless Steel Catalog Number	Length (in)	Buckles Included
C10SSLC	10	Integral Loop
C16SSLC	16	Integral Loop
C22SSLC	22	Integral Loop
C34SSLC	34	Integral Loop
C45SSLC	45	Integral Loop
C50SSLC	50	Integral Loop
C66SSLC	66	Integral Loop
C78SSLC	78	Integral Loop

Plastic Strap Catalog Number	Length (in)	Buckles Included
C50PLLC	600 (50 ft reel)	No
C10PLLC	10	Yes
C13PLLC	13	Yes
C16PLLC	16	Yes
C27PLLC	27	Yes



Plastic Lashing Strap With Buckle    SS Lashing Strap Assembly

## Plastic Lashing Strap Kit

Kit of (5) 50' reels of plastic lashing strap and (150) plastic buckles to secure messenger strand to communication cables. Loop strength 250 lbs. Buckles are black acetal plastic with stainless steel locking barbs.

### Ordering information:

- Kit: Hubbell Catalog No. **C550B150PLLC**
- 50' reel of lashing strap only: Hubbell Catalog No. **C50PLLC**
- Buckle only: Hubbell Catalog No. **CBPLLC**



Use strap tensioning tool for tensioning and cutting excess strap material.  
Hubbell Catalog No. **PSC2170130**



Lashing Kit, No. C550B150PLLC



# Bolts

## Bolt, Cable Extension

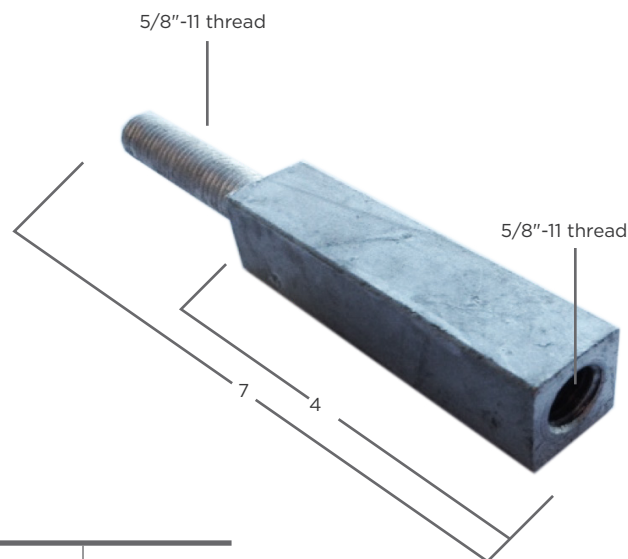
Creates a second cable run at the same level on the same side of the pole as an existing cable run with a 4" extension. Used in conjunction with Reinforcing Strap (PSC2080241) on page A72.

### Features

- 5/8" - 11 Thread (Internal and External)
- Stand-off segment 4" x 1" Sq.
- Overall length 7"
- Meets Bellcore 627-0005

### Material

- Steel
- Galvanized per ASTM A-153



Hubbell SKU	Internal Thread	External Thread	Overall Length	Extension Length	Approx. Ship Wt. per each
PSC2080292	5/8"-11	5/8"-11	7"	4"	1.1 lbs.

## Carriage Bolts

Carriage Bolts have square nuts, finished points and rolled threads. Standard heads have square shoulders. Open-hearth steel. Hot-dip galvanized.

### 3/8-Inch Diameter

Catalog Number	Dimensions Inches		Approx Ship Wt Each (lbs)
	Bolt Length	Thread Length	
8634 <sup>(1)(2)</sup>	4	1-3/4	0.16
863412 <sup>(1)(2)</sup>	4-1/2	1-3/4	0.17
8635 <sup>(1)(2)</sup>	5	1-3/4	0.18
8636 <sup>(1)</sup>	6	1-3/4	0.20
8637	7	1-3/4	0.22
400012548 <sup>(1)</sup>	8	4	0.27
400012555 <sup>(1)</sup>	10	4	0.30
400012563 <sup>(1)</sup>	12	4	0.35

NOTE: 4,250 lb rated tensile strength.

(1) RUS listed.

(2) ANSI C135.1.

### 1/2-Inch Diameter

Catalog Number	Dimensions Inches		Approx Ship Wt Each (lbs)
	Bolt Length	Thread Length	
864412 <sup>(1)</sup>	4-1/2	3	0.32
400012589 <sup>(1)</sup>	4-3/4	3	0.35
8645 <sup>(1)(2)</sup>	5	3	0.33
864512 <sup>(1)</sup>	5-1/2	3	0.38
8646 <sup>(1)(2)</sup>	6	3	0.39
8647	7	4	0.44

NOTE: 7,800 lb rated tensile strength.

(1) RUS listed.

(2) ANSI C135.1.



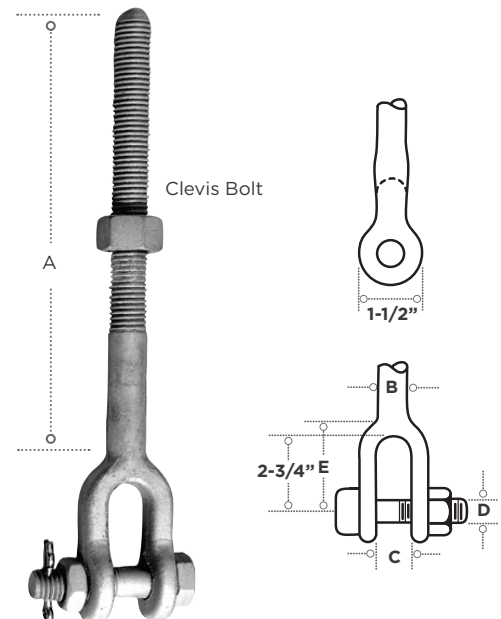
Carriage Bolt

## Clevis Bolts

For deadend attachments strings. Cotter bolt is 2-3/4" long and comes with cotter pin and hex nut. Clevis Bolts are drop-forged steel. Hot-dip galvanized.

Catalog Number	Dimensions Inches						Approx Ship Wt Each (lbs)
	A	B	C	D	E	Thread Length	
<b>15808</b> <sup>(1)</sup>	8	5/8	13/16	1/2	1-13/16	6	1.50
<b>15810</b> <sup>(1)</sup>	10	5/8	13/16	1/2	1-13/16	6	1.99
<b>15812</b> <sup>(1)</sup>	12	5/8	13/16	1/2	1-13/16	6	2.17
<b>15814</b> <sup>(1)</sup>	14	5/8	13/16	1/2	1-13/16	6	2.20
<b>15828</b> <sup>(1)</sup>	8	3/4	13/16	5/8	1-13/16	6	2.00
<b>15830</b> <sup>(1)</sup>	10	3/4	13/16	5/8	1-13/16	6	2.57
<b>15832</b> <sup>(1)</sup>	12	3/4	13/16	5/8	1-13/16	6	2.80
<b>15834</b> <sup>(1)</sup>	14	3/4	13/16	5/8	1-13/16	6	3.04

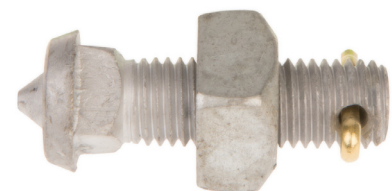
NOTE: 5/8" bolt has 12,400 lb rated tensile strength. 3/4" bolt has 18,350 lb rated tensile strength.  
(1) RUS listed.



## Cone Head Bolt

For use on universal pole bands 6276 and 6277. Includes one square nut and cotter key. Galvanized per ASTM A-153.

Catalog Number	Diameter	Thread Length	Overall Length Inches	Approx. Ship Wt. per each
<b>PS6280</b>	3/4"	Full	2-1/2	0.50 lbs.



**No. PS6280**



# Bolts

## Double-Arming Eye Bolt

Bolts have a cone type point and are threaded to within 2" of the 1-1/2" x 2" eye. Three square nuts. Drop-forged steel. Hot-dip galvanized.

### 5/8-Inch Diameter

Catalog Number	Dimensions Inches			Approx Ship Wt Each (lbs)
	Inside Dimension A	Outside Dimension B	Length Under Eye C	
19784 <sup>(1)</sup>	1-1/2	2-5/8	14	1.96
19786 <sup>(1)</sup>	1-1/2	2-5/8	16	2.20
19788 <sup>(1)</sup>	1-1/2	2-5/8	18	2.32
19790 <sup>(1)</sup>	1-1/2	2-5/8	20	2.56
19792 <sup>(1)</sup>	1-1/2	2-5/8	22	2.60

NOTE: 12,400 lb rated tensile strength.

(1) RUS listed.



## Double-Arming Bolts, All-Thread Rods Cable B Suspension Bolts

Referred to as "D.A. bolts," Double-Arming Bolts are used for double-arm applications (one arm on each side of the pole). Hubbell Power Systems D.A. Bolts are manufactured to HPS specifications that meet the requirements of ANSI C135.1. They are available in a range of thread diameters and lengths. Each bolt includes four assembled square nuts. Threads are formed with the rolled thread process. Bolt length is measured from the last thread, end to end. A semi-cone point is included on bolts 8" and longer. Shorter lengths include a chamfered end

### 1/2" Thread Diameter (1/2-13 UNC)

Catalog Number	Length Inches	Approx Ship Wt Each (lbs)
8846	16	1.17
8848	18	1.25

NOTE: 7,800 lb rated tensile strength.

### 5/8" Thread Diameter (5/8-11 UNC)

Catalog Number	Length Inches	Approx Ship Wt Each (lbs)
8860	10	1.17
8862 <sup>(1) (2)</sup>	12	1.26
8864 <sup>(1) (2)</sup>	14	1.48
8866 <sup>(1) (2)</sup>	16	1.70
8868 <sup>(1) (2)</sup>	18	1.80
8870 <sup>(1) (2)</sup>	20	1.97
8872 <sup>(1) (2)</sup>	22	2.13
8874 <sup>(1) (2)</sup>	24	2.27
8876	26	2.40
8877	28	2.53
8878	30	2.67
8879	32	2.80
T2060419 <sup>(1)</sup>	36	3.30
PSDA584000 <sup>(1)</sup>	40	3.50
PSDA584400	44	3.60



NOTE: 12,400 lb rated tensile strength.

(1) RUS listed, n - double arming bolt.

(2) ANSI standard, C135.1.

## Double-Arming Bolts, All-Thread Rods (continued)

### Cable B Suspension Bolts

#### 3/4" Thread Diameter (3/4-10 UNC)

Catalog Number	Length Inches	Approx Ship Wt Each (lbs)
C2050140	6	1.28
C2050141	8	1.50
PSC2050606	10	1.70
8882 <sup>(2)</sup>	12	1.82
8884 <sup>(2)</sup>	14	2.24
8886 <sup>(2)</sup>	16	2.48
8888 <sup>(2)</sup>	18	2.72
8890 <sup>(1) (2)</sup>	20	2.92
8892 <sup>(1) (2)</sup>	22	3.16
8894 <sup>(1) (2)</sup>	24	3.35
8896	26	3.56
8897	28	3.65
8898	30	3.81
889832	32	4.13
PS889834	34	4.34
PS889836	36	4.50
PS889838	38	4.82
PS889840	40	5.10
PS889842	42	5.41

NOTE: 18,350 lb rated tensile strength.

(1) RUS listed, n - double arming bolt.

(2) ANSI standard, C-135.1.

#### 7/8" Thread Diameter (7/8-9 UNC)

Catalog Number	Length Inches	Approx Ship Wt Each (lbs)
PSDA781200	12	2.83
PSDA781400	14	3.12
PSDA781600	16	3.41
PSDA781800	18	3.70
PSDA782000	20	3.99
PSDA782200	22	4.27
PSDA782400	24	4.56
PSDA782600	26	4.85
PSDA782800	28	5.14
PSDA783000	30	5.43
PSDA783200	32	5.72
PSDA783400	34	6.01
PSDA783600	36	6.30
PSDA783800	38	6.59
PSDA784000	40	6.88
PSDA784200	42	7.17
PSDA784400 <sup>(2)</sup>	44	7.40
PSDA784600 <sup>(2)</sup>	46	7.63
PSDA784800 <sup>(2)</sup>	48	8.00
PSDA785000 <sup>(2)</sup>	50	8.23

NOTE: 24,500 lb rated tensile strength.

(1) RUS listed, n - double arming bolt.

(2) ANSI standard, C-135.1.

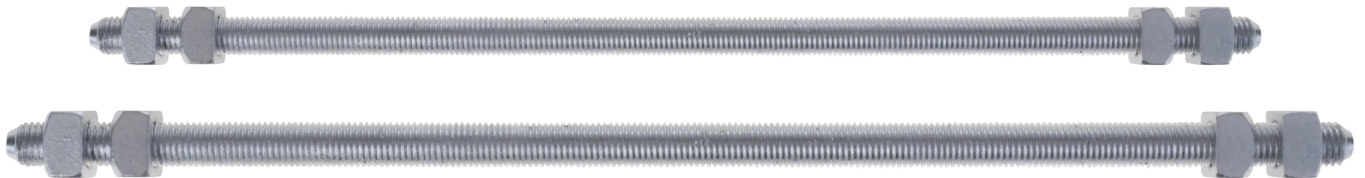
#### 1" Thread Diameter (1-8 UNC)

Catalog Number	Length Inches	Approx Ship Wt Each (lbs)
PSDA101200 <sup>(2)</sup>	12	4.00
PSDA101400 <sup>(2)</sup>	14	4.35
PSDA101600 <sup>(2)</sup>	16	4.72
PSDA101800 <sup>(2)</sup>	18	5.00
PSDA102000 <sup>(2)</sup>	20	5.30
PSDA102200 <sup>(2)</sup>	22	5.70
PSDA102400 <sup>(2)</sup>	24	6.10
PSDA102600 <sup>(2)</sup>	26	6.40
PSDA102800 <sup>(2)</sup>	28	6.75
PSDA103000 <sup>(2)</sup>	30	7.10
PSDA103200 <sup>(2)</sup>	32	7.40
PSDA103400 <sup>(2)</sup>	34	7.55
PSDA103600 <sup>(2)</sup>	36	7.70

NOTE: 33,550 lb rated tensile strength.

(1) RUS listed, n - double arming bolt.

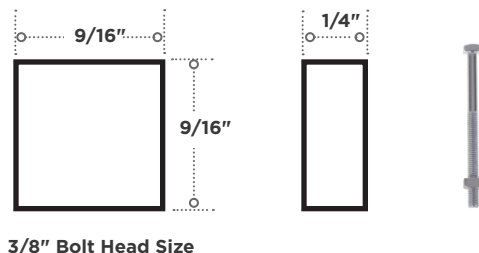
(2) ANSI standard, C-135.1.



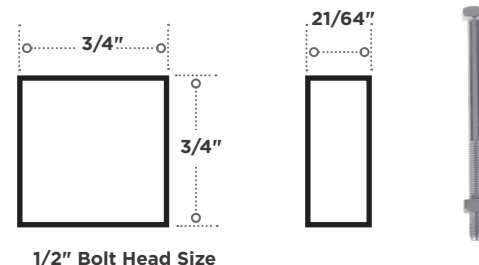
# Bolts

## Machine Bolts, Square Head Cable A Suspension Bolts

Sometimes referred to as "crossarm" bolts or "through" bolts, Hubbell Power Systems Square Head and Hex Head Machine Bolts are manufactured to HPS specifications that meet the requirements of ANSI C135.1 and are available in a range of thread diameters and lengths. The head is marked with an identifying "C" and the bolt includes an assembled square nut. Threads are formed with the rolled thread process. Bolt length is measured from the underside of the head to the last thread. Semi-cone point comes on bolts 8" and longer in 1/2", 5/8" and 3/4" diameters. All others have chamfered or rounded ends.



3/8" Bolt Head Size



1/2" Bolt Head Size

### 3/8" Thread Diameter (3/8-16 UNC)

Catalog Number	Dimensions Inches		Approx Ship Wt Each (lbs)
	Length	Minimum Thread Length	
8603	3	1	0.13
8604	4	3	0.15
860412 <sup>(1)</sup>	4-1/2	3	0.17
8605 <sup>(1)</sup>	5	3	0.18
860512	5-1/2	3	0.19
T2060412 <sup>(1)</sup>	6	3	0.21

NOTE: 4,250 lb rated tensile strength.

(1) ANSI standard, C-135.1.

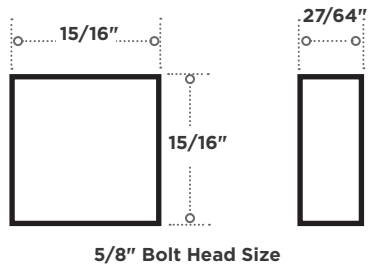
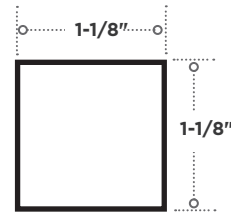
### 1/2" Thread Diameter (1/2-13 UNC)

Catalog Number	Dimensions Inches		Approx Ship Wt Each (lbs)
	Length	Minimum Thread Length	
870112	1-1/2	1-1/4	0.17
400013470 <sup>(2)</sup>	1-3/4	1-1/4	0.19
8705 <sup>(1)</sup>	5	3	0.35
8706 <sup>(1) (2)</sup>	6	3	0.40
8707 <sup>(1)</sup>	7	3	0.48
8708 <sup>(1) (2)</sup>	8	4	0.49
8709 <sup>(1)</sup>	9	4	0.57
8710 <sup>(1) (2)</sup>	10	4	0.60
8712 <sup>(1) (2)</sup>	12	4	0.71
8714 <sup>(1)</sup>	14	6	0.73
DF2B16	16	6	0.82

NOTE: 7,800 lb rated tensile strength.

(1) RUS listed, c - machine bolt.

(2) ANSI standard, C-135.1.

**Machine Bolts, SQUARE HEAD (continued)****Cable A Suspension Bolts****5/8" Bolt Head Size****3/4" Bolt Head Size****5/8" Thread Diameter (5/8-11 UNC)**

Catalog Number	Cable A Suspension Bolt Catalog Number	Dimensions Inches		Approx Ship Wt Each (lbs)
		Length	Minimum Thread Length	
8802		2	1-1/2	0.36
880212		2-1/2	2-1/4	0.39
PS8803		3	1-1/2	0.48
8804		4	3	0.57
8805		5	3	0.60
8806 <sup>(1) (2)</sup>		6	3	0.69
8807 <sup>(1) (2)</sup>		7	4	0.75
8808 <sup>(1) (2)</sup>	400013645*	8	4	0.78
8809 <sup>(1)</sup>		9	4	0.88
8810 <sup>(1) (2)</sup>	400013652*	10	6	0.93
8812 <sup>(1) (2)</sup>	400013660*	12	6	1.08
8814 <sup>(1) (2)</sup>	400013678*	14	6	1.23
8816 <sup>(1) (2)</sup>	400013686*	16	6	1.40
8818 <sup>(1) (2)</sup>	400013694*	18	6	1.54
8820 <sup>(1)</sup>	400013702*	20	6	1.71
8822 <sup>(1)</sup>	400013710*	22	6	1.76
8824 <sup>(1)</sup>	400314274*	24	6	1.96
8826		26	6	2.15
8828		28	6	2.31
8830		30	6	2.52
8832		32	6	2.78

**3/4-Inch Thread Diameter (3/4- 9 UNC)**

Catalog Number	Cable A Suspension Bolt Catalog Number	Dimensions Inches		Approx Ship Wt Each (lbs)
		Length	Minimum Thread Length	
PS8906		6	3	1.09
8910 <sup>(1) (2)</sup>	400013728*	10	4	1.54
8912 <sup>(1) (2)</sup>	400013736*	12	6	1.62
8914 <sup>(1) (2)</sup>	400013744*	14	6	1.88
8916 <sup>(1) (2)</sup>	400013751*	16	6	2.25
8918 <sup>(1) (2)</sup>	400013769*	18	6	2.32
8920 <sup>(1)</sup>		20	6	2.52
8922 <sup>(1)</sup>	400013022*	22	6	2.68
8924 <sup>(1)</sup>	400013024*	24	6	3.04
8926 <sup>(1)</sup>		26	6	3.08
8928		28	6	3.23
8930		30	8	3.46
8932		32	8	3.69
PS8934 <sup>(2)</sup>		34	8	3.83
PS8936 <sup>(2)</sup>		36	8	4.60

NOTE: 18,350 lb rated tensile strength.

\* Cable A Suspension Bolts include 2 square nuts

(1) RUS listed, c - machine bolt.

(2) ANSI standard, C-135.1.

NOTE: 12,400 lb rated tensile strength.

\* Cable A Suspension Bolts include 2 square nuts

(1) RUS listed, c - machine bolt.

(2) ANSI standard, C-135.1.

# Bolts

## Machine Bolts, Square Head (continued)

### Cable A Suspension Bolts

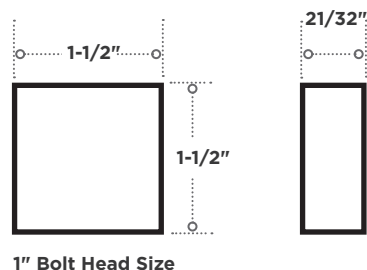
#### 7/8-Inch Thread Diameter (7/8- 9 UNC)

Catalog Number	Dimensions Inches		Approx Ship Wt Each (lbs)
	Length	Minimum Thread Length	
PSSB780300	3	2	0.94
PSSB780400	4	2	1.15
PSSB780500	5	2-1/2	1.30
PSSB780600 <sup>(1)</sup>	6	2-1/2	1.44
PSSB780800 <sup>(1) (2)</sup>	8	3	1.76
PSSB781000 <sup>(1) (2)</sup>	10	6	2.08
DF5B12 <sup>(1) (2)</sup>	12	6	2.40
C2050254 <sup>(1) (2)</sup>	14	6	2.84
C2050255 <sup>(1) (2)</sup>	16	6	3.16
C2050256 <sup>(1) (2)</sup>	18	6	3.52
C2050257 <sup>(1)</sup>	20	6	3.90
C2050258 <sup>(1)</sup>	22	6	4.25
DF5B24 <sup>(1)</sup>	24	6	4.30
PSSB782600 <sup>(1)</sup>	26	8	4.62
PSSB782800 <sup>(1)</sup>	28	8	4.94
PSSB783000	30	8	5.27
PSSB783200	32	8	5.61
PSSB783400	34	8	5.69
PSSB783600	36	8	6.07
PSSB783800	38	8	6.20
PSSB784000	40	8	6.60
PSSB784200	42	8	6.80

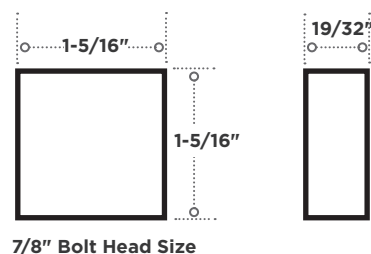
NOTE: 24,500 lb rated tensile strength. For additional square nuts, see page A92.

(1) RUS listed, c - machine bolt.

(2) ANSI standard, C135.1.



1" Bolt Head Size



7/8" Bolt Head Size



#### 1-Inch Thread Diameter (1-8 UNC)

Catalog Number	Dimensions Inches		Approx Ship Wt Each (lbs)
	Length	Minimum Thread Length	
PSSB101200 <sup>(1)</sup>	12	6	3.27
PSSB101400 <sup>(1)</sup>	14	6	3.69
PSSB101600 <sup>(1)</sup>	16	6	4.12
PSSB101800 <sup>(1)</sup>	18	6	4.54
PSSB102000	20	6	4.96
PSSB102200	22	6	5.38
PSSB102400	24	6	5.81
PSSB102600	26	6	6.24
PSSB102800	28	8	6.67
PSSB103000	30	8	7.10

NOTE: 33,500 lb rated tensile strength. For additional square nuts, see page A92.

(1) ANSI standard, C-135.1.

## Machine Bolts, Hex Head

Hubbell Power Systems Square Head and Hex Head Machine Bolts are manufactured to HPS specifications that meet the requirements of ANSI C135.1 and are available in a range of thread diameters and lengths. The head is marked with an identifying "C" and the bolt includes an assembled hex nut. Threads are formed with the rolled thread process. Bolt length is measured from the underside of the head to the last thread.

### 1/2-Inch Thread Diameter (1/2-13 UNC)

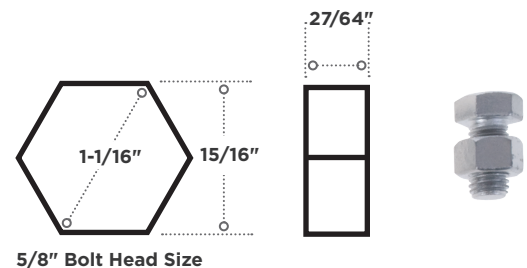
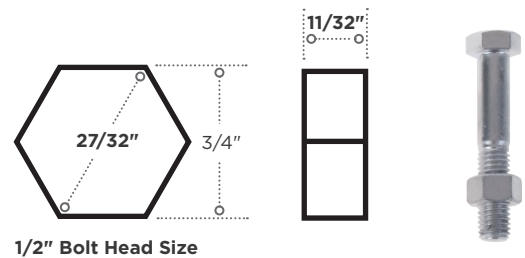
Catalog Number	Dimensions Inches		Approx Ship Wt Each (lbs)
	Length	Minimum Thread Length	
PSHB120150	1-1/2	1-1/4	0.15
PSHB120175	1-3/4	1-1/4	0.16
PSHB120200	2	1-1/4	0.17
PSHB120250	2-1/2	1-1/4	0.20
PSHB120300	3	1-1/4	0.23
PSHB120400	4	3	0.30

NOTE: 7,800 lb rated tensile strength.

### 5/8-Inch Thread Diameter (5/8-11 UNC)

Catalog Number	Dimensions Inches		Approx Ship Wt Each (lbs)
	Length	Minimum Thread Length	
PSHB580150	1-1/2	1-1/4	0.33
PSHB580175	1-3/4	1-1/2	0.35
PSHB580200	2	1-1/2	0.37
PSHB580250	2-1/2	1-1/2	0.43
PSHB580300	3	1-1/2	0.46

NOTE: 12,400 lb rated tensile strength.





# Bolts

## Ovaleye Bolts

Bolts with 5/8" and 3/4" shanks have 1-1/2" x 2" ovaleyes. Drop-forged, galvanized steel bolts have cone type points and rolled threads.

### 1/2-Inch Shank Diameter (7/16 x 1-1/4" x 1-5/8" Ovaley)

Catalog Number	Dimensions Inches		Approx Ship Wt Each (lbs)
	Length	Thread Length	
29937	6	4	0.66
29943	12	6	1.00

NOTE: 7,800 lb rated tensile strength.

### 3/4-Inch Shank Diameter (5/8 x 1-1/2" x 2" Ovaley)

Catalog Number	Dimensions Inches		Approx Ship Wt Each (lbs)
	Length Under Eye	Thread Length	
29978 <sup>(1) (2)</sup>	8	4	1.80
29980 <sup>(1) (2)</sup>	10	4	2.00
29982 <sup>(1) (2)</sup>	12	6	2.28
29984 <sup>(1) (2)</sup>	14	6	2.48
29986 <sup>(1) (2)</sup>	16	6	2.68
29988 <sup>(1) (2)</sup>	18	6	3.14
29990 <sup>(1) (2)</sup>	20	6	3.26

NOTE: 20,050 lb rated tensile strength.

(1) RUS listed.

(2) ANSI standard, C135.5

### 5/8-Inch Shank Diameter (9/16 x 1-1/2" x 2" Ovaley)

Catalog Number	Dimensions Inches		Approx Ship Wt Each (lbs)
	Length	Thread Length	
29956 <sup>(1) (2)</sup>	6	4	1.00
29958 <sup>(1) (2)</sup>	8	4	1.04
29959 <sup>(1) (2)</sup>	9	4	1.13
29960 <sup>(1) (2)</sup>	10	6	1.22
29962 <sup>(1) (2)</sup>	12	6	1.44
29964 <sup>(1) (2)</sup>	14	6	1.46
29966 <sup>(1) (2)</sup>	16	6	1.68
29968 <sup>(1) (2)</sup>	18	6	2.08
29970 <sup>(1) (2)</sup>	20	6	2.40

NOTE: 13,550 lb rated tensile strength.

(1) RUS listed.

(2) ANSI standard, C135.4, C135.5



## Screw Eye Bolts

Gimlet-point lag-screw thread. Drop-forged except Catalog Number 8777. Hot-dip galvanized per ASTM A-153.

Catalog Number	Type	Dimensions Inches			Approx Ship Wt Each (lbs)
		Size of Eye	Diameter	Length Under Eye	
<b>29930</b>	Ovaleye	1-1/4 x 1-5/8	1/2	6	0.65
<b>C2050094</b>	Ovaleye	1-1/4 x 1-5/8	1/2	4	0.54
<b>8777<sup>(1)</sup></b>	Hookeye	3/4	3/8	3-1/2	0.16

(1) 1/4" eye opening.



Ovaley Screw Eye Bolt

Hookeye Screw Eye Bolt

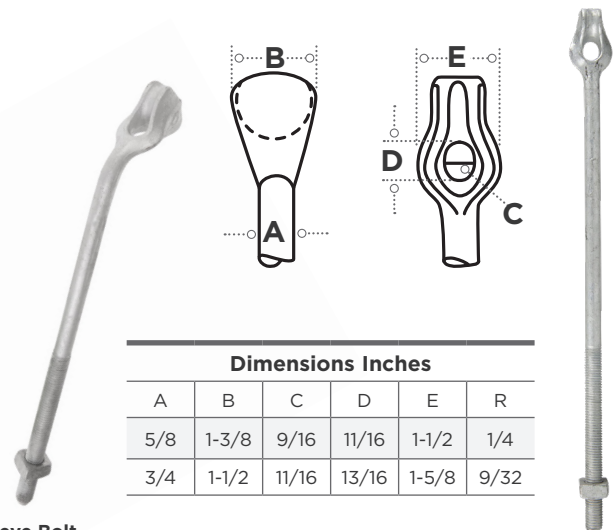
## Thimbleye® Bolts

Contoured eye keeps guy strand from kinking, bending or spreading. Drop-forged steel. Hot-dip galvanized. Cone-type points. Eyes of angle bolts are offset 45 degrees.

Catalog Number		Dimensions Inches		Rated Tensile Strength (lbs)	Approx Ship Wt Each (lbs)
Straight Bolt	Angle Bolt	Size	Thread Length		
<b>DG1F8<sup>(1)</sup></b>	<b>DG4F8<sup>(1) (2)</sup></b>	5/8 x 8	4	12,400	1.12
<b>5510<sup>(1) (2)</sup></b>	<b>5010<sup>(1) (2)</sup></b>	5/8 x 10	4	12,400	1.48
<b>5512<sup>(1) (2)</sup></b>	<b>5012<sup>(1) (2)</sup></b>	5/8 x 12	6	12,400	1.76
<b>5514<sup>(2)</sup></b>	<b>5014<sup>(2)</sup></b>	5/8 x 14	6	12,400	1.88
<b>5516</b>	<b>5016</b>	5/8 x 16	6	12,400	1.92
<b>DG1F18</b>	—	5/8 x 18	6	12,400	2.00
<b>PS5520<sup>(1)</sup></b>	—	5/8 x 20	6	12,400	2.05
<b>PS5610<sup>(1)</sup></b>	<b>5110T<sup>(1)</sup></b>	3/4 x 10	4	18,350	2.28
<b>5612<sup>(1)</sup></b>	<b>5112T<sup>(1)</sup></b>	3/4 x 12	6	18,350	2.44
<b>5614</b>	<b>5114T</b>	3/4 x 14	6	18,350	2.64

(1) RUS listed.

(2) ANSI standard, C-135.4.



Angle Thimbleye Bolt

Straight Thimbleye Bolt

Dimensions Inches

A	B	C	D	E	R
5/8	1-3/8	9/16	11/16	1-1/2	1/4
3/4	1-1/2	11/16	13/16	1-5/8	9/32

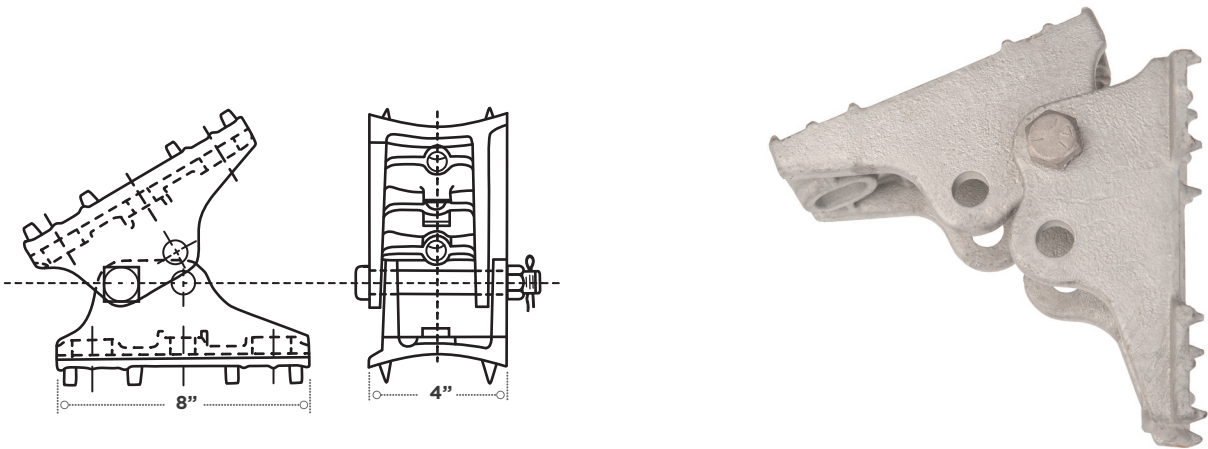
# Braces

## Push Pole Brace

For use in push pole application where tension guying is not feasible. Brace adjusts for different pole angles.

Catalog Number	Dimensions Inches				Approx Ship Wt Each (lbs)
	Pole Diameter	Base Diameter	Mounting Bolt Diameter	Hinge Bolt Diameter	
SG611	6 - 11	4 x 8	3/4	3/4	7.50

NOTE: Ductile iron per ASTM A-536. Hot-dipped galvanized per ASTM A-153



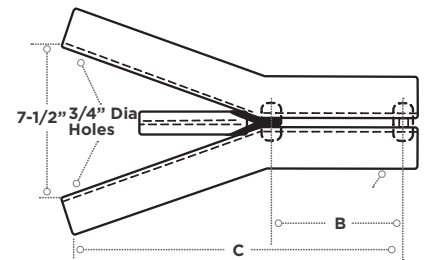
## Cable Extension Brackets

For suspending cables at a distance from the pole, catalog number 7903 Cable Suspension Clamp is suspended under the arm and attached through the center slot to a 5/8" machine bolt with a washer under the bolt head. Cable extension from the pole is 23" for catalog number 7920, and 41" for catalog number 7921. Cable clamp with attachment bolt and pole mounting bolts, or lag screws, must be ordered separately. Hot-dip galvanized.

Catalog Number	Dimensions Inches			Approx Ship Wt Each (lbs)
	A - Angle Size	B	C	
7920	3 x 2-1/2 x 1/4	8 1/2	26	29.0
7921	3-1/2 x 2-1/2 x 5/16	18 3/4	44-1/2	62.0



Cable Extension Bracket



## Type L Suspension Bracket

Consists of one support strap and one L-bracket standoff. The bracket secures one messenger clamp adjacent to pole and one clamp below and offset from pole. Through bolt and suspension clamps are purchased separately.

Catalog Number	Description	Dimensions (In)	Approx Ship Wt Each (lbs)
260520846	Bracket, Type L Suspension	L bracket - 1-1/4 x 1/2 Strap - 1-1/4 x 1/8	3.7
260634910	Strap Only	1-1/4 x 1/8	0.84



No. 260520846



No. 260634910

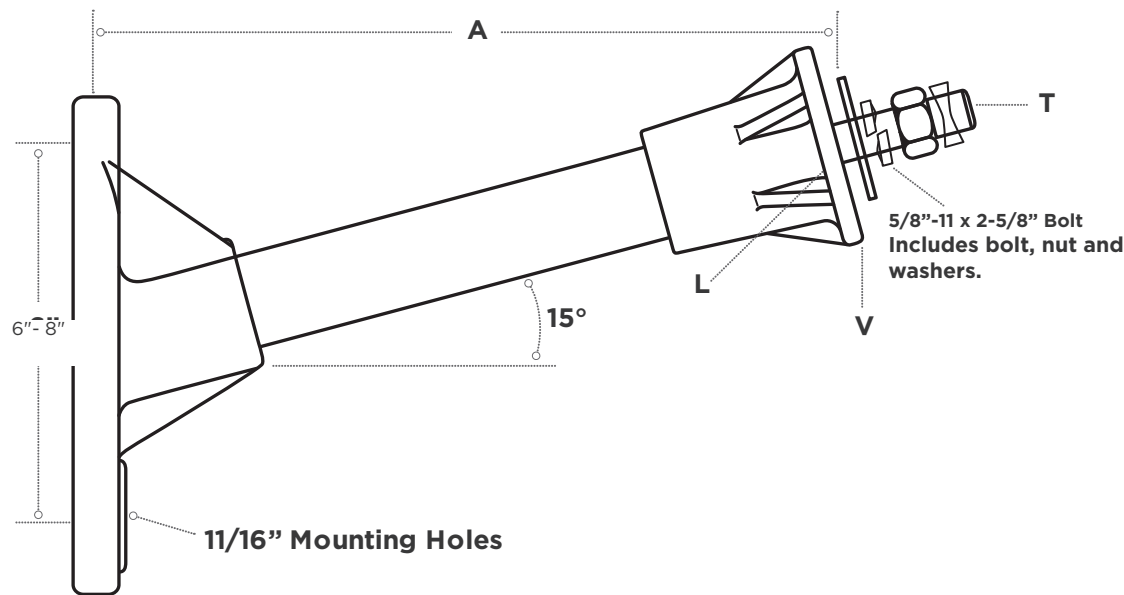
# Brackets

## Communication Standoff Brackets

With over 60 years of manufacturing experience, you can depend on the quality of our brackets. Standoff brackets are a great way to add distance between the equipment being mounted and the pole when additional clearance or space is needed. Our brackets are available in a variety of lengths, angles, and end fittings to suit your application needs.

Fiberglass is a great option due to the increased lifespan, non-conductive nature, and decreased flammability. The fiberglass rod is either painted with UV resistant paint or coated in silicone to add to the longevity of the bracket.

Communication standoff brackets are designed with an end fitting that is well suited for communication applications. These end fittings are perfect for attaching a suspension clamp to support the messenger wire from pole to pole.

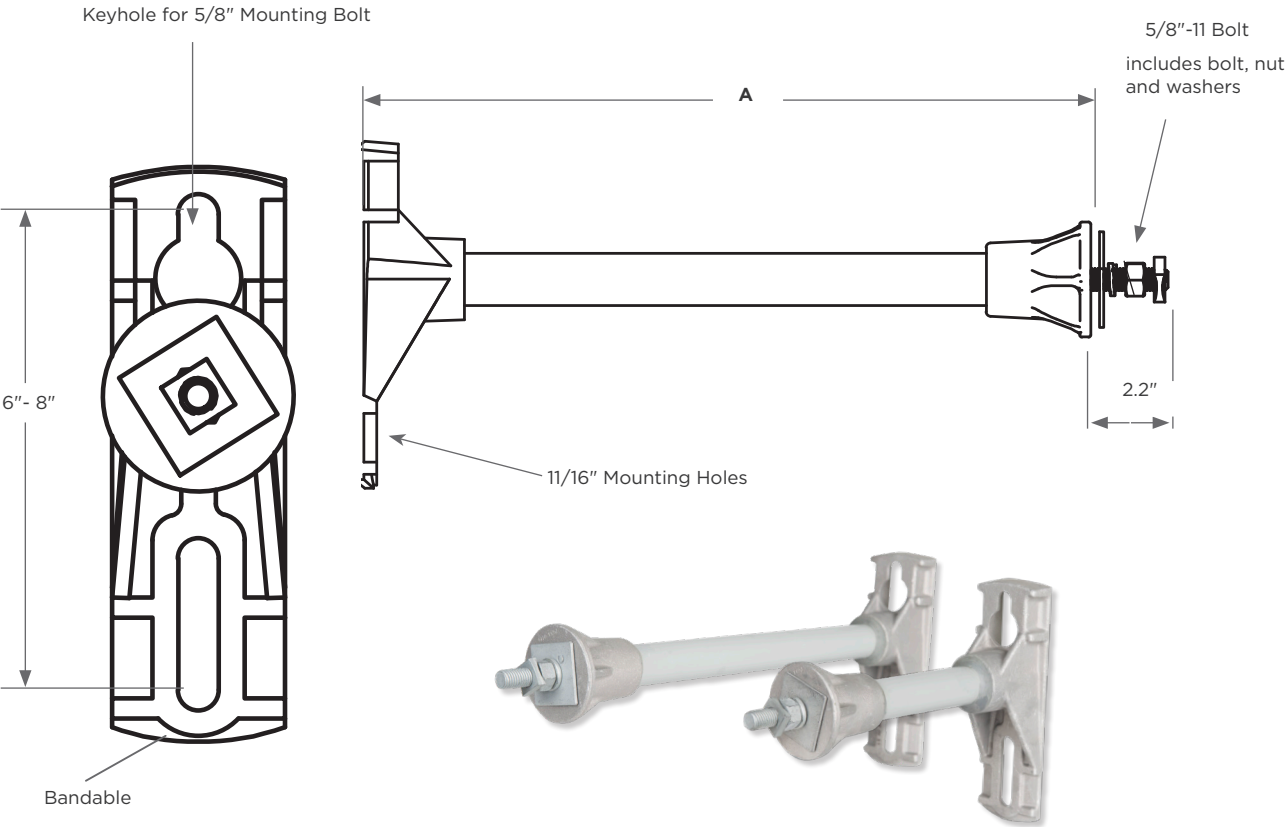


Medium Duty 1-1/2" (38 mm) Diameter Rod

Catalog Number	Length A Inches (cm)	Minimum Ultimate <sup>(1)</sup>			Weight Each lb
		Vertical V lb (kg)	Longitudinal L lb (kg)	Transverse T lb (kg)	
1CSM12	12 (30.5)	2,100 (945)	1,300 (585)	1,500 (675)	3.8
1CSM15	15 (38.1)	1,800 (810)	1,200 (540)	1,500 (675)	4.2
1CSM18	18 (45.7)	1,500 (675)	1,000 (450)	1,500 (675)	4.6
1CSM21	21 (53.3)	1,300 (585)	850 (383)	1,500 (675)	5.0
1CSM24	24 (61.0)	1,100 (495)	700 (315)	1,500 (675)	5.4
1CSM30	30 (76.2)	900 (405)	600 (270)	1,500 (675)	6.1
1CSM36	36 (91.4)	900 (405)	500 (225)	1,500 (675)	6.8

(1) Recommended maximum working load is 50% of minimum ultimate ratings listed. Consult factory for additional lengths and bases.

Communication Standoff Bracket (0°)



- Base design permits bolting or banding to structure
- Rod is fiberglass with UV-resistant urethane gray paint
- Base and End Fitting are aluminum alloy.

Medium Duty 1-1/2" (38 mm) Dia. Fiberglass Rod

Catalog Number	Length A Inches (cm)	Minimum Ultimate <sup>(1)</sup>			Weight Each lb (kg)
		Vertical V lb (kg)	Longitudinal L lb (kg)	Transverse T lb (kg)	
1CSM120	12 (30)	2100 (953)	900 (408)	1500 (680)	3.8 (1.7)
1CSM150	15 (38)	1800 (810)	800 (363)	1500 (680)	4.2 (1.9)
1CSM180	18 (46)	1500 (680)	700 (318)	1500 (680)	4.6 (2.1)
1CSM210	21 (53)	1200 (544)	600 (272)	1500 (680)	5.0 (2.3)
1CSM240	24 (61)	900 (408)	500 (227)	1500 (680)	5.4 (2.4)

(1) Recommended maximum working load is 50% of minimum ultimate ratings listed.  
Consult factory for additional lengths, bases, and long bolt option.  
Add "SC" suffix to the end of the catalog number to denote Silicone Coated rod.



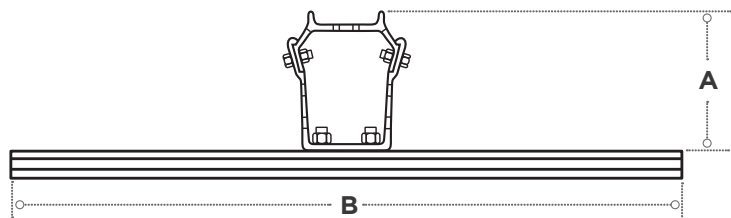
# Brackets

## Conduit Brackets

A versatile conduit bracket for supporting 1" to 6" dia. conduit in various mounting configurations. Bracket will mount up to four 6" conduits with unlimited adjustability. H-Slot extrusion eliminates field drilling. Unit mounts to the pole on 3-5/8" hole centers using 5/8" thru-bolt and 1/2" lag (not supplied). Conduit strap kits are ordered separately below. Additional T-Slot Shapes are available on the following pages.

Catalog Number	Dimensions Inches		Approx Ship Wt Each (lbs)
	A	B	
C6CSO	6	N/A	2.31
C6CSO6	6	6	3.03
C6CSO8	6	8	3.10
C6CSO12	6	12	3.50
C6CSO18	6	18	4.44
C6CSO24	6	24	4.85
C6CSO36	6	36	5.81
C6CSO48	6	48	6.50
C9CSO	9	N/A	2.97
C9CSO12	9	12	4.81
C9CSO24	9	24	6.02
C9CSO36	9	36	7.88

Note: For brackets with 4-Way T-Slot in place of H-Slot, add the suffix 4WT to the end of the catalog number.

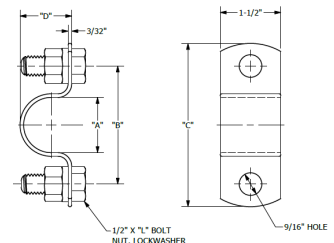


## Conduit Strap Kits

Strap Kits with the following variations are available for use with the Conduit Brackets above. The straps have two holes for mounting one conduit section. Each Strap Kit contains a strap, two each 1/2" x 1-1/4" hex head bolts, lockwashers and hex nuts.



Conduit Strap Kit

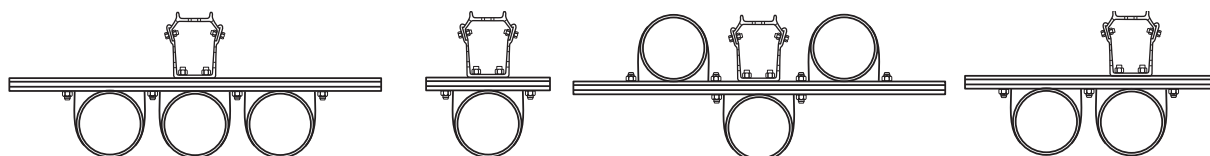


No. CSTK2 to Conduit Strap Kit

Catalog Number	Dimensions Inches					Approx Ship Wt Each (lbs)
	Conduit Size	A	B	C	D	
CSTK1	1	1-3/8	3	4-1/8	1-1/4	0.30
CSTK15	1-1/2	1-7/8	3-1/2	4-5/8	1-7/8	0.35
CSTK2	2	2-3/8	3-15/16	5-1/16	2-1/4	0.40
CSTK25	2-1/2	2-7/8	4-7/16	5-9/16	2-3/4	0.45
CSTK3	3	3-1/2	5-1/16	6-3/16	3-3/8	0.50
CSTK35	3-1/2	4	5-9/16	6-11/16	3-15/16	0.60
CSTK4	4	4-1/2	6-1/16	7-3/16	5-3/8	0.65
CSTK5	5	5-9/16	7-1/8	8-1/4	5-1/2	0.70
CSTK6	6	6-5/8	8-3/8	9-5/16	6-1/2	0.75

Note: Add suffix 2HMB for 1/2" x 2" bolts instead.

### Installation Options



## Conduit Strap Only

Aluminum conduit strap without bolts included. One 9/16" hole on each end.

Catalog Number	Size (in)	Approx Ship Wt Each (lbs)
CST2	2	0.12
CST3	3	0.17
CST4	4	0.30
CST5	5	0.33

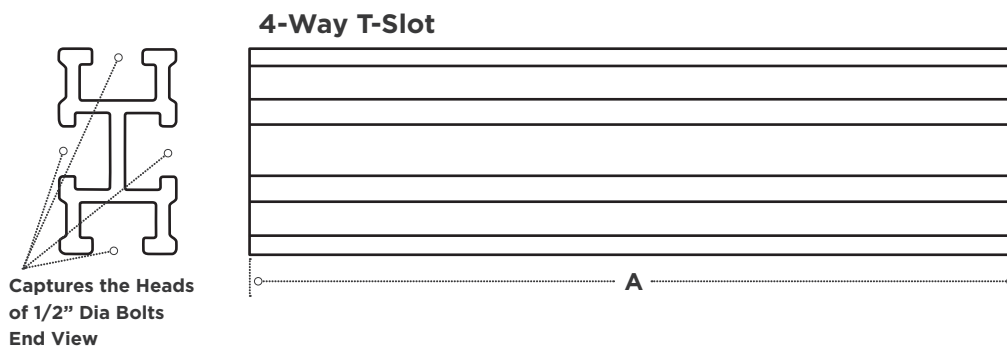
## T-Slot Shaped Conduit Brackets

For versatile equipment mounting, these custom T-Slot Shapes are extruded from high-strength, heat-treated 6061-T6 aluminum alloy.

A multi-purpose extrusion for mounting equipment in four directions using 1/2" diameter hardware.

### 4-Way T-Slot

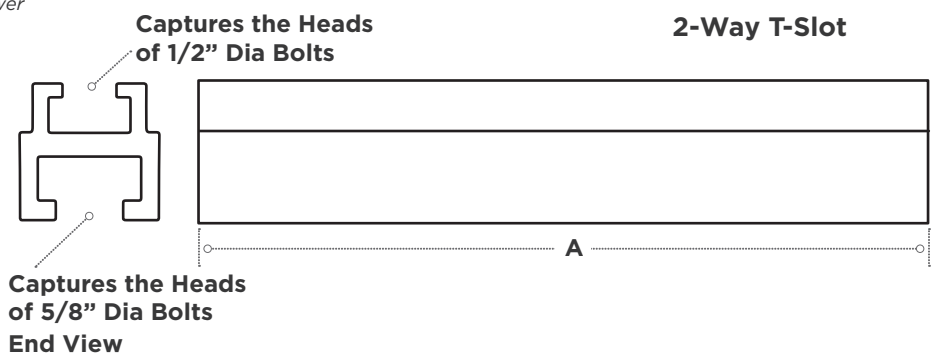
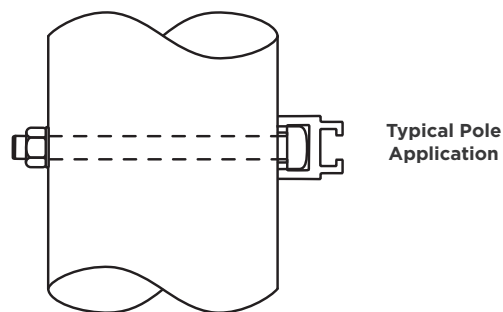
Catalog Number	Dimension A Inches	Weight Each lb
C4WT12	12	1.25
C4WT24	24	2.25
C4WT36	36	3.25
C4WT48	48	4.50
C4WT60	60	5.50
C4WT120	120	11.00



### 2-Way T-Slot

Catalog Number	Dimension A Inches	Weight Each lb
C2WT12	12	1
C2WT24	24	2
C2WT36	36	3
C2WT48	48	4
C2WT60	60	5
C2WT120	120	10

NOTE: Both the extrusions can be used for thru-bolt mounting of equipment to poles, structures, walls, enclosures, machinery, etc. Other lengths are available by special order. Contact Hubbell Power Systems for details.

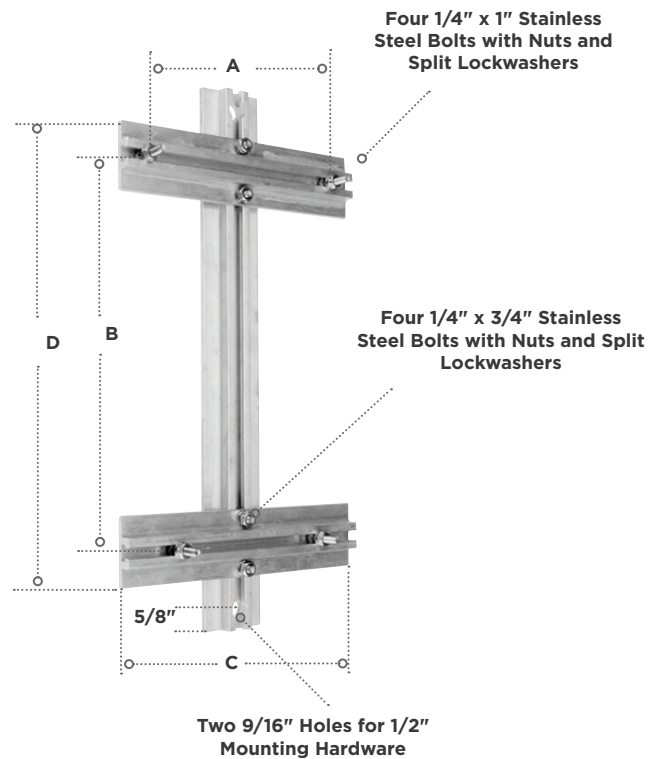


# Brackets

## Cabinet Mounting Bracket

- For mounting meter cabinets, meter sockets or other light-duty enclosures, with a maximum weight not to exceed 500 pounds.
- Installs to pole or wall with two 1/2" fasteners, not included.
- Adjust for various hole patterns. See ordering information below for ranges.
- Consists of one vertical support, two horizontal supports and stainless steel mounting hardware.
- Shipped unassembled.

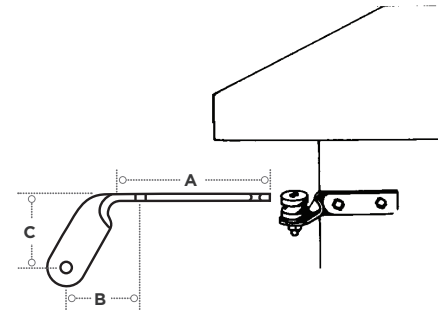
Catalog Number	Mounting Range Inches				Wt Each lb
	A	B	C	D	
CCMB812	1 to 7-1/4	2 to 12	8	16-3/8	2.25
CCMB1218	1 to 11-1/4	2 to 18	12	22-3/8	3.00
CCMB1624	1 to 15-1/4	2 to 24	16	28-3/8	3.75
CCMB1830	1 to 17-1/4	2 to 30	18	34 3/8	4.25



## House Bracket

Used where the pole lead attaches to the building at an angle or to carry leads around the corner of a building. Used with porcelain spool insulator and 8604 bolt which are not included. Hot-dip galvanized per ASTM A-153.

Hubbell Catalog Number	Bell Corp Number	Dimensions Inches						Approx Ship Wt Each (lbs)
		Mtg. Holes	Ins. Holes	Steel Size	A	B	C	
8205	400017836	9/32	13/32	1/2 x 3/16	4-3/4	2-7/8	2-5/8	0.82



## Wall Strap

Deadend strands to the mounting wall

Catalog Number	Change to Mast Diameter Range (inches)	Approx Ship Wt Each (lbs)
400302402	Thimbleye® Wall Strap, 3/4" x 24", 5/8" offset	3.30
PSC2080291	U Wall Strap deadends strands at right angles to the mounting wall. Attach the U wall strap using 1/2" hardware (not supplied).	1.20
DC168B1	Thimbleye® Wall Strap, 3/4" x 17", 5/8" offset	2.40



No. 400302402



PSC2080291

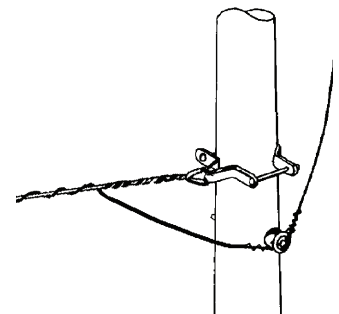
## Mast Service Deadend Bracket

Attaches to 1-1/4" through 3" diameter service masts. Front strap is rounded to prevent damage to bail of the service clamp. Square hole at end of the front slot captures the carriage bolt head during installation and prevents slippage after installation. Hot-dip galvanized per ASTM A-153.

Catalog Number	Change to Mast Diameter Range (inches)	Approx Ship Wt Each (lbs)
C2060169	1-1/4 to 3	1.02
DC12M1	1-1/4 to 2	0.78



No. DC12M1



# Brackets

## Type C Deadend Bracket

Used to deadend communications service drops.  
5/16" Clevis Pin Included. Galvanized steel, ASTM A-153.

Catalog Number	Description	Approx Ship Wt Each (lbs)
400017869	Deadend Attachment	1.60



No. 400017869

### Attachment, Corner Deadend

Corner Attachment Bracket is an integral thimble eye pole attachment for deadending strand and guy grips at angles of 35° to 60°. Pole mounting surface is curved with integral spurs. Accommodates Maximum 1/2" diameter strand/guy grips.

Catalog Number	Description	Approx Ship Wt Each (lbs)
PSC2080479	Deadend Attachment	1.60

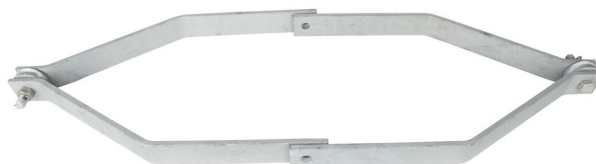


No. PSC2080479

### Bracket, Deadend Pole Mount

Pole Mount Deadend Bracket Assembly used to deadend at the pole when an obstruction on the pole prohibits standard deadend hardware. Mounting hole for 5/8" hardware (not included).

Catalog Number	Description	Approx Ship Wt Each (lbs)
PSC2080491	Pole Mount Assembly	27.90



No. PSC2080491



## Brackets

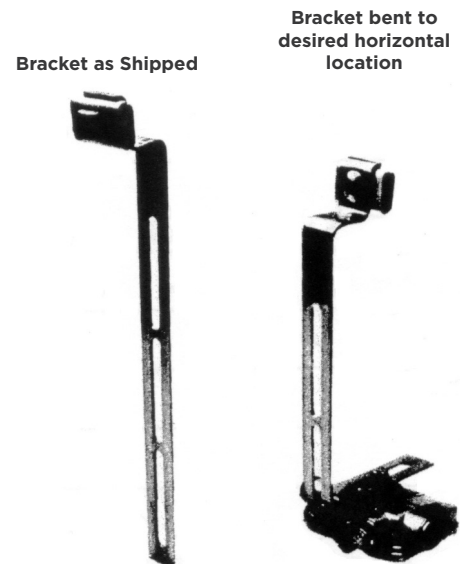
### Hanger Bracket (Tap)

Aluminum, for strand 6M and 6.6M. Used in CATV drop installations to secure a tap or other electronics to the messenger strand. The bracket can be bent at any point to achieve the desired horizontal location.

#### Features

- Size range 3" to 9" (distance between strand and tap).
- Bracket and clamping plates are made of aluminum alloy.
- Bolt and nut are made of steel.
- Designed for 1/4" (6.6M) and 5/16" (6M) messenger strand.
- Square hole in bracket prevents bolt rotation when tightening.
- Bend at top edge of bracket prevents rotation when bolts are tightened.
- Interlocking clamping plates assure a positive and secure grip on the messenger strand.
- Elongated slots provide variable positioning of tap or other electronics.

Ordering information: **ATB115050**



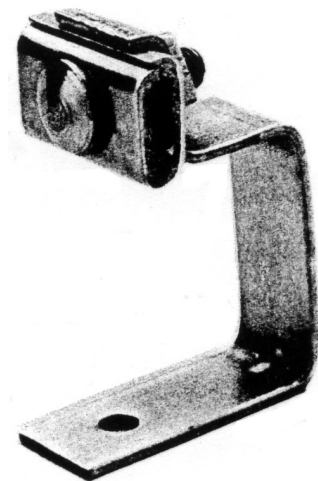
### Aluminum Extension Bracket (Tap)

Aluminum, for strand 6M and 6.6M. Used in CATV drop installations to secure a tap to the messenger strand when it cannot be attached directly. The unit is offset below the strand, preventing cable abrasion on the equipment housing.

#### Features

- 2-1/2" size (distance between strand and tap).
- Bracket and clamping plates are made of aluminum alloy.
- Bolt and nut are made of steel.
- Designed for 1/4" (6.6M) and 5/16" (6M) messenger strand.
- Square hole in bracket prevents bolt rotation when tightening.
- Tap mounting hole accepts up to a 5/16" bolt.
- Bend at top edge of bracket prevents rotation when bolts are tightened.
- Interlocking clamping plates assure a positive and secure grip on the messenger strand.

Ordering information: **ATB255050**



### Service Deadend Plate

- Plate, Service Deadend, 1-1/2"
- Attaches with two 1/2" dia. fasteners
- Hot dip galvanized per ASTM A-153
- Hubbell Catalog number **DC13E1**



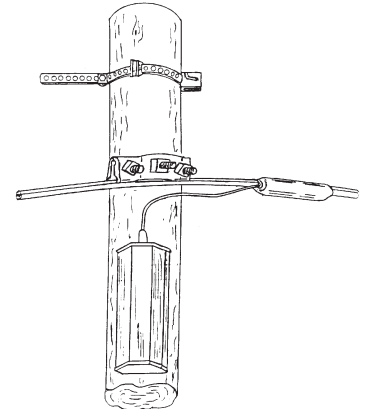
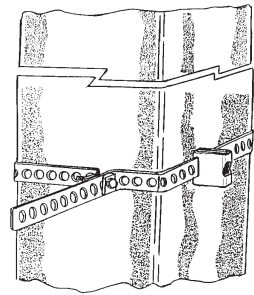
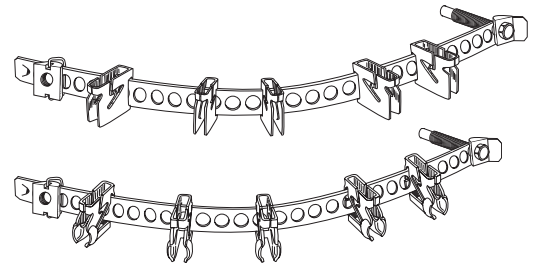
No. DC13E1

## Stainless Steel Mast Clamps

All-stainless-steel strap-type mast clamp, with movable hooks for anchoring aerial drop wire. Designed to secure telephone and CATV aerial drop wire installations to steel masts, wooden poles, concrete poles.

### Features

- All-stainless-steel construction for strength and corrosion resistance.
- Installs on round or square poles and masts.
- Each hook can accommodate up to three drop wire clamps at any angle.
- Upon installation, the hooks can be moved to any position along the strap length, for maximum versatility.
- Works with all of the popular drop wire clamps.
- Strap is made of annealed stainless steel, so it is easily formed around various shapes and diameters.



Catalog Number	Length	Hook Type	Number of Hooks per Assembly	Qty.	Approx Ship Wt Each (lbs)
EM-8484TT	32"	Assembled	5	50	32
EM-8484TT-5RH	32"	Removable	5	1	0.7
EM-8484TT-54	54"	Assembled	5	50	39
EM-8484TT-54S2RH	54"	Removable	2	50	27
EM-8484TT-RH	--	Removable	Removable Hooks Only	50	4

## Beam Clamp

Used to deadend strands to I-beams. Set screw provides positioning during attachment of 5/8" bolt.

Catalog Number	Number of Bolts	Dimensions Inches			Approx Ship Wt Each (lbs)
		Length	Width	Accepts Strand Size	
PSC2080244	2	2.5	2.25	5/8	0.65



No. PSC2080244

# Clamps

## Crossover Clamp 1/4"

Secures mid-span messenger strands crossing perpendicularly to each other to prevent abrasion.

Catalog Number	Number of Bolts	Dimensions Inches			Approx Ship Wt Each (lbs)
		Length	Width	Accepts Strand Size	
C25CC	2	2.4	2.4	1/4	0.7
PSC2080480	2	3.25	1.5	1/4 thru 3/8	1.6



No. C25CC

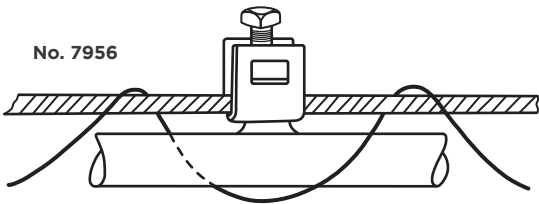


No. PSC2080480

## Ground Clamp, B-Strand

Connection is soldered to the cable sheath and mechanically clamped to the messenger wire. The bolt can be removed so that the clamp can be dropped over the messenger. Hot-dip galvanized per ASTM A-153.

Catalog Number	Dimensions Inches			Approx Ship Wt Each (lbs)
	Steel Size	Length	Bolt Size	
7956	3/16 x 1-3/4	1-3/4	1/2 x 1-3/4	0.61



## Guy Deadend Clamps

Parallel grooves trap strand tightly without marring. Plate halves align evenly for easy application. Each bolt has a shoulder to prevent turning while tightening. Hot-dip galvanized per ASTM A-153.

### 5/8" Clamp Bolts

Catalog Number	Number of Bolts	Dimensions Inches			Approx Ship Wt Each (lbs)
		Length	Width	Accepts Strand Size	
6460	3	6	2-1/8	3/8 thru 5/8	3.90
6461 <sup>(1)(2)</sup>	3	6	1-21/32	5/16 thru 1/2	2.52
6462	2	4	1-21/32	5/16 thru 1/2	1.78

(1) *RUS listed.* (2) *NEMA standard.*

### 1/2" Clamp Bolts

Catalog Number	Number of Bolts	Dimensions Inches			Approx Ship Wt Each (lbs)
		Length	Width	Accepts Strand Size	
6448	2	3-3/8	1-9/16	1/4 thru 7/16	1.32
6449	3	4	1-9/16	1/4 thru 7/16	1.62
6450 <sup>(1)(2)</sup>	3	6	1-9/16	1/4 thru 7/16	2.28

(1) *RUS listed.* (2) *NEMA standard.*

## Guy Clamps

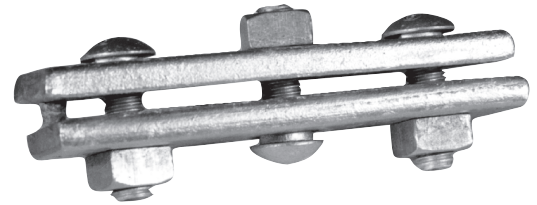
Guy clamp member provides a more positive hold on the guy strand.

Catalog Number	Number of Bolts	Dimensions Inches			Approx Ship Wt Each (lbs)
		Length	Width	Accepts Strand Size	
6409	2	3.4	1.60	3/16 thru 5/16	1.35
400121315	1	1.56	1.44	3/16 thru 3 / 8	0.58

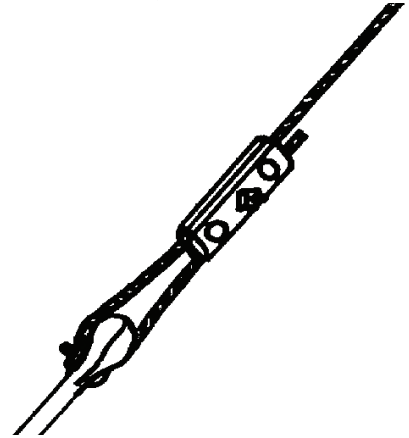
## B Guy Rod Clamp

Used for above ground extension of existing anchor rod.

Catalog Number	Number of Bolts	Dimensions Inches			Approx Ship Wt Each (lbs)
		Length	Width	Accepts Strand Size	
400121372	3	6.0	2.00	5/8 thru 3 / 4	6.79



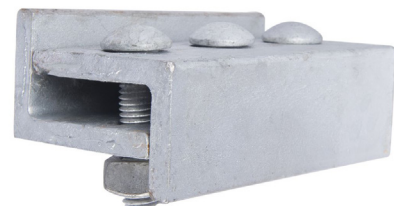
3-Bolt Guy Deadend Clamp



No. 6409



No. 400121315



No. 400121372

# Clamps

## Messenger Suspension Clamps

Clamps are used with through bolts to support cable at poles. Accommodate strand size 1/4" thru 7/16". Through bolt also serves as clamping member. One or more nuts and/or washers are used between the pole and clamp for required spacing. Catalog Number 7901 is used on very light cables. This one bolt clamp consists of the two clamping members only. Catalog Numbers 7902L and 7902R are used at corners and angles. Catalog Numbers 7903 and 7904 are used on straight runs.

Catalog Number	Type	Dimensions Inches		Approx Ship Wt Each (lbs)
		Length	Center Hole Dia	
7901	1-Bolt Straight Susp	2-1/2	11/16	0.75
7902L	3-Bolt Angle Susp.	7	11/16	2.04
7902R	3-Bolt Angle Susp	7	13/16	2.04
7903	3-Bolt Straight Susp.	5-3/4	11/16	1.78
7903L <sup>(1)</sup>	3-Bolt Straight Susp.	5-3/4	11/16	1.77
7904	3-Bolt Straight Susp.	5-3/4	13/16	1.75
PSC2080529	3-Bolt Angle Susp.	7-1/4	13/16	4.20

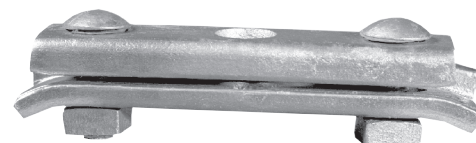
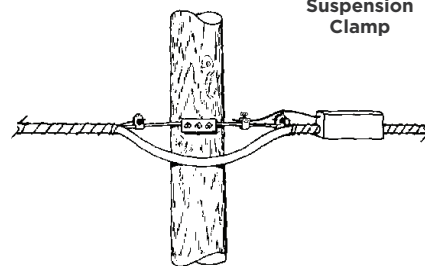
(1) Flat keeper plate.



no. 7903L



3-Bolt  
Suspension  
Clamp



3-Bolt Angle  
Suspension Clamp

## Serpentine Cable Suspension Clamp

C-Cable Suspension clamp is used for jacketed integrated messenger cable (Figure 8 style). Serpentine grooves in the mounting plates provide superior holding strength of insulated messenger wire. Includes two 5/8" dia. carriage clamping bolts. Clamp mounts to pole with a 5/8" dia. thru-bolt, that also serves as a clamping member.

Catalog Number	Number of Bolts	Dimensions Inches			Approx Ship Wt Each (lbs)
		Length	Width	Accepts Strand Size	
PSC2080296	2	6	1.6	5/8	2.5



No. PSC2080296

## Aerial Suspension Clamps

Aerial Suspension Clamp, used to secure messenger to pole face. 5/8" hole in clamp base is tapped to remain in position when clamp half is removed. Top hook supports cable during installation.

Catalog Number	No. of Bolts	Minimum Cable Diameter	Maximum Cable Diameter	Approx Ship Wt Each (lbs)
ASC2	1	0.22	0.56	2.16
ASC3	1	0.43	0.75	1.77
ASC5	3	0.56	0.75	7.61



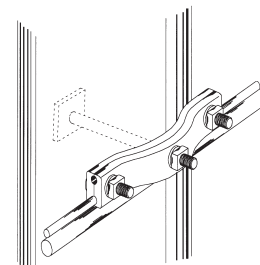
Aerial Suspension Clamp

## Support Clamp for All Figure 8 Facilities

Made of high tensile aluminum. Designed to receive 1/2" or 5/8" standard through bolt.

### Features

- Designed to fit many sizes of support strand used for Figure 8 duct or Figure 8 cable (strand sizes .109 - .148 and 3/16" - 1/4").
- Serpentine design prevents pull-through and allows cable or messenger-on-duct to be twisted when installed.
- Two marked clamp grooves minimize insulation crushing.
- Can be used on corners up to 30° with solid support members, and 20° with stranded.



### Ordering information

#### EM-0925

Figure 8 Support Clamp

Standard packaging: 25/bx, 30 lb/bx. No minimum order.

#### EM-0925.750

Version of above clamp with 13/16" middle hole for attaching 3/4" hardware



## Clamps and Clips

### Reinforcing Strap for Cable Extension Bolt

Used to provide support for the Cable Extension Bolt (PSC2080292) when adding a second cable run at the same level on the same side of the pole as an existing cable run.

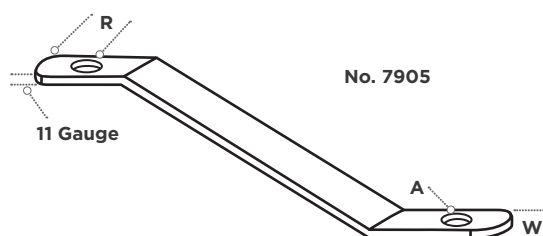
Catalog Number	Mounting Holes Diameter	Distance Between Mounting Holes	Distance of Offset	Overall Length
PSC2080241	11/16"	11"	6-3/8"	12-1/4"
PSC2080242	13/16"	11"	6-1/2"	6 3/4"



### Reinforcing Strap for Messenger Suspension Clamps

Used as additional support in attaching Messenger Suspension Clamps to pole for heavy loads.

Catalog Number	Dimensions Inches				Approx Ship Wt Each (lbs)
	A	R	D	W	
7905	11/16	7/8	11/16	1-1/2	0.41
400314803	11/16	7/8	1/8	2	0.60
400314811	5/8	5/8	1/8	1-3/8	0.40
400315016	5/8	5/8	1/8	1-3/8	0.44

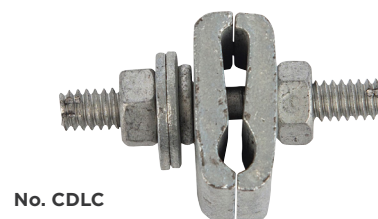
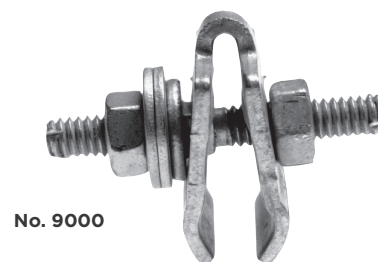


### Lashing Wire Clamp

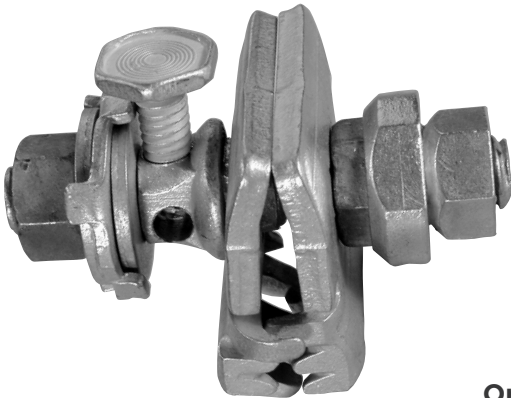
Clamp is fitted with a special clamp bolt formed with a shoulder to prevent turning while tightening. Both ends of the 1/4" bolt are peened to prevent loss of nuts during shipment or handling. Hot-dip galvanized per ASTM A-153.

Catalog Number	Type	Dimensions Inches			Approx Ship Wt Each (lbs)
		Length	Width	Strand Size	
9000 <sup>(1)</sup>	E	1	1	1/4 thru 7/16	0.17
CDLC	D	1	1	1/4 thru 7/16	0.14

(1) RUS listed.



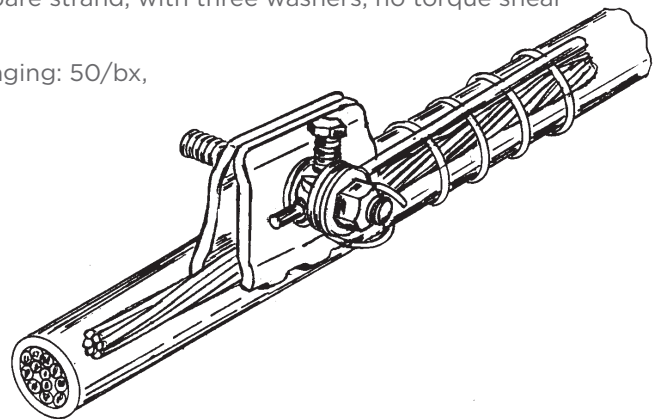
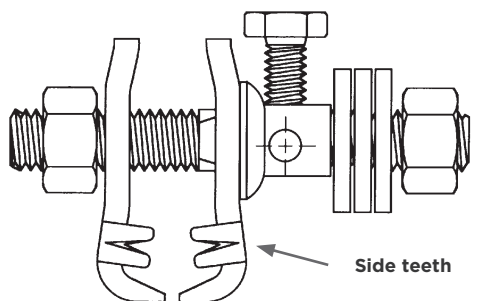
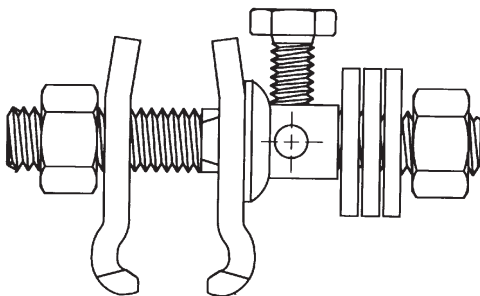
## Combination Strand and Lashing Wire Clamps



### Ordering information

**EM-5006** - For bare strand, with three washers, no torque shear head.

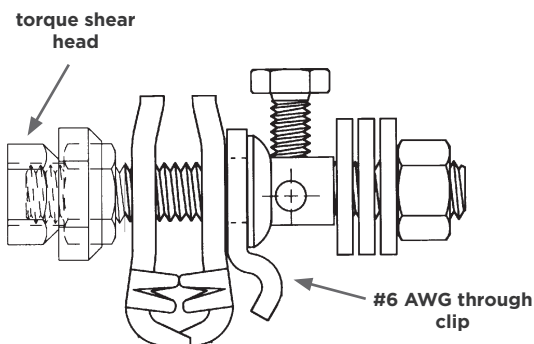
Standard packaging: 50/bx,  
18 lb/bx.



### Ordering information

**EM-5007** - Galvanized steel clamp for terminating lashing wire and bonding and grounding messenger strand. Side teeth to penetrate jacket.

Standard packaging: 100/bx, 29 lb/bx.



### Ordering information

**EM-5007-1** - Same as EM 5007 (above), but with torque shear head and a #6 AWG through clip.

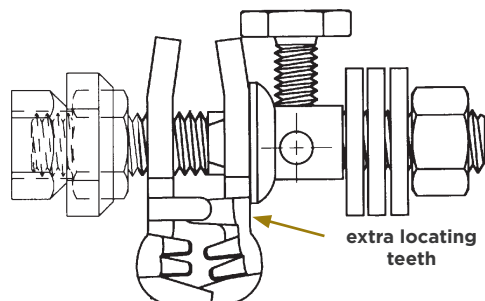
Standard packaging: 1/bg, 50/bx, 21 lb/bx.



LISTED  
84D8

# Clamps and Clips

## Combination Strand and Lashing Wire Clamps (continued)



### Ordering information

**EM-5008** – Same as EM 5007 (opposite), but with torque shear head and extra locating teeth.

Standard packaging: 50/bx, 19 lb/bx.



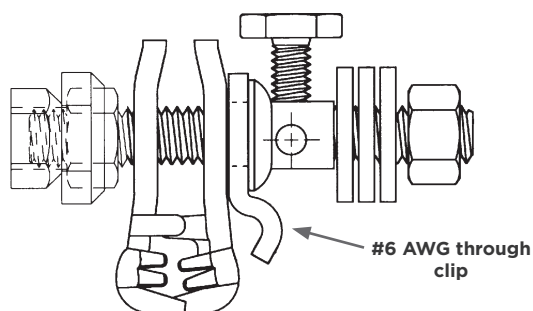
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### Ordering information

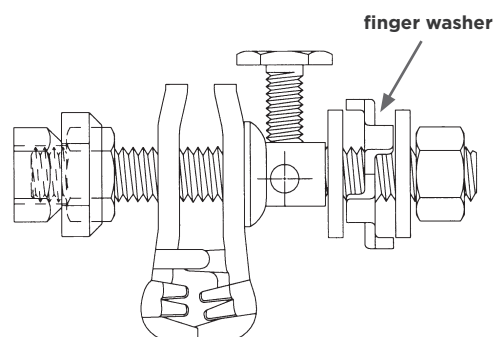
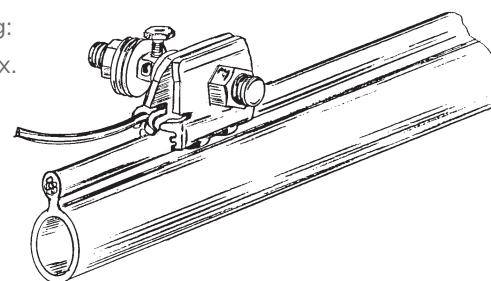
**EM-5008-1** – Same as EM 5008 (above), but with added #6 AWG through clip.

Standard packaging:

1/bg, 50/bx, 21 lb/bx.



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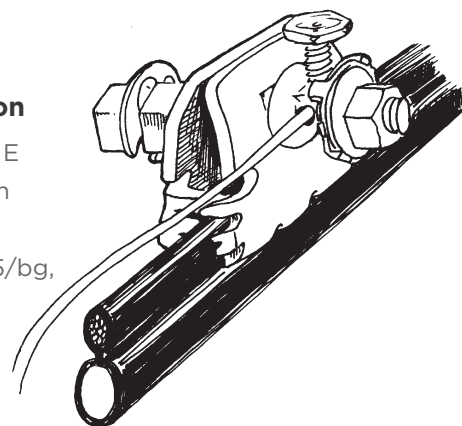


### Ordering information

**EM-5008-03** – Same as EM 5008 (top), but with added finger washer.

Standard packaging:

5/bg, 50/bx, 21 lb/bx.



### At a glance . . .

PART NUMBER	Distinguishing Features	LISTINGS
EM-5006		
EM-5007	Side teeth to penetrate jacket	UL
EM-5007-1	Side teeth, torque shear head, #6 AWG through clip	UL
EM-5008	Side teeth, torque shear head, extra locating teeth	UL
EM-5008-1	Side teeth, torque shear head, extra locating teeth, #6 AWG through clip	
EM-5008-03	Side teeth, torque shear head, extra locating teeth, finger washer	

## Wire Rope Clips

Body of each clip is galvanized ductile iron designed to fit the strand, which is protected by smooth-rounded contact surfaces. Bolts are made of high-strength steel.

Catalog Number	Strand Size Inches	Approx Ship Wt Each (lbs)
6480	1/4	0.13
6481	5/16	0.14
6482	3/8	0.23
6484	1/2	0.50
6485	5/8	1.11



Wire Rope Clip

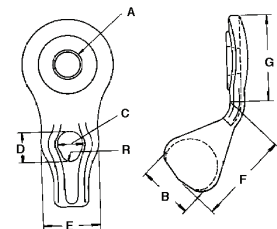
## Angle Thimbleye® Eye

Used for attaching to thru-bolt or threaded end of straight or angle Thimbleye bolt for down guying. Rounded groove protects guy strand from sharp bending and kinking. Drop-forged galvanized steel. Construction for high-strength application.



Catalog Number	Dimensions Inches									Approx Ship Wt Each (lbs)
	For Bolt Diameter	Mtg. Bolt Hole A	B	C	D	E	F	G	R	
0100 <sup>(1)</sup>	5/8	11/16	1-1/2	11/16	13/16	1-5/8	2-1/2	2-1/2	9/32	1.20
0101	3/4	13/16	1-1/2	11/16	13/16	1-5/8	2-1/2	2-1/2	9/32	1.32

(1) RUS listed



Guy Wire Thimbles






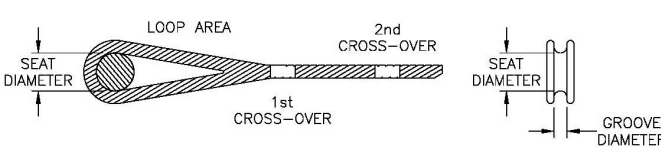
Open end slips over ovaleye anchor rods and bolts. Grooved to fit various strand sizes, they are made from crescent-shaped stock to prevent abrupt, strand-wakening kinks.

Catalog Number	Strand Size (in)	Approx Ship Wt Each (lbs)
6593	3/8	0.09
6594	1/2	0.15
6595	5/8	0.30



Guy Wire Thimble

## Guy Wire Deadends Hardware Recommendations & Dimensions

Recommended Fittings			
Pole Fittings	Anchor Heads	Anchor Rods	Guy Strain Insulators
			 <div> <b>ANSI</b>  <b>54-1</b>  <b>54-2</b>  <b>54-3</b>  <b>54-4</b> </div>
Fittings We Do Not Recommend		Dimensioning	
			

Galvanized Steel Deadends	Aluminized Steel Deadends	Nominal Strand Size	Minimum Seat Diameter, 1st Cross-Over Mark	Maximum Seat Diameter, 1st Cross-Over Mark	Maximum Seat Diameter, 2nd Cross-Over Mark	Minimum Groove Diameter (in)	Min. Hole Diameter for Anchor Rods (in)
FWDE1102 / BDE9102		3/16	1	1-3/4	2-1/2	1/4	3/8
FWDE1103 / BDE9103		7/32	1-1/8	1-3/4	2-1/2	5/16	3/8
	AWDE4110	12, 6M, 3#9	1-1/8	1-3/4	2-1/2	5/16	7/16
FWDE1104 / BDE9104		1/4	1-1/8	1-3/4	2-1/2	5/16	7/16
	AWDE4113	8, 8M, 7#11	1-1/8	1-3/4	2-1/2	3/8	1/2
FWDE1105 / BDE9105		9/32	1-1/8	1-3/4	2-1/2	3/8	1/2
	AWDE4116	10M, 7#10	1-1/4	1-3/4	2-1/2	3/8	9/16
FWDE1106 / BDE9106		5/16	1-1/4	1-3/4	2-1/2	3/8	9/16
	AWDE4119	3#6, 12.5M, 7#9	1-3/8	1-3/4	2-1/2	7/16	5/8
	AWDE4120	14M	1-3/8	1-3/4	2-1/2	7/16	5/8
FWDE1107 / BDE9107		3/8	1-3/8	1-3/4	2-1/2	7/16	5/8
	AWDE4122	3#5, 16M, 7#8	1-3/8	1-3/4	2-1/2	7/16	5/8
	AWDE4124	18M	1-3/8	2-3/8	2-1/2	1/2	11/16
	AWDE4125	7#7	1-3/8	2-3/8	2-1/2	1/2	11/16
FWDE1108 / BDE9108		7/16	1-3/8	2-3/8	2-1/2	1/2	11/16
	AWDE4126	20M	1-3/8	2-3/8	2-1/2	1/2	11/16
	AWDE4128	7#6	1-3/8	2-3/8	- - -	9/16	3/4
FWDE2115 / BDE9115		1/2	1-3/8	2-3/8	- - -	9/16	3/4
	AWDE4130	25M	1-1/2	2-5/8	- - -	5/8	15/16
	AWDE4131	7#5	1-1/2	2-5/8	- - -	5/8	15/16
FWDE2116 / BDE9116		9/16	1-1/2	2-5/8	- - -	5/8	15/16



# Deadends Formed Wire Guy Wire

## Galv. Steel / Bezinal® FWDE / BDE

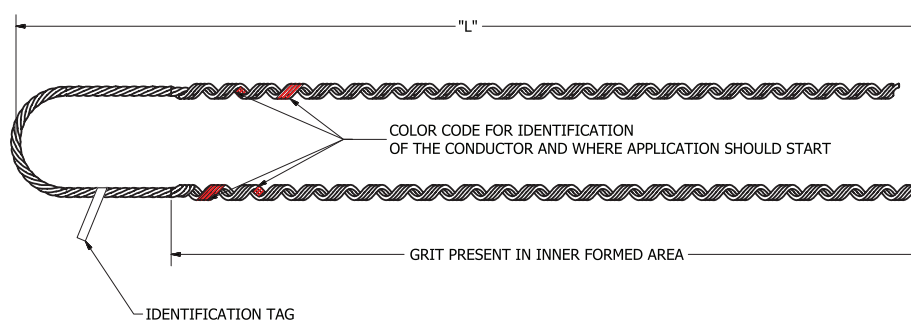
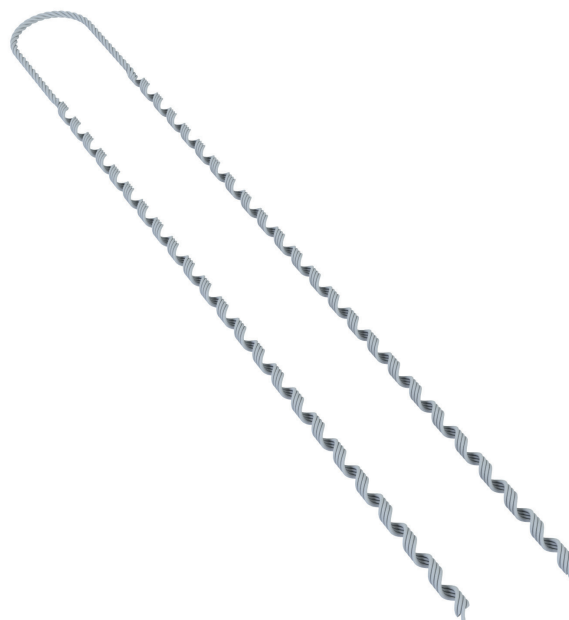
- For deadend applications of support guy wires.
- Fargo FWDE series formed wire deadends are designed for use on all types of galvanized guy wire (EHS, High Strength, Common, Siemens-Martin, Utilities and Bell System Strand).
- Fargo BDE series formed wire deadends are designed for use on Bezinal® and other common Zinc-Aluminum coated strand.
- FWDE and BDE will hold a minimum of 100% of the guy wire rated breaking strength.

*Note: Consult factory for information on other applications. Left hand lay standard.*

**Material: FWDE** – EHS Steel wire, Zinc-plated, Class B coating per ASTM A641. For Class C coating, add C suffix.

For FWDE1104LA, LA suffix denotes Class A coating.

**BDE** – Steel wire, Zinc-Aluminum mischmetal alloy plated per ASTM A855.



## Product Data & Conductor Size

CATALOG NUMBER		NOMINAL SIZE	MAXIMUM RBS LB (KN)	DIAMETER RANGE		NOMINAL LENGTH (L)		CARTON QTY		COLOR CODE
				MIN	MAX	IN	MM	UNITS	WEIGHT LBS. (KG)	
FWDE1102	BDE9102	3/16	3,990 (17.7)	0.174 (4.41)	0.203 (5.16)	20	508	150	30 (13.6)	Red
FWDE1103	BDE9103	7/32	5,400 (24.0)	0.204 (5.18)	0.230 (5.84)	24	610	50	19 (8.6)	Green
FWDE1104**	BDE9104	1/4	6,650 (29.6)	0.231 (5.87)	0.259 (6.58)	25	635	50	24 (10.9)	Yellow
FWDE1104LA		1/4	6,650 (29.6)	0.231 (5.87)	0.259 (6.58)	25	635	100	24 (10.9)	Yellow
FWDE1105	BDE9105	9/32	8,950 (39.8)	0.260 (6.60)	0.291 (7.39)	28	711	50	26 (11.8)	Blue
FWDE1106**	BDE9106	5/16	11,200 (49.8)	0.292 (7.42)	0.336 (8.53)	31	787	50	41 (18.6)	Black
FWDE1107**	BDE9107	3/8	15,400 (68.5)	0.337 (8.56)	0.394 (10.01)	35	891	50	53 (24.0)	Orange
FWDE1108**	BDE9108	7/16	20,800 (92.5)	0.395 (10.03)	0.474 (12.04)	38	965	25	36 (16.3)	Green
FWDE2115	BDE9115	1/2	26,900 (119.7)	0.475 (12.07)	0.515 (13.08)	49	1245	20	67 (30.4)	Blue
FWDE2116	BDE9116	9/16	35,000 (155.7)	0.516 (13.11)	0.570 (14.48)	55	1397	10	48 (21.8)	Yellow

NOTES: All dimensions: inches (mm) unless otherwise noted.

Rated at full tension of guy strand RBS for EHS, HS, Siemens-Martin, Common and Utility Grades.

\*\* RUS Technically Accepted.

AERIAL INSTALLATION

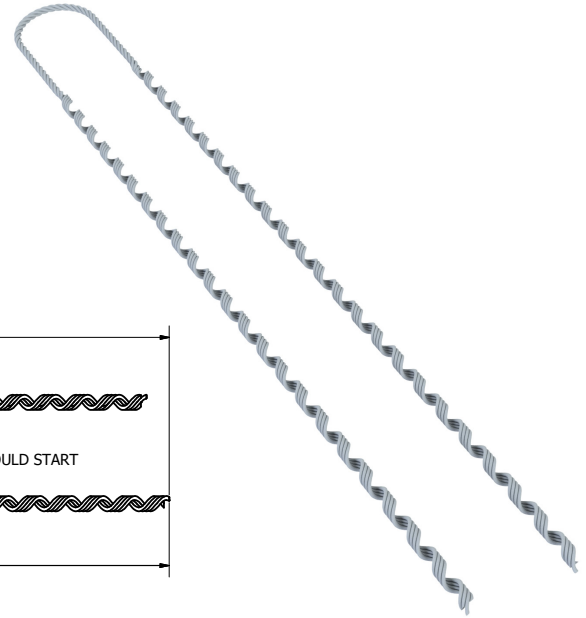
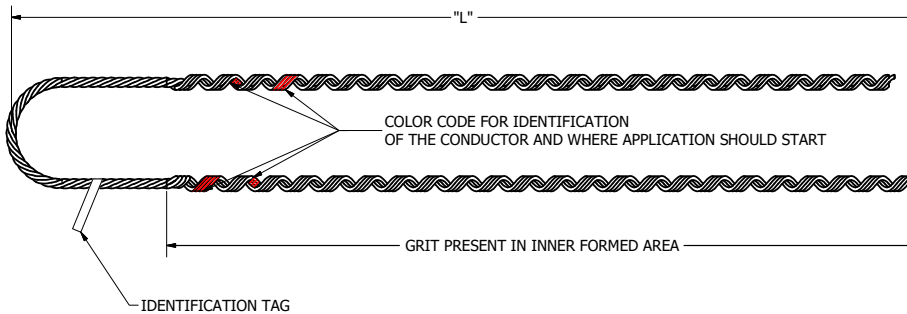
# Deadends Formed Wire Guy Wire Alumoweld®

## Aluminum / Steel AWDE

- For deadend applications of support guy wires.
- Fargo AWDE series formed wire deadends are designed for use on Alumoweld® and other common Aluminum coated steel guy wire.
- AWDE will hold a minimum of 100% of the guy wire rated breaking strength.

**Note:** Consult factory for information on other applications.  
Left hand lay standard.

**Material:** Steel wire, Aluminum-clad per ASTM B415.



## Product Data & Conductor Size

CATALOG NUMBER	NOMINAL SIZE	MAXIMUM RBS LB (KN)	DIAMETER RANGE		NOMINAL LENGTH (L)		CARTON QTY		COLOR CODE
			MIN	MAX	IN	MM	UNITS	WEIGHT LBS. (KG)	
AWDE4108	4M, 3#10	4532 (20.1)	.204 (5.18)	.230 (5.842)	21	533	50	16 (7.3)	Green
AWDE4110 **	6M, 3#9	6,000 (26.7)	0.231 (5.87)	0.259 (6.58)	22	559	50	20 (9.1)	Yellow
AWDE4113 **	3#8, 8M	8,000 (35.6)	0.260 (6.60)	0.291 (7.39)	24	610	50	20 (9.1)	Blue
AWDE4116 **	3#7, 10M, 7#10	10,000 (44.5)	0.292 (7.42)	0.336 (8.53)	26	660	50	30 (13.6)	Black
AWDE4119 **	3#6, 12.5M, 7#9	12,500 (55.6)	0.337 (8.56)	0.360 (9.14)	29	737	50	33 (14.8)	Yellow
AWDE4120 **	14M	14,000 (62.3)	0.361 (9.17)	0.384 (9.75)	31	787	50	53 (24.0)	Blue
AWDE4122 **	3#5, 16M, 7#8	16,000 (71.2)	0.385 (9.78)	0.410 (10.41)	32	813	50	55 (25.0)	Orange
AWDE4124	18M	18,000 (80.1)	0.411 (10.44)	0.430 (10.92)	34	864	25	29 (132)	Black
AWDE4125	7#7	20,000 (89.0)	0.431 (10.95)	0.474 (12.04)	36	914	25	32 (14.5)	Green
AWDE4126 **	20M	20,000 (89.0)	0.431 (10.95)	0.474 (12.04)	36	914	10	22 (10.0)	Yellow
AWDE4128	7#6	22,730 (101.1)	0.475 (12.07)	0.515 (13.08)	40	1016	10	23 (10.5)	Blue
AWDE4130	25M	25,000 (111.2)	0.516 (13.11)	0.535 (13.59)	43	1092	10	31 (14.1)	Red
AWDE4131	7#5	27,030 (120.2)	0.536 (13.61)	0.570 (14.48)	45	1143	10	32 (14.5)	Yellow

NOTES: All dimensions: inches (mm) unless otherwise noted.

Alumoweld is a registered trademark of AFL Corporation.

\*\* RUS Technically Accepted.

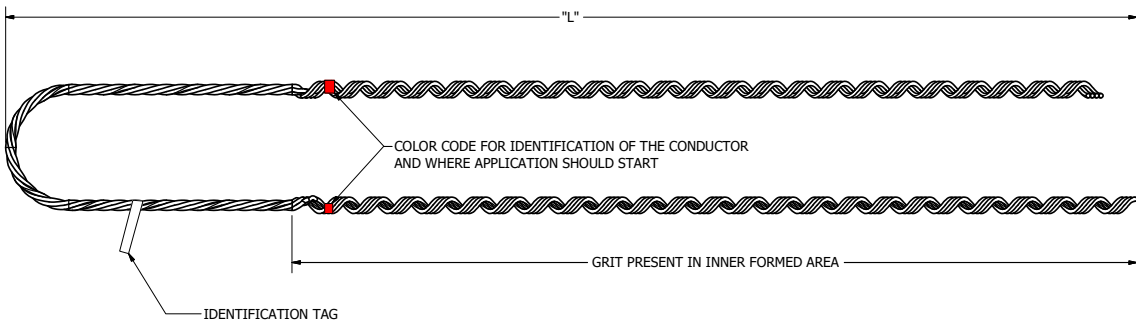
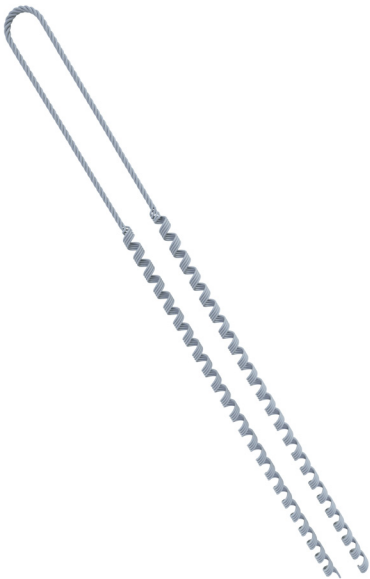
# Deadends Formed Wire Guy Wire False Deadends

## Galv. Steel / Bezinal® FWFDE / BFDE

- For false deadend applications of support guy wires. The extended loop region provides clearance for the support guy wire to exit the connector and continue beyond the deadend location.
- Fargo FWFDE series formed wire false deadends are designed for use on all types of galvanized guy wire (EHS, High Strength, Common, Siemens-Martin, Utilities and Bell System Strand).
- Fargo BFDE series formed wire false deadends are designed for use on Bezinal® and other common Zinc-Aluminum coated strand.
- FWFDE and BFDE will hold a minimum of 100% of the guy wire rated breaking strength.

**Note:** Consult factory for information on other applications. Left hand lay standard

**Material:** **FWFDE** - EHS Steel wire, Zinc-plated, Class B coating per ASTM A641.  
**BFDE** - Steel wire, Zinc-Aluminum mischmetal alloy plated per ASTM A855



### Product Data & Conductor Size

CATALOG NUMBER		NOMINAL SIZE	MAXIMUM RBS LB (KN)	DIAMETER RANGE		NOMINAL LENGTH (L)		CARTON QTY		COLOR CODE
				MIN	MAX	IN	MM	UNITS	WEIGHT LBS. (KG)	
FWFDE1104	BFDE9104	1/4	6,650 (29.6)	0.231 (5.87)	0.259 (6.58)	36	914	25	20 (9.1)	Yellow
FWFDE1106	BFDE9106	5/16	11,200 (49.8)	0.292 (7.42)	0.336 (8.53)	39	991	25	25 (11.3)	Black
FWFDE1107	BFDE9107	3/8	15,400 (68.5)	0.337 (8.56)	0.394 (10.01)	42	1067	25	34 (15.4)	Orange
FWFDE1108	BFDE9108	7/16	20,800 (92.5)	0.395 (10.03)	0.474 (12.04)	48	1219	20	50 (22.7)	Green

NOTES: All dimensions: inches (mm) unless otherwise noted.  
Bezinal is a registered trademark of Bekaert Company

## ALUMINUM GDE5100

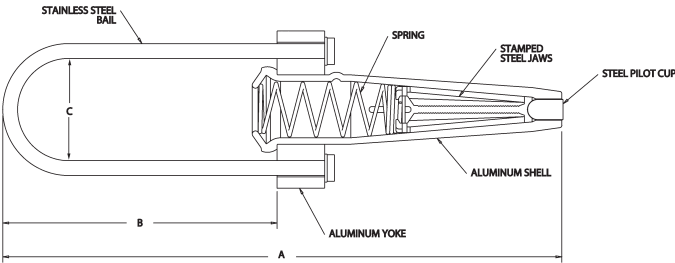
Fargo GDE5100 Series Automatic deadends are designed for use on High Strength, Common, Siemens-Martin, Utilities and Bell System Strand.

**Rating:** 90% of conductor breaking strength

**Material:** **Gripping Unit** - Aluminum Alloy

**Yoke** - Aluminum Alloy

**Bail** - Stainless Steel



### Product Data & Conductor Size

CATALOG NUMBER	PRIMARY STRAND APPLICATION	RANGE IN. (MM)	DIMENSIONS IN. (MM)		
			A	B	C
GDE5100	1/4" HS, Com, S-M, Util, Bell	0.231" - 0.249" (5.87 - 6.32)	9.2" (234)	5.7" (145)	1.4" (36)
GDE5100L	1/4" HS, Com, S-M, Util, Bell	0.231" - 0.249" (5.87 - 6.32)	12.7" (234)	9.2" (234)	1.4" (36)
GDE5101	5/16" HS, Com, S-M, Util, Bell	0.300" - 0.324" (7.62 - 8.23)	9.3" (236)	5.6" (142)	1.5" (38)
GDE5101L	5/16" HS, Com, S-M, Util, Bell	0.300" - 0.324" (7.62 - 8.23)	13.1" (333)	9.5" (241)	1.5" (38)
GDE5102	3/8" HS, Com, S-M, Util, Bell	0.348" - 0.372" (8.84 - 9.45)	11.5" (292)	7.1" (180)	2.0" (51)
GDE5102L	3/8" HS, Com, S-M, Util, Bell	0.348" - 0.372" (8.84 - 9.45)	16.5" (419)	12.0" (305)	2.0" (51)

NOTES: Suffix "L" Denotes Extended Bail.

For conductors other than those listed, consult factory.

# Deadends Automatic Guy Wire Heavy Duty

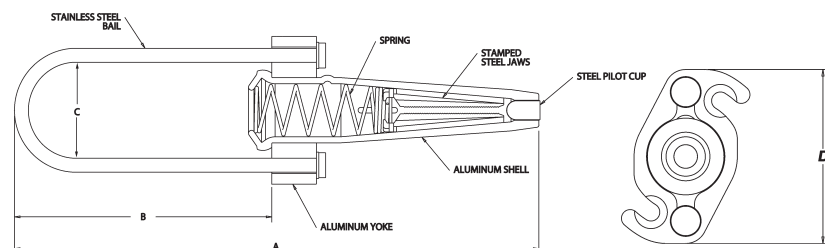
## ALUMINUM GDE5200

Fargo GDE5200 Series Automatic deadends are designed for use on all grades of galvanized steel wire strand ... High Strength, Extra High Strength, Alumoweld®, Alumonized, Common, Siemens-Martin, Utilities and Bell System Strand.

**Rating:** 90% of conductor breaking strength

**Innovative yoke design allows for installation without use of a gripping hook.**

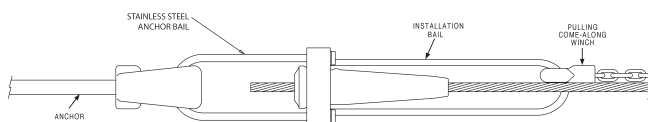
**Material:** Gripping Unit - Aluminum Alloy



### Product Data & Conductor Size

CATALOG NUMBER	PRIMARY STRAND APPLICATION	CABLE RANGE ØIN. (MM)	DIMENSIONS IN. (MM)			
			A	B	C	D
GDE5199	3/16" EHS (2.8MS) AW	0.174" - 0.188" (4.42 - 4.78)	10.0" (254)	5.7" (145)	1.6" (41)	2.7" (69)
GDE5200	1/4" EHS 7#12 (6M) AW	0.231" - 0.249" (5.87 - 6.32)	10.2" (259)	5.7" (145)	1.6" (41)	2.7" (69)
GDE5200L	1/4" EHS 7#12 (6M) AW	0.231" - 0.249" (5.87 - 6.32)	13.9" (353)	9.4" (239)	1.6" (41)	2.7" (69)
GDE5201	5/16" EHS 7#10 (10M), 7#11 (8M) AW	0.261" - 0.324" (6.62 - 8.23)	10.3" (262)	5.5" (140)	1.8" (46)	2.8" (71)
GDE5201L	5/16" EHS 7#10 (10M), 7#11 (8M) AW	0.261" - 0.324" (6.62 - 8.23)	15.6" (396)	10.8" (274)	1.8" (46)	2.8" (71)
GDE5202	3/8" EHS 3#5, 7#8, 7#9, 12.5M, 14M, 16M AW #4-2/5, #2-3/4, #1-5/2 AWAC	0.327" - 0.399" (8.31 - 10.13)	13.0" (330)	7.1" (180)	2.1" (53)	3.5" (89)
GDE5202L	3/8" EHS 3#5, 7#8, 7#9, 12.5M, 14M, 16M AW #4-2/5, #2-3/4, #1-5/2 AWAC	0.327" - 0.399" (8.31 - 10.13)	16.8" (427)	11.0" (279)	2.1" (53)	3.5" (89)
GDE5203	7/16" EHS 7#7 (20M), 18M AW #2-2/5, #1-3/4, #1/0-5/2 AWAC	0.402" - 0.459" (10.21 - 11.66)	15.0" (381)	8.2" (208)	2.4" (61)	3.8" (97)
GDE5203L	7/16" EHS 7#7 (20M), 18M AW #2-2/5, #1-3/4, #1/0-5/2 AWAC	0.402" - 0.459" (10.21 - 11.66)	18.7" (475)	12.3" (312)	2.4" (61)	3.8" (97)
GDE5204	1/2" EHS, 25M AW #1/0-3/4, #2/0-4/3 AWAC	0.487" - 0.519" (12.37 - 13.18)	16.0" (406)	10.3" (262)	2.6" (66)	4.1" (104)
GDE5204L	1/2" EHS, 25M AW #1/0-3/4, #2/0-4/3 AWAC	0.487" - 0.519" (12.37 - 13.18)	20.1" (511)	14.5" (368)	2.6" (66)	4.1" (104)

### Typical Installation with 2nd Bail



**NOTES:** Suffix "L" denotes extended bail.  
 Alumoweld® is a registered trademark of the United States Alumoweld Company, LLC (AFL).  
 AWAC is a registered trademark of Fushi Copperweld Inc.  
 For conductors other than those listed, consult factory.

INSTALLATION BAIL	PART NO.
Bail for GDE5199	PS3005200
Bail for GDE5200 / GDE5200L	PS3005200
Bail for GDE5201 / GDE5201L	PS3005521
Bail for GDE5202 / GDE5202L	3005152
Bail for GDE5203 / GDE5203L	3005527
Bail for GDE5204 / GDE5204L	PS3005524

### Auxiliary Eye

Adds additional guy attachment to existing anchor rod. Also can be used as a pulling eye for guying tension.



Catalog Number	Dimensions Inches			Approx Ship Wt Each (lbs)
	Anchor Rod Diameter	Maximum Strand Size	Thimble Diameter	
BB155A	5/8 to 1	1/2	1-1/2	2.70

NOTE: Ductile iron per ASTM A-536. Hot-dipped galvanized per ASTM A-153. U-Bolts .5" diameter.

### Connector

#### B Strand Connector

Interlocks two strands ranging from 3/16" to 1/2". Accommodates maximum 1/2" diameter strand. Smooth thimble seating surface.

Catalog Number	Length	Width	Seating Diameter	Approx. Ship wt. per each
PSC2080286	2.65"	2.5"	1.8"	1.2 lbs





# Eyelets and Eyes

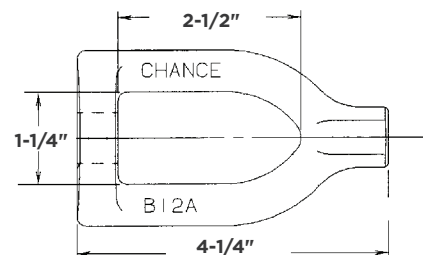
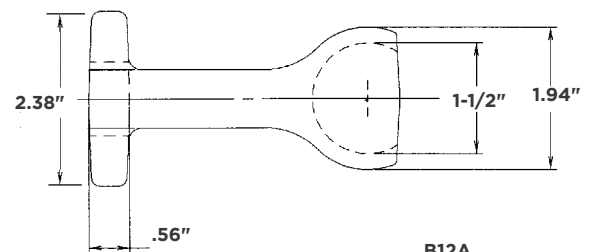
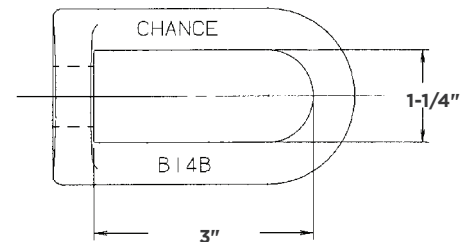
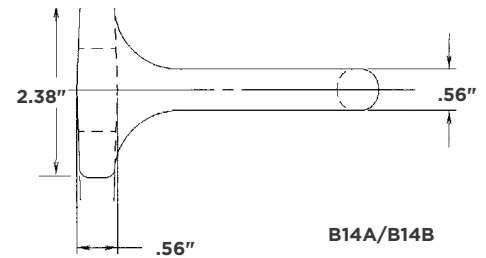
## Ovaleye Eyelet

Eyelets are unthreaded and designed to be installed on the head end of a machine bolt. The oval hole facilitates insertion of the bolt.

Catalog Number	Dimensions Inches		Approx Ship Wt Each (lbs)
	Mounting Bolt Diameter	Maximum Strand Size	
B14A <sup>(1)</sup>	5/8	-	1.00
B14B	3/4	-	1.00
B12A	5/8	5/8	1.37

NOTE: Ductile iron per ASTM A-536. Hot-dipped galvanized per ASTM A-153. Contact Hubbell Power Systems for round bolt hole design.

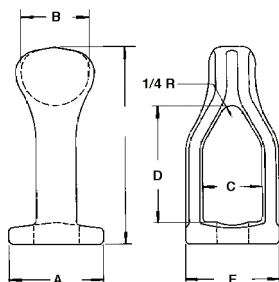
(1) RUS listed.



## Thimbleye® Eyelets

Used on ordinary machine bolts for straight-away guys. Rounded groove protects guy strand from sharp kinks and bends. Drop-forged galvanized steel. Construction for high-strength applications.

Catalog Number	Dimensions Inches								Approx Ship Wt Each (lbs)
	For Bolt Diameter	Mtg. Bolt Hole A	A	B	C	D	E	F	
6519	5/8	11/16 x 1	2-1/16	1-1/2	1-5/16	2-9/16	2-1/16	4-5/16	1.23
6520	3/4	13/16 x 1-1/8	2-1/16	1-1/2	1-5/16	2-9/16	2-1/16	4-5/16	1.30



Thimbleye(R)  
Eyelet

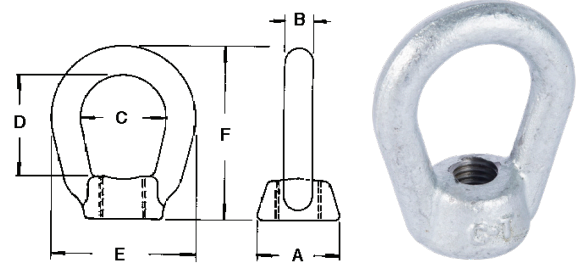
## Standard Eyenuts

Most commonly used for deadending, back-guying and attaching pole head guys on the threaded ends of crossarm bolts. Drop-forged, hot-dip galvanized steel.

Catalog Number	Dimensions Inches							Approx Ship Wt Each (lbs)
	For Bolt Diameter	A	B	C	D	E	F	
6500	1/2	1-1/4	1/2	1-1/8	1-1/8	2-1/8	2-5/8	0.51
6501	5/8	1-1/4	1/2	1-1/8	1-1/8	2-1/8	2-5/8	0.46
6502 <sup>(1)(2)</sup>	5/8	1-3/8	1/2	1-1/2	1-3/4	2-1/2	3	0.63
6503 <sup>(2)</sup>	3/4	1-3/8	1/2	1-1/2	1-3/4	2-1/2	3	0.54

(1) RUS listed.

(2) ANSI standard, C-135.5.



Standard Eyenut

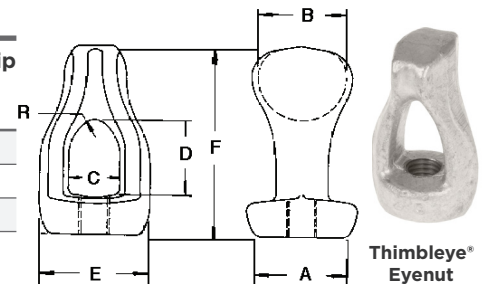
## Thimbleye® Eyenuts

For attaching to thru-bolts or threaded end of straight or angle Thimbleye bolts for straight-away head guys. Drop-forged galvanized steel. Nuts are contoured to minimize bending and kinking of guy strand.

Catalog Number	Dimensions Inches								Approx Ship Wt Each (lbs)
	Tapped For Bolt	A	B	C	D	E	F	R	
6510 <sup>(1)(2)</sup>	5/8	1-1/2	1-1/2	7/8	1-3/8	1-7/8	3-1/4	1/4	0.78
6511 <sup>(2)</sup>	3/4	1-1/2	1-1/2	7/8	1-3/8	1-7/8	3-1/4	1/4	0.72
6512	1 and PISA	1-1/8	1-5/8	1-1/8	1-19/32	2-25/64	3-1/4	1-3/32	1.80

(1) RUS listed.

(2) ANSI standard, C-135.5.



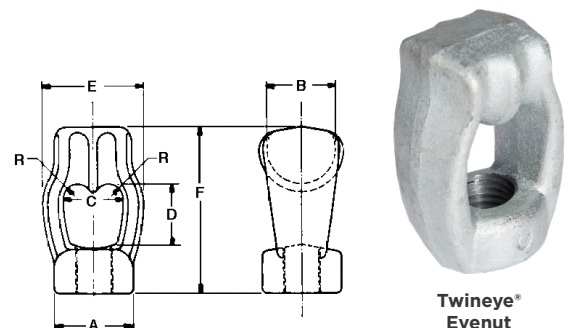
Thimbleye® Eyenut

## Twineye® Eyenuts

Used for head or stub guying of two strands, Twineye Eyenuts can be attached to thru-bolts or threaded end of straight or angle Thimbleye bolts. Grooves are contoured to protect guy strands. Drop-forged galvanized steel.

Catalog Number	Dimensions Inches								Approx Ship Wt Each (lbs)
	Tapped For Bolt	A	B	C	D	E	F	R	
6560	5/8	1-7/8	1-11/16	1-1/8	1-5/16	2-3/8	3-5/8	1-5/16	1.90
6561	3/4	1-7/8	1-11/16	1-1/8	1-5/16	2-3/8	3-5/8	1-5/16	1.84
6562 <sup>(1)</sup>	1 and PISA	1-7/8	1-11/16	1-1/8	1-5/16	2-3/8	3-5/8	1-5/16	1.88

(1) Catalog Number 6562 eyenut fits both 1" bolts and 1" PISA rods.



Twineye® Eyenut

# Guards

## Riser Pole Cable Guards

Protect telephone and power lines where circuits lead from underground to overhead.

### Guards - Steel

Guards are 14-gauge hot-dip galvanized steel, formed into "U" shape.

Catalog Number	Inside Diameter (in)	Length (ft)	Approx Ship Wt Each (lbs)
<b>C2030450</b>	3/4	8	4.80
<b>6531<sup>(1)</sup></b>	1-1/8	5	4.80
<b>653112<sup>(1)</sup></b>	1-1/8	8	5.60
<b>6532<sup>(1)</sup></b>	2-3/16	5	8.60
<b>6533<sup>(1)</sup></b>	2-3/16	8	12.60
<b>6534T</b>	3-3/16	5	15.25
<b>6535</b>	3-3/16	8	18.00
<b>C2030451</b>	3-11/16	8	22.69
<b>400314357<sup>(2)</sup></b>	1-1/8	8	7.50
<b>C2030452</b>	3/4	5	2.76
<b>701012478</b>	6	8	35.00

(1) RUS listed.

(2) Booted

### Mounting Straps

Straps are made from hot-dip galvanized flat steel, shaped to fit steel guards. Straps not needed for polyethylene guards.

Catalog Number	Used with Guard Number	Dimensions Inches		Approx Ship Wt Each (lbs)
		Steel Size	Hole Diameter	
<b>6538<sup>(1)</sup></b>	6531 & 653112	1/8 x 3/4	9/32	0.13
<b>6539<sup>(1)</sup></b>	6532 & 6533	1/8 x 3/4	9/32	0.24
<b>6540<sup>(1)</sup></b>	6534T & 6535	3/16 x 1	11/32	0.64
<b>C2030455</b>	C2030450 C2030452	3/32 x 3/4	9/32	0.66
<b>C2030456</b>	C2030451	3/16 x 1	11/32	0.69
<b>400314092<sup>(1)</sup></b>	6531 & 653112	13/100 x 3/4	9/32	0.13
<b>400314761</b>	6531 & 653112	13/100 x 3/4	9/32	0.14
<b>400314779<sup>(1)</sup></b>	6532 & 6533	13/100 x 3/4	9/32	0.24
<b>400314795</b>	C203-0451	19/100 x 1	11/32	0.60
<b>401370598</b>	701012478	19/100 x 1	13/32	1.12
<b>401370606</b>	701012478	19/100 x 1	13/32	1.41

(1) RUS listed.



Steel U-Guard



Steel U-Guard Mounting Strap

## Riser Pole Cable Guards

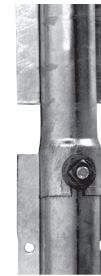
Flanged one-piece unit is formed of 14-gauge steel. Hot-dip galvanized. Extension is flared at one end so that it can be joined to the base section. A carriage bolt fastens the two sections together and also serves as a ground lead attachment point. Mounting holes in 1" wide flanges are located every 25". Straps are not needed for installation.

### Cable Guards

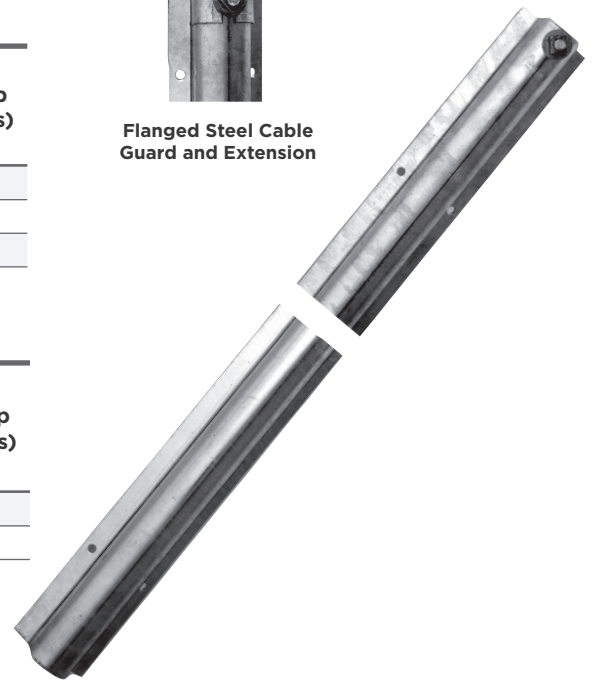
Catalog Number	Overall Length ft	Dimensions Inches		Approx Ship Wt Each (lbs)
		Inside Diameter	Inside Clearance from Face of Pole	
C2030033	9	2	1-7/8	19.00
C2030034	9	3	2-7/8	26.00
C2030035	9	3-1/2	3-3/8	28.00

### Cable Guard Extensions

Catalog Number	Overall Length ft	Dimensions Inches		Approx Ship Wt Each (lbs)
		Inside Diameter	Inside Clearance from Face of Pole	
C2030036	5	2	1-1/2	10.00
C2030037	5	3	2-7/8	14.00



Flanged Steel Cable Guard and Extension



## Riser Pole Cable Guards (continued)

### Guards - Polyethylene

Gray plastic, in a flanged "U" shape with 8 mounting holes per side. One end is belled to allow for overlap with an adjacent cable guard.

Catalog Number	Inside Diameter (in)	Length (ft)	Approx Ship Wt Each (lbs)
PSC2030546	1	10	2.41
PSC2030547	2	5	2.78
PSC2030548	2	10	4.80
PSC2030549	3	5	4.76
PSC2030550	3	10	7.40
PSC2030551	4	5	4.00
PSC2030552	4	10	11.90
PSC2030553	5	5	8.89
PSC2030554	5	10	12.00
PSC2030555	6	5	9.17
PSC2030556	6	10	18.96



Polyethylene Cable Guard

## Guards

### Adapter Boots

Catalog Number	For Cable Guard Size (in)	No. of Mounting Holes	Approx Ship Wt Each (lbs)
PSC2030557	1-2	4	2.28
PSC2030558	2-5	8	4.86



Polyethylene Adapter Boot

### Riser Pole Cable Guards (continued)

#### Back Plate

Polyethylene back plate for cable guard. Back plates are gray plastic with 3 mounting holes.

Catalog Number	For Cable Guard Width (in)	For Cable Guard Length (ft)	Approx Ship Wt Each (lbs)
PSC2030559	2	5	0.80
PSC2030560	2	10	1.60
PSC2030561	3	5	1.32
PSC2030562	3	10	2.62
PSC2030563	4	5	1.64
PSC2030564	4	10	3.31
PSC2030565	5	5	2.51
PSC2030566	5	10	4.91
PSC2030567	6	5	3.17



Polyethylene Back Plate

## Guy Hooks - Strap Type

6584 guy hook is used in wrapped guy applications to prevent wire from creeping downward. Catalog Numbers 5001 and 5004 are used in down guy applications. Hooks should be used under bolt heads for maximum shear strength.

Catalog Number	Description	Dimensions Inches		Approx Ship Wt Each (lbs)
		Material Size	Hole Diameter	
<b>5001</b>	2-Bolt Storm	1/4 x 1-1/2 x 7	9/16 & 13/16	1.08
<b>5004<sup>(1)</sup></b>	1-Bolt Storm, 3/4" R	1/4 x 1-1/2 x 4-1/8	11/16	0.79
<b>6584<sup>(1)</sup></b>	1-Bolt Standard	7/16 x 1-3/4 x 4	11/16	0.85

(1) RUS listed.



**No. 5001**



**No. 5004**



**No. 6584**



# Guy Attachments

## Guy Hooks for Down or Span Guy Applications

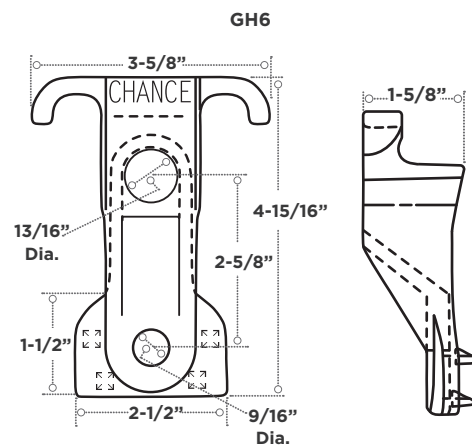
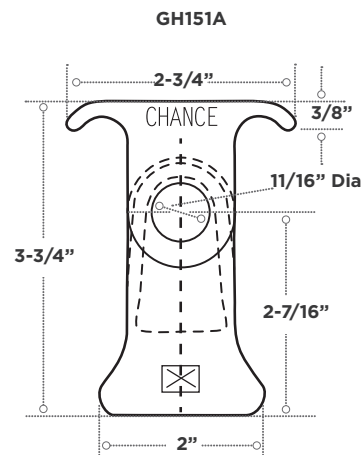
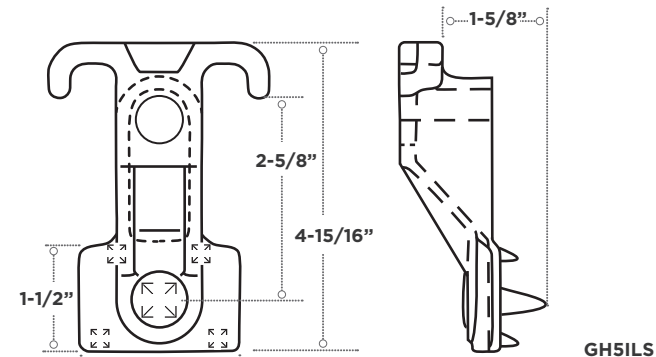
Use in down or span guy applications. Spurs resist down slotting. The overturning action is resisted by the wide lower curved heel pad. Guy Hooks are available without cleats for use on non-wood poles.

Catalog Number	Minimum Ultimate Tensile Strength lb	Dimensions Inches			Approx Ship Wt Each (lbs)
		Thru-Bolt Diameter	Max Guy Strand	Lag Screw Diameter	
400149910	10,000	5/8	7/16	—	1.52
GH151A	12,400	5/8	7/16	—	0.62
GH5 <sup>(1)</sup> *	12,400	5/8	7/16	1/2	1.30
GH5ILS	12,400	5/8	7/16	—	1.39
400149928	15,000	3/4	5/8	—	1.73
GH6 *	18,350	3/4	1/2	1/2	1.50
GH6ILS	18,350	3/4	1/2	—	1.53
GH6X	25,400	7/8	5/8	1/2 or 3/4	2.40
GH6XBILS	33,500	1	5/8	—	2.25

NOTE: Suffix "ILS" indicates cast in integral lag. Ductile iron per ASTM A-536. Hot-dipped galvanized per ASTM A-153.

(1) RUS listed.

\* GH5 and GH6 are available without cleats for non-wood poles. Add "N" suffix to catalog number.

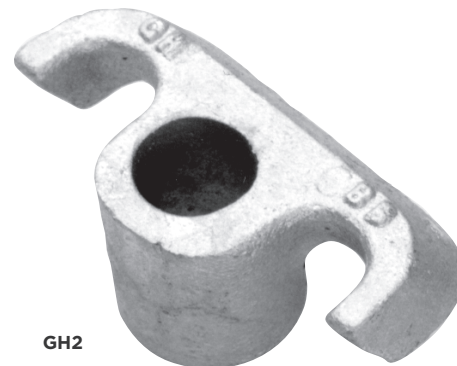


## Guy Hook, Span Type

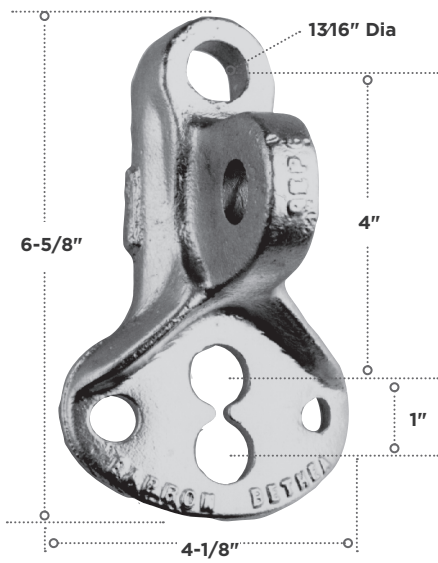
For guy attachment, use at angles 0° to 30° from horizontal.

Catalog Number	Dimensions Inches		Approx Ship Wt Each (lbs)
	Max Thru-Bolt Diameter	Max Guy Strand Diameter	
GH2	5/8	1/2	0.66
GH3	3/4	1/2	0.64

NOTE: Ductile iron per ASTM A-536. Hot-dipped galvanized per ASTM A-153.



## Pole Eye Plate



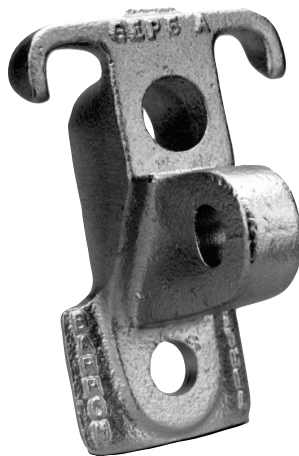
The GEP6 pole eye plate is used for clevis-type guy attachments and provides a large pad area to spread forces over the pole surface. It is ideal for guy strain insulator installation. Minimum ultimate tension rating is 21,000 lbs. at 90 and 45 degrees.

Catalog Number	Dimensions Inches		Approx Ship Wt Each (lbs)
	Mounting Bolt Diameter	Maximum Pin Diameter	
GEP6	3/4	3/4	2.69

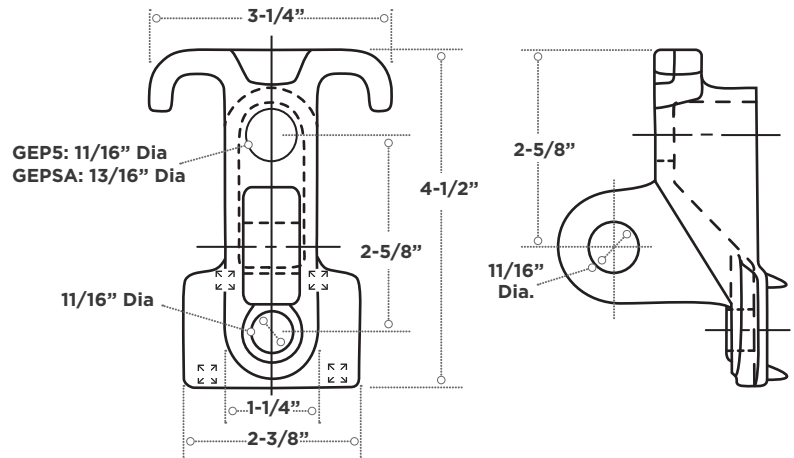
NOTE: Ductile iron per ASTM A-536. Hot-dipped galvanized per ASTM A-153. Available with N suffix for non-wood poles, catalog number GEP6N.

## Combination Pole Eye/Guy Hook

This combination allows a guy loop to be made up on the ground as well as provides a clevis eye plate capability. Spurs prevent slippage down the pole.



GEP5



Catalog Number	Minimum Ultimate Tension Strength lb	Dimensions Inches		Approx Ship Wt Each (lbs)
		Mounting Bolt Diameter	Max Strand Size	
GEP5	12,500	5/8	5/8	1.75
GEP5A	16,000	3/4	5/8	1.75
GEP5A34	21,000	3/4	5/8	2.25

NOTE: Ductile iron per ASTM A-536. Hot-dipped galvanized per ASTM A-153. GEP5A and GEP5A34 available with N suffix for non-wood poles.

# Guy Markers

## Full Round

### Increased Visibility

A full 360° of 1-1/2" diameter high-visibility yellow or orange provides increased visibility to children and adults alike. Also available in green or gray for more aesthetically inconspicuous applications.

### Increased Vandal Resistance

A unique strand trapping design has been added to the security of a concealed pigtail and a self-locking nylon strap. The guy strand passes easily in one direction only — into the marker.

### Increased Installation Ease and Range

Easy to install; tough to remove. Simply snap the marker over the guy and lock it in place with the self-locking nylon strap and pigtail. Fits guy strand diameters from 3/16" to 1/2".

### Increased Ruggedness for Demanding Service

The UV-stabilized, high impact, high density polyethylene construction has excellent color retention, cold weather properties and no cutaway sections to weaken its strength.



\* Cat. No. C0790263. Reflective 10" long bright orange strip 2' from top of yellow marker for greater visibility. Ideal for heavy snow areas and also for recreational ATV-use areas.

## Ordering Information

Catalog Number		Dimensions Inches			Std Package	Approx Ship Wt Each (lbs)
Yellow	Orange	Length	Diameter	Strand Range		
84FRPMYEL	—	84	1-1/2	3/16 thru 1/2	20	1.30
96FRPMYEL <sup>(1)</sup>	96FRPMORG	96	1-1/2	3/16 thru 1/2	20	1.48
C0790263 <sup>†</sup>	—	96	1-1/2	3/16 thru 1/2	20	1.48

(1) Can be ordered without pigtail, Catalog Number T0790206.

## Flame Retardant

Catalog Number	Dimensions Inches			Std Package	Approx Ship Wt Each (lbs)
Yellow	Length	Diameter	Strand Range		
96FRPMRYEL <sup>(1)</sup>	96	1-1/2	3/16 thru 1/2	20	1.48

(1) RUS listed.

Overlapping Full-Round Markers

Bright, high-visibility markers neither bleach out to white nor crack from cold temperatures. Made of ultraviolet-stabilized high-density polyethylene, overlapping tube-like design offers full-length coverage. No tools are required for installation. Replaceable standard tie strap allows the markers to be reused. Three holes permit the black self-locking nylon strap (furnished) to secure the lower end in a choice of two attachment methods — either above or over the anchor rod, illustrated above. This fastening design eliminates the cutaway section that would weaken its resistance to breaking. The economy marker is available in high-visibility 8’ long, 1-1/8” O.D. and bright yellow sections.

Ordering Information

Catalog Number	Dimensions		Color	Per Carton	
	Length ft	Diameter Inches		Units	Approx Ship Wt Each (lbs)
96FRPE	8	1-1/8	Bright Yellow	25	0.96



AERIAL INSTALLATION

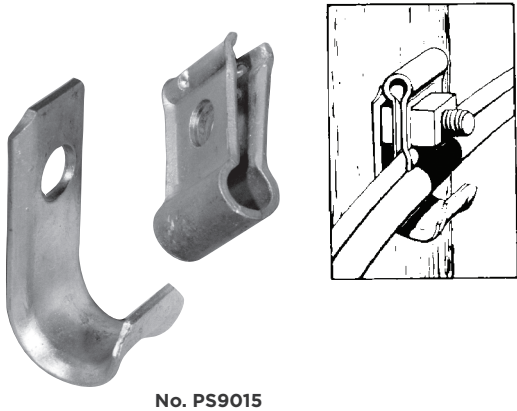
# Hangers and Hooks

## Figure 8 Hanger

Used to support integrated messenger telephone cable – commonly referred to as Figure 8 Cable. Hanger is in two parts, hook and clamp, both galvanized steel. Installed with a 1/2" machine bolt and two square nuts. One nut is placed between hook and clamp for spacing. The other is used to tighten the clamp member. Order nuts and bolts separately. Accommodates .109 to .134 solid messenger wire.

Figure 8 Cable

Catalog Number	Description	Approx Ship Wt Each (lbs)
PS9015	Hook and Clamp	0.54

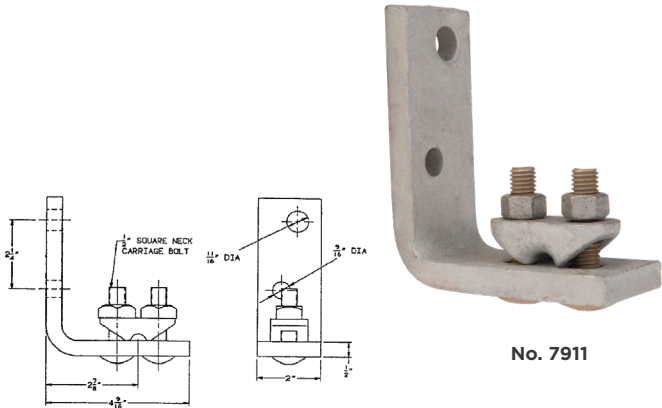


## Messenger Hangers

Used on corners and straight runs, messenger is securely clamped by two 1/2" carbon-steel guy clamp bolts. Mounted with a 5/8" thru-bolt and a 1/2" lag screw, neither of which are included. Hot-dip galvanized.

Universal Type

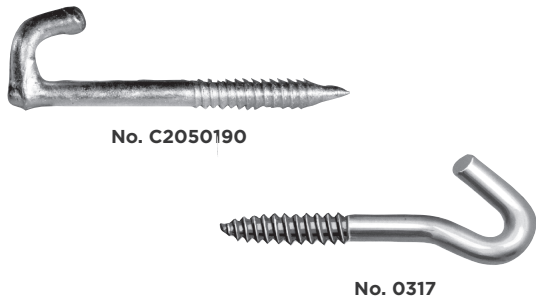
Catalog Number	Dimensions Inches			Approx Ship Wt Each (lbs)
	Steel Size	Ext. From Pole	Strand Size	
7911	1/2 x 2	4-1/4	5/16 to 1/2	3.70



## Drive and Screw Hooks

These hooks are used to attach wedge-type service drops and deadend clamps to crossarms, poles or buildings. Catalog Number C2050190 Drive Hook is furnished with 7/16" fether drive threads and a pilot point for easy starting. Catalog Number 0317 Screw Hook has 3/8" gimlet threads.

Catalog Number	Dimensions Inches			Approx Ship Wt Each (lbs)
	Thread Diameter	Thread Length	Overall Length	
C2050190	7/16	2-1/2	4-3/4	0.27
PSC2050605	5/16	2	3-1/2	0.123
0317	3/8	2	4	0.13



## Ground Wire Molding

KOVER-GARD® molding protects surface ground wires, lead wires and conductors. Flame retardant and easy to install. Makes wood or metal molding obsolete.

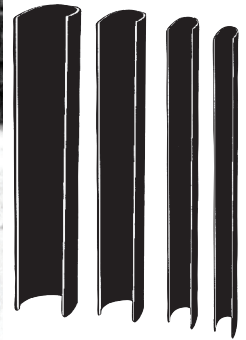
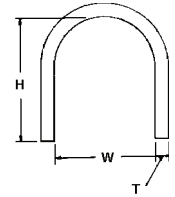
### KOVER-GARD® Molding

Catalog Number	Nominal Size Inches	Measurement Inches				Std Package	Approx Ship Wt Each (lbs)
		H	W	T	Std Length		
96KG12	1/2	1/2	1/2	1/16	96	50	0.48
96KG34	3/4	3/4	3/4	1/16	96	50	0.76
96KG1	1	1	1	5/64	96	50	0.96

K-S Straps for fastening covered conductors, conduit or pipe. Anything up to 7/8" O.D., electrical or not.

### K-S Straps

Catalog Number	Dimensions Inches			Pieces Per Carton	Weight Per Carton lb
	Length	Width	Thickness		
KS12 (for 96KG12)	2	5/8	1/16	1,000	6.25



K-S Straps

# Nails and Nuts

## Pole Dating Nails

Used to indicate the year in which poles are set. Heads are 5/8" diameter. Hot-dip galvanized. Insert the 4-digit year in place of XXXX above. Example: For 2025 pole dating nails, use catalog number PSC2052025.

Catalog Number	Length Inches	Approx Ship Wt Each (lbs)
PSC205XXXX	2-1/2	0.05



Pole Dating Nail

## Nuts

### M-F Curved Lock Nuts

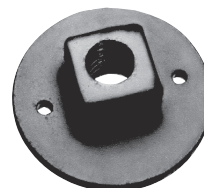
Catalog Number	Bolt Size Inches	Approx Ship Wt Each (lbs)
3510	3/8	0.01
3511	1/2	0.03
3512	5/8	0.05
3513	3/4	0.06
3514	7/8	0.08
3515	1	0.10



MF Locknut

### Washer Nuts

Catalog Number	Dimensions Inches			Approx Ship Wt Each (lbs)
	Accommodates Bolt Size	Width	Thickness	
3193	1/2	2	13/16	0.18
3194	5/8	2-1/2	1	0.41
3195	3/4	2-3/4	1-1/8	0.47



Washer Nut

### Palnut Lock Nuts

Catalog Number	Dimensions Inches			Approx Ship Wt Each (lbs)
	Bolt Size	Width	Height	
3530	3/8	5/8	.160	0.01
3531	1/2	13/16	.190	0.01
3532	5/8	1	.224	0.01
3533	3/4	1 1/8	.246	0.02

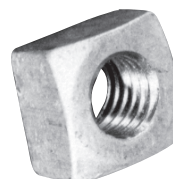


Palnut Locknut

### For Bolts - Regular Square Nuts

Catalog Number	Bolt Size Inches	Threads Per Inch	Approx Ship Wt Each (lbs)
8600M	3/8	16	0.02
55083P	1/2	13	0.08
55084P	5/8	11	0.10
55085P	3/4	10	0.14
56538P	7/8	9	0.30
56073P	1	8	0.50

Regular square nuts are not for use on anchor rods

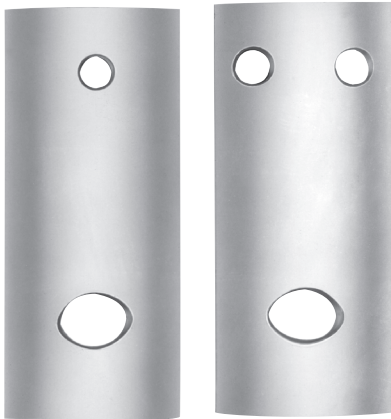


Regular Square Nut



### Lift and Load Plates

Used to protect poles on heavy down guying when Thimbleye®, Angle-Thimbleye or Oval-Eye bolts are used through the pole. Hot-dip galvanized.



2-Hole Lift

3-Hole Lift

Catalog Number	Description	Size Holes Inches		Plate Size Inches	Approx Ship Wt Each (lbs)
		Top	Bottom		
PS7887	2-Hole Lift	9/16	3/4 x 1	3/16 x 2-1/2 x 7	0.98
7888	2-Hole Lift	9/16	7/8 x 1	1/4 x 2-1/2 x 7	1.26
7897	3-Hole Lift	9/16	3/4 x 1	3/16 x 2-1/2 x 7	0.97
7898 <sup>(1)</sup>	3-Hole Lift	9/16	7/8 x 1	1/4 x 2-1/2 x 7	1.26

(1) RUS listed.

### Strain Plates

Strain Plates are used to prevent pole from being damaged by guy wire. Nail holes at corners are 3/16" diameter. Hot-dip galvanized steel plates are formed to 5" radius.

Catalog Number	Type	Dimensions Inches	Approx Ship Wt Each (lbs)
6575	Standard	4 x 8 x 14 Ga.	1.16



No. 6575

# Screws

## Lag Screws

Lag Screws of 1/4", 3/8" and 1/2" diameter have upset shoulders for a tight fit. Hot-dip galvanized.



Gimlet Point Type



Fetter Drive, Drive-Point



Twist-Drive Pilot Point



B-Cable Suspension Screw



Fetter Drive Pilot-Point Type



Hex Head Lag Screw with Neoprene-Steel Washer

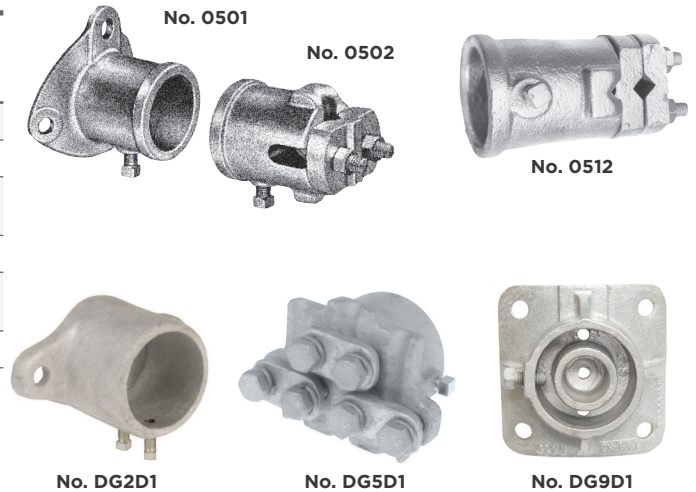
Catalog Number	Dimensions Inches		Approx Ship Wt Each (lbs)
	Diameter	Length	
Gimlet Point Type			
872112GP	1/4	1-1/2	0.02
8722GP	1/4	2	0.03
872212GP	1/4	2-1/2	0.04
DF1L3	1/4	3	0.06
DF3L3	3/8	3	0.09
Twist-Drive Pilot Point Type			
508500	1/2	4	0.23
PSC2050562	1/2	4-1/2	0.26
Fetter Drive Pilot-Point Type			
DF6L250	3/8	2-1/2	0.07
508743	3/8	3	0.10
508744	3/8	4	0.13
508753	1/2	3	0.20
508754	1/2	4	0.24
50875412	1/2	4-1/2	0.27
508755	1/2	5	0.28
B-Cable Suspension Screw			
PSC2170146	7/8	4-1/2	1.87
Hex Head Lag Screw with Neoprene-Steel Washer			
PSC2050504	1/4	2	0.03
PSC2050631	1/4	2-1/2	0.04

## Sidewalk Guy Fittings

These fittings are used along sidewalks or near buildings where space is not available for standard guying. Pole Plate is attached with one 5/8" bolt and two 1/2" lag screws. End Fittings clamp the strand. Hot-dip galvanized.

Catalog Number	Description	Pipe (in)	Approx Ship Wt Each (lbs)
<b>0501<sup>(1)</sup></b>	Pole Plate	2	4.55
<b>0502<sup>(1)</sup></b>	End Fitting w/Clamp	2	4.95
<b>0512<sup>(1)</sup></b>	End Fitting w/Double Clamp	2	6.20
<b>DG2D1</b>	Pole End Plate	2-1/2	3.72
<b>DG5D1</b>	End Fitting w/ Three Clamps	2-1/2	4.13
<b>DG9D1</b>	Guy Fitting Plate A	2-1/2	4.69

(1) RUS listed.



## Cable Spacers

Used to create a space between messenger strand and aerial cable. Black plastic.

Catalog Number	Type	Space Created (in)	Approx Ship Wt Each (lbs)
<b>PSC2080519</b>	Kinsel Saddle	1/2	0.01
<b>PSC2080520</b>	Kinsel Saddle	3/4	0.01
<b>PSC2080420</b>	Bell	1/4	0.01
<b>PSC2080421</b>	Bell	1/2	0.01
<b>PSC2080422</b>	Bell	3/4	0.02
<b>PSC2080423</b>	Bell	1	0.03
<b>PSC2080424</b>	Bell	1-1/2	0.03
<b>PSC2080425</b>	Bell	2	0.04
<b>PSC2080426</b>	Stackable	1/2" increments	0.02



## Serving Sleeves

For holding down the loose end of guy strand projecting beyond the guy clamp. Chance Serving Sleeves, which have a flared end to speed application, are faster to apply than wire-wrap sleeves. Hot-dip galvanized.



Catalog Number	Dimensions (Inches)		Approx Ship Wt Each (lbs)
	Strand Size	Overall Length	
<b>6452</b>	1/4	1-3/8	0.028
<b>6453</b>	5/16	1-1/2	0.059
<b>6454</b>	3/8	1-3/4	0.073
<b>6455</b>	7/16	2	0.120
<b>6456</b>	1/2	2 1/4	0.130

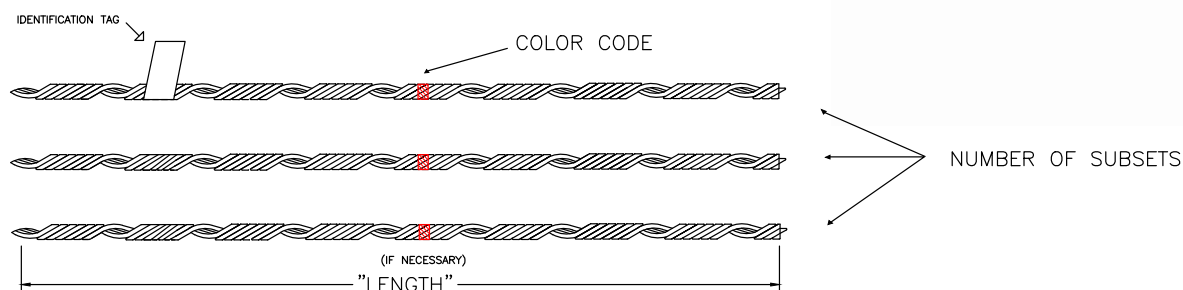
# Splices Formed Wire Guy Wire

## Galv. Steel FWLS

- For repairing damaged or severed guy wire or messenger cable.
- Do not use FWLS splices on overhead shield wires.
- Fargo FWLS series formed wire are designed for use on all types of galvanized guy wire (EHS, High Strength, Common, Siemens-Martin, Utilities, and Bell System Strand).
- FWLS will hold a minimum of 100% of the guy wire rated breaking strength (ultimate strength) when centered over the severed or point of damage.

**Rating:** Consult factory for information on other applications. Left hand lay standard.

**Material:** EHS Steel wire, Zinc-plated, Class B coating per ASTM A641.



## Product Data & Conductor Size

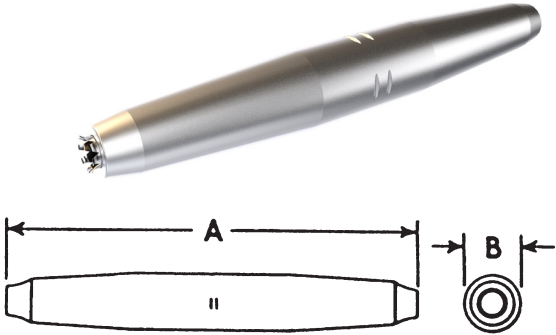
CATALOG NUMBER	NOMINAL SIZE	MAXIMUM RBS LB (KN)	NUMBER OF SUB- SETS	DIAMETER RANGE IN (MM)		NOMINAL LENGTH (L)		CARTON QTY		COLOR CODE
				MIN	MAX	IN	MM	UNITS	WEIGHT LBS. (KG)	
FWLS2102	3/16 (3W & 7W)	3,990 (17.7)	2	0.174 (4.41)	0.203 (5.16)	27	685	100	30 (13.6)	Red
FWLS2103	7/32 (7W)	5,400 (24.0)	2	0.204 (5.18)	0.230 (5.84)	29	737	100	36 (16.3)	Green
FWLS2104	1/4 (3W & 7W)	6,650 (29.6)	2	0.231 (5.87)	0.259 (6.58)	35	889	50	34 (15.4)	Yellow
FWLS2105	9/32 (7W)	8,950 (39.8)	2	0.260 (6.60)	0.291 (7.39)	38	965	50	36 (16.3)	Blue
FWLS2106	5/16 (3W & 7W)	11,200 (49.8)	2	0.292 (7.42)	0.336 (8.53)	42	1067	50	46 (20.8)	Black
FWLS2107	3/8 (3W & 7W)	15,400 (68.5)	3	0.337 (8.56)	0.394 (10.01)	50	1270	25	38 (17.2)	Orange
FWLS2108	7/16 (7W)	20,800 (92.5)	3	0.395 (10.03)	0.474 (12.04)	56	1422	25	58 (26.3)	Green
FWLS2109	1/2 (7W & 19W)	26,900 (119.7)	3	0.475 (12.07)	0.515 (13.08)	63	1600	10	36 (16.3)	Blue
FWLS2110	9/16 (7W & 19W)	35,000 (155.7)	3	0.516 (13.11)	0.570 (14.48)	71	1803	10	52 (23.5)	Yellow

Notes: All dimensions: inches (mm) unless otherwise noted.

## Guy Wire GLS

- For splicing applications with overhead or support guy wires
- GLS500x series automatic splices are designed for use on High Strength (HS), Common (Com), Siemens-Martin (SM), Utilities (Util), and Bell System strand
- GLS504x series automatic splices are designed for use on all guy wire types listed above, plus Extra High Strength (EHS) and Alumoweld (AW)
- All GLS automatic splices will hold a minimum of 90% of the guy wire rated breaking strength

**Material:**      **Shell** - High Strength Aluminum Alloy  
                      **Jaws** - Plated Steel




### Product Data & Conductor Size


CATALOG NUMBER	PRIMARY STRAND APPLICATION	CABLE RANGE ØIN. (MM)	DIMENSIONS	
			DIM. A IN. (MM)	DIM B IN. (MM)
GLS5000	1/4" HS, Com, S-M, Util, Bell	0.231" - 0.249" (5.87 - 6.32)	6.4" (163)	0.9" (23)
GLS5001	5/16" HS, Com, S-M, Util, Bell	0.300" - 0.324" (7.62 - 8.23)	7.4" (189)	1.1" (28)
GLS5002	3/8" HS, Com, S-M, Util, Bell	0.348" - 0.372" (8.84 - 9.45)	9.00" (229)	1.3" (33)
GLS5039	3/16 STR EHS, AW	0.174" - 0.188" (4.42 - 4.78)	8.6" (219)	1.13" (29)
GLS5040	1/4" EHS 7#12 (6M) AW	0.231" - 0.249" (5.87 - 6.32)	8.3" (211)	1.13" (28)
GLS5041	5/16" EHS 7#10 (10M), 7#11 (8M) AW	0.300" - 0.324" (7.62 - 8.23)	9.4" (239)	1.22" (31)
GLS5042	3/8" EHS 3#5, 7#8, 7#9, 12.5M, 14M, 16M AW #4-2/5, #2-3/4, #1-5/2 AWAC	0.348" - 0.372" (8.84 - 9.45)	10.0" (260)	1.48" (38)
GLS5043	7/16" EHS 7#7 (20M), 18M AW #2-2/5, #1-3/4, #1/0-5/2 AWAC	0.402" - 0.459" (10.21 - 11.66)	11.0" (280)	1.60" (41)
GLS5044	1/2" EHS, 25M AW, #1/0-3/4, #2/0-4/3 AWAC	0.487" - 0.519" (12.37 - 13.18)	10.8" (273)	1.70" (43)

NOTE: For conductors other than those listed, consult factory.

# Staples

Used to secure ground wire and ground wire molding to wood poles.

Staple Type	Dimensions Length x Inside Width x Wire Diameter Inches	Finish					
		Electro Zinc Catalog Number		Galvanized Catalog Number		Copper Coated Catalog Number	
		Quantity Per Carton/Inner Package	Approx Ship Wt Each (lbs)	Quantity Per Carton/Inner Package	Approx Ship Wt Each (lbs)	Quantity Per Carton/Inner Package	Approx Ship Wt Each (lbs)
Barbed  Square Shank Cut Point  	1-1/2 x 3/8 x .131			C2050460 <sup>(1)</sup>			
				1750/350	0.014		
	1-1/2 x 3/8 x .140					C2050464	
						1500/300	0.017
	2 x 3/8 x .131			C2050461			
				1300/260	0.019		
	2 x 5/8 x .165			C2050463 <sup>(1)</sup>			
				800/160	0.032		
	3 x 11/16 x .218			C2050462 <sup>(1)</sup>			
				300/60	0.032		

Staple Type	Dimensions Length x Inside Width x Wire Diameter Inches	Finish					
		Electro Zinc Catalog Number		Galvanized Catalog Number		Copper Coated Catalog Number	
		Quantity Per Carton/Inner Package	Approx Ship Wt Each (lbs)	Quantity Per Carton/Inner Package	Approx Ship Wt Each (lbs)	Quantity Per Carton/Inner Package	Approx Ship Wt Each (lbs)
Cut  Slash Point    Sold by the Pound	1-1/4 x 3/16 x .114					C2050245	
						6700/NA	0.007
	1-3/8 x 1/2 x .162					C2050244	
						3100/NA	0.016
	1-1/2 x 1/4 x .148	751134 <sup>(3)</sup>		C2050247 <sup>(1)(2)</sup>			
		3600/NA	0.014	3600/NA	0.014		
	1-1/2 x 3/8 x .162					9167 <sup>(1)</sup>	
						2900/NA	0.017
	2 x 1/2 x .162					9169	
						2200/NA	0.023

(1) RUS listed. (2) ANSI standard, C-135.14.

(3) Add SP to catalog number for special package - 10 pound carton, minimum order quantity 10 cartons. Approx. ship weight of 100 pounds.

AERIAL INSTALLATION  
**Staples (continued)**

Staple Type	Dimensions Length x Inside Width x Wire Diameter Inches	Finish					
		Electro Zinc Catalog Number		Galvanized Catalog Number		Copper Coated Catalog Number	
		Quantity Per Carton/Inner Package	Approx Ship Wt Each (lbs)	Quantity Per Carton/Inner Package	Approx Ship Wt Each (lbs)	Quantity Per Carton/Inner Package	Approx Ship Wt Each (lbs)
Rolled						<b>C2050223<sup>(2)</sup></b>	
Diamond Point	1 x 1/4 x .114					5000/500	0.005
	1 x 5/16 x .120	<b>7511</b>		<b>C2050213</b>			
		1000/100	0.005	1000/100	0.005		
	1-1/4 x 1/4 x .114					<b>C2050224<sup>(2)</sup></b>	
						5000/500	0.006
	1-1/2 x 5/16 x .144					<b>C2050225<sup>(2)</sup></b>	
						2500/500	0.012
	1-1/2 x 3/8 x .148	<b>C2050207</b>		<b>C2050214<sup>(2)</sup></b>			
		1000/100	0.014	1000/100	0.014		
	1-3/4 x 3/8 x .144					<b>9153<sup>(2)</sup></b>	
						2500/500	0.014
	1-3/4 x 3/8 x .148	<b>C2050208</b>		<b>C2050215<sup>(2)</sup></b>			
		1000/100	0.015	1000/100	0.015		
	2 x 1/2 x .162	<b>7512<sup>(2)</sup></b>		<b>C2050216<sup>(1)(2)</sup></b>		<b>9154</b>	
		1000/100	0.022	1000/100	0.022	1000/100	0.022
	2 x 5/8 x .162	<b>C2050209<sup>(2)</sup></b>		<b>C2050217<sup>(2)</sup></b>		<b>C2050226<sup>(2)</sup></b>	
		1000/100	0.023	1000/100	0.023	1000/100	0.023
	2 x 5/8 x 3/16	<b>C2050210</b>		<b>C2050218<sup>(2)</sup></b>			
		1000/100	0.032	1000/100	0.032		
	2 x 1-1/16 x 3/16	<b>7513</b>		<b>C2050219<sup>(2)</sup></b>		<b>C2050229</b>	
		1000/100	0.031	1000/100	0.031	1000/100	0.031
	2-1/4 x 25/32 x 3/16					<b>C2050227</b>	
						1000/100	0.034
	2-1/2 x 1-1/16 x 3/16					<b>C2050230<sup>(2)</sup></b>	
						1000/100	0.040
	3 x 1 x 1/4					<b>C2050232<sup>(2)</sup></b>	
						500/100	0.080
	3 x 1-1/16 x 1/4	<b>7522<sup>(2)</sup></b>		<b>C2050220<sup>(2)</sup></b>		<b>9161<sup>(1)(2)</sup></b>	
		500/100	0.080	500/100	0.080	500/100	0.080
	3 x 1-1/2 x 1/4	<b>C2050211</b>		<b>C2050221<sup>(2)</sup></b>		<b>C2050233</b>	
		500/100	0.080	500/100	0.080	500/100	0.080
	3-1/2 x 1-3/4 x 1/4	<b>C2050212</b>		<b>C2050222</b>			
		250/100	0.095	250/50	0.095		





# Steps

## Pole Steps

Steps are made from hot-rolled, open-hearth steel. Hot-dip galvanized. Standard Drive Hook type has fetter drive thread and pilot point for easy starting.

Catalog Number	Type Head	Size Inches	Approx Ship Wt Each (lbs)
506125 <sup>(1)</sup>	Hook	5/8 x 10	0.92

(1) NEMA standard.



No. 506125

## Detachable Type

Removable steps create a neat appearance and deter unauthorized pole climbing. Installed by placing plate over lag until plate cuts into pole. Nail driven into bottom hole gives extra rigidity. Step fits on lag head. Order lags and steps separately. Lag and plate assemblies are available for either wood pole or steel pole applications.

Note: T2050433 and T2050449 are not for composite pole installations.

Catalog Number	Description	Approx Ship Wt Each (lbs)
PS6235 <sup>(1)</sup>	Lag & Plate (for wood pole installation)	0.60
PS6236 <sup>(1)</sup>	Step	1.05
T2050433	Bolt & Plate (for steel pole installation)	0.64
T2050449	Bolt, Plate, Step (for steel pole installation)	1.70

(1) NEMA standard.



for Wood Poles



No. PS6236



No. T2050433 for Steel Poles



No. T2050449 for Steel Poles

## Galvanized Steel Washers

## Square Curved Washers

Catalog No	Dimensions Inches			Approx Ship Wt Each (lbs)
	Washer Size	Hole Diameter	Bolt Diameter	
680912	4 x 4 x 1/4	15/16	7/8	1.20
681012	2-1/4 x 2-1/4 x 3/16	11/16	5/8	0.31
PS6822	2-1/2 x 2-1/2 x 3/16	11/16	5/8	0.36
682212	3 x 3 x 1/4	13/16	3/4	0.66
6823	3 x 3 x 1/4	7/8	3/4	0.62
682312	3 x 3 x 1/4	11/16	5/8	0.62
6825	3-1/4 x 3-1/4 x 1/4	13/16	3/4	0.76
DF4W15	4 x 4 x 3/16	13/16	3/4	0.82
400285037	3-3/8 x 3-1/2 x 3/8	15/16	7/8	1.22
400285029	3-3/8 x 3-1/2 x 3/8	1-1/8	1	1.30

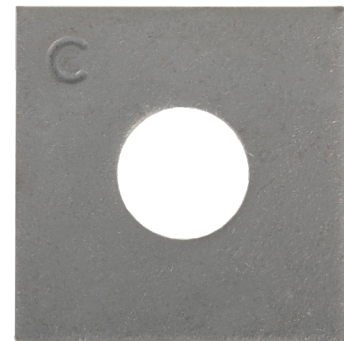


Square Curved

## Square Washers

Catalog No	Dimensions Inches			Approx Ship Wt Each (lbs)
	Washer Size	Hole Diameter	Bolt Diameter	
6811	2 x 2 x 1/8	9/16	1/2	0.13
6812	2 x 2 x 1/8	11/16	5/8	0.12
6813	2-1/4 x 2-1/4 x 3/16	11/16	5/8	0.24
PSC2050546	3 x 3 x 1/4	11/16	5/8	0.60
6814 <sup>(1)</sup>	2-1/4 x 2-1/4 x 3/16	13/16	3/4	0.23
6816	3 x 3 x 3/16	13/16	3/4	0.51
6817 <sup>(1)</sup>	3 x 3 x 1/4	13/16	3/4	0.64
6818 <sup>(1)</sup>	4 x 4 x 3/16	13/16	3/4	0.87
681812	4 x 4 x 1/4	7/8	3/4	1.20
681912 <sup>(1)</sup>	4 x 4 x 1/2	13/16	3/4	2.36
PSC2050534	3 x 3 x 1/4	15/16	7/8	0.60
6819	4 x 4 x 1/4	15/16	7/8	1.18
PSC2050519	4 x 4 x 1/4	1-1/16	1	1.04
6820	4 x 4 x 1/2	1-1/8	1	2.28
400285714	4 x 4 x 1/2	1-3/16	1-1/8	2.28
400285722	6 x 6 x 1/2	1-7/16	1-3/8	4.18

(1) RUS listed.



Square

# Washers (continued)

## Galvanized Steel Washers

### Round Washers

Catalog No	Dimensions Inches			Approx Ship Wt Each (lbs)
	Washer Size	Hole Diameter	Bolt Diameter	
<b>PS6801</b>	1 O.D. x 14 Ga.	7/16	3/8	0.016
<b>PS6802</b>	1-1/4 O.D. x 14 Ga.	9/16	3/8	0.028
<b>PS6803<sup>(1)</sup></b>	1-3/8 O.D. x 12 Ga.	9/16	1/2	0.045
<b>400285169</b>	1-3/8 O.D. x 12 Ga.	9/16	1/2	0.045
<b>6805<sup>(1)</sup></b>	1-3/4 O.D. x 10 Ga.	11/16	5/8	0.085
<b>6806</b>	2 O.D. x 9 Ga.	13/16	3/4	0.118
<b>PS6807</b>	2-1/4 OD x 8 Ga.	15/16	7/8	.152
<b>6808</b>	2-1/2 O.D. x 8 Ga.	1-1/16	1	0.21

(1) RUS listed.

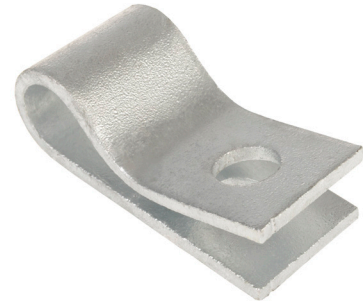


Round

## Galvanized Steel Washers

### Spring Clip Washers

Catalog Number	Dimensions Inches			Approx Ship Wt Each (lbs)
	Stock	Hole Size	Bolt Size	
3539	5/32 x 1	9/16	1/2	0.22
3540	1/4 x 1-3/4	11/16	5/8	0.93
3541	1/4 x 1-3/4	13/16	3/4	0.91
C2050436	1/4 x 1-3/4	15/16	7/8	0.89
C2050438	1/4 x 1-3/4	1-1/16	1	0.87



Spring Clip

### Spring Lock Washers

Catalog Number	Dimensions Inches			Approx Ship Wt Each (lbs)
	Stock	Hole Size	Bolt Size	
DF7W1	0.094 x 0.141	7/16	3/8	0.010
4035	0.125 x 0.171	9/16	1/2	0.015
4036	0.156 x 0.203	11/16	5/8	0.024
4037	0.188 x 0.234	13/16	3/4	0.048
PSC2050496	0.219 x 0.266	15/16	7/8	0.066
PSC2050497	0.250 x 0.297	1-1/16	1	0.084

(1) Packaged 300 per carton.



Spring Lock

### Double Coil Spring Lockwashers

Catalog Number	Dimensions Inches			Approx Ship Wt Each (lbs)
	Stock	Hole Size	Bolt Size	
C2050185	5/32 x 1	9/16	1/2	0.040
C2050186	3/16 x 1-3/16	11/16	5/8	0.066
C2050187	7/32 x 1-3/8	13/16	3/4	0.104
C2050188	7/64 x 3/4	7/16	3/8	0.015

### Heavy Duty Double Coil Spring Lockwashers

Catalog Number	Dimensions Inches			Approx Ship Wt Each (lbs)
	Stock	Hole Size	Bolt Size	
CMW38	0.156 x 0.196	0.40	3/8	0.030
CMW12	0.156 x 0.243	0.53	1/2	0.050
CMW58	0.234 x 0.302	0.65	5/8	0.120
CMW34	0.234 x 0.302	0.78	3/4	0.140



Double Coil Spring

## Washers (continued)

### Cast Galvanized Steel Washers

Cast washers provide excellent strength characteristics. Reinforcing ribs helps prevent washer from crushing.

#### Curved Square

Catalog Number	Dimensions Inches			Approx Ship Wt Each (lbs)
	Size	Max. Bolt Diameter	Thickness At Boss	
GCW31	3 x 3	5/8	3/8	0.45
GCW31A	3 x 3	3/4	3/8	0.45
GCW41	4 x 4	3/4	1/2	1.00
GCW41A	4 x 4	7/8	17/32	1.00
GCW41B	4 x 4	1	11/16	1.230



Curved Square

#### Curved Rectangular

Catalog Number	Dimensions Inches			Approx Ship Wt Each (lbs)
	Size	Max. Bolt Diameter	Thickness At Boss	
CRW3	2-1/4 x 3-1/2	3/4	3/8	0.45
CRW4A	3 x 4	7/8	1/2	0.93
CRW4B	3 x 4	1	1/2	0.93



Curved Rectangular

#### Round Flat

Catalog Number	Dimensions Inches			Approx Ship Wt Each (lbs)
	Diameter	Max. Bolt Diameter	Thickness At Boss	
GWR3	3	3/4	7/16	0.44
GWR4	4	7/8	1/2	0.87
GWR4A	4	1	1/2	0.87



Round Flat

#### Square Flat

Catalog Number	Dimensions Inches			Approx Ship Wt Each (lbs)
	Size	Max. Bolt Diameter	Thickness At Boss	
BB214	2-1/4 x 2-1/4	5/8	9/32	0.20
BB214A	2-1/4 x 2-1/4	3/4	9/32	0.20



Square Flat





## Drop Line Hardware

With pole line hardware manufacturing experience going back to 1907, Hubbell's growing line of drop line hardware provides the same quality and reliability all the way to the customer's premises. Products include those needed for twisted pair, coax, or fiber from the pole to the house or business.



## Siding Clips

Simplifies field installation for RG6 and RG59 coaxial cable. Wedges in-between siding. No drilling/screwing required. Made from plastic. Standard package size of 100.

Catalog Number	Color	Orientation
PSC2080442	Clear	Horizontal
PSC2080443	Black	Horizontal
PSC2080444	Clear	Vertical
PSC2080445	Black	Vertical



Horizontal House Clip



Vertical House Clip

## U-Cable Clip

U-Cable Clip for RG-6 Coaxial Cable. Secures coaxial cable to wall of home or building.

Catalog Number	Material	Approx Ship Wt Each (lbs)
PSC2170151	Aluminum	.003



U-Cable Clip

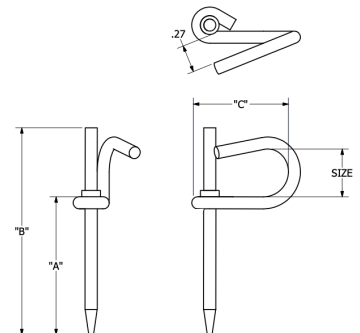
## Drive Ring

Use to secure or temporarily support drop cable on the pole. Meets Bellcore CA06835.

Catalog Number	Size	Dimensions Inches (in)			Minimum Order Quantity	Approx Ship Wt Each (lbs)
		A	B	C		
PSC2170074	1/2	1-3/8	2-1/16	3/4	500	0.02
PSC2170075	5/8	1-7/16	2-1/4	1-1/8	500	0.03
PSC2170076	5/8 L	1-15/16	2-3/4	1-1/8	500	0.03
PSC2170077	7/8	1-1/2	2-9/16	2-1/16	250	0.06
PSC2170078	7/8 L	2	3-1/16	2-1/16	250	0.07
PSC2170079	1-1/4	1-5/8	2-15/16	2-3/4	250	0.10
PSC2170080	1-1/4 L	2-1/8	3-7/16	2-3/4	250	0.10



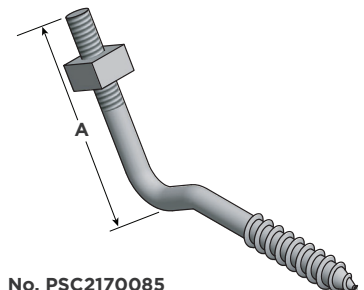
Drive Ring



## Angle Screws

Hot-dip galvanized angle screws

Catalog Number	Size	Dimensions Inches (in)				Minimum Order Quantity	Approx Ship Wt Each (lbs)
		Machine Thread	Wood Screw Thread	Length A (in)	Machine Screw Thread Length (in)		
PSC2170085	5/16	5/16 - 18	#20	2-1/4	1-1/8	10	0.12
PSC2170086	3/8	3/8 - 16	#24	3-1/4	1-5/8	10	0.16



No. PSC2170085

# Drop Attachments

## House Hooks

Loop drop wire clamp bail over 'P' section of house hook.

Catalog Number	Dimensions (in)	Wrenchable	Minimum Order Quantity	Approx Ship Wt Each (lbs)
PSC2170095	3-3/4 x 1-1/2	No	200	0.07
PSC2170096	4-1/2 x 1-5/8	Yes	100	0.07
PSC2170097	6-1/2 x 1-5/8	Yes	100	0.07
PSC2170129	4-1/2 x 1-1/2	No	200	0.09



No. PSC2170095

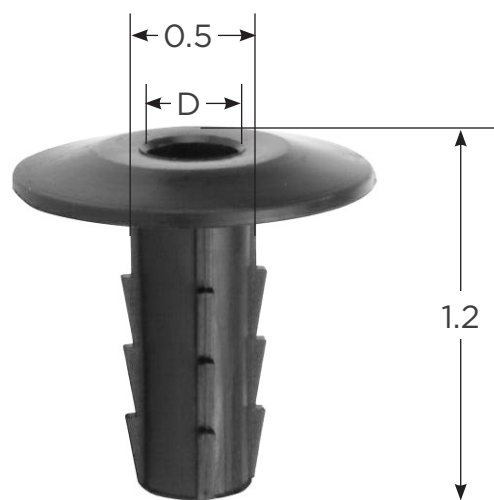


No. PSC2170096

## Bushings

These single feed-through bushings seal wall openings and protect RG6 and RG6 Quad Cables from harm and abrasion damage.

Catalog Number	Dimensions (in)	Feed through diameter D (in)	Color
PSC2080429	1.2 x 0.5	0.310	Natural
PSC2080430	1.2 x 0.5	0.310	Clear
PSC2080431	1.2 x 0.5	0.310	Beige
PSC2080432	1.2 x 0.5	0.310	Black
PSC2080433	1.2 x 0.5	0.310	White
PSC2080434	1.2 x 0.5	0.265	Clear
PSC2080435	1.2 x 0.5	0.265	Beige
PSC2080436	1.2 x 0.5	0.265	Black
PSC2080437	1.2 x 0.5	0.265	White
PSC2080446	1.2 x 0.5	0.210	Clear
PSC2080447	1.2 x 0.5	0.210	Beige
PSC2080448	1.2 x 0.5	0.210	Black
PSC2080449	1.2 x 0.5	0.210	White



No. PSC2080432

## 1-2 Pair and 6 Pair Dropwire Clamps

Attaches to hooks and span clamps to secure ends (pole, building or mid-span) of 1-2 & 6 pair communication service drops

- 1-2 pair meets the requirements of Telcordia specifications GR-3174
- Clamp Strength Rating:  
Ex: - Clamp Strength Rating:  
1-2 pair clamps - 555 lbs.  
6 pair clamps - 800 lbs.  
Drop clamps will exceed the rated tensile strength of the applicable cable

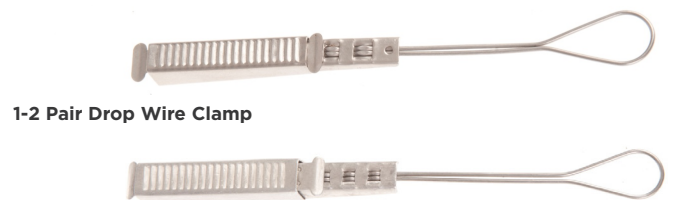


### Features

- Available in either stainless steel or aluminum
- 1-2 pair supplied with serrated shims
- 6 pair supplied with dimpled shims

### Material:

- Stainless steel clamps - 304 stainless steel
- Aluminum clamps - 5052-H32 aluminum
- Clamp bail wire (aluminum and stainless clamps) - 430 stainless



1-2 Pair Drop Wire Clamp

Catalog Number	Drop Cable	Material	Shim Style	Approx Ship Wt Each (lbs)
C2PRAS	1-2 Pair	Aluminum	Serrated	.08
C2PRSS		Stainless		.11
C6PRSD	6 Pair	Stainless	Dimpled	.18

6 Pair Drop Wire Clamp

## Universal CATV Clamp

Attaches to hooks and span clamps to secure ends (pole, building or mid-span) of CATV messengered service drops.

### Material:

- Clamp - 5052-H32 aluminum
- Clamp bail wire - 430 stainless

Catalog No. CMDCA  
CATV Service Drop Clamp



Catalog Number	Drop Cable	Approx Ship Wt Each (lbs)
CMDCA	Messengered COAX	0.05

AERIAL INSTALLATION

# Clamps, Drop/Span

## Flat Fiber Drop Clamp

Drop wire clamp for attaching flat fiber type communications cable to hooks, or span clamps that are installed on buildings, poles or at mid-span.

Approved for use on the following drop cables:

- Corning SST-Drop™ and ROC™ Drop
- Superior Essex Universal Drop FTTP and FTTP Tight Buffered Drop
- Prysmian ResiLink™ ADF Flat Drop
- Commscope O-DF Drop
- OFS Mini LT Flat Drop

**Material:**

- Clamp - 304 stainless
- Wire bale - 430 stainless
- Shim Style: Serrated



Catalog Number	Drop Cable	Approx Ship Wt Each (lbs)
FFD12SS	Flat Fiber Cable	0.11

## Span Clamps

For attaching overhead service wire to strand.

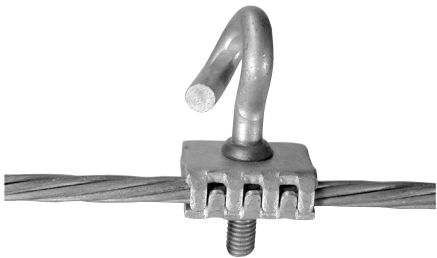
**Features**

- Works on 6M through 25M strand.
- Short, shaped teeth give extraordinary gripping power to clamp without touching the web.
- Works well on both self-support cable and bare strand.
- Especially effective in attaching to duct-on-strand or aerialinner duct.
- Meets Spec CA08391 for function and mechanical strength.

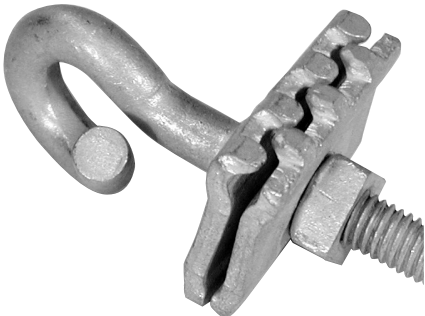
Ordering information

**EM-8011** “The Gripper” finger version.

Standard packaging: 5/sm bx, 100/lg bx, 41 lb/lg bx. No minimum order.



EM-8010 on Strand



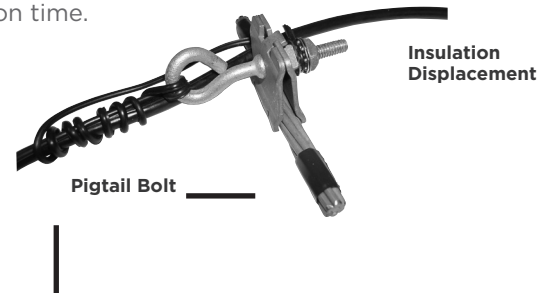
EM-8011

## Mid-Span Clamps

For attaching overhead service wire to strand, and bonding messenger to strand.

### Features

- Pigtail bolt reduces chance of messenger wire slipping out of bolt.
- Three stainless steel washers with insulation-penetrating teeth contact messenger through jacket. This reduces corrosion and installation time.
- Works on .109 through 25M strand.
- Short, shaped teeth give extraordinary gripping power.



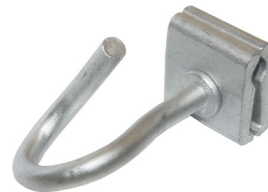
### Ordering information

EM 8012-1PIDC

Provides drop wire clamp attachment at the mid-span.

- 1-2 pair meets the requirements of Telcordia specifications GR-3174
- Clamp Strength Rating:

Catalog Number	Letter Designation	Bolt/Pigtail Diameter (in)	Approx Ship Wt Each (lbs)
<b>CQSC</b>	Q Span	.025	0.17
<b>CESC</b>	E Span	0.38	0.43
<b>COSC</b>	O Span	0.38	0.25



**Q Span Clamp**



**E Span Clamp**



**O Span Clamp**

## Clamps, Span

### Span Clamp with Internal Teeth

When used in conjunction with messengered drop cable, the messenger wire can be installed directly to the multidrop span clamp without a drop wire clamp.

#### Applications

- Attaching overhead service wire to strand, and bonding messenger to strand.

#### Features

- Works on 6M through 25M strand.
- Short, shaped teeth give extraordinary gripping power to clamp without touching the web.
- Especially effective in attaching to duct-on-strand or aerial inner duct.
- Meets Spec CA08391 for function and mechanical strength.
- Internal insulation-penetrating teeth contact strand through jacket (no stripping).

#### Ordering information

**EM-8012** Span clamp

Standard packaging: 5/sm bx, 100/lg bx, 43 lb/lg bx.

No minimum order.

### Bonding Clip for Integrated Messenger Coax Cable

#### Description

A set of teeth in clip form, made of tinned copper alloy.

#### Applications

- Can be used under strand applied hardware to provide bonding contact through IM coax insulation.

#### Features

- Teeth long enough and strong enough to make reliable contact.
- A multiple of teeth to pass the high current test.
- Tinned to provide compatibility.
- Collapsible enough to be pre-applied by hand.
- Prevents having to strip insulation.
- Longer than most hardware so the clip can be seen from the ground, assuring bonding is done.

#### Ordering information

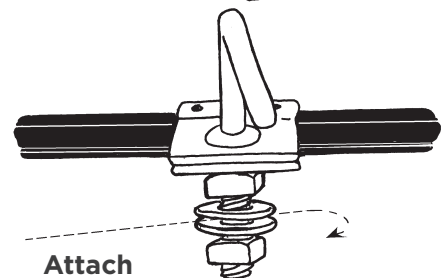
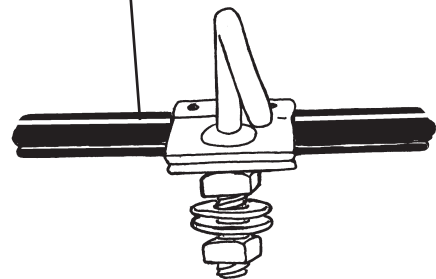
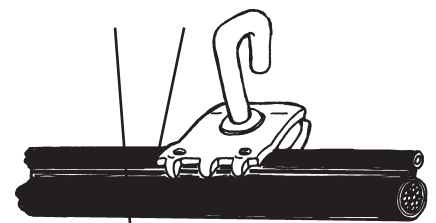
**EM-8011**

Bonding Clip for Integrated Messenger Coax Cable

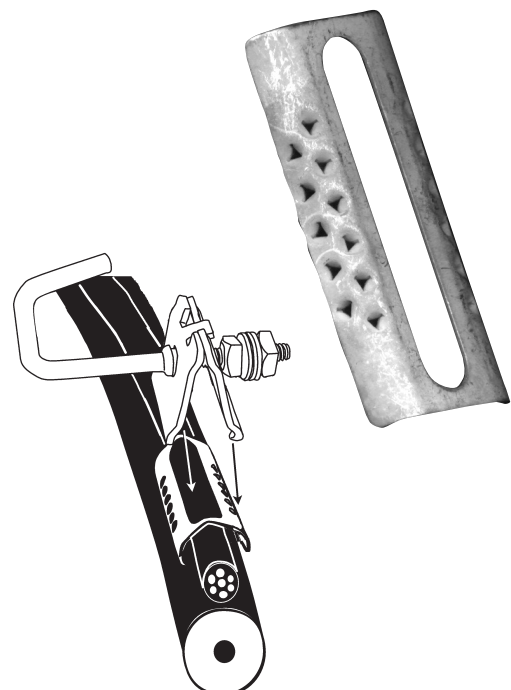
Standard packaging: 2000/bx, 30 lb/bx.

No minimum order.

Clamp on self support



Attach messenger between washers



## Mid-Span Clamp Insulator

### Description

The Mid-Span Clamp Insulator provides extra insulation between the support strand and aerial drop wire. Made from low density polyethylene, it helps prevent lightning burn through of the drop wire jacket, which causes nuisance ground-outs.

### Features

- Simple, economical design is available as a loose piece to install on existing hardware, or it can be ordered on new mid span clamps.
- Shaped like a cam, it can be installed on pigtail bolt, located, and then turned to lock in the drop wire bail.

### Applications

For use in lightning-prone areas. It is also economical enough to use on every span clamp to help prevent trouble.

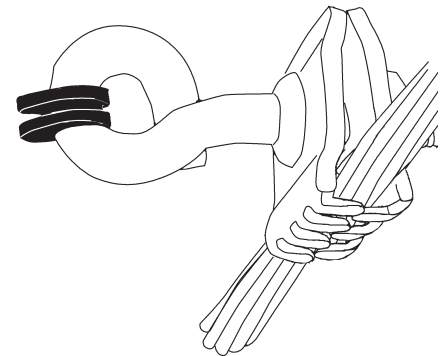
### Ordering information

**EM PG02** Mid-span clamp insulator

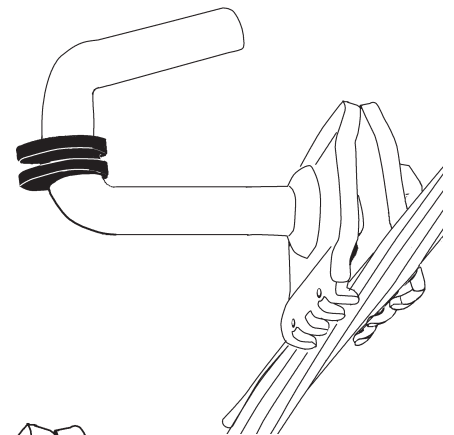
**EM 8010PG** Span clamp with teeth and insulator

**EM 8011PG** Span clamp with fingers and insulator

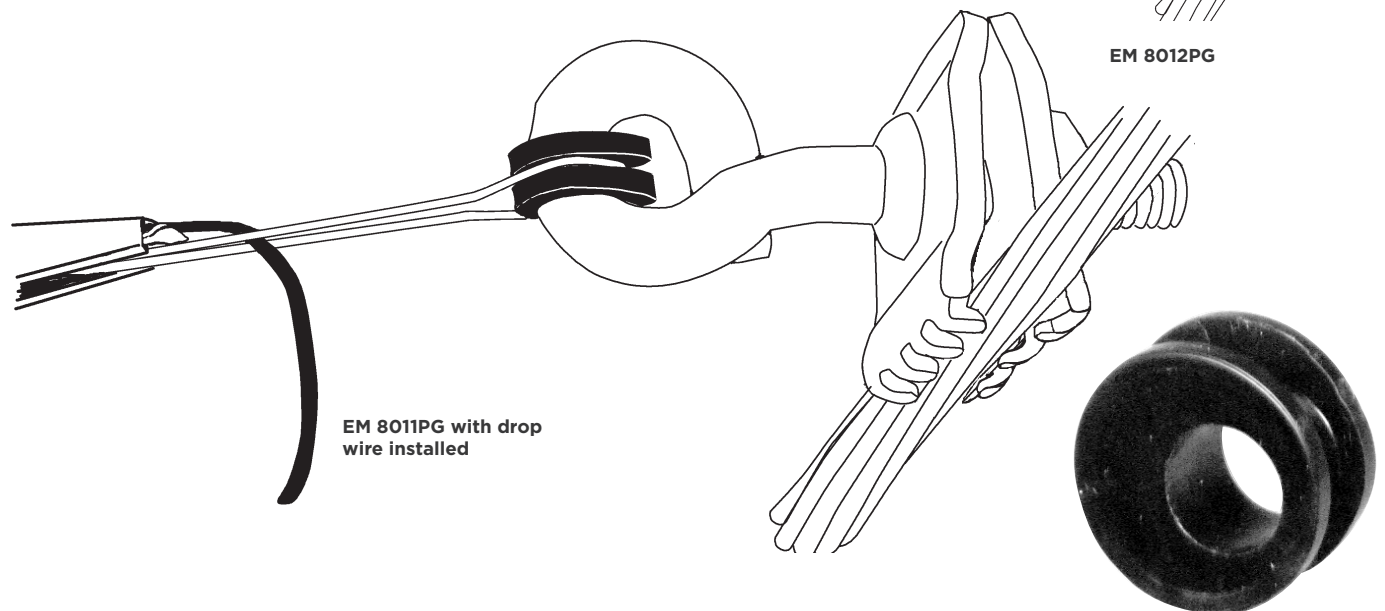
**EM 8012PG** Span clamp with internal teeth, “L”-shaped bolt, and insulator



**EM 8010PG**



**EM 8012PG**



**EM 8011PG with drop wire installed**



# Hook

## Ram's Horn Hook

Ram's Horn Hook attaches at the home or building with 1/4" hardware (not provided). Loop drop wire clamp bail over ram's horn hook.

### Ordering information

Hubbell Catalog No. CRHH

## Insulated P-Hook

House attachment for drop wire clamps. Extra long shank for aluminum siding. Porcelain knob for high strength as well as insulating qualities.

### Ordering information

**EM-8016** Insulated P-Hook Standard packaging: 100/bx, 12 lb/bx. No minimum order.

**EM-8016-KNOB** Just the porcelain knob.

## Insulated P-Hook

### Applications

Connecting messengered coax drop wire to house hooks, "P" clamps, ram's horns.

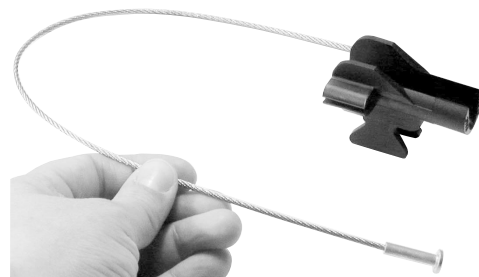
### Features

- Glass-filled nylon for outstanding strength.
- Non metallic body insulates against shorts.
- Detachable bail can be threaded through a loop.
- Flexible bail can be looped around for extra stability.
- Rounded geometry prevents damage to coax or messenger.

**Ordering information:** **EM-RD011** Coax Drop Clamp



No. CRHH







## ADSS Hardware

In many cases, ADSS aerial fiber installation is faster and more cost effective than lashing, and allows communications cables to be placed in the power zone on utility poles.

Hubbell Power Systems' line of ADSS support hardware for short span distribution applications makes the job even faster, reducing installation costs while ensuring system integrity, even in heavy ice and wind loading areas.

The Hubbell ADSS Wedge Style Deadend is designed for fast, easy, and reliable installation of ADSS (All Dielectric Self-Support) aerial fiber optic cable. The deadends are designed with an open, conical body containing a pair of sliding wedges. The wedges are engineered to mechanically couple to the cable without causing damage to the sheath or fibers, providing a secure grip without fear of signal loss.

#### Material

- Body: UV Resistant Thermoplastic
- Bail: Stainless Steel

#### Benefits

- Light and compact
- Easy, quick, and safe deadending
- Installation takes seconds with no special tools
- The flexible bail provides an extra protection to the cable against Aeolian vibrations
- Safe for installation near space potentials up to 11kV

#### Specifications

- Deadending of 0.236" to 0.787" ADSS cables
- Spans up to 325 ft.
- All plastic parts are UV resistant and tested in conditions equivalent to minimum of 25 years in service
- Accepts standard pole line fittings
- Recommended for double jacket ADSS cables. For single jacket cables, contact the manufacturer for recommendations.



Part Number	Cable Diameter Range				Ultimate Body Strength (lbf)
	Min (in)	Max (in)	Min (mm.)	Max (mm.)	
<b>WEGADSS100</b>	0.236	0.315	6	8	750
<b>WEGADSS101</b>	0.315	0.394	8	10	750
<b>WEGADSS102</b>	0.394	0.472	10	12	1650
<b>WEGADSS103</b>	0.472	0.551	12	14	1650
<b>WEGADSS104</b>	0.551	0.630	14	16	1650
<b>WEGADSS105</b>	0.630	0.709	16	18	1650
<b>WEGADSS106</b>	0.709	0.787	18	20	1650

# Aluminum ADSS Suspension Clamps

The Hubbell Aluminum ADSS Suspension Clamps offer fixed or hanging configuration options for a full range of ADSS cable sizes from 0.426" to 1.050" OD.

**Material**

- Body: Aluminum
- Insert: Polyurethane
- Hardware: Galvanized steel, Neoprene

**Benefits**

- Full range of ADSS cable coverage from 0.426" to 1.050" diameter
- Fixed Clamp:
  - Installation with through bolt or stainless steel banding (upto 1-1/4" wide)
  - Versatile design can be used as a stringing block (with inserts removed)
- Hanging Clamp: Installation with J-hook (PSC2080237) or eye-bolt

**Specifications**

- Tangent suspension for spans up to 600 ft.
- 30° max turning angle
- Ultimate vertical load: 4000 lbs.
- Meets IEEE 1591.2



**HUBSUSFxxx**  
Fixed Suspension Clamp



**HUBSUSHxxx**  
Hanging Suspension Clamp

Ordering Information			
Part Number		Cable Diameter Range	
Fixed Clamp	Hanging Clamp	Min (Mm.)	Max (Mm.)
HUBSUSF199	HUBSUSH199	0.426 (10.8)	0.475 (12.0)
HUBSUSF200	HUBSUSH200	0.476 (12.1)	0.525 (13.3)
HUBSUSF201	HUBSUSH201	0.526 (13.4)	0.575 (14.6)
HUBSUSF202	HUBSUSH202	0.576 (14.7)	0.625 (15.9)
HUBSUSF203	HUBSUSH203	0.626 (16.0)	0.675 (17.1)
HUBSUSF204	HUBSUSH204	0.676 (17.2)	0.750 (19.1)
HUBSUSF205	HUBSUSH205	0.751 (19.2)	0.825 (21.0)
HUBSUSF206*	HUBSUSH206*	0.826 (21.1)	0.900 (22.9)
HUBSUSF207*	HUBSUSH207*	0.901 (23.0)	0.975 (24.8)
HUBSUSF208*	HUBSUSH208*	0.976 (24.9)	1.050 (26.7)

\*Consult factory for information on standards qualification.

## AERIAL INSTALLATION

# ADSS Suspension Clamps

The Hubbell ADSS suspension clamp is a heavy duty, versatile, and reliable solution for securely suspending ADSS (All Dielectric Self-Support) aerial fiber optic cable. The versatility of the clamp allows the installer to fix the clamp to the pole using either a through bolt or band. If a loose tangent is required, the clamp can be suspended using a standard J-hook (Part # PSC2080237). Accepting a range of sizes and multiple installation methods, the Hubbell ADSS suspension clamp is sure to meet your tangent needs.

### Material

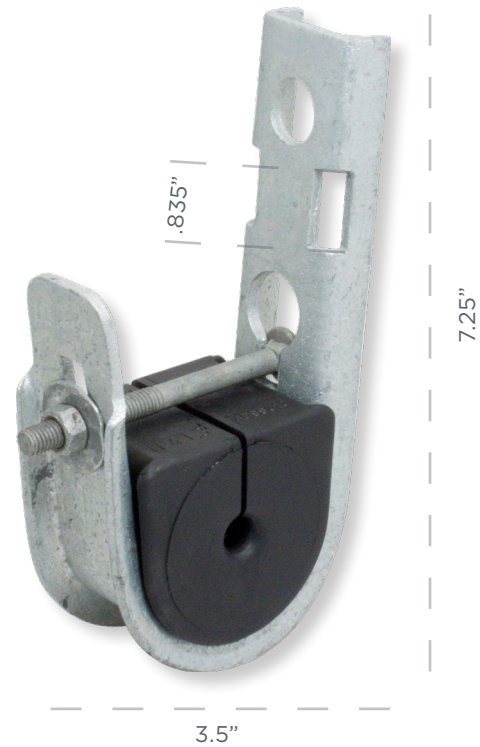
- Body: Galvanized Steel
- Insert: Neoprene Sleeve

### Benefits

- Two sizes to cover the full range of ADSS cables from 0.394" to 0.787"
- Installation in just a few seconds with standard tools
- Versatility in installation methods

### Specifications

- Tangent suspension for spans up to 600 ft.
- Less than 20° angle on cable routes between spans (For angles greater than 20°, double deadend or false deadend)



Part Number	Cable Diameter Range				Ultimate Body Strength (lbs.)
	Min (in)	Max (in)	Min (mm.)	Max (mm.)	
ASCF102	0.394	0.591	10	15	3000
ASCF114	0.591	0.787	15	20	3000

AERIAL INSTALLATION

## ADSS Hanging Suspension Clamps

The Hubbell ADSS Dielectric Suspension Clamp is a great choice when installing ADSS (All Dielectric Self-Support) aerial fiber optic cable near the energized zone on a utility pole. Installed as a float mount, the clamp is best used on a closed eye nut (Part #'s 6500, 6501, 6502, 6503).

**Material**

- Body: UV Resistant Thermoplastic
- Insert: Neoprene Sleeve

**Benefits**

- Lightweight, compact, and cost effective design
- Dielectric body
- Installation in seconds
- Suspension bails provide additional protection against Aeolian vibration

**Specifications**

- Tangent suspension for spans up to 325 ft
- Less than 20° angle on cable routes between spans (For angles greater than 20°, double deadend or false deadend)



Part Number	Cable Diameter Range				Ultimate Body Strength (lbf)
	Min (in)	Max (In)	Min (mm.)	Max (mm.)	
AHSC800	0.315	0.472	8	12	450
AHSC1200	0.472	0.630	12	16	450



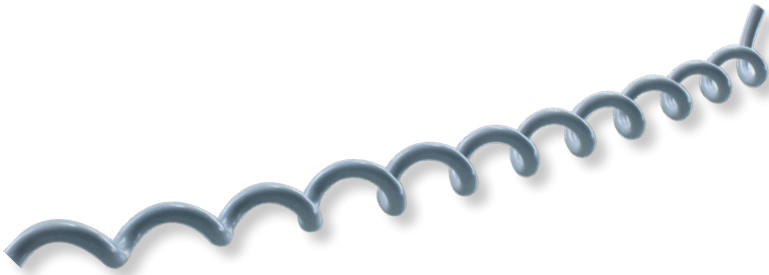
The ADSS spiral vibration damper reduces Aeolian vibration. Aeolian vibration is a high frequency, low amplitude vibration caused by wind passing across the fiber cable. This vibration can cause support hardware to breakdown and fail over time. The spiral vibration dampers are made of PVC and are very easy to install.

Material

- PVC

Benefits

- Reduces Aeolian and galloping vibrations
- Easy installation
- Dielectric material



Part Number	Cable Diameter Range				Length (in.)
	Min (in)	Max (in)	Min (mm.)	Max (mm.)	
SVD103	0.252	0.327	6.4	8.3	49
SVD104	0.327	0.461	8.3	11.7	53
SVD105	0.461	0.563	11.7	14.3	53
SVD106	0.563	0.760	14.3	19.3	65



## OPTI-LOOP™ Storage Systems

Cable slack in aerial networks is critical for expansion and repairs. Hubbell's OptiLoop aerial slack storage products are ideal for storing slack on the span. Available in various sizes and materials, OptiLoop slack storage systems can be used on lashed aerial, ADSS, and drop cables.

They provide a convenient, economically priced and industry-approved method of storing extra length of fiber optic cable.

# Aluminum Fiber Optic Storage System

The aluminum Opti-Loop™ FOS for strand and messenger mounted cable is available in a variety of sizes. With more than one million units in service, Opti-Loop fiber storage systems lead the industry in quality and durability.

**Design features and benefits**

- All aluminum construction with continuous welds at crossbars and ends.
- Each pair is individually boxed and includes stainless steel mounting bolts, nuts and washers.
- Fits all fiber cable up to 1.50" OD.
- Powder coat finish.
- Tie eyelets designed to accommodate both stainless steel and tie wrap securing methods.
- Radius ends to ensure no sharp corners.
- Outward facing channel and minimal surface area minimizes stress and ice loading.



**Ordering Information**

Catalog Number	Size (Inches)	Length (Inches)	Outside Diameter (Inches)
FOS10TMK	10.2	23	11.4
FOS1TMK	12.2	26	13.4
FOS2TMK*	12.2	26	13.4
FOS3TMK	16.2	31	17.7
FOS4TMK	18.2	33	19.7
FOS5TMK*	18.2	33	19.8
FOS6TMK	20.2	34	21.4
FOS24TMK	24.0	38	25.4
FOS30TMK	30.0	44	31.4

*\*Indicates multi-wrap unit*

# Plastic Fiber Optic Storage System

The plastic Opti-Loop™ FOS for strand and messenger mounted cable is available in a variety of sizes. They provide a convenient, economically priced and industry approved method of storing extra length of fiber optic cable.

### Design features and benefits

- Utilizes self-aligning tap brackets.
- Requires only one tool for installation.
- No “fishing” tie wraps through holes or slots.
- Can be stacked if necessary.
- Contains UV inhibitor.
- Cut away channel creates a smoother transition to messenger.
- Minimal surface area minimizes stress and ice loading.



### Ordering Information

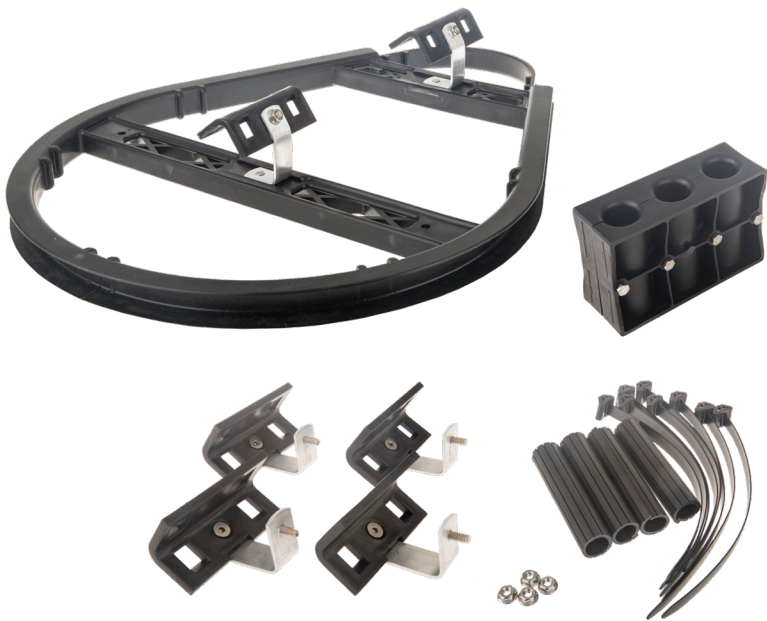
Catalog Number	Size (Inches)	Length (Inches)	Outside Diameter (Inches)
FOSP17TMK	17	26	18.9
FOSP12TMK	12	18	13.1

# ADSS Direct Attach Fiber Optic Storage System

The Opti-Loop™ ADSS Direct Attach unit uses the patented bowtie double deadend process for storing ADSS fiber. This system provides maximum protection for fiber cable and contains no conductive properties.

**Design features and benefits**

- Each pair is individually boxed and includes ADSS Direct Attach mounting brackets and an all dielectric pole block.
- No “fishing” tie wraps through holes or slots.
- Cut away channel creates a smoother transition to messenger.
- Contains UV inhibitor.



**Ordering Information**

Catalog Number	Size (Inches)	Length (Inches)	Outside Diameter (Inches)
FOSDA17ADSS	17	26	18.9
FOSDA12ADSS	12	18	13.1

# OptiLoop™ FOS Aluminum ADSS Storage System

The aluminum Opti-Loop™ FOS for All Dielectric Self Support (ADSS) cable is available in 3 sizes. With more than one million units in service, Opti-Loop fiber storage systems lead the industry in quality and durability.

### Design features and benefits

- All aluminum construction with continuous welds at crossbars and ends
- Each pair is individually boxed and includes ADSS Direct Attach mounting brackets and an all dielectric pole block
- Fits all fiber cable up to 1.50" OD
- Powder coat finish
- Tie eyelets designed to accommodate both stainless steel and tie wrap securing methods
- Radius ends to ensure no sharp corners
- Outward facing channel and minimal surface area minimizes stress and ice loading

*\*Hubbell Power Systems does not recommend using the aluminum ADSS Storage System in the power zone of the pole. It is only recommended for use in the communications zone of the pole. For All Dielectric plastic units please order the FOSDA version.*



### Ordering Information

Catalog Number	Size (Inches)	Length (Inches)	Outside Diameter (Inches)
FOS20ADSS	20.2	34.0	21.4
FOS24ADSS	24.0	38.0	25.4
FOS30ADSS	30.0	44.0	31.4





# Hubbell Underground Enclosures

Strength, performance, quality, and outstanding customer service have been hallmarks of all Hubbell underground enclosure brands for more than 40 years. The industry leader for applications in non-deliberate traffic areas, our enclosures provide rugged and cost-effective protection for a variety of electric utility, commercial & industrial, communications, water and gas equipment while meeting the specific demands of your industry.

All Hubbell underground enclosure brands come backed with cutting-edge engineering expertise and a total commitment to quality that is designed into our products. Our engineers are respected and valued advisors throughout the industry and our quality processes are among the most sophisticated in application. When you need unyielding performance and reliability, Hubbell underground enclosure brands are the right choice.

Hubbell is proud to offer the wide selection of underground enclosures found in this catalog. The following pages outline our industry leading Quazite, Quazite FRP and Pencell brands. In addition to our core products and options, Hubbell can help customize a solution for your project and application.



## UNDERGROUND ENCLOSURES

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Hubbell offers three distinct brands of underground enclosures. All three are built with the same attention to quality and performance that you know and expect from Hubbell. Each brand is made of a different base material. Our comprehensive product offering is tailored to ensure that your application requirements are met, no matter what. Based on your design style preference, Hubbell offers Quazite® monolithic polymer concrete, Quazite® FRP fiberglass-reinforced polymer, and PenCell HDPE enclosure products. All three brands offer superior performance and unique benefits.

## Quazite® Enclosures

Polymer concrete is made from select-grade aggregates in combination with a polymer resin system. When combined through a process of mixing, molding, and curing, an extremely powerful cross-linked bond is formed. Precast polymer concrete is reinforced with fiberglass to give it additional strength and rigidity.

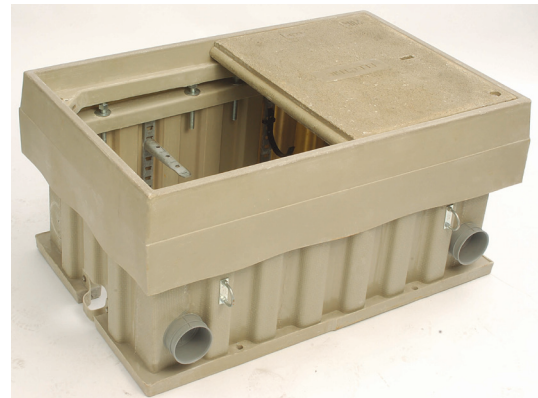
**Polymer Concrete**



## Quazite® FRP Enclosures

Fiberglass-reinforced polymer, also called FRP, is a special combination of polymer concrete and fiber-reinforced polymer. This hybrid construction, formed from an FRP shell and a polymer concrete ring and cover, delivers a high strength, lightweight, abrasion-resistant product that is protected from ultraviolet rays.

**Fiberglass Reinforced Polymer**



## PenCell® Enclosures

Structural foam molded high density polyethylene, also called HDPE, is a light weight, high strength plastic molding process that provides outstanding structural integrity and durability. HDPE enclosures are mated with covers made from a variety of materials: HDPE, polymer concrete or steel. This combination creates a highly versatile choice for underground utility enclosures where low weight and high strength are necessary.

**High Density Polyethylene (HDPE)**



# Quazite: Available Size Chart

Style	Size	Depths	Assembly Load Rating Options	UL
PC	6x8	6-3/4	Tier 15	Yes
	8x8	12, 18	Tier 15	Yes
	8x18	7, 8	Tier 8, Tier 15	Yes
	11x18	12, 18	Tier 8	Yes
	12x12	12	Tier 8, Tier 15	Yes
	13x24	12	Tier 5	Yes
	17x30	12	Tier 5	Yes
PD	13x24	18, 26	Tier 8, Tier 15, Tier 22	Yes
	17x30	18, 26	Tier 8, Tier 15, Tier 22	Yes
	24x36	18, 26, 48	Tier 8, Tier 15, Tier 22	Yes
	30x48	24, 48	Tier 8, Tier 15, Tier 22	Yes
PG	11x18	12, 18	Tier 8, Tier 15, Tier 22	Yes
	11x20	12, 18	Tier 8, Tier 15, Tier 22	No
	13x24	12, 18, 24	Tier 8, Tier 15, Tier 22	Yes
	17x30	12, 18, 22, 24, 30	Tier 8, Tier 15, Tier 22	Yes
	24x24	24 (Extensions Available)	Tier 8, Tier 15, Tier 22	Yes
	24x36	18, 24, 30, 36, 42 (Extensions Available)	Tier 8, Tier 15, Tier 22	Yes
	30x48	18, 24, 36, 48 (Extensions Available)	Tier 8, Tier 15, Tier 22	Yes
	30x60	21, 30, 36	Tier 5, Tier 15, Tier 22	No
	36x36	36 (Extensions Available)	Tier 8, Tier 15, Tier 22	Yes
	36x60	19, 24, 31, 36 (Extensions Available)	Tier 5, Tier 15, Tier 22	No
	36x72	21, 36	Tier 5, Tier 15, Tier 22	No
	48x48	36, 48	Tier 5, Tier 15, Tier 22	No
	48x72	36, 48 (Extensions Available)	Tier 5, Tier 15, Tier 22	No
	48x78	27, 36	Design 12,000 lbs / Test 24,000 lbs	No
	48x96	48 (Extensions Available)	Tier 5, Tier 15, Tier 22	No
PT	10x15	18	Tier 8, Tier 15	No
	13x24	18	Tier 8, Tier 15	Yes
	17x30	18	Tier 8, Tier 15	Yes
PX	12x12	24	Tier 8, Tier 15	Yes
Median	5x16		Tier 8, Tier 15	No
	10x12		Tier 8, Tier 15	No
Round	27	36, 48	Tier 8, Tier 15, Tier 22	Yes
	39	18, 24, 36, 48, 72	Tier 8, Tier 15, Tier 22	Yes

# Quazite FRP: Available Size Chart

Style	Size	Depths	Load Rating Options
Straight Wall	6x8	6-3/4	Tier 8
	10x15	12	Tier 8, Tier 15
	11x18	12, 18	Tier 8, Tier 15, Tier 22
	11x21	12	Tier 5, Tier 8, Tier 15
	11x32	12	Tier 5, Tier 8, Tier 15
	12x12	12	Tier 8, Tier 15, Tier 22
	13x24	12, 18	Tier 8, Tier 15, Tier 22
	15x17	12	Tier 8, Tier 15
	15x27	12	Tier 5, Tier 8
	16x22	18	Tier 8, Tier 15
	17x30	12, 18, 22, 30	Tier 8, Tier 15, Tier 22
	24x24	12, 18, 24	Tier 8, Tier 15, Tier 22
	24x36	18, 24, 30	Tier 8, Tier 15, Tier 22
	30x48	18, 24, 36	Tier 8, Tier 15, Tier 22
	30x60	18, 30, 36, 48	Tier 8, Tier 15, Tier 22
	36x36	18, 24, 30, 36, 48	Tier 8, Tier 15, Tier 22
	36x60	18, 24, 30, 36, 48	Tier 8, Tier 15, Tier 22
	36x72	36, 48	Tier 8, Tier 15, Tier 22
Flared Wall	10x15	12, 18	Tier 8, Tier 15
	11x18	12, 18	Tier 8, Tier 15, Tier 22
	11x32	12	Tier 5, Tier 8
	12x12	12, 24	Tier 8, Tier 15
	13x24	12, 18, 24*	Tier 8, Tier 15, Tier 22
	15x17	12	Tier 5, Tier 8, Tier 15
	15x27	12	Tier 5, Tier 8
	16x22	30	Tier 8, Tier 15
	17x30	12, 18, 22, 24, 30, 34*	Tier 8, Tier 15, Tier 22
	24x36	18, 24, 30, 36, 42, 48*	Tier 8, Tier 15, Tier 22
	24x60	24	Tier 5
	30x48	18, 24, 30, 36	Tier 8, Tier 15, Tier 22
Corrugated Wall	30x48	18, 24, 30, 36, 48*	Tier 8, Tier 15, Tier 22
	30x60	18, 24, 30, 36, 48	Tier 5, Tier 8, Tier 15, Tier 22
	36x60	18, 24, 30, 36, 48	Tier 8, Tier 15, Tier 22
	36x72	18, 24, 30, 36, 48	Tier 8, Tier 15, Tier 22
	36x96	30, 36, 48	Tier 8, Tier 15, Tier 22
	48x48	18, 24, 30, 36, 48	Tier 8, Tier 15, Tier 22
	48x72	18, 24, 30, 36, 48	Tier 8, Tier 15, Tier 22
	48x78	18, 24, 30, 36, 48	Tier 8, Tier 15, Tier 22
	48x96	18, 24, 30, 36, 48	Tier 8, Tier 15, Tier 22
	78x96	36, 48	Tier 8, Tier 15, Tier 22
	96x96	36, 48	Tier 8, Tier 15, Tier 22
Round	2000	24, 48	Tier 8, Tier 15, Tier 22
	2700	36, 72	Tier 8, Tier 15
	3200	36	Tier 8, Tier 15, Tier 22
	3900	14, 30, 36	Tier 8, Tier 15, Tier 22

\*Extensions Available

# PenCell: Available Size Chart

Style	Size	Depths	Load Rating Options
DT	11x18	9, 11, 18, 20	5k, Tier 15
	12x12	14, 16, 20, 25	5K, Tier 15
	13x24	15, 17, 18, 23, 24*	5K, Tier 15
	17x30	15, 17, 18, 24, 26, 30, 32, 36, 38*	5k, Tier 15, Tier 22 (24" & 36" depth only)
	24x36	18, 24, 36	5K, Tier 15, Tier 22
	30x48	18, 24, 36	5K, Tier 15, Tier 22
PE	6	9	5K
	9	10	5K
	10	18, 19	5K
	14	12, 17*	5K
	20	17, 19	5K, 10K
	30	12, 17, 19*	5K, 10K
	36	15	5K
PM	10x10	12	20K
	10x14	12	20K
	10x18	12	20K
	12x12	24	20K
	12x18	24	20K
	12x20	18	20K
	12x24	24	20K
	18x18	24	5K, 20K
	18x24	24	20K
	18x30	24	20K
	24x24	24*	5K, 20K
	24x36	24*	5K, 20K
	24x48	24*	5K, 20K
	24x60	24*	5K, 20K
	30x36	24*	5K, 20K
	30x48	24*	5K, 20K
	30x60	24*	5K, 20K
	36x36	24*	5K, 20K
	36x48	24*	5K, 20K
	36x60	24*	5K, 20K
	48x48	24, 30, 36, 42, 48*	20K
Round	12x12	24	20K
	18x18	24	20K

\*Extensions Available

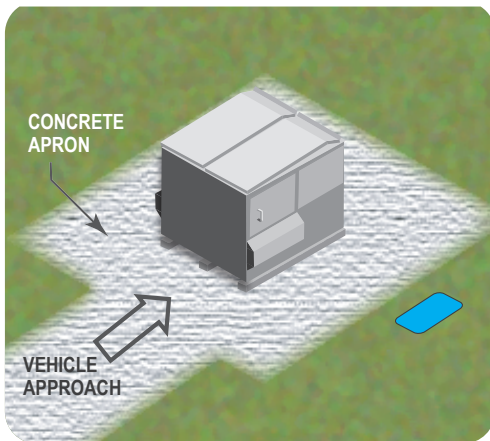
# “ANSI Tier” Selection and Placement in Non-Deliberate Vehicular Traffic Applications

## All load ratings are not the same

All Hubbell enclosures include load ratings either as a specified design load, or as a “Tier” rating that designates the achievement of a particular ANSI load rating level. Most Hubbell enclosures use the ANSI Tier rating system. However, some of the PenCell enclosures use the “K” rating system. More information on both of these ratings can be found in this catalog. If you have any questions, our engineering department is here to help.

The enclosures shown in these sketches have been color coded to indicate the proper Tier level required for the application.

- Pedestrian/Tier 5
- Tier 8
- Tier 15 or 22



## TRASH RECEPTACLE APPLICATION

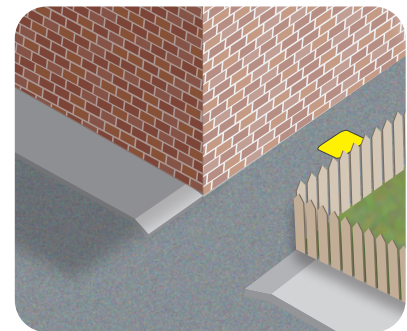
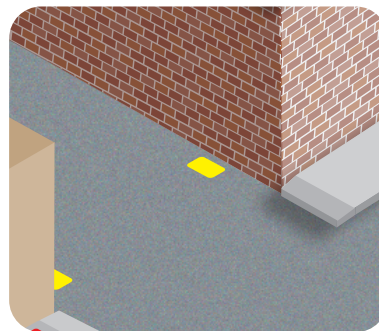
(NON-DELIBERATE TRAFFIC)

Where there is a trash receptacle, place the enclosure away from the concrete that the receptacle is set on. Even though the traffic expected on the receptacle's concrete apron is occasional, it is deliberate because the traffic is both intentional and heavy in nature. Correct placement will ensure the wheels of the truck will not roll over the enclosure.

## DUAL LANE ALLEY

(NON-DELIBERATE TRAFFIC)

In a single lane alleyway, the enclosure should be placed in the center of the alleyway. This minimizes the possibility of the enclosure being run over. In a dual lane alleyway, the enclosure should be placed as close to the building as possible. Typically, two vehicles will not be in the alleyway at the same time, so chances of the enclosure being run over are minimal. Knowledge of the location and expected traffic patterns should be used to determine if traffic will be deliberate or non-deliberate.



## RESIDENTIAL

(NON-DELIBERATE TRAFFIC)

Enclosures may be placed in grassy areas, sidewalks or in areas next to a structure or pole where it is unlikely a vehicle will run over it. Do not place enclosures in the street or driveway where traffic is anticipated and deliberate.





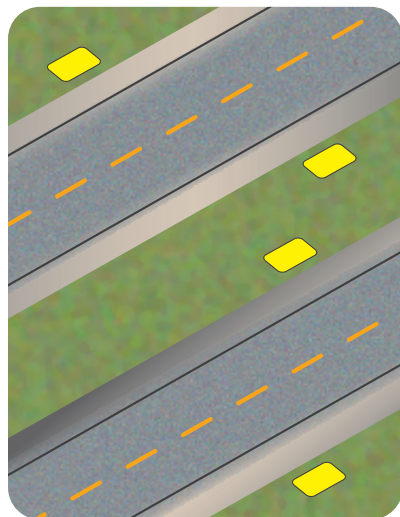
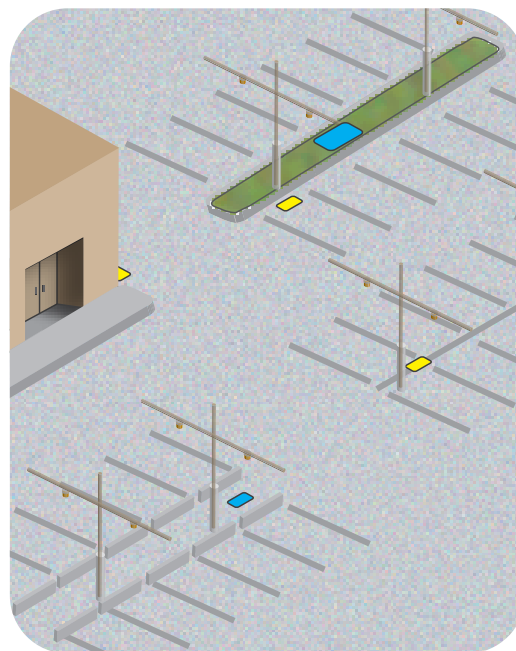
# “ANSI Tier” Selection and Placement in Non-Deliberate Vehicular Traffic Applications

## PARKING LOTS

(NON-DELIBERATE TRAFFIC)

Enclosure applications:

- In the front center of a parking space so that vehicle tires will straddle the enclosure.
- In the grassy area where the parking lot ends.
- Alongside and close to the lighting poles.
- Between parking curbs where the possibility of running over the enclosure is remote.
- Along the building but not in front of a door or pick up area where vehicular traffic is expected.



## DIVIDED HIGHWAY

(NON-DELIBERATE TRAFFIC)

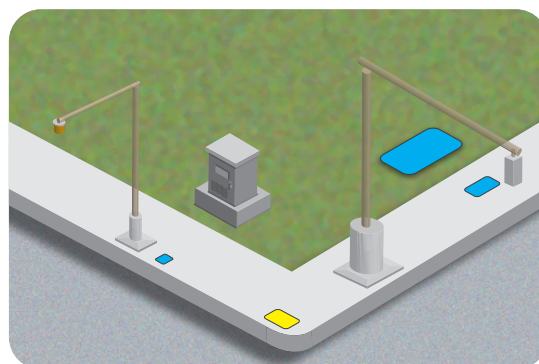
On a divided highway, place the enclosure in any area that is not paved and where deliberate traffic is not expected. They can be placed in the grassy median or off the shoulder of the highway.

NOTE: The paved shoulder of the highway is normally considered a deliberate traffic location because it may be used as a breakdown lane or as an actual traffic lane in times of construction. Therefore, an enclosure should never be placed in the paved shoulder of a road or in the road itself. The enclosure should be placed off the shoulder, in the grassy areas.

## SIDEWAY & GRASSY AREA

(NON-DELIBERATE TRAFFIC)

An enclosure can be placed in any grassy area and in most sidewalks. However, an enclosure should not be placed in a sidewalk where a driveway crosses over the sidewalk.





## Load Ratings – Steadfast Reliability

Many Hubbell underground enclosures are designed to meet or exceed the load requirements set forth in the American National Standards Institute's ANSI/SCTE 77 2013 "Specification for Underground Enclosure Integrity." ANSI tier designations represent the minimum allowable load requirements in the industry to ensure underground enclosures are always secure and reliable.

The ANSI application tier number relates to a nominal design load multiplied by 1,000 pounds. For example, Tier 8 is 8 x 1,000 pounds, or 8,000 lbs. All ANSI tier loadings will have a corresponding test load, which is 50% greater than the design load. The maximum deflection at the indicated design load shall be a half-inch for vertical tests and a quarter-inch per foot of length for lateral tests.

### Application Tiers & Static Vertical Wheel Load Ratings per ANSI/SCTE 77 2013 "Specification for Underground Enclosure Integrity"

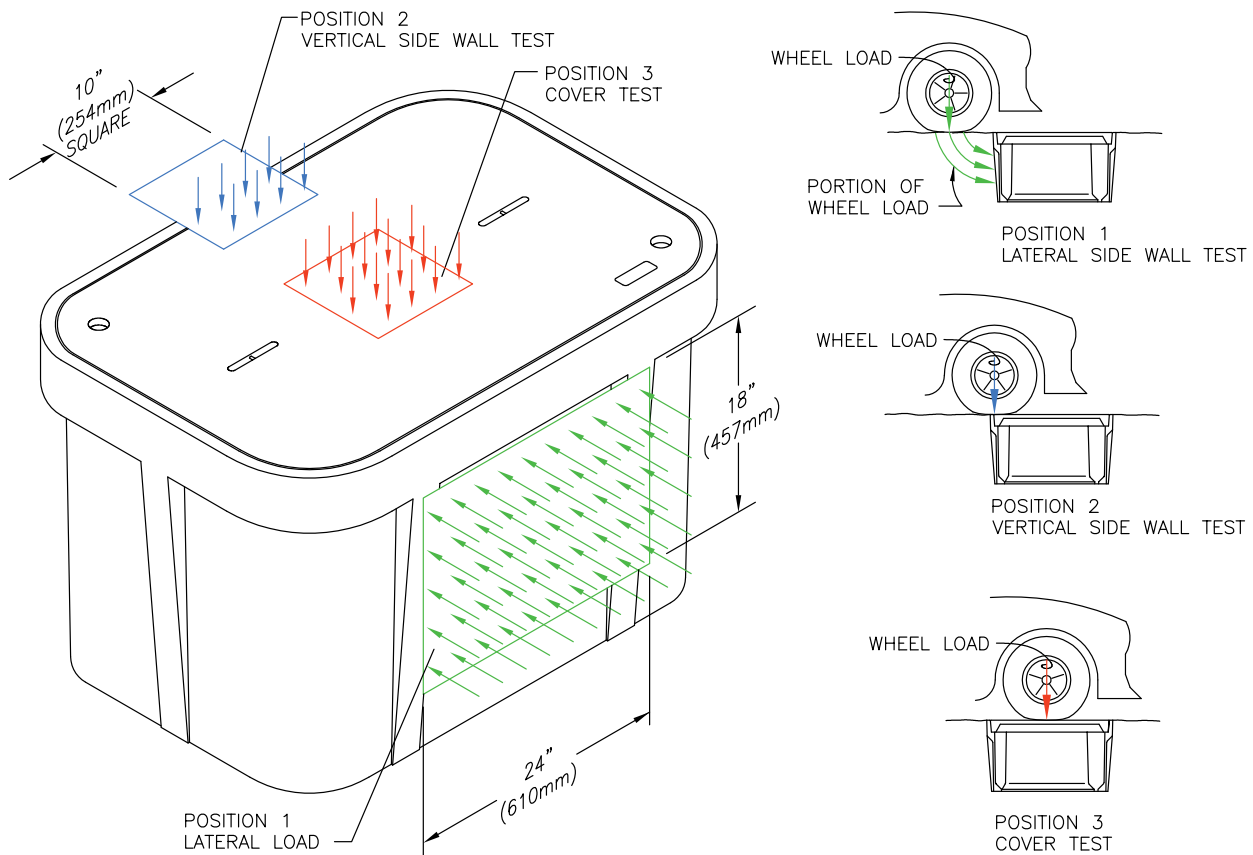
*NOTE — Quazite® products are not intended for use in deliberate traffic areas.*

Application Tiers	Loading Requirements				UL Listed to meet ANSI 77 Requirements
<b>Light Duty</b> Pedestrian Traffic Only	<b>Vertical</b>	<b>Test Load</b>	13.3kN	3,000 lbs.	
<b>Tier 5</b> Sidewalk applications with a safety factor for occasional non-deliberate vehicular traffic	<b>Vertical</b>	<b>Design Load Test Load</b>	22.2 kN 33.3 kN	5,000 lbs. 7,500 lbs.	PC 13"x24" or PC 17"x30" style enclosure and cover assemblies with standard covers (CA) and standard covers w/o bolts (WA).
	<b>Lateral</b>	<b>Design Load Test Load</b>	28.7 kPa 43.1 kPa	600 lbs./sq. ft. 900 lbs./sq. ft.	
<b>TIER 8</b> Sidewalk applications with a safety factor for non-deliberate vehicular traffic	<b>Vertical</b>	<b>Design Load Test Load</b>	35.6 kN 53.4 kN	8000 lbs. 12,000 lbs.	PG and PT style enclosure and cover assemblies up to 30" x 48" and PC style in sizes 6"x 8", 8"x18", 11"x18" and 12"x12" with standard covers (CA) and standard covers w/o bolts (WA).
	<b>Lateral</b>	<b>Design Load Test Load</b>	28.7 kPa 43.1 kPa	600 lbs./sq. ft. 900 lbs./sq. ft.	
<b>TIER 15</b> Driveway, parking lot, and off-roadway applications subject to occasional non-deliberate heavy vehicular traffic	<b>Vertical</b>	<b>Design Load Test Load</b>	66.7 kN 100.1 kN	15,000 lbs. 22,500 lbs.	PG, PT and PC style enclosure and cover assemblies up to 30"x48" with heavy duty covers (HA).
	<b>Lateral</b>	<b>Design Load Test Load</b>	38.3 kPa 57.5 kPa	800 lbs./sq. ft. 1,200 lbs./sq. ft.	
<b>TIER 22</b> Driveway, parking lot, and off-roadway applications subject to occasional non-deliberate heavy vehicular traffic	<b>Vertical</b>	<b>Design Load Test Load</b>	100.1 kN 150.1 kN	22,500 lbs. 33,750 lbs.	PC, PD, PG and PT style enclosure and cover assemblies up to 30" x 48" with extra heavy duty covers (HH).
	<b>Lateral</b>	<b>Design Load Test Load</b>	38.3 kPa 57.5 kPa	800 lbs./sq. ft. 1,200 lbs./sq. ft.	
<b>AASHTO H-20</b> Deliberate vehicular traffic applications ONLY. Quazite® does not currently offer any enclosures for this application tier.	Certified precast concrete, cast iron or other AASHTO recognized materials.*  *There are no AASHTO design or test provisions for polymer composites. Therefore there is no recognized method of testing for qualification. Applying other material testing methods to polymer composites is not recognized by AASHTO. <b>BUYER BEWARE !</b>				

## Three-Position Testing – Proven Endurance.

A key requirement outlined in ANSI/SCTE 77 2013 is three-position testing for enclosures. Three-position testing is a method to verify product performance, and is accomplished by test loading at three pre-designated critical points. Quazite products have been tested at each of the three positions and all have met or surpassed requirements.

- The latest copy of the standard may be purchased from ANSI. It may also be viewed in PDF form on SCTE's website at [http://www.scte.org/documents/pdf/Standards/ANSI\\_SCTE%2077%202013.pdf](http://www.scte.org/documents/pdf/Standards/ANSI_SCTE%2077%202013.pdf)





# Underground Enclosures

Hubbell maintains a large inventory of Quazite enclosures to serve your needs.

### NEC & Underground Enclosures

The National Electric Code states in article 314.30 that enclosures “...shall be designed and installed to withstand all loads likely to be imposed...” and addresses issues related to enclosure size, wiring entries, enclosures without bottoms, and bonding requirements for covers. “

The code references the ANSI/SCTE 77 “Specification for Underground Enclosure Integrity” National Standard, which outlines various tests that enclosures must pass to meet the standard. ANSI/SCTE 77 also provides load charts with Tier ratings to help users determine the appropriate enclosure to select based on the loadings expected in the application.

### Quazite® - UL-Listed to ANSI Standard.

All Quazite® polymer concrete enclosures meet or exceed the test provisions of ANSI/SCTE 77 2013, and most polymer concrete enclosures sized 30” x 48” and smaller are UL-Listed to the ANSI National Standard as referenced in the 2005, 2008, 2011 and 2014 NEC. To achieve this, Quazite® enclosures must pass numerous material and product performance tests before they can meet ANSI/SCTE 77 2013.

### Testing Requirements for ANSI/SCTE 77 2013

- Three-Position Load Testing to simulate actual application performance
- UV Degradation per ASTM G-154
- Fire Resistance per RUS 7CFR 1755.910 (PE-91)
- Chemical Resistance per ASTM D-543
- Water Absorption per ASTM D-570
- Impact Resistance per ASTM D2444
- Accelerated service per ASTM D-756, procedure E

*Note: Quazite® recommends testing by third party organizations such as UL or ETL to verify that enclosures meet all test provisions of ANSI/SCTE 77.*

### Quazite® - Peace of Mind.

Quazite® enclosures have undergone rigorous physical, environmental, and internal equipment-protection tests, and have been found by UL to meet the requirements required by the ANSI Standard. By adhering to the NEC, ANSI, and UL requirements, in the enclosure-selection process, users are ensured long service life. Quazite® enclosures offer not only improved manageability and cost-efficiency over other enclosures, but peace of mind as well.

National Fire Protection Agency, 2005, 2008, 2011 and 2014 National Electric Code.

Subsequent to the issuance of the 2005 NEC, ANSI approved an updated version of the standard, ANSI/SCTE 77 2013.

The latest copy of the standard may be purchased from ANSI. It may also be viewed in PDF form on SCTE's website at [http://www.scte.org/documents/pdf/Standards/ANSI\\_SCTE%2077%202013.pdf](http://www.scte.org/documents/pdf/Standards/ANSI_SCTE%2077%202013.pdf)



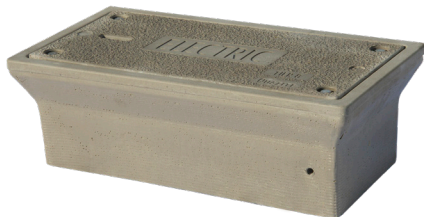
## Style Guide - Tailored Product Variety.

We offer a wide variety of box styles in order to meet your most specialized enclosure needs. Each style offers specific strengths and assets for diverse functionality



### PG Style

Straight sides allow for easy adjustment of box should the grade level change. Used for a variety of purposes, such as a splice box, pull box, equipment enclosure, or for any application requiring easy access to an underground service. PG boxes are stackable for increased depth.



### PC Style

Straight sides allow for easy adjustment of box should the grade level change. All PC boxes are stackable and are available with gasketing.



### PX Style

PX Styles are excellent for service box assemblies and offer flared design to prevent frost heave. PX boxes are also nestable for compact storage.



### PT Style

The flared design prevents frost heave, and covers are interchangeable with many precast concrete parts. PT boxes are also nestable for compact storage.



### PD Style

These enclosures feature a 1 degree flare for maximum strength. Flared design optimizes internal volume and minimizes frost heave.

## Quazite Selection Guide

### PR Style

This polymer concrete round enclosure can prevent a cover from falling into the box.



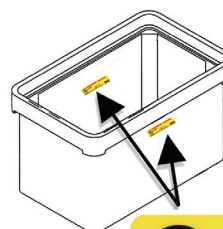
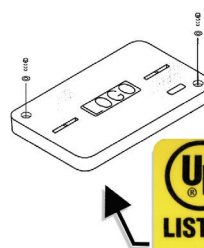
### UL Listing

 indicates UL Listing

### UL Listed Enclosures

Determine if a UL listed enclosure is required for your installation. Federally funded electrical and telecom projects, as well as many state and municipal projects, generally require the use of a UL Listed product whenever one is available.

Most Quazite® polymer concrete underground handhole enclosures in sizes through 30" x 48" and smaller are agency listed. These products are clearly marked with the UL label on both the box and underneath the cover. Special order boxes with holes (or mouseholes, etc.) may qualify for UL listing as long as the holes do not exceed more than 25 percent of the area of each sidewall and as long as the holes do not cut into a structural reinforcing rib, corner, or box lip.



Highlighted areas indicate UL Listing

UNDERGROUND ENCLOSURES

## Quazite: Available Size Chart

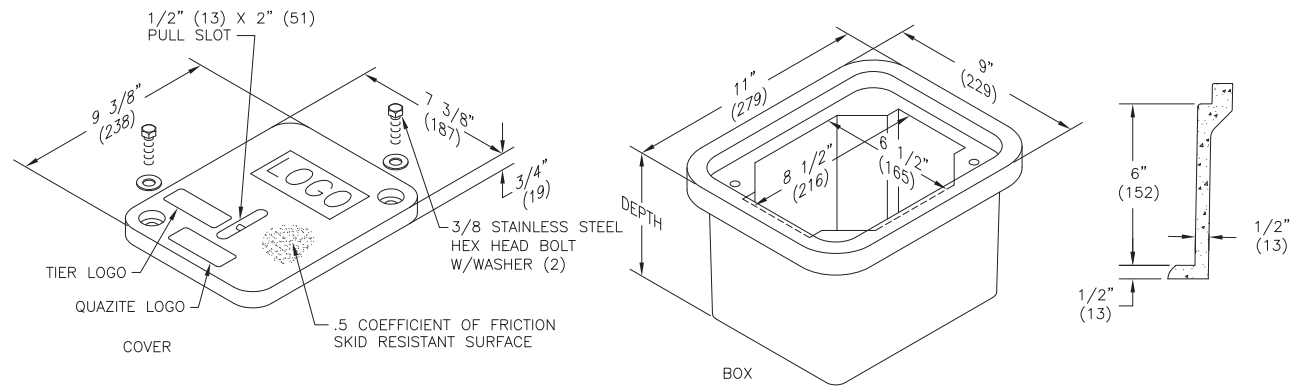
Style	Size	Depths	Assembly Load Rating Options	UL
PC	6x8	6-3/4	Tier 15	Yes
	8x8	12, 18	Tier 15	Yes
	8x18	7, 8	Tier 8, Tier 15	Yes
	11x18	12, 18	Tier 8	Yes
	12x12	12	Tier 8, Tier 15	Yes
	13x24	12	Tier 5	Yes
	17x30	12	Tier 5	Yes
PD	13x24	18, 26	Tier 8, Tier 15, Tier 22	Yes
	17x30	18, 26	Tier 8, Tier 15, Tier 22	Yes
	24x36	18, 26, 48	Tier 8, Tier 15, Tier 22	Yes
	30x48	24, 48	Tier 8, Tier 15, Tier 22	Yes
PG	11x18	12, 18	Tier 8, Tier 15, Tier 22	Yes
	11x20	12, 18	Tier 8, Tier 15, Tier 22	No
	13x24	12, 18, 24	Tier 8, Tier 15, Tier 22	Yes
	17x30	12, 18, 22, 24, 30	Tier 8, Tier 15, Tier 22	Yes
	24x24	24 (Extensions Available)	Tier 8, Tier 15, Tier 22	Yes
	24x36	18, 24, 30, 36, 42 (Extensions Available)	Tier 8, Tier 15, Tier 22	Yes
	30x48	18, 24, 36, 48 (Extensions Available)	Tier 8, Tier 15, Tier 22	Yes
	30x60	21, 30, 36	Tier 5, Tier 15, Tier 22	No
	36x36	36 (Extensions Available)	Tier 8, Tier 15, Tier 22	Yes
	36x60	19, 24, 31, 36 (Extensions Available)	Tier 5, Tier 15, Tier 22	No
	36x72	21, 36	Tier 5, Tier 15, Tier 22	No
	48x48	36, 48	Tier 5, Tier 15, Tier 22	No
	48x72	36, 48 (Extensions Available)	Tier 5, Tier 15, Tier 22	No
	48x78	27, 36	Design 12,000 lbs / Test 24,000 lbs	No
	48x96	48 (Extensions Available)	Tier 5, Tier 15, Tier 22	No
PT	10x15	18	Tier 8, Tier 15	No
	13x24	18	Tier 8, Tier 15	Yes
	17x30	18	Tier 8, Tier 15	Yes
PX	12x12	24	Tier 8, Tier 15	Yes
Median	5x16		Tier 8, Tier 15	No
	10x12		Tier 8, Tier 15	No
Round	27	36, 48	Tier 8, Tier 15, Tier 22	Yes
	39	18, 24, 36, 48, 72	Tier 8, Tier 15, Tier 22	Yes



Dimensions / Data

6" x 8" PC Style Polymer Concrete (Stackable) Assembly

Hex Head Bolts are St



Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W / 2 Bolts	15	15,000 / 22,500	4	40	PC0608HA00**
UL	Gasketed w /4 bolts	15	15,000 / 22,500	4	40	PC0608HG00**

Replace \*\* with a logo code found on page U54.

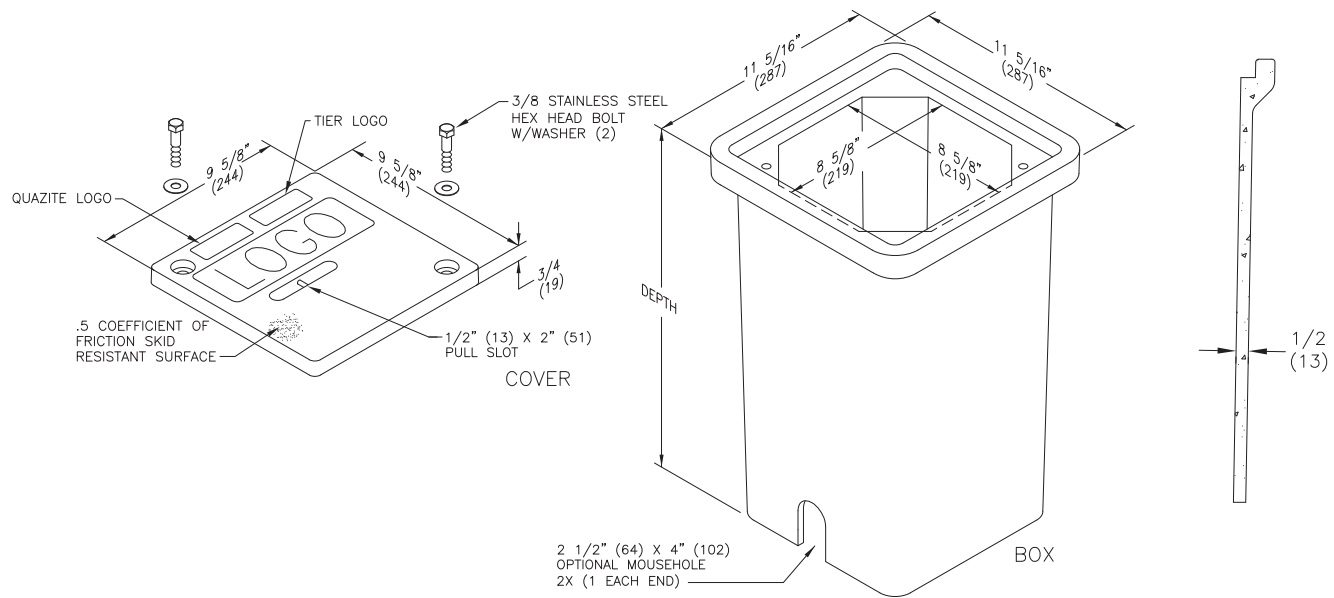
NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

Boxes

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	6-3/4"	15	15,000 / 22,500	14	160	PC0608BA06
UL	Solid Bottom	7-1/4"	15	15,000 / 22,500	15	160	PC0608DA06

To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

**8" x 8" PC Style Polymer Concrete (Stackable) Assembly****Hex Head Bolts are Standard****Covers**

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W / 2 Bolts	15	15,000 / 22,500	6	36	PC0808HA00**
UL	Gasketed W / 2 Bolts	15	15,000 / 22,500	6	36	PC0808HG00**

Replace \*\* with a logo code found on page U54.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

**Boxes**

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	12"	15	15,000 / 22,500	25	36	PC0808BA12
UL		18"	15	15,000 / 22,500	36	24	PC0808BA18
UL	Solid Bottom	18-1/2"	15	15,000 / 22,500	42	24	PC0808DA18

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

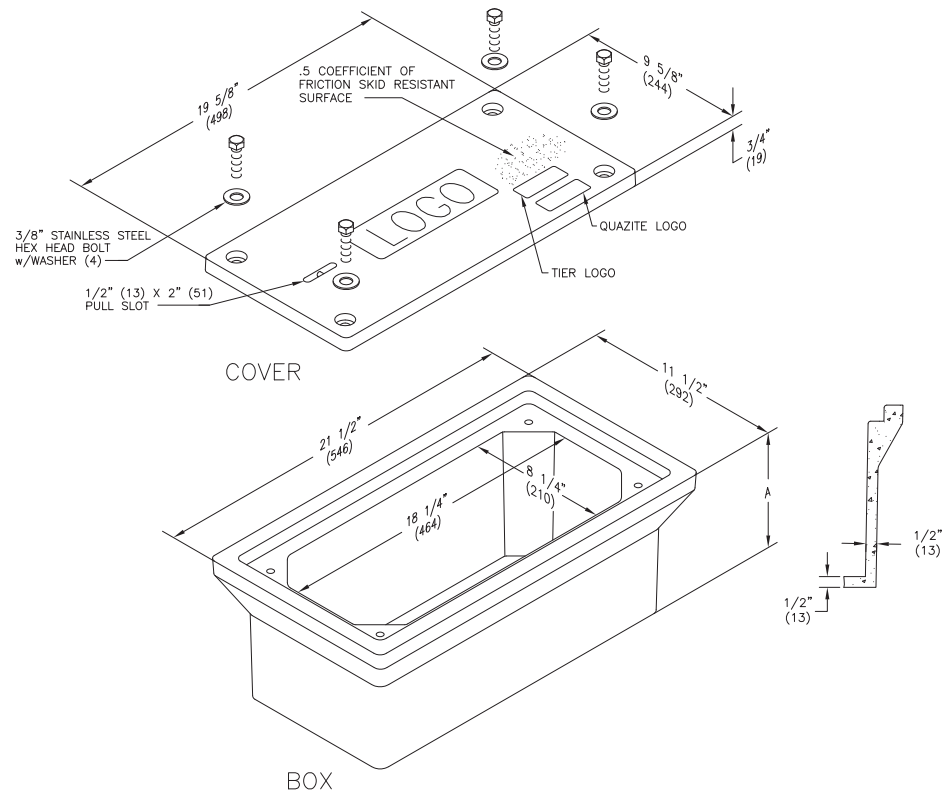
To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

Dimensions / Data

8" x 18" PC Style Polymer Concrete (Stackable) Assembly

Hex Head Bolts are Standard



Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 4 Bolts	8	8,000 / 12,000	11	20	PC0818CA00**
UL	No Bolts	8	8,000 / 12,000	11	20	PC0818WA00**
UL	W/ 4 Bolts	15	15,000 / 22,500	11	20	PC0818HA00**

Replace \*\* with a logo code found on page U54.

To order gasketed covers replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

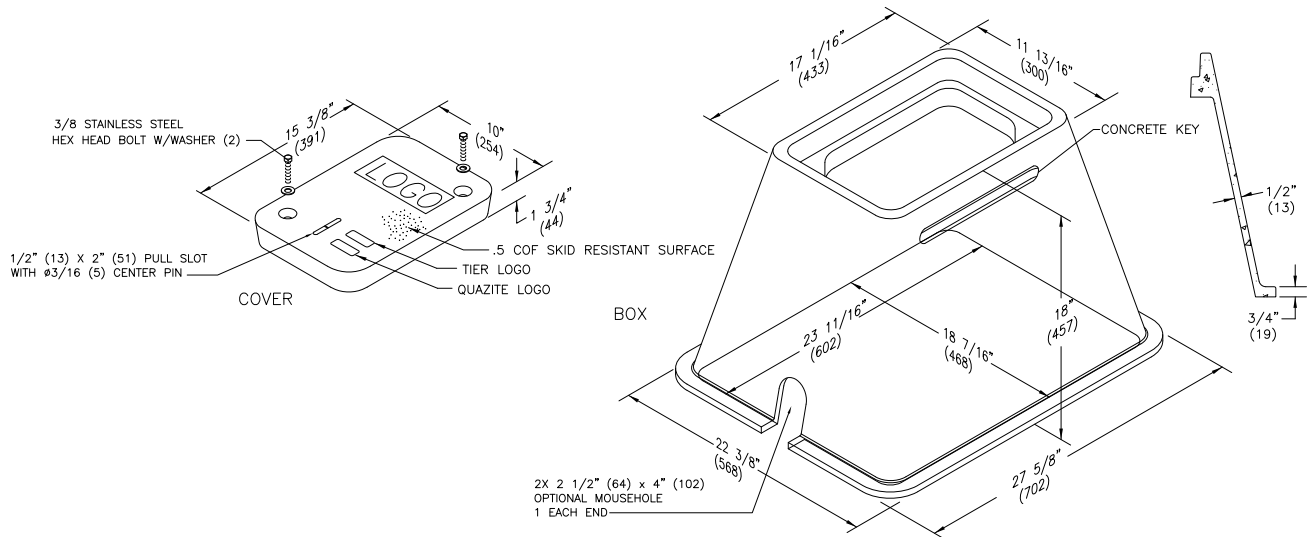
Boxes

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	7"	15	15,000 / 22,500	25	20	PC0818BA07
UL		8"	15	15,000 / 22,500	27	20	PC0818BA08
UL	Solid Bottom	7-1/2"	15	15,000 / 22,500	32	20	PC0818DA07
UL		8-1/2"	15	15,000 / 22,500	35	20	PC0818DA08

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

**10" x 15" PT Style Polymer Concrete (Nestable) Assembly****Hex Head Bolts are Standard****Covers**

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	20	40	PG1015CA00**
W/ 2 Bolts	15	15,000 / 22,500	20	40	PG1015HA00**
No Bolts	8	8,000 / 12,000	20	40	PG1015WA00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

**Boxes**

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	18"	15	15,000 / 22,500	70	5	PT1015BA18

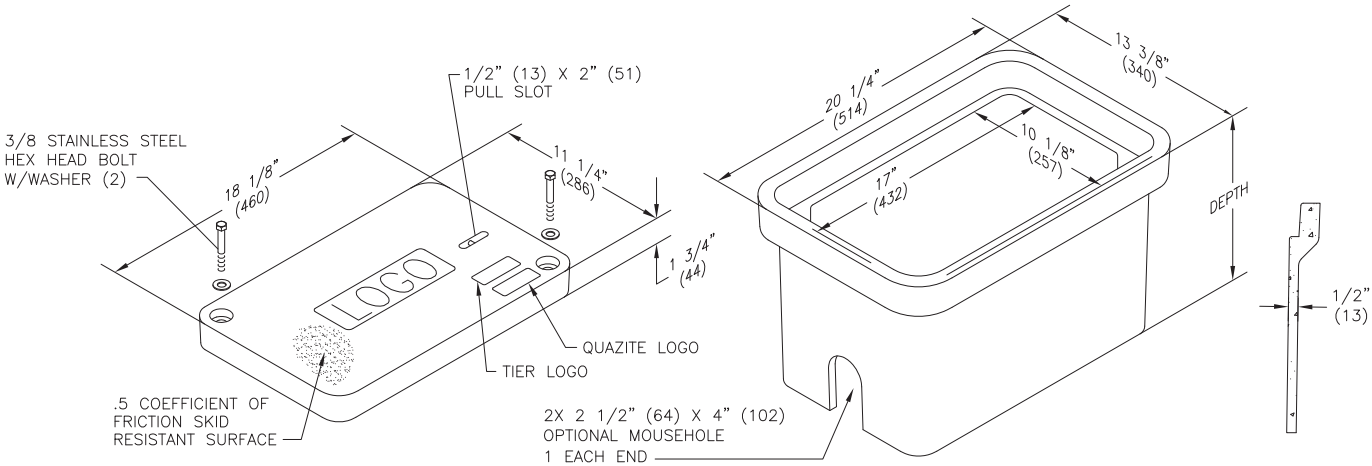
To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

11" x 18" PG Style Polymer Concrete (Stackable) Assembly

Hex Head Bolts are Standard



Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 2 Bolts	8	8,000 / 12,000	27	40	PG1118CA00**
UL	W/ 2 Bolts	15	15,000 / 22,500	27	40	PG1118HA00**
UL	No Bolts	8	8,000 / 12,000	27	40	PG1118WA00**
UL	W/ 2 Bolts	22	22,500 / 33,750	27	40	PG1118HH00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

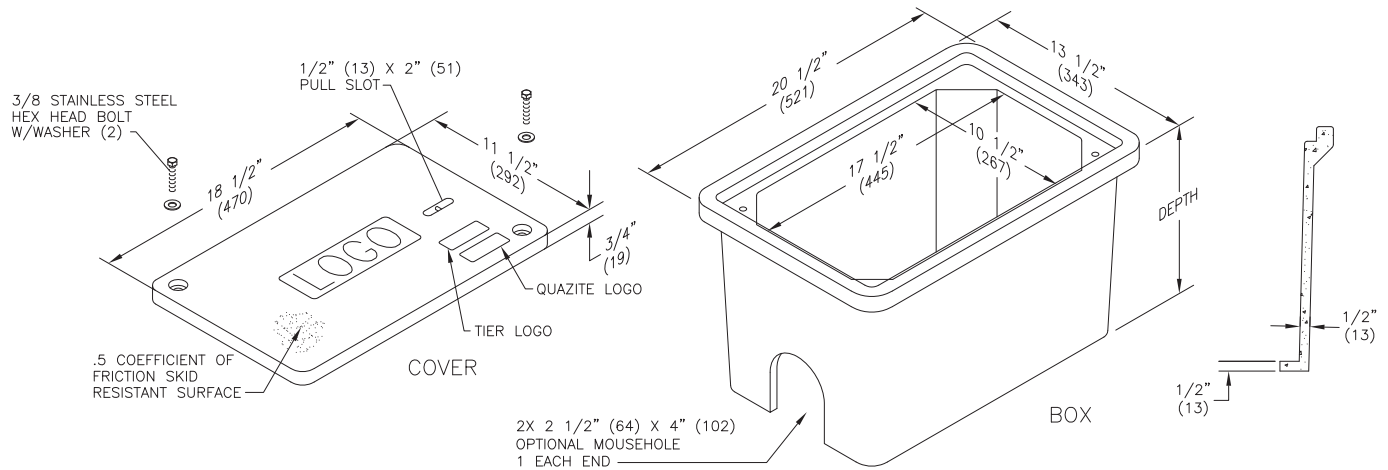
Boxes

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	12"	22	22,500 / 33,750	40	30	PG1118BA12
UL		18"		22,500 / 33,750	53	24	PG1118BA18
UL	Solid Bottom	12-1/2"	22	22,500 / 33,750	43	30	PG1118DA12
UL		18-1/2"		22,500 / 33,750	60	24	PG1118DA18
UL	Footed Box	12-1/2"	22	22,500 / 33,750	41	30	PG1118JA12
UL		18-1/2"		22,500 / 33,750	55	24	PG1118JA18

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

**11" x 18" PC Style Polymer Concrete (Stackable) Assembly****Hex Head Bolts are Standard****Covers**

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 2 Bolts	8	8,000 / 12,000	13	40	PC1118CA00**
UL	Gasketed W/ 4 Bolts	8	8,000 / 12,000	13	40	PC1118CG00**
UL	No Bolts	8	8,000 / 12,000	13	40	PC1118WA00**

Replace \*\* with a logo code found on page U54.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

**Boxes**

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Std. Open Bottom	12"	15	15,000 / 22,500	37	24	PC1118BA12
UL		18"		15,000 / 22,500	53	30	PC1118BA18
UL	Solid Bottom	12-1/2"	15	15,000 / 22,500	45	24	PC1118DA12
UL		18-1/2"		15,000 / 22,500	60	30	PC1118DA18
UL	Footed Box	12-1/2"	15	15,000 / 22,500	37	24	PC1118JA12
UL		18-1/2"		15,000 / 22,500	56	30	PC1118JA18

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

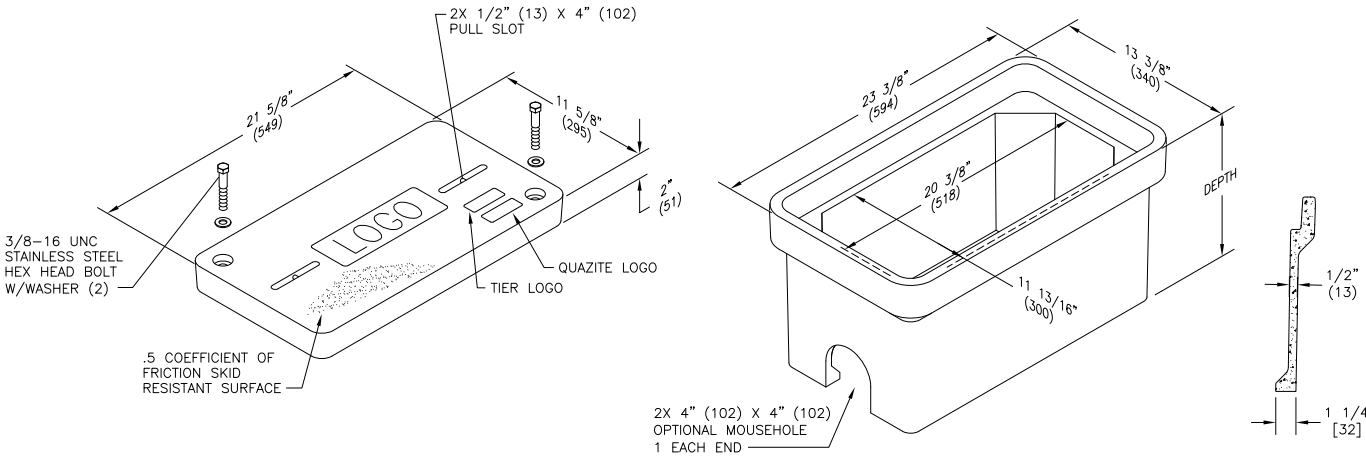
To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

Dimensions / Data

11" x 20" PG Style Polymer Concrete (Stackable) Assembly

Hex Head Bolts are Standard



Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	28	30	PG1120CA00**
W/ 2 Bolts	15	15,000 / 22,500	38	30	PG1120HA00**
No Bolts	8	8,000 / 12,000	28	30	PG1120WA00**
W/ 2 Bolts	22	22,500 / 33,750	38	30	PG1120HH00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

Boxes

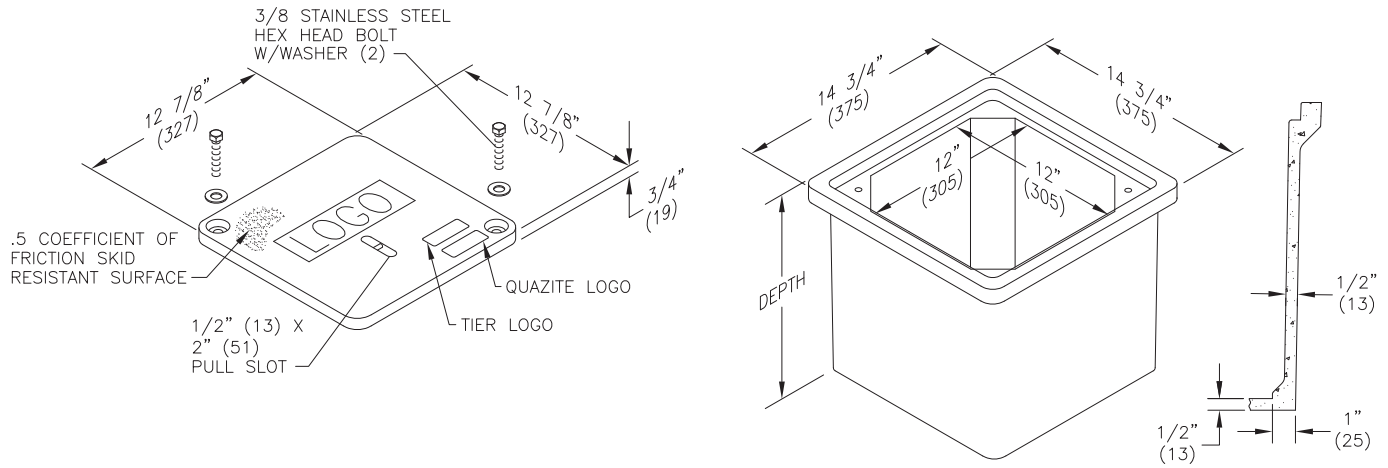
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	22	22,500 / 33,750	50	20	PG1120BA12
	18"		22,500 / 33,750	69	16	PG1120BA18
Solid Bottom	12-1/2"	22	22,500 / 33,750	58	20	PG1120DA12
	18-1/2"		22,500 / 33,750	77	16	PG1120DA18

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.



**12" x 12" PC Style Polymer Concrete (Stackable) Assembly****Hex Head Bolts are Standard****Covers**

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 2 Bolts	8	8,000 / 12,000	12	60	PC1212CA00**
UL	W/ 2 Bolts	15	15,000 / 22,500	12	60	PC1212HA00**
UL	No Bolts	8	8,000 / 12,000	12	60	PC1212WA00**

To order gasketed covers, replace the letter "A" with the letter "G".

Gasketed covers are with 4 bolts.

Replace \*\* with a logo code found on page U54.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do make the enclosure water tight.

**Boxes**

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	12"	15	15,000 / 22,500	36	30	PC1212BA12
UL	Solid Bottom	12-1/2"	15	15,000 / 22,500	41	30	PC1212DA12

To order gasketed boxes, replace the letter "A" with the letter "G".

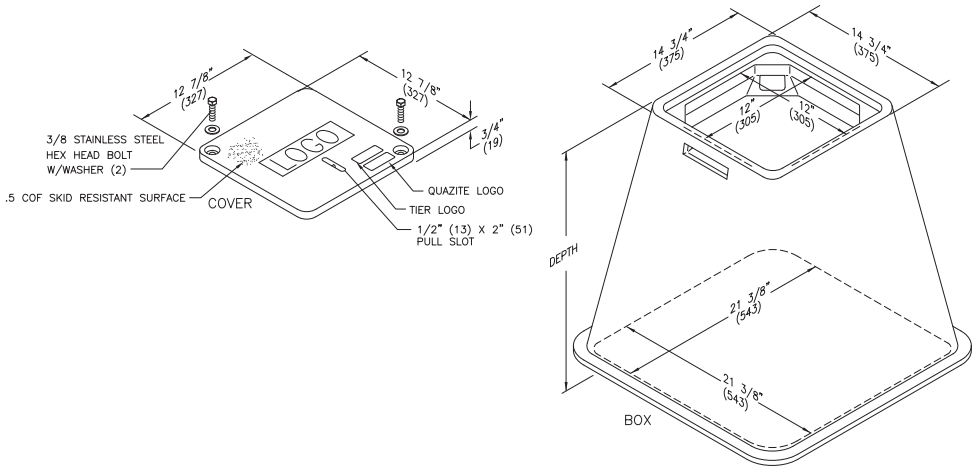
Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do make the enclosure water tight.

Dimensions / Data

12" x 12" PX Style Polymer Concrete (Nestable) Assembly

Hex Head Bolts are Standard



Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 2 Bolts	8	8,000 / 12,000	20	60	PC1212CA00**
UL	W/ 2 Bolts	15	15,000 / 22,500	20	60	PC1212HA00**
UL	No Bolts	8	8,000 / 12,000	20	60	PC1212WA00**

To order gasketed covers, replace the letter "A" with the letter "G".

Gasketed covers are with 4 bolts.

Replace \*\* with a logo code found on page U54.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do make the enclosure water tight.

Boxes

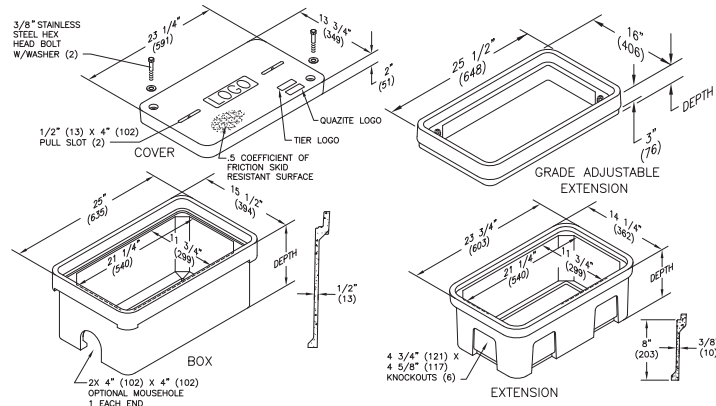
	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	24"	15	15,000 / 22,500	85	5	PX1212BA24

To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

## 13" x 24" PG Style Polymer Concrete (Stackable) Assembly

Hex Head Bolts are Standard



## Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 2 Bolts	8	8,000 / 12,000	33	30	PG1324CA00**
UL	W/ 2 Bolts	15	15,000 / 22,500	51	30	PG1324HA00**
UL	W/ 2 Bolts	22	22,500 / 33,750	54	30	PG1324HH00**
UL	No Bolts	8	8,000 / 12,000	33	30	PG1324WA00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

Available with EZ Locate.

## Boxes

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	12"	22	22,500 / 33,700	53	20	PG1324BA12
UL		18"		22,500 / 33,700	72	16	PG1324BA18
UL		24"		22,500 / 33,700	91	12	PG1324BA24
UL	Solid Bottom	12-1/2"	22	22,500 / 33,700	63	20	PG1324DA12
UL		18-1/2"		22,500 / 33,700	85	16	PG1324DA18
UL		24-1/2"		22,500 / 33,700	107	12	PG1324DA24

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

To order gasketed boxes, replace the letter "A" with the letter "G".

## Extensions (for use under box only, one per box)

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
8" - Open Bottom	8-3/4"	22	22,500 / 33,750	25	24	PG1324EA08
8" - Solid Bottom	9-1/4"	22	22,500 / 33,750	35	24	PG1324RA08

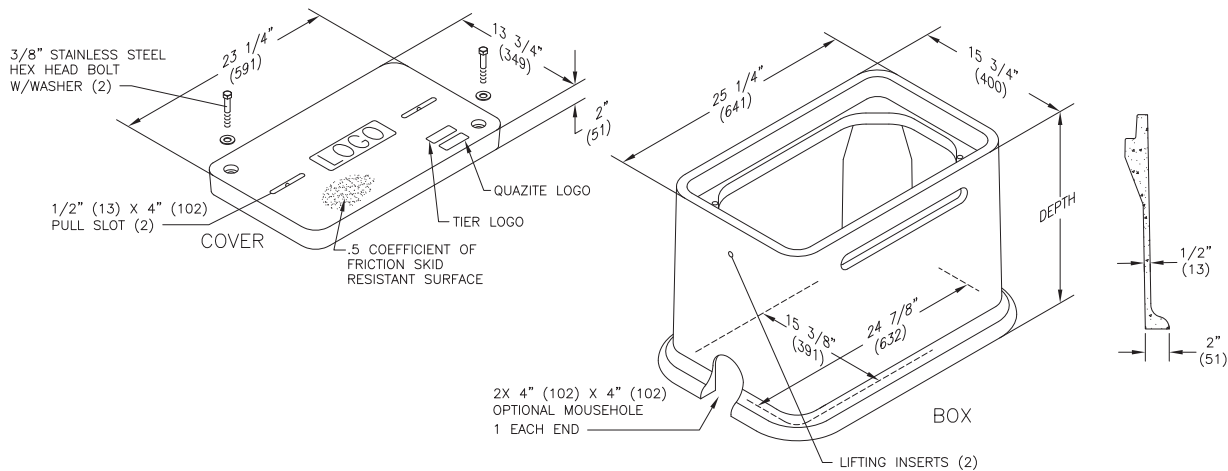
## Grade Adjustable Extension (for use on top of box only, one per box)

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
3" Top Extension	5-1/8"	22	22,500 / 33,750	37	24	PG1324ED03

Dimensions / Data

13" x 24" PD Style Polymer Concrete (Stackable) Assembly

Hex Head Bolts are Standard



Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 2 Bolts	8	8,000 / 12,000	33	30	PG1324CA00**
UL	W/ 2 Bolts	15	15,000 / 22,500	51	30	PG1324HA00**
UL	W/ 2 Bolts	22	22,500 / 33,750	54	30	PG1324HH00**
UL	No Bolts	8	8,000 / 12,000	33	30	PG1324WA00**

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

To order gasketed covers, replace the letter "A" with the letter "G".

Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	18"	22	22,500 / 33,750	104	4	PD1324BA18
Open Bottom	26"	22	22,500 / 33,750	133	4	PD1324BA26

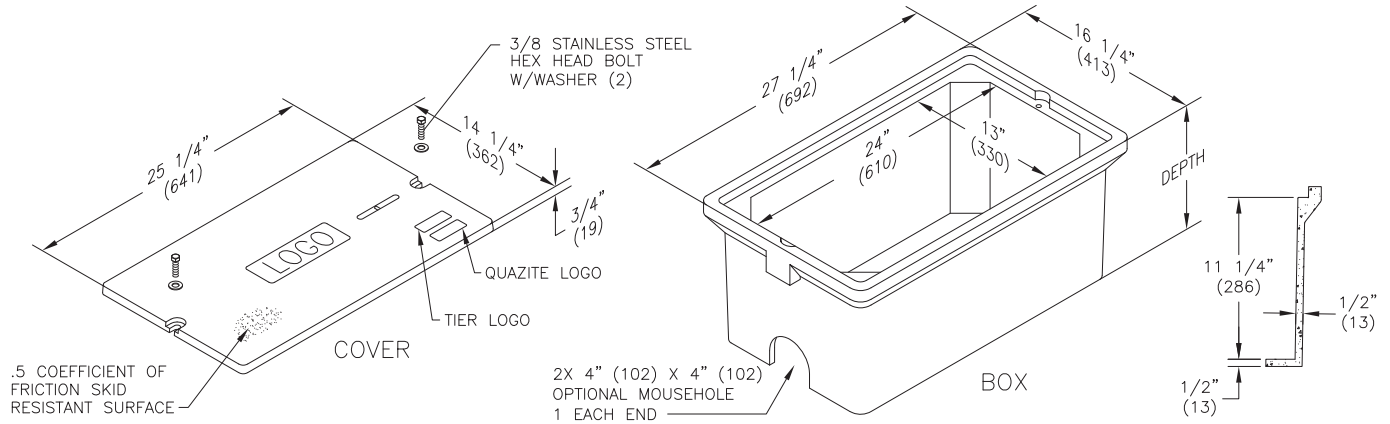
To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

## 13" x 24" PC Style Polymer Concrete (Stackable) Assembly

Hex Head Bolts are Standard



## Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 2 Bolts	5	5,000 / 7,500	23	40	PC1324CA00**
UL	No Bolts	5	5,000 / 7,500	23	40	PC1324WA00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

## Boxes

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	12"	5	5,000 / 7,500	50	20	PC1324BA12
UL	Solid Bottom	12-1/2"	5	5,000 / 7,500	60	20	PC1324DA12
UL	Footed Box	12-1/2"	5	5,000 / 7,500	57	20	PC1324JA12

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

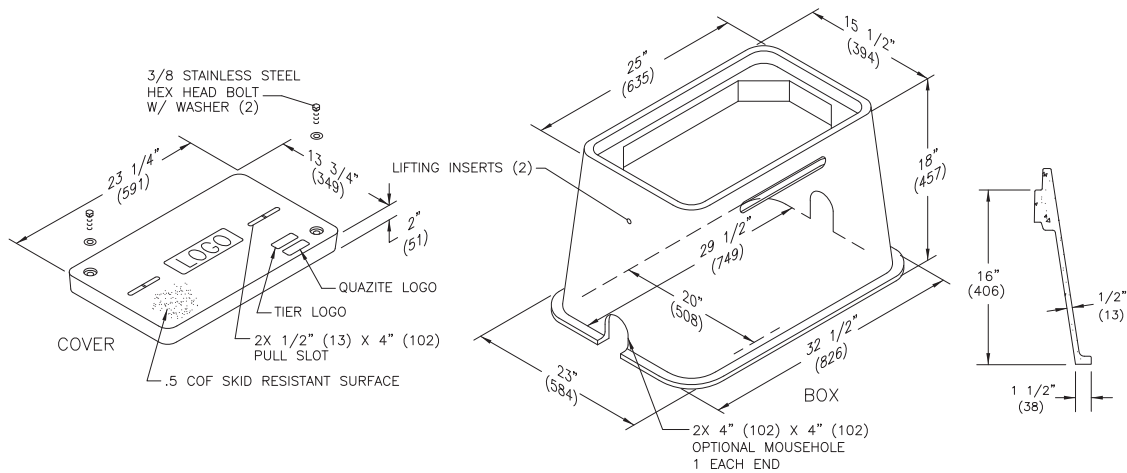
To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

Dimensions / Data

13" x 24" PT Style Polymer Concrete (Nestable) Assembly

Hex Head Bolts are Standard



Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 2 Bolts	8	8,000 / 12,000	32	30	PT1324CA00**
UL	W/ 2 Bolts	15	15,000 / 22,500	49	30	PT1324HA00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

Boxes

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	18"	15	15,000 / 22,500	97	5	PT1324BA18

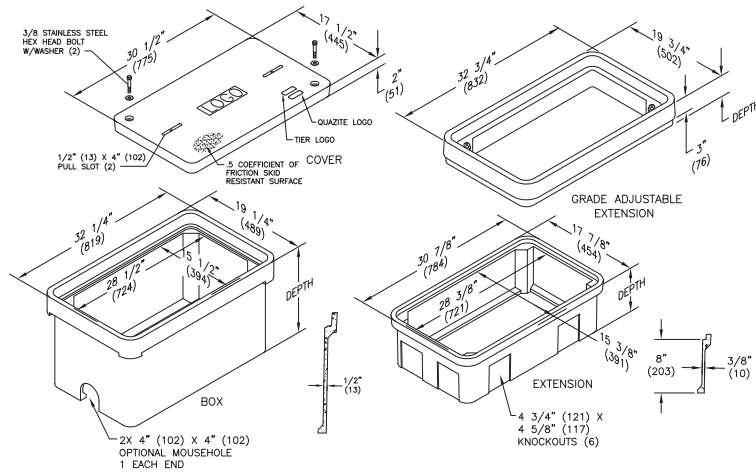
To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

## 17" x 30" PG Style Polymer Concrete (Stackable) Assembly

Hex Head Bolts are Standard



## Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 2 Bolts	8	8,000 / 12,000	52	20	PG1730CA00**
UL	W/ 2 Bolts	15	15,000 / 22,500	83	20	PG1730HA00**
UL	W/ 2 Bolts	22	22,500 / 33,750	83	20	PG1730HH00**
UL	No Bolts	8	8,000 / 12,000	52	20	PG1730WA00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

Available with EZ Locate.



## Dimensions / Data

### 17" x 30" PG Style Polymer Concrete (Stackable) Assembly (Continued)

Hex Head Bolts are Standard

**Boxes (Box depths 22" thru 30" must be used as bottom of any stack)**

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	12"	22	22,500 / 33,750	67	10	PG1730BA12
UL		18"		22,500 / 33,750	94	8	PG1730BA18
UL		22"		22,500 / 33,750	106	6	PG1730BA22
UL		24"		22,500 / 33,750	122	6	PG1730BA24
UL		30"		22,500 / 33,750	144	4	PG1730BA30
UL	Solid Bottom	12-1/2"	22	22,500 / 33,750	85	10	PG1730DA12
UL		18-1/2"		22,500 / 33,750	112	8	PG1730DA18
UL		22-1/2"		22,500 / 33,750	124	6	PG1730DA22
UL		24-1/2"		22,500 / 33,750	137	6	PG1730DA24
UL		30-1/2"		22,500 / 33,750	150	4	PG1730DA30

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed cover and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

**Bottom Extensions (for use under 12" and 18" boxes only, one per box)**

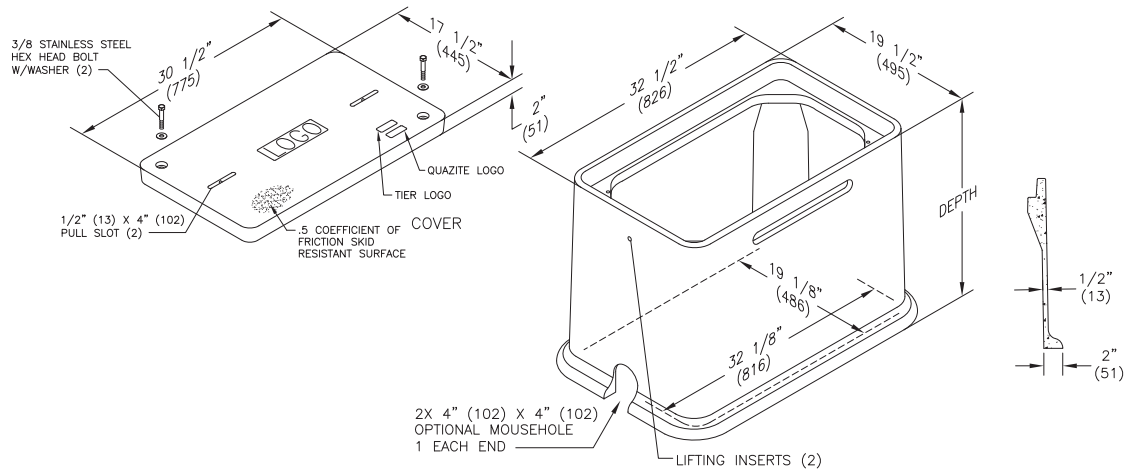
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Open bottom	8-3/4"	22	22,500 / 33,750	36	12	PG1730EA08
Solid bottom	9-1/4"	22	22,500 / 33,750	55	12	PG1730RA08

**Grade Adjustable Extension (for use on top of box only, one per box)**

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
3" Top extension	5-1/8"	22	22,500 / 33,750	48	12	PG1730ED03

## 17" x 30" PD Style Polymer Concrete Assembly

Hex Head Bolts are Standard



## Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 2 Bolts	8	8,000 / 12,000	52	20	PG1730CA00**
UL	W/ 2 Bolts	15	15,000 / 22,500	83	20	PG1730HA00**
UL	W/ 2 Bolts	22	22,500 / 33,750	83	20	PG1730HH00**
UL	No Bolts	8	8,000 / 12,000	52	20	PG1730WA00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

## Boxes

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	18"	22	22,500 / 33,750	129	4	PD1730BA18
UL	Open Bottom	26"	22	22,500 / 33,750	166	4	PD1730BA26

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

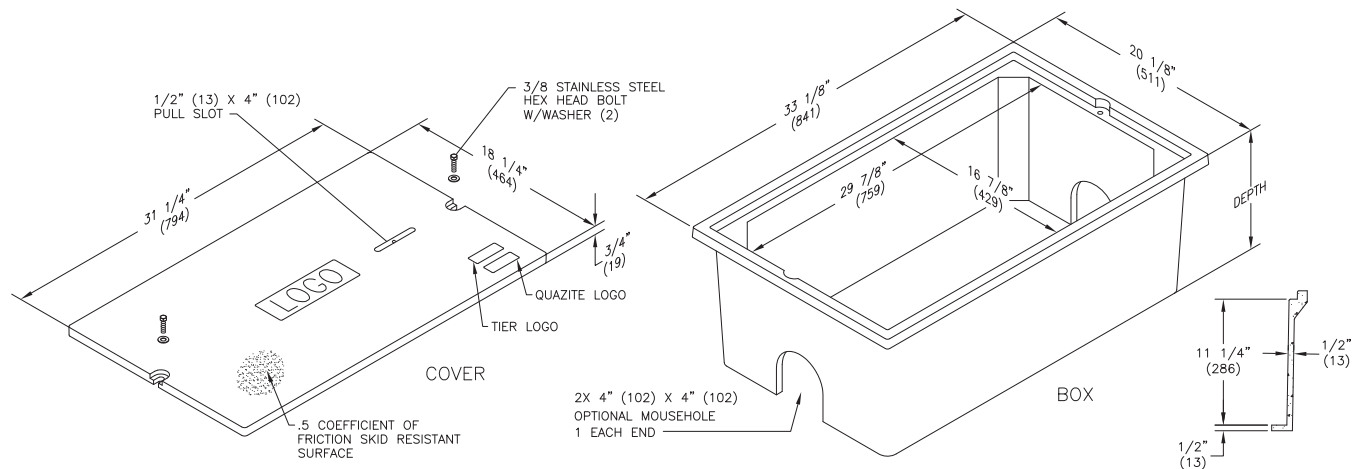
To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

Dimensions / Data

17" x 30" PC Style Polymer Concrete (Stackable) Assembly

Hex Head Bolts are Standard



Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 2 Bolts	5	5,000 / 7,500	33	30	PC1730CA00**
UL	No Bolts	5	5,000 / 7,500	33	30	PC1730WA00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

Boxes

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	12"	5	5,000 / 7,500	58	10	PC1730BA12
UL	Solid Bottom	12-1/2"	5	5,000 / 7,500	83	10	PC1730DA12
UL	Footed Box	12-1/2"	5	5,000 / 7,500	67	10	PC1730JA12

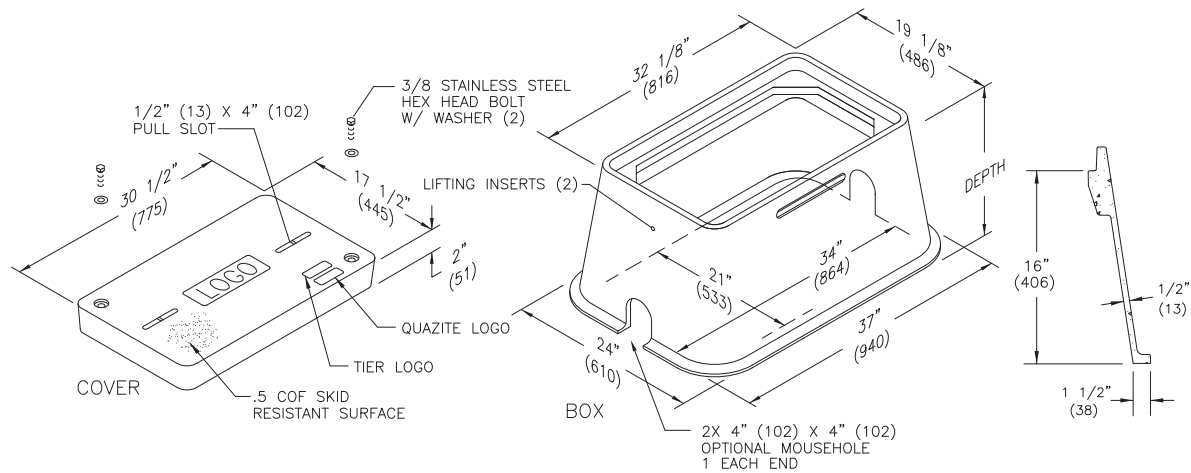
To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

# 17" x 30" PT Style Polymer Concrete (Nestable) Assembly

Hex Head Bolts are Standard



## Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 2 Bolts	8	8,000 / 12,000	52	20	PT1730CA00**
UL	W/ No Bolts	8	8,000 / 12,000	52	20	PT1730WA00**
UL	W/ 2 Bolts	15	15,000 / 22,500	83	20	PT1730HA00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

## Boxes

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	18"	15	15,000 / 22,500	126	5	PT1730BA18

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

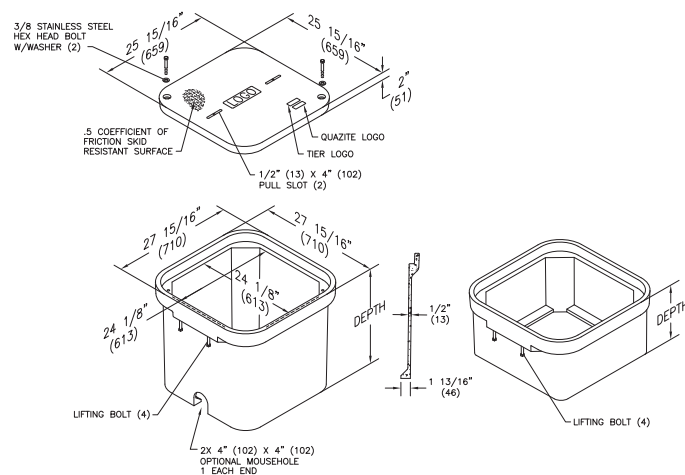
To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

# Dimensions / Data

## 24" x 24" PG Style Polymer Concrete (Stackable) Assembly

Hex Head Bolts are Standard



### Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 2 Bolts	8	8,000 / 12,000	70	10	PG2424CA00**
UL	W/ 2 Bolts	15	15,000 / 22,500	100	10	PG2424HA00**
UL	No Bolts	8	8,000 / 12,000	70	10	PG2424WA00**
UL	W/ 2 Bolts	22	22,500 / 33,750	100	10	PG2424HH00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

### Boxes

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	24"	22	22,500 / 33,750	165	2	PG2424BA24
UL	Solid Bottom	24-1/2"	22	22,500 / 33,750	185	2	PG2424DA24

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

To order gasketed boxes, replace the letter "A" with the letter "G".

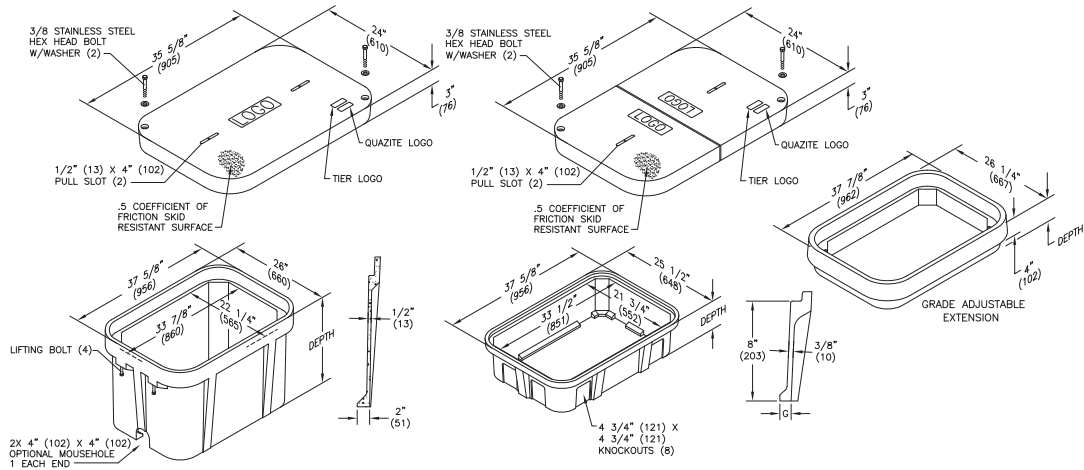
NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

### Extensions (Open bottom can be used as top or bottom, solid bottom is bottom extension only)

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Open Bottom	8"	22	22,500 / 33,750	71	8	PG2424EA06
Open Bottom	14"	22	22,500 / 33,750	112	6	PG2424EA12
Solid Bottom	8-1/2"	22	22,500 / 33,750	96	8	PG2424RA06
Solid Bottom	14-1/2"	22	22,500 / 33,750	130	6	PG2424RA12

## 24" x 36" PG Style Polymer Concrete (Stackable) Assembly

Hex Head Bolts are Standard



## Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 2 Bolts	8	8,000 / 12,000	100	10	PG2436CA00**
UL	2 piece w/2 Bolts	8	8,000 / 12,000	122	10	PG2436CS00**
UL	W/ 2 Bolts	15	15,000 / 22,500	115	10	PG2436HA00**
UL	2 piece w/2 Bolts	15	15,000 / 22,500	122	10	PG2436HS00**
UL	W/ 2 Bolts	22	22,500 / 33,750	122	10	PG2436HH00**
UL	No Bolts	8	8,000 / 12,000	100	10	PG2436WA00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

Available with EZ Locate.

## Dimensions / Data

### 24" x 36" PG Style Polymer Concrete (Stackable) Assembly (Continued)

Hex Head Bolts are Standard

#### Boxes (Box depths 24" thru 42" must be used as bottom of any stack)

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	18"	22	22,500 / 33,750	141	4	PG2436BA18
UL		24"		22,500 / 33,750	180	3	PG2436BA24
UL		30"		22,500 / 33,750	196	2	PG2436BA30
UL		36"		22,500 / 33,750	254	2	PG2436BA36
UL		42"		22,500 / 33,750	293	1	PG2436BA42
UL	Solid Bottom	18-1/2"	22	22,500 / 33,750	171	4	PG2436DA18
UL		24-1/2"		22,500 / 33,750	228	3	PG2436DA24
UL		30-1/2"		22,500 / 33,750	238	2	PG2436DA30
UL		36-1/2"		22,500 / 33,750	282	2	PG2436DA36
UL		42-1/2"		22,500 / 33,750	321	1	PG2436DA42

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: 24" thru 42" boxes must be used as bottom on any stack.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

#### Bottom Extensions (for use under 12" and 18" boxes only, one per box)

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Open bottom	8-3/4"	22	22,500 / 33,750	81	6	PG2436EA08
Solid bottom	9-1/4"	22	22,500 / 33,750	95	6	PG2436RA08

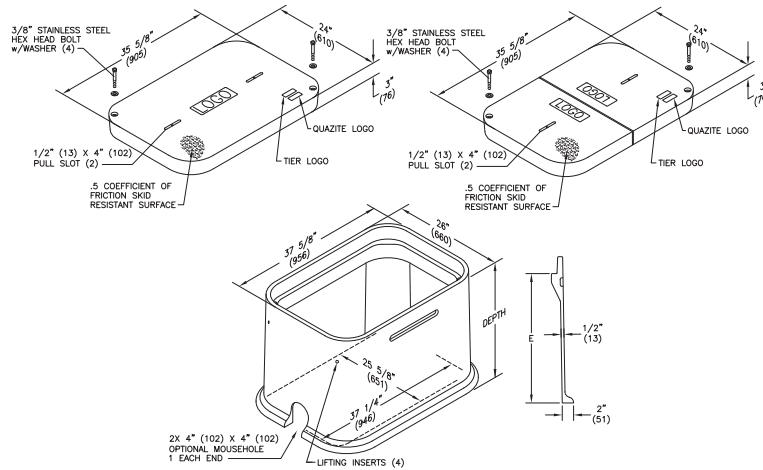
#### Grade Adjustable Extension

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
4" top extension, 1/2 thread	7-1/8"	22	22,500 / 33,750	80	6	PG2436ED04
4" top extension, 3/8 thread	7-1/8"	22	22,500 / 33,750	80	6	PG2436E503



## 24" x 36" PD Style Polymer Concrete Assembly

Hex Head Bolts are Standard



## Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 2 Bolts	8	8,000 / 12,000	100	10	PG2436CA00**
	2 piece w/2 Bolts	8	8,000 / 12,000	122	10	PG2436CS00**
UL	W/ 2 Bolts	15	15,000 / 22,500	115	10	PG2436HA00**
UL	2 piece w/2 Bolts	15	15,000 / 22,500	122	10	PG2436HS00**
UL	W/ 2 Bolts	22	22,500 / 33,750	122	10	PG2436HH00**
UL	No Bolts	8	8,000 / 12,000	100	10	PG2436WA00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

## Boxes

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	18"	22	22,500 / 33,750	159	2	PD2436BA18
UL		26"	22	22,500 / 33,750	199	2	PD2436BA26
		48"	22	22,500 / 33,750	313	1	PD2436BA48

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

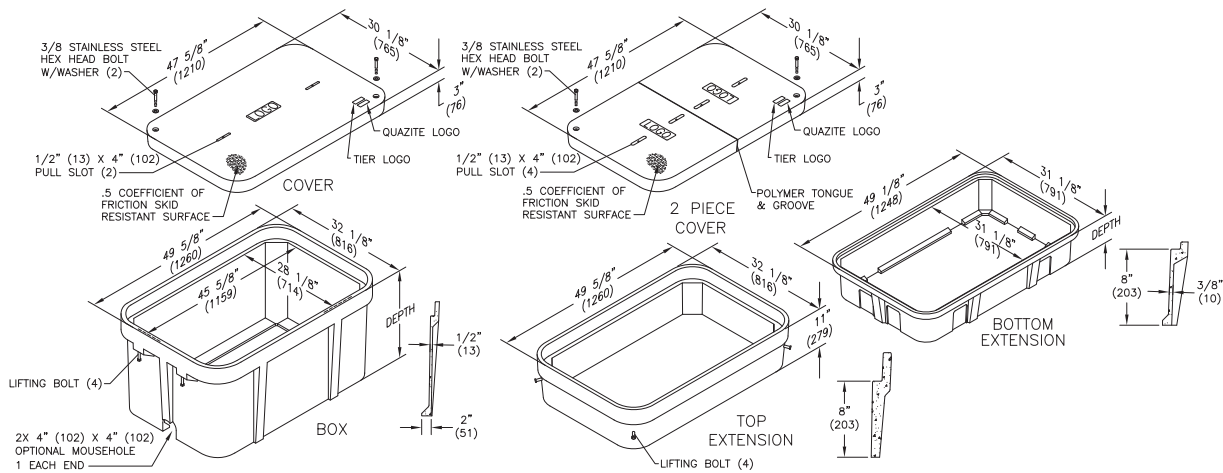
To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

Dimensions / Data

30" x 48" PG Style Polymer Concrete (Stackable) Assembly

Hex Head Bolts are Standard



Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 2 Bolts	8	8,000 / 12,000	159	10	PG3048CA00**
	2 piece w/2 Bolts	8	8,000 / 12,000	181	10	PG3048CS00**
UL	W/ 2 Bolts	15	15,000 / 22,500	206	10	PG3048HA00**
UL	2 piece w/2 Bolts	15	15,000 / 22,500	206	10	PG3048HS00**
UL	W/ 2 Bolts	22	22,500 / 33,750	220	10	PG3048HH00**
UL	No Bolts	8	8,000 / 12,000	159	10	PG3048WA00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

## Dimensions / Data

### 30" x 48" PG Style Polymer Concrete (Stackable) Assembly (Continued)

Hex Head Bolts are Standard

#### Boxes (Box depths 24" thru 48" must be used as bottom of any stack)

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Ⓢ	Standard Open Bottom	18"	22	22,500 / 33,750	185	4	PG3048BA18
Ⓢ		24"		22,500 / 33,750	236	3	PG3048BA24
Ⓢ		36"		22,500 / 33,750	343	2	PG3048BA36
		48"		22,500 / 33,750	450	1	PG3048BA48
Ⓢ	Solid Bottom	18-1/2"	22	22,500 / 33,750	220	4	PG3048DA18
Ⓢ		24-1/2"		22,500 / 33,750	287	3	PG3048DA24
Ⓢ		36-1/2"		22,500 / 33,750	394	2	PG3048DA36
		48"		22,500 / 33,750	501	1	PG3048DA48

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

#### Top Extension

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Open bottom	11"	22	22,500 / 33,750	100	8	PG3048EA11

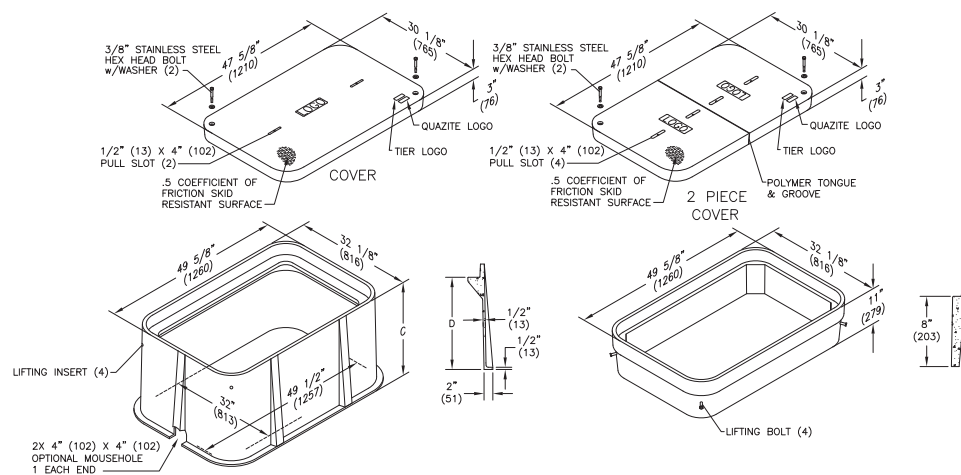
#### Bottom Extensions (for use under 18" box only, one per box)

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Open bottom	8-3/4"	22	22,500 / 33,750	102	8	PG3048EA08
Solid bottom	9-1/4"	22	22,500 / 33,750	151	8	PG3048RA08

# Dimensions / Data

## 30" x 48" PG Style Polymer Concrete (Stackable) Assembly

Hex Head Bolts are Standard



### Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 2 Bolts	8	8,000 / 12,000	159	10	PG3048CA00**
	2 piece w/2 Bolts	8	8,000 / 12,000	181	10	PG3048CS00**
UL	W/ 2 Bolts	15	15,000 / 22,500	206	10	PG3048HA00**
UL	2 piece w/2 Bolts	15	15,000 / 22,500	206	10	PG3048HS00**
UL	W/ 2 Bolts	22	22,500 / 33,750	220	10	PG3048HH00**
UL	No Bolts	8	8,000 / 12,000	159	10	PG3048WA00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

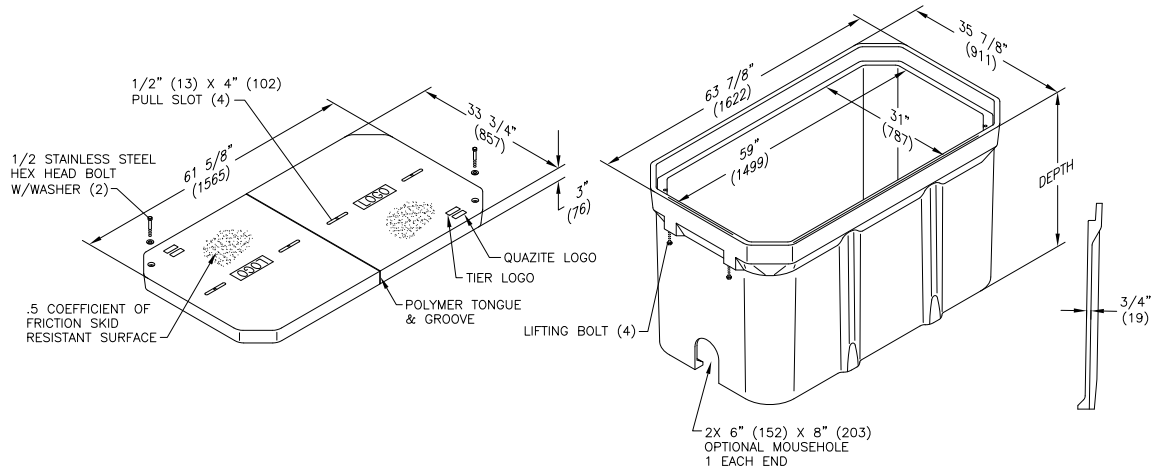
NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

### Boxes

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	24"	22	22,500 / 33,750	286	2	PD3048BA24
UL		48"	22	22,500 / 33,750	614	1	PD3048BA48

### Top Extension

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Open bottom	11"	22	22,500 / 33,750	100	8	PG3048EA11

**30" x 60" PG Style Polymer Concrete (Stackable) Assembly****Hex Head Bolts are Standard****Covers**

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Lightweight 2 Bolts	5	5,000 / 7,500	228	10	LG3060CA00**
W/ 2 Bolts	15	15,000 / 22,500	346	10	PG3060HA00**
W/ 2 Bolts	22	22,500 / 33,750	368	10	PG3060HH00**
Lightweight No bolts	5	5,000 / 7,500	228	10	LG3060WA00**

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

**Boxes (Box depths 30" and 36" must be used as bottom of any stack)**

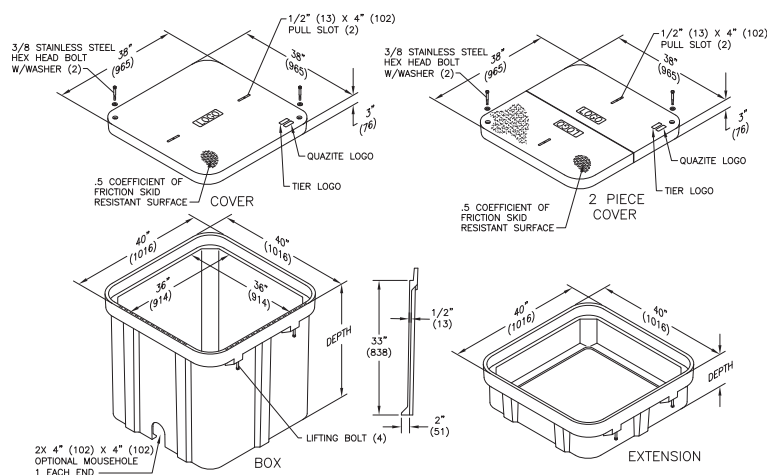
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	21"	22	22,500 / 33,750	350	4	PG3060BA21
	30"		22,500 / 33,750	492	3	PG3060BA30
	36"		22,500 / 33,750	565	2	PG3060BA36
Solid Bottom	21-1/2"	22	22,500 / 33,750	420	4	PG3060DA21
	30-1/2"		22,500 / 33,750	532	3	PG3060DA30
	36-1/2"		22,500 / 33,750	601	2	PG3060DA36

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

# Dimensions / Data

## 36" x 36" PG Style Polymer Concrete (Stackable) Assembly

Hex Head Bolts are Standard



### Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 2 Bolts	8	8,000 / 12,000	174	10	PG3636CA00**
	2 piece w/ 2 Bolts	8	8,000 / 12,000	220	10	PG3636CS00**
UL	W/ 2 Bolts	15	15,000 / 22,500	220	10	PG3636HA00**
UL	2 piece w/ 2 Bolts	15	15,000 / 22,500	220	10	PG3636HS00**
UL	W/ 2 Bolts	22	22,500 / 33,750	330	10	PG3636HH00**
UL	No Bolts	8	8,000 / 12,000	174	10	PG3636WA00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

### Boxes

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	36"	22	22,500 / 33,750	367	2	PG3636BA36
UL	Solid Bottom	36-1/2"		22,500 / 33,750	407	2	PG3636DA36

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

To order gasketed boxes, replace the letter "A" with the letter "G".

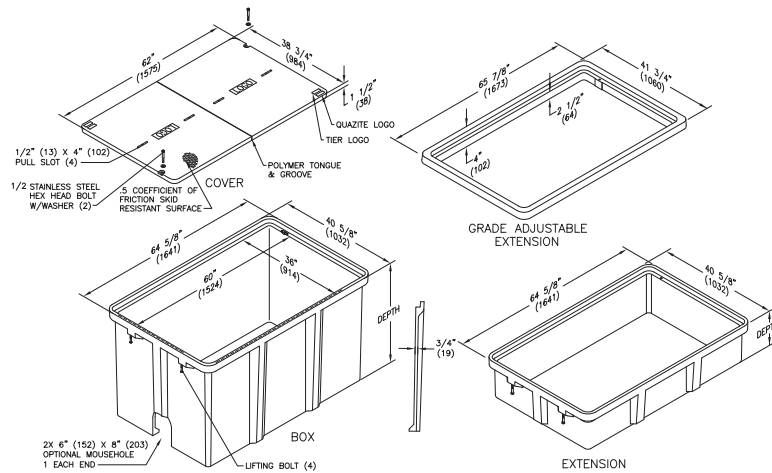
NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

### Top Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Open bottom	12"	22	22,500 / 33,750	129	6	PG3636EA12

## 36" x 60" PG Style Polymer Concrete (Stackable) Assembly

Hex Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Lightweight 2 Bolts	5	5,000 / 7,500	222	10	LG3660CA00**
W/ 2 Bolts	15	15,000 / 22,500	384	10	PG3660HA00**
W/ 2 Bolts	22	22,500 / 33,750	470	10	PG3660HH00**
Lightweight No bolts	5	5,000 / 7,500	222	10	LG3660WA00**

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

## Boxes (Box depths 31" and 36" must be used as bottom of any stack)

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	19"	22	22,500 / 33,750	381	4	PG3660BA19
	24"		22,500 / 33,750	397	3	PG3660BA24
	31"		22,500 / 33,750	481	2	PG3660BA31
	36"		22,500 / 33,750	647	2	PG3660BA36
Solid Bottom	19-1/2"	22	22,500 / 33,750	479	4	PG3660DA19
	24-1/2"		22,500 / 33,750	495	3	PG3660DA24
	31-1/2"		22,500 / 33,750	590	2	PG3660DA31
	36-1/2"		22,500 / 33,750	738	2	PG3660DA36

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".



Dimensions / Data

36" x 60" PG Style Polymer Concrete (Stackable) Assembly (Continued)

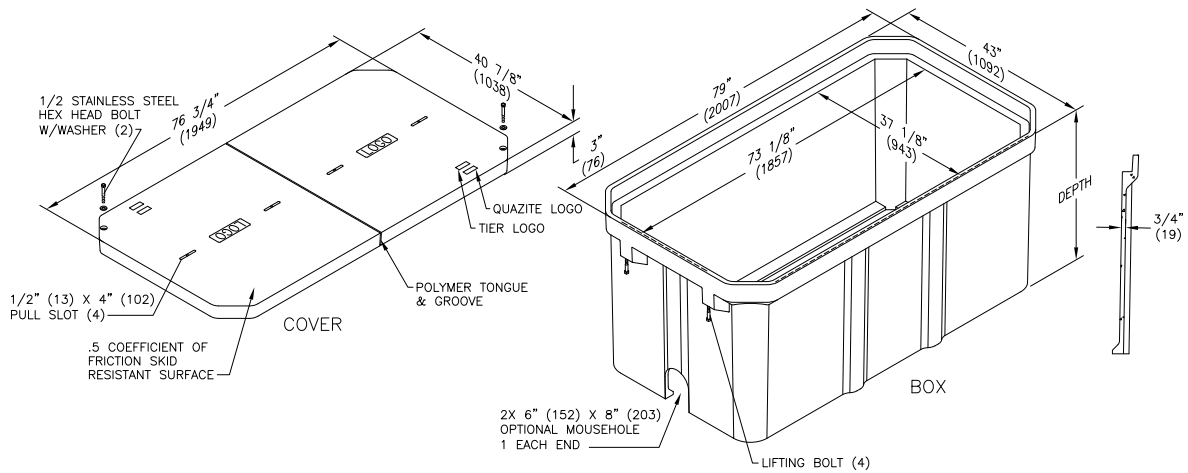
Grade Adjustable Extension

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Top extension	2-1/2"	22	22,500 / 33,750	116	6	PG3660ED03

Top Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Open bottom	11-1/2"	22	22,500 / 33,750	200	6	PG3660EA12



**36" x 72" PG Style Polymer Concrete (Stackable) Assembly****Hex Head Bolts are Standard****Covers**

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Lightweight 2 Bolts	5	5,000 / 7,500	310	10	LG3672CA00**
W/ 2 Bolts	15	15,000 / 22,500	488	10	PG3672HA00**
W/ 2 Bolts	22	22,500 / 33,750	544	10	PG3672HH00**
Lightweight No bolts	5	5,000 / 7,500	310	10	LG3672WA00**

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

**Boxes (Box depth 36" must be used as bottom of any stack)**

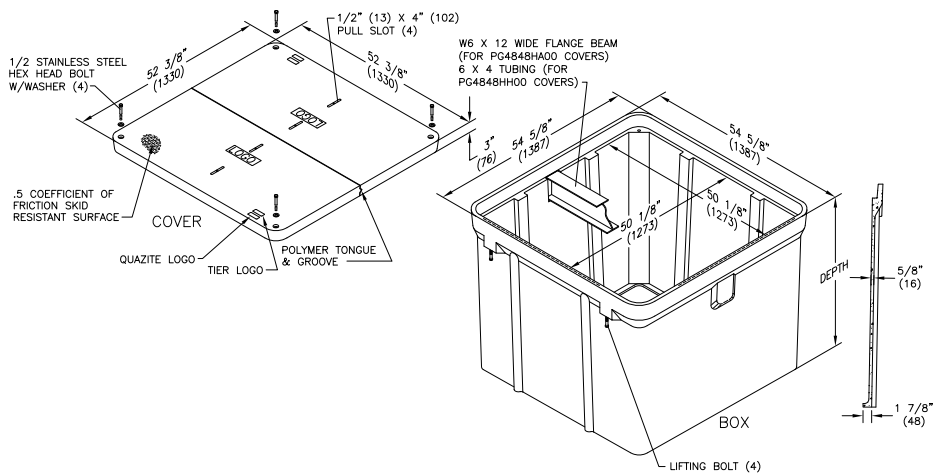
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	21"	22	22,500 / 33,750	448	3	PG3672BA21
	36"		22,500 / 33,750	768	2	PG3672BA36
Solid Bottom	21-1/2"	22	22,500 / 33,750	569	3	PG3672DA21
	36-1/2"		22,500 / 33,750	822	2	PG3672DA36

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

Dimensions / Data

48" x 48" PG Style Polymer Concrete (Stackable) Assembly

Hex Head Bolts are Standard



Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Lightweight 4 Bolts	5	5,000 / 7,500	286	10	LG4848CA00**
W/ 4 Bolts	15	15,000 / 22,500	364	10	PG4848HA00**
W/ 4 Bolts	22	22,500 / 33,750	596	10	PG4848HH00**
Lightweight No bolts	5	5,000 / 7,500	286	10	LG4848WA00**

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

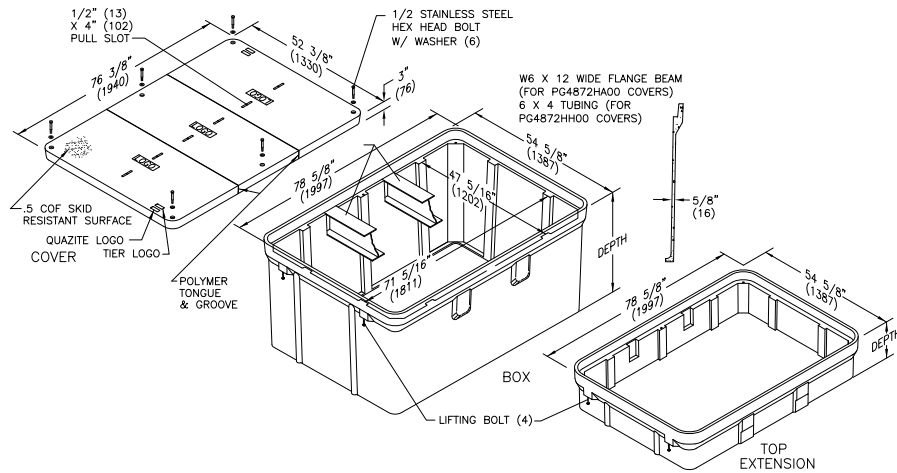
Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	36"	22	22,500 / 33,750	629	2	PG4848BA36
	48"		22,500 / 33,750	866	2	PG4848BA48
Solid Bottom	36-1/2"	22	22,500 / 33,750	663	2	PG4848DA36
	48-1/2"		22,500 / 33,750	940	2	PG4848DA48

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

## 48" x 72" PG Style Polymer Concrete (Stackable) Assembly

Hex Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Lightweight 6 Bolts	5	5,000 / 7,500	447	2	LG4872CA00**
W/ 6 Bolts	15	15,000 / 22,500	573	2	PG4872HA00**
W/ 6 Bolts	22	22,500 / 33,750	891	2	PG4872HH00**
Lightweight No bolts	5	5,000 / 7,500	447	2	LG4872WA00**

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	36"	22	22,500 / 33,750	810	2	PG4872BA36
	48"		22,500 / 33,750	1050	1	PG4872BA48
Solid Bottom	36-1/2"	22	22,500 / 33,750	1065	2	PG4872DA36
	48-1/2"		22,500 / 33,750	1245	1	PG4872DA48

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

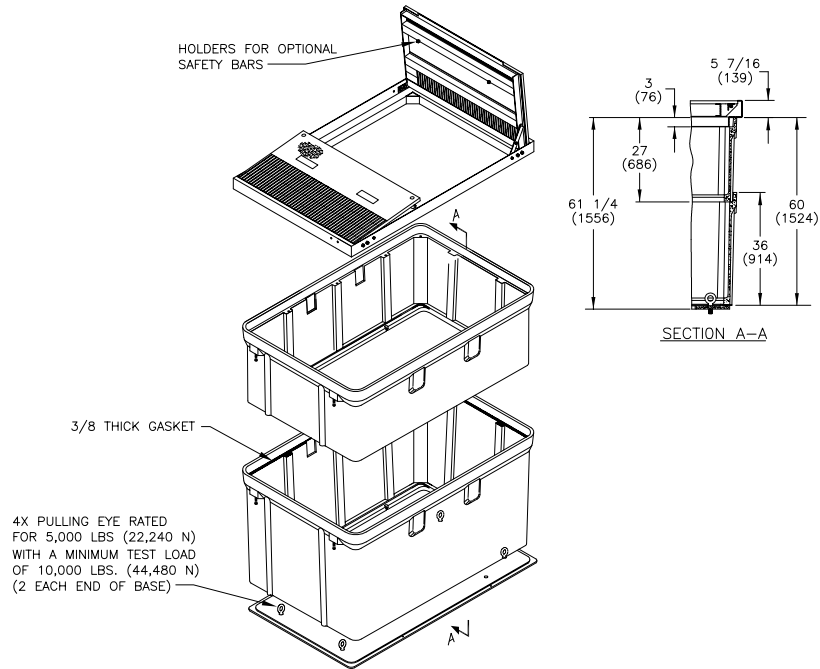
## Top Extension

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Open Bottom, No beam provided	15"	22	22,500 / 33,750	359	5	PG4872EA12

## Dimensions / Data

### 48" x 78" PG Style Polymer Concrete Assembly

Hex Head Bolts are Standard



#### Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Torsion	N/A	12,000 / 24,000	622	10	PG4878CT00**

Replace \*\* with a logo code found on page U54.

#### Boxes (Box Depth 36" must be used as bottom of any stack)

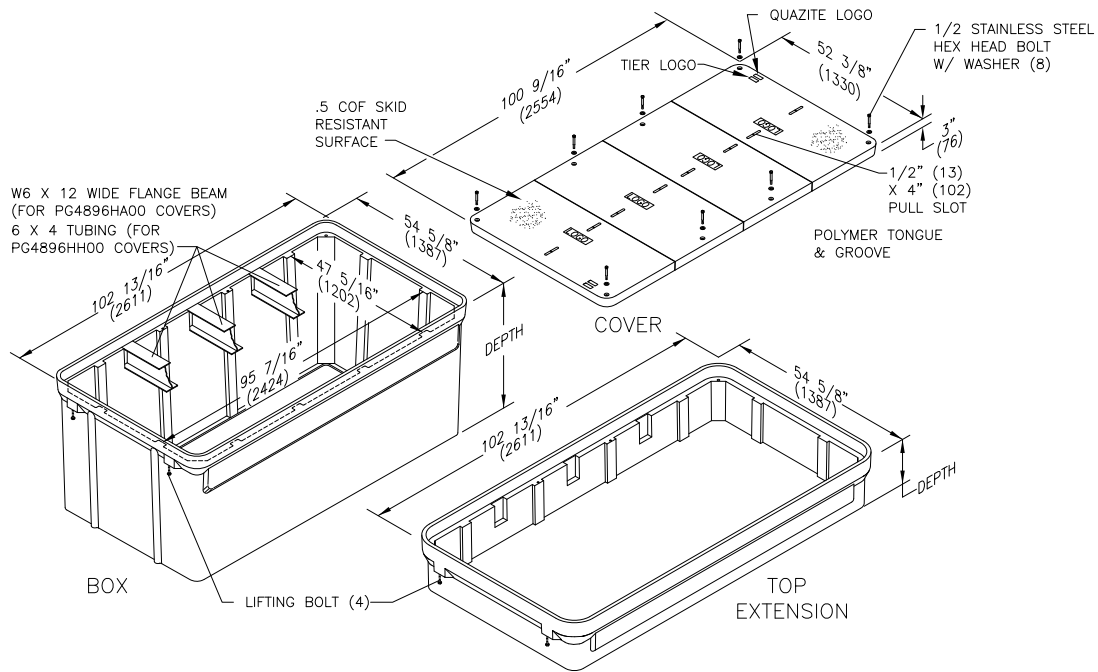
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	27"	22	22,500 / 33,750	867	1	PG4878BA27
	36	22	22,500 / 33,750	707	1	PG4878BG36

#### Base

Description	Weight #	Part No.
Bottom with pulling eyes & ground holes	555	PG4878D500

## 48" x 96" PG Style Polymer Concrete (Stackable) Assembly

Hex Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Lightweight 8 Bolts	5	5,000 / 7,500	608	2	LG4896CA00**
W/ 8 Bolts	15	15,000 / 22,500	794	2	PG4896HA00**
W/ 8 Bolts	22	22,500 / 33,750	1186	2	PG4896HH00**
Lightweight No bolts	5	5,000 / 7,500	608	2	LG4896WA00**

Replace \*\* with a logo code found on page U54. See page U59 for meter and touch / radio read cover options.

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	48"	22	22,500 / 33,750	1384	1	PG4896BA48
Solid Bottom	48-1/2"	22	22,500 / 33,750	1537	1	PG4896DA48

To order boxes with 2 standard mouseholes, replace the letter "A" with the letter "B".

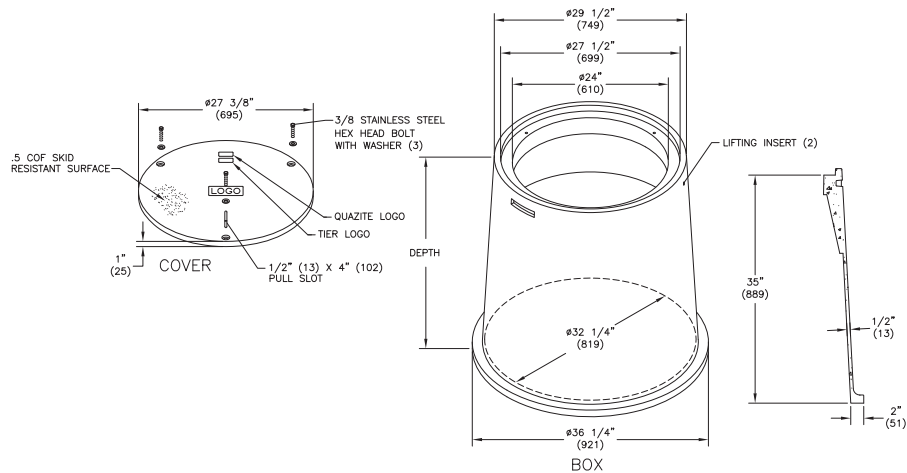
## Top Extension

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Open Bottom, No beam provided	15"	22	22,500 / 33,750	485	5	PG4896EA12

Dimensions / Data

27" Round Style Polymer Concrete (Nestable) Assembly

Hex Head Bolts are Standard



Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 3 Bolts	8	8,000 / 12,000	53	10	PR2700CA00**
	W/ 3 Bolts	15	15,000 / 22,500	75	10	PR2700HA00**
	W/ 3 Bolts	22	22,500 / 33,750	75	10	PR2700HH00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

Boxes

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	36"	22	22,500 / 33,750	278	3	PR2732BA36

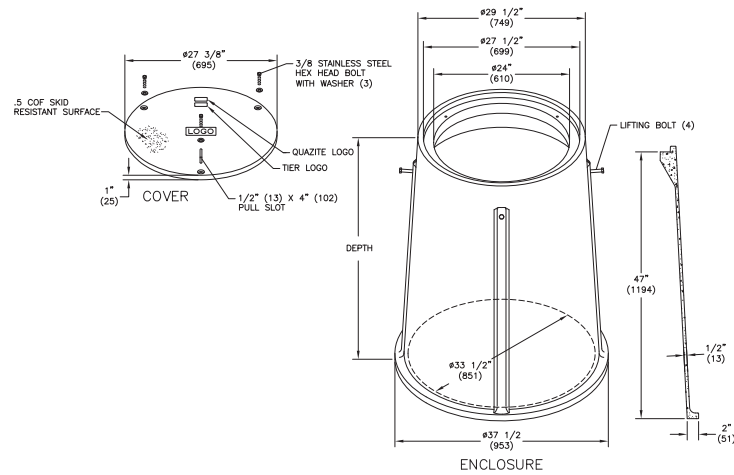
To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.



## 27" Round Style Polymer Concrete Assembly

Hex Head Bolts are Standard



## Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
U <sub>L</sub>	W/ 3 Bolts	8	8,000 / 12,000	53	10	PR2700CA00**
	W/ 3 Bolts	15	15,000 / 22,500	75	10	PR2700HA00**
	W/ 3 Bolts	22	22,500 / 33,750	75	10	PR2700HH00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

## Boxes

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
U <sub>L</sub>	Standard Open Bottom	48"	22	22,500 / 33,750	283	2	PR2733BA48

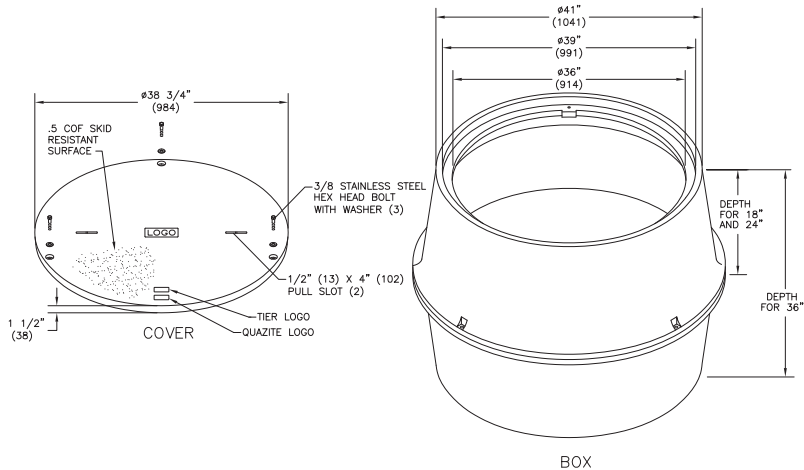
To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

Dimensions / Data

39" Round Style Polymer Concrete (Nestable) Assembly

Hex Head Bolts are Standard



Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 3 Bolts	8	8,000 / 12,000	141	10	PR3900CA00**
UL	W/ 3 Bolts	15	15,000 / 22,500	180	10	PR3900HA00**
UL	W/ 3 Bolts	22	22,500 / 33,750	180	10	PR3900HH00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

Boxes

	Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	Standard Open Bottom	18"	22	22,500 / 33,750	244	3	PR3943BA18
		24"	22	22,500 / 33,750	326	2	PR3944BA24
UL		36"	22	22,500 / 33,750	488	1	PR3943BA36

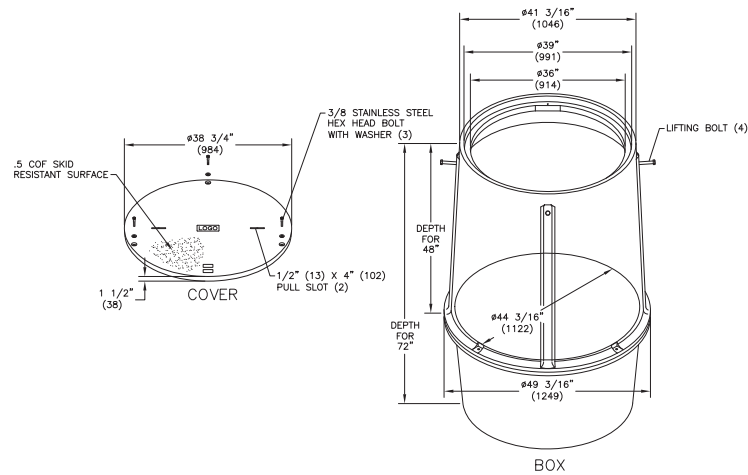
To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: 36" depth created by bolting 2-18" deep boxes bottom to bottom.

## 39" Round Style Assembly

Hex Head Bolts are Standard



## Covers

	Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
UL	W/ 3 Bolts	8	8,000 / 12,000	141	10	PR3900CA00**
UL	W/ 3 Bolts	15	15,000 / 22,500	180	10	PR3900HA00**
UL	W/ 3 Bolts	22	22,500 / 33,750	180	10	PR3900HH00**

To order gasketed covers, replace the letter "A" with the letter "G".

Replace \*\* with a logo code found on page U54.

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	48"	22	22,500 / 33,750	377	2	PR3944BA48
	72"	22	22,500 / 33,750	707	1	PR3944BA72

To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: 72" depth created by bolting 1-48" & 1-24" deep box bottom to bottom.

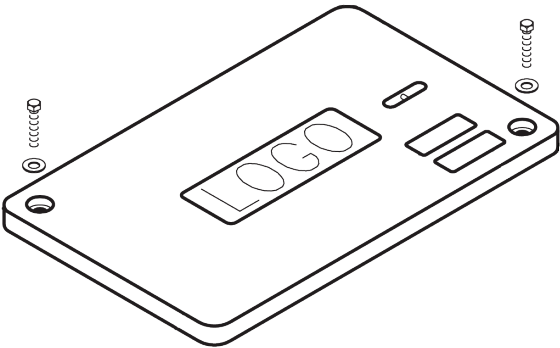
UNDERGROUND ENCLOSURES

# Quazite® Cover Options

Most commonly used cover logos are shown below.  
Custom Logos are available. Contact your Quazite / Hubbell Representative.

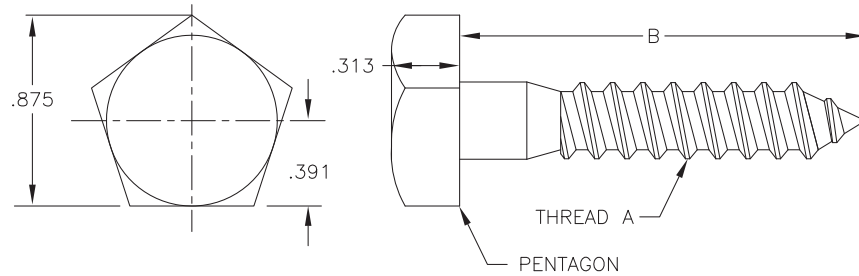
Logos

Polymer Concrete Logo Codes	Description
09	Blank
10	Catv
12	Communications
14	Controls
17	Electric
21	Fiber Optics
22	Fire Alarm
23	Gas
24	Ground
26	High Voltage
29	Lighting
36	Security
38	Signal
40	State Traffic Signal
41	Street Lighting
42	Telecom
43	Telephone
44	Traffic
45	Traffic Control
46	Traffic Signal
48	Tv
50	Water
57	Emergency
65	Illumination
81	Danger High Voltage
84	Power
92	Telecommunications
3A	Dot
6B	Instrumentation
ZA	Irrigation
K91	Reclaimed Water
KH1	Fiberoptic



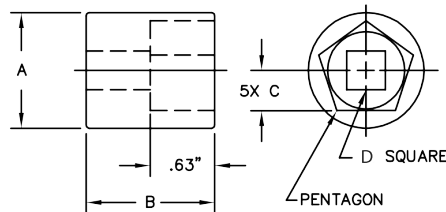
### Tamper Resistant Penta-Head Bolt

This upgrade option includes a special penta head bolt that can only be turned using a Penta-Head socket. To order this option for Polymer Concrete Covers, add the suffix P to the end of the cover part number. (Example: PG2436HA0017P).



### Quazite® Tools

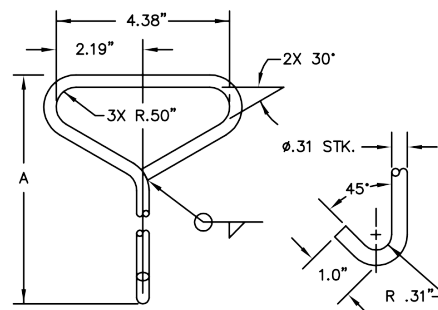
#### Tamper Resistant Standard Penta-Head Socket - Alloy Steel



Part No.	UPC # 66-237	(A)	(B)	(C)	(D)
C082920	11844	1.13"	2.00"	.391"	.375"
C082922	11845	0.88"	1.50"	.250"	.375"
WP74900	N/A	1.13"	2.00"	.391"	.500"
WP74902	N/A	1.13"	2.00"	.391"	*

\* Includes integral T-handle

### Cover Hook - Electroplated Steel



Description	Part No.	UPC # 66-237	(A)
Short Cover Hook	C082905	11842	7.0"
Long Cover Hook	C082908	11843	27.0"

# Cover Options

## Electronic Markers (Cast in Cover)

A full range of electronic markers are encased in the polymer concrete PC, PG, PT, LG, LT, or PR style covers. Specify frequency for your utility type by inserting the code letter into the 10th digit of the cover number. (Example: PG3048CA0P09).

Type	Polymer Concrete Code	Frequency
Telecommunications	T	101.4 kHz
Power	P	169.8 kHz
Gas	G	83.0 kHz
Water	W	145.7 kHz
Sanitary	S	121.6 kHz

## Quazite® Torsion Covers

Feature a skid-resistant surface and come with an assisted, low-force cover opening that bolts closed. Torsion covers range in size from 35-5/8" x 58-3/4" to 54-5/8" x 81-5/8". Torsion Covers provide easy access to the vault when open, and security when closed.

## Lightweight Covers

The reduced weight combined with the tremendous strength of Hubbell's lightweight cover design translates into speed and productivity. Contact your Hubbell / Quazite representative for more information.

## Touch Read

Touch Read counter bores and Radio Read opening are available in several size covers. Contact your Hubbell / Quazite representative for more information.



# UNDERGROUND ENCLOSURES

## EZ AUGER™ Upgrade Kits

Most existing Quazite polymer concrete enclosures can be upgraded to EZ Auger™ bolt technology. Upgrade kits are available for most enclosures in both hex head and penta head configurations.

### Quazite's Self-Cleaning EZ Auger™ Bolt System Upgrade Kit for Polymer Concrete Enclosures (Each assembly includes 2 HEX HEAD EZ Auger™ bolts, 2 EZ Auger™ nuts and 2 washers)

HEX HEAD KIT	Thread	Part No.	UPC # 66-2037	Cover Application
	3/8-7 Lag Thread	CO82500	12861	PC0608, PC0818, PC1012, PC1118, PC1212, PC1324, PC1730, PX1324, PX1730, PR2700
	3/8-7 Lag Thread	CO82507	18369	PG1015, PG1118
	3/8-7 Lag Thread	CO82505	12862	PG1324, PG1730
	3/8-7 Lag Thread	CO82510	12863	PG2436, PG3048, PG3636
	3/8-7 Lag Thread	CO82512	17590	PG3048 Overlapping
	1/2-6 Lag Thread	CO82522	17591	LG3660
	1/2-6 Lag Thread	CO82524	17592	PG3660 Overlapping
	1/2-6 Lag Thread	CO82526	17593	PG3060, PG3672, PG4848, PG4872, PG4896
	1/2-6 Lag Thread	CO82528	17594	PG3060 Overlapping

### Hubbell's Self-Cleaning EZ Auger™ Bolt System Upgrade Kit for Polymer Concrete Enclosures (Each assembly includes 2 PENTA HEAD EZ Auger™ bolts, 2 EZ Auger™ nuts and 2 washers)

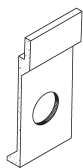
PENTA HEAD KIT	Thread	Part No.	UPC # 66-2037	Cover Application
	3/8-7 Lag Thread	CO82600	18378	PC0608, PC0818, PC1012, PC1118, PC1212, PC1324, PC1730, PX1324, PX1730, PR2700
	3/8-7 Lag Thread	CO82607	18379	PG1015, PG1118
	3/8-7 Lag Thread	CO82605	18377	PG1324, PG1730
	3/8-7 Lag Thread	CO82610	18376	PG2436, PG3048, PG3636
	3/8-7 Lag Thread	CO82612	18375	PG3048 Overlapping
	1/2-6 Lag Thread	CO82622	18374	LG3660
	1/2-6 Lag Thread	CO82624	18373	PG3660 Overlapping
	1/2-6 Lag Thread	CO82626	18372	PG3060, PG3672, PG4848, PG4872, PG4896
	1/2-6 Lag Thread	CO82628	18371	PG3060 Overlapping



## Polymer Concrete Enclosure Options

Quazite® features several different accessories for its boxes, including cable racks, unistrut racks, pulleys, knockouts, coiling brackets, and terminators. Knockouts are pre-scored at the factory, allowing for easy break out without the need for special tools. Pulleys feature a forged-steel eye-nut and a steel-reinforcing plate.

### Holes

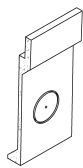


Conduit Sizes  
(For actual hole sizes and locations see page 58.)  
2"  
3"  
4" Electrical  
4" Telephone  
5"  
6"

Other hole sizes available. Contact your local HUBBELL®/QUAZITE® representative for additional

Special order boxes with holes (or mouseholes, etc.) may qualify for UL Listing as long as the holes do not exceed more than 25% of the area of each sidewall and as long as the holes do not cut into a structural reinforcing rib, corner, or box lip.

### Knockouts

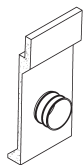


Conduit Sizes  
(For actual hole sizes and locations see page 58.)  
2"  
3"  
4" Electrical  
4" Telephone  
5"  
6"

Other knockout sizes available. Contact your local HUBBELL®/QUAZITE® representative for additional

Special order boxes with holes (or mouseholes, etc.) may qualify for UL Listing as long as the holes do not exceed more than 25% of the area of each sidewall and as long as the holes do not cut into a structural reinforcing rib, corner, or box lip.

### Terminators



Conduit Sizes  
(For actual hole sizes and locations see page 58.)  
2"  
3"  
4" (Electrical & Telephone)\*  
5"  
6"

\*New 4" terminator design accommodates both electrical and telephone conduit sizes. Other terminator sizes available. Contact your local HUBBELL®/QUAZITE® representative for additional

Special order boxes with holes (or mouseholes, etc.) may qualify for UL Listing as long as the holes do not exceed more than 25% of the area of each sidewall and as long as the holes do not cut into a structural reinforcing rib, corner, or box lip.

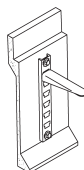
### Strut Racks



Box and cover struts available. Contact your local HUBBELL®/QUAZITE® representative for sizes.

Inserts must be located in ribs. See page 67 for rib locations.  
Width x Depth  
1-5/8" x 1-5/8"

### Cable Racks & Rack Hooks - Galvanized Steel

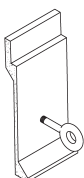


Cable Racks available in the following lengths:  
12" length **C080911**  
18" length **C080910**  
24" length **C080915**  
30" length **C080920**  
36" length **C080921**

See page U61 for cable rack locations.

Cable Rack Hooks  
7-1/2" length **C2031132**  
10" length **C080907**

### Pulling Eyes



Available Ratings  
1,500 lbs.  
3,000 lbs.  
10,000 lbs.

### Captive Bolts

Captive bolts are available for PC, PG, LG, PT, LT and PR style covers. Captive bolts prevent the bolt from falling out of the cover when the cover is removed.

### EZ - Locate

The EZ Locate System allows the #6 - #24 AWG ground wires / bonding harnesses or tracer wires to be quickly isolated from the grounding electrode.

The telescoping body is made from stainless steel; the isolating ground switch is made from engineering-grade thermo-plastic and tin-plated copper alloy components to prevent corrosion.

Available Sizes  
13x24, 17x30, 24x36, 30x48, 48x48



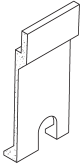
# UNDERGROUND ENCLOSURES

## Polymer Concrete Enclosure Options

### Bolt Holes

Sizes  
3/8"  
1/4"  
1/2"

### Mouseholes



There is no additional charge for mouseholes in the standard size and location for their respective enclosures. **PC0608, PC0818** and **PC1212** boxes usually do not have mouseholes. See pg. 139 for locations.

Mousehole Sizes Standard on Boxes  
2-1/2" x 4" **LT1015, PC1118, PG1118**

4" x 4" **PC1324, PT1324, PC1730, PT1730, PG1324, PG2424, PG1730, PD1730, PG2436, PG3048, PD3048, PG3636**

6" x 8" **PG3060, PG3660, PG3672, PG4848, PG4872, PG4896**

Special order boxes with holes (or mouseholes, etc.) may qualify for UL Listing as long as the holes do not exceed more than 25% of the area of each sidewall and as long as the holes do not cut into a structural reinforcing rib, corner, or box lip.

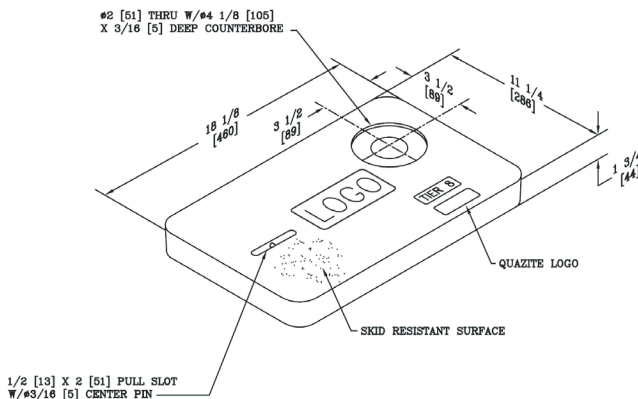
Other sizes available. Contact your local HUBBELL®/QUAZITE® representative for information.

### Pull Slots

The standard cover pull slot measures 1/2" x 4". Bell cover pull slots measuring 1" x 4" are available upon request.

### Touch/Radio Read Option

Holes for touch or radio read applications can be provided in covers as needed.

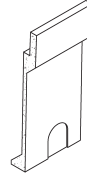


### Inserts - 18-8 Stainless Steel

Available Sizes  
3/8" or 1/2"

Inserts must be located in ribs. See page 139 for rib locations.

### Mousehole Knockouts

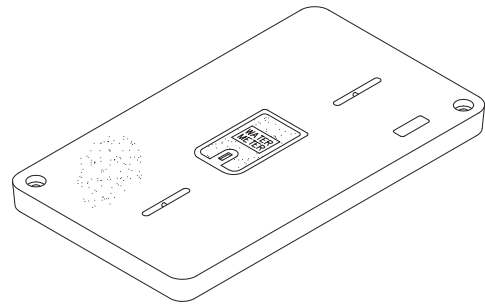


There is no additional charge for mousehole knockouts in the standard size and location for their respective enclosures. Contact your local HUBBELL®/QUAZITE® representative for size options. See pg. 139 for locations.

### Hinged Meter Lids\*

Available Sizes  
Cast iron 4-1/2" x 7-1/2" lid  
Cast iron 6" x 9" lid  
Cast iron 9" x 12" lid with frame

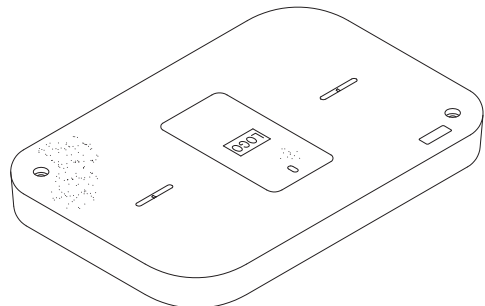
\*Select sizes available in Tier 15. Tier 22 not available.



### Drop-in Meter Lids\*

Available Sizes  
Polymer concrete 6" x 9" drop-in lid  
Polymer concrete 7" x 13" drop-in lid  
Polymer concrete 9" x 15" drop-in lid

\*Select sizes available in Tier 15. Tier 22 not available.



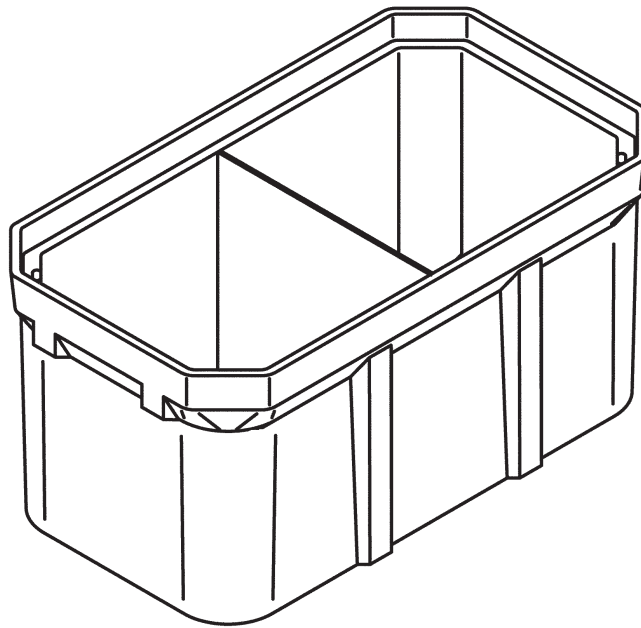
## Polymer Concrete Enclosure Dividers

### Divided Boxes

Dividers are available for the following size enclosures:

24" x 36" x 18"	36" x 60" x 36"
24" x 36" x 30"	36" x 72" x 21"
24" x 36" x 42"	36" x 72" x 36"
30" x 48" x 18"	48" x 48" x 36"
30" x 48" x 36"	48" x 48" x 48"
30" x 60" x 21"	48" x 72" x 36"
30" x 60" x 36"	48" x 72" x 48"
36" x 36" x 36"	48" x 96" x 48"

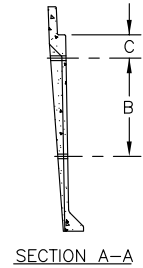
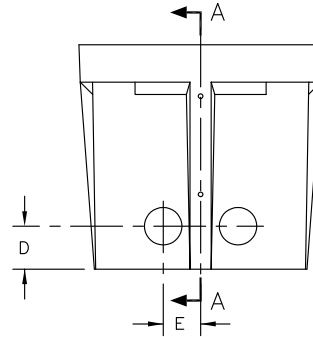
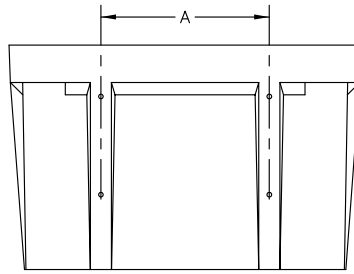
*NOTE: Dividers are not sold separately.*



Dividers are typically located at the center of the box. Multiple dividers are also available. Additional dividers not listed may be available upon request. Contact your local HUBBELL® / QUAZITE® representative.

## Standard Cable Rack Insert, Terminator, Knockout &amp; Hole Locations

Mouseholes (not illustrated) - The standard location for mouseholes is in the center of the end walls of the enclosure.



## Boxes

PART NO.	DIMENSIONS				
	A	B	C	D	E
PG2424BA24	12" (305 mm)	10-1/2" (267mm)	4" (102 mm)	5-1/2" (140mm)	4" (102mm)
PG2436BA18	18" (457mm)	9" (229mm)	2-1/2" (64 mm)	5-1/2" (140mm)	4" (102mm)
PG2436BA24	18" (457mm)	13-1/2" (343mm)	2-1/2" (64 mm)	5-1/2" (140mm)	4" (102mm)
PG2436BA30	18" (457mm)	13-1/2" (343mm)	2-1/2" (64 mm)	5-1/2" (140mm)	4" (102mm)
PG2436BA42	18" (457mm)	13-1/2" (343mm)	2-1/2" (64 mm)	5-1/2" (140mm)	4" (102mm)
PD3048BA24	22" (559mm)	10-1/2" (267mm)	6" (152 mm)	5-1/2" (140mm)	5-1/2" (140mm)
PD3048BA48	22" (559mm)	13-1/2" (343 mm)	6" (152 mm)	5-1/2" (140mm)	5-1/2" (140mm)
PG3048BA18	22" (559mm)	9" (229mm)	2-1/2" (64 mm)	5-1/2" (140mm)	5-1/2" (140mm)
PG3048BA24	22" (559mm)	10-1/2" (267mm)	2-1/2" (64 mm)	5-1/2" (140mm)	5-1/2" (140mm)
PG3048BA36	22" (559mm)	13-1/2" (343mm)	2-1/2" (64 mm)	5-1/2" (140mm)	5-1/2" (140mm)
PG3060BA21	20-3/4" (527mm)	10-1/2" (267mm)	2-1/2" (64 mm)	5-1/2" (140mm)	7" (178mm)
PG3060BA30	24" (610mm)	10-1/2" (267mm)	2-1/2" (64 mm)	5-1/2" (140mm)	7" (178mm)
PG3060BA36	20-3/4" (527mm)	10-1/2" (267mm)	2-1/2" (64 mm)	5-1/2" (140mm)	7" (178mm)
PG3636BA36	18" (457mm)	13-1/2" (343mm)	2-1/2" (64 mm)	5-1/2" (140mm)	7" (178mm)
PG3660BA19	22" (559mm)	10-1/2" (267mm)	4" (102 mm)	5-1/2" (140mm)	9" (229mm)
PG3660BA24	22" (559mm)	10-1/2" (267mm)	4" (102 mm)	5-1/2" (140mm)	9" (229mm)
PG3660BA31	22" (559mm)	10-1/2" (267mm)	4" (102 mm)	5-1/2" (140mm)	9" (229mm)
PG3660BA36	22" (559mm)	10-1/2" (267mm)	4" (102 mm)	5-1/2" (140mm)	9" (229mm)
PG3672BA21	20" (508mm)	10-1/2" (267mm)	2-1/2" (76 mm)	5-1/2" (140mm)	9" (229mm)
PG3672BA36	20" (508mm)	10-1/2" (267mm)	3" (76 mm)	5-1/2" (140mm)	9" (229mm)
PG4848BA36	22" (559mm)	10-1/2" (267mm)	5-1/2" (140 mm)	7" (178mm)	5-1/2" (140mm)
PG4848BA48	22" (559mm)	10-1/2" (267mm)	5-1/2" (140 mm)	7" (178mm)	5-1/2" (140mm)
PG4872BA36	46" (1168mm)	13-1/2" (343mm)	5-1/2" (140 mm)	7" (178mm)	5-1/2" (140mm)
PG4872BA48	46" (1168mm)	13-1/2" (343mm)	5-1/2" (140 mm)	7" (178mm)	5-1/2" (140mm)
PG4896BA48	24-3/16" (614mm)	13-1/2" (343mm)	5-1/2" (140 mm)	7" (178mm)	5-1/2" (140mm)

NOTE - Holes should be located only in the walls of an enclosure. Do not cut holes in ribs or corners. Hole locations are  $\pm 1"$  (25mm). Dimensions & weights in parentheses are metric equivalent.



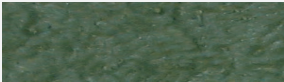

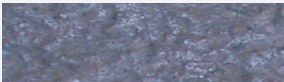

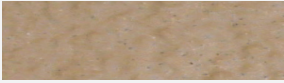


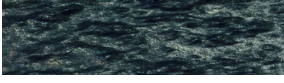
## Hole Sizing for Non-Metallic Conduit / Duct

NOMINAL SIZE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	3"	4" (elec.)	4" (tele.)	5"	6"
CONDUIT O.D.	.840	1.050	1.315	1.660	1.900	2.375	3.500	4.500	4.350	5.563	6.625
HOLE SIZE	1"	1-1/4"	1-3/8"	1-3/4"	2"	2-1/2"	3-3/4"	4-3/4"	4-3/4"	5-3/4"	6-3/4"

Quazite recommends that holes be punched 1/8" to 1/4" larger than the actual outside diameter of the conduit duct. If more precise holes are required, contact your local HUBBELL® / QUAZITE® representative.

## Quazite® Color Options

The standard color for QUAZITE® products is concrete gray. Various color options allow for blending with adjacent materials or special identification of enclosures. Some commonly requested colors include:

Color Sample	Description	Polymer Concrete Part No. Code
	Brick Red	R
	Munsell Green	G
	Light Green	F
	Cement Gray	C
	Charcoal Gray	D
	Black	B
	Pecan	T
	International Orange	A
	Purple	N (non-potable water)
	Blue	U

*Note: Printed colors are reference only and do not exactly represent product colors.*

*Contact your local Hubbell / Quazite representative for other special colors.*

*Specify color for PC & PG polymer concrete by inserting the code letter into the 6th digit of the cover or box number. (Example: PG304RCA0009).*











# Underground Enclosures

Hubbell maintains a large inventory of Quazite FRP enclosures to serve your needs.

### NEC & Underground Enclosures

The National Electric Code states in article 314.30 that enclosures “...shall be designed and installed to withstand all loads likely to be imposed...” and addresses issues related to enclosure size, wiring entries, enclosures without bottoms, and bonding requirements for covers.”

The code references the ANSI/SCTE 77 “Specification for Underground Enclosure Integrity” National Standard, which outlines various tests that enclosures must pass to meet the standard. ANSI/SCTE 77 also provides load charts with Tier ratings to help users determine the appropriate enclosure to select based on the loadings expected in the application.

### Quazite® FRP – ANSI Standard

All Quazite® FRP enclosures meet or exceed the test provisions of ANSI/SCTE 77 2013 as referenced in the 2005, 2008, 2011 and 2014 NEC. To achieve this, Quazite® FRP enclosures must pass numerous material and product performance tests before they can meet ANSI/SCTE 77 2013.

### Testing Requirements for ANSI/SCTE 77 2013

- Three-Position Load Testing to simulate actual application performance
- UV Degradation per ASTM G-154
- Fire Resistance per RUS 7CFR 1755.910 (PE-91)
- Chemical Resistance per ASTM D-543
- Water Absorption per ASTM D-570
- Impact Resistance per ASTM D2444
- Accelerated service per ASTM D-756, procedure E

### Quazite® FRP – Peace of Mind

Quazite® FRP enclosures have undergone rigorous physical, environmental, and internal equipment-protection tests and meet the requirements of the ANSI Standard. By adhering to the NEC and ANSI requirements in the enclosure-selection process, users are ensured long service life. Quazite® FRP enclosures offer not only improved manageability and cost-efficiency over other enclosures, but peace of mind as well.

National Fire Protection Agency, 2005, 2008, 2011 and 2014 National Electric Code.

Subsequent to the issuance of the 2005 NEC, ANSI approved an updated version of the standard, ANSI/SCTE 77 2013.

The latest copy of the standard may be purchased from ANSI. It may also be viewed in PDF form on SCTE's website at [http://www.scte.org/documents/pdf/Standards/ANSI\\_SCTE%2077%202013.pdf](http://www.scte.org/documents/pdf/Standards/ANSI_SCTE%2077%202013.pdf)

## Style Guide - Tailored Product Variety

We offer a wide variety of FRP box styles in order to meet your most specialized enclosure needs. Each style offers specific strengths and assets for diverse functionality



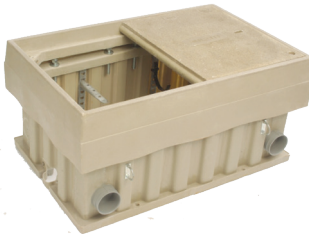
### FRP Flared Wall Style

This style features a unique combination of polymer concrete and fiber-reinforced polymer. FRP flared wall styles are nestable for compact storage and shipment. The flared wall design also optimizes internal volume and minimizes frost heave.



### FRP Straight Wall Style

This style features a unique combination of polymer concrete and fiber-reinforced polymer. FRP straight wall boxes are stackable for increased depth. Straight wall design is also easy to remove or adjust in the field.



### Corrugated Style

A special combination of polymer concrete and fiber-reinforced polymer along with the corrugated walls give this style design flexibility, added strength and durability. Adjust-to-grade or torsion options also available on select sizes.



### FRP Round Style

This round enclosure features a unique combination of polymer concrete and fiber-reinforced polymer. The shape also prevents a cover from falling into the box.

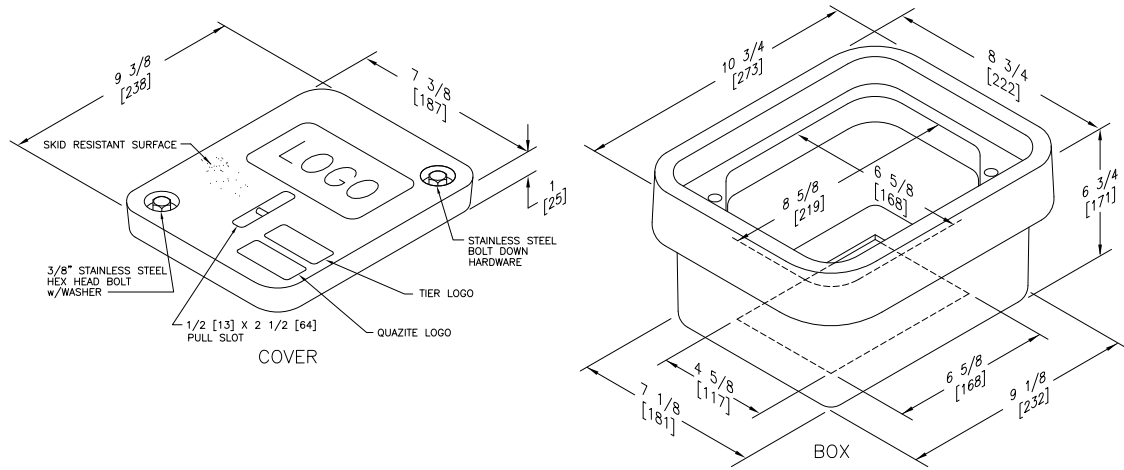
# Quazite FRP: Available Size Chart

Style	Size	Depths	Load Rating Options
Straight Wall	6x8	6-3/4	Tier 8
	10x15	12	Tier 8, Tier 15
	11x18	12, 18	Tier 8, Tier 15, Tier 22
	11x21	12	Tier 5, Tier 8, Tier 15
	11x32	12	Tier 5, Tier 8, Tier 15
	12x12	12	Tier 8, Tier 15, Tier 22
	13x24	12, 18	Tier 8, Tier 15, Tier 22
	15x17	12	Tier 8, Tier 15
	15x27	12	Tier 5, Tier 8
	16x22	18	Tier 8, Tier 15
	17x30	12, 18, 22, 30	Tier 8, Tier 15, Tier 22
	24x24	12, 18, 24	Tier 8, Tier 15, Tier 22
	24x36	18, 24, 30	Tier 8, Tier 15, Tier 22
	30x48	18, 24, 36	Tier 8, Tier 15, Tier 22
	30x60	18, 30, 36, 48	Tier 8, Tier 15, Tier 22
	36x36	18, 24, 30, 36, 48	Tier 8, Tier 15, Tier 22
	36x60	18, 24, 30, 36, 48	Tier 8, Tier 15, Tier 22
	36x72	36, 48	Tier 8, Tier 15, Tier 22
Flared Wall	10x15	12, 18	Tier 8, Tier 15
	11x18	12, 18	Tier 8, Tier 15, Tier 22
	11x32	12	Tier 5, Tier 8
	12x12	12, 24	Tier 8, Tier 15
	13x24	12, 18, 24*	Tier 8, Tier 15, Tier 22
	15x17	12	Tier 5, Tier 8, Tier 15
	15x27	12	Tier 5, Tier 8
	16x22	30	Tier 8, Tier 15
	17x30	12, 18, 22, 24, 30, 34*	Tier 8, Tier 15, Tier 22
	24x36	18, 24, 30, 36, 42, 48*	Tier 8, Tier 15, Tier 22
	24x60	24	Tier 5
	30x48	18, 24, 30, 36	Tier 8, Tier 15, Tier 22
Corrugated Wall	30x48	18, 24, 30, 36, 48*	Tier 8, Tier 15, Tier 22
	30x60	18, 24, 30, 36, 48	Tier 5, Tier 8, Tier 15, Tier 22
	36x60	18, 24, 30, 36, 48	Tier 8, Tier 15, Tier 22
	36x72	18, 24, 30, 36, 48	Tier 8, Tier 15, Tier 22
	36x96	30, 36, 48	Tier 8, Tier 15, Tier 22
	48x48	18, 24, 30, 36, 48	Tier 8, Tier 15, Tier 22
	48x72	18, 24, 30, 36, 48	Tier 8, Tier 15, Tier 22
	48x78	18, 24, 30, 36, 48	Tier 8, Tier 15, Tier 22
	48x96	18, 24, 30, 36, 48	Tier 8, Tier 15, Tier 22
	78x96	36, 48	Tier 8, Tier 15, Tier 22
	96x96	36, 48	Tier 8, Tier 15, Tier 22
Round	2000	24, 48	Tier 8, Tier 15, Tier 22
	2700	36, 72	Tier 8, Tier 15
	3200	36	Tier 8, Tier 15, Tier 22
	3900	14, 30, 36	Tier 8, Tier 15, Tier 22

\*Extensions Available

## 6" x 8" FRP Straight Wall Stackable

Hex Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	5	300	C30060801A***
No Bolts	8	8,000 / 12,000	5	300	C00060801A***

Replace \*\*\* with a logo code found on page U133.

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open	6-3/4"	8	8,000 / 12,000	6	64	B33060806A
Solid Bottom	6-3/4"	8	8,000 / 12,000	6.5	64	B33060806B

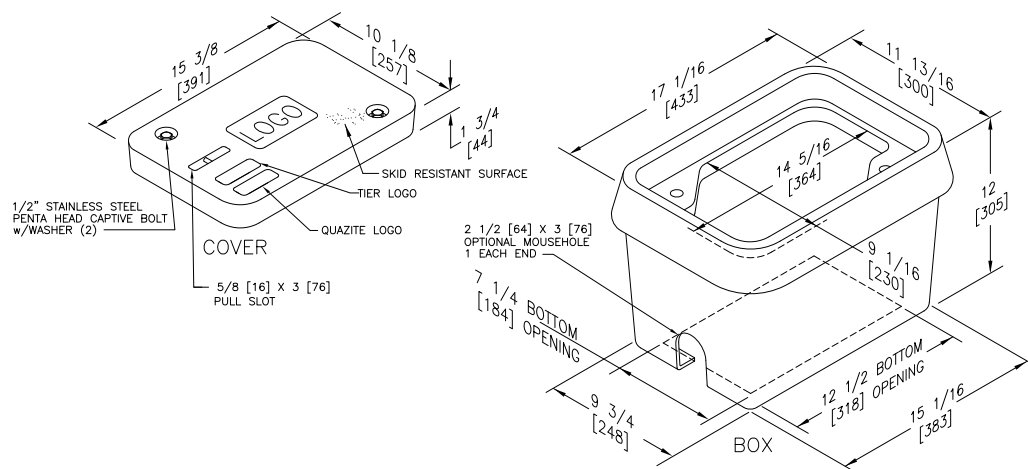
To order gasketed boxes, replace the last character with "G".

NOTE: Gasket reduce the inflow of fluids but do not make the enclosure water tight.

# Dimensions / Data

## 10" x 15" FRP Straight Wall Stackable

Penta Head Bolts are Standard



### Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	17	100	C10101502A***
W/ 2 Bolts	15	15,000 / 22,500	19	100	C12101502A***
No Bolts	8	8,000 / 12,000	17	100	C00101502A***
No Bolts, W/CI Reader, Over 90	5	5,000 / 7,500	20	100	C08101502C009
No Bolts, W/CI Reader, Under 90	5	5,000 / 7,500	20	100	C08101502D009
No Bolts, W/CI Reader, Over 90	8	8,000 / 12,000	20	100	C00101502C009
No Bolts, W/CI Reader, Under 90	8	8,000 / 12,000	20	100	C00101502D009
No Bolts, W/CI Reader, Over 90	15	15,000 / 22,500	20	100	C02101502C009
No Bolts, W/CI Reader, Under 90	15	15,000 / 22,500	20	100	C02101502D009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	24	25	B13101512A
	12"	15	15,000 / 22,500	27	25	B14101512A
Solid Bottom	12"	8	8,000 / 12,000	28	25	B13101512B
	12"	15	15,000 / 22,500	31	25	B14101512B

To order boxes with 2 standard mouseholes, replace the last character with "M".

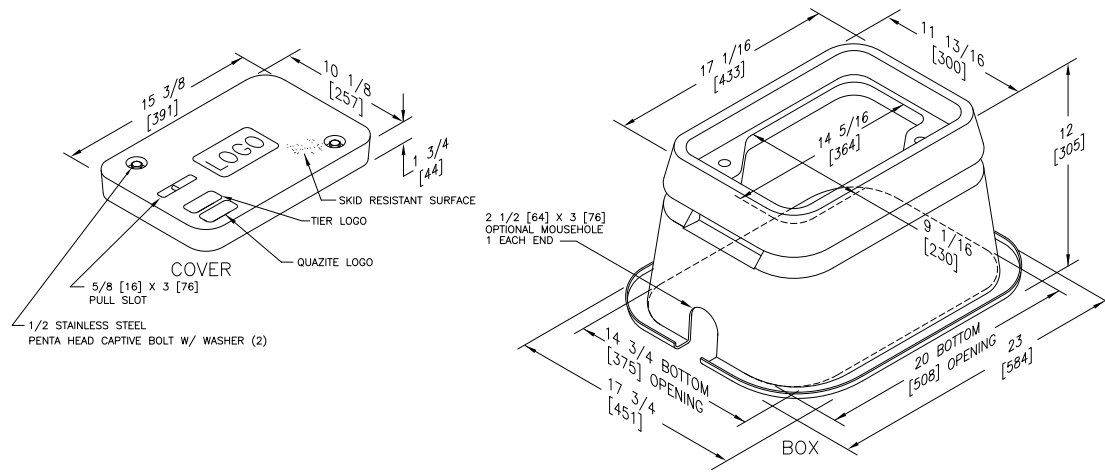
To order gasketed boxes, replace the last character with "G".

NOTE: Gasket reduce the inflow of fluids but do not make the enclosure water tight.



## 10" x 15" FRP Flared

## Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	17	100	C10101502A***
W/ 2 Bolts	15	15,000 / 22,500	19	100	C12101502A***
No Bolts	8	8,000 / 12,000	17	100	C00101502A***
No Bolts, W/CI Reader, Over 90	5	5,000 / 7,500	20	100	C08101502C009
No Bolts, W/CI Reader, Under 90	5	5,000 / 7,500	20	100	C08101502D009
No Bolts, W/CI Reader, Over 90	8	8,000 / 12,000	20	100	C00101502C009
No Bolts, W/CI Reader, Under 90	8	8,000 / 12,000	20	100	C00101502D009
No Bolts, W/CI Reader, Over 90	15	15,000 / 22,500	20	100	C02101502C009
No Bolts, W/CI Reader, Under 90	15	15,000 / 22,500	20	100	C02101502D009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	22	50	B10101512A
	18"		8,000 / 12,000	36	20	B10101518A
	12"	15	15,000 / 22,500	25	50	B12101512A
	18"		15,000 / 22,500	38	20	B12101518A

To order boxes with 2 standard mouseholes, replace the last character with "M".

To order gasketed boxes, replace the last character with "G".

Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

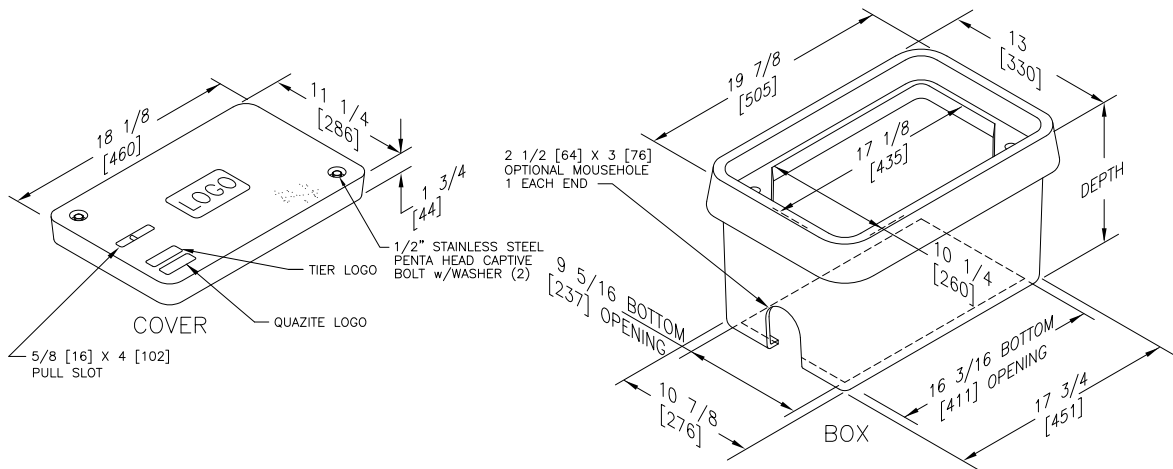
NOTE: Cover rating cannot exceed box rating.



Dimensions / Data

11" x 18" FRP Straight Wall Stackable

Penta Head Bolts are Standard



Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	21	100	C10111802A***
W/ 2 Bolts	15	15,000 / 22,500	23	100	C12111802A***
No Bolts	8	8,000 / 12,000	21	100	C00111802A***
W/ 2 Bolts	22	22,500 / 33,750	23	100	C16111802A***
No Bolts, W/CI Reader, Over 90	5*	5,000 / 7,500	26	100	C08111802C009
No Bolts, W/CI Reader, Under 90	5*	5,000 / 7,500	26	100	C08111802D009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

\* CI Reader covers also available in Tier 8.

Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000/12,000	25	25	B13111812A
	18"		8,000/12,000	29	20	B13111818A
	12"	15	15,000/22,500	28	25	B14111812A
	18"		15,000/22,500	32	20	B14111818A
	12"	22	22,500/33,750	28	25	B16111812A
	18"		22,500/33,750	32	20	B16111818A
Solid Bottom	12"	8	8,000/12,000	27	25	B13111812B
	18"		8,000/12,000	31	20	B13111818B
	12"	15	15,000/22,500	30	25	B14111812B
	18"		15,000/22,500	34	20	B14111818B
	12"	22	22,500/33,750	30	25	B16111812B
	18"		22,500/33,750	34	20	B16111818B

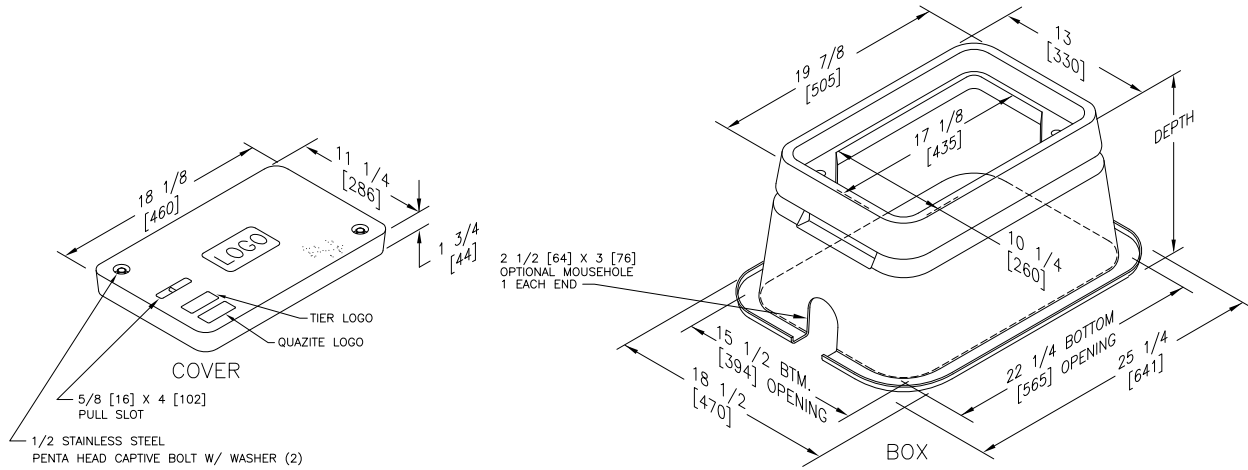
To order boxes with 2 standard mouseholes, replace the last character with "M".

To order gasketed boxes, replace the last character with "G".

NOTE: Gasket reduce the inflow of fluids but do not make the enclosure water tight.

## 11" x 18" Flared Wall Style FRP (Nestable) Assembly

Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	21	100	C10111802A***
W/ 2 Bolts	15	15,000 / 22,500	23	100	C12111802A***
No Bolts	8	8,000 / 12,000	21	100	C00111802A***
W/ 2 Bolts	22	22,500 / 33,750	23	100	C16111802A***
No Bolts, W/CI Reader, Over 90	5*	5,000 / 7,500	26	100	C08111802C009
No Bolts, W/CI Reader, Under 90	5*	5,000 / 7,500	26	100	C08111802D009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch/radio read cover options.

\* CI Reader covers also available in Tier 8.

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	25	50	B10111812A
	18"		8,000 / 12,000	29	40	B10111818A
	12"	15	15,000 / 22,500	28	50	B12111812A
	18"		15,000 / 22,500	32	40	B12111818A
	12"	22	22,500 / 33,750	28	50	B19111812A
	18"		22,500 / 33,750	32	40	B19111818A

To order boxes with 2 standard mouseholes, replace the last character with "M".

To order gasketed boxes, replace the last character with "G".

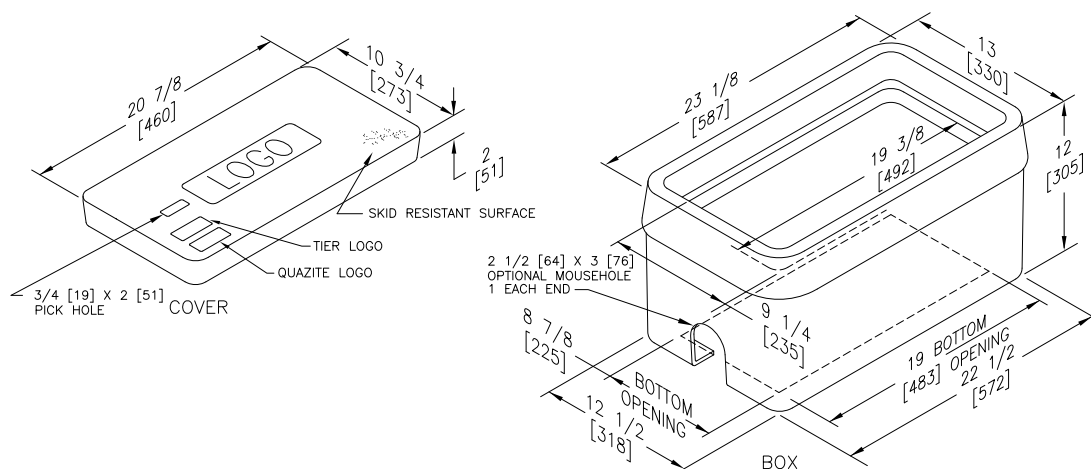
Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.

# Dimensions / Data

## 11" x 21" FRP Straight Wall

Penta Head Bolts are Standard



### Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
No Bolts	8	8,000 / 12,000	27	100	C00112102A***
No Bolts	15	15,000 / 22,500	27	100	C02112102A***
No Bolts, w/CI Reader, Over 90	5*	5,000 / 7,500	32	100	C08112102C009
No Bolts, w/CI Reader, Under 90	5*	5,000 / 7,500	32	100	C08112102D009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch/radio read cover options.

\* CI Reader covers also available in Tier 8.

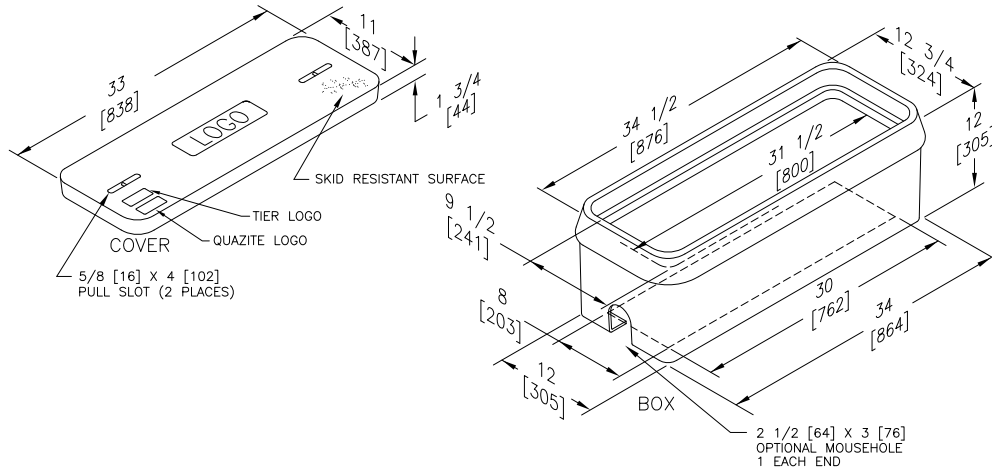
### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	30	25	B03112112A
	12"	15	15,000 / 22,500	34	25	B04112112A
Solid Bottom	12"	8	8,000 / 12,000	32	25	B03112112B
	12"	15	15,000 / 22,500	36	25	B04112112B

To order boxes with 2 standard mouseholes, replace the last character with "M".

## 11" x 32" FRP Straight Wall

Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
No Bolts	8	8,000 / 12,000	40	100	C00113202A***
No Bolts	15	15,000 / 22,500	43	100	C02113202A***
No Bolts, W/CI Reader, Over 90	5*	5,000 / 7,500	45	100	C08113202C009
No Bolts, W/CI Reader, Under 90	5*	5,000 / 7,500	45	100	C08113202D009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

\* CI Reader covers also available in Tier 8.

## Boxes

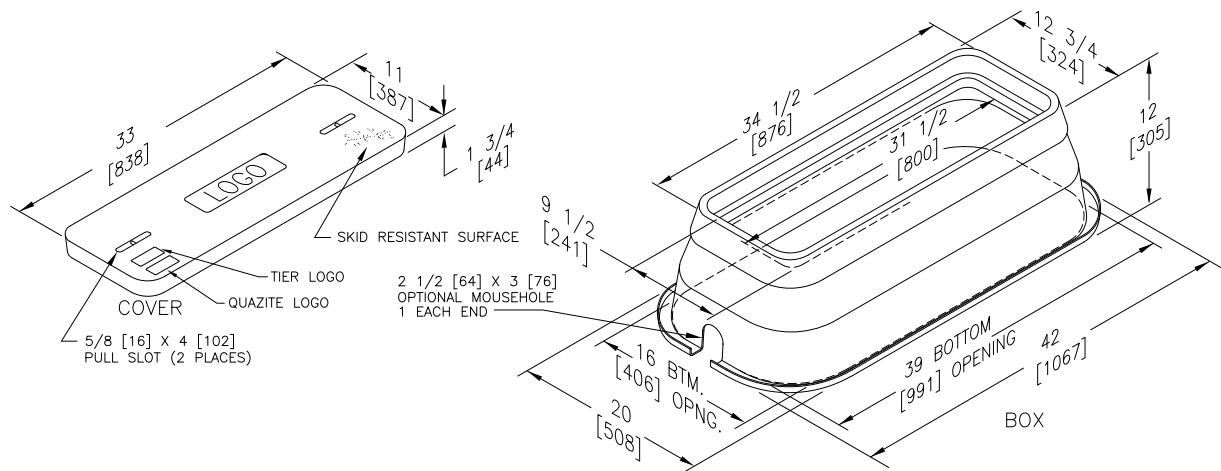
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	40	16	B03113212A
	12"	15	15,000 / 22,500	44	16	B04113212A
Solid Bottom	12"	8	8,000 / 12,000	42	16	B03113212B
	12"	15	15,000 / 22,500	46	16	B04113212B

To order boxes with 2 standard mouseholes, replace the last character with "M".

Dimensions / Data

11" x 32" Flared Wall Style FRP (Nestable) Assembly

Penta Head Bolts are Standard



Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
No Bolts	8	8,000 / 12,000	40	100	C00113202A***
No Bolts, W/CI Reader, Over 90	5*	5,000 / 7,500	45	100	C08113202C009
No Bolts, W/CI Reader, Under 90	5*	5,000 / 7,500	45	100	C08113202D009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

\* CI Reader covers also available in Tier 8.

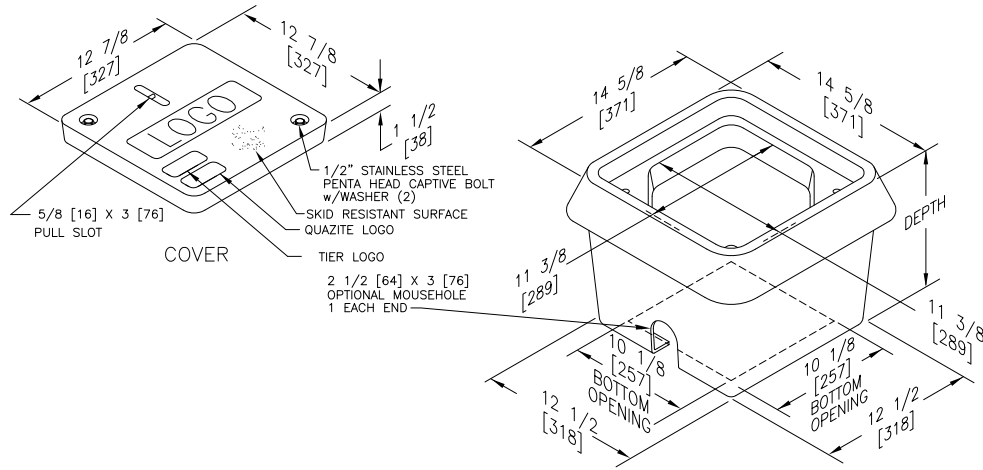
Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	40	16	B00113212A

To order boxes with 2 standard mouseholes, replace the last character with "M".

## 12" x 12" FRP Straight Wall Stackable

Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	14	100	C10121202A***
W/ 2 Bolts	15	15,000 / 22,500	15	100	C12121202A***
No Bolts	8	8,000 / 12,000	14	100	C00121202A***
W/ 2 Bolts	22	22,500 / 33,750	15	100	C16121202A***

Replace \*\*\* with a logo code found on page U133.

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	26	30	B13121212A
	12"	15	15,000 / 22,500	30	30	B14121212A
	12"	22	22,500 / 33,750	30	30	B16121212A
Solid Bottom	12"	8	8,000 / 12,000	27	30	B13121212B
	12"	15	15,000 / 22,500	31	30	B14121212B
	12"	22	22,500 / 33,750	31	30	B16121212B

To order boxes with 2 standard mouseholes, replace the last character with "M".

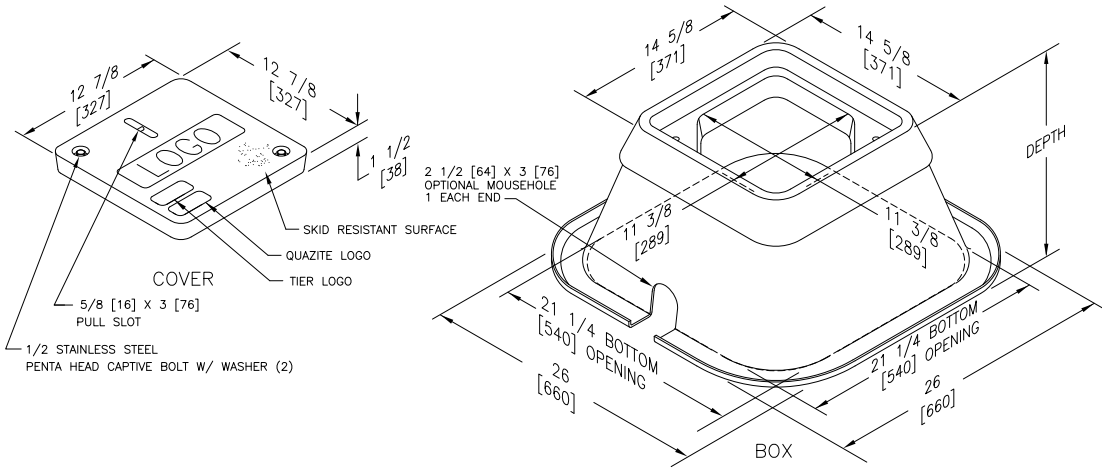
To order gasketed boxes, replace the last character with "G".

NOTE: Gasket reduce the inflow of fluids but do not make the enclosure water tight.

Dimensions / Data

12" x 12" FRP Flared

Penta Head Bolts are Standard



Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	27	100	C10121202A***
W/ 2 Bolts	15	15,000 / 22,500	27	100	C12121202A***
No Bolts	8	8,000 / 12,000	27	100	C00121202A***

Replace \*\*\* with a logo code found on page U133.

Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	28	10	B10121212A
	24"		8,000 / 12,000	45	10	B10121224A
	12"	15	15,000 / 22,500	32	10	B12121212A
	24"		15,000 / 22,500	51	10	B12121224A

To order boxes with 2 standard mouseholes, replace the last character with "M".

To order gasketed boxes, replace the last character with "G".

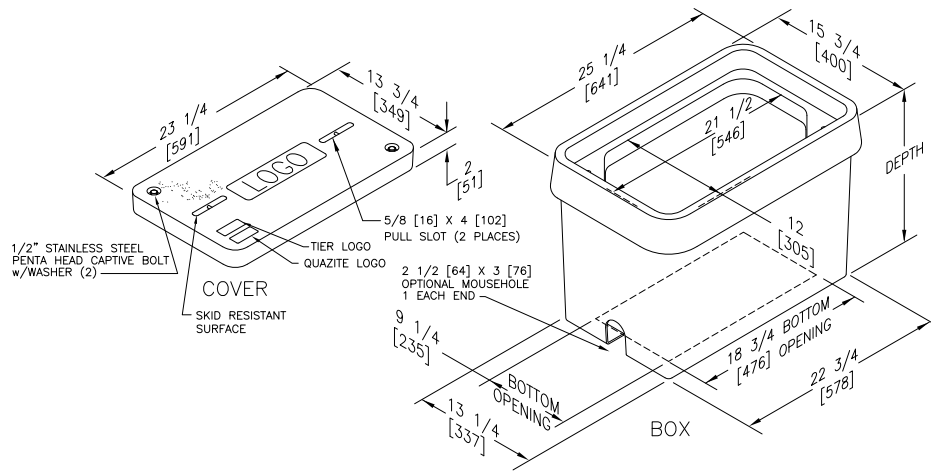
Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.



## 13" x 24" FRP Straight Wall Stackable

Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	26	50	C10132402A***
W/ 2 Bolts	15	15,000 / 22,500	40	50	C12132402A***
No Bolts	8	8,000 / 12,000	26	50	C00132402A***
W/ 2 Bolts	22	22,500 / 33,750	40	50	C16132402A***
No Bolts, W/CI Reader, Over 90	5*	5,000 / 7,500	30	50	C08132402C009
No Bolts, W/CI Reader, Under 90	5*	5,000 / 7,500	30	50	C08132402D009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

\* CI Reader covers also available in Tier 8.

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	38	20	B13132412A
	18"			44	16	B13132418A
	12"	15	15,000 / 22,500	42	20	B14132412A
	18"			50	16	B14132418A
	12"	22	22,500 / 33,750	42	20	B16132412A
Solid Bottom	12"	8	8,000 / 12,000	40	20	B13132412B
	18"			46	16	B13132418B
	12"	15	15,000 / 22,500	44	20	B14132412B
	18"			52	16	B14132418B
	12"	22	22,500 / 33,750	44	20	B16132412B

To order boxes with 2 standard mouseholes, replace the last character with "M".

To order gasketed boxes, replace the last character with "G".

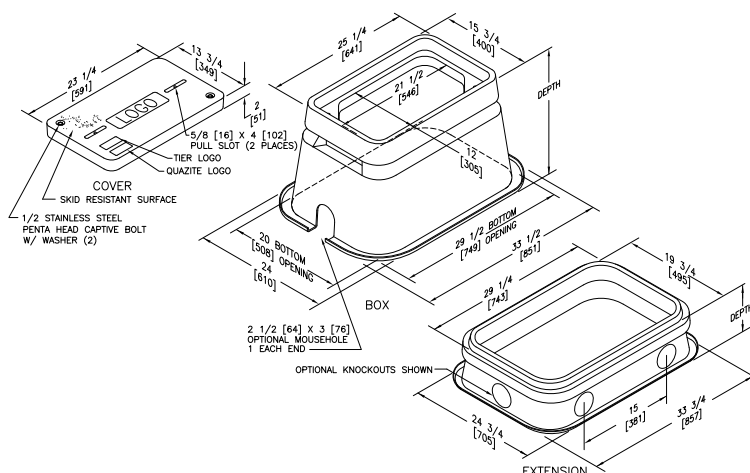
Gasket reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.

# Dimensions / Data

## 13" x 24" Flared Wall Style FRP (Nestable) Assembly

Penta Head Bolts are Standard



### Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	26	50	C10132402A***
W/ 2 Bolts	15	15,000 / 22,500	40	50	C12132402A***
No Bolts	8	8,000 / 12,000	26	50	C00132402A***
W/ 2 Bolts	22	22,500 / 33,750	40	50	C16132402A***
No Bolts, W/CI Reader, Over 90	5*	5,000 / 7,500	30	50	C08132402C009
No Bolts, W/CI Reader, Under 90	5*	5,000 / 7,500	30	50	C08132402D009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

\* CI Reader covers also available in Tier 8.

### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	38	16	B10132412A
	18"		8,000 / 12,000	44	16	B10132418A
	24"		8,000 / 12,000	52	10	B10132424A
	12"	15	15,000 / 22,500	42	16	B12132412A
	18"		15,000 / 22,500	50	16	B12132418A
	24"		15,000 / 22,500	58	10	B12132424A
	12"	22	22,500 / 33,750	42	16	B19132412A
	18"		22,500 / 33,750	50	16	B19132418A
	24"		22,500 / 33,750	58	10	B19132424A

To order boxes with 2 standard mouseholes, replace the last character with "M".

To order gasketed boxes, replace the last character with "G".

Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.

### Bottom Extensions

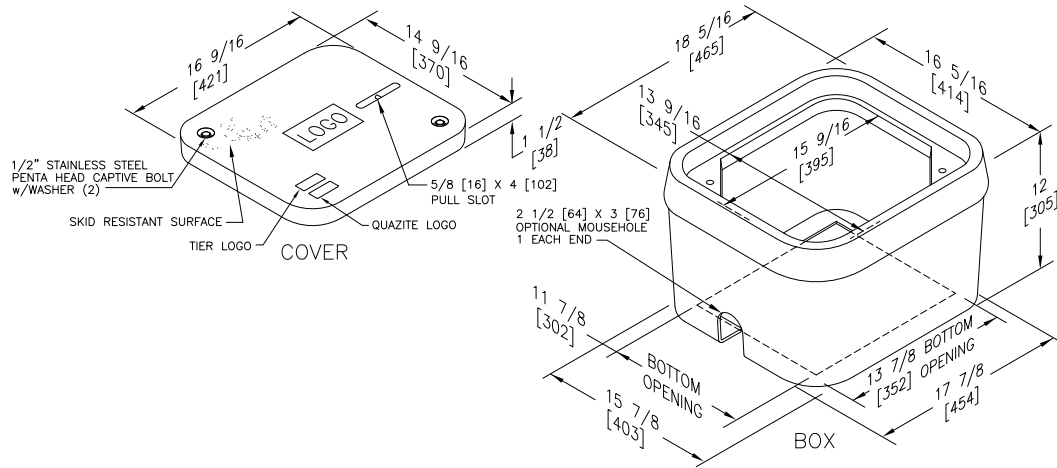
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
8" - Tier 8	8"	8	8,000 / 12,000	33	12	E00132408A
8" - Tier 15	8"	15	15,000 / 22,500	38	12	E02132408A

To order boxes with 2 standard mouseholes, replace the last character with "M".

To order gasketed boxes, replace the last character with "G".

## 15" x 17" FRP Straight Wall

Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	22	100	C10151702A***
W/ 2 Bolts	15	15,000 / 22,500	25	100	C12151702A***
No Bolts	8	8,000 / 12,000	22	100	C00151702A***
No Bolts	15	15,000 / 22,500	25	100	C02151702A***
No Bolts, W/CI Reader, Over 90	5*	5,000 / 7,500	30	100	C08151702E009
No Bolts, W/CI Reader, Under 90	5*	5,000 / 7,500	30	100	C08151702F009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

\* CI Reader covers also available in Tier 8."

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	24	20	B13151712A
	12"	15	15,000 / 22,500	28	20	B14151712A
Open Bottom, No Bolts	12"	8	8,000 / 12,000	24	20	B03151712A
	12"	15	15,000 / 22,500	28	20	B04151712A
Solid Bottom	12"	8	8,000 / 12,000	26	20	B13151712B
	12"	15	15,000 / 22,500	30	20	B14151712B

To order boxes with 2 standard mouseholes, replace the last character with "M".

To order gasketed boxes, replace the last character with "G".

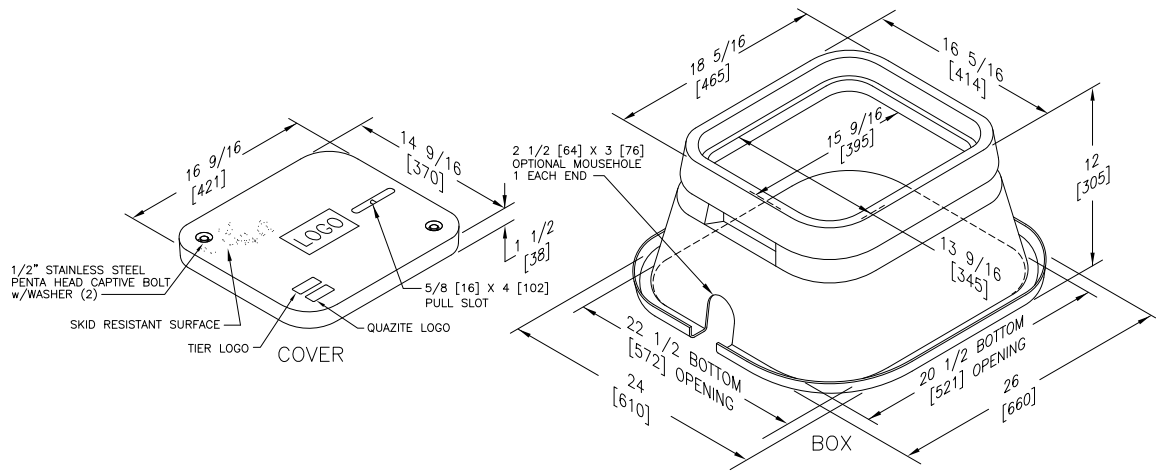
Gasket reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.

Dimensions / Data

15" x 17" FRP Flared

Penta Head Bolts are Standard



Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	22	100	C10151702A***
W/ 2 Bolts	15	15,000 / 22,500	25	100	C12151702A***
No Bolts	8	8,000 / 12,000	22	100	C00151702A***
No Bolts, W/CI Reader, Over 90	5*	5,000 / 7,500	27	100	C08151702E009
No Bolts, W/CI Reader, Under 90	5*	5,000 / 7,500	27	100	C08151702F009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

\* CI Reader covers also available in Tier 8.

Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	24	20	B10151712A
	12"	15	15,000 / 22,500	28	20	B12151712A

To order with 2 standard mouseholes, replace the last character with "M".

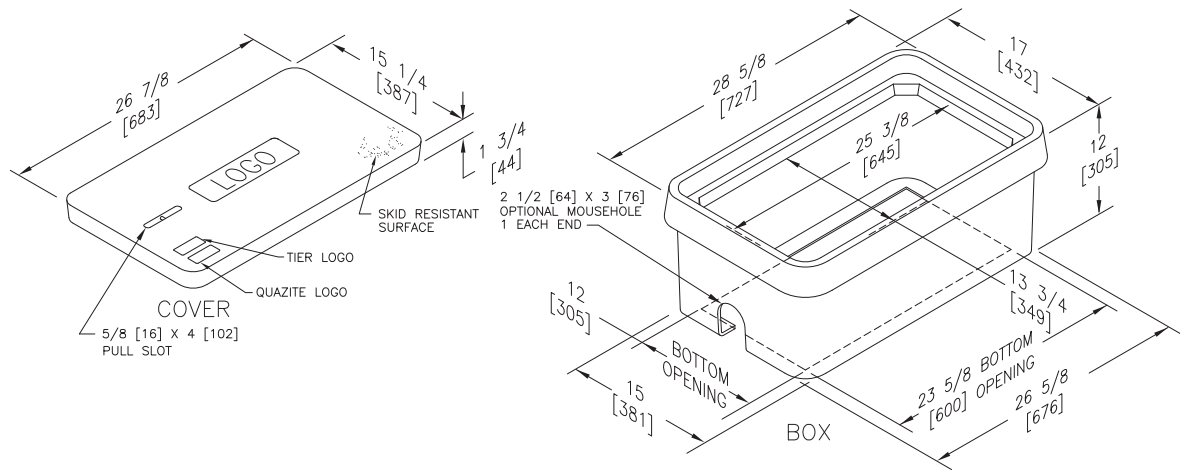
To order gasketed boxes, replace the letter "A" with the letter "G".

NOTE: Gasket reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.

## 15" x 27" FRP Straight Wall Stackable

Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
No Bolts	8	8,000 / 12,000	22	50	C00152702A***
No Bolts, W/CI Reader, Over 90	5	5,000 / 7,500	27	50	C08152702E009
No Bolts, W/CI Reader, Under 90	5	5,000 / 7,500	27	50	C08152702F009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	32	10	B03152712A
Solid Bottom	12"	8	8,000 / 12,000	34	10	B03152712B

To order with 2 standard mouseholes, replace the last character with "M".

To order gasketed boxes, replace the letter "A" with the letter "G".

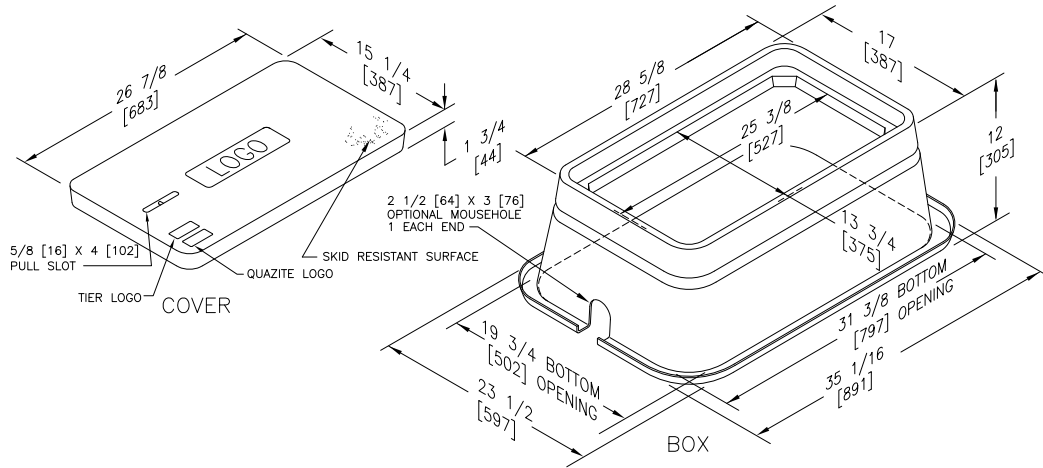
NOTE: Gasket reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.

Dimensions / Data

15" x 27" FRP Flared

Penta Head Bolts are Standard



Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
No Bolts	8	8,000 / 12,000	22	50	C00152702A***
No Bolts, W/CI Reader, Over 90	5	5,000 / 7,500	27	50	C08152702E009
No Bolts, W/CI Reader, Under 90	5	5,000 / 7,500	27	50	C08152702F009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

Boxes

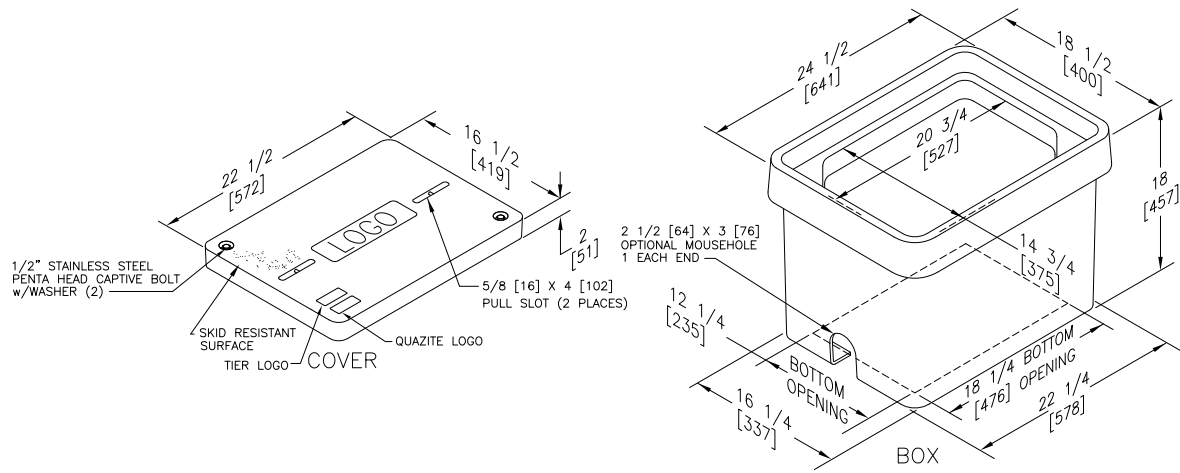
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	32	10	B00152712A

To order with 2 standard mouseholes, replace the last character with "M".

NOTE: Cover rating cannot exceed box rating.

## 16" x 22" FRP Straight Wall Stackable

Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	29	50	C10162202A***
W/ 2 Bolts	15	15,000 / 22,500	34	50	C12162202A***
No Bolts	8	8,000 / 12,000	29	50	C00162202A***
No Bolts	15	15,000 / 22,500	34	50	C02162202A***

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	18"	8	8,000 / 12,000	42	9	B13162218A
	18"	15	15,000 / 22,500	52	9	B14162218A
No Bolts	18"	8	8,000 / 12,000	42	9	B03162218A
No Bolts	18"	15	15,000 / 22,500	42	9	B04162218A
Solid Bottom	18"	8	8,000 / 12,000	46	9	B13162218B
	18"	15	15,000 / 22,500	56	9	B14162218B
No Bolts	18"	8	8,000 / 12,000	42	9	B03162218B
No Bolts	18"	15	15,000 / 22,500	42	9	B04162218B

To order boxes with 2 standard mouseholes, replace the letter "A" with letter "B".

NOTE: Gasket reduce the inflow of fluids but do not make the enclosure water tight.

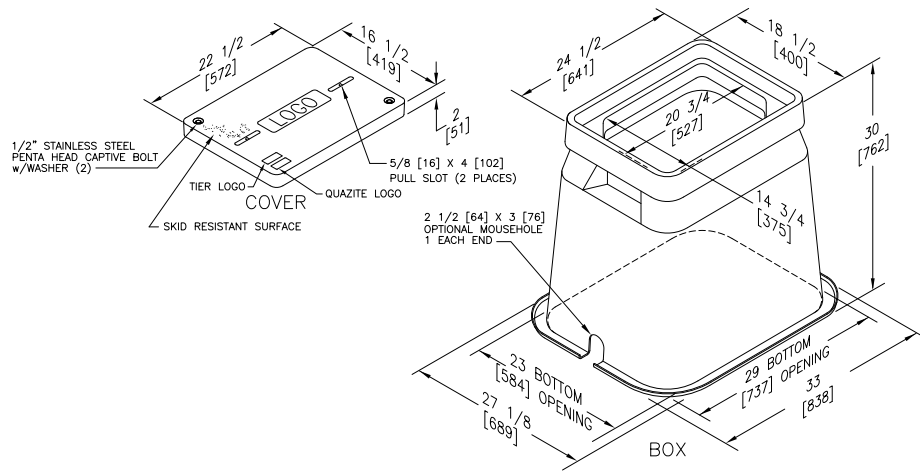
NOTE: Cover rating cannot exceed box rating.



Dimensions / Data

16" x 22" FRP Flared

Penta Head Bolts are Standard



Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	29	50	C10162202A***
W/ 2 Bolts	15	15,000 / 22,500	34	50	C12162202A***
No Bolts	8	8,000 / 12,000	29	50	C00162202A***
No Bolts	15	15,000 / 22,500	34	50	C02162202A***

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	30"	8	8,000 / 12,000	66	10	B10162230A
	30"	15	15,000 / 22,500	76	10	B12162230A
No Bolt	30"	8	8,000 / 12,000	66	10	B00162230A
	30"	15	15,000 / 22,500	66	10	B02162230A

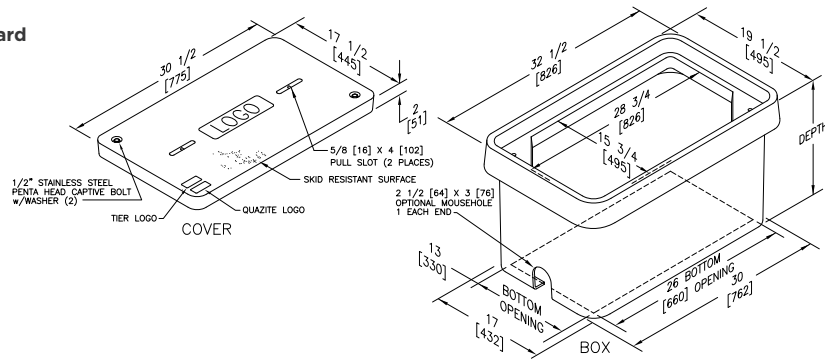
To order boxes with 2 standard mouseholes, replace the letter "A" with letter "B".

NOTE: Gasket reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.

## 17" x 30" FRP Straight Wall Stackable

Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	27	50	C10173002A***
W/ 2 Bolts	15	15,000 / 22,500	27	50	C12173002A***
No Bolts	8	8,000 / 12,000	27	50	C00173002A***
No Bolts	15	15,000 / 22,500	27	50	C02173002A***
W/ 2 Bolts	22	22,500 / 33,750	27	50	C16173002A***
No Bolts, W/CI Reader, Over 90	5	5,000 / 7,500	53	50	C08173003E009
No Bolts, W/CI Reader, Under 90	5	5,000 / 7,500	53	50	C08173003F009
No Bolts, W/CI Reader, Over 90	8	8,000 / 12,000	53	50	C00173003E009
No Bolts, W/CI Reader, Under 90	8	8,000 / 12,000	53	50	C00173003F009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch/radio read cover options.

Available with EZ-Locate.

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	46	10	B13173012A
	18"		8,000 / 12,000	58	9	B13173018A
	22"		8,000 / 12,000	68	8	B13173022A
	30"		8,000 / 12,000	88	6	B13173030A
	12"	15	15,000 / 22,500	50	10	B14173012A
	18"		15,000 / 22,500	62	9	B14173018A
	22"		15,000 / 22,500	74	8	B14173022A
	30"		15,000 / 22,500	94	6	B14173030A
	12"	22	22,500 / 33,750	50	10	B16173012A
	18"		22,500 / 33,750	62	9	B16173018A
Solid Bottom	12"	8	8,000 / 12,000	51	10	B13173012B
	18"		8,000 / 12,000	63	9	B13173018B
	22"		8,000 / 12,000	73	8	B13173022B
	30"		8,000 / 12,000	93	6	B13173030B
	12"	15	15,000 / 22,500	55	10	B14173012B
	18"		15,000 / 22,500	67	9	B14173018B
	22"		15,000 / 22,500	79	8	B14173022B
	30"		15,000 / 22,500	99	6	B14173030B
	12"	22	22,500 / 33,750	55	10	B16173012B
	18"		22,500 / 33,750	67	9	B16173018B

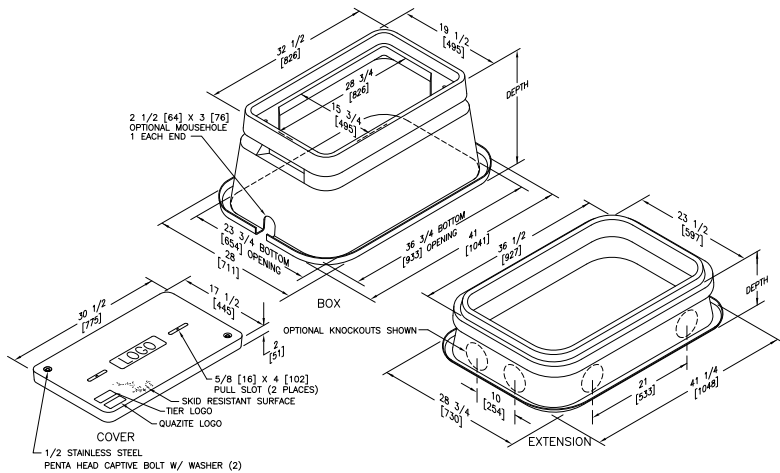
To order boxes with 2 standard mouseholes, replace the last character with "M". To order gasketed boxes, replace the last character with "G".

NOTE: Gaskets reduce the inflow of fluids but do not make the enclosure water tight. NOTE: Cover rating cannot exceed box rating.

Dimensions / Data

17" x 30" Flared Wall Style FRP (Nestable) Assembly

Penta Head Bolts are Standard



Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	47	50	C10173002A***
W/ 2 Bolts	15	15,000 / 22,500	51	50	C12173002A***
No Bolts	8	8,000 / 12,000	47	50	C00173002A***
No Bolts	15	15,000 / 22,500	51	50	C02173002A***
W/ 2 Bolts	22	22,500 / 33,750	51	50	C16173002A***
No Bolts, W/CI Reader, Over 90	5	5,000 / 7,500	53	50	C08173003E009
No Bolts, W/CI Reader, Under 90	5	5,000 / 7,500	53	50	C08173003F009
No Bolts, W/CI Reader, Over 90	8	8,000 / 12,000	53	50	C00173003E009
No Bolts, W/CI Reader, Under 90	8	8,000 / 12,000	53	50	C00173003F009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

## Dimensions / Data

### 17" x 30" Flared Wall Style FRP (Nestable) Assembly (Continued)

Penta Head Bolts are Standard

#### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	46	10	B10173012A
	18"		8,000 / 12,000	58	10	B10173018A
	22"		8,000 / 12,000	68	10	B10173022A
	24"		8,000 / 12,000	78	10	B10173024A
	30"		8,000 / 12,000	88	10	B10173030A
	34"		8,000 / 12,000	96	8	B10173034A
	12"	15	15,000 / 22,500	50	10	B12173012A
	18"		15,000 / 22,500	64	10	B12173018A
	22"		15,000 / 22,500	74	10	B12173022A
	24"		15,000 / 22,500	84	10	B12173024A
	30"		15,000 / 22,500	94	10	B12173030A
	34"		15,000 / 22,500	102	8	B12173034A
	12"	22	22,500 / 33,750	50	10	B19173012A
	18"		22,500 / 33,750	64	10	B19173018A
	22"		22,500 / 33,750	74	10	B19173022A
	24"		22,500 / 33,750	84	10	B19173024A
	30"		22,500 / 33,750	94	10	B19173030A

To order boxes with 2 standard mouseholes, replace the last character with "M".

To order gasketed boxes, replace the last character with "G".

Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.

#### Bottom Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
8" - Tier 8	8"	8	8,000 / 12,000	39	12	E00173008A
8" - Tier 15	8"	15	15,000 / 22,500	45	12	E02173008A
16" - Tier 8	16"	8	8,000 / 12,000	42	8	E00173016A
16" - Tier 15	16"	15	15,000 / 22,500	48	8	E02173016A

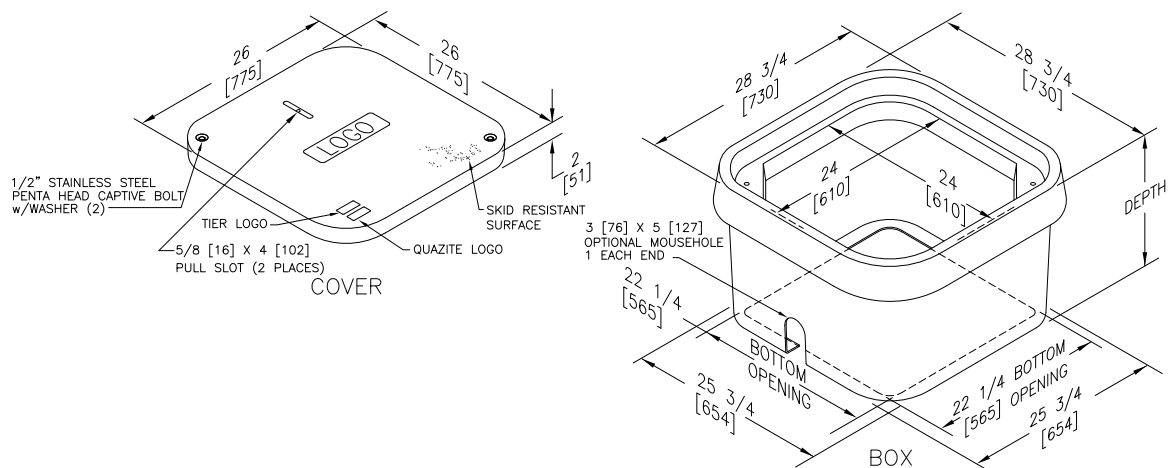
To order boxes with 2 standard mouseholes, replace the last character with "M".

To order gasketed boxes, replace the last character with "G".

# Dimensions / Data

## 24" x 24" FRP Straight Wall Stackable

Penta Head Bolts are Standard



### Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	70	20	C10242402A***
W/ 2 Bolts	15	15,000 / 22,500	100	20	C12242402A***
No Bolts	8	8,000 / 12,000	70	20	C00242402A***
W/ 2 Bolts	22	22,500 / 33,750	100	20	C16242402A***

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	74	9	B13242412A
	18"		8,000 / 12,000	78	5	B13242418A
	24"		8,000 / 12,000	83	5	B13242424A
	12"	15	15,000 / 22,500	77	9	B14242412A
	18"		15,000 / 22,500	84	5	B14242418A
	24"		15,000 / 22,500	92	5	B14242424A
	12"	22	22,500 / 33,750	77	9	B16242412A
	18"		22,500 / 33,750	84	5	B16242418A
	24"		22,500 / 33,750	92	5	B16242424A
Solid Bottom	12"	8	8,000 / 12,000	81	9	B13242412B
	18"		8,000 / 12,000	85	5	B13242418B
	24"		8,000 / 12,000	90	5	B13242424B
	12"	15	15,000 / 22,500	84	9	B14242412B
	18"		15,000 / 22,500	91	5	B14242418B
	24"		15,000 / 22,500	99	5	B14242424B
	12"	22	22,500 / 33,750	84	9	B16242412B
	18"		22,500 / 33,750	91	5	B16242418B
	24"		22,500 / 33,750	99	5	B16242424B

To order boxes with 2 standard mouseholes, replace the last character with "M".

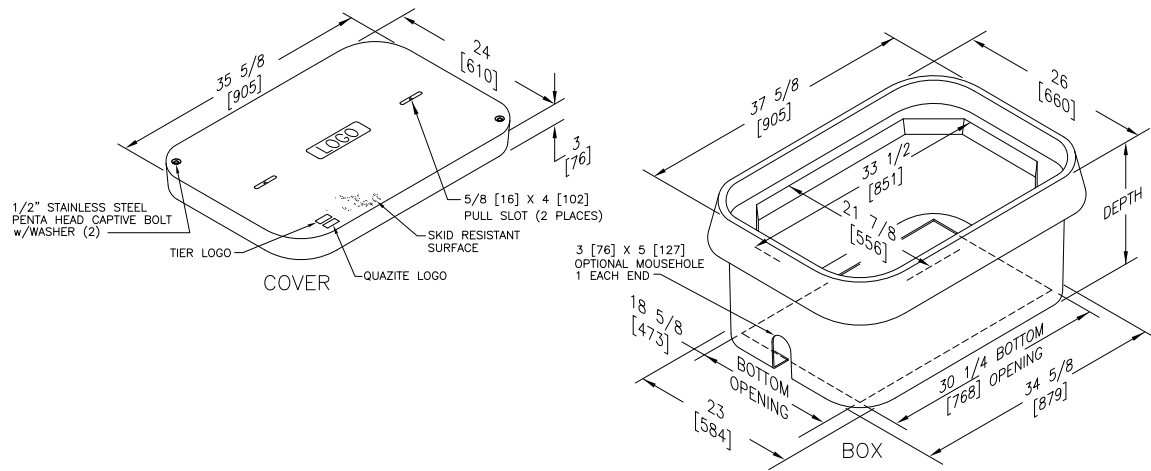
To order gasketed boxes, replace the last character with "G".

NOTE: Gasket reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.

## 24" x 36" FRP Straight Wall Stackable

Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	86	20	C10243603A***
W/ 2 Bolts	15	15,000 / 22,500	94	20	C12243603A***
No Bolts	8	8,000 / 12,000	86	20	C00243603A***
W/ 2 Bolts	22	22,500 / 33,750	94	20	C16243603A***
No Bolts, W/CI Reader, Over 90	5	5,000 / 7,500	89	20	C08243603E009
No Bolts, W/CI Reader, Under 90	5	5,000 / 7,500	89	20	C08243603F009
No Bolts, W/CI Reader, Over 90	8	8,000 / 12,000	89	20	C00243603E009
No Bolts, W/CI Reader, Under 90	8	8,000 / 12,000	89	20	C00243603F009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

Available with EZ-Locate.

## Dimensions / Data

### 24" x 36" FRP Straight Wall Stackable (Continued)

Penta Head Bolts are Standard

#### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	18"	8	8,000 / 12,000	100	6	<b>B13243618A</b>
	24"		8,000 / 12,000	109	5	<b>B13243624A</b>
	30"		8,000 / 12,000	118	4	<b>B13243630A</b>
	18"	15	15,000 / 22,500	105	6	<b>B14243618A</b>
	24"		15,000 / 22,500	114	5	<b>B14243624A</b>
	30"		15,000 / 22,500	123	4	<b>B14243630A</b>
	18"	22	22,500 / 33,750	105	6	<b>B16243618A</b>
	24"		22,500 / 33,750	114	5	<b>B16243624A</b>
	30"		22,500 / 33,750	123	4	<b>B16243630A</b>
Solid Bottom	18"	8	8,000 / 12,000	107	6	<b>B13243618B</b>
	24"		8,000 / 12,000	116	5	<b>B13243624B</b>
	30"		8,000 / 12,000	125	4	<b>B13243630B</b>
	18"	15	15,000 / 22,500	112	6	<b>B14243618B</b>
	24"		15,000 / 22,500	121	5	<b>B14243624B</b>
	30"		15,000 / 22,500	130	4	<b>B14243630B</b>
	18"	22	22,500 / 33,750	112	6	<b>B16243618B</b>
	24"		22,500 / 33,750	121	5	<b>B16243624B</b>
	30"		22,500 / 33,750	130	4	<b>B16243630B</b>

To order boxes with 2 standard mouseholes, replace the last character with "M". To order gasketed boxes, replace the last character with "G".

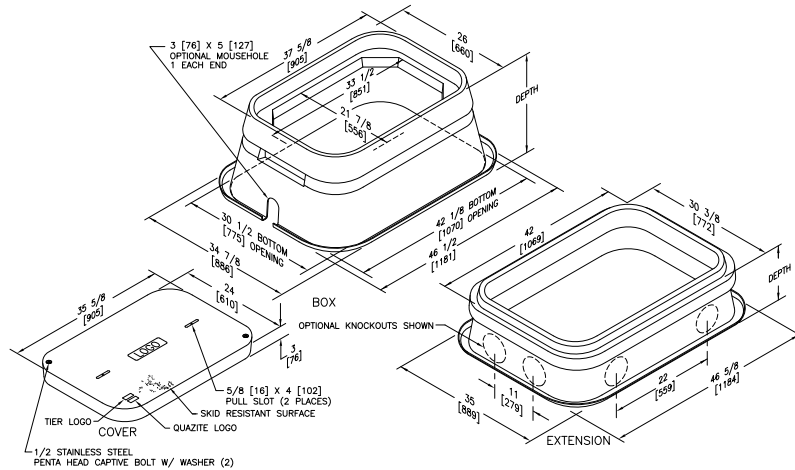
NOTE: Gasket reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.



## 24" x 36" Flared Wall Style FRP (Nestable) Assembly

Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	86	20	C10243603A***
W/ 2 Bolts	15	15,000 / 22,500	94	20	C12243603A***
No Bolts	8	8,000 / 12,000	86	20	C00243603A***
W/ 2 Bolts	22	22,500 / 33,750	94	20	C16243603A***
No Bolts, W/CI Reader, Over 90	5	5,000 / 7,500	89	20	C08243603E009
No Bolts, W/CI Reader, Under 90	5	5,000 / 7,500	89	20	C08243603F009
No Bolts, W/CI Reader, Over 90	8	8,000 / 12,000	89	20	C00243603E009
No Bolts, W/CI Reader, Under 90	8	8,000 / 12,000	89	20	C00243603F009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

## Dimensions / Data

### 24" x 36" Flared Wall Style FRP (Nestable) Assembly (Continued)

Penta Head Bolts are Standard

#### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	18"	8	8,000 / 12,000	100	5	B10243618A
	24"		8,000 / 12,000	109	5	B10243624A
	30"		8,000 / 12,000	118	5	B10243630A
	36"		8,000 / 12,000	124	4	B10243636A
	42"		8,000 / 12,000	127	3	B10243642A
	48"		8,000 / 12,000	133	3	B10243648A
	18"	15	15,000 / 22,500	105	5	B12243618A
	24"		15,000 / 22,500	114	5	B12243624A
	30"		15,000 / 22,500	123	5	B12243630A
	36"		15,000 / 22,500	129	4	B12243636A
	42"		15,000 / 22,500	132	3	B12243642A
	48"		15,000 / 22,500	138	3	B12243648A
	18"	22	22,500 / 33,750	105	5	B19243618A
	24"		22,500 / 33,750	114	5	B19243624A

To order boxes with 2 standard mouseholes, replace the last character with "M".

To order gasketed boxes, replace the last character with "G".

Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

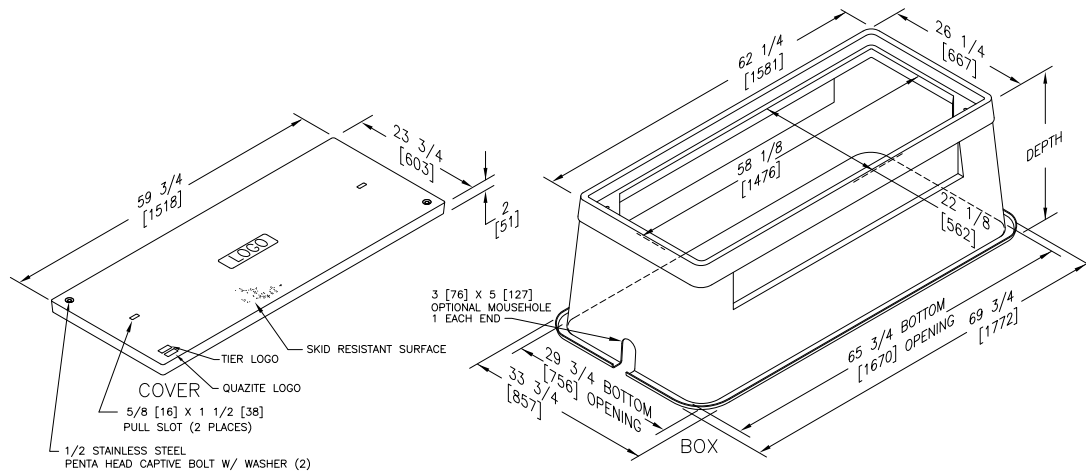
NOTE: Cover rating cannot exceed box rating.

#### Bottom Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
8" - Tier 8	8"	8	8,000 / 12,000	46	6	E00243608A
8" - Tier 15	8"	15	15,000 / 22,500	46	6	E02243608A
16" - Tier 8	16"	8	8,000 / 12,000	55	5	E00243616A
16" - Tier 15	16"	15	15,000 / 22,500	63	5	E02243616A

## 24" x 36" Flared Wall Style FRP (Nestable) Assembly

Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	5	5,000 / 7,500	65	10	C18246002A***
No Bolts	5	5,000 / 7,500	65	10	C08246002A***

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	24"	5	5,000 / 7,500	115	5	B18246024A

To order boxes with two standard mouse holes, replace the last character with "M".

To order gasketed boxes, replace the last character with "G".

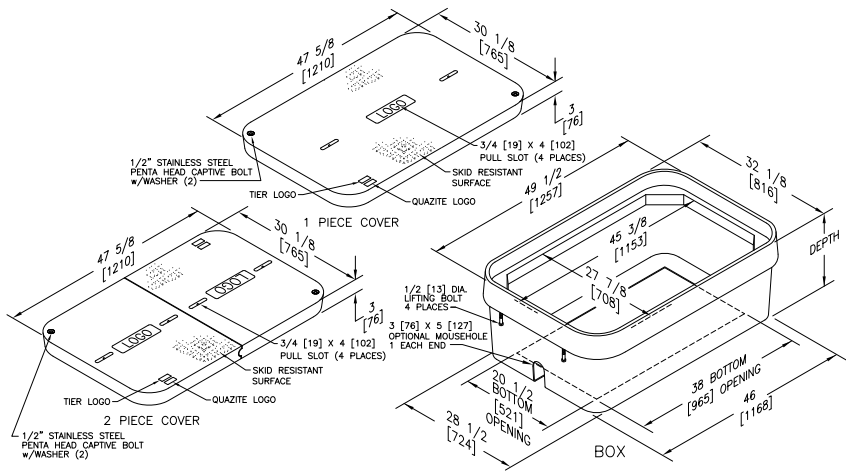
Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.

Dimensions / Data

30" x 48" FRP Straight Wall Stackable

Penta Head Bolts are Standard



Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
2 Piece W/ 2 Bolts	8	8,000 / 12,000	165	10	C10304803A***
2 Piece W/ 2 Bolts	15	15,000 / 22,500	225	10	C12304803A***
2 Piece No Bolts	8	8,000 / 12,000	165	10	C00304803A***
2 Piece W/ 2 Bolts	22	22,500 / 33,750	225	10	C16304803A***
1 Piece W/ 2 Bolts	8	8,000 / 12,000	165	10	C10304803Y***
1 Piece W/ 2 Bolts	15	15,000 / 22,500	225	10	C12304803Y***
No Bolts, W/CI Reader, Over 90	5	5,000 / 7,500	168	10	C08304803E009
No Bolts, W/CI Reader, Under 90	5	5,000 / 7,500	168	10	C08304803F009
No Bolts, W/CI Reader, Over 90	8	8,000 / 12,000	168	10	C00304803E009
No Bolts, W/CI Reader, Under 90	8	8,000 / 12,000	168	10	C00304803F009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

## Dimensions / Data

### 30" x 48" FRP Straight Wall Stackable (Continued)

Penta Head Bolts are Standard

#### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	18"	8	8,000 / 12,000	130	6	B13304818A
	24"		8,000 / 12,000	148	5	B13304824A
	36"		8,000 / 12,000	160	4	B13304836A
	18"	15	15,000 / 22,500	135	6	B14304818A
	24"		15,000 / 22,500	153	5	B14304824A
	36"		15,000 / 22,500	170	4	B14304836A
	18"	22	22,500 / 33,750	135	6	B16304818A
	24"		22,500 / 33,750	153	5	B16304824A
	36"		22,500 / 33,750	170	4	B16304836A
Solid Bottom	18"	8	8,000 / 12,000	140	6	B13304818B
	24"		8,000 / 12,000	158	5	B13304824B
	36"		8,000 / 12,000	170	4	B13304836B
	18"	15	15,000 / 22,500	140	6	B14304818B
	24"		15,000 / 22,500	158	5	B14304824B
	36"		15,000 / 22,500	170	4	B14304836B
	18"	22	22,500 / 33,750	140	6	B16304818B
	24"		22,500 / 33,750	158	5	B16304824B
	22"		22,500 / 33,750	170	4	B16304836B

To order boxes with 2 standard mouseholes, replace the last character with "M".

To order gasketed boxes, replace the last character with "G".

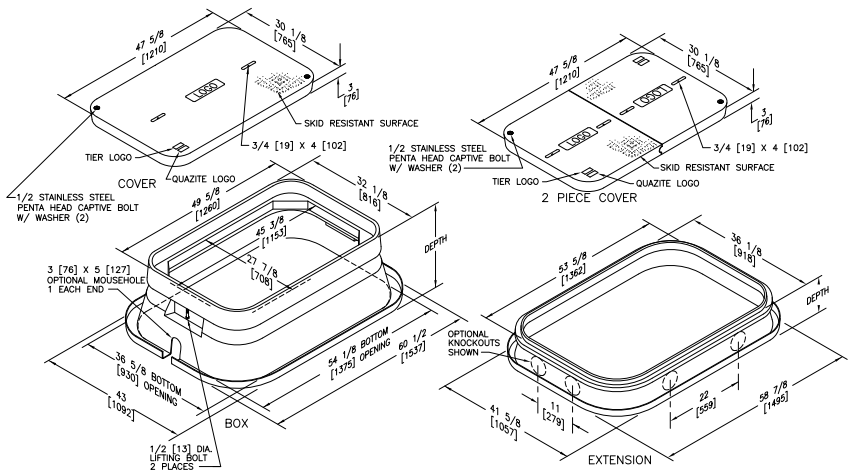
NOTE: Gasket reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.

Dimensions / Data

30" x 48" Flared Wall Style FRP (Nestable) Assembly

Penta Head Bolts are Standard



Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
2 Piece W/2 Bolts	8	8,000 / 12,000	165	10	C10304803A***
2 Piece W/2 Bolts	15	15,000 / 22,500	225	10	C12304803A***
2 Piece W/No Bolts	8	8,000 / 12,000	165	10	C00304803A***
2 Piece W/2 Bolts	22	22,500 / 33,750	225	10	C16304803A***
1 Piece W/2 Bolts	8	8,000 / 12,000	165	10	C10304803Y***
1 Piece W/2 Bolts	15	15,000 / 22,500	225	10	C12304803Y***
No Bolts, W/CI Reader, Over 90	5	5,000 / 7,500	168	10	C08304803E009
No Bolts, W/CI Reader, Under 90	5	5,000 / 7,500	168	10	C08304803F009
No Bolts, W/CI Reader, Over 90	8	8,000 / 12,000	168	10	C00304803E009
No Bolts, W/CI Reader, Under 90	8	8,000 / 12,000	168	10	C00304803F009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

## Dimensions / Data

### 30" x 48" Flared Wall Style FRP (Nestable) Assembly (Continued)

Penta Head Bolts are Standard

#### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	18"	8	8,000 / 12,000	145	5	B10304818A
	24"		8,000 / 12,000	155	5	B10304824A
	30"		8,000 / 12,000	175	5	B10304830A
	36"		8,000 / 12,000	190	4	B10304836A
	18"	15	15,000 / 22,500	150	5	B12304818A
	24"		15,000 / 22,500	160	5	B12304824A
	30"		15,000 / 22,500	180	5	B12304830A
	36"		15,000 / 22,500	200	4	B12304836A
	18"	22	22,500 / 33,750	150	5	B19304818A
	24"		22,500 / 33,750	160	5	B19304824A
	30"		22,500 / 33,750	180	5	B19304830A
	36"		22,500 / 33,750	200	4	B19304836A

To order boxes with 2 standard mouseholes, replace the last character with "M".

To order gasketed boxes, replace the last character with "G".

Gaskets reduce the inflow of fluids but do not make the enclosure water tight. One piece covers are recommended when using gaskets.

NOTE: Cover rating cannot exceed box rating.

#### Bottom Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
8" - Tier 8	8"	8	8,000 / 12,000	55	5	E00304808A
8" - Tier 15	8"	15	15,000 / 22,500	65	5	E02304808A
16" - Tier 8	16"	8	8,000 / 12,000	100	3	E00304816A
16" - Tier 15	16"	15	15,000 / 22,500	110	3	E02304816A

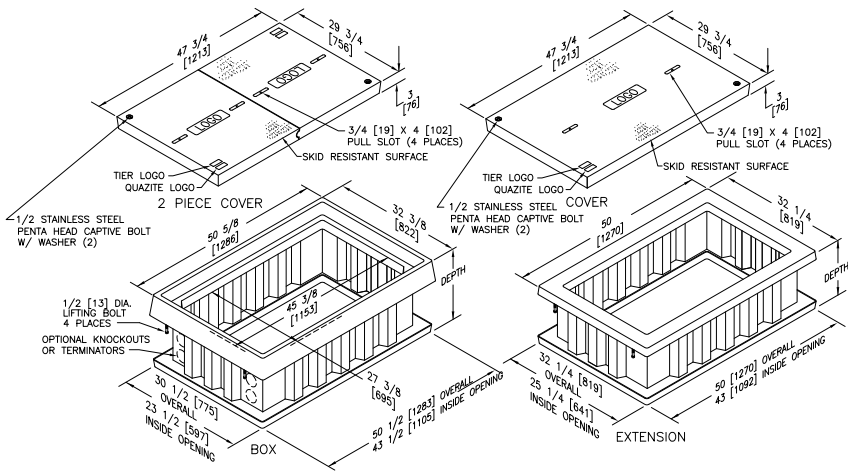
NOTE: Cover rating cannot exceed box rating.



Dimensions / Data

30" x 48" Corrugated Wall Style Assembly

Penta Head Bolts are Standard



Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
2 Piece W/2 Bolts	8	8,000 / 12,000	165	3	C1A304803A***
2 Piece W/No Bolts	8	8,000 / 12,000	165	3	C0A304803A***
2 Piece W/2 Bolts	15	15,000 / 22,500	220	3	C1B304803A***
2 Piece W/2 Bolts	22	22,500 / 33,750	225	3	C1C304803A***
1 Piece W/2 Bolts	8	8,000 / 12,000	165	3	C1A304803Y***
1 Piece W/2 Bolts	15	15,000 / 22,500	225	3	C1B304803Y***
No Bolts , W/CI Reader, Over 90	5	5,000 / 7,500	168	3	C0E304803E009
No Bolts , W/CI Reader, Under 90	5	5,000 / 7,500	168	3	C0E304803F009
No Bolts, W/CI Reader, Over 90	8	8,000 / 12,000	168	3	C0A304803E009
No Bolts, W/CI Reader, Under 90	8	8,000 / 12,000	168	3	C0A304803F009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

## 30" x 48" Corrugated Wall Style Assembly (Continued)

Penta Head Bolts are Standard

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	18"	8	8,000 / 12,000	190	1	B1A304818A
	24"		8,000 / 12,000	199	1	B1A304824A
	30"		8,000 / 12,000	209	1	B1A304830A
	36"		8,000 / 12,000	218	1	B1A304836A
	48"		8,000 / 12,000	236	1	B1A304848A
Standard Open Bottom	18"	15	15,000 / 22,500	190	1	B1B304818A
	24"		15,000 / 22,500	199	1	B1B304824A
	30"		15,000 / 22,500	209	1	B1B304830A
	36"		15,000 / 22,500	218	1	B1B304836A
	48"		15,000 / 22,500	236	1	B1B304848A
Standard Open Bottom	18"	22	22,500 / 33,750	190	1	B1C304818A
	24"		22,500 / 33,750	199	1	B1C304824A
	30"		22,500 / 33,750	209	1	B1C304830A
	36"		22,500 / 33,750	218	1	B1C304836A
	48"		22,500 / 33,750	236	1	B1C304848A

To order boxes with an integral bottom, replace the last character with "B".

To order gasketed boxes, replace the last character with "G".

To order adjust-to-grade boxes, replace the last character with "W".

Gaskets reduce the inflow of fluids but do not make the enclosure water tight. One piece covers are recommended when using gaskets.

NOTE: Cover rating cannot exceed box rating.

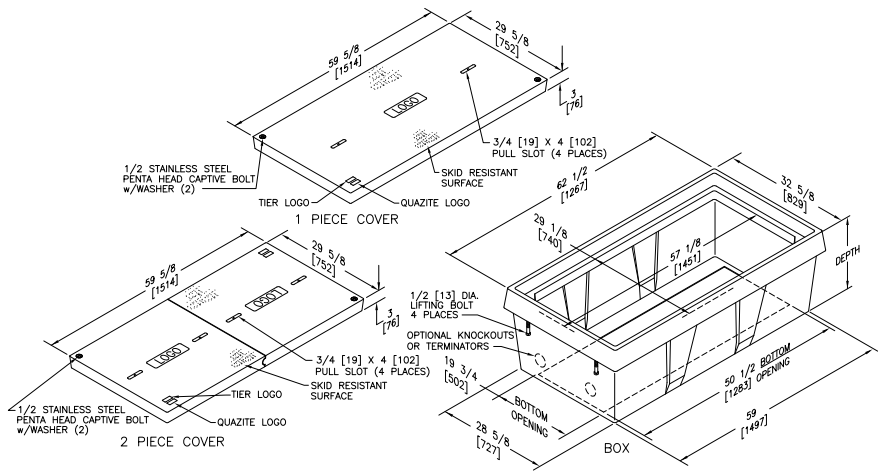
## Bottom Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	8"	8	8,000 / 12,000	105	1	E0A304808A
	12"		8,000 / 12,000	111	1	E0A304812A
	18"		8,000 / 12,000	120	1	E0A304818A
	24"		8,000 / 12,000	129	1	E0A304824A
Standard Open Bottom	8"	15	15,000 / 22,500	105	1	E0B304808A
	12"		15,000 / 22,500	111	1	E0B304812A
	18"		15,000 / 22,500	120	1	E0B304818A
	24"		15,000 / 22,500	129	1	E0B304824A
Standard Open Bottom	8"	22	22,500 / 33,750	105	1	E0C304808A
	12"		22,500 / 33,750	111	1	E0C304812A
	18"		22,500 / 33,750	120	1	E0C304818A
	24"		22,500 / 33,750	129	1	E0C304824A

Dimensions / Data

30" x 60" FRP Straight Wall Stackable

Penta Head Bolts are Standard



Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
2 Piece W/ 2 Bolts	8	8,000 / 12,000	208	10	C1A306003A***
2 Piece W/ 2 Bolts	15	15,000 / 22,500	268	10	C1B306003A***
2 Piece No Bolts	8	8,000 / 12,000	208	10	C0A306003A***
2 Piece W/ 2 Bolts	22	22,500 / 33,750	268	10	C1C306003A***
1 Piece W/ 2 Bolts	8	8,000 / 12,000	208	10	C1A306003Y***
1 Piece W/ 2 Bolts	15	15,000 / 22,500	268	10	C1B306003Y***
W/2 Bolts, W/CI Reader, Over 90	5	5,000 / 7,500	211	10	C1E306003E009
W/2 Bolts, W/CI Reader, Under 90	5	5,000 / 7,500	211	10	C1E306003F009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

**30" x 60" FRP Straight Wall Stackable (Continued)**

Penta Head Bolts are Standard

**Boxes**

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	18"	8	8,000 / 12,000	195	1	B13306018A
	30"		8,000 / 12,000	220	1	B13306030A
	36"		8,000 / 12,000	235	1	B13306036A
	48"		8,000 / 12,000	255	1	B13306048A
	18"	15	15,000 / 22,500	251	1	B14306018A
	30"		15,000 / 22,500	271	1	B14306030A
	36"		15,000 / 22,500	286	1	B14306036A
	48"		15,000 / 22,500	306	1	B14306048A
	18"	22	22,500 / 33,750	251	1	B16306018A
	30"		22,500 / 33,750	271	1	B16306030A
	36"		22,500 / 33,750	286	1	B16306036A
	48"		22,500 / 33,750	306	1	B16306048A
Solid Bottom	18"	8	8,000 / 12,000	210	1	B13306018B
	30"		8,000 / 12,000	235	1	B13306030B
	36"		8,000 / 12,000	250	1	B13306036B
	48"		8,000 / 12,000	270	1	B13306048B
	18"	15	15,000 / 22,500	266	1	B14306018B
	30"		15,000 / 22,500	286	1	B14306030B
	36"		15,000 / 22,500	301	1	B14306036B
	48"		15,000 / 22,500	321	1	B14306048B
	18"	22	22,500 / 33,750	266	1	B16306018B
	30"		22,500 / 33,750	286	1	B16306030B
	36"		22,500 / 33,750	301	1	B16306036B
	48"		22,500 / 33,750	321	1	B16306048B

To order boxes with 2 standard mouseholes, replace the last character with "M". To order gasketed boxes, replace the last character with "G".

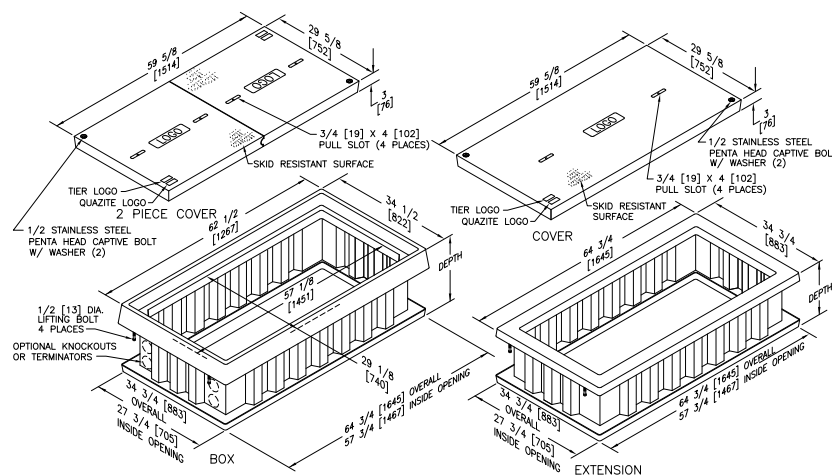
NOTE: Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.

# Dimensions / Data

## 30" x 60" Corrugated Wall Style Assembly

Penta Head Bolts are Standard



### Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
2 Piece W/2 Bolts	8	8,000 / 12,000	208	1	C1A306003A***
2 Piece W/No Bolts	8	8,000 / 12,000	208	1	C0A306003A***
2 Piece W/2 Bolts	15	15,000 / 22,500	268	1	C1B306003A***
2 Piece W/2 Bolts	22	22,500 / 33,750	268	1	C1C306003A***
1 Piece W/2 Bolts	8	8,000 / 12,000	208	1	C1A306003Y***
1 Piece W/2 Bolts	15	15,000 / 22,500	268	1	C1B306003Y***
W/2 Bolts, W/CI Reader, Over 90	5	5,000 / 7,500	211	1	C1E306003E009
W/2 Bolts, W/CI Reader, Under 90	5	5,000 / 7,500	211	1	C1E306003F009

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

**30" x 60" Corrugated Wall Style Assembly (Continued)**

Penta Head Bolts are Standard

**Boxes**

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	18"	8	8,000 / 12,000	229	1	B1A306018A
	24"		8,000 / 12,000	240	1	B1A306024A
	30"		8,000 / 12,000	251	1	B1A306030A
	36"		8,000 / 12,000	263	1	B1A306036A
	48"		8,000 / 12,000	286	1	B1A306048A
Standard Open Bottom	18"	15	15,000 / 22,500	229	1	B1B306018A
	24"		15,000 / 22,500	240	1	B1B306024A
	30"		15,000 / 22,500	251	1	B1B306030A
	36"		15,000 / 22,500	263	1	B1B306036A
	48"		15,000 / 22,500	286	1	B1B306048A
Standard Open Bottom	18"	22	22,500 / 33,750	229	1	B1C306018A
	24"		22,500 / 33,750	240	1	B1C306024A
	30"		22,500 / 33,750	251	1	B1C306030A
	36"		22,500 / 33,750	263	1	B1C306036A
	48"		22,500 / 33,750	286	1	B1C306048A

To order boxes with an integral bottom, replace the last character with "B".

To order adjust-to-grade boxes, replace the last character with "W".

NOTE: Cover rating cannot exceed box rating.

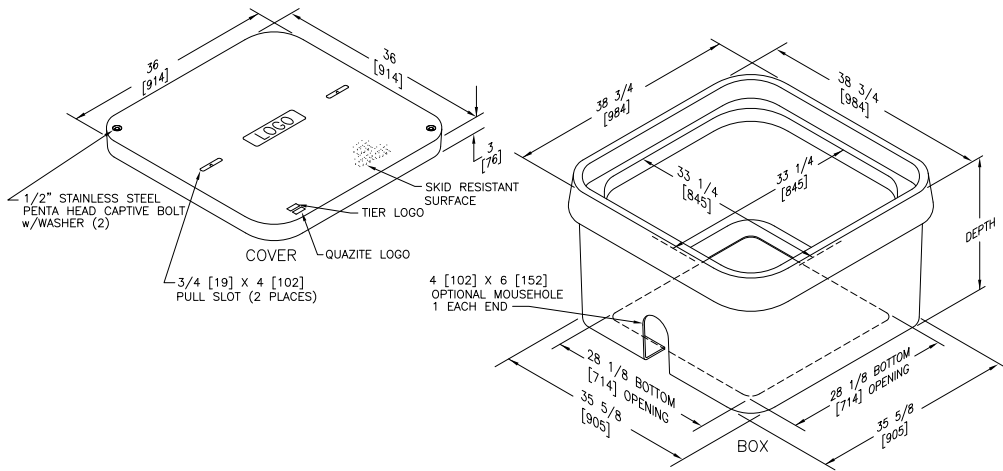
**Bottom Extensions**

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	8"	8	8,000 / 12,000	131	1	E0A306008A
	12"		8,000 / 12,000	139	1	E0A306012A
	18"		8,000 / 12,000	150	1	E0A306018A
	24"		8,000 / 12,000	161	1	E0A306024A
Standard Open Bottom	8"	15	15,000 / 22,500	131	1	E0B306008A
	12"		15,000 / 22,500	139	1	E0B306012A
	18"		15,000 / 22,500	150	1	E0B306018A
	24"		15,000 / 22,500	161	1	E0B306024A
Standard Open Bottom	8"	22	22,500 / 33,750	131	1	E0C306008A
	12"		22,500 / 33,750	139	1	E0C306012A
	18"		22,500 / 33,750	150	1	E0C306018A
	24"		22,500 / 33,750	161	1	E0C306024A

Dimensions / Data

36" x 36" FRP Straight Wall Stackable

Penta Head Bolts are Standard



Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	140	50	C10363603A***
W/ 2 Bolts	15	15,000 / 22,500	170	50	C12363603A***
No Bolts	8	8,000 / 12,000	140	50	C00363603A***
W/ 2 Bolts	22	22,500 / 33,750	170	50	C16363603A***

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.



**36" x 36" FRP Straight Wall Stackable (Continued)**

Penta Head Bolts are Standard

**Boxes**

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	18"	8	8,000 / 12,000	130	10	B13363618A
	24"		8,000 / 12,000	140	10	B13363624A
	30"		8,000 / 12,000	150	10	B13363630A
	36"		8,000 / 12,000	160	10	B13363636A
	48"		8,000 / 12,000	180	10	B13363648A
	18"	15	15,000 / 22,500	140	10	B14363618A
	24"		15,000 / 22,500	150	10	B14363624A
	30"		15,000 / 22,500	160	10	B14363630A
	36"		15,000 / 22,500	165	10	B14363636A
	48"		15,000 / 22,500	185	10	B14363648A
	18"	22	22,500 / 33,750	140	10	B16363618A
	24"		22,500 / 33,750	150	10	B16363624A
	30"		22,500 / 33,750	160	10	B16363630A
	36"		22,500 / 33,750	165	10	B16363636A
	48"		22,500 / 33,750	185	10	B16363648A
Solid Bottom	18"	8	8,000 / 12,000	140	10	B13363618B
	24"		8,000 / 12,000	150	10	B13363624B
	30"		8,000 / 12,000	160	10	B13363630B
	36"		8,000 / 12,000	170	10	B13363636B
	48"		8,000 / 12,000	190	10	B13363648B
	18"	15	15,000 / 22,500	150	10	B14363618B
	24"		15,000 / 22,500	160	10	B14363624B
	30"		15,000 / 22,500	170	10	B14363630B
	36"		15,000 / 22,500	175	10	B14363636B
	48"		15,000 / 22,500	195	10	B14363648B
	18"	22	22,500 / 33,750	150	10	B16363618B
	24"		22,500 / 33,750	160	10	B16363624B
	30"		22,500 / 33,750	170	10	B16363630B
	36"		22,500 / 33,750	175	10	B16363636B
	48"		22,500 / 33,750	195	10	B16363648B

To order boxes with 2 standard mouseholes, replace the last character with "M".

To order gasketed boxes, replace the last character with "G".

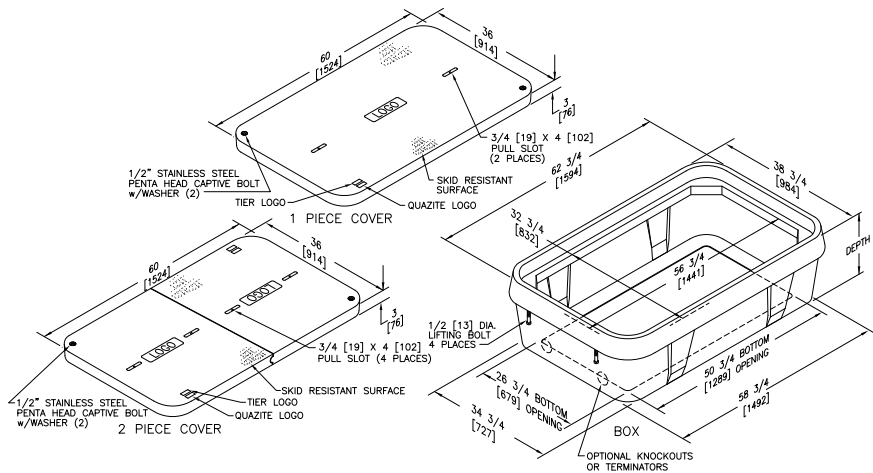
NOTE: Gasket reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.

Dimensions / Data

36" x 60" FRP Straight Wall Stackable

Penta Head Bolts are Standard



Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
2 Piece W/ 2 Bolts	8	8,000 / 12,000	273	10	C10366003A***
2 Piece W/ 2 Bolts	15	15,000 / 22,500	333	10	C12366003A***
2 Piece No Bolts	8	8,000 / 12,000	273	10	C00366003A***
2 Piece W/ 2 Bolts	22	22,500 / 33,750	333	10	C16366003A***
1 Piece W/ 2 Bolts	8	8,000 / 12,000	273	10	C10366003Y***
1 Piece W/ 2 Bolts	15	15,000 / 22,500	333	10	C12366003Y***

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

# Dimensions / Data

## 36" x 60" FRP Straight Wall Stackable (Continued)

Penta Head Bolts are Standard

### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	18"	8	8,000 / 12,000	212	1	B13366018A
	24"		8,000 / 12,000	222	1	B13366024A
	30"		8,000 / 12,000	236	1	B13366030A
	36"		8,000 / 12,000	260	1	B13366036A
	48"		8,000 / 12,000	308	1	B13366048A
	18"	15	15,000 / 22,500	237	1	B14366018A
	24"		15,000 / 22,500	247	1	B14366024A
	30"		15,000 / 22,500	261	1	B14366030A
	36"		15,000 / 22,500	285	1	B14366036A
	48"		15,000 / 22,500	333	1	B14366048A
	18"	22	22,500 / 33,750	237	1	B16366018A
	24"		22,500 / 33,750	247	1	B16366024A
	30"		22,500 / 33,750	261	1	B16366030A
	36"		22,500 / 33,750	285	1	B16366036A
	48"		22,500 / 33,750	333	1	B16366048A
Solid Bottom	18"	8	8,000 / 12,000	230	1	B13366018B
	24"		8,000 / 12,000	240	1	B13366024B
	30"		8,000 / 12,000	254	1	B13366030B
	36"		8,000 / 12,000	278	1	B13366036B
	48"		8,000 / 12,000	326	1	B13366048B
	18"	15	15,000 / 22,500	255	1	B14366018B
	24"		15,000 / 22,500	265	1	B14366024B
	30"		15,000 / 22,500	279	1	B14366030B
	36"		15,000 / 22,500	303	1	B14366036B
	48"		15,000 / 22,500	351	1	B14366048B
	18"	22	22,500 / 33,750	255	1	B16366018B
	24"		22,500 / 33,750	265	1	B16366024B
	30"		22,500 / 33,750	279	1	B16366030B
	36"		22,500 / 33,750	303	1	B16366036B
	48"		22,500 / 33,750	351	1	B16366048B

To order boxes with 2 standard mouseholes, replace the last character with "M".

To order gasketed boxes, replace the last character with "G".

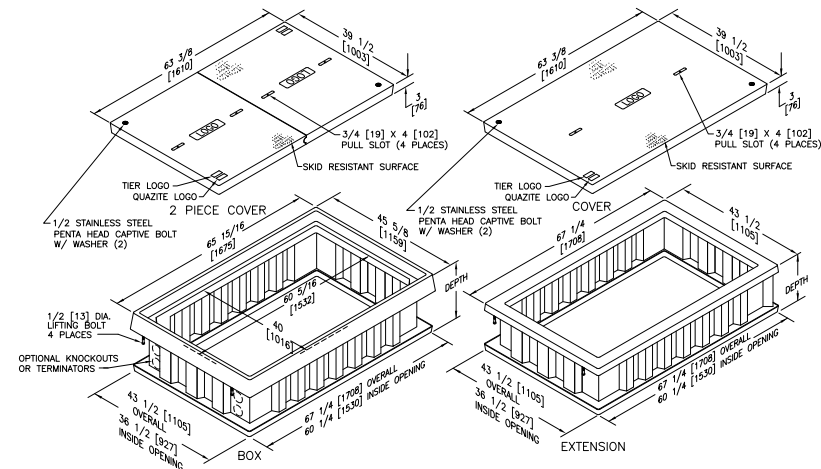
NOTE: Gasket reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.

Dimensions / Data

36" x 60" Corrugated Wall Style Assembly

Penta Head Bolts are Standard



Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
2 Piece W/ 2 Bolts	8	8,000 / 12,000	273	1	C1A366003A***
2 Piece No Bolts	8	8,000 / 12,000	273	1	C0A366003A***
2 Piece W/ 2 Bolts	15	15,000 / 22,500	333	1	C1B366003A***
2 Piece W/ 2 Bolts	22	22,500 / 33,750	333	1	C1C366003A***
1 Piece W/2 Bolts	8	8,000 / 12,000	273	1	C1A366003Y***
1 Piece W/2 Bolts	15	15,000 / 22,500	333	1	C1B366003Y***

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

# Dimensions / Data

## 36" x 60" Corrugated Wall Style Assembly (Continued)

Penta Head Bolts are Standard

### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	18"	8	8,000 / 12,000	212	1	B1A366018A
	24"		8,000 / 12,000	222	1	B1A366024A
	30"		8,000 / 12,000	236	1	B1A366030A
	36"		8,000 / 12,000	260	1	B1A366036A
	48"		8,000 / 12,000	308	1	B1A366048A
Standard Open Bottom	18"	15	15,000 / 22,500	232	1	B1B366018A
	24"		15,000 / 22,500	252	1	B1B366024A
	30"		15,000 / 22,500	256	1	B1B366030A
	36"		15,000 / 22,500	280	1	B1B366036A
	48"		15,000 / 22,500	328	1	B1B366048A
Standard Open Bottom	18"	22	22,500 / 33,750	232	1	B1C366018A
	24"		22,500 / 33,750	252	1	B1C366024A
	30"		22,500 / 33,750	256	1	B1C366030A
	36"		22,500 / 33,750	280	1	B1C366036A
	48"		22,500 / 33,750	328	1	B1C366048A

To order boxes with an integral bottom, replace the last character with "B".

To order adjust-to-grade boxes, replace the last character with "W".

NOTE: Cover rating cannot exceed box rating.

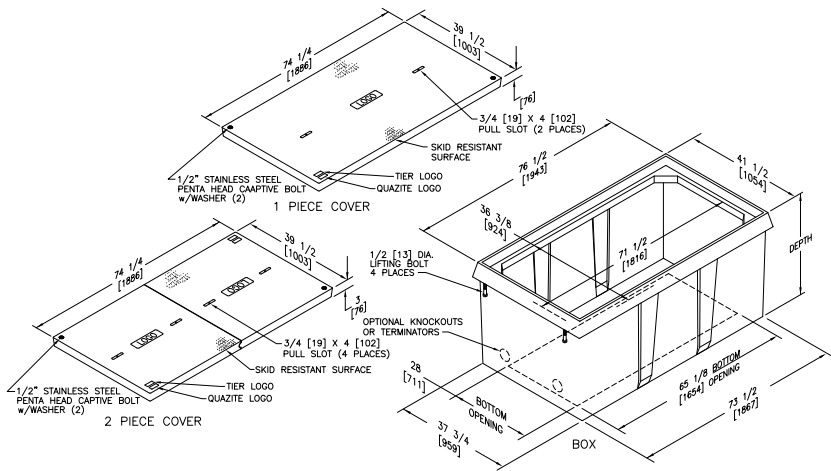
### Bottom Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	8"	8	8,000 / 12,000	173	1	E0A366008A
	12"		8,000 / 12,000	182	1	E0A366012A
	18"		8,000 / 12,000	197	1	E0A366018A
	24"		8,000 / 12,000	212	1	E0A366024A
Standard Open Bottom	8"	15	15,000 / 22,500	173	1	E0B366008A
	12"		15,000 / 22,500	182	1	E0B366012A
	18"		15,000 / 22,500	197	1	E0B366018A
	24"		15,000 / 22,500	212	1	E0B366024A
Standard Open Bottom	8"	22	22,500 / 33,750	173	1	E0C366008A
	12"		22,500 / 33,750	182	1	E0C366012A
	18"		22,500 / 33,750	197	1	E0C366018A
	24"		22,500 / 33,750	212	1	E0C366024A

Dimensions / Data

36" x 72" FRP Straight Wall Stackable

Penta Head Bolts are Standard



Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
2 Piece W/ 2 Bolts	8	8,000 / 12,000	275	10	C1A367203A***
2 Piece W/ 2 Bolts	15	15,000 / 22,500	355	10	C1B367203A***
2 Piece No Bolts	8	8,000 / 12,000	275	10	C0A367203A***
2 Piece W/ 2 Bolts	22	22,500 / 33,750	355	10	C1C367203A***
1 Piece W/ 2 Bolts	8	8,000 / 12,000	275	10	C1A367203Y***
1 Piece W/ 2 Bolts	15	15,000 / 22,500	355	10	C1B367203Y***

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	36"	8	8,000 / 12,000	326	1	B13367236A
	48"		8,000 / 12,000	382	1	B13367248A
	36"	15	15,000 / 22,500	346	1	B14367236A
	48"		15,000 / 22,500	402	1	B14367248A
	36"	22	22,500 / 33,750	346	1	B16367236A
	48"		22,500 / 33,750	402	1	B16367248A
Solid Bottom	36"	8	8,000 / 12,000	353	1	B13367236B
	48"		8,000 / 12,000	414	1	B13367248B
	36"	15	15,000 / 22,500	375	1	B14367236B
	48"		15,000 / 22,500	436	1	B14367248B
	36"	22	22,500 / 33,750	375	1	B16367236B
	48"		22,500 / 33,750	436	1	B16367248B

To order boxes with 2 standard mouseholes, replace the last character with "M".

To order gasketed boxes, replace the last character with "G".

NOTE: Gasket reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.

Exploded view diagram of the 1000 Series Rectangular Enclosure, showing the Cover, Box, and Extension components with their dimensions and assembly details.

**Cover Dimensions and Details:**

- Overall Width: 74 1/4 [1696]
- Overall Depth: 39 1/2 [1003]
- Skid Resistant Surface
- 3/4 [19] X 4 [102] Pull Slot (4 Places)
- 1/2 Stainless Steel Penta Head Captive Bolt W/ Washer (4)
- Quartzite Logo
- Tier Logo
- COVER

**Box Dimensions and Details:**

- Overall Width: 42 [1067]
- Overall Depth: 38 1/8 [966]
- Inside Opening Width: 31 1/2 [1816]
- Inside Opening Depth: 77 [1956]
- 1/2 [13] Dia. Lifting Bolt 4 Places
- Optional Knockouts or Terminators
- BOX

**Extension Dimensions and Details:**

- Overall Width: 42 [1067]
- Overall Depth: 38 [889]
- Inside Opening Width: 70 [1778]
- Inside Opening Depth: 77 [1956]
- EXTENSION

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 4 Bolts	8	8,000 / 12,000	275	5	C1A367203A***
No Bolts	8	8,000 / 12,000	275	5	C0A367203A***
W/ 4 Bolts	15	15,000 / 22,500	355	5	C1B367203A***
W/ 4 Bolts	22	22,500 / 33,750	355	5	C1C367203A***

[www.hubbell.com/hubbellpowersystems/en](http://www.hubbell.com/hubbellpowersystems/en) | **U113**



## Dimensions / Data

### 36" x 72" Corrugated Wall Style Assembly (Continued)

Penta Head Bolts are Standard

#### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	18"	8	8,000 / 12,000	269	1	B1A367218A
	24"		8,000 / 12,000	284	1	B1A367224A
	30"		8,000 / 12,000	299	1	B1A367230A
	36"		8,000 / 12,000	313	1	B1A367236A
	48"		8,000 / 12,000	343	1	B1A367248A
Standard Open Bottom	18"	15	15,000 / 22,500	300	1	B1B367218A
	24"		15,000 / 22,500	315	1	B1B367224A
	30"		15,000 / 22,500	330	1	B1B367230A
	36"		15,000 / 22,500	344	1	B1B367236A
	48"		15,000 / 22,500	374	1	B1B367248A
Standard Open Bottom	18"	22	22,500 / 33,750	300	1	B1C367218A
	24"		22,500 / 33,750	315	1	B1C367224A
	30"		22,500 / 33,750	330	1	B1C367230A
	36"		22,500 / 33,750	344	1	B1C367236A
	48"		22,500 / 33,750	374	1	B1C367248A

To order boxes with an integral bottom, replace the last character with "B".

To order adjust-to-grade boxes, replace the last character with "W".

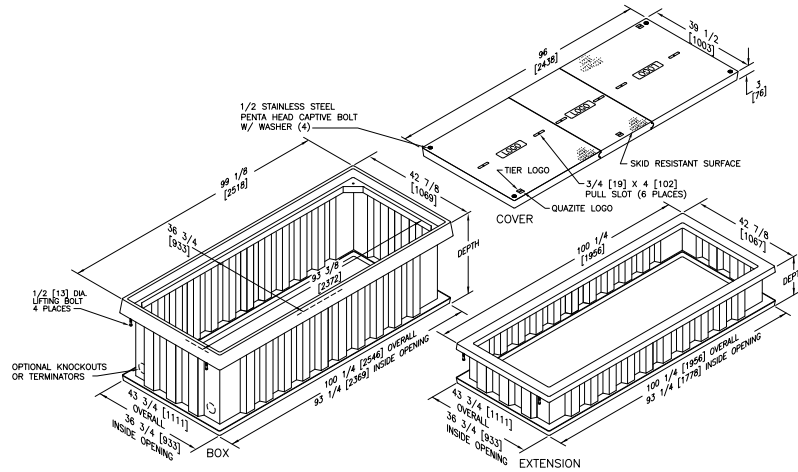
NOTE: Cover rating cannot exceed box rating.

#### Bottom Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	8"	8	8,000 / 12,000	186	1	E0A367208A
	12"		8,000 / 12,000	193	1	E0A367212A
	18"		8,000 / 12,000	205	1	E0A367218A
	24"		8,000 / 12,000	217	1	E0A367224A
Standard Open Bottom	8"	15	15,000 / 22,500	186	1	E0B367208A
	12"		15,000 / 22,500	193	1	E0B367212A
	18"		15,000 / 22,500	205	1	E0B367218A
	24"		15,000 / 22,500	217	1	E0B367224A
Standard Open Bottom	8"	22	22,500 / 33,750	186	1	E0C367208A
	12"		22,500 / 33,750	193	1	E0C367212A
	18"		22,500 / 33,750	205	1	E0C367218A
	24"		22,500 / 33,750	217	1	E0C367224A

## 36" x 96" Corrugated Wall Style Assembly

Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 4 Bolts	8	8,000 / 12,000	400	2	C1A369603A***
No Bolts	8	8,000 / 12,000	400	2	C0A369603A***
W/ 4 Bolts	15	15,000 / 22,500	420	2	C1B369603A***
W/ 4 Bolts	22	22,500 / 33,750	420	2	C1C369603A***

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

## Dimensions / Data

### 36" x 96" Corrugated Wall Style Assembly (Continued)

Penta Head Bolts are Standard

#### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	30"	8	8,000 / 12,000	649	1	B1A369630A
	36"		8,000 / 12,000	669	1	B1A369636A
	48"		8,000 / 12,000	709	1	B1A369648A
Standard Open Bottom	30"	15	15,000 / 22,500	798	1	B1B369630A
	36"		15,000 / 22,500	818	1	B1B369636A
	48"		15,000 / 22,500	858	1	B1B369648A
Standard Open Bottom	30"	22	22,500 / 33,750	798	1	B1C369630A
	36"		22,500 / 33,750	818	1	B1C369636A
	48"		22,500 / 33,750	858	1	B1C369648A

To order boxes with an integral bottom, replace the last character with "B".

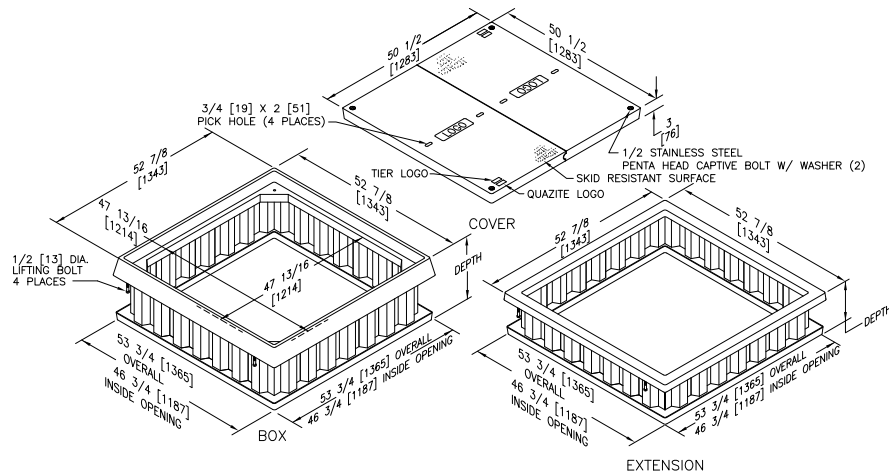
NOTE: Cover rating cannot exceed box rating.

#### Bottom Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	246	1	E0A369612A
	18"		8,000 / 12,000	258	1	E0A369618A
	24"		8,000 / 12,000	270	1	E0A369624A
	36"		8,000 / 12,000	294	1	E0A369636A
	48"		8,000 / 12,000	318	1	E0A369648A
Standard Open Bottom	12"	15	15,000 / 22,500	246	1	E0B369612A
	18"		15,000 / 22,500	258	1	E0B369618A
	24"		15,000 / 22,500	270	1	E0B369624A
	36"		15,000 / 22,500	294	1	E0B369636A
	48"		15,000 / 22,500	318	1	E0B369648A
Standard Open Bottom	12"	22	22,500 / 33,750	246	1	E0C369612A
	18"		22,500 / 33,750	258	1	E0C369618A
	24"		22,500 / 33,750	270	1	E0C369624A
	36"		22,500 / 33,750	294	1	E0C369636A
	48"		22,500 / 33,750	318	1	E0C369648A

## 48" x 48" Corrugated Wall Style Assembly

Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 4 Bolts	8	8,000 / 12,000	271	3	C1A484803A***
No Bolts	8	8,000 / 12,000	271	3	C0A484803A***
W/ 4 Bolts	15	15,000 / 22,500	345	3	C1B484803A***
W/ 4 Bolts	22	22,500 / 33,750	345	3	C1C484803A***

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch/radio read cover options.

## Dimensions / Data

### 48" x 48" Corrugated Wall Style Assembly (Continued)

Penta Head Bolts are Standard

#### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	18"	8	8,000 / 12,000	262	1	B1A484818A
	24"		8,000 / 12,000	275	1	B1A484824A
	30"		8,000 / 12,000	288	1	B1A484830A
	36"		8,000 / 12,000	301	1	B1A484836A
	48"		8,000 / 12,000	327	1	B1A484848A
Standard Open Bottom	18"	15	15,000 / 22,500	291	1	B1B484818A
	24"		15,000 / 22,500	304	1	B1B484824A
	30"		15,000 / 22,500	317	1	B1B484830A
	36"		15,000 / 22,500	330	1	B1B484836A
	48"		15,000 / 22,500	356	1	B1B484848A
Standard Open Bottom	18"	22	22,500 / 33,750	291	1	B1C484818A
	24"		22,500 / 33,750	304	1	B1C484824A
	30"		22,500 / 33,750	317	1	B1C484830A
	36"		22,500 / 33,750	330	1	B1C484836A
	48"		22,500 / 33,750	356	1	B1C484848A

To order boxes with an integral bottom, replace the last character with "B".

To order adjust-to-grade boxes, replace the last character with "W".

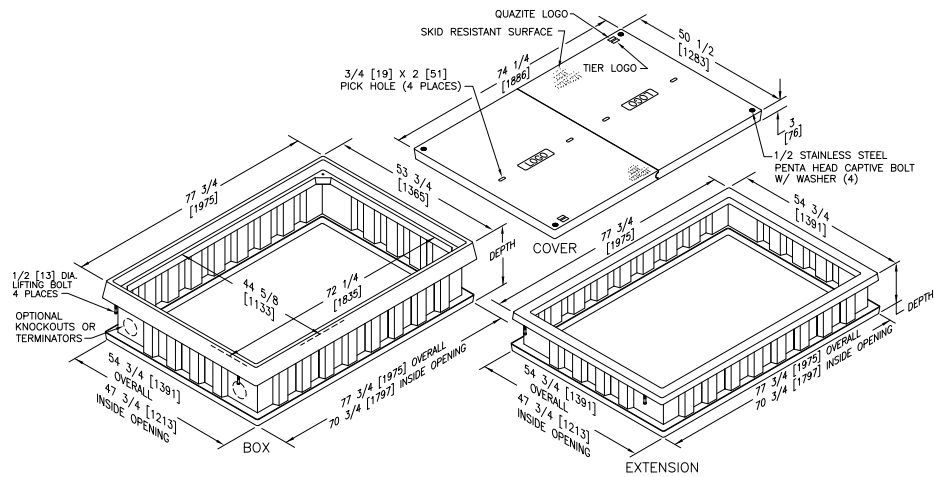
NOTE: Cover rating cannot exceed box rating.

#### Bottom Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	240	1	E0A484812A
	18"		8,000 / 12,000	265	1	E0A484818A
	24"		8,000 / 12,000	290	1	E0A484824A
Standard Open Bottom	12"	15	15,000 / 22,500	240	1	E0B484812A
	18"		15,000 / 22,500	265	1	E0B484818A
	24"		15,000 / 22,500	290	1	E0B484824A
Standard Open Bottom	12"	22	22,500 / 33,750	240	1	E0C484812A
	18"		22,500 / 33,750	265	1	E0C484818A
	24"		22,500 / 33,750	290	1	E0C484824A

## 48" x 72" Corrugated Wall Style Assembly

Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 4 Bolts	8	8,000 / 12,000	294	3	C1A487203A***
No Bolts	8	8,000 / 12,000	294	3	C0A487203A***
W/ 4 Bolts	15	15,000 / 22,500	368	3	C1B487203A***
W/ 4 Bolts	22	22,500 / 33,750	368	3	C1C487203A***

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

## Dimensions / Data

### 48" x 72" Corrugated Wall Style Assembly (Continued)

Penta Head Bolts are Standard

#### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	18"	8	8,000 / 12,000	348	1	B1A487218A
	24"		8,000 / 12,000	364	1	B1A487224A
	30"		8,000 / 12,000	380	1	B1A487230A
	36"		8,000 / 12,000	396	1	B1A487236A
	48"		8,000 / 12,000	428	1	B1A487248A
Standard Open Bottom	18"	15	15,000 / 22,500	387	1	B1B487218A
	24"		15,000 / 22,500	403	1	B1B487224A
	30"		15,000 / 22,500	419	1	B1B487230A
	36"		15,000 / 22,500	435	1	B1B487236A
	48"		15,000 / 22,500	467	1	B1B487248A
Standard Open Bottom	18"	22	22,500 / 33,750	387	1	B1C487218A
	24"		22,500 / 33,750	403	1	B1C487224A
	30"		22,500 / 33,750	419	1	B1C487230A
	36"		22,500 / 33,750	435	1	B1C487236A
	48"		22,500 / 33,750	467	1	B1C487248A

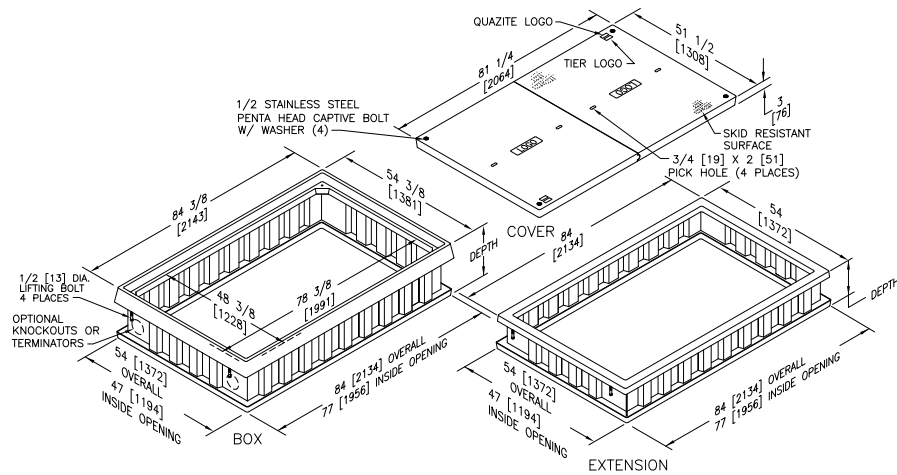
#### Bottom Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	240	1	E0A487212A
	18"		8,000 / 12,000	265	1	E0A487218A
	24"		8,000 / 12,000	290	1	E0A487224A
	36"		8,000 / 12,000	310	1	E0A487236A
Standard Open Bottom	12"	15	15,000 / 22,500	240	1	E0B487212A
	18"		15,000 / 22,500	265	1	E0B487218A
	24"		15,000 / 22,500	290	1	E0B487224A
	36"		15,000 / 22,500	310	1	E0B487236A
Standard Open Bottom	12"	22	22,500 / 33,750	240	1	E0C487212A
	18"		22,500 / 33,750	265	1	E0C487218A
	24"		22,500 / 33,750	290	1	E0C487224A
	36"		22,500 / 33,750	310	1	E0C487236A



## 48" x 78" Corrugated Wall Style Assembly

Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 4 Bolts	8	8,000 / 12,000	320	5	C1A487803A***
No Bolts	8	8,000 / 12,000	320	5	C0A487803A***
W/ 4 Bolts	15	15,000 / 22,500	400	5	C1B487803A***
W/ 4 Bolts	22	22,500 / 33,750	400	5	C1C487803A***

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

## Dimensions / Data

### 48" x 78" Corrugated Wall Style Assembly (Continued)

Penta Head Bolts are Standard

#### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	18"	8	8,000 / 12,000	384	1	B1A487818A
	24"		8,000 / 12,000	400	1	B1A487824A
	30"		8,000 / 12,000	415	1	B1A487830A
	36"		8,000 / 12,000	431	1	B1A487836A
	48"		8,000 / 12,000	463	1	B1A487848A
Standard Open Bottom	18"	15	15,000 / 22,500	423	1	B1B487818A
	24"		15,000 / 22,500	439	1	B1B487824A
	30"		15,000 / 22,500	454	1	B1B487830A
	36"		15,000 / 22,500	470	1	B1B487836A
	48"		15,000 / 22,500	502	1	B1B487848A
Standard Open Bottom	18"	22	22,500 / 33,750	423	1	B1C487818A
	24"		22,500 / 33,750	439	1	B1C487824A
	30"		22,500 / 33,750	454	1	B1C487830A
	36"		22,500 / 33,750	470	1	B1C487836A
	48"		22,500 / 33,750	502	1	B1C487848A

To order boxes with an integral bottom, replace the last character with "B".

To order adjust-to-grade boxes, replace the last character with "W".

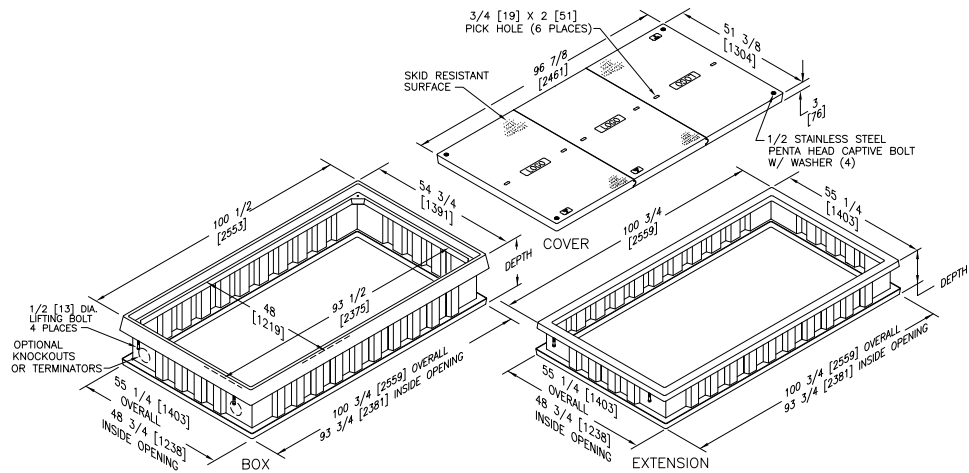
NOTE: Cover rating cannot exceed box rating.

#### Bottom Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	275	1	E0A487812A
	18"		8,000 / 12,000	294	1	E0A487818A
	24"		8,000 / 12,000	312	1	E0A487824A
	36"		8,000 / 12,000	331	1	E0A487836A
Standard Open Bottom	12"	15	15,000 / 22,500	275	1	E0B487812A
	18"		15,000 / 22,500	294	1	E0B487818A
	24"		15,000 / 22,500	312	1	E0B487824A
	36"		15,000 / 22,500	331	1	E0B487836A
Standard Open Bottom	12"	22	22,500 / 33,750	275	1	E0C487812A
	18"		22,500 / 33,750	294	1	E0C487818A
	24"		22,500 / 33,750	312	1	E0C487824A
	36"		22,500 / 33,750	331	1	E0C487836A

## 48" x 96" Corrugated Wall Style Assembly

Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 4 Bolts	8	8,000 / 12,000	402	2	C1A489603A***
No Bolts	8	8,000 / 12,000	402	2	C0A489603A***
W/ 4 Bolts	15	15,000 / 22,500	520	2	C1B489603A***
W/ 4 Bolts	22	22,500 / 33,750	520	2	C1C489603A***

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

## Dimensions / Data

### 48" x 96" Corrugated Wall Style Assembly (Continued)

Penta Head Bolts are Standard

#### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	18"	8	8,000 / 12,000	694	1	B1A489618A
	24"		8,000 / 12,000	713	1	B1A489624A
	30"		8,000 / 12,000	729	1	B1A489630A
	36"		8,000 / 12,000	748	1	B1A489636A
	48"		8,000 / 12,000	767	1	B1A489648A
Standard Open Bottom	18"	15	15,000 / 22,500	776	1	B1B489618A
	24"		15,000 / 22,500	795	1	B1B489624A
	30"		15,000 / 22,500	811	1	B1B489630A
	36"		15,000 / 22,500	830	1	B1B489636A
	48"		15,000 / 22,500	849	1	B1B489648A
Standard Open Bottom	18"	22	22,500 / 33,750	776	1	B1C489618A
	24"		22,500 / 33,750	795	1	B1C489624A
	30"		22,500 / 33,750	811	1	B1C489630A
	36"		22,500 / 33,750	830	1	B1C489636A
	48"		22,500 / 33,750	849	1	B1C489648A

To order boxes with an integral bottom, replace the last character with "B".

To order adjust-to-grade boxes, replace the last character with "W".

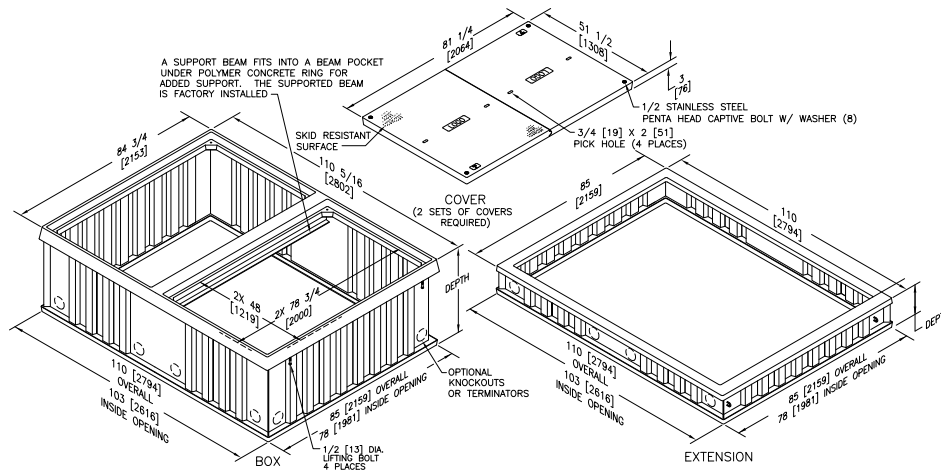
NOTE: Cover rating cannot exceed box rating.

#### Bottom Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	299	1	E0A489612A
	18"		8,000 / 12,000	305	1	E0A489618A
	24"		8,000 / 12,000	311	1	E0A489624A
	36"		8,000 / 12,000	317	1	E0A489636A
	44"		8,000 / 12,000	323	1	E0A489644A
Standard Open Bottom	12"	15	15,000 / 22,500	299	1	E0B489612A
	18"		15,000 / 22,500	305	1	E0B489618A
	24"		15,000 / 22,500	311	1	E0B489624A
	36"		15,000 / 22,500	317	1	E0B489636A
	44"		15,000 / 22,500	323	1	E0B489644A
Standard Open Bottom	12"	22	22,500 / 33,750	299	1	E0C489612A
	18"		22,500 / 33,750	305	1	E0C489618A
	24"		22,500 / 33,750	311	1	E0C489624A
	36"		22,500 / 33,750	317	1	E0C489636A
	44"		22,500 / 33,750	323	1	E0C489644A

## 78" x 96" Corrugated Wall Style Assembly

Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 8 Bolts	8	8,000 / 12,000	704	1	C1A789603A***
No Bolts	8	8,000 / 12,000	704	1	C0A789603A***
W/ 8 Bolts	15	15,000 / 22,500	880	1	C1B789603A***
W/ 8 Bolts	22	22,500 / 33,750	880	1	C1C789603A***

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	36"	8	8,000 / 12,000	1826	1	B1A789636A
	48"		8,000 / 12,000	1892	1	B1A789648A
Standard Open Bottom	36"	15	15,000 / 22,500	1826	1	B1B789636A
	48"		15,000 / 22,500	1892	1	B1B789648A
Standard Open Bottom	36"	22	22,500 / 33,750	1826	1	B1C789636A
	48"		22,500 / 33,750	1892	1	B1C789648A

To order boxes with an integral bottom, replace the last character with "B".

NOTE: Cover rating cannot exceed box rating.

Dimensions / Data

78" x 96" Corrugated Wall Style Assembly (Continued)

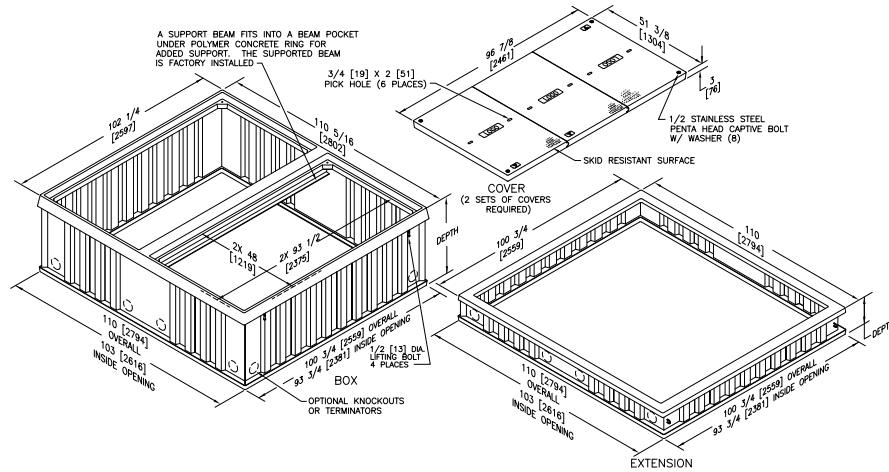
Penta Head Bolts are Standard

Bottom Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	1050	1	E0A789612A
	24"		8,000 / 12,000	1063	1	E0A789624A
	36'		8,000 / 12,000	1076	1	E0A789636A
	44"		8,000 / 12,000	1089	1	E0A789644A
Standard Open Bottom	12"	15	15,000 / 22,500	1050	1	E0B789612A
	24"		15,000 / 22,500	1063	1	E0B789624A
	36'		15,000 / 22,500	1076	1	E0B789636A
	44"		15,000 / 22,500	1089	1	E0B789644A
Standard Open Bottom	12"	22	22,500 / 33,750	1050	1	E0C789612A
	24"		22,500 / 33,750	1063	1	E0C789624A
	36'		22,500 / 33,750	1076	1	E0C789636A
	44"		22,500 / 33,750	1089	1	E0C789644A

## 96" x 96" Corrugated Wall Style Assembly

Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 8 Bolts	8	8,000 / 12,000	804	1	C1A969603A***
No Bolts	8	8,000 / 12,000	804	1	C0A969603A***
W/ 8 Bolts	15	15,000 / 22,500	1005	1	C1B969603A***
W/ 8 Bolts	22	22,500 / 33,750	1005	1	C1C969603A***

Replace \*\*\* with a logo code found on page U133. See page U136 for other meter lid and touch / radio read cover options.

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	36"	8	8,000 / 12,000	2247	1	B1A969636A
	48"		8,000 / 12,000	2328	1	B1A969648A
Standard Open Bottom	36"	15	15,000 / 22,500	2247	1	B1B969636A
	48"		15,000 / 22,500	2328	1	B1B969648A
Standard Open Bottom	36"	22	22,500 / 33,750	2247	1	B1C969636A
	48"		22,500 / 33,750	2328	1	B1C969648A

To order boxes with an integral bottom, replace the last character with "B".

NOTE: Cover rating cannot exceed box rating.

Dimensions / Data

96" x 96" Corrugated Wall Style Assembly (Continued)

Penta Head Bolts are Standard

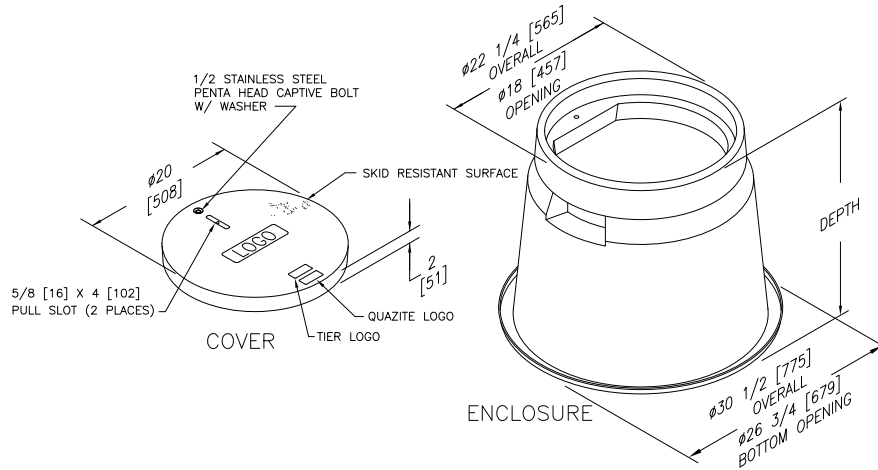
Bottom Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	12"	8	8,000 / 12,000	1292	1	E0A969612A
	24"		8,000 / 12,000	1308	1	E0A969624A
	35"		8,000 / 12,000	1324	1	E0A969636A
	44"		8,000 / 12,000	1340	1	E0A969644A
Standard Open Bottom	12"	15	15,000 / 22,500	1292	1	E0B969612A
	24"		15,000 / 22,500	1308	1	E0B969624A
	35"		15,000 / 22,500	1324	1	E0B969636A
	44"		15,000 / 22,500	1340	1	E0B969644A
Standard Open Bottom	12"	22	22,500 / 33,750	1292	1	E0C969612A
	24"		22,500 / 33,750	1308	1	E0C969624A
	35"		22,500 / 33,750	1324	1	E0C969636A
	44"		22,500 / 33,750	1340	1	E0C969644A



## 2000 Round Enclosure FRP (Nestable) Assembly

Penta Head Bolts are Standard



## Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 1 Bolts	8	8,000 / 12,000	23	20	C10200002A***
W/ 1 Bolts	15	15,000 / 22,500	34	20	C12200002A***
W/ 1 Bolts	22	22,500 / 33,750	34	20	C16200002A***
No Bolts	8	8,000 / 12,000	23	20	C00200002A***

Replace \*\*\* with a logo code found on page U133.

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	24"	8	8,000 / 12,000	48	10	B10200024A
	48"		8,000 / 12,000	96	6	B10200048A
Standard Open Bottom	24"	15	15,000 / 22,500	59	10	B12200024A
	48"		15,000 / 22,500	118	6	B12200048A
Standard Open Bottom	24"	22	22,500 / 33,750	59	10	B19200024A
	48"		22,500 / 33,750	118	6	B19200048A

48" Depth created by bolting 2-24" deep boxes bottom to bottom.

To order gasketed boxes, replace the last character with "G".

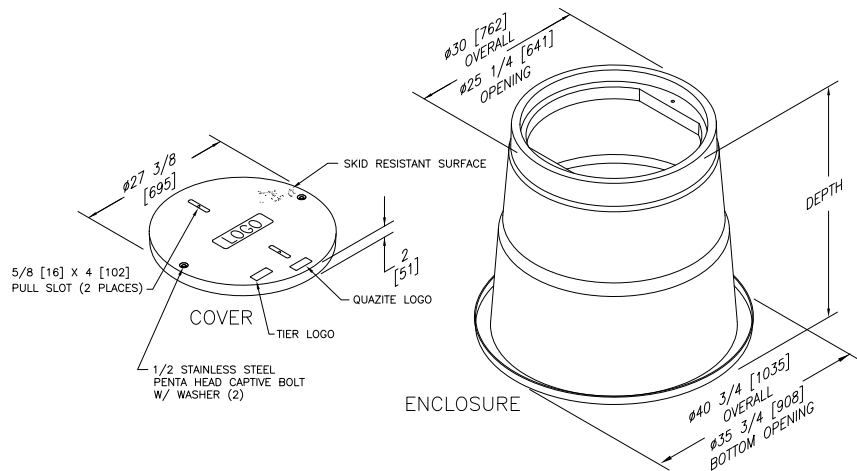
Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.

Dimensions / Data

2700 Round FRP (Nestable) Assembly

Penta Head Bolts are Standard



Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	50	10	C10270002A***
W/ 2 Bolts	15	15,000 / 22,500	65	10	C12270002A***
No Bolts	8	8,000 / 12,000	50	10	C00270002A***

Replace \*\*\* with a logo code found on page U133.

Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	36"	8	8,000 / 12,000	95	5	B10270036A
	72"		8,000 / 12,000	190	1	B10270072A
Standard Open Bottom	36"	15	15,000 / 22,500	121	5	B12270036A
	72"		15,000 / 22,500	242	1	B12270072A

To order gasketed boxes, replace the last character with "G".

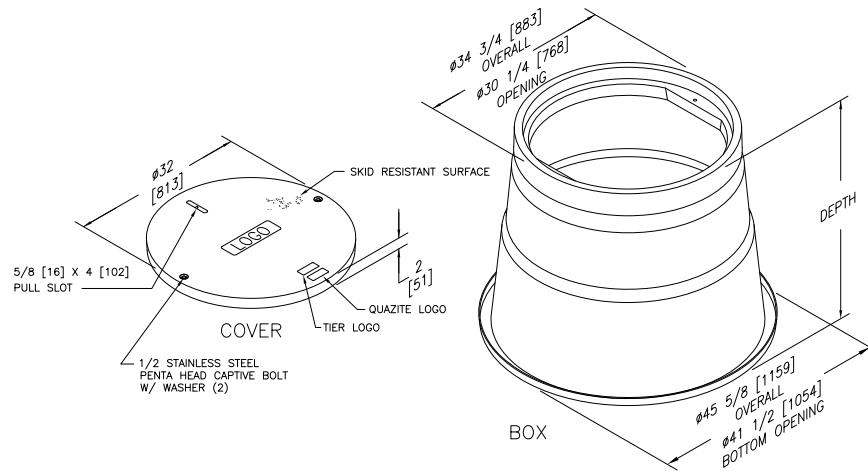
72" Depth created by bolting 2-36" deep boxes bottom to bottom.

Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.

## 3200 Round Enclosure FRP (Nestable) Assembly

Penta Head Bolts are Standard



### Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	91	10	C10320002A***
W/ 2 Bolts	15	15,000 / 22,500	106	10	C12320002A***
W/ 2 Bolts	22	22,500 / 33,750	106	10	C16320002A***
No Bolts	8	8,000 / 12,000	91	10	C00320002A***

Replace \*\*\* with a logo code found on page U133.

### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	36"	8	8,000 / 12,000	95	5	B10320036A
Standard Open Bottom	36"	15	15,000 / 22,500	121	5	B12320036A
Standard Open Bottom	36"	22	22,500 / 33,750	121	5	B19320036A

To order gasketed boxes, replace the last character with "G".

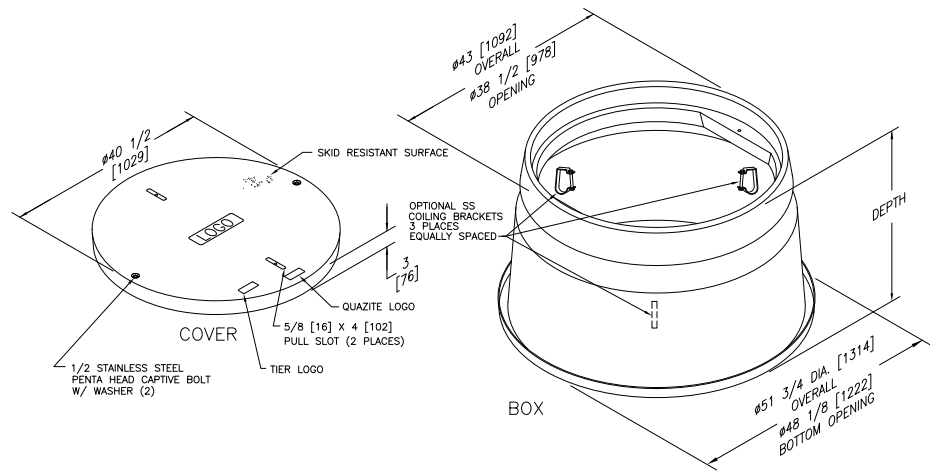
Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.

Dimensions / Data

3900 Round Enclosure FRP (Nestable) Assembly

Penta Head Bolts are Standard



Covers

Description	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
W/ 2 Bolts	8	8,000 / 12,000	200	5	C10390003A***
W/ 2 Bolts	15	15,000 / 22,500	250	5	C12390003A***
W/ 2 Bolts	22	22,500 / 33,750	250	5	C16390003A***
No Bolts	8	8,000 / 12,000	200	5	C00390003A***

Replace \*\*\* with a logo code found on page U133.

Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Part No.
Standard Open Bottom	14"	8	8,000 / 12,000	154	1	B10390014A
	30"		8,000 / 12,000	168	1	B10390030A
	36"		8,000 / 12,000	175	1	B10390036A
Standard Open Bottom	14"	15	15,000 / 22,500	158	1	B12390014A
	30"		15,000 / 22,500	179	1	B12390030A
	36"		15,000 / 22,500	190	1	B12390036A
Standard Open Bottom	14"	22	22,500 / 33,750	158	1	B19390014A
	30"		22,500 / 33,750	179	1	B19390030A
	36"		22,500 / 33,750	190	1	B19390036A

To order gasketed boxes, replace the last character with "G".

Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

NOTE: Cover rating cannot exceed box rating.

UNDERGROUND ENCLOSURES

# Quazite® FRP Cover Options

Most commonly used cover logos are shown below.  
Custom Logos are available. Contact your Quazite / Hubbell Representative.



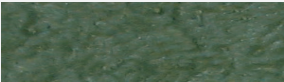



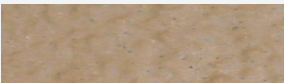

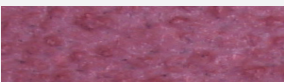
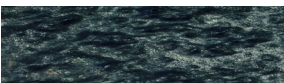
## Logos

Frp & Corrugated Logo Codes	Description
009	Blank
010	Catv
012	Communications
014	Controls
017	Electric
021	Fiber Optics
022	Fire Alarm
023	Gas
024	Ground
026	High Voltage
029	Lighting
036	Security
038	Signal
040	State Traffic Signal
041	Street Lighting
042	Telecom
043	Telephone
044	Traffic
045	Traffic Control
046	Traffic Signal
048	Tv
050	Water
057	Emergency
065	Illumination
081	Danger High Voltage
084	Power
092	Telecommunications
03A	Dot
06B	Instrumentation
0ZA	Irrigation
K91	Reclaimed Water
KH1	Fiberoptic

UNDERGROUND ENCLOSURES

Quazite FRP Color Options

The standard color for QUAZITE FRP products is concrete gray. Various color options allow for blending with adjacent materials or special identification of enclosures. Some commonly requested colors include:

Color Sample	Description	Part No. Code
	Brick Red	R
	Munsell Green	G
	Light Green	F
	Cement Gray	C
	Charcoal Gray	D
	Black	B
	Pecan	T
	International Orange	A
	Purple	P
	Blue	U

*Note: Printed colors are reference only and do not exactly represent product colors.*

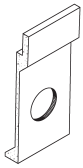
*Contact your local Hubbell / Quazite representative for other special colors.*

*Specify color for FRP & corrugated by inserting the code letter into the 14th digit of the cover number and the 13th digit of the box number.*  
*Example: C22304802J009R).*

*NOTE: Box color applies only to collar on FRP boxes.*

Quazite FRP features several different accessories for its boxes, including cable racks, unistrut racks, pulleys, knockouts, coiling brackets, and terminators. Knockouts are pre-scored at the factory, allowing for easy break out without the need for special tools. Pulleys feature a forged-steel eye-nut and a steel-reinforcing plate.

## Holes

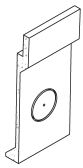


Conduit Sizes  
(For actual hole sizes and locations see page 58.)  
2"  
3"  
4" Electrical  
4" Telephone  
5"  
6"

Other hole sizes available. Contact your local HUBBELL® / QUAZITE® representative for additional.

Special order boxes with holes (or mouseholes, etc.) may qualify for UL Listing as long as the holes do not exceed more than 25% of the area of each sidewall and as long as the holes do not cut into a structural reinforcing rib, corner, or box lip.

## Knockouts

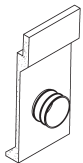


Conduit Sizes  
(For actual hole sizes and locations see page 58.)  
2"  
3"  
4" Electrical  
4" Telephone  
5"  
6"

Other knockout sizes available. Contact your local HUBBELL® / QUAZITE® representative for additional.

Special order boxes with holes (or mouseholes, etc.) may qualify for UL Listing as long as the holes do not exceed more than 25% of the area of each sidewall and as long as the holes do not cut into a structural reinforcing rib, corner, or box lip.

## Terminators

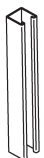


Conduit Sizes  
(For actual hole sizes and locations see page 58.)  
2"  
3"  
4" (Electrical & Telephone)\*  
5"  
6"

\*New 4" terminator design accommodates both electrical and telephone conduit sizes. Other terminator sizes available. Contact your local HUBBELL® / QUAZITE® representative for additional.

Special order boxes with holes (or mouseholes, etc.) may qualify for UL Listing as long as the holes do not exceed more than 25% of the area of each sidewall and as long as the holes do not cut into a structural reinforcing rib, corner, or box lip.

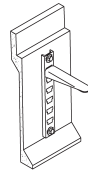
## Strut Racks



Box and cover struts available. Contact your local HUBBELL® / QUAZITE® representative for sizes.

Inserts must be located in ribs. See page 67 for rib locations.  
Width x Depth  
1-5/8" x 1-5/8"

## Cable Racks & Rack Hooks - Galvanized Steel

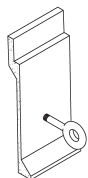


Cable Racks available in the following lengths:  
12" length **C080911**  
18" length **C080910**  
24" length **C080915**  
30" length **C080920**  
36" length **C080921**

See page U137 for cable rack locations.

Cable Rack Hooks	Part No.
7-1/2" length	<b>C2031132</b>
10" length	<b>C080907</b>

## Pulling Eyes



Available Ratings  
1,500 lbs.  
3,000 lbs.  
10,000 lbs.

## Captive Bolts

Captive bolts are standard on all FRP products except for the 6 x 8 enclosure. Captive bolts prevent the bolt from falling out of the cover when the cover is removed.

## EZ - Locate

The EZ Locate System allows the #6 - #24 AWG ground wires / bonding harnesses or tracer wires to be quickly isolated from the grounding electrode.

The telescoping body is made from stainless steel; the isolating ground switch is made from engineering-grade thermo-plastic and tin-plated copper alloy components to prevent corrosion.

Available Sizes  
17x30 and 24x36



# FRP Enclosure Options

## Bolt Holes

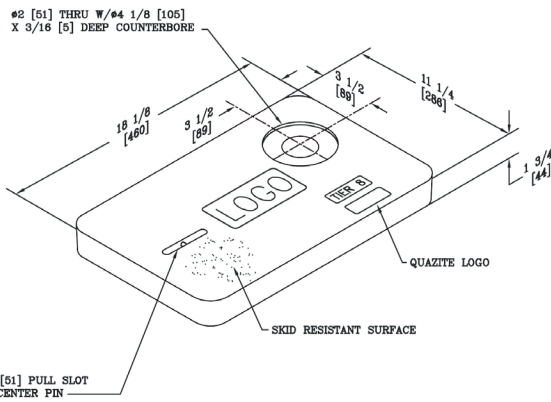
Sizes  
3/8"  
1/4"  
1/2"

## Inserts - 18-8 Stainless Steel

Available Sizes  
3/8" or 1/2"

## Touch/Radio Read Option

Holes for touch or radio read applications can be provided in covers as needed.

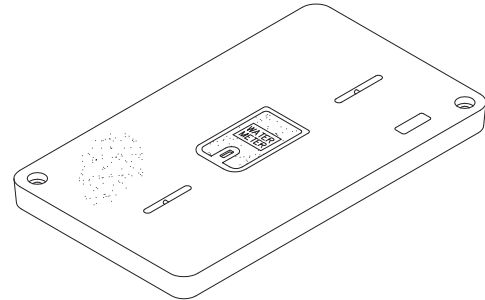


## Pull Slots

The standard cover pull slot measures 1/2" x 4". Bell cover pull slots measuring 1" x 4" are available upon request.

## Hinged Meter Lids\*

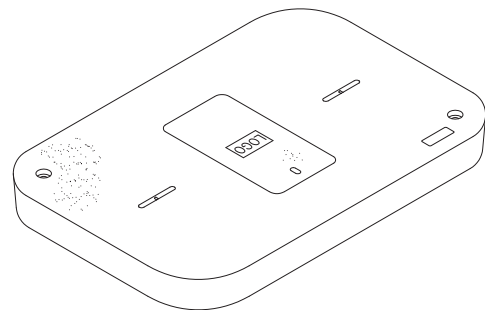
Available Sizes  
Cast iron 4" x 6" lid  
Cast iron 6" x 9" lid



## Drop-in Meter Lids\*

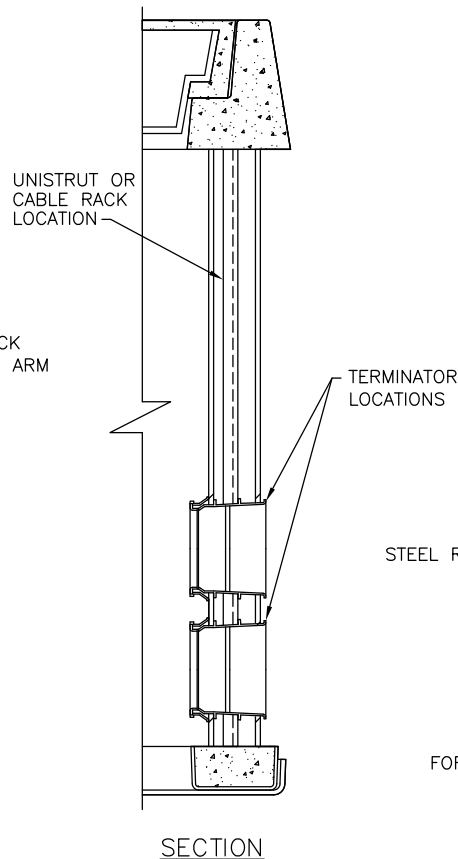
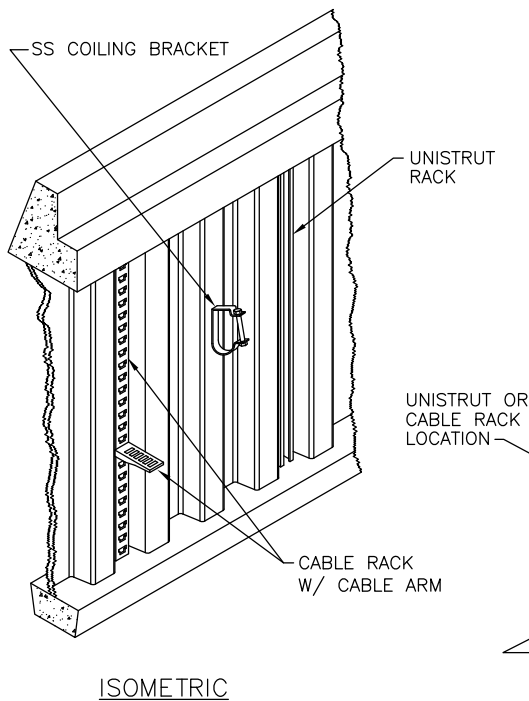
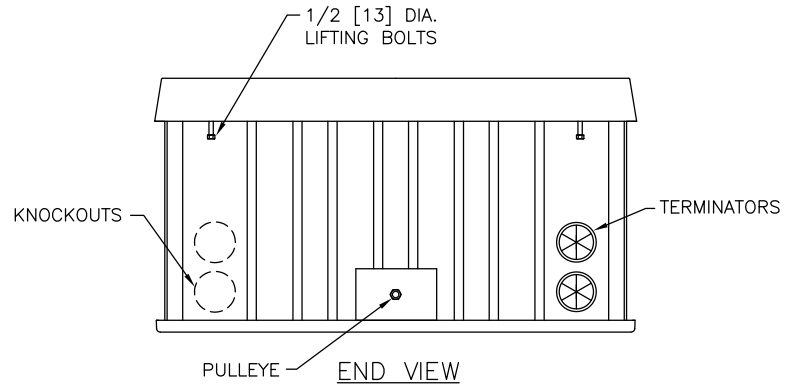
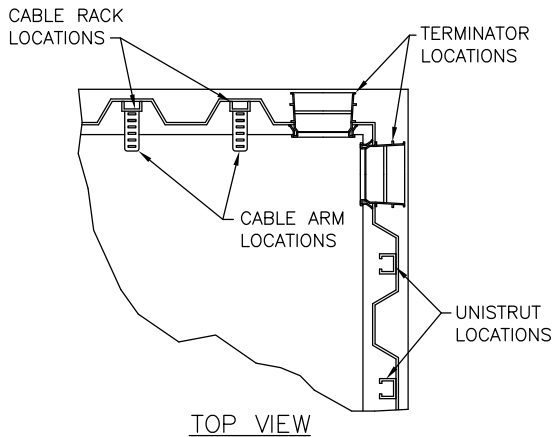
Available Sizes  
Polymer concrete 6" x 9" drop-in lid  
Polymer concrete 7" x 13" drop-in lid  
Polymer concrete 9" x 15" drop-in lid

\*Select sizes available in Tier 15. Tier 22 not available.



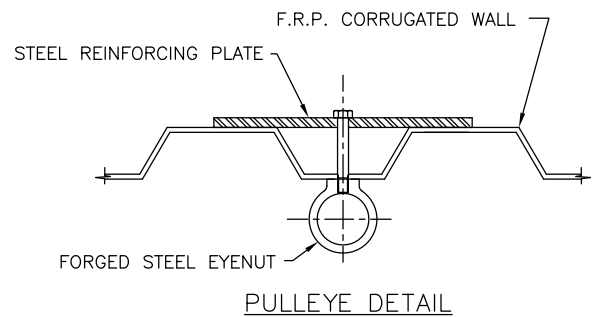
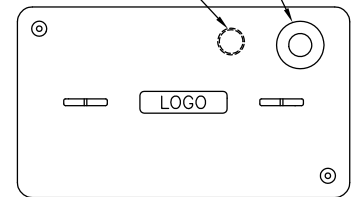


# Typical Features and Details of FRP Enclosures

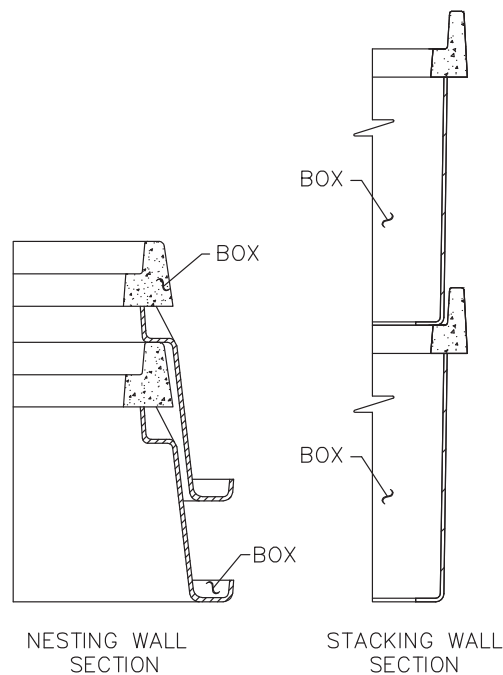
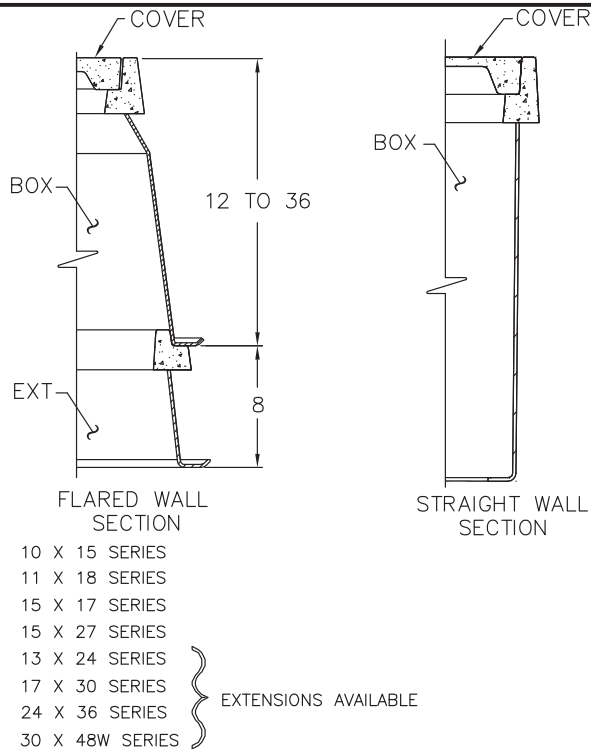
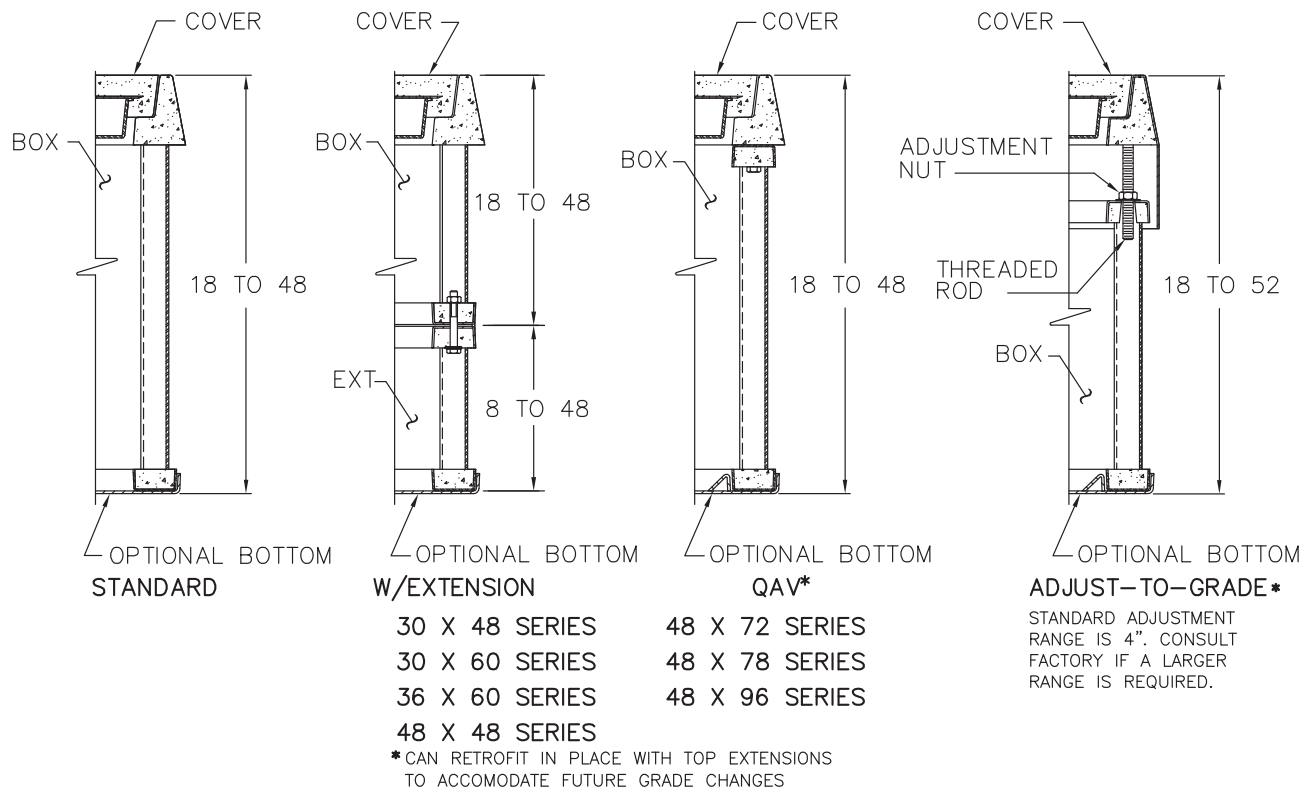


OPTIONAL 2 [51] DIA. THRU HOLE  
W/ 4 1/8 [105] DIA. X 3/16 [5] C'BORE  
TOUCH READ OR RADIO READ OPENING  
MORE SIZES ARE AVAILABLE  
CONTACT SALES ASSOCIATE  
FOR MORE INFORMATION

OPTIONAL TELEPHONE OR ELECTRIC  
EMS MARKER (CAST IN COVER)

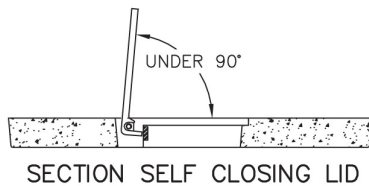
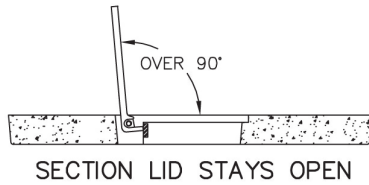
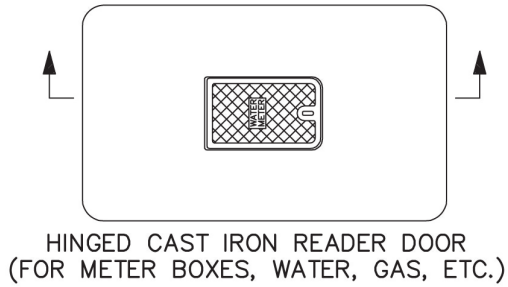


# FRP Enclosure Specifications / Data



# UNDERGROUND ENCLOSURES

## FRP Enclosure Options

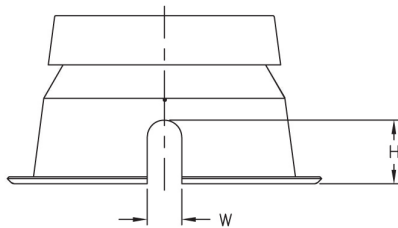


STANDARD READER DOOR LOCATION		
BOX SIZE	DOOR SIZE	DETAIL
11 X 18	4 X 6	A
13 X 24	4 X 6	A
15 X 27	4 X 6	A
17 X 30	6 X 9	A
24 X 36	6 X 9	A
30 X 48	6 X 9	A
36 X 60 (1PC)	6 X 9	A
36 X 60 (2PC)	6 X 9	B
48 X 78 (2PC)	6 X 9	B
48 X 96 (3PC)	6 X 9	*

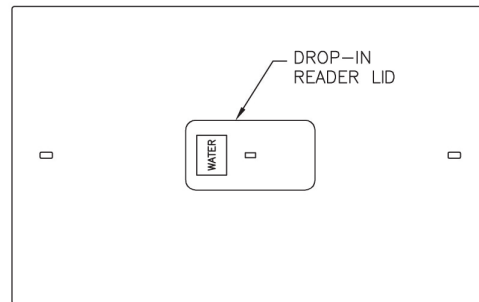
\* READER DOOR CENTERED  
IN CENTER COVER

DETAIL "A"

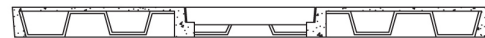
DETAIL "B"



STANDARD MOUSEHOLES		
BOX SERIES	W	H
11 X 18	2-1/2	3
13 X 24	2-1/2	3
15 X 27	2-1/2	3
17 X 30	2-1/2	3
24 X 36	3	5
30 X 48	3	5
30 X 60	3	5
36 X 60 & LARGER	4	6



COVER



COVER SECTION

DROP IN READER LID SIZES
6 x 9 x 1
7 x 13 x 1
9 x 15 x 1

Select sizes available in Tier 15. Tier 22 not available.







# Underground Enclosures

Hubbell maintains a large inventory of PenCell enclosures to serve your needs.

NEC & Underground Enclosures

The National Electric Code states in article 314.30 that enclosures “...shall be designed and installed to withstand all loads likely to be imposed...” and addresses issues related to enclosure size, wiring entries, enclosures without bottoms, and bonding requirements for covers.

The code references the ANSI / SCTE 77 “Specification for Underground Enclosure Integrity” National Standard, which outlines various tests that enclosures must pass to meet the standard. ANSI / SCTE 77 also provides load charts with Tier ratings to help users determine the appropriate enclosure to select based on the loadings expected in the application.

PenCell

PenCell DT enclosures with polymer concrete covers meet or exceed the test provisions of ANSI / SCTE 77 2013. To achieve this, PenCell enclosures must pass numerous material and product performance tests before they can meet ANSI / SCTE 77 2013.

Testing Requirements for ANSI / SCTE 77 2013

- Three-Position Load Testing to simulate actual application performance
- UV Degradation per ASTM G-154
- Fire Resistance per RUS 7CFR 1755.910 (PE-91)
- Chemical Resistance per ASTM D-543
- Water Absorption per ASTM D-570
- Impact Resistance per ASTM D2444
- Accelerated service per ASTM D-756, procedure E

“K” rating

For projects where Tier Ratings are not required, we offer products that have been tested in our labs to meet 5K, 10K, or 20K loads. The K-load testing differs from ANSI / SCTE 77 Tier testing in that the K-load testing is a one-time, vertical cover test to ensure the enclosure can safely withstand the static load. By contrast, the ANSI / SCTE 77 Tier testing includes cyclic testing of enclosures in three positions: lateral sidewall, vertical sidewall, and vertical cover. We carefully test and periodically retest our products to ensure they meet and will continue to meet the demands of their intended use.

Currently, there is not a standard for testing enclosures with a “K” load rating designation. No association should be made stating that enclosures with this designation meet the testing requirements of any standard such as ANSI / SCTE 77, WUC 3.6 or any other.

Cover Type	Cover Rating	Test Area
Plastic	5K (5,000 lbs)	10" X 10"
Steel	10K (10,000 lbs)	10" X 10"
Polymer Concrete	20K (20,000 lbs)	10" X 10"

## Style Guide - Tailored Product Variety

We offer a wide variety of FRP box styles in order to meet your most specialized enclosure needs. Each style offers specific strengths and assets for diverse functionality



### DT Style

Heavy duty straight wall enclosures made of a structurally ribbed HDPE box and a cover made from either polymer concrete or HDPE. DT series enclosures with polymer concrete covers achieve specific ANSI /SCTE 77 Tier ratings.



### PE Style

Light duty enclosures that include round models as well as rectangular vault models. Various cover options include HDPE or galvanized diamond plate steel. Spacers and lower extensions are available on specific rectangular vault models. Most rectangular vault models are adaptable to our above-grade pedestals.



### PM (PEM) Style

Grade level enclosures made of an HDPE foam molded box that offers modular construction. It's tapered walls prevent frost heave while allowing the units to be nested during storage. This highly versatile series can be combined with various cover options that include polymer concrete, HDPE and even split 2-piece designs. Extensions are also available.



### PR (PEMR) Style

Round top enclosures made of an HDPE tapered box combined with a polymer concrete ring and cover. The round shape also prevents the cover from falling into the enclosure cavity.

# PenCell : Available Size Chart

Style	Size	Depths	Load Rating Options
DT	11x18	9, 11, 18, 20	5K, Tier 15
	12x12	14, 16, 20, 25	5K, Tier 15
	13x24	15, 17, 18, 23, 24*	5K, Tier 15
	17x30	15, 17, 18, 24, 26, 30, 32, 36, 38*	5K, Tier 15, Tier 22 (24" & 36" depth only)
	24x36	18, 24, 36	5K, Tier 15, Tier 22
	30x48	18, 24, 36	5K, Tier 15, Tier 22
PE	6	9	5K
	9	10	5K
	10	18, 19	5K
	14	12, 17*	5K
	20	17, 19	5K, 10K
	30	12, 17, 19*	5K, 10K
	36	15	5K
PM	10x10	12	20K
	12x12	24	20K
	12x18	24	20K
	12x20	18	20K
	12x24	24	20K
	18x18	24	5K, 20K
	18x24	24	20K
	18x30	24	20K
	24x24	24*	5K, 20K
	24x36	24*	5K, 20K
	24x48	24*	5K, 20K
	24x60	24*	5K, 20K
	30x36	24*	5K, 20K
	30x48	24*	5K, 20K
	30x60	24*	5K, 20K
	36x36	24*	5K, 20K
	36x48	24*	5K, 20K
	36x60	24*	5K, 20K
	48x48	24, 30, 36, 42, 48*	20K
Round	12x12	24	20K
	18x18	24	20K

\*Extensions Available

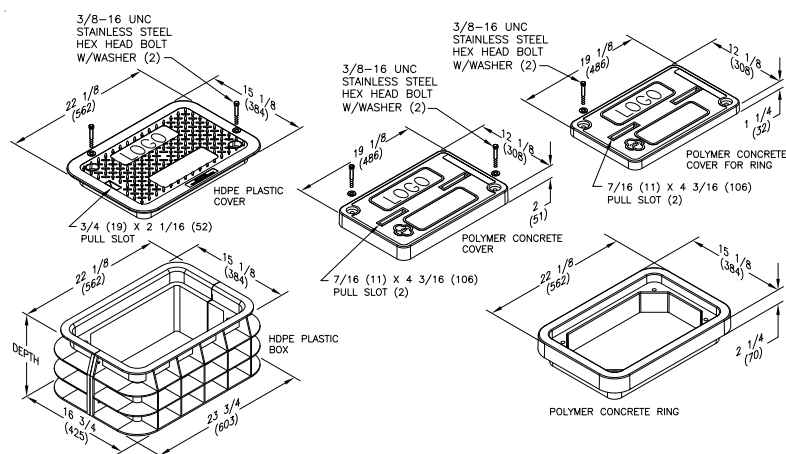




# Dimensions / Data

## 11" x 18" PenCell DT

Hex Head Bolts are Standard



### Assemblies

Description	Depth	Tier	Design / Test Load	Weight	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	9"	15	15,000 / 22,500	43	36	DT-2-1118PCH	DT111809PCH00***
Box W/ PC Ring & Cover	11"	15	15,000 / 22,500	62	33	DT-1118PCH	DT111812PRH00***
Box & HDPE Cover	9"	N/A	N/A / 5,000	15	54	DT-1118HD	DT111809HDH00***
Box & Polymer Concrete Cover	18"	15	15,000 / 22,500	53	18	DT-2-1118-18PCH	DT111818PCH00***
Box W/ PC Ring & Cover	20"	15	15,000 / 22,500	72	30	DT-1118-20PCH	DT111820PRH00***
Box & HDPE Cover	18"	N/A	N/A / 5,000	25	30	DT-1118-18HDH	DT111818HDH00***

### Covers & Ring

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
2" Poly Concrete W/ Bolts	15	15,000 / 22,500	33	Poly Concrete	DT-2-1118PCLH	DT1118CLH00***
1-1/4" Poly Conc W/ Bolts	15	15,000 / 22,500	22	Poly Concrete	DT-1118PCLH	DT1118CTH00***
HDPE Cover	N/A	N/A / 5,000	5	HDPE	DT-1118PLH	DT1118PLI12***
2-1/4" PC Ring	15	15,000 / 22,500	19	Poly Concrete	PCRD1118	DT1118RR

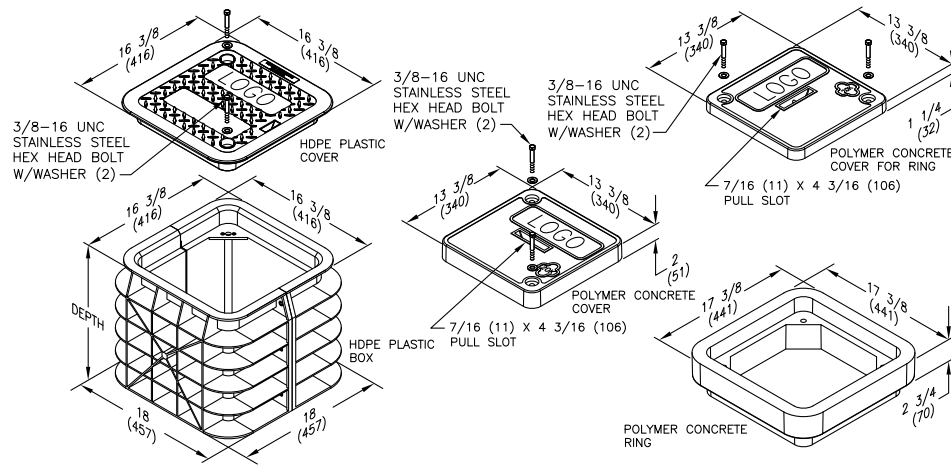
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### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray Open Bottom	9"	15	15,000 / 22,500	10	40	DT-1118GS-Y	DT111809GSY
Green Open Bottom	9"	15	15,000 / 22,500	10	40	DT-1118GS	DT111809GSN

## 12" x 12" PenCell DT

Hex Head Bolts are Standard



## Assemblies

Description	Depth	Tier	Design / Test Load	Weight	Pallet Qty	Old Part No.	New Part No.
Box & Concrete Cover	14"	15	15,000 / 22,500	38	35	DT-2-1212PCH	DT121212PCH00***
Box W/ PC Ring & Cover	16"	15	15,000 / 22,500	54	35	DT-1212PCH	DT121214PRH00***
Box & HDPE Cover	14"	N/A	N/A / 5,000	18	35	DT-1212HD	DT121212HDH00***

## Covers &amp; Ring

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
2" Poly Concrete W/ Bolts	15	15,000 / 22,500	24	Poly Concrete	DT-2-1212PCLH	DT121212CLH00***
1-1/4" Poly Conc W/ Bolts	15	15,000 / 22,500	17	Poly Concrete	DT-1212PCLH	DT121212CTH00***
HDPE Cover	N/A	N/A / 5,000	4	HDPE	DT-1212PLH	DT121212PLI12***
2-1/4" PC Ring	15	15,000 / 22,500	23	Poly Concrete	PCRDT1212	DT1212RR

Replace \*\*\* with a logo code found on page U180.

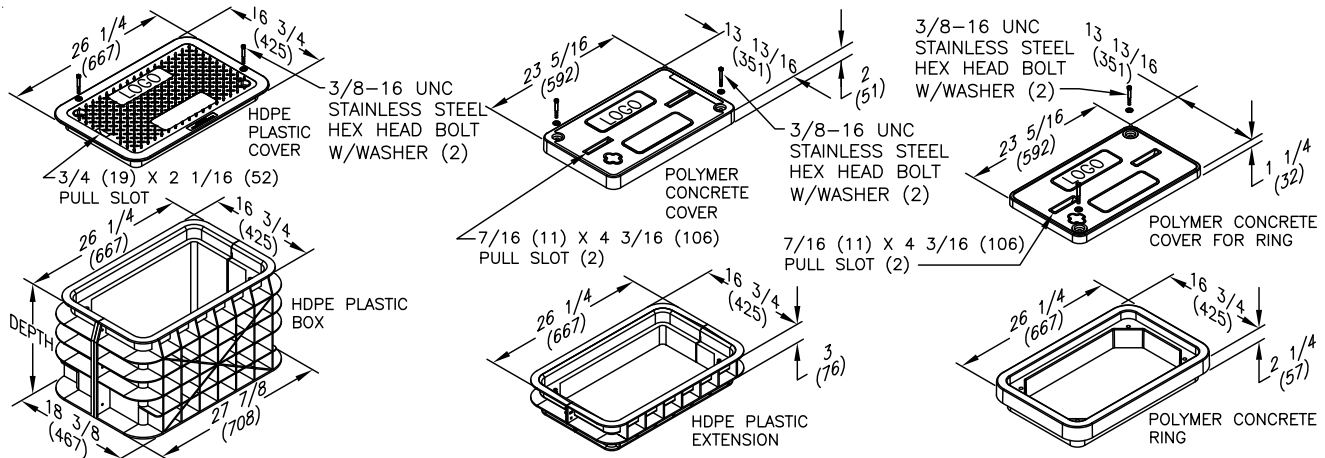
## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray Open Bottom	14"	15	15,000 / 22,500	14	35	DT-1212GS-Y	DT121212GSY
Green Open Bottom	14"	15	15,000 / 22,500	14	35	DT-1212GS	DT121212GSN

# Dimensions / Data

## 13" x 24" PenCell DT

Hex Head Bolts are Standard



### Assemblies

Description	Depth	Tier	Design / Test Load	Weight	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	15"	15	15,000 / 22,500	63	25	DT-2-1324PCH	DT132415PCH00***
Box & HDPE Cover	15"	N/A	N/A / 5,000	26	25	DT-1324HD	DT132415HDH00***
Box, Ext & Polymer Concrete Cover	18"	15	15,000 / 22,500	68	25	DT-2-1324-18PCH	DT132418PCH00***
Box W/ PC Ring & Cover	17"	15	15,000 / 22,500	85	25	DT-1324-18PCH	DT132418PRH00***
Box, Ext & HDPE Cover	18"	N/A	N/A / 5,000	31	25	DT-1324-18HDH	DT132418HDH00***
Box, (3) Ext & Polymer Concrete Cover	24"	15	15,000 / 22,500	78	20	DT-2-1324-24PCH	DT132424PCH00***
Box, (2) Ext W/ PC Ring & Cover	23"	15	15,000 / 22,500	95	20	DT-1324-24PCH	DT132424PRH00***
Box, (3) Ext & HDPE Cover	24"	N/A	N/A / 5,000	41	20	DT-1324-24HDH	DT132424HDH00***

### Covers & Ring

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
2" Poly Concrete W/ Bolts	15	15,000 / 22,500	43	Poly Concrete	DT-2-1324PCLH	DT1324CLH00***
1-1/4" Poly Conc W/ Bolts	15	15,000 / 22,500	65	Poly Concrete	DT-1324PCLH	DT1324CTH00***
HDPE Cover	N/A	N/A / 5,000	6	HDPE	DT-1324PLH	DT1324PLI12***
2-1/4" PC Ring	15	15,000 / 22,500	22	Poly Concrete	PCRD1324	DT1324RR

Replace \*\*\* with a logo code found on page U180.

### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray Open Bottom	15"	15	15,000 / 22,500	20	25	DT-1324GS-Y	DT132415GSY
Green Open Bottom	15"	15	15,000 / 22,500	20	25	DT-1324GS	DT132415GSN

### Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
HDPE Extension (Gray)	3"	15	15,000 / 22,500	5	40	DT-1324-3EXT-Y	DT132403EXY
HDPE Extension (Green)	3"	15	15,000 / 22,500	5	40	DT-1324-3EXT	DT132403EXN

# Dimensions / Data

## 17" x 30" PenCell DT

### Assemblies with Concrete Covers

Description	Depth	Tier	Design / Test Load	Weight	Pallet Qty	Old Part No.	New Part No.
Box & 2" Cover	15"	15	15,000 / 22,500	102	12	DT-2-1730PCH	DT173015PCH00***
With 3" Extension	18"	15	15,000 / 22,500	108	12	DT-2-1730-18PCH	DT173018PCH00***
Box, PC Ring & Cover	17-1/4"	15	15,000 / 22,500	123	12	DT-1730-18PCH	DT173018PRH00***
Box & 2" Cover	24"	15	15,000 / 22,500	124	12	DT-2-1730-24PCH	DT173024PCH00***
Box, PC Ring & Cover	26-1/4"	15	15,000 / 22,500	145	N/A	DT-1730-24PCH	DT173024PRH00***
With (2) 3" Extensions	30"	15	15,000 / 22,500	130	6	DT-2-1730-30PCH	DT173030PCH00***
Box, PC Ring & Cover With (2) 3" Extensions	32-1/4"	15	15,000 / 22,500	157	N/A	DT-1730-30PCH	DT173030PRH00***
Box & 2" Cover	36"	15	15,000 / 22,500	140	6	DT-2-1730-36PCH	DT173036PCH00***
Box, PC Ring & Cover	38-1/4"	15	15,000 / 22,500	161	N/A	DT-1730-36PCH	DT173036PRH00***

NOTE: Tier 22 available for 24" & 36" depth boxes / assemblies.

### Assemblies with HDPE Covers

Description	Depth	Tier	Design / Test Load	Weight	Pallet Qty	Old Part No.	New Part No.
Box & Cover	15"	N/A	N/A / 5,000	35	12	DT-1730HD	DT173015HDH00***
With 3" Extension	18"	N/A	N/A / 5,000	41	12	DT-1730-HDH	DT173018HDH00***
Box & Cover	24"	N/A	N/A / 5,000	50	12	DT-1730-24HDH	DT173024HDH00***
With (2) 3" Extensions	30"	N/A	N/A / 5,000	57	6	DT-1730-30HDH	DT173030HDH00***
Box & Cover	36"	N/A	N/A / 5,000	73	6	DT-1730-36HDH	DT173036HDH00***

### Covers & Polymer Concrete Ring

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
2" with Bolts	15	15,000 / 22,500	77	Poly Concrete	DT-2-1730PCLH	DT1730CLH00***
1-1/4" with Bolts	15	15,000 / 22,500	60	Poly Concrete	DT-1730PCLH	DT1730CTH00***
HDPE Cover	N/A	N/A / 5,000	10	HDPE	DT-1730PLH	DT1730PLI12***
PC Ring	15	15,000 / 22,500	38	Poly Concrete	PCRD1730	DT1730RR

NOTE: Tier 22 available for 24" & 36" depth boxes / assemblies.

### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray Open Bottom	15"	15	15,000 / 22,500	25	12	DT-1730GS-Y	DT173015GSY
Green Open Bottom	15"	15	15,000 / 22,500	25	12	DT-1730GS	DT173015GSN
Gray Open Bottom	24"	15	15,000 / 22,500	47	12	DT-1730-24GS-Y	DT173024GSY
Green Open Bottom	24"	15	15,000 / 22,500	47	12	DT-1730-24GS	DT173024GSN
Gray Open Bottom	36"	15	15,000 / 22,500	63	6	DT-1730-36GS-Y	DT173036GSY
Green Open Bottom	36"	15	15,000 / 22,500	63	6	DT-1730-36GS	DT173036GSN

NOTE: Tier 22 available for 24" & 36" depth boxes / assemblies.

### Extensions

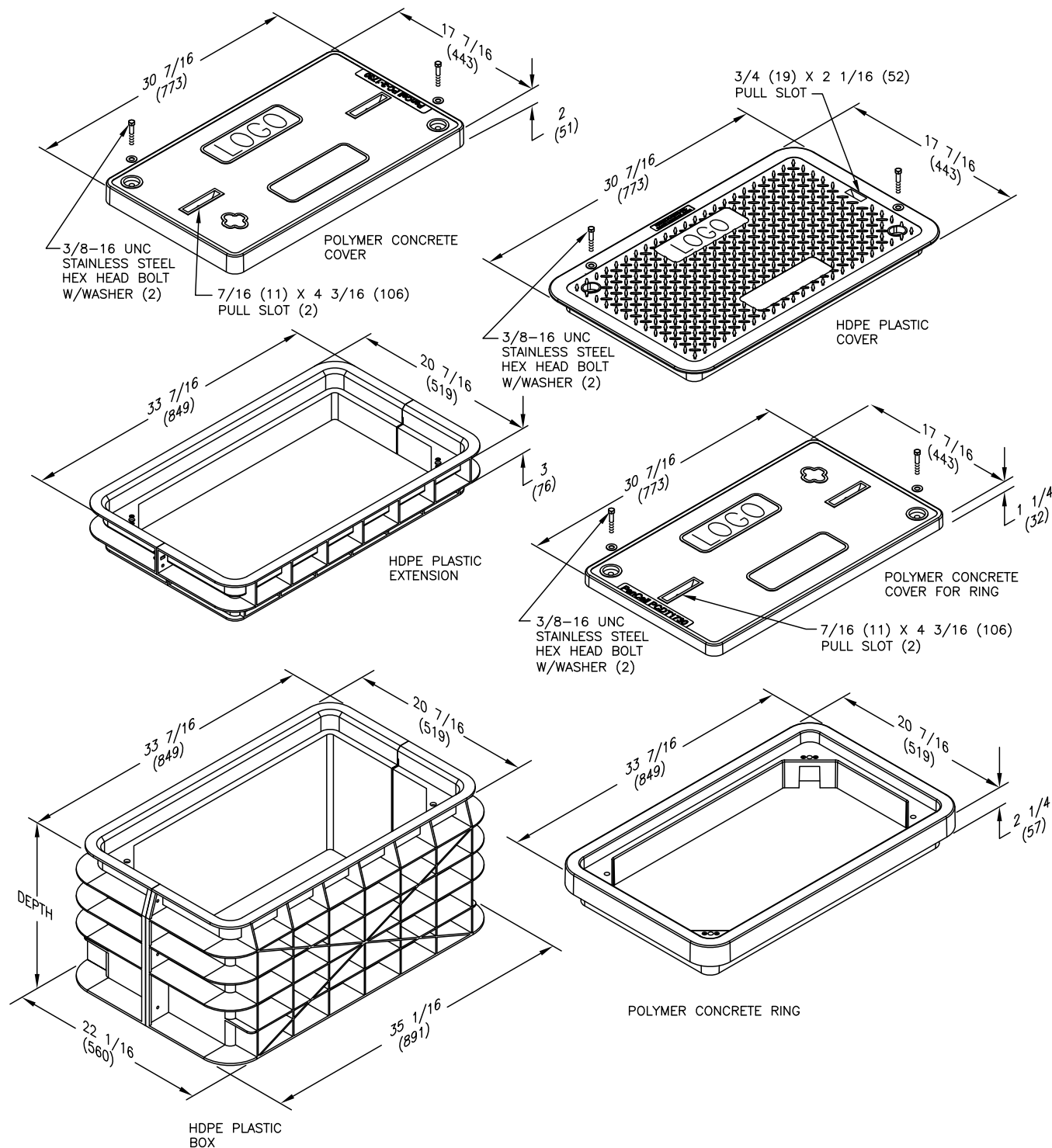
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray	3"	15	15,000 / 22,500	6	40	DT-1730-3EXT-Y	DT173003EXY
Green	3"	15	15,000 / 22,500	6	40	DT-1730-3EXT	DT173003EXN

Replace \*\*\* with a logo code found on page U180.

# Dimensions / Data

## 17" x 30" PenCell DT (continued)

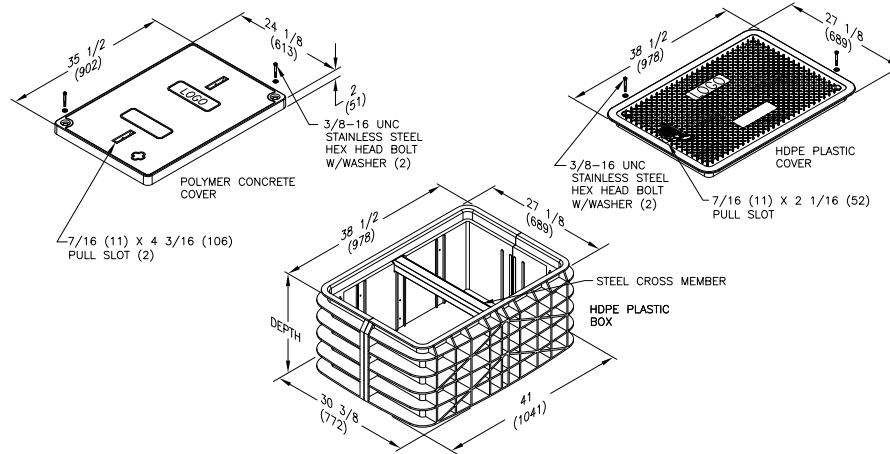
Hex Head Bolts are Standard





## 24" x 36" PenCell DT

Hex Head Bolts are Standard



## Assemblies

Description	Depth	Tier	Design / Test Load	Weight	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	18"	15	15,000 / 22,500	164	2	DT-2-2436-18PCH	DT243618PCH00***
Box & HDPE Cover	18"	N/A	N/A / 5,000	65	6	DT-2436-18H	DT243618HDH00***
Box & Polymer Concrete Cover	24"	15	15,000 / 22,500	180	4	DT-2-2436PCH	DT243624PCH00***
Box & HDPE Cover	24"	N/A	N/A / 5,000	81	4	DT-2436HD	DT243624HDH00***
Box & Polymer Concrete Cover	36"	15	15,000 / 22,500	229	2	DT-2-2436-36PCH	DT243636PCH00***
Box & HDPE Cover	36"	N/A	N/A / 5,000	130	2	DT-2436PLH	DT243636HDH00***

## Covers

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
2" with Bolts	15	15,000 / 22,500	117	Poly Concrete	DT-2-2436PCLH	DT2436CLH00***
HDPE with Bolts	N/A	N/A / 5,000	18	HDPE	DT-2436PLH	DT2436PLI12***

Replace \*\*\* with a logo code found on page U180. NOTE: Tier 22 available.

Available with EZ-Locate.

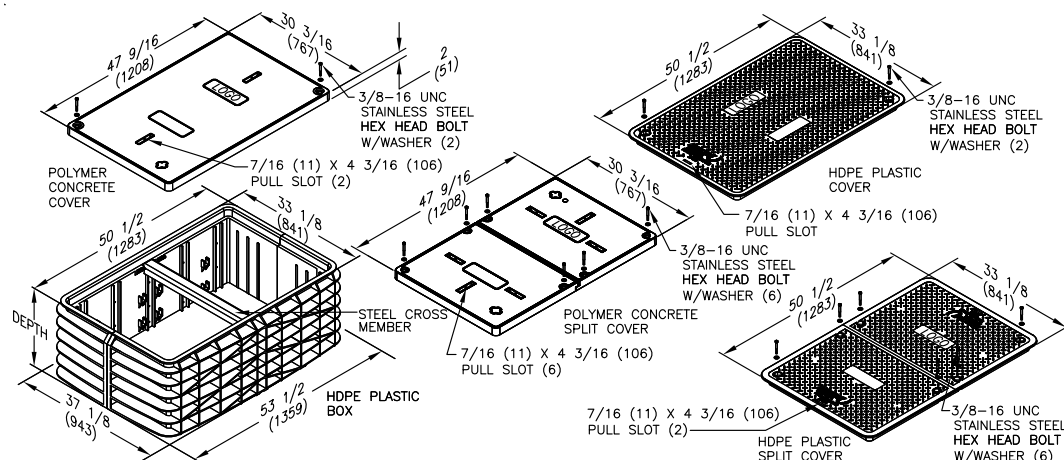
## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray Open Bottom	18"	15	15,000 / 22,500	47	6	DT-2436-18GS-Y	DT243618GSY
Green Open Bottom	18"	15	15,000 / 22,500	47	6	DT-2436-18GS	DT243618GSN
Gray Open Bottom	24"	15	15,000 / 22,500	63	4	DT-2436-24GS-Y	DT243624GSY
Green Open Bottom	24"	15	15,000 / 22,500	63	4	DT-2436-24GS	DT243624GSN
Gray Open Bottom	36"	15	15,000 / 22,500	112	2	DT-2436-36GS-Y	DT243636GSY
Green Open Bottom	36"	15	15,000 / 22,500	112	2	DT-2436-36GS	DT243636GSN

# Dimensions / Data

## 13" x 24" PenCell DT

Hex Head Bolts are Standard



### Assemblies

Description	Depth	Tier	Design / Test Load	Weight	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	24"	15	15,000 / 22,500	285	1	DT-2-3048-24PCH	DT304824PCH00***
Box & HDPE Cover	24"	N/A	N/A / 5,000	109	1	DT-3048-24H	DT304824HDH00***
Box & Polymer Concrete Cover	36"	15	15,000 / 22,500	322	1	DT-2-3048-36PCH	DT304836PCH00***
Box & HDPE Cover	36"	N/A	N/A / 5,000	146	1	DT-3048-36H	DT304836HDH00***

### Covers

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
2" with Bolts	15	15,000 / 22,500	200	Poly Concrete	DT-2-3048PCLH	DT3048CLH00***
HDPE with Bolts	N/A	N/A / 5,000	24	HDPE	DT-3048PLH	DT3048PLI12***
2" Split Cover	15	15,000 / 22,500	216	Poly Concrete	PCLDT-2-3048-SPL	DT3048CSH00***
HDPE Split Cover	N/A	N/A / 5,000	26	HDPE	DT-3048PLH-SPL	DT3048SPI12***

Replace \*\*\* with a logo code found on page U180. NOTE: Tier 22 available. Available with EZ-Locate.

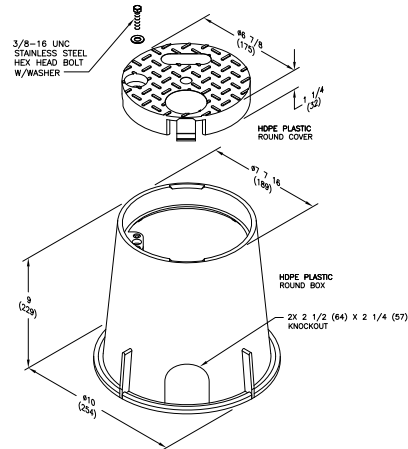
### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray Open Bottom	18"	15	15,000 / 22,500	64	N/A	DT-3048-18GS-Y	DT304818GSY
Green Open Bottom	18"	15	15,000 / 22,500	64	N/A	DT-3048-18GS	DT304818GSN
Gray Open Bottom	24"	15	15,000 / 22,500	85	4	DT-3048-24GS-Y	DT304824GSY
Green Open Bottom	24"	15	15,000 / 22,500	85	4	DT-3048-24GS	DT304824GSN
Gray Open Bottom	36"	15	15,000 / 22,500	122	2	DT-3048-36GS-Y	DT304836GSY
Green Open Bottom	36"	15	15,000 / 22,500	122	2	DT-3048-36GS	DT304836GSN



## 6" PenCell PE

Hex Head Bolts are Standard



## Assemblies

Description	Depth	Tier	Design / Test Load	Weight	Pallet Qty	Old Part No.	New Part No.
Box & HDPE Cover	9"	N/A	N/A / 5,000	3	300	PE-6HDH	PE6HDH00***
With Knockouts	9"	N/A	N/A / 5,000	3	300	PE-6HDHK	PE6HDHK0***

## Covers

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
HDPE	N/A	N/A / 5,000	1	HDPE	PE-6-PLH	PE6PLI12***

Replace \*\*\* with a logo code found on page U180.

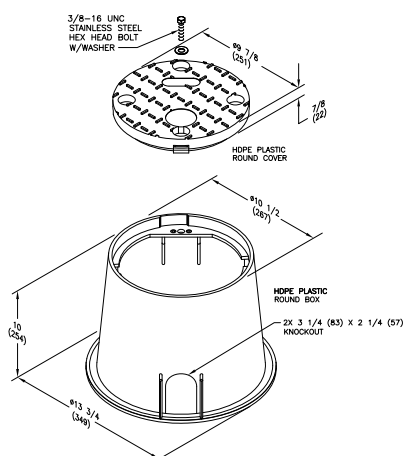
## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Green Open Bottom	9"	N/A	N/A / 5,000	2	300	PE-6-GS	PE6GSI01
With Knockouts	9"	N/A	N/A / 5,000	2	300	PE-6-GSK	PE6GSI05

# Dimensions / Data

## 9" PenCell PE

Hex Head Bolts are Standard



### Assemblies

Description	Depth	Tier	Design / Test Load	Weight	Pallet Qty	Old Part No.	New Part No.
Box & HDPE Cover	10"	N/A	N/A / 5,000	4	200	PE-9HDH	PE9HDH00***
With Knockouts	10"	N/A	N/A / 5,000	4	200	PE-9HDHK	PE9HDHK0***

### Covers

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
HDPE	N/A	N/A / 5,000	1	HDPE	PE-9-PLH	PE9PLI12***

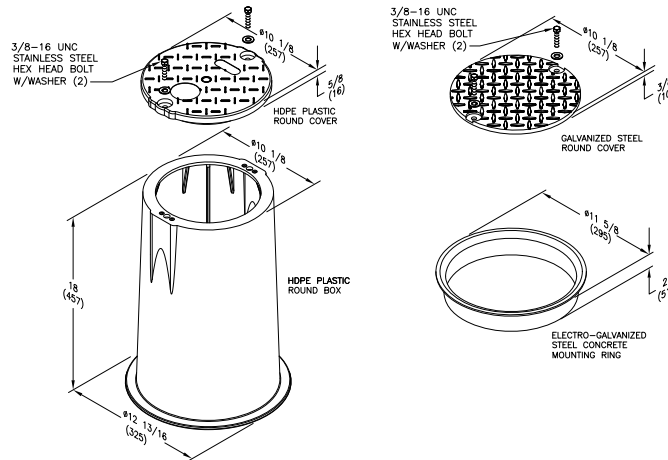
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### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Green Open Bottom	10"	N/A	N/A / 5,000	3	200	PE-9-GS	PE9GSI01
With Knockouts	10"	N/A	N/A / 5,000	3	200	PE-9-GSK	PE9GSI05

## 10" PenCell PE

Hex Head Bolts are Standard



## Assemblies

Description	Depth	Tier	Design / Test Load	Weight	Pallet Qty	Old Part No.	New Part No.
Box & HDPE Cover	18-5/8"	N/A	N/A / 5,000	7	52	PE-10HDH	PE10HDH00***
With Steel / PC Ring	19"	N/A	N/A / 5,000	9	26	PE-10HDH-4	PE10URH00***
Box & Steel Cover	18-1/4"	N/A	N/A / 10,000	15	20	PE-10-UH	PE10UPH00***
With Steel / PC Ring	19"	N/A	N/A / 10,000	17	26	PE-10-UH-4	PE10U4H00***

## Covers &amp; Concrete Ring

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
HDPE	N/A	N/A / 5,000	2	HDPE	PE-10-PLH	PE10PLI12***
Steel	N/A	N/A / 10,000	10	Steel	PE-10-SLH	PE10SLH00***
Steel / PC Ring	N/A	N/A / 10,000	2	Steel / PC	PE-10-4	RM02101

Replace \*\*\* with a logo code found on page U180.

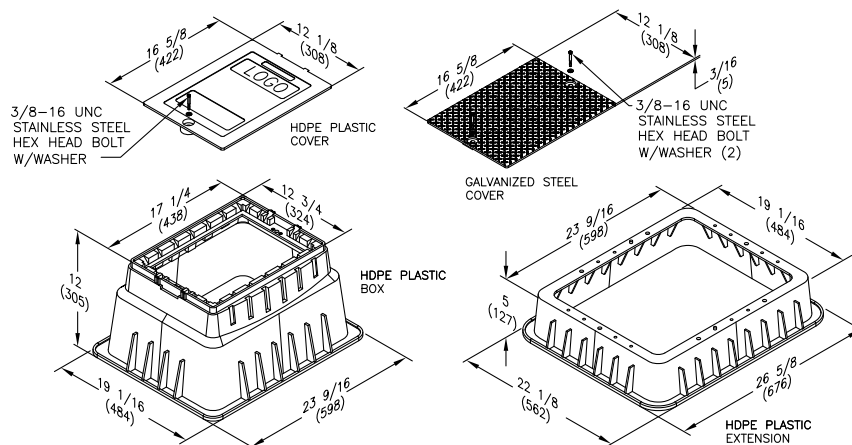
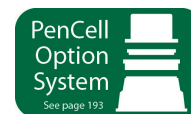
## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Green Open Bottom	18"	N/A	N/A / 5,000	5	52	PE-10-GS	PE10GSI01
Box for Steel / PC Ring	18"	N/A	N/A / 5,000	5	52	PE-10-GS	PE10GSI00

# Dimensions / Data

## 14" PenCell PE

Hex Head Bolts are Standard



### Assemblies

Description	Depth	Tier	Design / Test Load	Weight	Pallet Qty	Old Part No.	New Part No.
Box & HDPE Cover	12"	N/A	N/A / 5,000	13	96	PE-14HDH	PE14HDH00***
W/ Penta Bolt / Crimp	12"	N/A	N/A / 5,000	13	96	PE-14HDXCL	PE14HDXCL***
Box & Steel Cover	12"	N/A	N/A / 10,000	21	48	PE-14-UH	PE14UPH00***
With Ground Lug	12"	N/A	N/A / 10,000	21	48	PE-14-UHG	PE14UPHGR***
Box & HDPE Cover With 5" Bottom Ext	17"	N/A	N/A / 5,000	16	30	PE-14HDH-5	PE14H5H00***
Box & Steel Cover With 5" Bottom Ext	17"	N/A	N/A / 5,000	24	30	PE-14-UH-5	PE14S5H00***

### Covers

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
HDPE	N/A	N/A / 5,000	3	HDPE	PE-14-PLH	PE14PLI12***
Steel	N/A	N/A / 10,000	12	Steel	PE-14-SLH	PE14SLH00***

Replace \*\*\* with a logo code found on page U180.

### Boxes

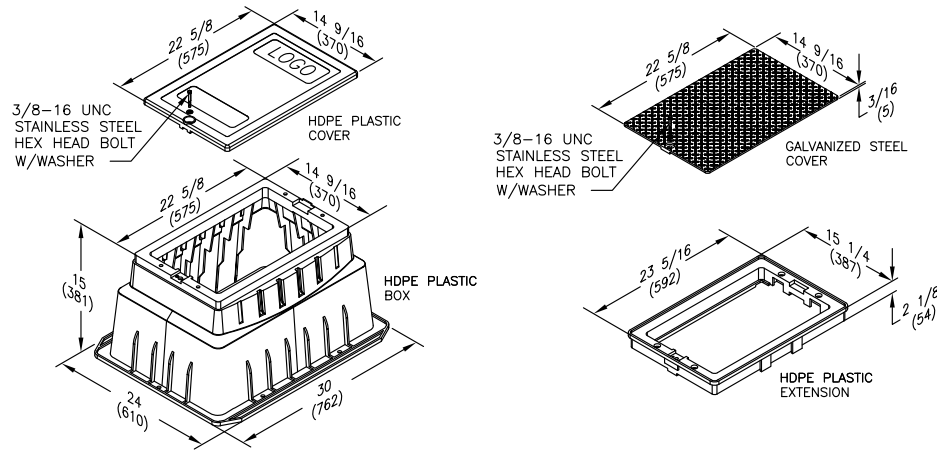
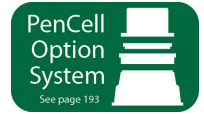
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Green Open Bottom	12"	N/A	N/A / 5,000	10	96	PE-14-GS	PE14GSI01

### Extension

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
5" Bottom	5"	N/A	N/A / 5,000	3	60	PE-14-5	PE1405EXN

## 20" PenCell PE

Hex Head Bolts are Standard



## Assemblies

Description	Depth	Tier	Design / Test Load	Weight	Pallet Qty	Old Part No.	New Part No.
Box & HDPE Cover	17"	N/A	N/A / 5,000	23	40	PE-20HDH	PE20HDH00***
W/ Penta Bolt/Crimp	17"	N/A	N/A / 5,000	23	40	PE-20HDXCL	PE20HDXCL***
Box & Steel Cover	17"	N/A	N/A / 10,000	34	32	PE-20-UH	PE20UPH00***
With Ground Lug	17"	N/A	N/A / 10,000	34	32	PE-20-UHG	PE20UPHGR***
Box & HDPE Cover With 2" Spacer Ext	19"	N/A	N/A / 5,000	28	32	PE-20HDH-2	PE20H2H00***
Box & Steel Cover With 2" Spacer Ext	19"	N/A	N/A / 10,000	39	24	PE-20-UH-2	PE20S2H00***

## Covers

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
HDPE	N/A	N/A / 5,000	6	HDPE	PE-20-PLH	PE20PLI12***
HDPE W/ Penta	N/A	N/A / 5,000	6	HDPE	PE-20-PLXCL	PE20PLI13***
Steel	N/A	N/A / 10,000	19	Steel	PE-20-SLH	PE20SLH00***

Replace \*\*\* with a logo code found on page U180.

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Green Open Bottom	17"	N/A	N/A / 5,000	15	40	PE-20-GS	PE20GSI01
Green with Crimp Lock	17"	N/A	N/A / 5,000	15	40	PE-20-GSXCL	PE20GSI03

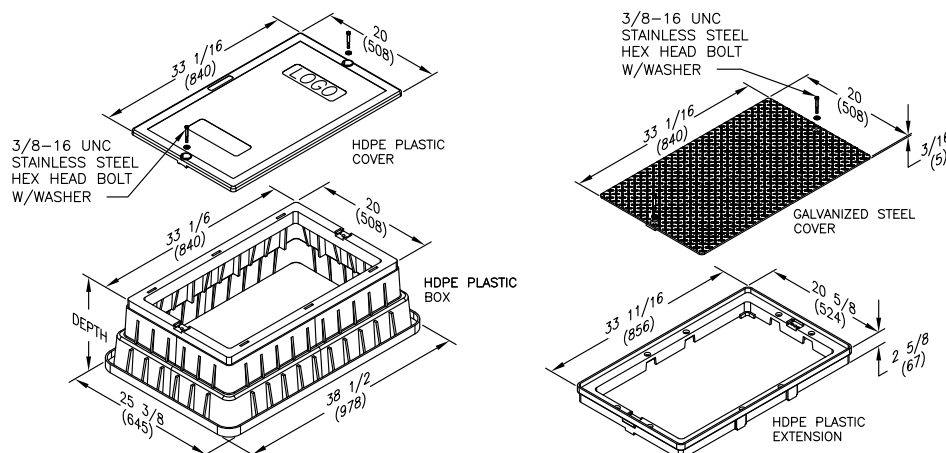
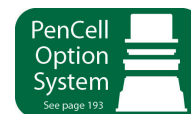
## Extension

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
2" Top Spacer	2"	N/A	N/A / 5,000	5	50	PE-20-2	PE20G2

# Dimensions / Data

## 30" PenCell PE

Hex Head Bolts are Standard



### Assemblies

Description	Depth	Tier	Design / Test Load	Weight	Pallet Qty	Old Part No.	New Part No.
Box & HDPE Cover	12"	N/A	N/A / 5,000	35	20	PE-30-12HDH	PE3012HDH00***
Box & Steel Cover	12"	N/A	N/A / 10,000	57	14	PE-30-12UH	PE3012UPH00***
Box & HDPE Cover	17"	N/A	N/A / 5,000	38	18	PE-30-HDH	PE30HDH00***
With Penta Blt / Crimp	17"	N/A	N/A / 5,000	38	16	PE-30HDXCL	PE30HDXCL***
Box & Steel Cover	17"	N/A	N/A / 10,000	60	12	PE-30-UH	PE30UPH00***
With Ground Lug	17"	N/A	N/A / 10,000	60	12	PE-30-UHG	PE30UPHGR***
Box & HDPE Cover W/ 2" Top Ext	19"	N/A	N/A / 5,000	43	16	PE-30HDH-2	PE30H2H00***
With 2" Top Ext & GL	19"	N/A	N/A / 10,000	65	12	PE-30-UH-2	PE30S2HGR***

### Covers

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
HDPE	N/A	N/A / 5,000	13	HDPE	PE-30-PLH	PE30PLI12***
HDPE W/ Penta	N/A	N/A / 5,000	13	HDPE	PE-30-PLXCL	PE30PLI07***
Steel	N/A	N/A / 10,000	35	Steel	PE-30-SLH	PE30SLH00***

Replace \*\*\* with a logo code found on page U180.

### Boxes

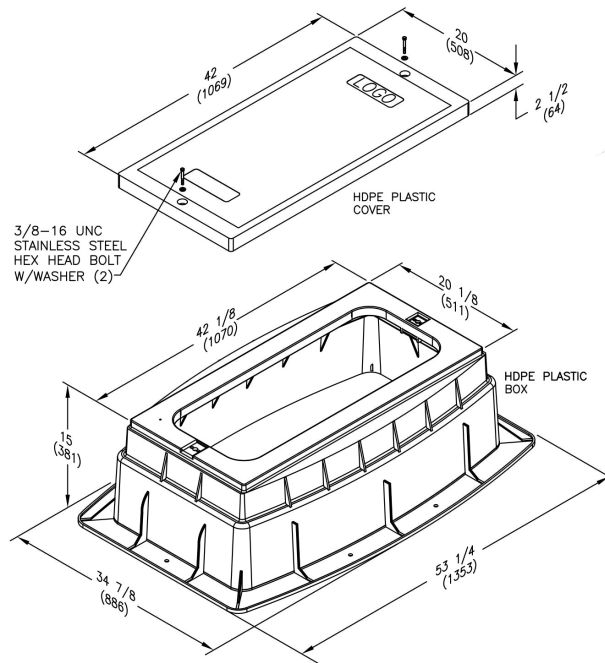
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Open Bottom	12"	N/A	N/A / 5,000	22	20	PE-30-12GS	PE3012GSI01
Open Bottom	17"	N/A	N/A / 5,000	25	18	PE-30-GS	PE30GSI01

### Extension

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
2" Top Spacer	2"	N/A	N/A / 5,000	N/A	N/A	PE-30-2	PE30G2

## 36" PenCell PE

Hex Head Bolts are Standard



## Assemblies

Description	Depth	Tier	Design / Test Load	Weight	Pallet Qty	Old Part No.	New Part No.
Box & HDPE Cover	15"	N/A	N/A / 5,000	45	9	PE-36HDH	PE36HDH00***

## Covers

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
HDPE	N/A	N/A / 5,000	15	HDPE	PE-36-PLH	PE36PLI12***

Replace \*\*\* with a logo code found on page U180.

## Boxes

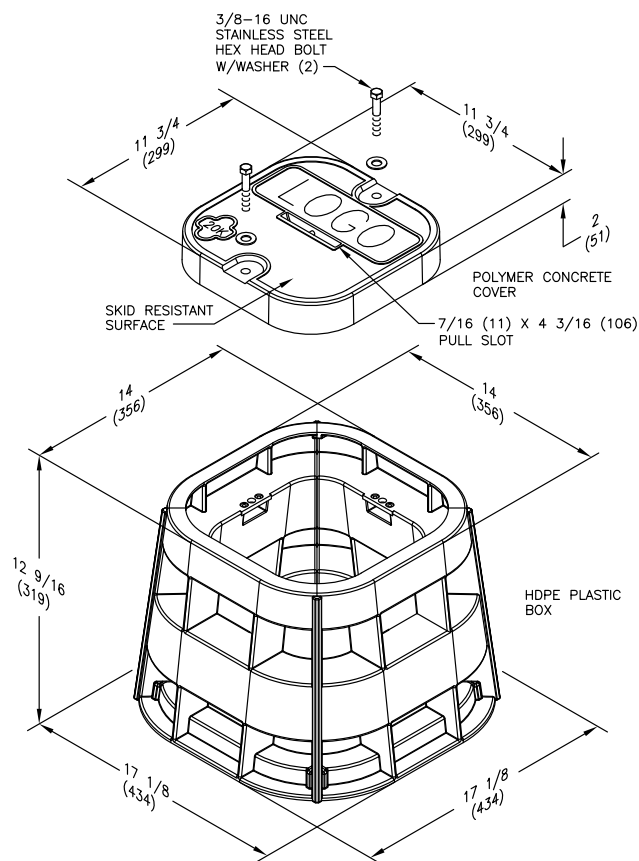
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Open Bottom	15"	N/A	N/A / 5,000	30	9	PE-36-GS	PE36GSI01



# Dimensions / Data

## 10" x 10" PenCell PM (PEM 10 Series)

Hex Head Bolts are Standard



### Assembly

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	12"	N/A	N/A / 20,000	30	45	PEM-1010-PCH	PM101012PCH00***

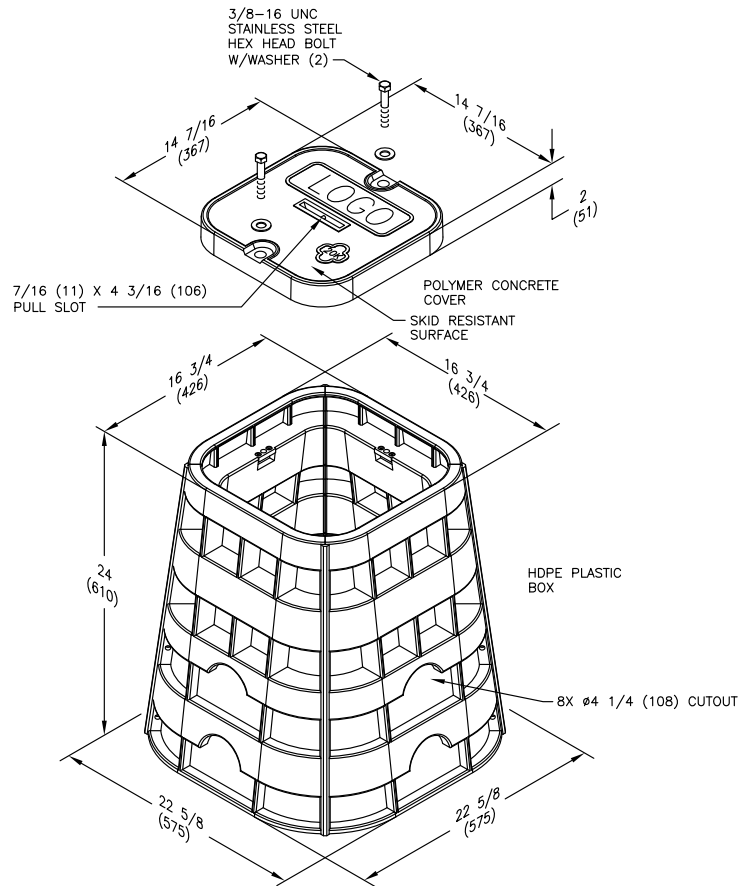
### Cover

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
1 Piece W/ 2 Bolts	N/A	N/A / 20,000	19	Poly Concrete	PEM-1010-PCLH	PM1010CLH00***

### Box

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Open Bottom	12"	N/A	N/A / 20,000	11	45	PEM-1010-GS	PM101012GSY

Replace \*\*\* with a logo code found on page U180.

**12" x 12" PenCell PM (PEM 12 Series)****Hex Head Bolts are Standard****Assembly**

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	24"	N/A	N/A / 20,000	68	16	PEM-1212-PCH	PM121224PCH00***

**Cover**

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
1 Piece W/ 2 Bolts	N/A	N/A / 20,000	28	Poly Concrete	PEM-1212-PCLH	PM1212CLH00***

**Box**

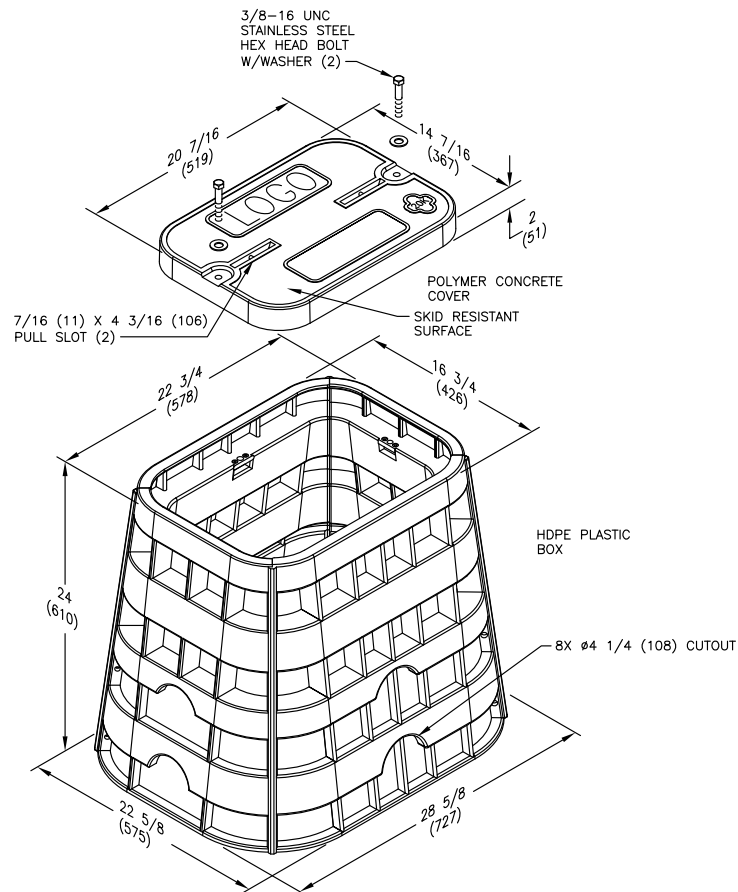
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Open Bottom	24"	N/A	N/A / 20,000	40	16	PEM-1212-GS	PM121224GSY

Replace \*\*\* with a logo code found on page U180.

# Dimensions / Data

## 12" x 18" PenCell PM (PEM 12 Series)

Hex Head Bolts are Standard



### Assembly

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	24"	N/A	N/A / 20,000	82	20	PEM-1218-PCH	PM121824PCH00***

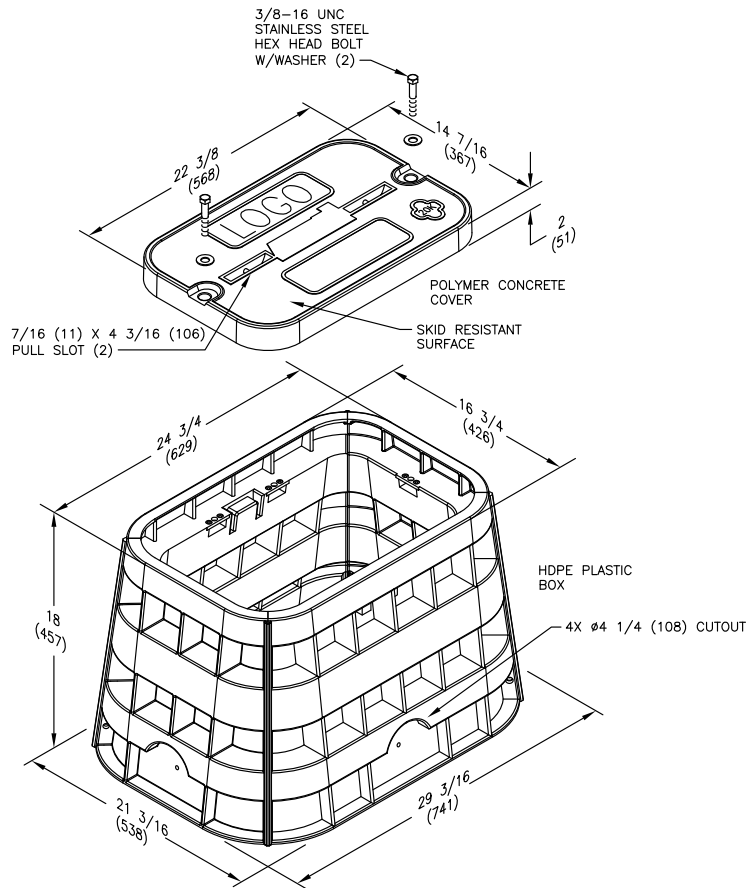
### Cover

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
1 Piece W/ 2 Bolts	N/A	N/A / 20,000	45	Poly Concrete	PEM-1218-PCLH	PM1218CLH00***

### Box

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Open Bottom	24"	N/A	N/A / 20,000	37	20	PEM-1218-GS	PM121824GSY

Replace \*\*\* with a logo code found on page U180.

**12" x 20" PenCell PM (PEM 12 Series)****Hex Head Bolts are Standard****Assembly**

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	18"	N/A	N/A / 20,000	92	30	PEM-1220-PCH	PM122018PCH00***

**Cover**

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
1 Piece W/ 2 Bolts	N/A	N/A / 20,000	47	Poly Concrete	PEM-1220-PCLH	PM1220CLH00***

**Box**

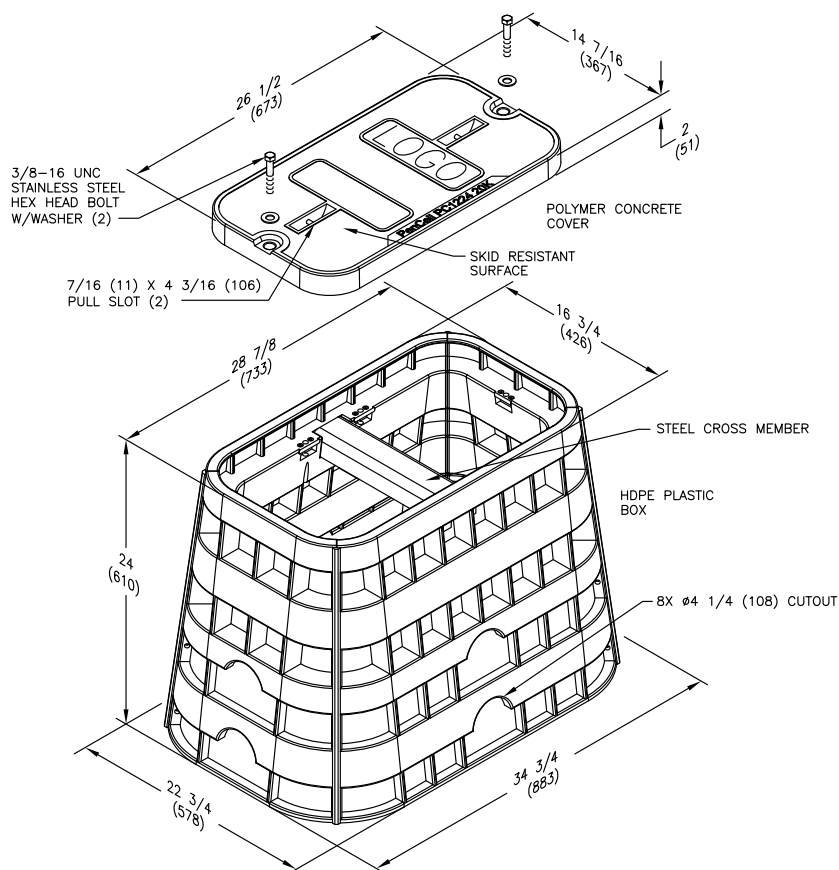
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Open Bottom	18"	N/A	N/A / 20,000	45	30	PEM-1220-GS	PM122018GSY

Replace \*\*\* with a logo code found on page U180.

# Dimensions / Data

## 12" x 24" PenCell PM (PEM 12 Series)

Hex Head Bolts are Standard



### Assembly

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	24"	N/A	N/A / 20,000	105	20	PEM-1224-PCH	PM122424PCH00***

### Cover

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
1 Piece W/ 2 Bolts	N/A	N/A / 20,000	54	Poly Concrete	PEM-1224-PCLH	PM1224CLH00***

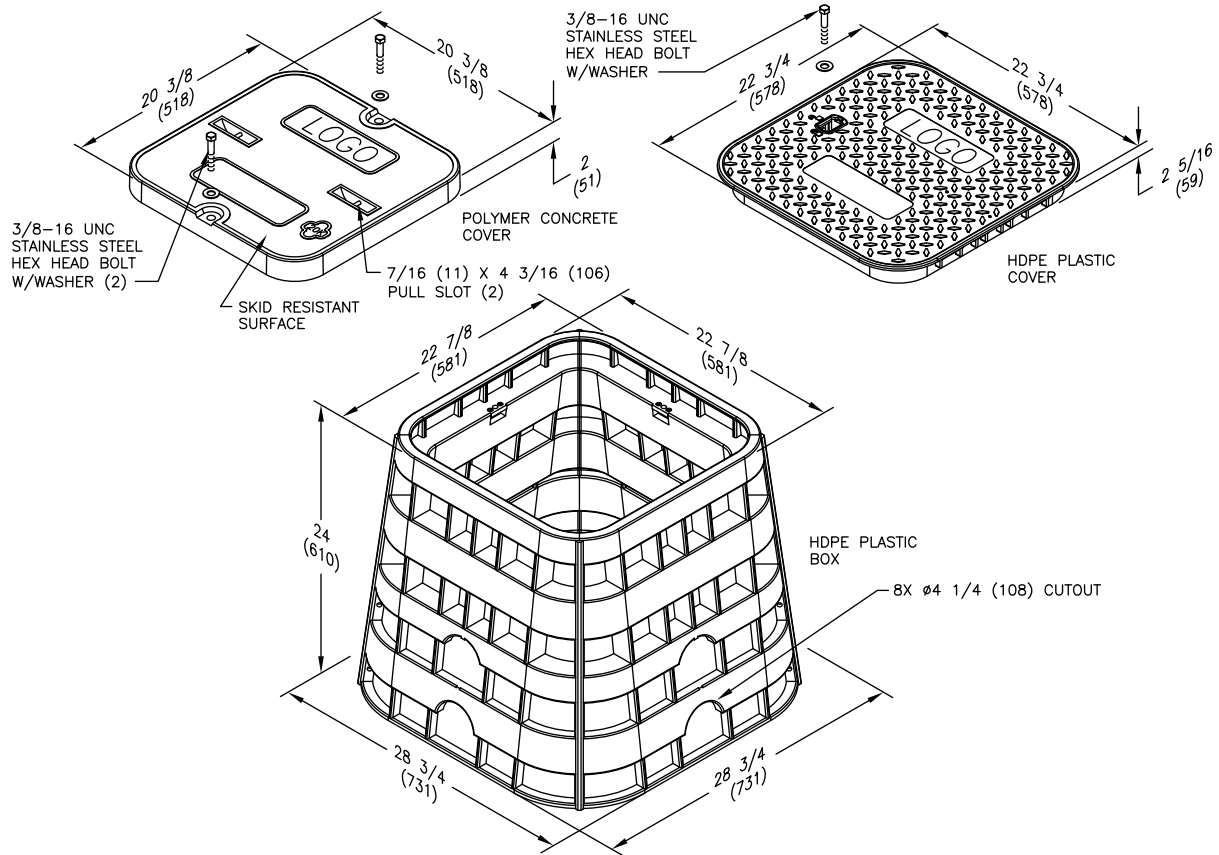
### Box

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Open Bottom	24"	N/A	N/A / 20,000	51	20	PEM-1224-GS	PM122424GSY

Replace \*\*\* with a logo code found on page U180.

## 18" x 18" PenCell PM (PEM 18 Series)

Hex Head Bolts are Standard



## Assemblies

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	24"	N/A	N/A / 20,000	103	20	PEM-1818-PCH	PM181824PCH00***
Box & HDPE Cover	24"	N/A	N/A / 5,000	58	20	PEM-1818H	PM181824HDH00***

## Covers

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
1 Piece W/ 2 Bolts	N/A	N/A / 20,000	54	Poly Concrete	PEM-1818-PCLH	PM1818CLH00***
1 Piece W/ 2 Bolts	N/A	N/A / 5,000	7	HDPE	PEM-1818PLH	PM1818PLI12***

## Boxes

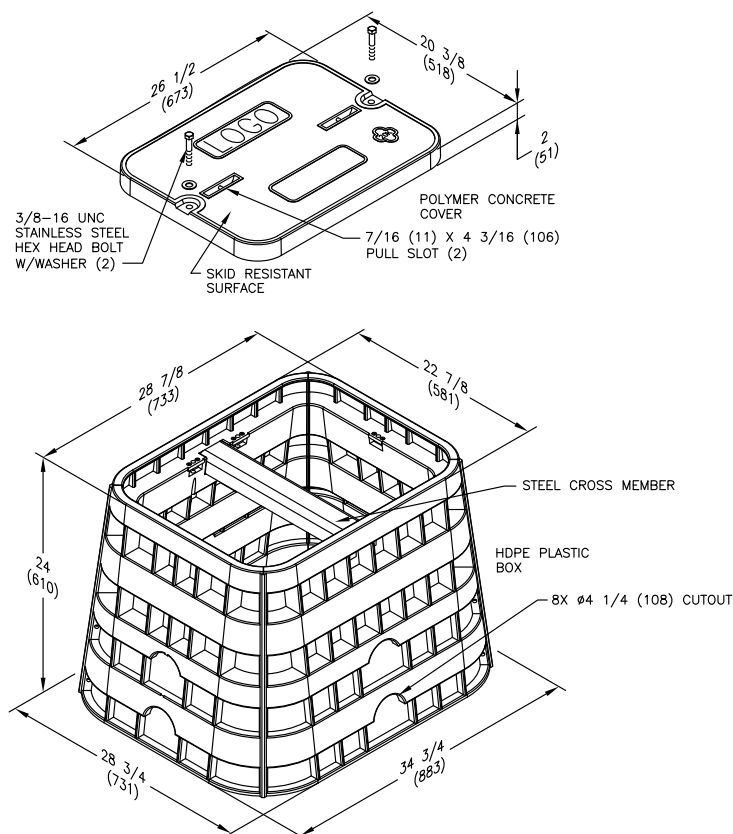
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray Open Bottom	24"	N/A	N/A / 20,000	51	20	PEM-1818-GS	PM181824GSY
Green Open Bottom	24"	N/A	N/A / 20,000	51	20	PEM-1818-GS	PM181824GSN

Replace \*\*\* with a logo code found on page U180.

# Dimensions / Data

## 18" x 24" PenCell PM (PEM 18 Series)

Hex Head Bolts are Standard



### Assembly

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	24"	N/A	N/A / 20,000	128	20	PEM-1824-PCH	PM182424PCH00***

### Cover

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
1 Piece W/ 2 Bolts	N/A	N/A / 20,000	62	Poly Concrete	PEM-1824-PCLH	PM1824CLH00***

### Box

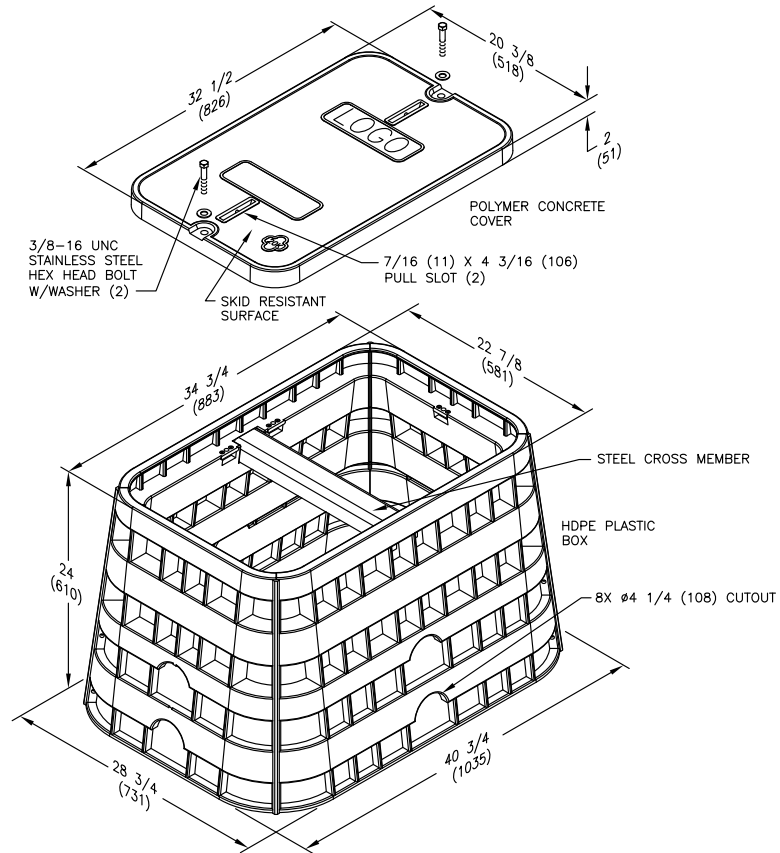
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Open Bottom	24"	N/A	N/A / 20,000	66	20	PEM-1824-GS	PM182424GSY

Replace \*\*\* with a logo code found on page U180.



## 18" x 30" PenCell PM (PEM 18 Series)

Hex Head Bolts are Standard



## Assembly

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	24"	N/A	N/A / 20,000	170	20	PEM-1830-PCH	PM183024PCH00***

## Cover

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
1 Piece W/ 2 Bolts	N/A	N/A / 20,000	70	Poly Concrete	PEM-1830-PCLH	PM1830CLH00***

## Box

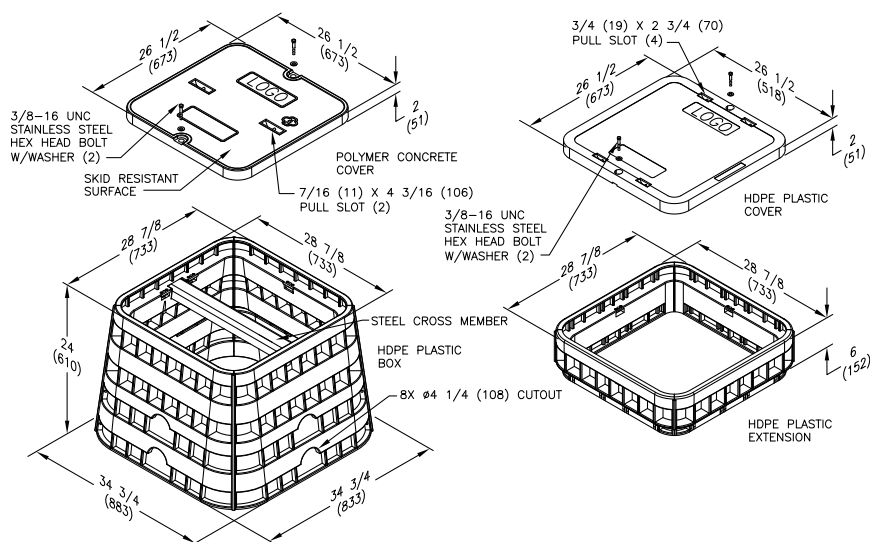
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Open Bottom	24"	N/A	N/A / 20,000	100	20	PEM-1830-GS	PM183024GSY

Replace \*\*\* with a logo code found on page U180.

# Dimensions / Data

## 24" x 24" PenCell PM (PEM 24 Series)

Hex Head Bolts are Standard



### Assemblies

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	24"	N/A	N/A / 20,000	150	6	PEM-2424-PCH	PM242424PCH00***
Box & HDPE Cover	24"	N/A	N/A / 5,000	75	10	PEM-2424H	PM242424HDH00***

### Covers

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
1 Piece W/ 2 Bolts	N/A	N/A / 20,000	100	Poly Concrete	PEM-2424-PCLH	PM242424CLH00***
1 Piece W/ 2 Bolts	N/A	N/A / 5,000	25	HDPE	PEM-2424PLH	PM242424PLI12***

### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray Open Bottom	24"	N/A	N/A / 20,000	50	10	PEM-2424-GS	PM242424GSY
Green Open Bottom	24"	N/A	N/A / 20,000	50	10	PEM-2424-GS	PM242424GSN

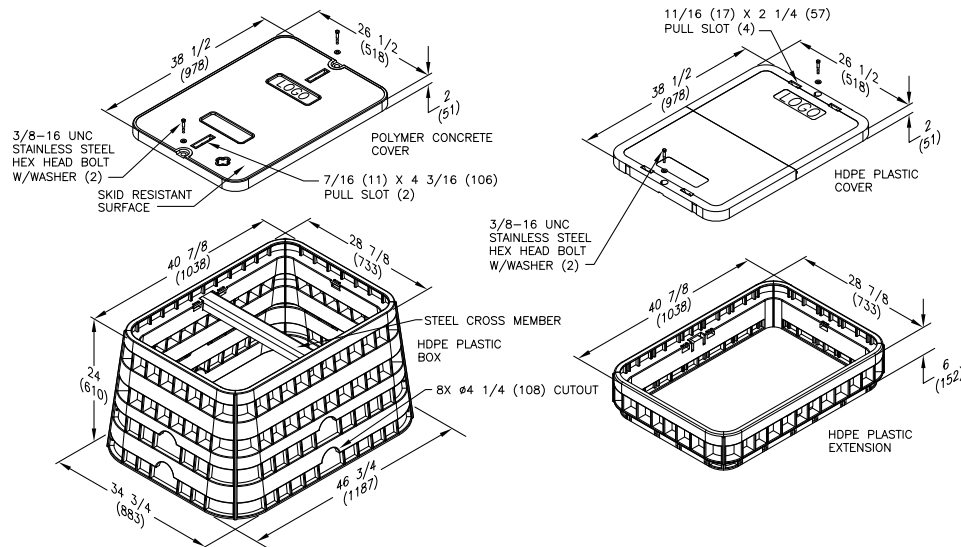
### Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray	6"	N/A	N/A / 20,000	20	20	PEM-2424-6	PM242406EXY
Green	6"	N/A	N/A / 20,000	20	20	PEM-2424-6	PM242406EXN

Replace \*\*\* with a logo code found on page U180.

## 24" x 36" PenCell PM (PEM 24 Series)

Hex Head Bolts are Standard



## Assemblies

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	24"	N/A	N/A / 20,000	224	4	PEM-2436-PCH	PM243624PCH00***
Box & HDPE Cover	24"	N/A	N/A / 5,000	99	6	PEM-2436H	PM243624HDH00***

## Covers

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
1 Piece W/ 2 Bolts	N/A	N/A / 20,000	151	Poly Concrete	PEM-2436-PCLH	PM2436CLH00***
2 Piece W/ 2 Bolts	N/A	N/A / 5,000	26	HDPE	PEM-2436PLH	PM2436PLI12***

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray Open Bottom	24"	N/A	N/A / 20,000	73	6	PEM-2436-GS	PM243624GSY
Green Open Bottom	24"	N/A	N/A / 20,000	73	6	PEM-2436-GS	PM243624GSN

## Extensions

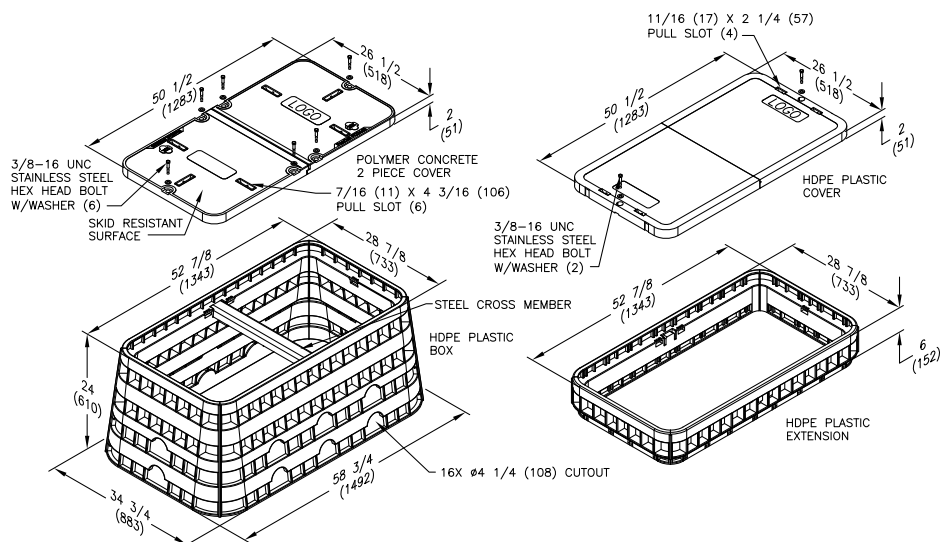
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray	6"	N/A	N/A / 20,000	30	20	PEM-2436-6	PM243606EXY
Green	6"	N/A	N/A / 20,000	30	20	PEM-2436-6	PM243606EXN

Replace \*\*\* with a logo code found on page U180.

# Dimensions / Data

## 24" x 48" PenCell PM (PEM 24 Series)

Hex Head Bolts are Standard



### Assemblies

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	24"	N/A	N/A / 20,000	271	1	PEM-2448-PCH	PM244824PCH00***
Box & HDPE Cover	24"	N/A	N/A / 5,000	113	2	PEM-2448H	PM244824HDH00***

### Covers

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
2 Piece W/ 6 Bolts	N/A	N/A / 20,000	187	Poly Concrete	PEM-2448-PCLH	PM2448CLH00***
2 Piece W/ 2 Bolts	N/A	N/A / 5,000	30	HDPE	PEM-2448PLH	PM2448PLI12***

### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray Open Bottom	24"	N/A	N/A / 20,000	84	3	PEM-2448-GS	PM244824GSY
Green Open Bottom	24"	N/A	N/A / 20,000	84	3	PEM-2448-GS	PM244824GSN

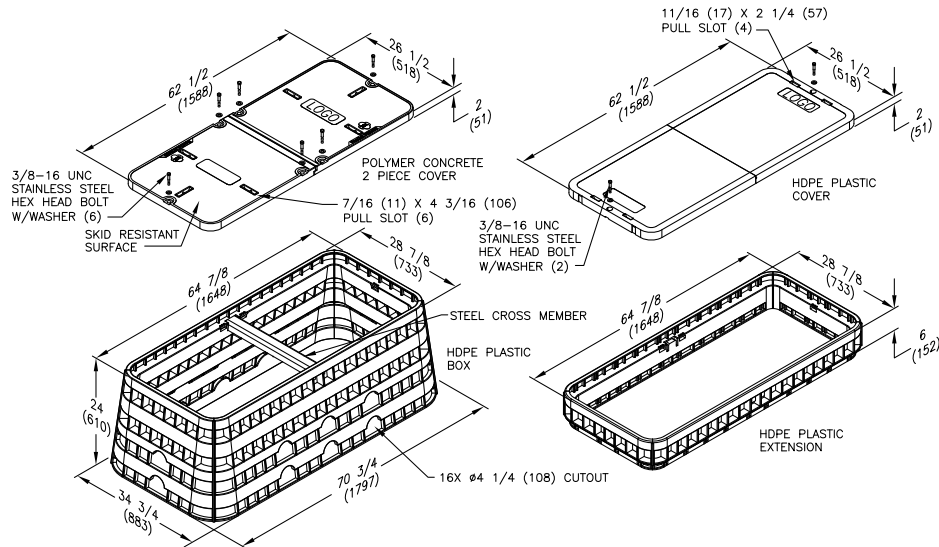
### Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray	6"	N/A	N/A / 20,000	35	10	PEM-2448-6	PM244806EXY
Green	6"	N/A	N/A / 20,000	35	10	PEM-2448-6	PM244806EXN

Replace \*\*\* with a logo code found on page U180.

## 24" x 60" PenCell PM (PEM 24 Series)

Hex Head Bolts are Standard



## Assemblies

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	24"	N/A	N/A / 20,000	328	1	PEM-2460-PCH	PM246024PCH00***
Box & HDPE Cover	24"	N/A	N/A / 5,000	132	3	PEM-2460H	PM246024HDH00***

## Covers

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
2 Piece W/ 6 Bolts	N/A	N/A / 20,000	232	Poly Concrete	PEM-2460-PCLH	PM2460CLH00***
2 Piece W/ 2 Bolts	N/A	N/A / 5,000	37	HDPE	PEM-2460PLH	PM2460PLI12***

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray Open Bottom	24"	N/A	N/A / 20,000	96	3	PEM-2460-GS	PM246024GSY
Green Open Bottom	24"	N/A	N/A / 20,000	96	3	PEM-2460-GS	PM246024GSN

## Extensions

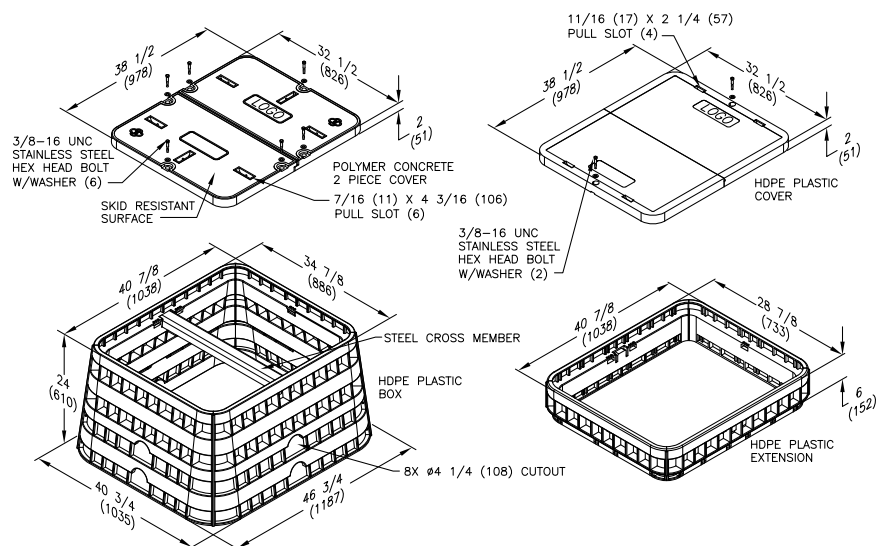
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray	6"	N/A	N/A / 20,000	40	10	PEM-2460-6	PM246006EXY
Green	6"	N/A	N/A / 20,000	40	10	PEM-2460-6	PM246006EXN

Replace \*\*\* with a logo code found on page U180.

# Dimensions / Data

## 30" x 36" PenCell PM (PEM 30 Series)

Hex Head Bolts are Standard



### Assemblies

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	24"	N/A	N/A / 20,000	275	2	PEM-3036-PCH	PM303624PCH00***
Box & HDPE Cover	24"	N/A	N/A / 5,000	118	3	PEM-3036H	PM303624HDH00***

### Covers

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
2 Piece W/ 6 Bolts	N/A	N/A / 20,000	186	Poly Concrete	PEM-3036-PCLH	PM3036CLH00***
2 Piece W/ 2 Bolts	N/A	N/A / 5,000	29	HDPE	PEM-3036PLH	PM3036PLI12***

### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray Open Bottom	24"	N/A	N/A / 20,000	89	3	PEM-3036-GS	PM303624GSY
Green Open Bottom	24"	N/A	N/A / 20,000	89	3	PEM-3036-GS	PM303624GSN

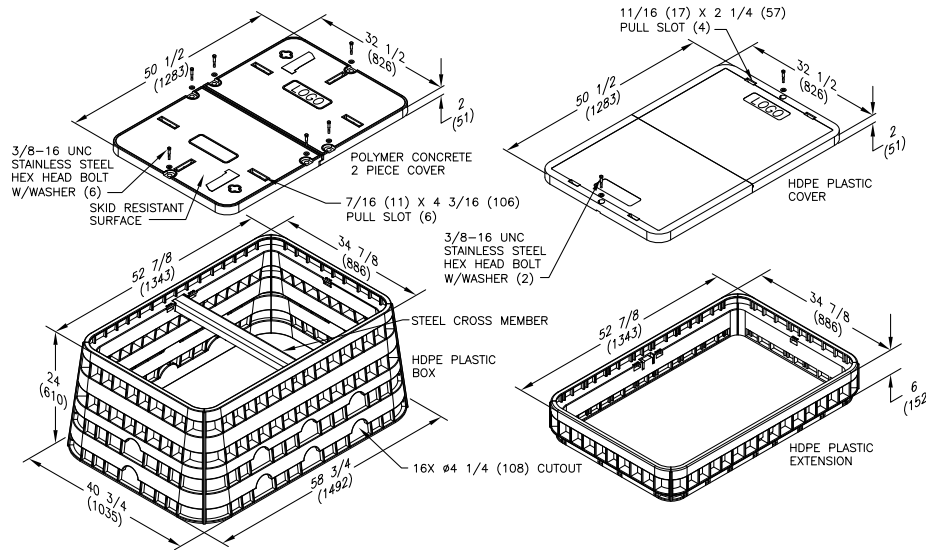
### Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray	6"	N/A	N/A / 20,000	25	10	PEM-3036-6	PM303606EXY
Green	6"	N/A	N/A / 20,000	25	10	PEM-3036-6	PM303606EXN

Replace \*\*\* with a logo code found on page U180.

## 30" x 48" PenCell PM (PEM 30 Series)

Hex Head Bolts are Standard



## Assemblies

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	24"	N/A	N/A / 20,000	339	3	PEM-3048-PCH	PM304824PCH00***
Box & HDPE Cover	24"	N/A	N/A / 5,000	132	3	PEM-3048H	PM304824HDH00***

## Covers

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
2 Piece W/ 6 Bolts	N/A	N/A / 20,000	246	Poly Concrete	PEM-3048-PCLH	PM3048CLH00***
2 Piece W/ 2 Bolts	N/A	N/A / 5,000	39	HDPE	PEM-3048PLH	PM3048PLI12***

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray Open Bottom	24"	N/A	N/A / 20,000	93	3	PEM-3048-GS	PM304824GSY
Green Open Bottom	24"	N/A	N/A / 20,000	93	3	PEM-3048-GS	PM304824GSN

## Extensions

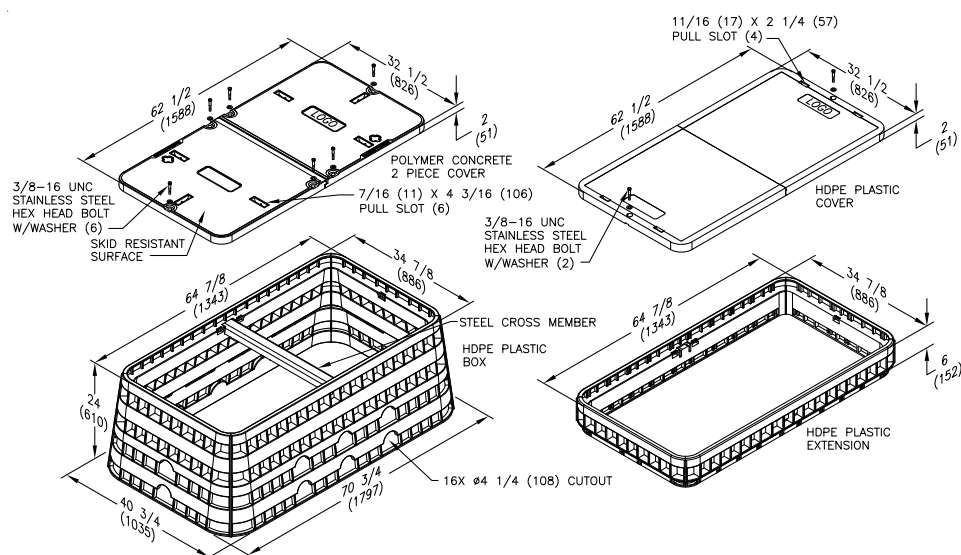
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray	6"	N/A	N/A / 20,000	40	10	PEM-3048-6	PM304806EXY
Green	6"	N/A	N/A / 20,000	40	10	PEM-3048-6	PM304806EXN

Replace \*\*\* with a logo code found on page U180.

# Dimensions / Data

## 30" x 60" PenCell PM (PEM 30 Series)

Hex Head Bolts are Standard



### Assemblies

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	24"	N/A	N/A / 20,000	405	1	PEM-3060-PCH	PM306024PCH00***
Box & HDPE Cover	24"	N/A	N/A / 5,000	156	3	PEM-3060H	PM306024HDH00***

### Covers

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
2 Piece W/ 6 Bolts	N/A	N/A / 20,000	297	Poly Concrete	PEM-3060-PCLH	PM3060CLH00***
2 Piece W/ 2 Bolts	N/A	N/A / 5,000	48	HDPE	PEM-3060PLH	PM3060PLI12***

### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray Open Bottom	24"	N/A	N/A / 20,000	108	3	PEM-3060-GS	PM306024GSY
Green Open Bottom	24"	N/A	N/A / 20,000	108	3	PEM-3060-GS	PM306024GSN

### Extensions

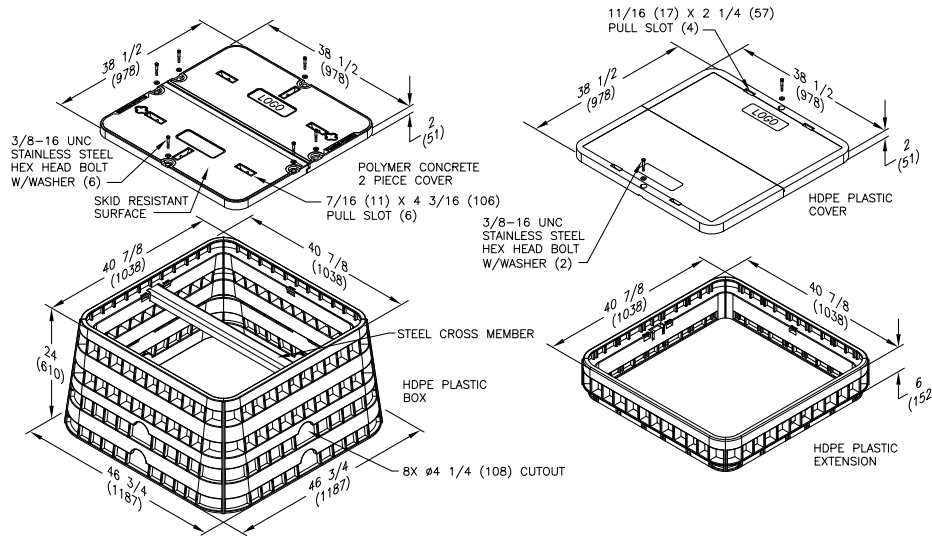
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray	6"	N/A	N/A / 20,000	45	10	PEM-3060-6	PM306006EXY
Green	6"	N/A	N/A / 20,000	45	10	PEM-3060-6	PM306006EXN

Replace \*\*\* with a logo code found on page U180.



## 36" x 36" PenCell PM (PEM 36 Series)

Hex Head Bolts are Standard



## Assemblies

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	24"	N/A	N/A / 20,000	354	2	PEM-3636-PCH	PM363624PCH00***
Box & HDPE Cover	24"	N/A	N/A / 5,000	135	3	PEM-3636H	PM363624HDH00***

## Covers

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
2 Piece W/ 6 Bolts	N/A	N/A / 20,000	250	Poly Concrete	PEM-3636-PCLH	PM3636CLH00***
2 Piece W/ 2 Bolts	N/A	N/A / 5,000	31	HDPE	PEM-3636PLH	PM3636PLI12***

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray Open Bottom	24"	N/A	N/A / 20,000	104	3	PEM-3636-GS	PM363624GSY
Green Open Bottom	24"	N/A	N/A / 20,000	104	3	PEM-3636-GS	PM363624GSN

## Extensions

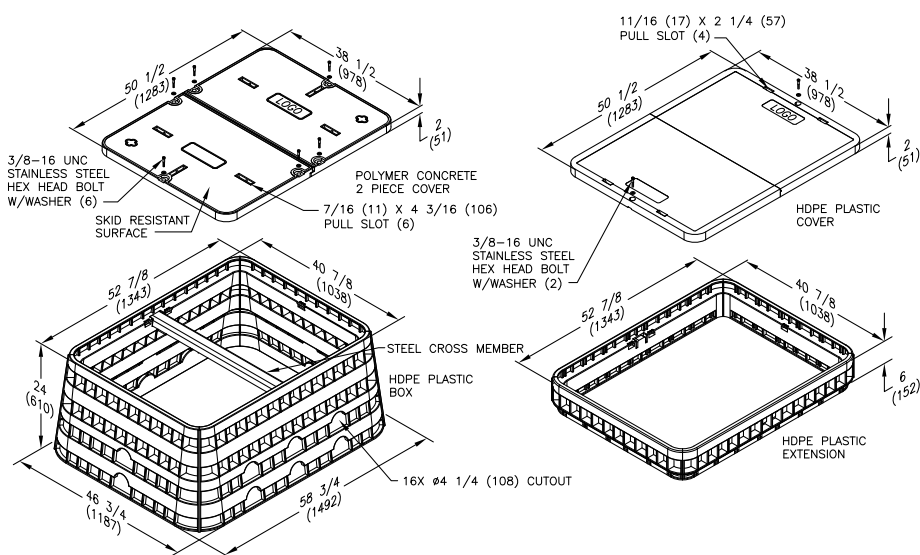
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray	6"	N/A	N/A / 20,000	31	10	PEM-3636-6	PM363606EXY
Green	6"	N/A	N/A / 20,000	31	10	PEM-3636-6	PM363606EXN

Replace \*\*\* with a logo code found on page U180.

# Dimensions / Data

## 36" x 48" PenCell PM (PEM 36 Series)

Hex Head Bolts are Standard



### Assemblies

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	24"	N/A	N/A / 20,000	389	1	PEM-3648-PCH	PM364824PCH00***
Box & HDPE Cover	24"	N/A	N/A / 5,000	160	3	PEM-3648H	PM364824HDH00***

### Covers

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
2 Piece W/ 6 Bolts	N/A	N/A / 20,000	285	Poly Concrete	PEM-3648-PCLH	PM3648CLH00***
2 Piece W/ 2 Bolts	N/A	N/A / 5,000	56	HDPE	PEM-3648PLH	PM3648PLI12***

### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray Open Bottom	24"	N/A	N/A / 20,000	104	3	PEM-3648-GS	PM364824GSY
Green Open Bottom	24"	N/A	N/A / 20,000	104	3	PEM-3648-GS	PM364824GSN

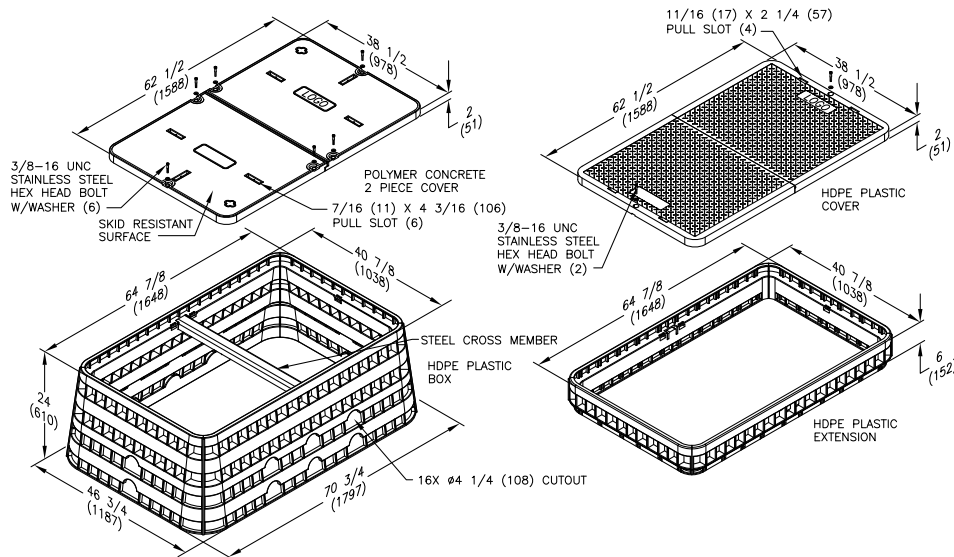
### Extensions

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray	6"	N/A	N/A / 20,000	32	10	PEM-3648-6	PM364806EXY
Green	6"	N/A	N/A / 20,000	32	10	PEM-3648-6	PM364806EXN

Replace \*\*\* with a logo code found on page U180.

## 36" x 60" PenCell PM (PEM 36 Series)

Hex Head Bolts are Standard



## Assemblies

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	24"	N/A	N/A / 20,000	465	1	PEM-3660-PCH	PM366024PCH00***
Box & HDPE Cover	24"	N/A	N/A / 5,000	160	3	PEM-3660H	PM366024HDH00***

## Covers

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
2 Piece W/ 6 Bolts	N/A	N/A / 20,000	350	Poly Concrete	PEM-3660-PCLH	PM3660CLH00***
2 Piece W/ 2 Bolts	N/A	N/A / 5,000	71	HDPE	PEM-3660PLH	PM3660PLI12***

## Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray Open Bottom	24"	N/A	N/A / 20,000	114	3	PEM-3660-GS	PM366024GSY
Green Open Bottom	24"	N/A	N/A / 20,000	114	3	PEM-3660-GS	PM366024GSN

## Extensions

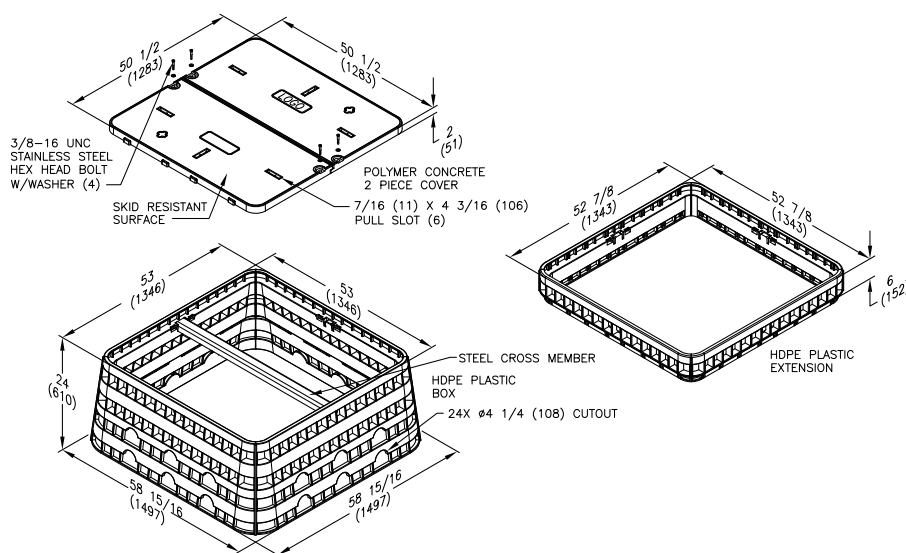
Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray	6"	N/A	N/A / 20,000	41	10	PEM-3660-6	PM366006EXY
Green	6"	N/A	N/A / 20,000	41	10	PEM-3660-6	PM366006EXN

Replace \*\*\* with a logo code found on page U180.

# Dimensions / Data

## 48" x 48" PenCell PM (PEM 48 Series)

Hex Head Bolts are Standard



### Assemblies

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box & Polymer Concrete Cover	24"	N/A	N/A / 20,000	465	1	PEM-4848PCH	PM484824PCH00***
With 6" Extension	30"	N/A	N/A / 20,000	507	1	PEM-4848-30PCH	PM484830PCH00***
With (2) 6" Extensions	36"	N/A	N/A / 20,000	549	1	PEM-4848-36PCH	PM484836PCH00***
With Modified 2-Piece GS	42"	N/A	N/A / 20,000	591	1	PEM-4848-42PCH	PM484842PCH00***
With Inverted 2-Piece GS	48"	N/A	N/A / 20,000	633	1	PEM-4848-48PCH	PM484848PCH00***

### Cover

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
2 Piece W/ 4 Bolts	N/A	N/A / 20,000	350	Poly Concrete	PEM-4848PCLH	PM4848CLH00***

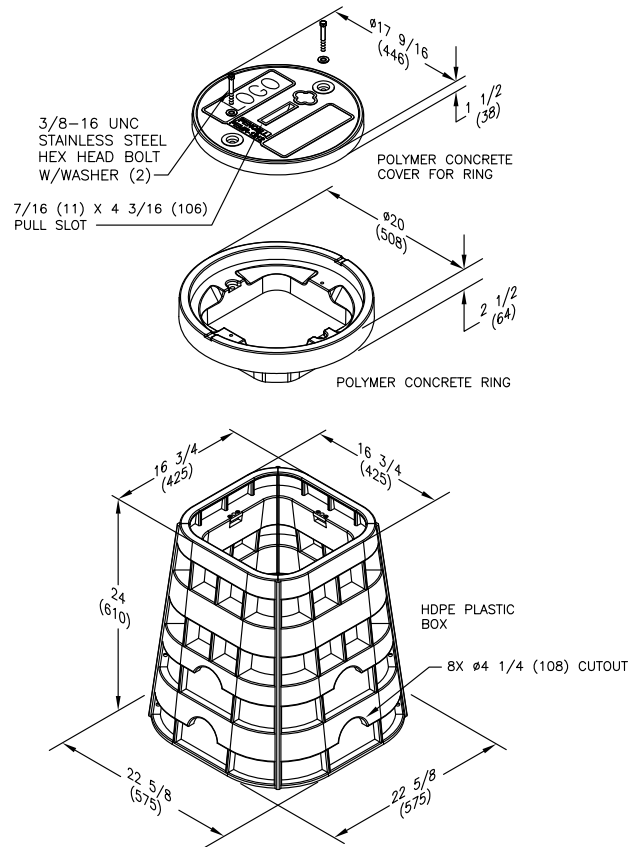
Replace \*\*\* with a logo code found on page U180.

### Boxes

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray Open Bottom	24"	N/A	N/A / 20,000	114	2	PEM-4848GS	PM484824GSY

### Extension

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Gray	6"	N/A	N/A / 20,000	42	6	PEM-4848-6EXT	PM484806EXY

**12" x 12" PenCell PR (PEMR 12)****Hex Head Bolts are Standard****Assemblies**

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Box W/ Poly Conc Cover & Ring	24"	N/A	N/A / 20,000	90	4	PEMR-1212PCH	PR121224PRH00***

**Cover & Ring**

Description	Tier	Design / Test Load #	Weight #	Material	Old Part No.	New Part No.
PC Cover & Ring	N/A	N/A / 20,000	53	Poly Concrete	PEM-1212PCLH	PR1212LRH00***

Replace \*\*\* with a logo code found on page U180.

**Boxes**

Description	Depth	Tier	Design / Test Load #	Weight #	Pallet Qty	Old Part No.	New Part No.
Green Open Bottom	24"	N/A	N/A / 20,000	37	4	PEMR-1212GSN	PM121224GSN

## Penell Cover Options

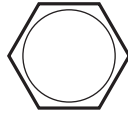
Most commonly used cover logos are shown below.  
Custom Logos are available. Contact your Quazite/Hubbell Representative.

### Logos

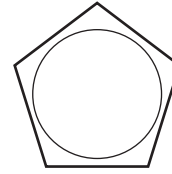
Pencell Logo Codes	Description
009	BLANK
010	CATV
012	COMMUNICATIONS
014	CONTROLS
017	ELECTRIC
021	FIBER OPTICS
022	FIRE ALARM
023	GAS
024	GROUND
026	HIGH VOLTAGE
029	LIGHTING
036	SECURITY
038	SIGNAL
040	STATE TRAFFIC SIGNAL
041	STREET LIGHTING
042	TELECOM
043	TELEPHONE
044	TRAFFIC
045	TRAFFIC CONTROL
046	TRAFFIC SIGNAL
048	TV
050	WATER
057	EMERGENCY
065	ILLUMINATION
081	DANGER HIGH VOLTAGE
084	POWER
092	TELECOMMUNICATIONS
03A	DOT
06B	INSTRUMENTATION
0ZA	IRRIGATION
K91	RECLAIMED WATER
KH1	FIBEROPTIC
5P3	ELECTRIC WARNING DO NOT OPEN

## Optional Accessories

PenCell underground enclosures come standard with a hex-head bolt to secure the lid onto the box. For additional security, Penta Head bolts are also available. The table below shows additional options available by box style.



Hex Head



Penta Head

	Locks	Brackets						
	Crimp Locks	Swing Arms	J Hooks	Custom	End Bells	Ground Lugs	Pulling Eyes	Temp. Service Outlet
DT Series	N/A	1324, 1730, 2436, 3048	All	All	1730, 2436, 3048	N/A	3048	N/A
PE Series	14, 20, 30	N/A	N/A	All	N/A	14, 20, 30 w/ steel lids	N/A	14, 20, 30
PM Series	N/A	1830 up to 3660	All	All	1830 and up less 24" deep	N/A	3660	N/A



## Optional Accessories

These and other accessories are available for your PenCell Enclosure. Contact your representative or customer service for more information.



Pulling Eyes



Terminators & Plastic Bolt Caps



3M Electronic Markers



Aluminum J Hooks



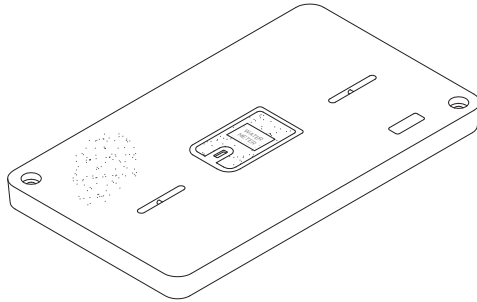
Small Lifting Hook



# PenCell Enclosure Options (polymer concrete only)

## Hinged Meter Lids\*

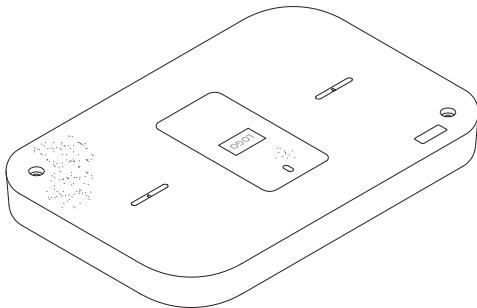
Available Sizes  
Cast iron 4" x 6" lid  
Cast iron 6" x 9" lid



## Drop-in Meter Lids\*

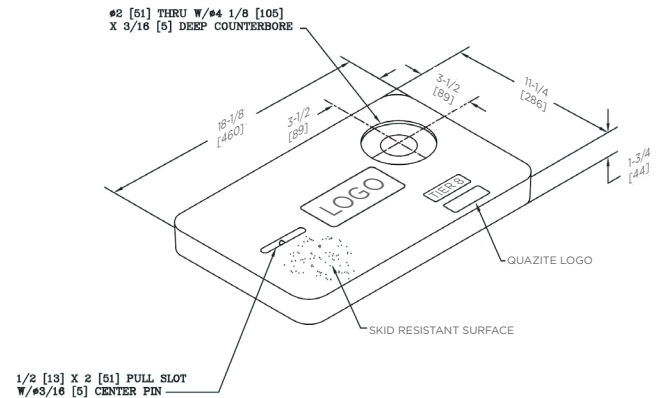
Available Sizes  
Polymer concrete 6" x 9" drop-in lid  
Polymer concrete 7" x 13" drop-in lid  
Polymer concrete 9" x 15" drop-in lid

\*Select sizes available in Tier 15. Tier 22 not available.



## Touch / Radio Read Option

Holes for touch or radio read applications can be provided in covers as needed.



## EZ - Locate

The EZ Locate System allows the #6 – #24 AWG ground wires / bonding harnesses or tracer wires to be quickly isolated from the grounding electrode.



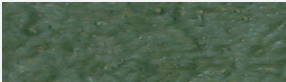

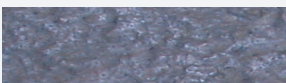
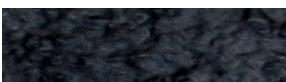
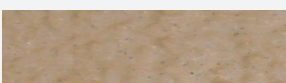

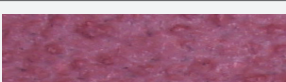
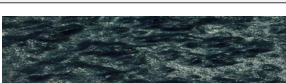
The telescoping body is made from stainless steel; the isolating ground switch is made from engineering-grade thermo-plastic and tin-plated copper alloy components to prevent corrosion.

Available Sizes  
24x36 and 30x48



# PenCell Color Options (polymer collar, ring, covers only)

Most PenCell HDPE boxes are available only in green or gray, and the standard color for polymer concrete collars and covers is concrete gray. However, polymer concrete collars and covers can be provided in various color options to allow for blending with adjacent materials or special identification of enclosures. Some commonly requested colors include:

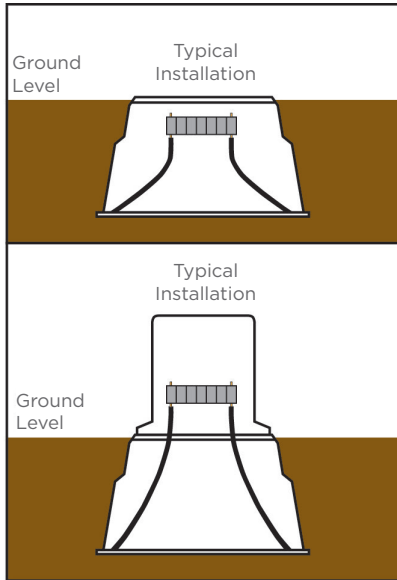
Color Sample	Description
	Brick Red
	Forest Green
	Light Green
	Cement Gray
	Charcoal Gray
	Black
	Pecan
	International Orange
	Purple
	Blue

*Note: Printed colors are reference only and do not exactly represent product colors.  
Contact your local Hubbell / PenCell representative for other special colors.*

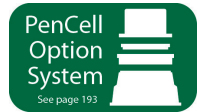
### Exclusively from PenCell

Only PenCell Plastics offers a system that accommodates your future planning.

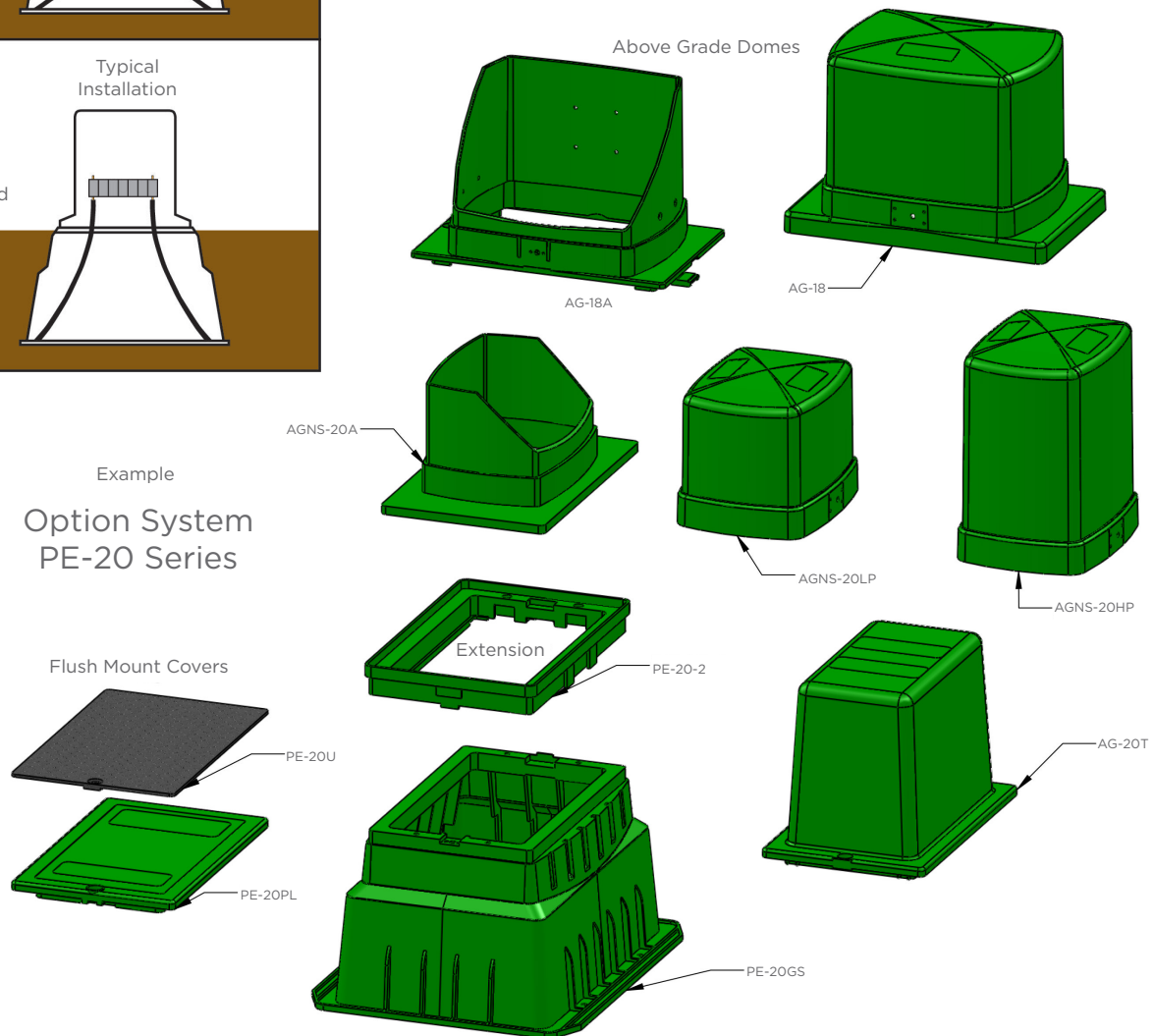
- Change cover material
- Add above-ground pedestal



Look for this symbol throughout this section of the catalog. It identifies an Option System compatible product.



### Example Option System PE-20 Series



# Installation

Guidelines for installing your Quazite® enclosure vary depending on size, location, and environmental factors. Quazite® enclosures are designed for non-deliberate traffic areas only.

## Small Enclosure Installation

### 1. Excavation

Excavate approximately 6 inches deeper than the depth of the enclosure. Add 6 inches of gravel or crushed rock for drainage.

### 2. Placement

Carefully lower enclosure into the hole until the top is at grade level.

### 3. Filling

Fill and compact the soil to grade level with the cover on the enclosure.

### 4. Adjustment

If the grade level is raised later, a straight-sided enclosure can be pulled up and bricks added at the bottom on one or four sides to conform to the landscape.







Attach nylon straps or chains to the lifting bolts.



Lift and position enclosure with backhoe.



Place gravel in the enclosure and around the side. Lift enclosure to let gravel run underneath.

## Install and Protect

Environmental factors should always be considered when installing enclosures of all sizes. Local conditions could dictate additions during installation, such as Concrete Collars or Internal Bracing. These additions provide security, support, and protection.

## Large Enclosure Installation

Quazite® enclosures sized 24" x 36" and larger can be safely and securely installed by following four simple steps. Quazite® enclosures are designed for non-deliberate traffic areas only.

### 1. Site Selection

Select an appropriate site or location that is suitable for an underground enclosure.

- Site features to consider prior to final selection include:
  - Utility easements
  - Parking lots
  - Parking lot entrances
  - Shipping and delivery docks
  - Waste-removal containers (dumpsters)

### 2. Conduits and Piping Preparation

- Trench and / or plow conduit.
- Bore under road crossings & railroads.
- Mark the depth of conduit using marker tape.

### 3. Excavate

- Excavate approximately 1-2 feet longer and wider than the box, and 6-8 inches deeper than the depth of the enclosure.
- Add a rodent barrier if necessary.
- Add 6 inches of gravel or crushed rock for drainage.

### 4. Placement

- Remove enclosure from the pallet to prepare for placement.
- Place nylon straps or chains around the lifting bolts and secure it to the backhoe bucket. The angle between the strap and the enclosure should not be less than 45 degrees.
- Lift the enclosure and place it into the hole.
- Place gravel in the enclosure and around the side if necessary.
- Lift the enclosure to the proper elevation, allowing gravel to run out under the enclosure.
- Check the enclosure's elevation with a level and range pole, and make the necessary adjustments with the backhoe bucket.
- Once the enclosure is set to the proper elevation, reinstall the covers, and back fill.
- If 95% compaction is required, internal bracing should be used on all manufacturers' enclosures to prevent deflection and premature failure.

# Hole Cutting Instructions

## Methods for Cutting Holes in Hubbell Enclosures:

### Hole Saw

1. Drill a 7/8" pilot hole with a carbide tipped masonry drill.
2. Drill hole using a diamond tipped masonry hole saw.
  - This is the preferred method from engineering
  - Estimated drilling time is 1 - 1.5 minutes
3. Wood cutting hole saw may be used on Quazite FRP and PenCell HDPE enclosures (15 - 20 seconds).
4. Depending on the box, cutting these holes from the inside or outside may work better. Cutting on a smooth flat area of the wall vs. a ribbed uneven area works best.



### Knockout Punch Driver

1. Set up the punch
  - 1.01 Slide the die over the pull rod.
  - 1.02 Insert pull rod into pilot hole.
  - 1.03 Thread the punch onto the pull rod.
2. Punch hole and remove
  - 2.01 Operate hand pump until the punch penetrates the surface.
  - 2.02 Open pump release valve.
  - 2.03 Remove the slug.

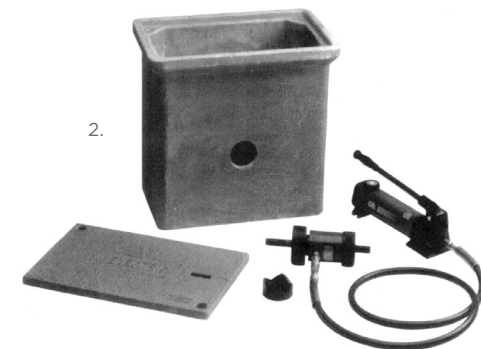
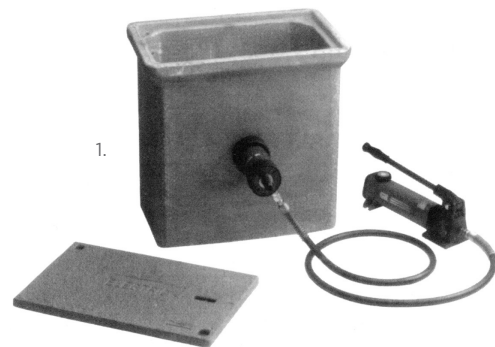
#### NOTES:

1) Quazite UL Listed enclosures with holes drilled in the field may qualify for UL Listing as long as the holes do not exceed more than 25% of the area of each sidewall and as long as the holes do not cut into a structural reinforcing rib, corner, or box lip.

2) Quazite FRP enclosures, follow the same guideline as #1 above.

3) PenCell HDPE enclosures, we recommend never removing more than 20% of the total area of any wall.

Contact your representative if there are any questions.







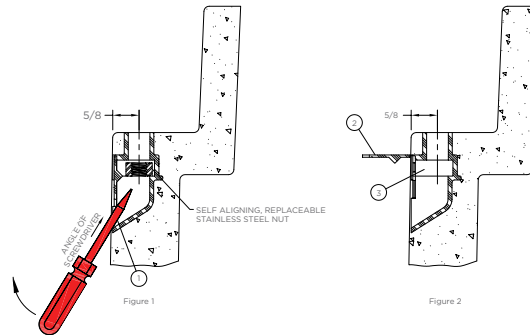
# EZ-Nut and Self-Aligning Nut Cleaning & Replacement Instructions

Quazite has redesigned the EZ-Nut assembly (Style “B”) to provide a 40% greater drainage opening area and enable quicker and easier nut replacement. This Style “B” design will be included in new production, but existing inventories may have the older Style “A” EZ-Nut assembly. These instructions are provided in the event it is necessary to replace an existing nut.

\*To determine which EZ-Nut design is in any box, insert a screwdriver into the drainage opening and pull upward. If the door does not pop open, the Style “A” EZ-Nut is in the box. Follow the instructions for the Style “A” design. If the door pops open, follow the instructions for the Style “B” EZ-Nut design.

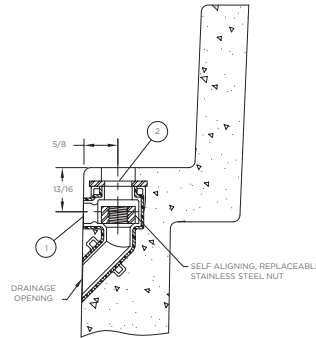
## Style “B” EZ-Nut replacement procedure\*

1. Locate the drainage opening in the area containing the insert. Insert a screwdriver into the opening at approximately the angle shown in Figure 1.
2. After inserting the screwdriver into the drainage opening, pull upward on the handle of the screwdriver in order to pry open the door of the insert as shown in Figure 2.
3. If necessary, remove any remaining debris from the opening. After the opening is clear, remove existing nut and replace with a nut of the required size.



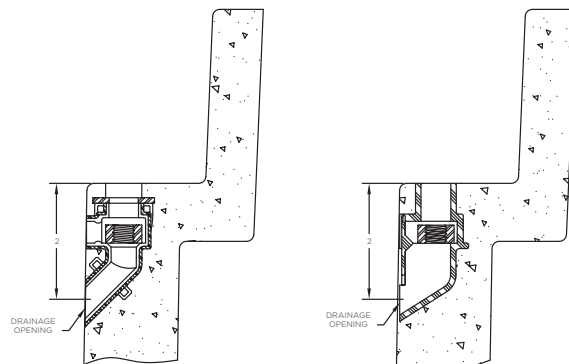
## Style “A” EZ-Nut replacement procedure\*

1. Measure 13/16” down from bearing ledge of the enclosure. Using a screwdriver and hammer, punch a hole into the cavity of the insert. Clear excess material out of the opening.
2. Insert a screwdriver into the top opening and push the square nut out of the opening just created. Replace with a new square nut and plug the cavity in the sidewall if necessary.



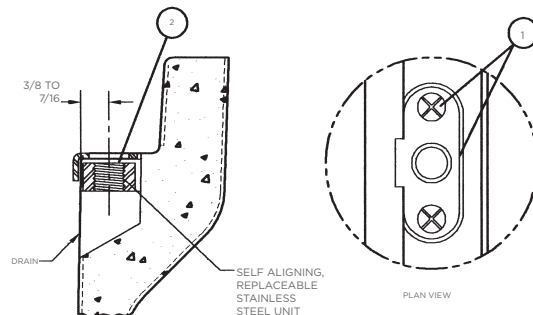
## EZ-Nut Cleanout Procedure

1. Make certain drain hole is clear. If it is not, scrape off material with a flat edge and remove any visible obstruction(s). The drain hole is located approximately 2” below the bearing ledge.
  2. Insert flat head screw driver into insert. Scrape dirt off of threads and clean out any excess dirt.
  3. (Optional) Spray WD-40® or equivalent lubricant into insert to lubricate the threads and help loosen any remaining debris.
- Replace cover and secure bolts into insert.



## Self-Aligning Nut Replacement:

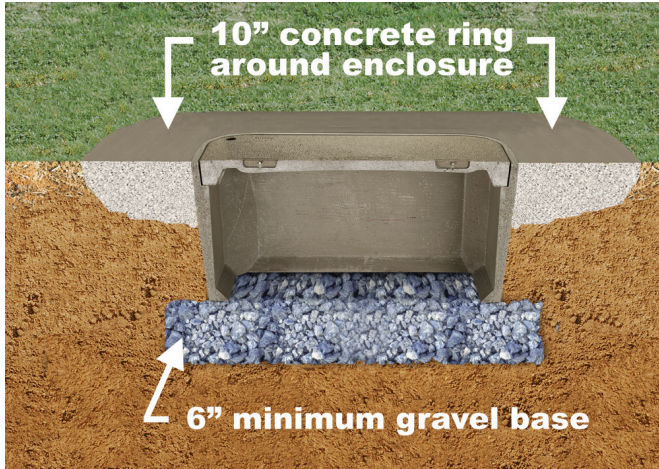
1. Remove screws using a phillips screwdriver. Then remove the retainer clip.
2. Remove square nut and replace it with a new square nut.
3. Replace the retainer clip and screws.





# UNDERGROUND ENCLOSURES

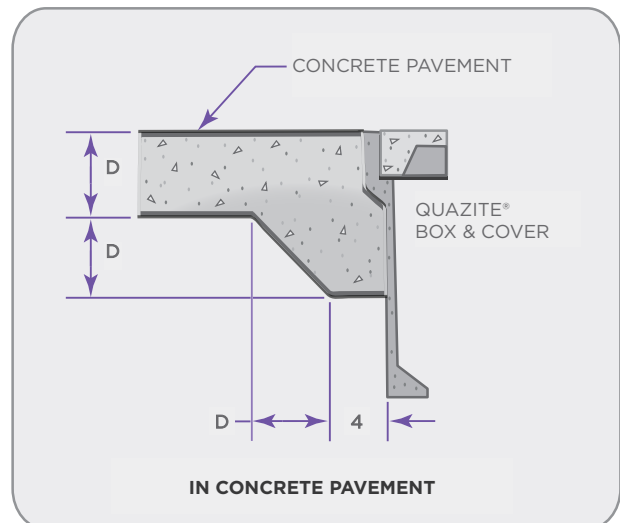
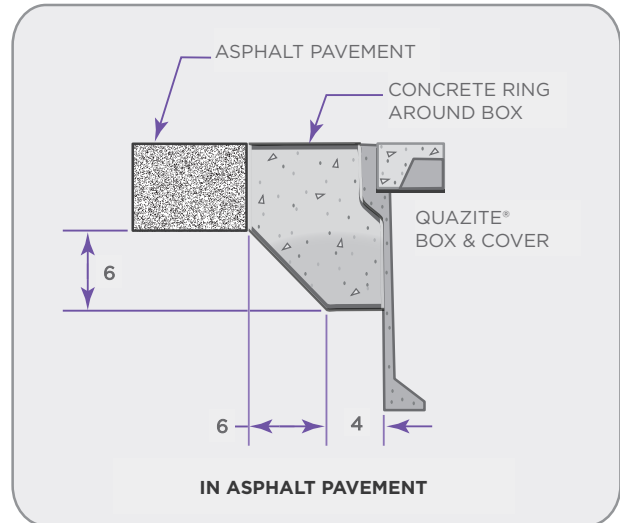
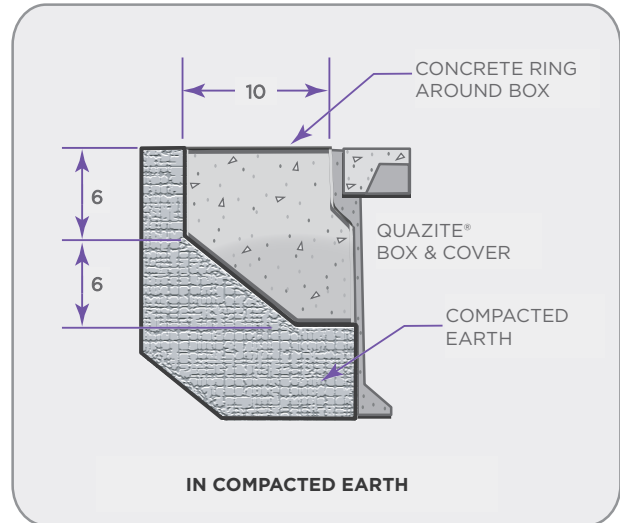
## Concrete Collar Application



Concrete collars may be desired to give added protection to Hubbell enclosures installed by driveways, parking lots, and off-roadway areas that are subject to occasional non-deliberate traffic. Concrete collars are not necessary in grassy areas or areas subject solely to pedestrian traffic.

**\*Notes:**

- Concrete encasement to be 3,000 psi minimum
- Concrete encasement collar dimension,  $D$ , to be equal to design pavement depth
- Pavement and subgrade to be as shown on the engineering plans

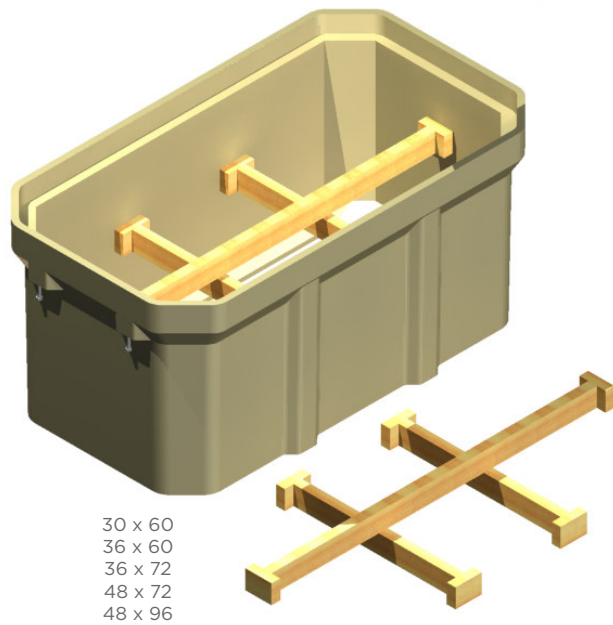
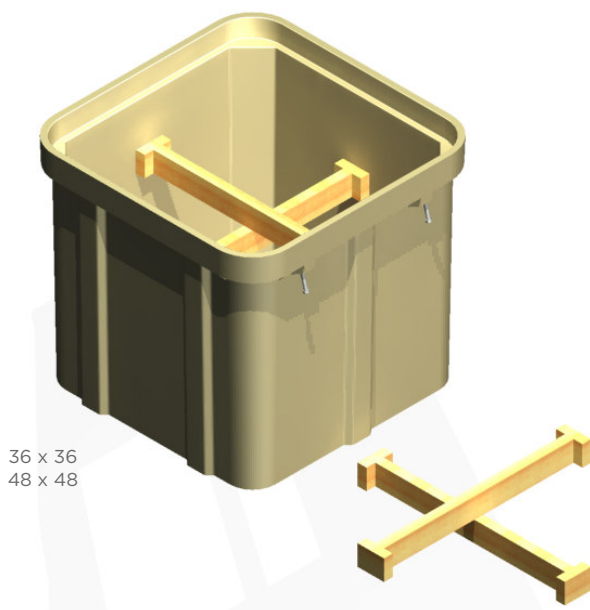
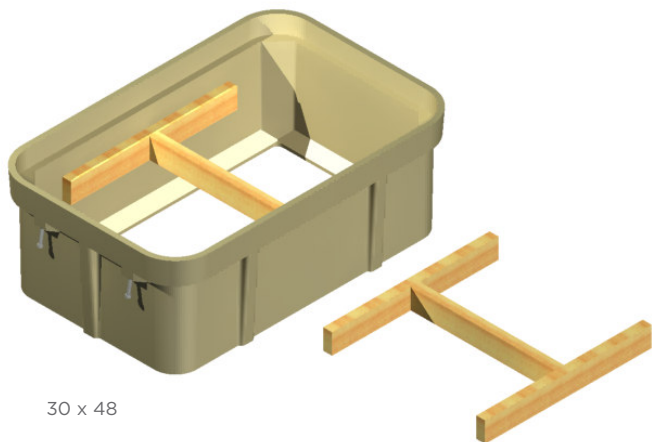


# Internal Bracing : Polymer Concrete

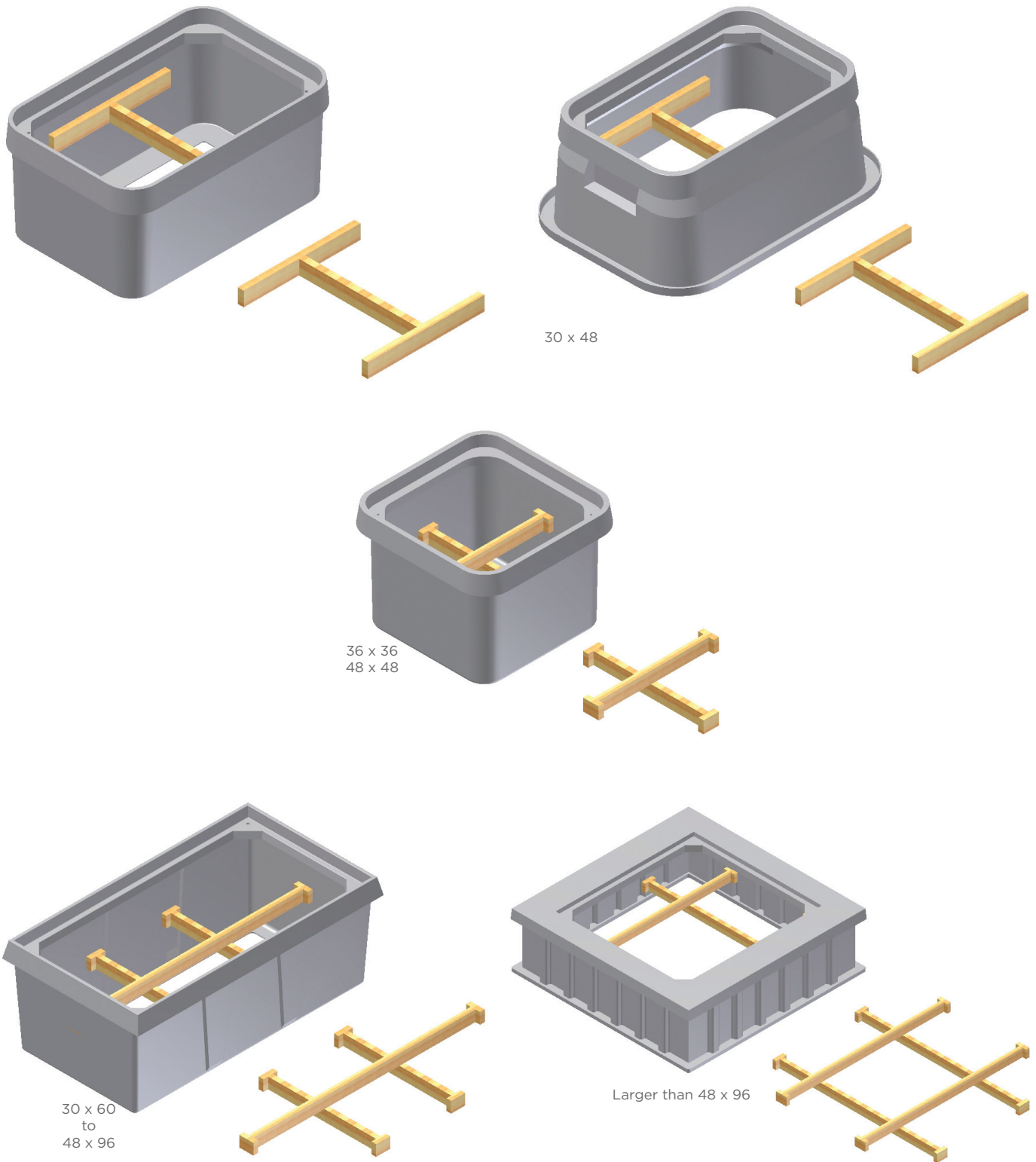
Internal bracing may be warranted for any manufacturer's underground enclosure. If 95% compaction is required, or if heavy vehicles will be present during construction and/or throughout the life of the enclosure, internal bracing during backfilling operations will ensure minimal box sidewall deflections. This applies to enclosures made from any material to maintain the original sidewall geometry. Supports should be 2 x 4s or similar material sized to hold at mid-depth.

**Note:**

*Applicable PenCell enclosures come standard with bracing.*



# Internal Bracing : FRP



## Polymer Concrete Catalog Numbering System for Boxes and Covers

1 Weight	2 Style	3,4,5,6 Size	7 Item - Covers	8 Item - Covers	9 Cover Variation	10 Cover Variation	11, 12 Logo Field	13 Item / Logo Field	14 Item
L (LW PC)	A (Special Covers)	0608	C (Standard)	A (Standard)	0 (Standard Cover)	0 (Standard Cover)	09 = Blank	1-9 (for 3 Digit Logos)	
P (PC)	C (Box Straight Sides W/ 3/4" cover)	0818	**H (H.D. 2,500# Test)	C (Overlapping)	A (Aluminum)	1 (Opens Over 90°)	17 = Electric		
	D (Flared Box W/1" Taper W/2" or 3" cover)	0914	S (Steel Cover)	G (Gasketed)	B (Captive Bolt)	2 (Opens Under 90°)	50 = Water	A (Cast Part for 2 Digit Logos)	A (See Reference Chart Below)
	G (Box Straight Sides 1-1/2", 1-11/16", 2", or 3" cover)	0915	W (Non-Bolt down Cover)	***H (33,750# Test)	D (Deep C'Bores for Locking Cylinders)	M (Metal Locator)		B (3/8" UNC Hex Bolt)	B (3/8" UNC Hex Bolt)
	R (Round Enclosure)	1015		J (Grade Adjustable Frame)	G (Galvanized)	R (Rockwell Touch Reader)	Other logos are available.	C (1/2" Coil Lg. PentaHead)	C (1/2" Coil Lg. PentaHead)
	T (Flared Box W/2" or 3" cover)	1016		S (Split Cover)	K (6"x9" Polymer Drop in Lid)		See logo listing.	H (3/8" Auger Bolt Hex)	H (3/8" Auger Bolt Hex)
	X (Replacement Cover or PX box 3/4" Cover)	1118		T (Torsion Cover)	L (7"x13-1/2" Polymer Drop in Lid)	Markers		J (1/2" UNC Bolt Hex)	J (1/2" UNC Bolt Hex)
		1212			P (CI 6" x 9" Meter Lid)	G (Gas)		K (1/2" Auger Bolt Hex)	K (1/2" Auger Bolt Hex)
		1324			Q (CI 9" x 12" Meter Lid)	P (Power)		L (1/2" Auger Bolt Penta)	L (1/2" Auger Bolt Penta)
		1730			R (CI 4-1/2" x 7-1/2" Meter Lid)	S (Sanitary)		P (Auger Bolt Penta)	P (Auger Bolt Penta)
		2042			S (Thru Slot 1/2" x 1")	T (Telephone)		R (3/8" UNC Bolt Sm. Penta)	R (3/8" UNC Bolt Sm. Penta)
		2424			T (1" x 4" Pull Slot)	W (Water)		S (1/2" UNC Bolt Penta)	S (1/2" UNC Bolt Penta)
		2436			V (CI 4-7/8" x 4-7/8" Vented Meter Lid)			T (3/8" UNC Bolt Lg. Penta)	T (3/8" UNC Bolt Lg. Penta)
		2700							
		2733	Item - Boxes	Item - Boxes	Box Depth	Box Depth			
		3048	B (Box Open Base)	A (Standard)	1	2	B (Box with 3/8-16 insert)		
		3060	D (Solid Base)	B (Std. Mouseholes)	1	8	J (Box with 1/2-13 insert)		
		3660	E (Extension)	C (Divided)	2	4			
		3672	J (Footed Box)	G (Gasketed)	3	6			
		3943	R (Extension W/ Solid Base)						
		4848							
		4872	Z (Assembly)						
		4896							
		*							

\* Designates a special color - R=Red, G=Green, etc.

L = Lightweight

\*\* This load is tested over a 10"x10" area

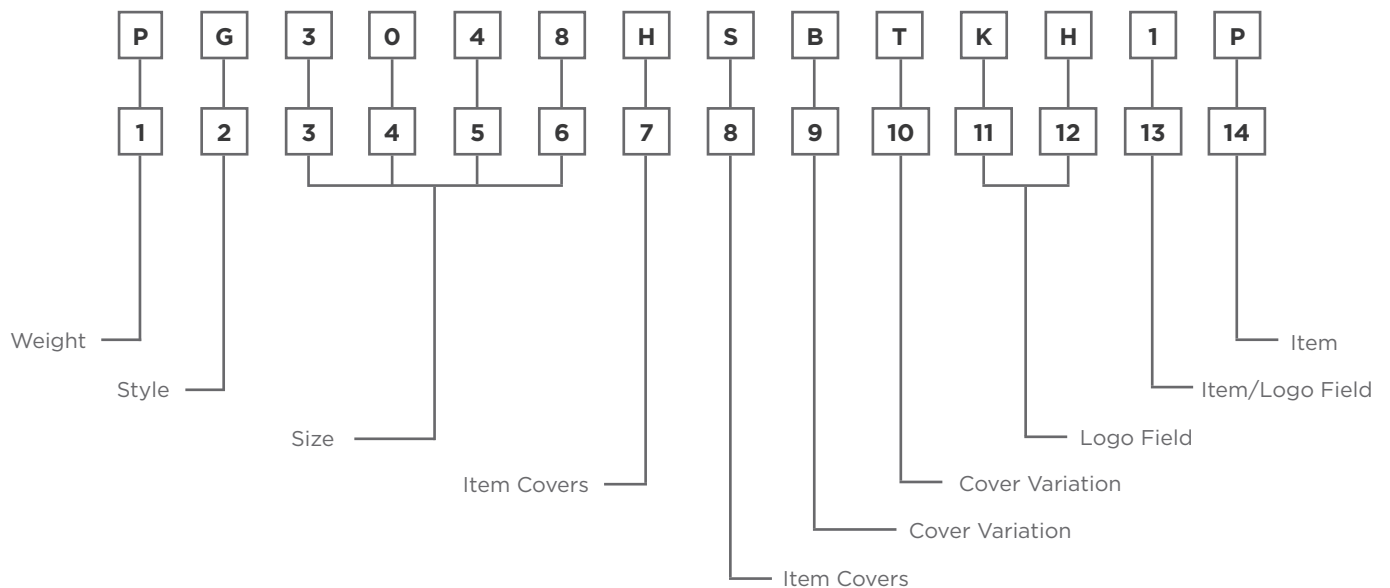
P = Standard

\*\*\* This load is tested over a 10"x20" area

P = Standard

**Penta Head Auger Bolt Reference Chart**

Item 13 OR Item 14	Part No.	Length	Thread Size	Application
P	<b>C080033</b> (small head)	2.00"	3/8-7	PC0516, PC0608, PC0808, PC0818, PC1012, PC1118, PC1212, PC1324, PC1730, PX1324, PX1730
	<b>C080034</b>	2.00"	3/8-7	PR2700
	<b>C080049</b>	3.00"	3/8-7	PG1015, PG1118, PG1120, PG2424, PT1324, PT1730, PR3900
	<b>C080154</b>	3.50"	3/8-7	PG1324, PG1730
	<b>C080054</b>	4.00"	3/8-7	PG2436, PG3048, PG3636
	<b>C080169</b>	3.00"	1/2-6	PG3660, PR2200
	<b>C080165</b>	4"	1/2-6	PG3060, PG3672, PG4848, PG4872, PG4896, PG3660 (overlapping)
	<b>C080166</b>	5"	1/2-6	PG3060 (overlapping)

**Sample Polymer Concrete Part Number**

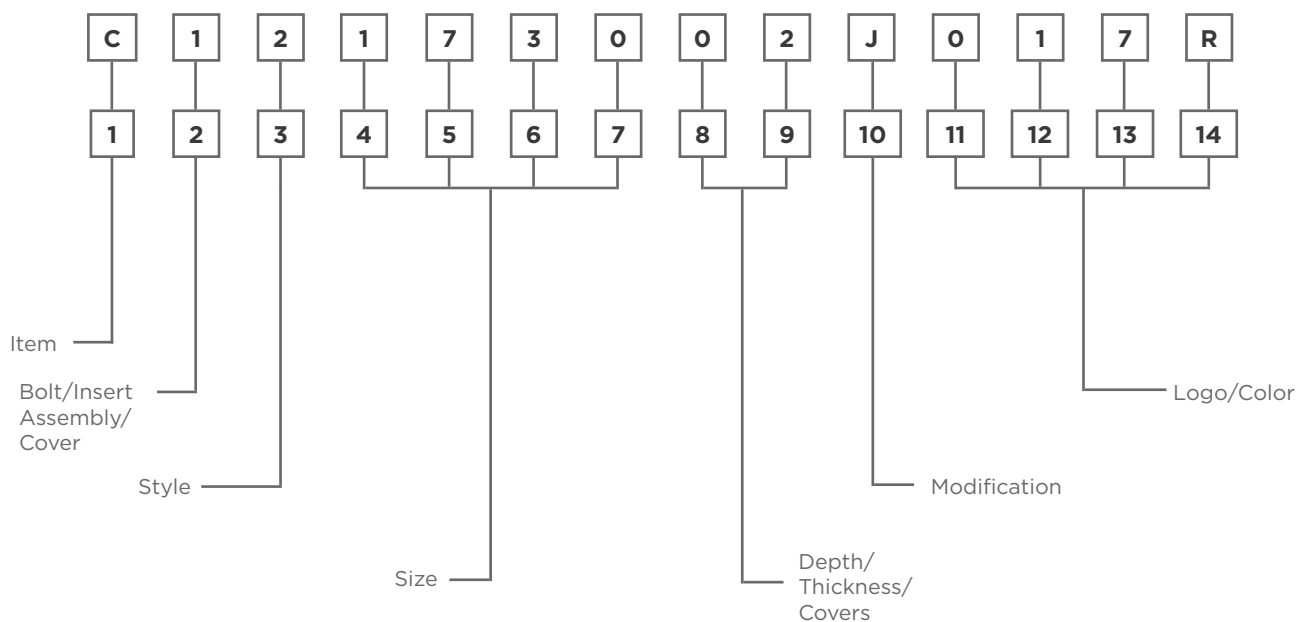
## FRP &amp; Corrugated Catalog Numbering System for Boxes and Covers

1 Item	2 Bolt/Insert Assembly/Cover	3 Style	4,5, 6,7 Size	8, 9 Depth/ Thickness Covers	10 Modification - Cover	11, 12, 13 Cover Logo	14 Cover Color
A (Assembly)	0 (Non Bolting)	0 (Flared Wall Box / Cover - Tier 8)	0608	01	A (Standard)	009 = Blank	A (Orange)
B (Box)	1 (1/2-13 UNC Bolt Penta)	2 (Flared Wall Box / Cover - Tier 15)	1015	02	C (4"x6" Cast Iron Reader Door Over 90) D (4"x6" Cast Iron Reader Door Under 90)	017 = Electric	G (Green)
C (Cover)	2 (1/2-13 UNC Bolt Hex)	3 (Straight Wall Box - Tier 8)	1118	03	E (6"x9" Cast Iron Reader Door Over 90) F (6"x9" Cast Iron Reader Door Under 90)	050 = Water	P (Purple)
E (Extension)	3 (3/8-16 UNC Bolt Hex & Washer)	4 (Straight Wall Box - Tier 15)	1121	Boxes / Extensions	G (Gasket) J (Power Marker)		R (Red)
	4 (3/8-16 UNC Bolt Penta & Washer)	6 (Straight Wall Box / Cover - Tier 22)	1132	08	K (Torsion Cover) L (Telephone Marker)	Other logos are available See logo listing	T (Government Tan)
	5 (1/2-6 Coil Thread Bolt Penta)	7 (Cover / Assembly - Pedestrian Traffic)	1212	12	M (Metal Locator) N (Round Cover Insert)	Color - Box	U (Blue)
	6 (1/2-6 Auger Bolt Hex)	8 (Cover / Assembly - Tier 5)	1324	18	P (Touch Read) Q (1/2"x1" Pick Holes)	A (Orange)	X (Requires CDR Brand Logo on Cover / Assembly)
	7 (1/2"-6 Auger Bolt Penta)	9 (Flared Wall Box - Tier 22)	1517	22	R (Radio Read)	G (Green)	
	Box	A (Corrugated Wall Box / Square Corner Cover - Tier 8)	1527	24	S (Split Cover (2436 and smaller) T (6"x9" Polymer Drop-in Lid)	P (Purple)	
	0 (Non Bolting)	B (Corrugated Wall Box / Square Corner Cover - Tier 15)	1622	30	U (7"x13" Polymer Drop-in Lid) V (9"x15" Polymer Drop-in Lid)	R (Red)	
	1 (1/2-13 UNC Insert)	C (Corrugated Wall Box / Square Corner Cover - Tier 22)	1730	34	Y (1 pc Panel Cover (3048 thru 3672) Z (2 pc Panel Cover (3048 thru 3672)	T (Government Tan)	
	3 (3/8-16 UNC Insert)	D (Corrugated Wall Assembly / Square Corner Cover - Pedestrian Traffic)	2424	36		U (Blue)	
	5 (1/2-6 Coil Thread Insert)	E (Corrugated Wall Assembly / Square Corner Cover - Tier 5)	2436	42			
			2460	48	H (QAV III)		
			3048		L (Oversized Shell)		
			3060		M (Standard Mouseholes)		
			3636		P (Intercept Panel) R (Collar for Round Cover)		
			3660		T (Top Extension)		
			3672		W (Grade Adjustable)		
			3696		X (Separate Base)		

Note: Cover rating can not exceed box rating.

**Bolt Reference Chart**

Item 2	Thread Size	Head Style	Length	Application	Part No.
1	1/2-13 UNC	Penta	3.00"	1015, 1118, 1212, 1324, 1517, 1622, 1730, 2424, 2460	<b>C080127</b>
1	1/2-13 UNC	Penta	4.50"	2436 & Larger	<b>C080130</b>
2	1/2-13 UNC	Hex	2.50"	1015, 1118, 1212, 1517	<b>C080110</b>
2	1/2-13 UNC	Hex	3.00"	1324, 1622, 1730, 2424, 2460	<b>C080120</b>
2	1/2-13 UNC	Hex	4.00"	2436 & Larger	<b>C080119</b>
3	3/8-16 UNC	Hex	2.50"	1015, 1118, 1212, 1517	<b>C080012</b>
3	3/8-16 UNC	Hex	3.00"	1324, 1622, 1730, 2424, 2460	<b>C080036</b>
3	3/8-16 UNC	Hex	4.00"	2436 & Larger	<b>C080018</b>
4	3/8-16 UNC	Penta	2.50"	1015, 1118, 1212, 1517	<b>C080026</b>
4	3/8-16 UNC	Penta	3.00"	1324, 1622, 1730, 2424, 2460	<b>C080028</b>
4	3/8-16 UNC	Penta	4.00"	2436 & Larger	<b>C080032</b>

**Sample FRP Part Number**



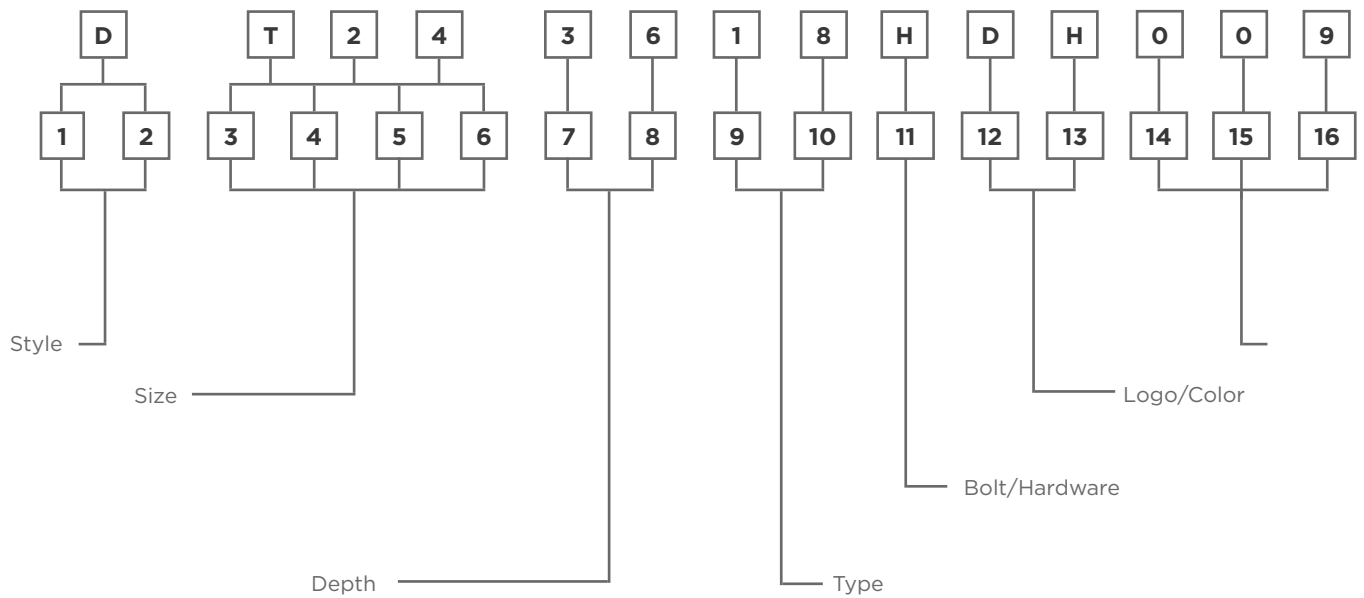
Notes:

2) This part numbering system is provided for guidance to help decipher our part numbers. Some styles or sizes are not available with some options. It is not possible to order a custom part by building your own part number from this table.



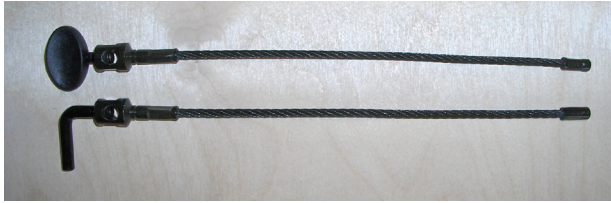


### Sample PenCell Part Number



## Cobra Locks – Proven Security

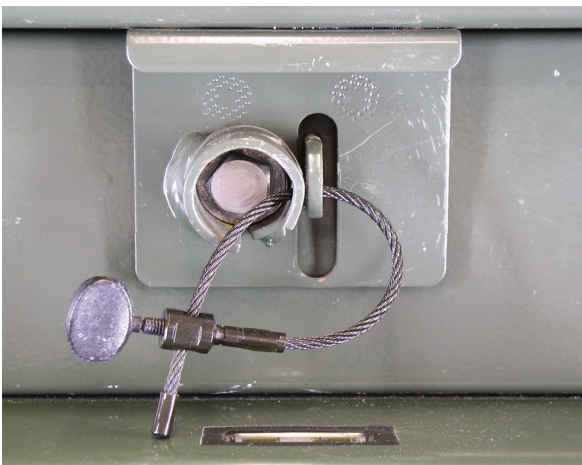
Cobra Locks are flexible, versatile, and most importantly, exceptionally secure. A lock's worth depends ultimately on its strength, and both Cobra Locks are proven in their ability to provide the ultimate in protection.



### Many Benefits:

- **Innovative** - Cobra Locks feature an innovative, one-piece design, which means there are no parts to lose. In addition to the many features and benefits of the Cobra Lock is the first tool-less equipment lock with a unique pan-shaped bolt head that easily breaks off by twisting with your hand at only 15 in-lbs.
- **Versatile** - Designed to be flexible, adjustable, and tamper-proof, Cobra Locks provide limitless versatility for use in tight installations, bent hinges, frozen hasps, and other challenging installations.
- **Secure** - Cobra Locks are constructed of high-quality aircraft cable. This provides high security, because commonly available tools such as pliers, snips, cutters, etc., are unable to cut through the cable. It requires powerful equipment such as grinders, heavy-duty bolt cutters, or high-quality lineman's cutters to cut the cable or remove the lock.
- **Resilient** - Cobra Locks are constructed with corrosion-resistant anodized ends and finish to endure the elements and ensure long life.
- **Strength** - Cobra Locks have been pull-tested to more than 2,000 pounds of resistance to ensure strength and reliability.

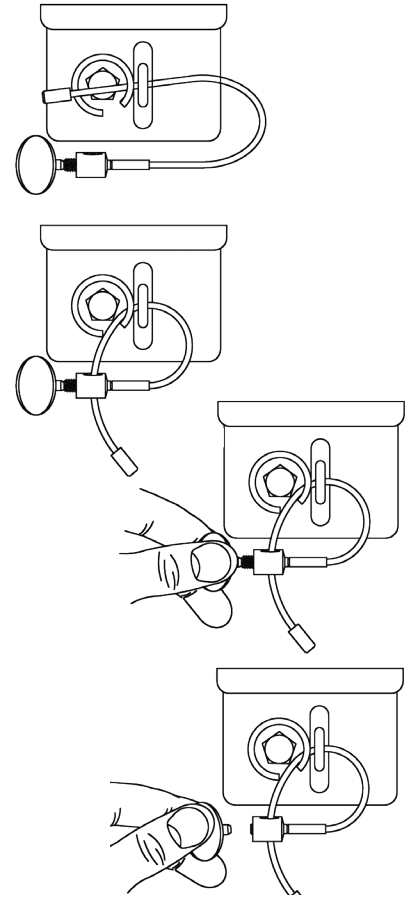
### Secure in a Snap!



# Cobra Locks – Installation Instructions

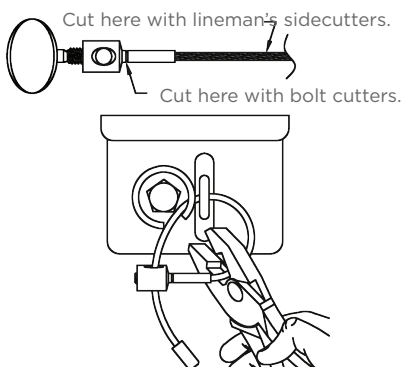
Cobra Locks are easy to put in place and remove by following these simple instructions:

1. Slip the loose end of the cable through the item to be locked.
2. Place the loose end through the eye of the lock body itself.
3. Temporarily secure the lock by tightening the bolt with your fingers.
4. To permanently lock the Cobra Lock, either grasp the lock body with pliers and turn set bolt with a wrench until the bolt head breaks off, or twist the bolt head with your fingers until it breaks off.



## Removal Instructions

To remove a lock, cut it at the groove with a grinder or heavy-duty pair of bolt cutters, or cut the cable with high-quality lineman's cutters. Commonly available tools such as pliers, snips, and cutters will not be effective against the high quality cable.

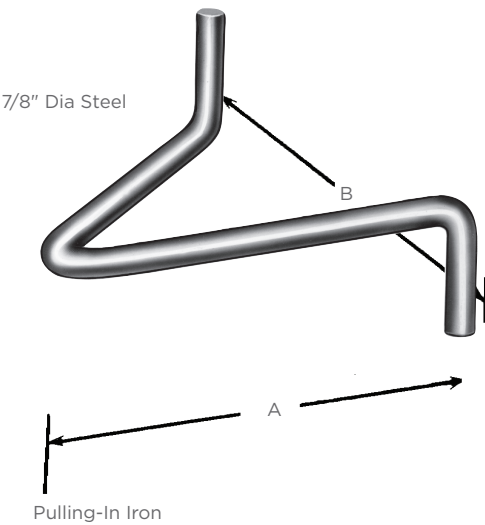
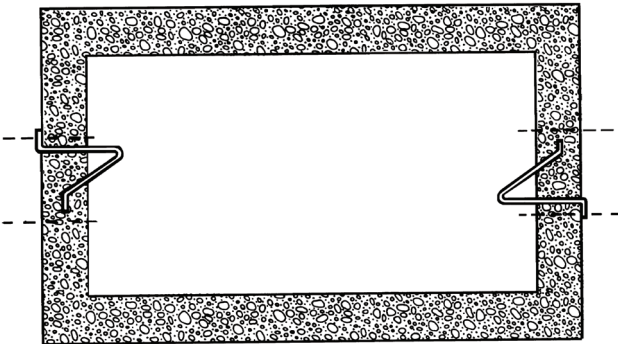


# Pulling-In Irons

Provides a strong and easy-to-get-at attachment for the pulling-in blocks when installing or removing cables. Pulling-In Irons are set into the brick or concrete walls of street vaults opposite all duct entrances. Hot-dip galvanized.

Catalog Number	Dimensions Inches			Approx Ship Wt lb Each
	Steel Size	A	B	
8119 (1)	7/8 Rd.	9	8 3/8	5.40
8120 (1)	7/8 Rd.	12	10 7/8	5.80

(1) RUS listed.

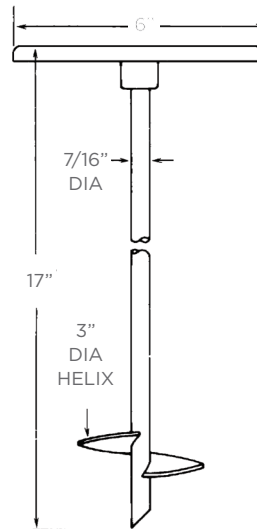
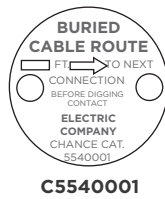


## GROUND-LEVEL CABLE ROUTE MARKERS

## Easy Location of Buried Cable.

This short anchor has an identification plate that can be used to mark locations of buried power, telephone or CATV cables. The anchor is screwed into the ground until the top plate is flush with the ground level. The 3" diameter helix and rod are galvanized steel. Holding power is approximately 750 pounds in average soil.

The top plate is made of copper alloy for high corrosion resistance and long life. The top is lettered with various information including an arrow pointing to the direction of the next connection.



## Ordering Information

Catalog Number	Lettering on Top Plate Insert	Approx Ship Wt lb Each
<b>C5540001<sup>(1)</sup></b>	Electric Company	2.81

(1) RUS listed.





# Pedestals



## Service Pedestals Product Selection Guide

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### Service Pedestals

Hubbell offers a wide variety of service pedestals in order to meet your most specialized needs. Hubbell is sure to have a core product that satisfies even your toughest application requirements. In addition to a wide range of core products and options, Hubbell can help customize a solution to achieve your goals. Type RR (Round-Rod) anchors torque rating is 2,300 ft-lb. Ultimate tension rating for RR mechanical strength is 70,000 lb. Failure to install within 5° of alignment with the guy load will significantly lower strength.

#### AG - Style

Pedestal dome, base, and adapter (if applicable) are constructed of high-density polyethylene (HDPE) structural foam. Flared base walls prevent frost heave.



#### AV - Style

Pedestal dome is low-density polyethylene (LDPE) roto-molded, with base constructed of high-density polyethylene (HDPE) structural foam. Flared base walls prevent frost heave.



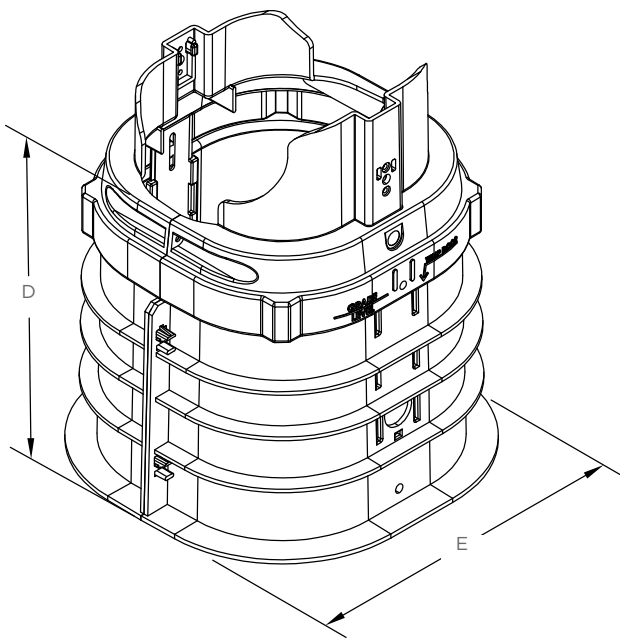
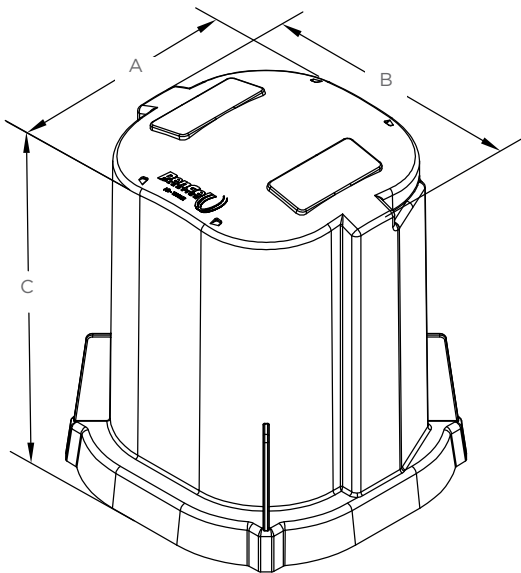
AG101015 - Above Grade Pedestal

Key Features and Benefits

- Designed to meet requirements of Communications, CATV and Electric Service
- The pedestal dome and base are constructed from High Density Polyethylene structural foam
- Double lock option available
- Excellent environmental resistance
- Complete unit includes base, dome, and bracket
- RDUP accepted material
- 360° access

Options Available

- Venting available
- Various mounting brackets available



Product Specifications

Part Number	Description	Dome Dimensions (In.)			Base Dimensions (In.)		Weight (Lbs.)
		Dome Width Dim "A"	Dome Depth Dim "B"	Dome Height Dim "C"	Base Height Dim "D"	Base Diameter Dim "E"	
AG101015	HDPE structural foam 10x10x15 dome and base	10-5/8	12-1/4	15-1/2	12	15-5/8	15

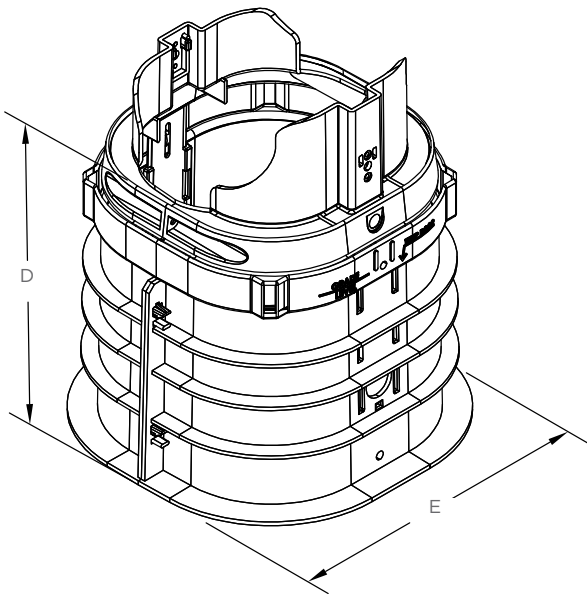
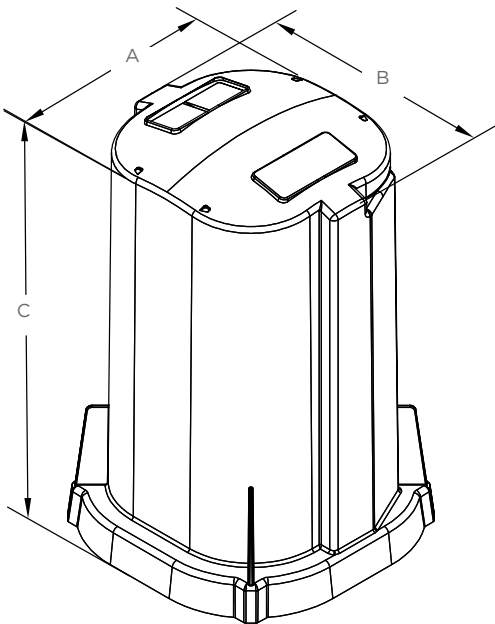
AG101020 - Above Grade Pedestal

Key Features and Benefits

- Designed to meet requirements of Communications, CATV and Electric Service
- The pedestal dome and base are constructed from High Density Polyethylene structural foam
- Double lock option available
- Excellent environmental resistance
- Complete unit includes base, dome, and bracket
- RDUP accepted material
- 360° access

Options Available

- Venting available
- Various mounting brackets available



Product Specifications

Part Number	Description	Dome Dimensions (In.)			Base Dimensions (In.)		Weight (Lbs.)
		Dome Width Dim "A"	Dome Depth Dim "B"	Dome Height Dim "C"	Base Height Dim "D"	Base Diameter Dim "E"	
AG101020	HDPE structural foam 10 x 10 x 20 dome and base	10-5/16	11-15/16	20	12	15-5/8	15

## AG101020 - Above Grade Pedestal

### Key Features and Benefits

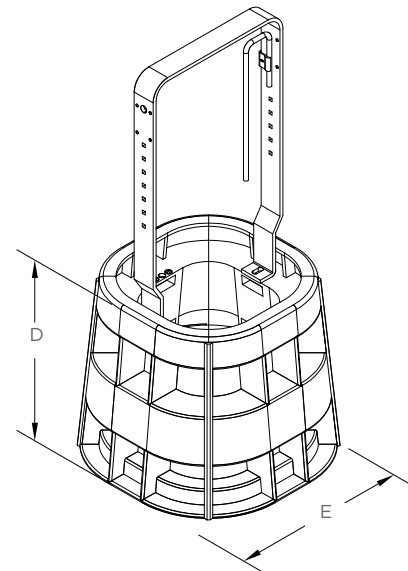
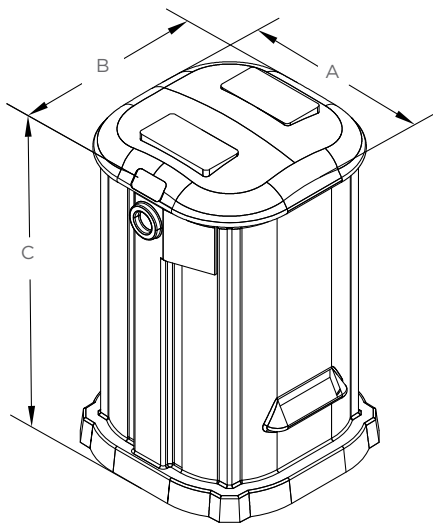
- Designed to meet requirements of Communications, CATV and Electric Service
- The pedestal dome is Low Density Polyethylene roto-molded and the base is High Density Polyethylene structural foam
- All stainless steel hardware
- Excellent environmental resistance
- Complete unit includes base, dome, and bracket
- RDUP accepted material
- 360° access
- Vented

### Options Available

- Custom colors are available
- Various mounting brackets available
- Hasp bracket

### Lock Options

- (HB) Hex Head Bolt
- (HF) Highfield Lock
- Self Locking Slam Lock (various actuators available)
  - (PT) Pin Torx
  - (HS) Hex Slam Lock
  - (PA) Pin Allen
  - (PL) Pencil Lock



### Product Specifications

Part Number	Description	Dome Dimensions (In.)			Base Dimensions (In.)		Weight (Lbs.)
		Dome Width Dim "A"	Dome Depth Dim "B"	Dome Height Dim "C"	Base Height Dim "D"	Base Diameter Dim "E"	
AV101020	LDPE roto-molding 10x10x20 dome and HDPE structural foam base	12-9/16	12-9/16	20-1/4	12-1/2	14-3/8	20

AV121230 - Above Grade Pedestal

Key Features and Benefits

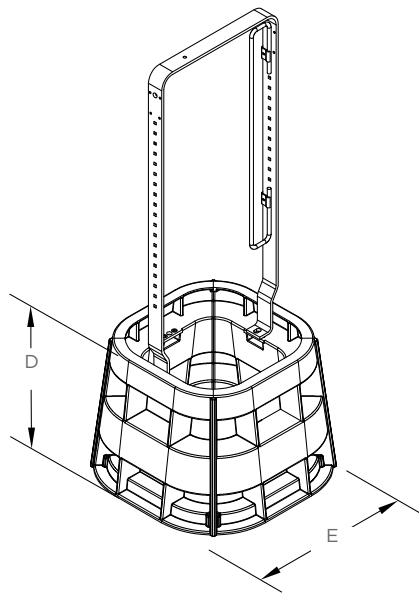
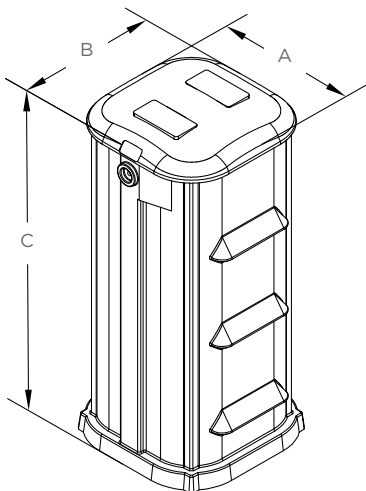
- Designed to meet requirements of Communications, CATV and Electric Service
- The pedestal dome is Low Density Polyethylene roto-molded and the base is High Density Polyethylene structural foam
- All stainless steel hardware
- Excellent environmental resistance
- Complete unit includes base, dome, and bracket
- RDUP accepted material
- 360° access
- Vented

Options Available

- Custom colors are available
- Various mounting brackets available
- Hasp bracket

Lock Options

- (HB) Hex Head Bolt
- (HF) Highfield Lock
- Self Locking Slam Lock (various actuators available)
  - (PT) Pin Torx
  - (HS) Hex Slam Lock
  - (PA) Pin Allen
  - (PL) Pencil Lock



Product Specifications

Part Number	Description	Dome Dimensions (In.)			Base Dimensions (In.)		Weight (Lbs.)
		Dome Width Dim "A"	Dome Depth Dim "B"	Dome Height Dim "C"	Base Height Dim "D"	Base Diameter Dim "E"	
AV121230	LDPE roto-molding 12x12x30 dome and HDPE structural foam base	14-7/16	14-7/16	31-15/16	12-9/16	17-1/8	25

## AV123018 - Above Grade Pedestal

### Key Features and Benefits

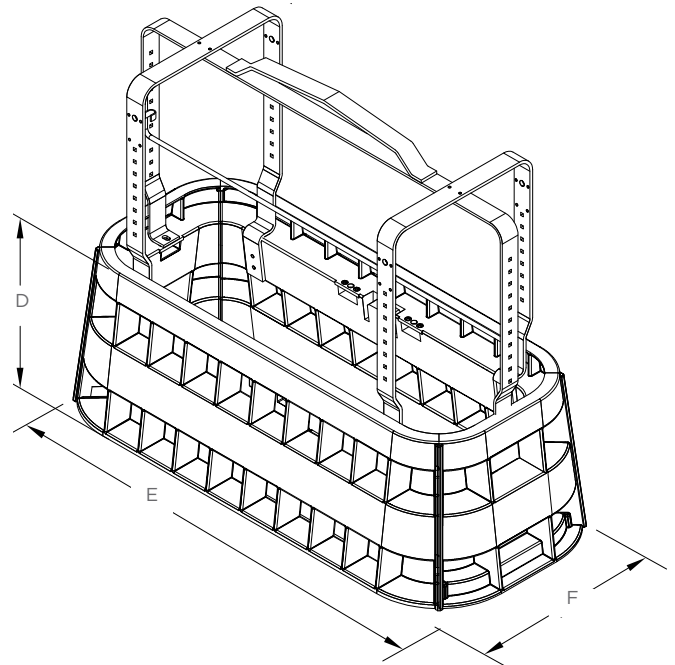
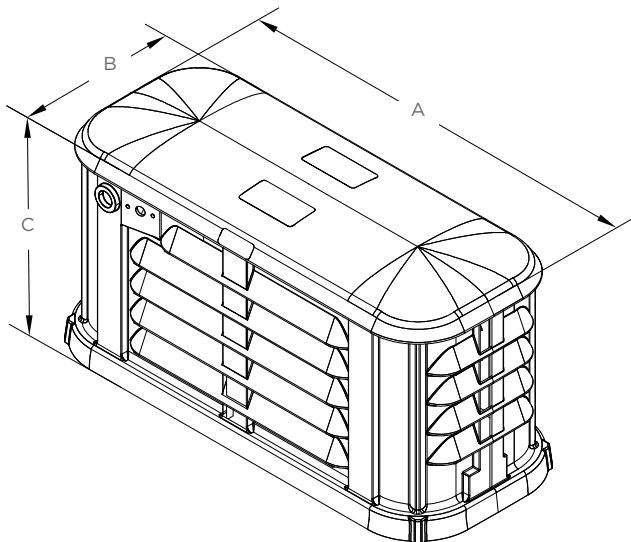
- Designed to meet requirements of Communications, CATV and Electric Service
- The pedestal dome is Low Density Polyethylene roto-molded and the base is High Density Polyethylene structural foam
- All stainless steel hardware
- Excellent environmental resistance
- Complete unit includes base, dome, and bracket
- RDUP accepted material
- 360° access

### Options Available

- Multiple colors are available
- Vented standard, non-vented available
- Various mounting brackets available
- Hasp provision for use of customer specific lock

### Lock Options

- (HB) Hex Head Bolt
- (HF) Highfield Lock
- Self Locking Slam Lock (various actuators available)
  - (PT) Pin Torx
  - (HS) Hex Slam Lock
  - (PA) Pin Allen
  - (PL) Pencil Lock



### Product Specifications

Part Number	Description	Dome Dimensions (In.)			Base Dimensions (In.)			Weight (Lbs.)
		Dome Width Dim "A"	Dome Depth Dim "B"	Dome Height Dim "C"	Base Height Dim "D"	Base Diameter Dim "E"	Base Width Dim "F"	
AV123018	LDPE roto-molding 12x30x18 dome and HDPE structural foam base	35-1/4	14-7/16	18	12-9/16	37-7/8	17-1/8	34

# Dimensions / Data

## AV142034 - Above Grade Pedestal

### Key Features and Benefits

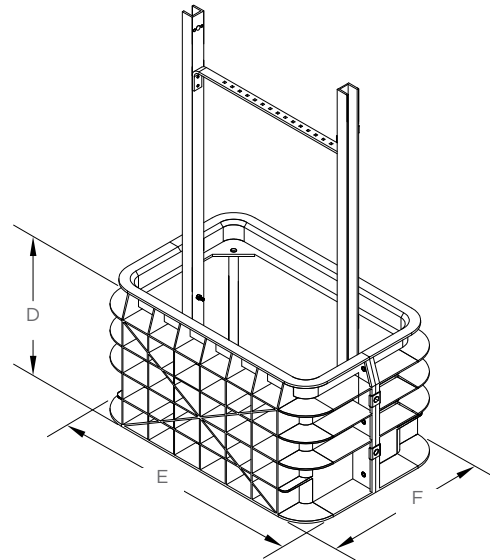
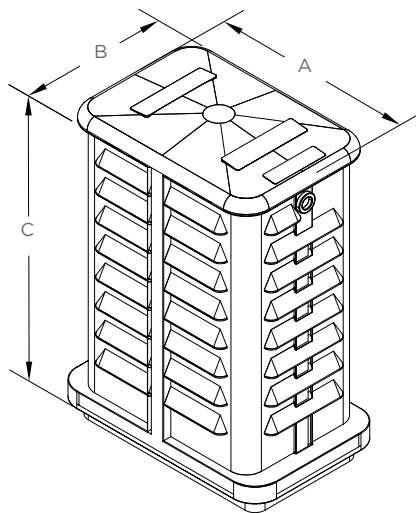
- Designed to meet requirements of Communications, CATV and Electric Service
- The pedestal dome is Low Density Polyethylene roto-molded and the base is High Density Polyethylene structural foam.
- All stainless steel hardware
- Excellent environmental resistance
- Complete unit includes base, dome, and bracket
- RDUP accepted material
- 360° access
- Vented

### Options Available

- Custom colors are available
- Various mounting brackets available

### Lock Options

- (HB) Hex Head Bolt
- (HF) Highfield Lock
- Self Locking Slam Lock (various actuators available)
  - (PT) Pin Torx
  - (HS) Hex Slam Lock
  - (PA) Pin Allen
  - (PL) Pencil Lock



### Product Specifications

Part Number	Description	Dome Dimensions (In.)			Base Dimensions (In.)			Weight (Lbs.)
		Dome Width Dim "A"	Dome Depth Dim "B"	Dome Height Dim "C"	Base Height Dim "D"	Base Diameter Dim "E"	Base Width Dim "F"	
AV142034	LDPE roto-molding 14x20x34 dome and HDPE structural foam base	23-15/16	16-3/4	34-1/2	15	27-7/8	18-3/8	48



## AV173016 - Above Grade Pedestal

### Key Features and Benefits

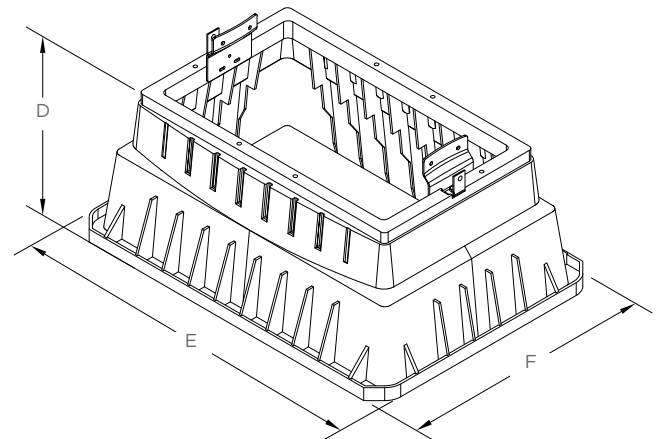
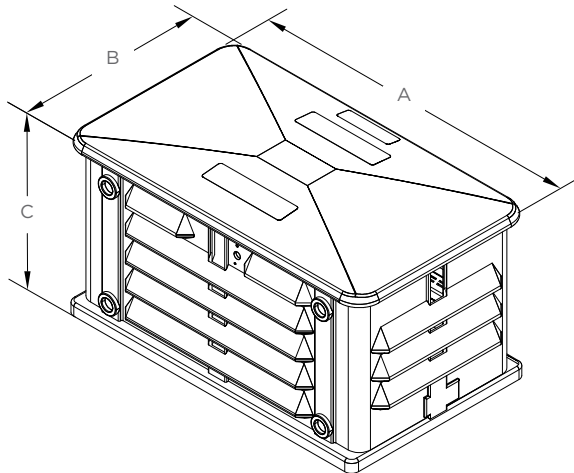
- Designed to meet requirements of Electric Service
- The pedestal dome is Low Density Polyethylene roto-molded and the base is High Density Polyethylene structural foam
- All stainless steel hardware
- Excellent environmental resistance
- Complete unit includes base, dome, bracket and locking hardware
- RDUP accepted material
- 360° access

### Options Available

- Custom colors are available
- Venting available

### Lock Options

- Brass Penta Head Lock



### Product Specifications

Part Number	Description	Dome Dimensions (In.)			Base Dimensions (In.)			Weight (Lbs.)
		Dome Width Dim "A"	Dome Depth Dim "B"	Dome Height Dim "C"	Base Height Dim "D"	Base Diameter Dim "E"	Base Width Dim "F"	
AV173016	LDPE roto-molding 17x30x16 dome and HDPE structural foam base	35-1/4	20-3/8	18-5/8	16-1/6	41-1/6	29-1/2	48

# Dimensions / Data

## AV183218 - Above Grade Pedestal

### Key Features and Benefits

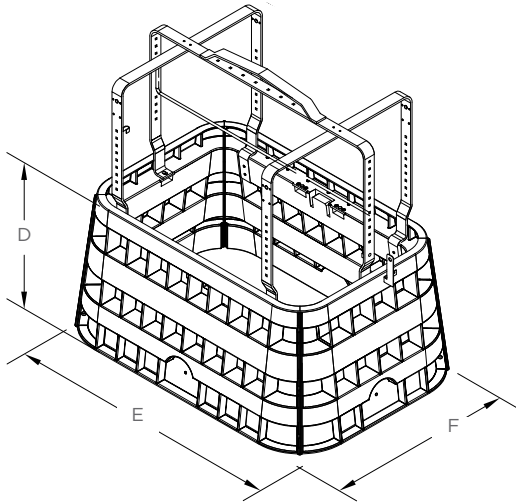
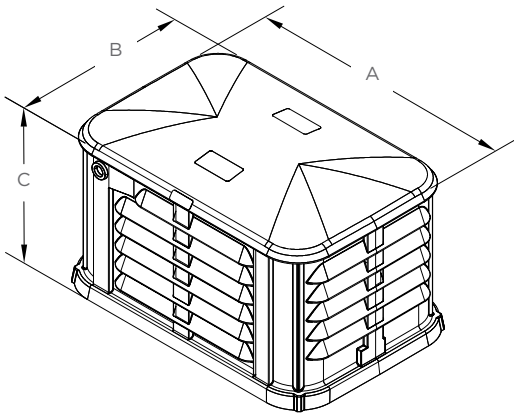
- Designed to meet requirements of Communications, CATV and Electric Service
- The pedestal dome is Low Density Polyethylene roto-molded and the base is High Density Polyethylene structural foam
- All stainless steel hardware
- Excellent environmental resistance
- Complete unit includes base, dome, and bracket
- RDUP accepted material
- 360° access

### Options Available

- Custom colors are available
- Venting available
- Various mounting brackets available
- Hasp bracket

### Lock Options

- (HB) Hex Head Bolt
- (HF) Highfield Lock
- Self Locking Slam Lock (various actuators available)
  - (PT) Pin Torx
  - (HS) Hex Slam Lock
  - (PA) Pin Allen
  - (PL) Pencil Lock



### Product Specifications

Part Number	Description	Dome Dimensions (In.)			Base Dimensions (In.)			Weight (Lbs.)
		Dome Width Dim "A"	Dome Depth Dim "B"	Dome Height Dim "C"	Base Height Dim "D"	Base Diameter Dim "E"	Base Width Dim "F"	
AV183218	LDPE roto-molding 18x32x18 dome and HDPE structural foam base	35-3/8	23-7/16	21	12	39-3/16	27-3/16	48

## AV243626 - Above Grade Pedestal

### Key Features and Benefits

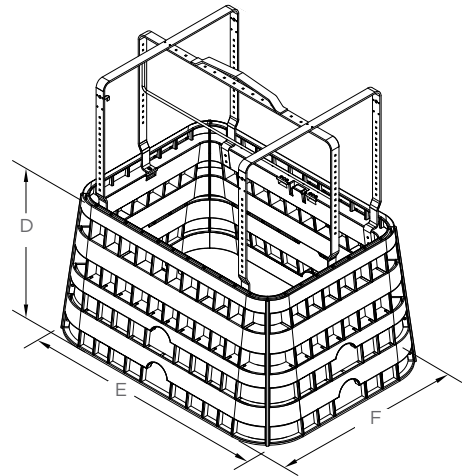
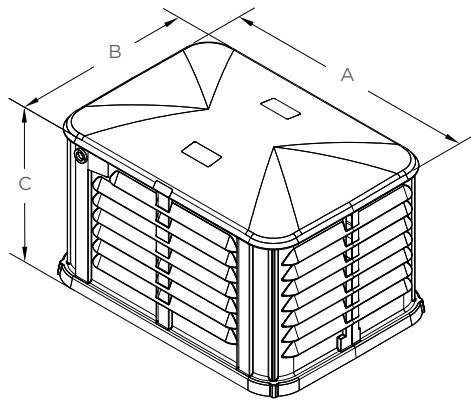
- Designed to meet requirements of Communications, CATV and Electric Service
- The pedestal dome is Low Density Polyethylene roto-molded and the base is High Density Polyethylene structural foam
- All stainless steel hardware
- Excellent environmental resistance
- Complete unit includes base, dome, and bracket
- RDUP accepted material
- 360° access

### Options Available

- Custom colors are available
- Venting available
- Various mounting brackets available
- Hasp bracket

### Lock Options

- (HB) Hex Head Bolt
- (HF) Highfield Lock
- Self Locking Slam Lock (various actuators available)
  - (PT) Pin Torx
  - (HS) Hex Slam Lock
  - (PA) Pin Allen
  - (PL) Pencil Lock



### Product Specifications

Part Number	Description	Dome Dimensions (In.)			Base Dimensions (In.)			Weight (Lbs.)
		Dome Width Dim "A"	Dome Depth Dim "B"	Dome Height Dim "C"	Base Height Dim "D"	Base Diameter Dim "E"	Base Width Dim "F"	
AV243626	LDPE roto-molding 24x36x26 dome and HDPE structural foam base	41-1/2	29-7/16	26	24	46-3/4	34-3/4	75

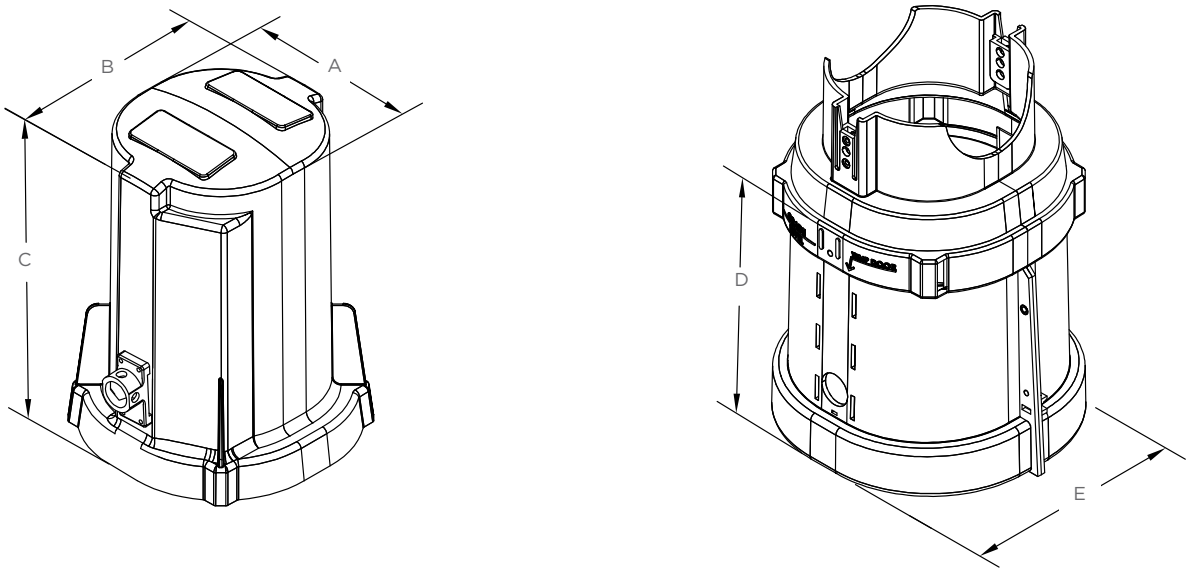
AG8815 - Above Grade Pedestal

Key Features and Benefits

- Designed to meet requirements of Communications, CATV and Electric Service
- The pedestal dome and base are constructed from High Density Polyethylene structural foam
- Double lock option available
- Excellent environmental resistance
- Complete unit includes base, dome, and bracket
- RDUP accepted material
- 360° access

Options Available

- Various mounting brackets available



Product Specifications

Part Number	Description	Dome Dimensions (In.)			Base Dimensions (In.)		Weight (Lbs.)
		Dome Width Dim "A"	Dome Depth Dim "B"	Dome Height Dim "C"	Base Height Dim "D"	Base Diameter Dim "E"	
AG8815	HDPE structural foam 8x8x15 dome and base	8-7/16	9-15/16	15-1/8	12	12-5/16	10

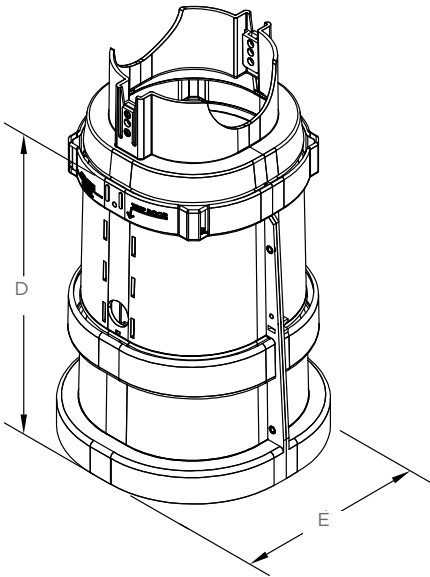
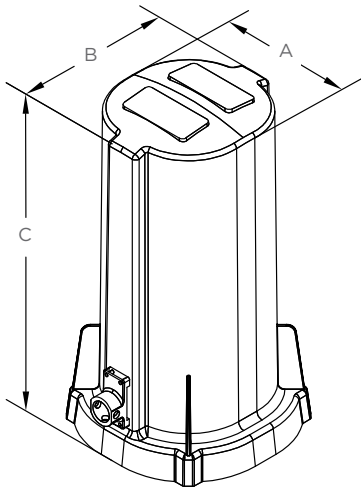
AG8820 - Above Grade Pedestal

Key Features and Benefits

- Designed to meet requirements of Communications, CATV and Electric Service
- The pedestal dome and base are constructed from High Density Polyethylene structural foam
- Double lock option available
- Excellent environmental resistance
- Complete unit includes base, dome, and bracket
- RDUP accepted material
- 360° access

Options Available

- Various mounting brackets available



Product Specifications

Part Number	Description	Dome Dimensions (In.)			Base Dimensions (In.)		Weight (Lbs.)
		Dome Width Dim "A"	Dome Depth Dim "B"	Dome Height Dim "C"	Base Height Dim "D"	Base Diameter Dim "E"	
AG8820	HDPE structural foam 8x8x20 dome and base	8-5/16	9-13/16	20	18	13-1/2	12

# Dimensions / Data

## AV8815 - Above Grade Pedestal

### Key Features and Benefits

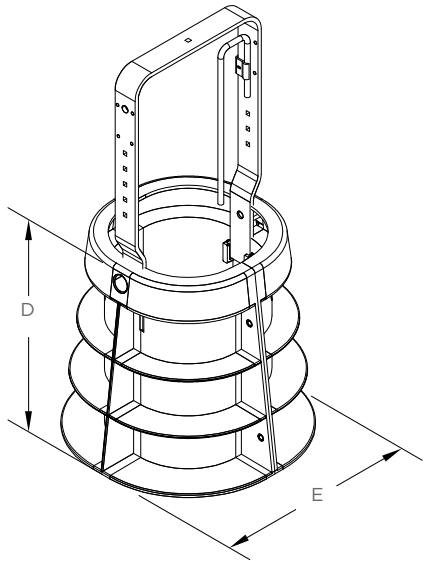
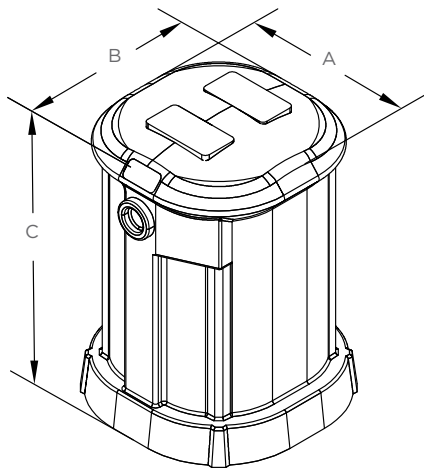
- Designed to meet requirements of Communications, CATV and Electric Service
- The pedestal dome is Low Density Polyethylene roto-molded and the base is High Density Polyethylene structural foam
- All stainless steel hardware
- Excellent environmental resistance
- Complete unit includes base, dome, and bracket
- RDUP accepted material
- 360° access

### Options Available

- Custom colors are available
- Venting available
- Various mounting brackets available
- Hasp bracket

### Lock Options

- (HB) Hex Head Bolt
- (HF) Highfield Lock
- Self Locking Slam Lock (various actuators available)
  - (PT) Pin Torx
  - (HS) Hex Slam Lock
  - (PA) Pin Allen
  - (PL) Pencil Lock



### Product Specifications

Part Number	Description	Dome Dimensions (In.)			Base Dimensions (In.)		Weight (Lbs.)
		Dome Width Dim "A"	Dome Depth Dim "B"	Dome Height Dim "C"	Base Height Dim "D"	Base Diameter Dim "E"	
AV8815	LDPE roto-molding 8x8x15 dome and HDPE structural foam base	10-13/16	10-13/16	15-7/16	12	13	10

## AV8820 - Above Grade Pedestal

### Key Features and Benefits

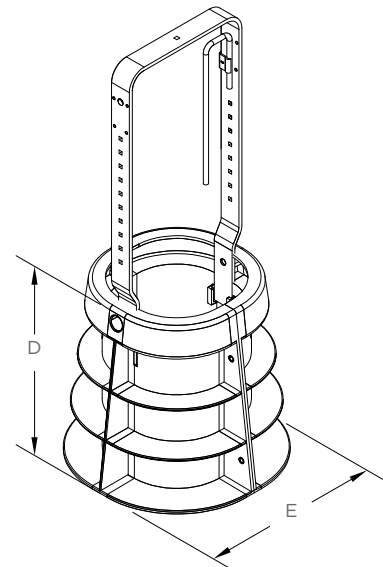
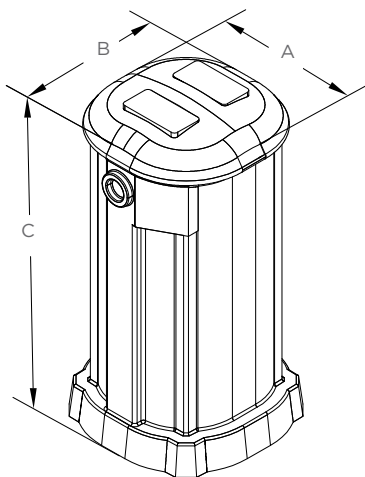
- Designed to meet requirements of Communications, CATV and Electric Service
- The pedestal dome is Low Density Polyethylene roto-molded and the base is High Density Polyethylene structural foam
- All stainless steel hardware
- Excellent environmental resistance
- Complete unit includes base, dome, and bracket
- RDUP accepted material
- 360° access

### Options Available

- Custom colors are available
- Venting available
- Various mounting brackets available
- Hasp bracket

### Lock Options

- (HB) Hex Head Bolt
- (HF) Highfield Lock
- Self Locking Slam Lock (various actuators available)
  - (PT) Pin Torx
  - (HS) Hex Slam Lock
  - (PA) Pin Allen
  - (PL) Pencil Lock



### Product Specifications

Part Number	Description	Dome Dimensions (In.)			Base Dimensions (In.)		Weight (Lbs.)
		Dome Width Dim "A"	Dome Depth Dim "B"	Dome Height Dim "C"	Base Height Dim "D"	Base Diameter Dim "E"	
AV8820	LDPE roto-molding 8x8x20 dome and HDPE structural foam base	10-13/16	10-5/16	15-9/16	12	13	12



PEDESTALS

Catalog Numbering System

Above Ground Service Pedestals

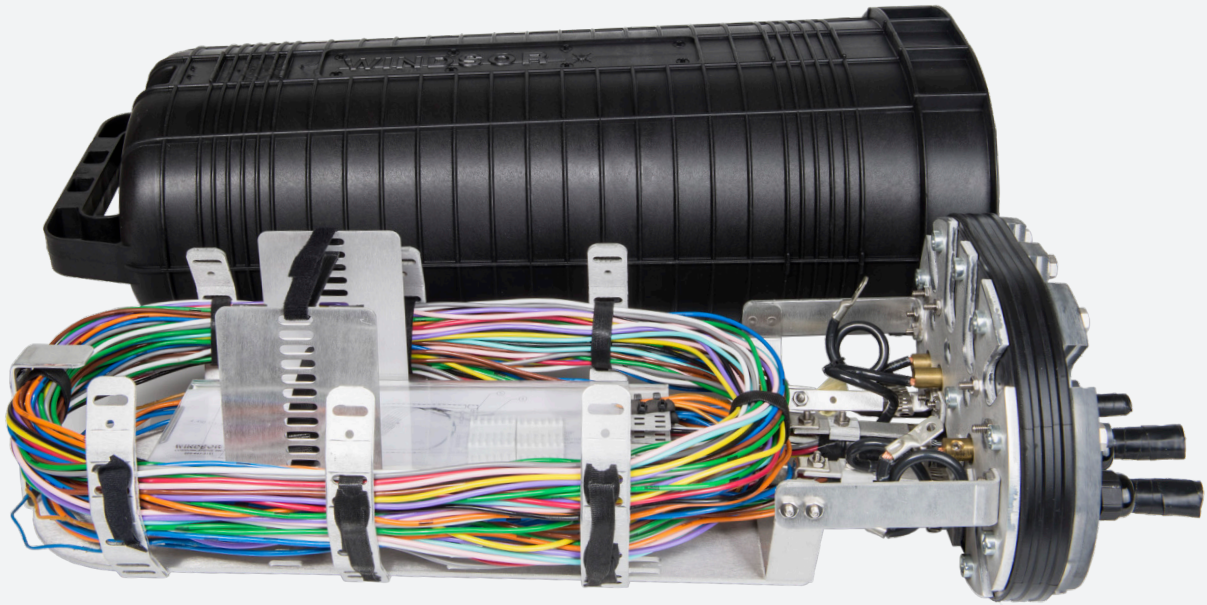
1,2	3-8	9,10	11,12	13,14	15	16-18
Model	Series	Assembly	Lock	Options	Color	Logo
AG	101015	HD Assembly Base & Dome	00	00	0 PenCell green	000
AV	101020	H5 (base, dome, and 5" extension)	CP (Cap Plug)		1 Light Green	
	121230	LD Assembly Base & Low-Profile Dome	D1 Diversified lock 801		2 Medium green	
	123018		D2 Diversified lock 802		3 Dark green	
	142034		D3 Diversified lock 75		7 Orange	
	1730		D4 Diversified lock 34		8 Purple	
	183218		D5 Diversified lock 85		9 Blue	
	2436		D6 Diversified lock 77			
			D7 (Diversified 035)			
			D8 Diversified lock 081			
			FB Double Crimp Lock			
			HB 3/8-16 Hex Head Bolt			
			HF Highfield			
			HS (Hex Slam Lock)			
			HT (Highfield w/Tether)			
			NL (Brass Lock Penta Bolt)			
			PA Pin allen			
			PL Pencil lock			
			PT Pin Torx			
			SS (Medical Grade Stainless Steel)			
			XB 3/8-16 Penta Head			
			XL (Penta Head Crimp Lock)			

Special Numbers

5,0

0

Verify part number through Customer Service. Additional options may be available. Check with Customer Service



# Hubbell Fiber Splice Closures

Hubbell fiber splice closures are designed by former splice technicians with flexibility and ease of workmanship in mind. All splice closures are sold fully assembled to reduce labor costs, splicing time, and chances of craft error. With over 30 years of splicing product design and manufacturing experience and proven field performance, Windsor closures are the ideal choice for your fiber networks

## Key Features

- Shipped Fully Assembled
- For Dielectric, Armored, and OPGW Cables
- EPDM rubber compression seal for 570 and 790 Closures
  - Waterproof
  - Peel out concentric rings to quickly and accurately size seal to cable
  - Split to provide access to all ports without service interruption
- Urethane compression seal with grommets for 350 and 570G closures
- All ports are slotted to eliminate trapped cables allowing easy cable additions and mid-sheath splicing
- Multiple drop grommets available for 350, 570, 570G and 790 closures
- Unsurpassed buffer tube storage capacity
- Convenient carrying/lifting handle for 570, 570G and 790 and lifting eye for 350
- IG closures facilitate toning of individual cables without needing to re-enter the closure

## Four End Plate Options:

- Dielectric
- Grounded
- Isolated ground
- OPGW (570 and 790 only)

Model	Splice Capacity		Dome Dimensions		Cable Ports
	Single	Ribbon	Opening	Length	
350	96	288	4.5" X 5.8"	21"	4
570 & 570G	432	1152	5.5" X 8"	24"	6
790	648	1728	7.5" X 10"	26"	8

HPS has a policy of continuous product improvement. For current product design specifications and terms and conditions, please visit [hubbelpowersystems.com](http://hubbelpowersystems.com).

SPLICE CLOSURES

# Dielectric Closures

Key Features

- Shipped Fully Assembled
- Peel-out, EPDM rubber compression seal for PSCA570S and PSCA790SEB closures
- Urethane compression seal with grommets for PSCA350S and PSCA570SG closures
- All ports slotted to eliminate trapped cables
- Unsurpassed buffer tube storage capacity

Available Models

- PSCA350S is factory equipped for butt splice applications in a compact size
- PSCA570S is factory equipped to support 2 backbone and 2 lateral cables in a mid-size dome
- PSCA570SG is factory equipped for butt splice applications in a mid-size dome
- PSCA790SEB is factory equipped to support 2 backbone and 2 lateral cables in a large dome
- Cable Build Out kits available for additional port capacity



PSCA570S

Ordering Information

Catalog Number	Tray Width Compatibility	Splice Capacity (Single/Ribbon)	Qty of Ports (Available/Factory Equipped)	Port Application Range In (MM)		Seal Type	Dimensions L x W x H IN (MM)	Weight LBS (KG)
				Backbone	Lateral			
PSCA350S	STANDARD	96 / 288	4 / 2	0.250-0.625 (6.35-15.88)		Grommet	21.608 x 8.575 x 5.963 (548.8 x 217.8 x 151.5)	6.730 (3.05)
PSCA570S	STANDARD / WIDE*	432 / 1152	6 / 4	0.375-0.875 (9.53-22.23)	0.375-0.750 (9.53-19.05)	Peel-out	24.550 x 10.726 x 7.160 (622.3 x 272.4 x 182.9)	12.000 (5.44)
PSCA570SG	STANDARD / WIDE*	432 / 1152	6 / 2	0.375-0.750 (9.53-19.05)	0.375-0.625 (9.53-15.88)	Grommet		11.770 (5.34)
PSCA790SEB	STANDARD / WIDE*	576 / 1728	8 / 4	0.375-1.250 (9.53-31.75)	0.375-0.875 (9.53-22.23)	Peel-out	26.542 x 12.716 x 9.300 (674.2 x 323.0 x 236.2)	17.280 (7.84)

\* 570 and 790 series closures incorporate an adjustable tray holder that accepts both standard and wide splice trays.

PSCA Closure Accessories

PSC350ADCBO	350 Closure Cable Build Out kit for 2 additional dielectric cables
PSC570ADCBO	570 Closure Cable Build Out kit for 2 additional dielectric cables
PSC570GADCBO	570G Closure Cable Build Out kit for 2 additional dielectric cables (Backbone Ports)
PSC570GADCBOBP	570G Closure Cable Build Out kit for 2 additional dielectric cables (Lateral Ports)
PSC790ADCBO	790 Closure Cable Build Out kit for 4 additional dielectric cables
PSC4040463P	350 Closure threaded stud bonding point
PSC4040462P	570 and 790 closure threaded stud bonding point

## Key Features

- Shipped Fully Assembled
- Peel-out, EPDM rubber compression seal for PSCG790SEB closures
- Urethane compression seal with grommets for PSCG350S and PSCG570SG closures
- All ports slotted to eliminate trapped cables
- Unsurpassed buffer tube storage capacity
- Dedicated grounding point for each cable port

## Available Models

- PSCG350S is factory equipped for butt splice applications in a compact size
- PSCG570SG is factory equipped for butt splice applications in a mid-size dome
- PSCG790SEB is factory equipped to support 2 backbone and 2 lateral cables in a large dome
- Cable Build Out kits available for additional port capacity
- Cable Build Out kits available for additional port capacity



**PSCG570SG**

## Ordering Information

Catalog Number	Tray Width Compatibility	Splice Capacity (Single/Ribbon)	Qty of Ports (Available/Factory Equipped)	Port Application Range In (MM)		Seal Type	Dimensions L x W x H IN (MM)	Weight LBS (KG)
				Backbone	Lateral			
<b>PSCG350S</b>	STANDARD	96 / 288	4 / 2	0.250-0.625 (6.35-15.88)		Grommet	22.608 x 8.575 x 5.963 (572.2 x 217.8 x 151.5)	7.190 (3.26)
<b>PSCG570SG</b>	STANDARD / WIDE*	432 / 1152	6 / 2	0.375-0.750 (9.53-19.05)	0.375-0.625 (9.53-15.88)	Grommet	25.602 x 10.726 x 7.160 (650.3 x 272.4 x 182.9)	12.23 (5.55)
<b>PSCG790SEB</b>	STANDARD / WIDE*	648 / 1728	8 / 4	0.375-1.250 (9.53-31.75)	0.375-0.875 (9.53-22.23)	Peel-out	27.550 x 12.716 x 9.300 (674.2 x 323.0 x 236.2)	18.200 (8.26)

\* 570 and 790 series closures incorporate an adjustable tray holder that accepts both standard and wide splice trays.

## PSCG Closure Accessories

<b>PSC350ADCBO</b>	350 Closure Cable Build Out kit for 2 additional cables (bonding point not included; if required, see PSC4040463P below)
<b>PSC570GADCBO</b>	570G Closure Cable Build Out kit for 2 additional dielectric cables (Backbone Ports; bonding point not included; if required, see PSC4040462P below)
<b>PSC570GADCBOBP</b>	570G Closure Cable Build Out kit for 2 additional dielectric cables (Lateral Ports; bonding point not included; if required, see PSC4040462P below)
<b>PSC790ADCBO</b>	790 Closure Cable Build Out kit for 4 additional dielectric cables (bonding point not included; if required, see PSC4040462P below)
<b>PSC4040463P</b>	350 Closure threaded stud bonding point
<b>PSC4040462P</b>	570 and 790 closure threaded stud bonding point

SPLICE CLOSURES

# Isolated Ground Closures

Key Features

- Shipped Fully Assembled
- Peel-out, EPDM rubber compression seal for PSCI570S and PSCI790SEB closures
- Urethane compression seal with grommets for PSCI350S and PSCI570SG closures
- All ports slotted to eliminate trapped cables
- Unsurpassed buffer tube storage capacity
- Dedicated isolated ground point for each cable port

Available Models

- PSCI350S is factory equipped for butt splice applications in a compact size
- PSCI570S is factory equipped to support 2 backbone and 2 lateral cables in a mid-size dome
- PSCI570SG is factory equipped for butt splice applications in a mid-size dome
- PSCI790SEB is factory equipped to support 2 backbone and 2 lateral cables in a large dome
- Cable build out kits available for additional port capacity
- Cable Build Out kits available for additional port capacity



PSCI570S

Ordering Information

Catalog Number	Tray Width Compatibility	Splice Capacity (Single/Ribbon)	Qty of Ports (Available/Factory Equipped)	Port Application Range In (MM)		Seal Type	Dimensions L x W x H IN (MM)	Weight LBS (KG)
				Backbone	Lateral			
PSCI350S	STANDARD	96 / 288	4 / 2	0.250-0.625 (6.35-15.88)		Grommet	22.377 x 8.575 x 5.963 (568.4 x 217.8 x 151.5)	7.650 (3.47)
PSCI570S	STANDARD / WIDE*	432 / 1152	6 / 4	0.375-0.875 (9.53-22.23)	0.375-0.750 (9.53-19.05)	Peel-out	25.570 x 10.726 x 7.160 (649.5 x 272.4 x 182.9)	13.000 (5.90)
PSCI570SG	STANDARD / WIDE*	432 / 1152	6 / 2	0.375-0.750 (9.53-19.05)	0.375-0.625 (9.53-15.88)	Grommet		12.270 (5.57)
PSCI790SEB	STANDARD / WIDE*	648 / 1728	8 / 4	0.375-1.250 (9.53-31.75)	0.375-0.875 (9.53-22.23)	Peel-out	27.529 x 12.716 x 9.300 (699.2 x 323.0 x 236.2)	19.120 (8.67)

\* 570 and 790 series closures incorporate an adjustable tray holder that accepts both standard and wide splice trays.

PSCI Closure Accessories

- PSC350IGCBO** 350 Closure Cable Build Out kit for 2 additional armored cables w/ grounds
- PSC570IGCBO** 570 Closure Cable Build Out kit for 2 additional armored cables w/ grounds
- PSC570GIGCBO** 570G Closure Cable Build Out kit for 2 additional armored cables w/ grounds (Backbone Ports)
- PSC570GIGCBOLP** 570G Closure Cable Build Out kit for 2 additional armored cables w/ grounds (Lateral Ports)
- PSC790IGCBO** 790 Closure Cable Build Out kit for 4 additional armored cables w/ grounds

## Key Features

- Shipped Fully Assembled
- Peel-out, EPDM rubber compression seal
- All ports slotted to eliminate trapped cables
- OPGW clamping system has substantial torque resistance and 1000 lbs pull out strength
- Accommodates central core and stainless-steel buffer tubes
- Unsurpassed buffer tube storage capacity

## Available Models

- PSCO570\*S is factory equipped to support 2 backbone OPGW and 2 lateral black jacket cables in a mid-size dome
- PSCO790\*SEB is factory equipped to support 2 backbone OPGW and 2 lateral black jacket cables in a large dome
- Cable Build Out Kits available for additional port capacity



PSCO570\*S

\*See "OPGW Closure Catalog Number Builder" below to complete catalog number for ordering

## Ordering Information

Catalog Number	Tray Width Compatibility	Splice Capacity (Single/Ribbon)	Qty of Ports (Available/Factory Equipped)	Port Application Range In (MM)			Seal Type	Dimensions L x W x H IN (MM)	Weight LBS (KG)
				OPGW	Backbone	Lateral			
PSCO570*S	STANDARD / WIDE*	432 / 1152	OPGW - 4 / 2 BLACK JACKET - 4 / 2	0.250-0.688 (6.35-17.48)	0.375-0.875 (9.53-22.23)	0.375-0.750 (9.53-19.05)	Peel-out	22.377 x 8.575 x 5.963 (568.4 x 217.8 x 151.5)	7.650 (3.47)
PSCO790*SEB	STANDARD / WIDE*	432 / 1152	OPGW - 4 / 2 BLACK JACKET - 6 / 2	0.375-1.125 (9.53-28.58)	0.375-1.250 (9.53-31.75)	0.375-0.875 (9.53-22.23)	Peel-out	25.570 x 10.726 x 7.160 (649.5 x 272.4 x 182.9)	13.000 (5.90)

\* 570 and 790 series closures incorporate an adjustable tray holder that accepts both standard and wide width splice trays.

## OPGW Closure Catalog Number Builder

Closure Size \_\_\_\_\_ PSCO \_\_\_\_ \_

• See chart

Number of OPGW Ports \_\_\_\_\_

• 2 Ports Standard; 4 Ports Maximum

Outside Cable Diameter \_\_\_\_\_

• Decimal inches

Diameter of Al Tube \_\_\_\_\_

• Decimal inches ("000" if: SS Tubes; 570 application with diameter < 0.250"; or, 790 application with diameter < 0.375")

Tray Width \_\_\_\_\_

• 570 and 790 series closures accept both standard and wide width splice trays

Express Bracket \_\_\_\_\_

• 570 - Omit

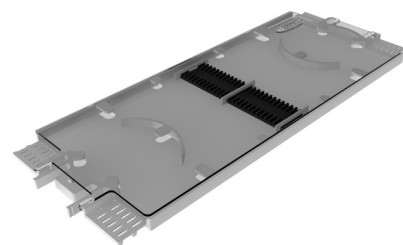
• 790 - Standard; add EB



# Splice Trays

## Key Features

- Plastic Splice Trays include an ABS plastic tray base with integrated fiber routing and splice chip retention tabs and recessed buffer tube tie-wrap slots
- Metal Splice Trays include a durable formed aluminum tray base



## Ordering Information

Catalog No.	Description	Tray Kit Contents						
		Tray Base	Clear LID	Single Fiber Splice Chips		Mass Fusion Splice Chips		Zip Ties & Felt
				6 POS.	12 POS.	6 POS.	12 POS.	
Plastic Trays								
PSCSTPS24	24 Single-Fiber Splice Capacity, Standard Width	•	•		2			•
PSCSTPS24T	24 Single-Fiber Splice Capacity, Standard Width Tall	•	•		1 Stkd.*			•
PSCSTPS48	48 Single-Fiber Splice Capacity, Wide Width	•	•		4			•
PSCSTPS72	72 Single-Fiber Splice Capacity, Wide Width	•	•		3 Stkd.*			•
PSCSTPR144	144 Mass Fusion Splice Capacity, Standard Width	•	•				1	•
PSCSTPR288	288 Mass Fusion Splice Capacity, Wide Width	•	•				2	•
PSCSTPTT	Transition Tray, Standard Width	•	•					•
PSCSTPTTW	Transition Tray, Wide Width	•	•					•
Metal Trays								
PSC20512	12 Single-Fiber Splice Capacity, Standard Width	•	•		1			
PSC20524	24 Single-Fiber Splice Capacity, Standard Width	•	•	4				
PSC20536	36 Single-Fiber Splice Capacity, Wide Width	•	Metal		3			
PSC20548	48 Single-Fiber Splice Capacity, Wide Width	•	Metal		4			
PSC20554	54 Single-Fiber Splice Capacity, Wide Width	•	Metal	4	1			
PSC205144	144 Mass Fusion Splice Capacity, Standard Width	•	Metal			2		
PSC205288	288 Mass Fusion Splice Capacity, Wide Width	•	Metal			4		
PSC20514TT	Transition Tray, Standard Width	•	Metal					
PSC205WTT	Transition Tray, Wide Width	•	Metal					

\* 12 position, double-stacked splice chip.

## Tray Accessories

**PSC10002P50** Heat Shrink Sleeve Single Fusion 2.375" (60 mm) Length (Sold as bag of 50 pieces)



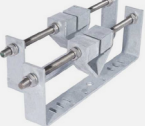





**PSC10002FP50** Heat Shrink Sleeve Mass Fusion 1.575" (40 mm) Length (Sold as bag of 50 pieces)



### Key Features

- Stationary brackets for coil bracket, pole and tower applications
- Aerial brackets for lashed cable and ADSS applications

### Ordering Information

Catalog No.	Description	Closure Compatibility				Product Image
		350	570	570G	790	
Stationary brackets						
PSC700VCB	<div>Vertical Closure Bracket, Stainless Steel</div> <ul style="list-style-type: none"><li>For use in conjunction with coil bracket (mounting hardware included)</li><li>Can band or bolt to wood poles or steel monopoles (hardware not included)</li></ul>	•	•	•	•	
PSC4040392	<div>Vertical Closure Standoff Bracket, Aluminum</div> <ul style="list-style-type: none"><li>For use in conjunction with coil bracket (mounting hardware included)</li><li>Can band or bolt to wood poles or steel monopoles (hardware not included)</li></ul>	•				
PSC4040395	<ul style="list-style-type: none"><li>Universal design supports various Hubbell and competitor closures</li></ul>		•	•	•	
PSC730TPMB	<div>Tower Post Mounting Bracket</div> <ul style="list-style-type: none"><li>For attaching Bullet Resistant Canister or PSC700VCB Vertical Closure Bracket to self-supporting towers (max 8"/200mm angle steel)</li><li>Sold as a pair</li></ul>		•	•	•	
Aerial brackets						
PSC570AB	<div>Aerial Hanging Bracket, Adjustable</div> <ul style="list-style-type: none"><li>For mounting splice closure to horizontal messenger strand</li><li>1.250" of height adjustability</li></ul>	•	•	•	•	
UBKTMK	<div>Aerial Hanging Bracket, Non-adjustable</div> <ul style="list-style-type: none"><li>For mounting splice closure to horizontal messenger strand</li><li>Non-adjustable design</li></ul>	•	•	•	•	
UBK	<div>ADSS Deadend Aerial Hanging Bracket</div> <ul style="list-style-type: none"><li>For mounting splice closure to deadend, armor rod, or fiberglass extension arm using universal bands</li></ul>	•	•	•	•	
UBKADSS	<div>ADSS Direct Attach Aerial Hanging Bracket</div> <ul style="list-style-type: none"><li>For mounting splice closure directly to the ADSS cable using direct attach banding bracket and peel-away grommet</li></ul> <div>Note: Consult cable manufacturer before using this mounting method</div>	•	•	•	•	
UB1	<div>ADSS Deadend Aerial Hanging Bracket, Messenger Hardware Adaptor</div> <ul style="list-style-type: none"><li>Adapts deadend, armor rod, or fiberglass extension arm for use with standard splice closure manufacturer's messenger mounting hardware</li></ul>	•	•	•	•	

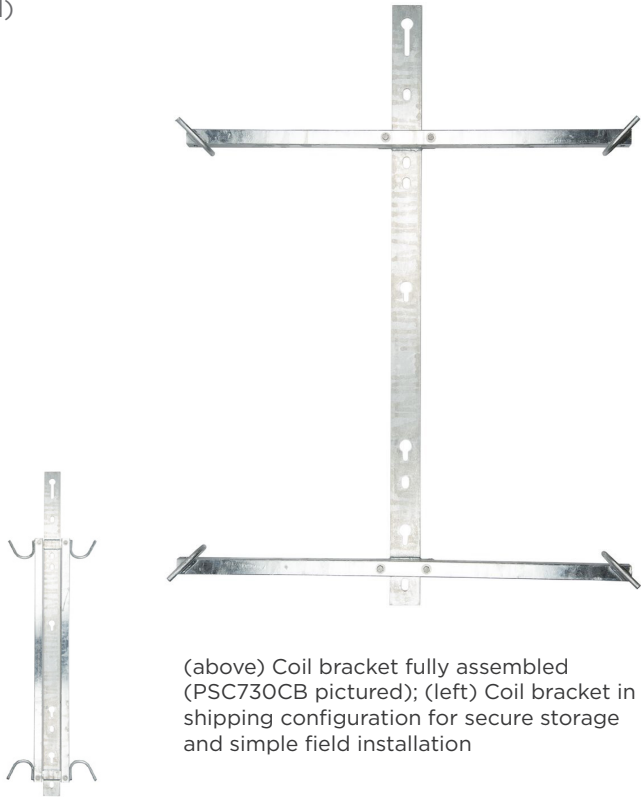
SPLICE CLOSURES

# Coil Brackets

Key Features

- Supports splice closure and holds extra lengths of OPGW or ADSS cable
- For use with Hubbell, AFL\*, PLP and other fiber splice closures
- Three-piece bolted design requires less storage space and allows small parcel shipment. (PSC730CB3 ships fully assembled)
- Can band or bolt to wood poles or steel monopoles (Hardware not included)

*\*PSC4040132 w/ standoffs required for some AFL closures*



(above) Coil bracket fully assembled (PSC730CB pictured); (left) Coil bracket in shipping configuration for secure storage and simple field installation

Ordering Information

Catalog No.	Description	Cable Application		Assembled Dimensions L x W x H IN (MM)	Weight LBS (KG)
		ADSS	OPGW		
PSC730CB3	Galvanized Steel Coil Bracket, 150' approx. capacity (2 x 75' cables)	•		33.000 x 26.000 x 8.000 (832.2 x 660.4 x 203.2)	25.500 (11.57)
PSC730CB	Galvanized Steel Coil Bracket, 300' approx. capacity (2 x 150' cables)	•	•	60.000 x 44.000 x 8.062 (1524.0 x 1117.6 x 204.8)	35.000 (15.88)
PSC730CB300	Galvanized Steel Coil Bracket, 600' approx. capacity (2 x 300' cables)	•	•	60.000 x 44.000 x 8.750 (1524.0 x 1117.6 x 222.3)	47.100 (21.36)
PSC730CB1000	Galvanized Steel Coil Bracket, 2000' approx. capacity (2 x 1000' cables)	•	•	60.000 x 58.750 x 9.750 (1524.0 x 1492.3 x 247.7)	50.000 (22.68)
PSC4040198	Aluminum Coil Bracket, 300' approx. capacity (2 x 150' cables)	•	•	60.000 x 44.000 x 10.438 (1524.0 x 1117.6 x 265.1)	44.000 (19.96)
PSC4040132	Aluminum Coil Bracket w/ Standoffs, 300' approx. capacity (2 x 150' cables)	•	•		45.000 (20.41)



# Bonding and Grounding

## Safe and Effective Solutions

Hubbell Power Systems offers a broad range of innovative and dependable bonding and grounding products. Engineering expertise and leading-edge manufacturing facilities provide our customers with continuous design improvements for a worry-free equipment installation.

Our products meet all applicable standards and certifications and come with technical support for smooth, safe operation. Our quality assurance practice is peace of mind that comes with the HPS and Electric Motion Company brands.

## Ground Rods

### Copper Bonded

- Manufactured by molecularly bonding 99.95% pure electrolytic copper to high-strength steel core rod.
- Core rod is rated for 80,000 lb tensile strength for driving into hard soils.
- Satisfies the requirements of UL and NEMA GR-1 specifications.
- Threaded and non-threaded Ground Rods are offered in both 10 mil and 13 mil plating thickness.
- Each rod permanently marked with company designation (HPS) and catalog number.
- Available accessories include couplers, drive heads, drive tips, ground rod clamps and conductive paste.
- A complete line of bronze ground rod clamps are available for connecting copper cable in parallel with the copper bonded Ground Rod.
- A heavy-duty clamp is available for high-pressure applications.

### Copper Bonded Ground Rods – Non-Threaded

Catalog Number	Plating <sup>(1)</sup> <sup>(2)</sup> Thickness mil	Rod Diameter Inches	Rod Length ft	Approx Ship Wt lb Per Each
C611380	10	1/2	8	5.4
C611300	10	1/2	10	7.06
C615880	10	5/8	8	6.8
C615800	10	5/8	10	8.6
C613460	10	3/4	6	7.88
C613480	10	3/4	8	9.8
C613400	10	3/4	10	12
C615883	13	5/8	8	6.8
C615803	13	5/8	10	8.6
C613483	13	3/4	8	9.8

(1) 10 mil plating thickness meets the requirements of ANSI/UL 467-1984 and ANSI/NEMA GR-1.

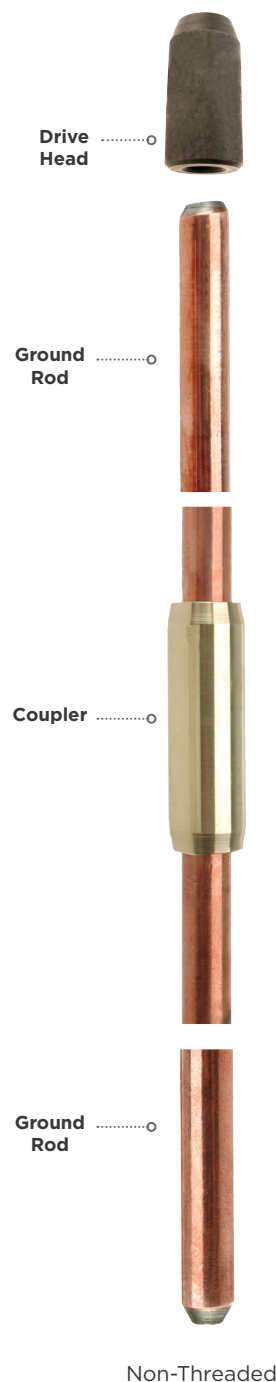
(2) 13 mil plating thickness meets the requirements of ANSI/UL 467-1984 and ANSI/NEMA GR-1.

### Coupler for Non-Threaded Ground Rods

Catalog Number	Rod Diameter Inches	Approx Ship Wt lb Per Each
CCC12	1/2	0.40
CCC58	5/8	0.56
CCC34	3/4	0.60

### Driving Head for Non-Threaded Ground Rods

Catalog Number	Rod Diameter Inches	Approx Ship Wt lb Per Each
CDH58	5/8	25
CDH34	3/4	25



## Threaded Ground Rods

Catalog Number	Plating <sup>(1)</sup> <sup>(2)</sup> Thickness mil	Rod Diameter Inches	Rod Length ft	Approx Ship Wt Each (lbs)
C631380	10	1/2	8	5.50
C631300	10	1/2	10	6.50
C635840	10	5/8	4	3.20
C635880	10	5/8	8	6.80
C635800	10	5/8	10	8.60
C633480	10	3/4	8	9.80
C633400	10	3/4	10	12.00
C635883	13	5/8	8	7.05

(1) 10 mil plating thickness meets the requirements of ANSI/UL 467-1984 and ANSI/NEMA GR-1.

(2) 13 mil plating thickness meets the requirements of ANSI/UL 467-1984 and ANSI/NEMA GR-1.

## Coupler for Threaded Ground Rods

Catalog Number	Rod Diameter Inches	Approx Ship Wt lb Per Each
CTC12	1/2	0.40
CTC58	5/8	0.56
CTC34	3/4	0.60

## Drive Head for Threaded Ground Rods

Catalog Number	Rod Diameter Inches	Approx Ship Wt lb Per Each
CTDH58	5/8	0.12
CTDH34	3/4	0.40



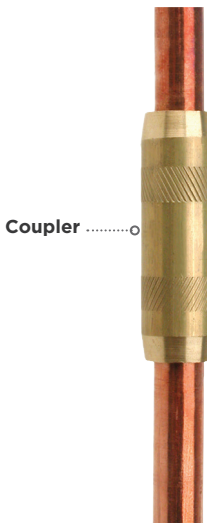
Drive Head



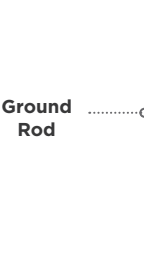
Coupler



Ground Rod



Coupler



Ground Rod

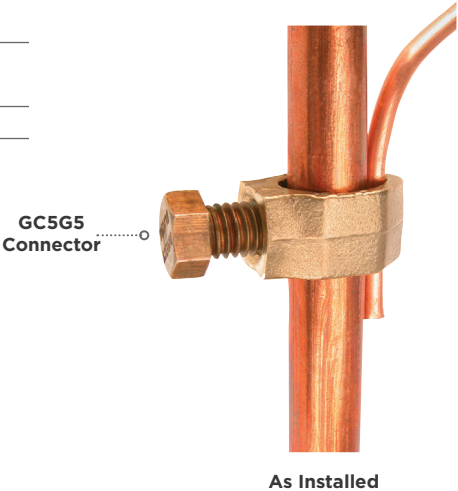
Threaded

# Ground Rods

Ground Rod or Pipe Clamp

Catalog Number	Application Type	Copper Cable Range	Rod Diameter Inches	Weight Each lb (kg)
GC4G4	Normal Duty	#8 Sol.—#4 Str.	1/2"	.09 (.04)
GC5G5	Normal Duty	#10 Sol.—#2 Str.	5/8"	.11 (.05)
GC6G6	Normal Duty	#8 Sol.—#4 Str.	3/4"	.13 (.06)
GC10301	Heavy Duty	#4 Sol.—4/0 Str.	1/2"	.24 (.11)
		#8 Sol.—2/0 Str.	5/8"	
GC10302	Heavy Duty	#4 Sol.—4/0 Str.	5/8"	.38 (.17)
		#8 Sol.—2/0 Str.	3/4"	
GC10303	Heavy Duty	#4 Sol.—250 MCM	3/4"	.51 (.23)

NOTE: Refer to Anderson & Fargo Connector Catalog for additional information.



## Galvanized

- Ground Rods are offered as standard type or with integral ground wire connections.
- Made of high-carbon, open-hearth steel for maximum strength to resist bending.
- Hot dip galvanized per ASTM A-153.

Catalog Number				Type	Dia Inches	Length ft	Approx Ship Wt Each (lbs)
Non- Threaded	Bell Corp Number	Standard With Electro- Braze Pigtail <sup>(2)</sup>	Drive Head Bolt-Type <sup>(3)(4)</sup>				
8565	402658926	—	—	E	1/2	5	3.40
8576		—	—		5/8	6	6.00
8578 <sup>(1)</sup>		C2030107 <sup>(1)</sup>	C2030377 <sup>(1)</sup>		5/8	8	8.00/8.60/8.93
8580		—	—		5/8	10	10.24
8618 <sup>(1)</sup>		—	—		3/4	8	12.00
8620		—	—		3/4	10	14.60

(1) RUS listed.

(2) The electro-braze pigtail is No. 6 tinned copper on 5/8" and 3/4" rod.

(3) Bolt-Type Drive Head Ground Rods have surfaces of head and integral clamp tinned.

(4) Non-ferrous bolt with lockwasher accommodates No. 3 to No. 8 stranded wire.



**Bolt-Type  
Drive Head**



**Standard  
Electro-Braze  
Pigtail**



**Non-Threaded Type**



## Ground Rods

### Galvanized Sectional

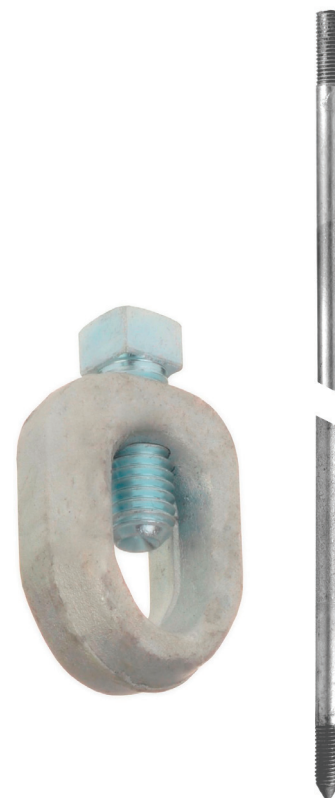
- Made of high-carbon steel as standard.
- All rods have a 5/8" cut thread on top and bottom.
- Hot dip galvanized.

Catalog Number	Description	Dimensions		Approx Ship Wt Each (lbs)
		Diameter Inches	Length	
<b>C2030052</b>	Cone Point with 5/8" Thread	5/8	8'	8.60
<b>8611</b>	Coupling for Above	5/8	2"	0.18

### Clamps

- Heavy duty forged steel clamps provide secure, low resistance connections. One piece bodies.
- 1/2" square-head cup point set screw is hot dip galvanized.

Catalog Number	Rod Diameter Inches	Wire Diameter Minimum	Wire Diameter Maximum	Approx Ship Wt Each (lbs)
<b>C2030344</b>	5/8	.128	.460	0.34
<b>C2030345</b>	3/4	.128	.460	0.36



No. C2030052

### Anchor Bonding

Bonding clamps maintain a dependable mechanical and electrical pressure contact between guy strand and anchor rod, when the guy is part of the grounding system.

Catalog Number	Eye Type	Use with	Rod Size	Approx Ship Wt Each (lbs)
<b>G5060</b>	Thimbleye®	Anchor Rod Eyes (Expanding, Crossplate, Rock)	1/2", 5/8", 3/4"	0.22
<b>G5061</b>	Twineye®	Anchor Rod Eyes (Expanding, Crossplate, Rock)	5/8", 3/4"	0.36
<b>G5063</b>	Tripleye®	Anchor Rod Eyes (Expanding, Crossplate, Rock); No-wrench Anchor Rod Eyes	3/4", 1"	0.41
<b>G5067</b>	Thimbleye®	PISA Eyenuts (Power Installed Screw Anchor Rods)	1/2", 5/8"	0.22
<b>G5068</b>	Thimbleye®	PISA Eyenuts (Power Installed Screw Anchor Rods)	3/4", 1"	0.36
<b>G5069</b>	Twineye®	PISA Eyenuts (Power Installed Screw Anchor Rods); Anchor Rod Eyes (Expanding, Crossplate, Rock)	5/8", 3/4", 1"	0.38
<b>C2030148</b>	Tripleye®	PISA Eyenuts (Power Installed Screw Anchor Rods)	5/8", 3/4", 1"	0.41



No. G5060



No. G5061

# Bonding & Grounding Straps, Harnesses & Braid

## Bonding Braid

### Plain Bonding Braid

A roll of flexible, woven, tinned copper wire, equivalent to a #6 AWG.

### Applications

- Provides shield continuity across cable openings
- Ideal for use with heat shrinkable material

### Features

- Can be cut to any desired length
- Tinned to reduce the rate of corrosion
- Flexibility allows movement of cable without loosening of bond clamps
- EM-2075 has blue webbed covering pre-installed at factory before spooling



### Ordering Information

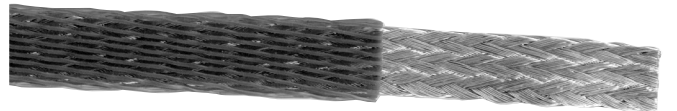
**EM-2004** 25-foot spool

*Standard packaging: 2.7 lb / sp, 10 sp/bx.*

**EM-2005** 100-foot spool

*Standard packaging: 9 lb / sp, 2 sp/bx.*

**EM-2004-1-100** 100-foot spool with black PVC covering

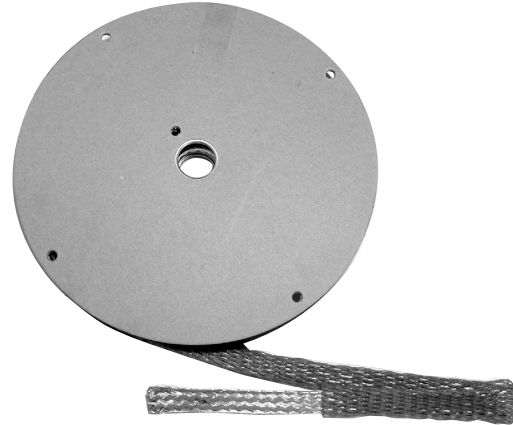
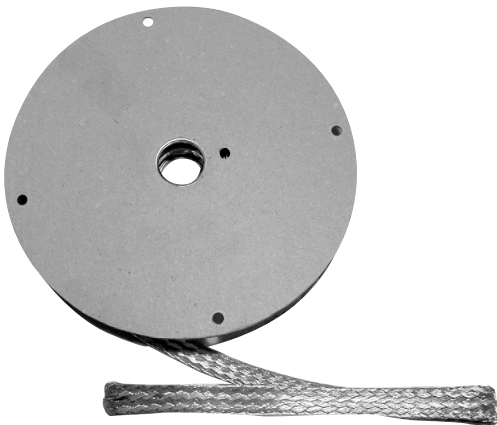


### Ordering Information

**EM-2075** 25-foot spool with blue web insulator

*Standard packaging: 3.4 lb / sp, 10 sp/bx.*

Add suffix -G for green web insulator.



## Braid Ferrule

When using plain braid, the tinned copper ferrule surrounds all of the strands at the termination point.

### Ordering Information

**EM-C4000** Braid Ferrule



# Bonding & Grounding Straps, Harnesses & Braid

## Bonding Braid, Continued

### Bonding Braid with Eyelets

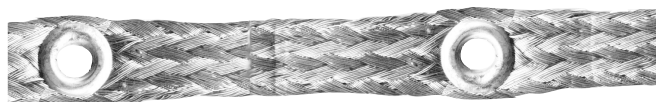
#6 AWG braided tinned copper wire with factory-installed eyelets, 3" spacing, hole diameter 1/4".

### Applications

- Rehab of pedestals and aerial closures
- Provides bond when using heat shrinkable material

### Features

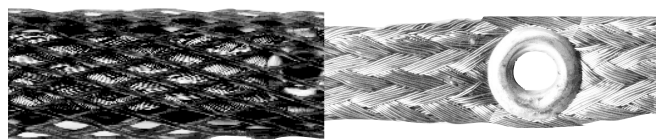
- Coils can be cut to length (no waste)
- Low profile design on eyelet
- Braid flexibility allows cables to move
- EM-2030 has blue webbed covering pre-installed at factory before spooling



### Ordering Information

**EM-2025** 25-foot spool uninsulated

Standard packaging: 2.8 lb / sp, 10 sp/bx.

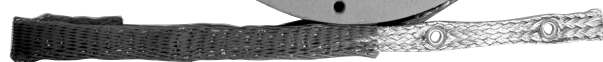


### Ordering Information

**EM-2030** 25-foot spool with blue web insulator

Standard packaging: 3.5 lb / sp, 10 sp/bx.

Add suffix -G for green web insulator.



# Bonding & Grounding Straps, Harnesses & Braid

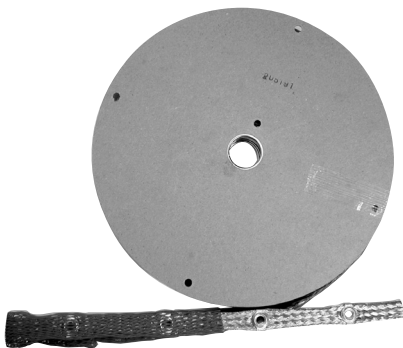
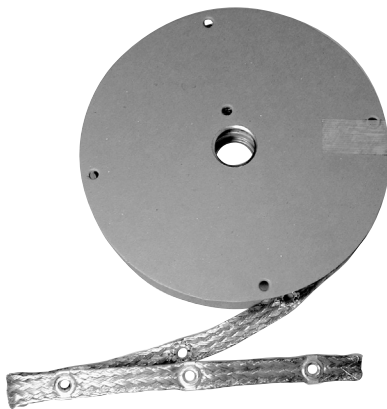
## Bonding Braid, Continued

### Ultrabond

#6 AWG braided copper wire with factory-installed eyelets with arms, solder-connected, 3" spacing, hole diameter 1/4".

### Applications

- Rehab of pedestals and aerial closures
- Provides bond when using heat shrinkable material



### Double-Hole Ultrabond

#10 AWG braided copper wire with factory-installed eyelets with arms, solder-connected, 2-1/2" hole diameter #10.

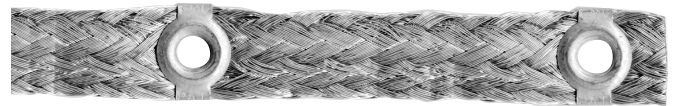


### Ordering Information

EM-2070 25-foot spool

### Features

- Compact design
- Gas-tight crimp maximizes conductivity by reducing cold flow and corrosion
- Easily trimmed to the desired length with splicer's scissors; eliminates waste
- Flexibility allows movement of cable without loosening connections
- Factory-installed terminations provide maximum pull-out strength
- Prepunched mounting holes are safer, eliminating the need to use a sharp instrument



### Ordering Information

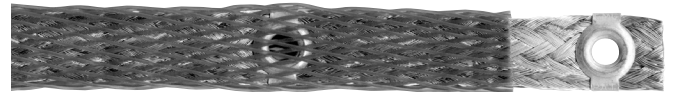
EM-2050 25-foot spool

Standard packaging: 3.3 lb / sp, 10 sp/bx.

EM-2052 50-foot spool

Standard packaging: 6.2 lb / sp, 10 sp/bx.

EM-2050-6 6" eyelet spacing, 25-foot spool



### Ordering Information

EM-2051 25-foot spool with blue web insulator

Standard packaging: 3.5 lb / sp, 10 sp/bx.

EM-2053 50-foot spool with blue web insulator

Standard packaging: 7 lb / sp, 10 sp/bx.



# Bonding & Grounding Straps, Harnesses & Braid

## Bonding Braid, Continued

### Ultrabond II with gas-tight crimped connections

#6 AWG braided tinned copper wire with factory-installed eyelets, 3" spacing, hole diameter 1/4".

- One-piece eyelet with arms will not spin or rotate during installation
- Gas-tight crimp maximized conductivity by reducing cold flow and corrosion
- Easily trimmed to the desired length with splicer's scissors; eliminates waste
- Simple design provides for easy, foolproof installation, terminates like any standard connection
- Flexibility allows movement of cable without loosening connections
- Factory-installed terminations provide maximum pull-out strength; no need to carry special tools
- Pre-punched mounting holes are safer, eliminating the need to use a sharp instrument
- Solderless termination
- Unique patented design

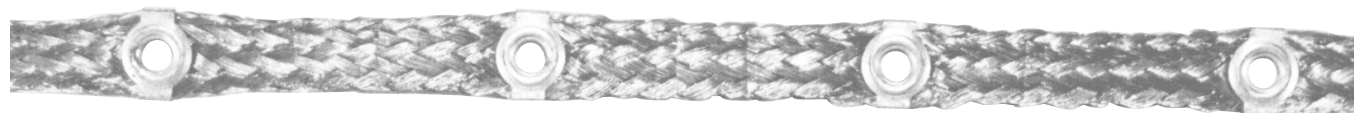
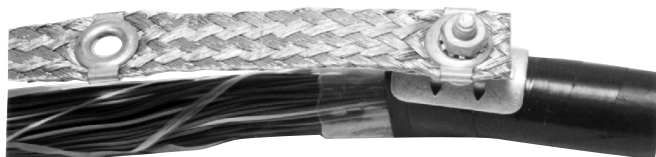


### Features



### Applications

- Grounding and bonding in pedestals and aerial closures
- Provides bond when using heat-shrinkable material
- Provides bond when using closures not equipped with bonding harnesses



### Ordering Information

**EM-2080** 25-foot spool

Standard packaging: 3.3 lb / sp, 10 sp/box.



### Ordering Information

**EM-2081** 25-foot spool with blue web insulator

Standard packaging: 3.6 lb / sp, 10 sp/bx.

Add suffix -G for green web insulator.

**EM-2012-3SD** Ultrabond II with 3/8" holes instead of 1/4"

**EM-2010-3AU-25** Same as above, except packaged in a dispenser box instead of on a spool

# Bonding & Grounding Straps, Harnesses & Braid

## #6 AWG Insulated and Bare Flexible Harnesses

Standard lengths: 6", 11", and 18", all RUS listed. Ring terminals, standard hole size #10, insulated and bare versions. For bonding and grounding in pedestal new construction and retrofitting. Please see chart on pages G17 & G18 for other ordering options.



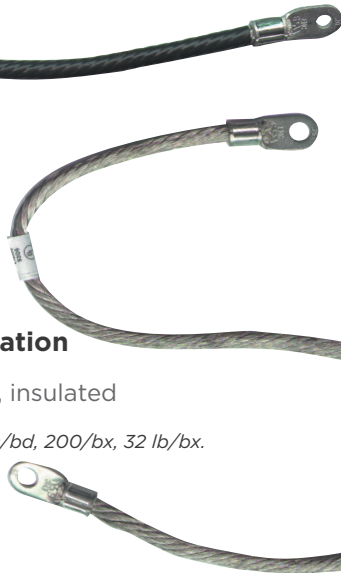
RUS Listed



### Ordering Information

EM-8100-1810 – 18", insulated

Standard packaging: 20/bd, 200/bx, 35 lb/bx.



### Ordering Information

EM-8100-18B10 – 18", insulated

Standard packaging: 20/bd, 200/bx, 32 lb/bx.



### Ordering Information

EM-8100-6B10 – 6", insulated

Standard packaging: 20/bd, 200/bx, 12 lb/bx.



LISTED  
93D6



### Ordering Information

EM-8100-1110 – 11", insulated

Standard packaging: 20/bd, 200/bx, 23 lb/bx.



### Ordering Information

EM-8100-610 – 6", insulated

Standard packaging: 20/bd, 200/bx, 14 lb/bx.



### Ordering Information

EM-8100-11B10 – 11", insulated

Standard packaging: 20/bd, 200/bx, 19 lb/bx.

# Bonding & Grounding Straps, Harnesses & Braid

## Grounding Harnesses, Continued

### #6 AWG Flexible Harnesses with Colored Insulation for Multi-Directional Cable Identification

Ring terminals, standard mounting hole sizes #10 and 1/4".

Colors available: Blue (central office), Orange (north), Brown (south), Slate (west), Green (east), Red (house). For bonding and grounding in pedestal new construction and retrofitting.

Also available as a pedestal kit: five of a fixed length of harness, one each blue, orange, brown, slate, and green.



### Ordering Information :

EM-8100 -	_____	-	_____	-	_____
	Length of harness		Ring terminal		Color of insulation
	in inches		mounting hole size		<b>BL = blue, OR = orange, BR = brown,</b>
			<b>1/4 inch or #10 stud</b>		<b>SL = slate, GR = green, R = red</b>

If kit is desired (five colors—does not include red), add the suffix KIT at end instead of color code.



# Bonding & Grounding Straps, Harnesses & Braid

## Microbond

### Ground Straps on a Roll with clear, see-through insulation

Construction: Tinned copper rope-lay with pure copper termination clip. Equivalent to a #6 AWG. Standard terminations every 4 inches, with 1/4" diameter mounting holes.

### Features

- Comes with clear PVC insulation in order to locate mounting holes easily
- Clear insulation can come in any color. Various cables in a closure can be identified by colors of bonding harnesses
- Insulation is tight to harness, creates a neater look
- One-piece terminal clip for greater conductivity
- Gas-tight crimp minimizes corrosion
- Comes on a roll—can be cut to length with splicer's snips
- Simple design provides for easy, foolproof installation, terminates like any standard connection
- Flexibility allows movement of cable without loosening connections
- Factory-installed terminations provide maximum pull-out strength, no need to carry special tools
- Pre-punched mounting holes are safer, eliminating the need to use a sharp instrument
- Solderless termination
- Unique patented design

### Applications

- Continuous looping of ground wire from ground point to ground point with no breaks
- Grounding machinery needing flexible ground because of vibration
- Fence and gate electrical grounding to create various lengths at a site
- Provides bond when using heat shrinkable material
- Provides bond when using closure not equipped with bonding hardware

### Ordering Information

EM-06MB-25B-425, uninsulated

Microbond) can be used for bonding Tyco FOSC® closures.



# Bonding & Grounding Straps, Harnesses & Braid

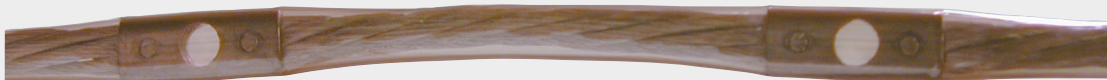
## Microbond, Continued



Ordering Information **EM-06MB-25CBL-425** – 25' roll, with clear blue insulation, UV inhibitor.  
Standard packaging: 10 sp/bx, 33 lb/bx.



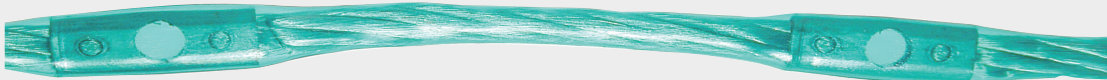
Ordering Information **EM-06MB-25COR-425** – 25' roll, with clear orange insulation, UV inhibitor  
Standard packaging: 10 sp/bx, 33 lb/bx.



Ordering Information **EM-06MB-25CBR-425**– 25' roll, with clear brown insulation, UV inhibitor.  
Standard packaging: 10 sp/bx, 33 lb/bx.



Ordering Information **EM-06MB-25CSL-425**– 25' roll, with clear slate insulation, UV inhibitor.  
Standard packaging: 10 sp/bx, 33 lb/bx.



Ordering Information **EM-06MB-25CG-425**– 25' roll, with clear green insulation, UV inhibitor.  
Standard packaging: 10 sp/bx, 33 lb/bx.

All these colors are also available as a kit: 5 rolls, one of each color, in a dispenser box.  
Ordering information **EM-06MB-25KIT-425**



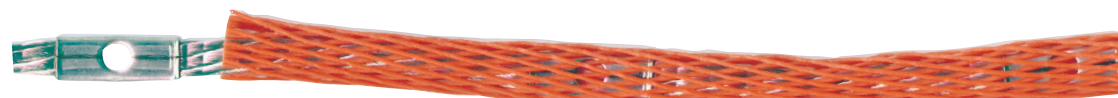
Ordering Information **EM-06MB-25C-425**– 25' roll, with clear insulation, UV inhibitor  
Standard packaging: 10 sp/bx, 33 lb/bx.



Ordering Information **EM-06MB-25B-425**– 25' roll, uninsulated  
Standard packaging: 10 sp/bx, 31 lb/bx.



Ordering Information **EM-06MB-25I-425**– 25' roll, insulated  
Standard packaging: 10 sp/bx, 35 lb/bx.



Ordering Information **EM-06MB-25W-425**– 25' roll, with web covering  
Standard packaging: 10 sp/bx, 34 lb/bx.

# Bonding & Grounding Straps, Harnesses & Braid

## #6 AWG Bonding Harness Ordering Guide

Please note: "XX" in itEM-numbers denotes assembly length.

### Untinned Standard

#### EM-3200 Series -Solid

Solid soft copper wire with a ring terminal on each end.



UNINSULATED

INSULATED

#### EM-3400 Series - 7-Strand

7-stranded wire with a ring terminal on each end. Standard "D" bond straps.



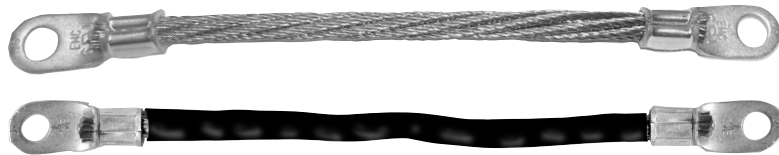
UNINSULATED

INSULATED

### Tinned Standard

#### EM-3600 Series - 49-Strand, 7 x 7/22 Rope-Lay Cable

Rope-Lay Cable 49 strands, rope-lay cable with a ring terminal on each end.



UNINSULATED

INSULATED

#### EM-8200 Series - 133-Strand, 7 x 19/27 Rope-Lay Cable

133 strands, rope-lay cable with a ring terminal on each end.



UNINSULATED

INSULATED

#### EM-8100 Series - 427-Strand, 7 x 61/32 Rope-Lay Cable

427 strands, rope-lay cable with a ring terminal on each end.



UNINSULATED

INSULATED

#### EM-7000 Series - 665-Strand, 7 x 95/34 Rope-Lay Cable

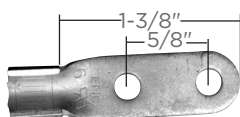
665 strands, rope-lay cable with a ring terminal on each end.



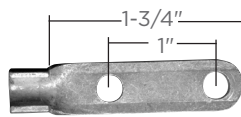
UNINSULATED

INSULATED

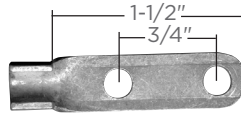
The harnesses above are also available with any of the terminals below. Please call our sales office for ordering information.



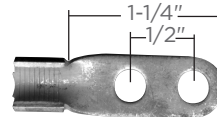
double #10 mounting hole ring terminal 5/8" spacing: .625DH10



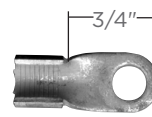
double 1/4" mounting hole ring terminal 1" spacing: -1DH



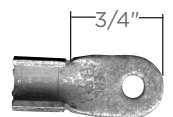
double 1/4" mounting hole ring terminal 3/4" spacing: -DHT75



double 1/4" mounting hole ring terminal 1/2" spacing: -DHT5







single 5/16" mounting hole ring terminal: 312



single #8 mounting hole ring terminal: 8

# Bonding & Grounding Straps, Harnesses & Braid

## #6 AWG Bonding Harness Ordering Guide, Continued

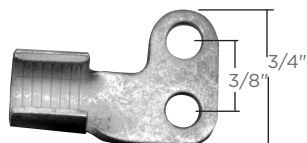
 Single 1/4" Mounting Hole Ring Terminal Both Ends	 Double 1/4" Mounting Hole Ring Terminal Both Ends, 5/8" Spacing	 Single #10 Mounting Hole Ring Terminal Both Ends	 Single 3/8" Mounting Hole Ring Terminal Both Ends	Insulation Color
EM-3200-XX EM-3205-XX	EM-3200-XX-DHDH EM-3205-XX-DHDH	EM-3200 (18") EM-3224 (24") EM-3205-XX10	EM-3200-XX375 EM-3205-XX375	Standard insulation color is Black; please use the part numbers in the "INSULATED" rows at left for black insulation. For other colors, please add the following suffixes:  BL = Blue OR = Orange BR = Brown SL = Slate GR = Green GY = Green w/Yellow Stripe R = Red
EM-34XX EM-34XX-1	EM-34XX-DHDH EM-34XX-1-DHDH	EM-34XX-10 EM-34XX-110	EM-34XX375 EM-34XX-1375	
EM-36XX EM-36XX-1	EM-36XX-DHDH EM-36XX-1-DHDH	EM-36XX10 EM-36XX110	EM-36XX.375 EM-36XX-1375	
EM-8200-XXB25 EM-8200-XX25	EM-8200-XXB-DHDH EM-8200-XX-DHDH	EM-8200-XXB10 EM-8200-XX10	EM-8200-XXB375 EM-8200-XX375	
EM-8100-XXB-25 EM-8100-XX25	EM-8100-XXB-DHDH EM-8100-XX-DHDH	EM-8100-XXB10 EM-8100-XX10	EM-8100-XXB375 EM-8100-XX375	
EM-7000-XXB25 EM-7000-XX	EM-7000-XXB-DHDH EM-7000-XX-DHDH	EM-7000-XXB10 EM-7000-XX10	EM-7000-XXB375 EM-7000-XX375	



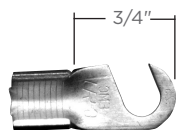
#10 mounting hole slotted ring terminal: 10SR



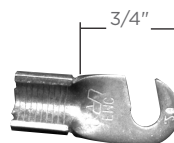
1/4" mounting hole slotted ring terminal: 25SR



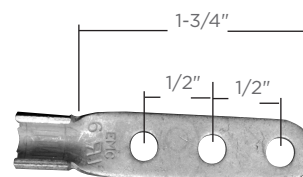
double #10 mounting hole ring terminal right angle, 3/8" spacing: DHRA



single 1/4" mounting hole hook terminal: 14H



single #10 mounting hole hook terminal: 10H



triple #10 mounting hole ring terminal 1/2" spacing between holes: -TH



# Bonding & Grounding Straps, Harnesses & Braid

## #6 AWG Bond straps

Solid, soft bare copper wire with a 1/4" compression terminal on each end. Standard lengths: 6", 11", and 18". Please see chart on pages G17 and G18 for other ordering options.



### Ordering Information

EM-3200-18 – 18", Standard packaging: 20/bd, 200/bx, 33 lb/bx.

EM-3200-11 – 11", Standard packaging: 20/bd, 200/bx, 19 lb/bx.

EM-3200-6 – 6", Standard packaging: 20/bd, 200/bx, 12 lb/bx.

## "D" Bond straps

Seven strands, uninsulated stranded wire with a ring terminal on each end. Standard "D" bond straps. Standard lengths: 6", 11", and 18". Please see chart on pages G17 and G18 for other ordering options.



### Ordering Information

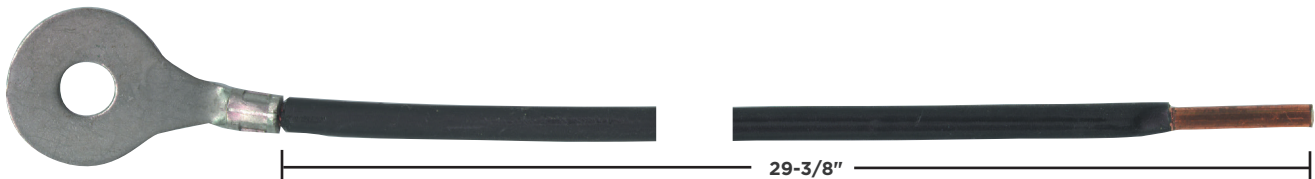
EM-3418-18 – 18", Standard packaging: 20/bd, 200/bx, 30 lb/bx.

EM-3411-11 – 11", Standard packaging: 20/bd, 200/bx, 19 lb/bx.

EM-3406-6 – 6", Standard packaging: 20/bd, 200/bx, 12 lb/bx.

## Joint Pedestal Bond Straps

Solid #6 AWG with black insulation, 1" strip at one end, 3/8" inside diameter ring terminal at the other. 29-3/8" long from end of conductor to barrel of crimp connector.

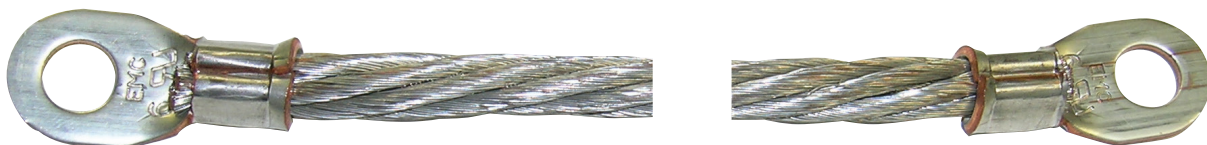


### Ordering Information

EM-3205-29375, Standard packaging: 10/bg, 100/bx, 27 lb/bx.

## #4 AWG Flexible Harnesses

#4 AWG rope-lay 7 x 85 x 32 bare tinned harnesses, with 1/4" ring terminals on each end. 16" long center to center.



### Ordering Information







EM-04-1625

# Bonding & Grounding Straps, Harnesses & Braid

## Copper Ground Wire

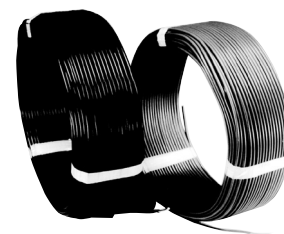
### Ordering Information

To create a part number, use the following guide. Standard products are indicated in bold type.

Basic Product	Add Plating	Add Insulation	Add Length in Feet
<b>EM-0140</b> (solid #14 AWG)	T - tinned <b>B - bare</b>	N - none <b>B - black</b> SL - slate* G - green	XX
<b>EM-1200</b> (solid #12 AWG)  LISTED 84D8	T - tinned <b>B - bare</b>	N - none <b>B - black</b> SL - slate G - green	XX
<b>EM-3226</b> (solid #10 AWG)  LISTED 84D8	T - tinned <b>B - bare</b>	N - none <b>B - black</b> SL - slate G - green	XX
<b>EM-3227</b> (solid #8 AWG)  LISTED 84D8	<b>B - bare</b>	N - none <b>B - black</b> SL - slate G - green	XX
<b>EM-3225</b> (solid #6 AWG)  LISTED 84D8	T - tinned <b>B - bare</b>	N - none <b>B - black</b> SL - slate G - green	XX
<b>EM-4500</b> (solid #6 AWG waterproof)	<b>B - bare</b>	<b>B - black</b> G - green	XX
<b>EM-4560</b> (solid #6 AWG with .120 thick PVC insulation)	T - tinned <b>B - bare</b>	<b>B - black</b> G - green SL - slate	XX
<b>EM-3400</b> (#6 AWG 7-strand)  LISTED 84D8	T - tinned <b>B - bare</b>	<b>B - black</b> N - none SL - slate G - green	XX
<b>EM-4000</b> (solid #4 AWG)  LISTED 84D8	T - tinned <b>B - bare</b>	N - none B - black SL - slate G - green	XX
<b>EM-2223</b> (solid #2 AWG)  LISTED 84D8	T - tinned <b>B - bare</b>	N - none B - black SL - slate G - green	XX

\*formerly GR - gray

Copper ground wire is available from Electric Motion in bare, tinned, insulated, and waterproof versions of various lengths. These are generally available in #12, #10, #8, #6, #4, or #2 AWG, hand coiled or on a spool.



### Loose Piece Crimp Terminals

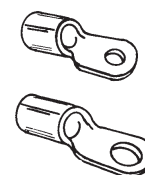
#### Ordering Information

##### EM-6-10-R

#6 AWG Tin-Plated

Copper Ring

#10 mounting hole.



Standard packaging: 100/sm bx, 1000/lg bx, 1.5 lb/sm bx, 13 lb/lg bx.

##### EM-6-25-R

#6 AWG Tin-Plated Copper Ring

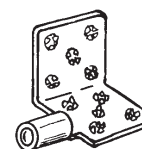
1/4" mounting hole.

Standard packaging: 100/sm bx, 1000/lg bx, 1.5 lb/sm bx, 13 lb/lg bx.

##### EM-14-TF

#14 AWG TERMI-FOIL®

Standard packaging: 100/bg, 1000/bx, 1.16 lb/bg.



##### EM-10-TF

#10 and #12 AWG TERMI-FOIL®

Standard packaging: 100/bg, 1000/bx.

# Bonding & Grounding Straps, Harnesses & Braid

## Waterproof #6 AWG Ground Wire For Sealed Plant



### Features

- #6 AWG solid conductor
- Polyethylene insulation
- Insulation is bonded to the conductor for sealed plant
- Passes eight foot water head test
- Bonded construction prevents jacket from “acting like a water pipe” to buried splices in long-term field use

### Applications

- Ideal for fiber optic splice grounding because moisture adversely affects fiber strength and long-term reliability
- Maintains shield integrity when toning cables

### Ordering Information

**EM-4500-BB500**

500' coil, black insulation.

*Standard packaging: 46 lb/coil. No minimum order.*



## Bonding & Grounding Straps, Harnesses & Braid

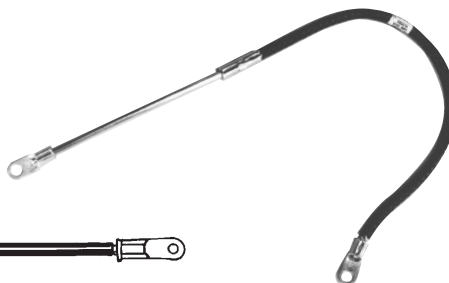
### #6 AWG Flexible/Solid Ground Straps

A combination solid #6 AWG and flexible #6 AWG ground strap with 1/4" ring terminal on each end. For bonding and grounding in sealed plant pedestals, closures, and PedCap RM™ closures. Combining solid, bare wire with stranded provides a flexible and airtight connection.

#### Ordering Information

EM-3210 – 6" solid, 12" stranded #6 AWG

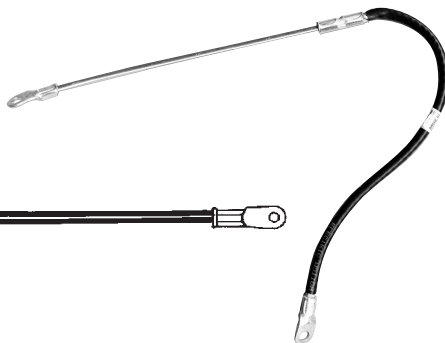
Standard packaging: 20/bd, 200/bx, 35 lb/bx.



#### Ordering Information

EM-3220 – 9" solid, 9" stranded #6 AWG

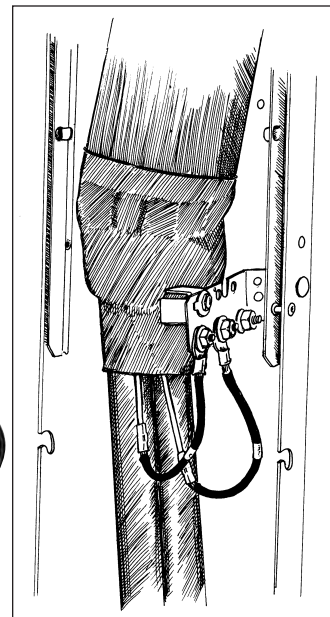
Standard packaging: 20/bd, 200/bx, 32 lb/bx.



#### Ordering Information

EM-3230 – 10" solid, 8" stranded #6 AWG

Standard packaging: 20/bd, 200/bx, 32 lb/bx.



#### Ordering Information

EM-3250 – 6" solid, 14" stranded #6 AWG

Standard packaging: 20/bd, 200/bx, 42 lb/bx.



To order colored insulation for any of these straps, add the following suffixes:

**BL** = Blue

**BR** = Brown

**GR** = Green

**OR** = Orange

**SL** = Slate

EM-3270 – 6" solid, 24" stranded #6 AWG

Standard packaging: 20/bd, 100/bx, 30 lb/bx. Minimum order 1 bundle.

EM-3275 – 6" solid, 32" stranded #6 AWG

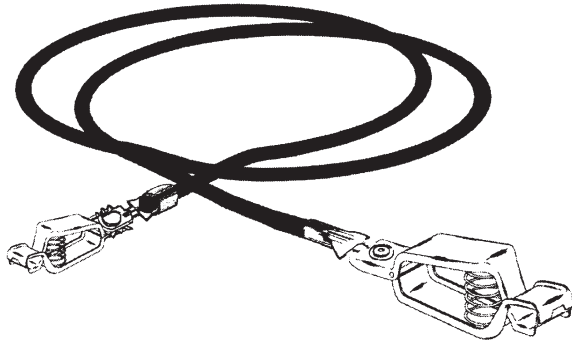
Standard packaging: 20/bd, 100/bx.

# Bonding & Grounding Straps, Harnesses & Braid

## Temporary Bond Straps

Available in 2-foot and 5-foot lengths, for temporary bonding across splices, to strand, and to streetlight fixtures.

5-foot bond provides shield continuity across cable openings during splicing operations. 2-foot bond can be used as a ground lead from one side of splice to the strand.



### Features

- #14 AWG conductor
- #24A and #11A test clips

### Ordering Information

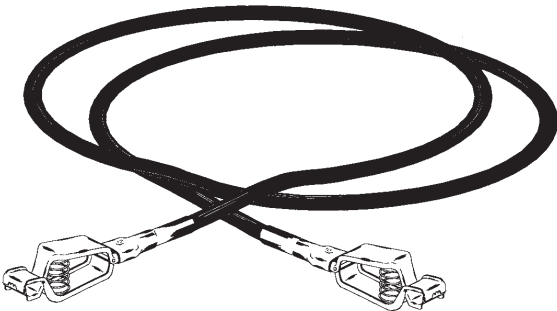
**EM-4009** – 2-foot strap

*Standard packaging: 1/bg, 25/bx, 14 lb/bx.*

**EM-4008** – 5-foot strap

*Standard packaging: 1/bg, 25/bx, 15 lb/bx.*

**EM-4008-04TPR** – #4 AWG conductor, 5-foot strap with black TPR insulation.



### Features

- #12 AWG conductor
- #27 test clips
- Type S wire

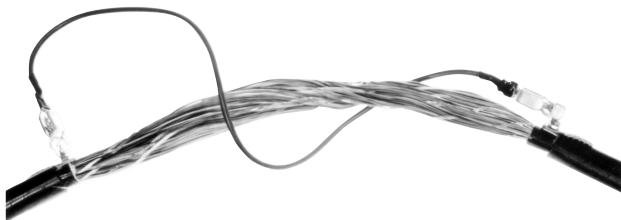
### Ordering Information

**EM-4011** – 2-foot strap

*Standard packaging: 10/bd, 100/bx, 17.45 lb/bx.*

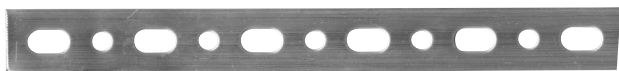
**EM-4010** – 5-foot strap

*Standard packaging: 100/bx, 28 lb/bx.*



# Bonding & Grounding Straps, Harnesses & Braid

## Perforated Bonding Ribbon



A tinned copper strip perforated with alternating slots and holes. Equivalent to a #6 AWG conductor (26,244 circular mil area). Available as a standard in 25-foot coils.

### Applications

- Provides bond when using heat-shrinkable material
- Bonding in cable vaults
- Replaces missing or defective bonds in the rehabilitation of pedestals and aerial closures

### Features

- Easily trimmed to the desired length with splicer's scissors, eliminating waste
- Simple construction provides for easy foolproof installation
- Replaces missing or defective bonds in the rehabilitation of pedestals and aerial closures

### Ordering Information

**EM-4425** – 25-ft. coil

*Standard packaging: 10 coils/bx, 27 lb/bx.*

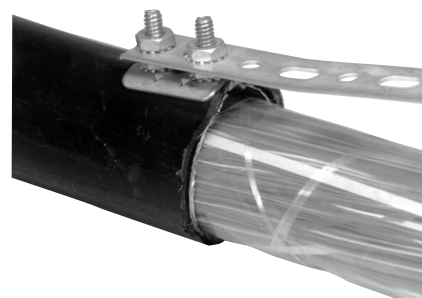
**EM-4527** – 100-ft. roll

*Standard packaging: 3 rolls/bx, 12 lb/rl.*

**EM-4425-ET** – 25-ft. coil, tin-plated after processing

*Standard packaging: 10 coils/bx, 27 lb/bx.*

**EM-4425I** – 225-ft. coil with black PVC jacket



## Bond Bar/Bond Bar with Tubing

A roll of soft tin-plated electrical grade copper with alternate round and slotted holes.

### Applications

For bonding across splices, shield continuity, and general grounding.

### Features

- Can be cut to length
- Available with black PVC insulator pre-installed at the factory
- Easily sealed against "B" sealing tape when exiting splice case
- Soft temper helps material form easily for neater installation

### Ordering Information

**EM-4420** – 25-ft. coil, tin-plated, no insulator

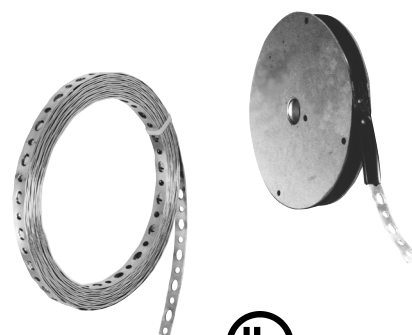
*Standard packaging: 10 sp/bx, 20 lb/bx.*

**EM-4420-100** – 100-ft. coil, tin-plated, no insulator

*Standard packaging: 5 sp/bx, 41 lb/bx.*

**EM-4422** – 25-ft. spool, with PVC insulator

*Standard packaging: 10 sp/bx, 36 lb/bx.*



# Bonding & Grounding Straps, Harnesses & Braid

## Wire and Cable Bonding/Grounding Products

#14 AWG (unless otherwise noted) with green insulation. Other lengths, terminal combinations, and insulation colors are available; please call our sales office.

### Ordering Information

(25/bg, 200/bx. Standard packaging listed after part number; required.)

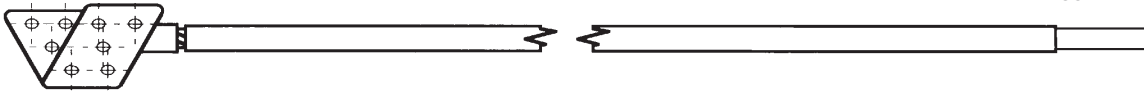
TERMI-FOIL® type for buried plant housings (solid conductor)

Former Jamac  
Catalog Number

Emc  
Part Number

HH-1  
HH-1-L

EM-1415-TFP (15") 7 lb/bx  
EM-1436-TFP (36") 14 lb/bx



Ring type for buried plant housings (solid conductor)

HH-2  
HH-3

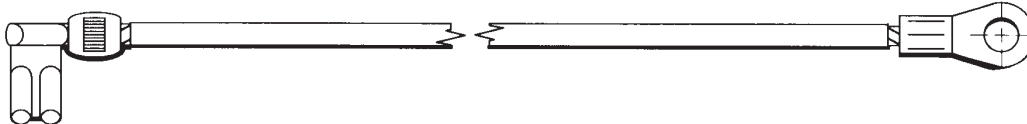
EM-1415-RP (15") 6 lb/bx  
EM-1436-RP (36") 12 lb/bx



Flag/ring type for cable in buried plant housings employing tab connectors (stranded conductor)

HH-4  
HH-5

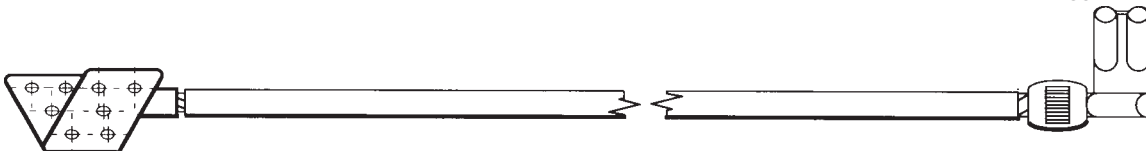
EM-1415-FLR (15") 6 lb/bx  
EM-1436-FLR (36") 14 lb/bx



Flag/TERMI-FOIL® type for service wire in buried plant housings employing tab connectors (stranded conductor)

HH-6  
HH-6-L

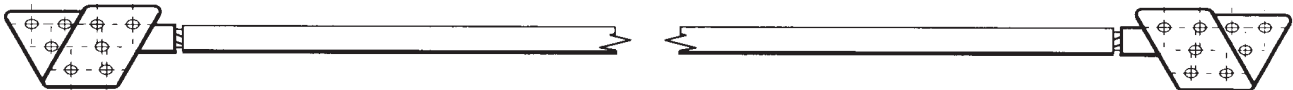
EM-1415-FLTF (15") 6 lb/bx  
EM-1436-FLTF (36") 15 lb/bx



TERMI-FOIL® type for splices

HS-11

EM-1420-TFTF (20") 8 lb/bx



Ring type for cable splices

HS-13  
HS-14

EM-1410-RR (10") 4 lb/bx  
EM-1420-RR (20") 7 lb/bx



TERMI-FOIL®/Ring type

EM-1412-TFR (12")  
EM-1415-TFR (15")  
EM-1008-TFR (8", #10 AWG)

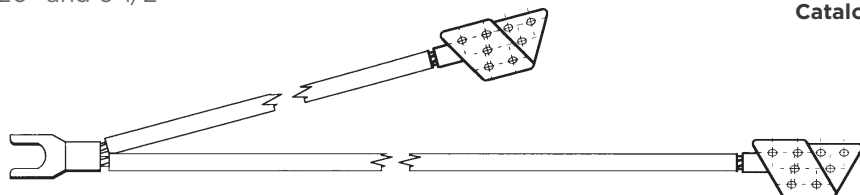


\*TERMI-FOIL® is a registered trademarks used by TE Connectivity Incorporated.

# Bonding & Grounding Straps, Harnesses & Braid

## Wire and Cable Bonding/Grounding Products (continued)

TERMI-FOIL® type for ready-access terminals -  
20" and 6-1/2"



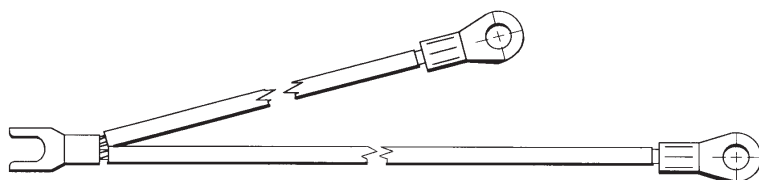
Former Jamac  
Catalog Number

HT-21

Emc  
Part Number

EM-14265 2-TFFR

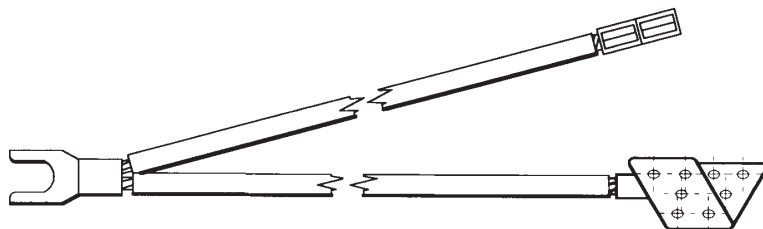
Ring type for ready-access terminals - 20" and 6-1/2"



HT-22

EM-14265 2RFR 10 lb/bx

TERMI-FOIL® type for buried wire at station protectors  
- 3-1/2"



HP-31

EM-1435-BTFFR 6 lb/bx

TERMI-FOIL® type buried wire at station protectors  
employing tab connectors (stranded conductor)



HP-32  
HP-33

EM-1403-TFFR (3") 3 lb/bx

EM-1407-TFFR (7") 4.2 lb/bx

EM-1420-TFFR (20")

EM-1007-TFFR (7", #10 AWG)

EM-1018-TFFR (18", #10 AWG)

\*TERMI-FOIL® is a registered trademarks used by TE Connectivity Incorporated.

## Pedestal Bonding Connector

### Ordering Information

**EM-1400** (formerly SL-1)

Pedestal Bonding Connector

(90° angle bracket)

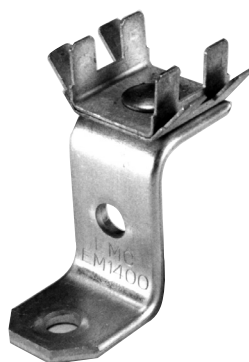
Standard packaging: 10/bg, 100/bx, 7 lb/bx.

**EM-1401** (formerly SL-2)

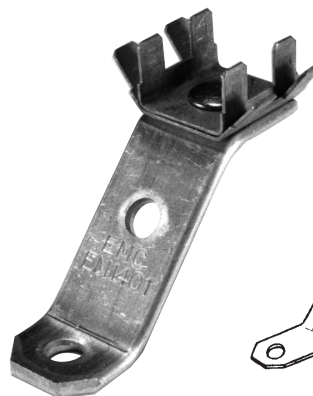
Pedestal Bonding Connector

(45° angle bracket)

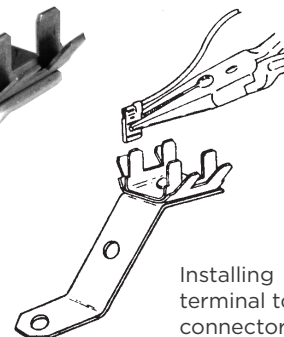
Standard packaging: 10/bg, 100/bx, 7 lb/bx.



EM-1400



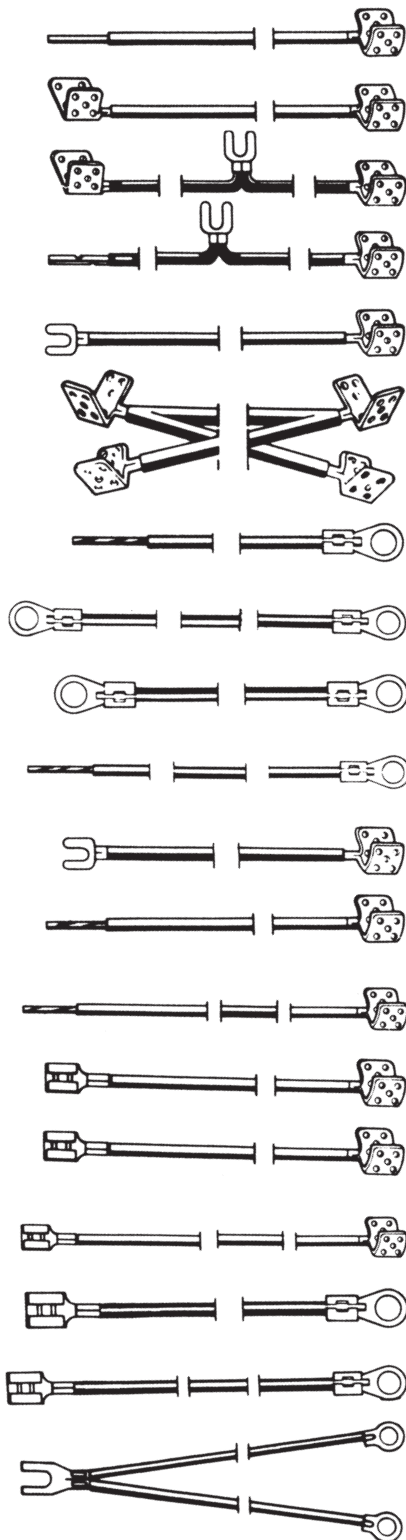
EM-1401



Installing  
terminal to  
connector

# Bonding & Grounding Straps, Harnesses & Braid

## Grounding Harness Cross Reference



Harness Length	Siecor/CAC	Siecor	EMC	JAMAC
16-1/2"	GH-1*	27-001-14	<b>EM-GH-1*</b>	
20"	GH-2	27-002-14	<b>EM-1420-TFTF</b>	HS-11
21"/7"	GH-3	27-003-14	<b>EM-142652-TFFR</b>	
4"/4"	GH-4	27-004-14	<b>EM-1435-BTFFR</b>	HP-31
3"	GH-7*	27-007-14	<b>EM-1403-TFFR</b>	HP-32
6"	GH-8	27-009-14	<b>EM-GH-8</b>	
16"	GH-9	27-010-14	<b>EM-GH-9</b>	
20-1/2"	GH-10	27-012-14	<b>EM-1420-RR</b>	HS-14
10"	GH-11	27-013-14	<b>EM-1410-RP</b>	HS-13
36"	GH-12	27-019-14	<b>EM-1436-RP</b>	
7"	GH-13	27-020-14	<b>EM-1407-TFFR</b>	HS-33
15"	GH-14	27-021-14	<b>EM-1415-TFP</b>	
36"	GH-15	27-022-14	<b>EM-1436-TFP</b>	
13"			<b>EM-1413-DSTF</b>	
15"	GH-16	27-023-14	<b>EM-1415-DSTF</b>	
36"	GH-17	27-024-14	<b>EM-GH-17</b>	
15"	GH-18	27-025-14	<b>EM-1415-DSR</b>	
36"	GH-19	27-026-14	<b>EM-GH-19</b>	
21"/21"	GH-20	27-027-14	<b>14 EM-1442-RRFR</b>	

\* Indicates solid conductors; all others stranded conductors.

## Bonding & Grounding Straps, Harnesses & Braid

### Grounding Harnesses

#### EM-GH-1 Grounding Harness



(former Siecor # 27-001-14)

The EM-GH-1 grounding harness is designed to connect and ground the shield of buried cable and service wire to screw-type grounding connectors employed in selected types of buried plant housings. The harness consists of a tinned TERMI-FOIL® connector crimped to one end of a green PVC insulated #14 AWG solid tinned copper wire. Overall length is 16-1/2 inches.

#### Ordering Information

**EM-GH-1** Standard packaging: 25 units per bag, shipping weight 12 oz. approx.

#### EM-GH-2 Grounding Harness



(former Siecor # 27-002-14)

The EM-GH-2 grounding harness is designed to interconnect the shields of spliced cables in butt or inline type closures. The harness consists of a tinned TERMI-FOIL® connector crimped to each end of a green PVC insulated #14 AWG stranded tinned copper wire. Overall length is 20 inches.

#### Ordering Information

**EM-GH-2** Standard packaging: 25 units per bag, shipping weight 17 oz. approx.

#### EM-GH-3 Grounding Harness



(former Siecor # 27-003-14)

The EM-GH-3 grounding harness is designed to interconnect and ground the shields of spliced cables and buried service wire to common grounding studs. The harness consists of two lengths of green PVC insulated #14 AWG stranded tinned copper wire joined together with a tinned spade terminal. A tinned TERMI-FOIL® connector is crimped to the opposite end of each wire. Overall length of each wire is 7 and 21 inches respectively.

#### Ordering Information

**EM-GH-3** Standard packaging: 25 units per bag, shipping weight 22 oz. approx.

#### EM-GH-4 Grounding Harness



(former Siecor # 27-004-14)

The EM-GH-4 grounding harness is designed to interconnect and ground the shield of buried service wire, with station protector ground wire, to the grounding stud of a station protector. The harness consists of two lengths of green PVC insulated #14 AWG stranded tinned copper wire joined together with a tinned spade terminal. A tinned TERMI-FOIL® connector is crimped to the opposite end of one wire, and a tinned butt-splice (ferrule) connector is crimped to the opposite end of the other wire. Overall length of each wire is 4 inches.

#### Ordering Information

**EM-GH-4** Standard packaging: 25 units per bag, shipping weight 9 oz. approx.

#### EM-GH-7 Grounding Harness



(former Siecor # 27-007-14)

The EM-GH-7 grounding harness is designed to interconnect and ground the shield of buried service wire to the grounding stud of a station protector. The harness consists of a tinned TERMI-FOIL® connector, crimped to one end of a green PVC insulated #14 AWG solid tinned copper wire, and a tinned spade terminal, crimped to the opposite end. Overall length is 3 inches.

#### Ordering Information

**EM-GH-7** Standard packaging: 25 units per bag, shipping weight 4 oz. approx.

*\*TERMI-FOIL® is a registered trademark of TE Connectivity.*



# Bonding & Grounding Straps, Harnesses & Braid

## Grounding Harnesses (Continued)

### EM-GH-8 Grounding Harness



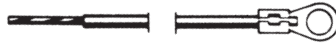
(former Siecor # 27-009-14)

The EM-GH-8 grounding harness is designed to interconnect the shields of double jacketed, double shielded cables in butt or inline type splice closures. The harness consists of four tinned TERMI-FOIL® connectors crimped to three interconnecting lengths of green PVC insulated #14 AWG stranded tinned copper wire. Overall length of each wire is 6 inches.

#### Ordering Information

**EM-GH-8** Standard packaging: 25 units per bag, shipping weight 18 oz. approx.

### EM-GH-9 Grounding Harness



(former Siecor # 27-010-14)

The EM-GH-9 grounding harness is designed to interconnect the ground stud of a shield bonding connector, installed on buried cable, to screw-type grounding connectors employed in selected types of buried plant housings. The harness consists of a tinned ring terminal crimped to one end of a green PVC insulated #14 AWG stranded tinned copper wire. Overall length is 16 inches.

#### Ordering Information

**EM-GH-9** Standard packaging: 25 units per bag, shipping weight 11 oz. approx.

### EM-GH-10 Grounding Harness



(former Siecor # 27-012-14)

The EM-GH-10 grounding harness is designed to interconnect the ground studs of shield bonding connectors, installed on spliced cables, in butt or inline type splice closures. The harness consists of a tinned ring terminal crimped to each end of a green PVC insulated #14 AWG stranded tinned copper wire. Overall length is 20 inches.

#### Ordering Information

**EM-GH-10** Standard packaging: 25 units per bag, shipping weight 8 oz. approx.

### EM-GH-11 Grounding Harness



(former Siecor # 27-013-14)

The EM-GH-11 grounding harness is designed to interconnect the ground studs of shield bonding connectors, installed on spliced cables, in butt or inline type splice closures. The harness consists of a tinned ring terminal crimped to each end of a green PVC insulated #14 AWG stranded tinned copper wire. Overall length is 10 inches.

#### Ordering Information

**EM-GH-11** Standard packaging: 25 units per bag, shipping weight 8 oz. approx.

### EM-GH-12 Grounding Harness



(former Siecor # 27-019-14)

The EM-GH-12 grounding harness is designed to interconnect the ground stud of a shield bonding connector, installed on buried cable, to screw-type grounding connectors employed in selected types of buried plant housings. The harness consists of a tinned ring terminal crimped to one end of a green PVC insulated #14 AWG stranded tinned copper wire. Overall length is 36 inches.

#### Ordering Information

**EM-GH-12** Standard packaging: 25 units per bag, shipping weight 24 oz. approx.

\*TERMI-FOIL® is a registered trademark of TE Connectivity

## Bonding & Grounding Straps, Harnesses & Braid

### Grounding Harnesses (continued)

#### EM-GH-13 Grounding Harness



(former Siecor # 27-020-14)

The EM-GH-13 grounding harness is designed to connect and ground the shield of buried service wire to the grounding stud of a station protector. The harness consists of a tinned TERMI-FOIL® connector, crimped to one end of a green PVC insulated #14 AWG stranded tinned copper wire, and a tinned spade terminal, crimped to the opposite end. Overall length is 7 inches.

##### Ordering Information

**EM-GH-1** Standard packaging: 25 units per bag, shipping weight 18 oz. approx.

#### EM-GH-14 Grounding Harness



(former Siecor # 27-021-14)

The EM-GH-14 grounding harness is designed to connect and ground the shield of buried cable and service wire to screw-type grounding connectors employed in selected types of buried plant housings. The harness consists of a tinned TERMI-FOIL® connector crimped to one end of a green PVC insulated #14 AWG stranded tinned copper wire. Overall length is 15 inches.

##### Ordering Information

**EM-GH-2** Standard packaging: 25 units per bag, shipping weight 12 oz. approx.

#### EM-GH-15 Grounding Harness



(former Siecor # 27-022-14)

The EM-GH-15 grounding harness is designed to connect and ground the shield of buried cable and service wire to screw-type grounding connectors employed in selected types of buried plant housings. The harness consists of a tinned TERMI-FOIL® connector crimped to one end of a green PVC insulated #14 AWG stranded tinned copper wire. Overall length is 36 inches.

##### Ordering Information

**EM-GH-3** Standard packaging: 25 units per bag, shipping weight 25 oz. approx.

#### EM-GH-16 Grounding Harness



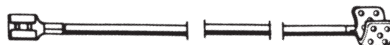
(former Siecor # 27-023-14)

The EM-GH-16 grounding harness is designed to connect and ground the shield of buried service wire to the spring action type grounding contacts employed in buried plant housings. The harness consists of a tinned TERMI-FOIL® connector, crimped to one end of a green PVC insulated #14 AWG stranded tinned copper wire, and a tinned spring action contact, crimped to the opposite end. Overall length is 15 inches.

##### Ordering Information

**EM-GH-4** Standard packaging: 25 units per bag, shipping weight 12 oz. approx.

#### EM-GH-17 Grounding Harness



(former Siecor # 27-024-14)

The EM-GH-17 grounding harness is designed to connect and ground the shield of buried service wire to the spring action type grounding contacts employed in buried plant housings. The harness consists of a tinned TERMI-FOIL® connector, crimped to one end of a green PVC insulated #14 AWG stranded tinned copper wire, and a tinned spring action contact, crimped to the opposite end. Overall length is 36 inches.

##### Ordering Information

**EM-GH-7** Standard packaging: 25 units per bag, shipping weight 26 oz. approx.

\*TERMI-FOIL® is a registered trademark of TE Connectivity.

# Bonding & Grounding Straps, Harnesses & Braid

## Grounding Harnesses (continued)

### EM-GH-18 Grounding Harness



(former Siecor # 27-025-14)

The EM-GH-18 grounding harness is designed to interconnect the ground stud of a shield bonding connector, installed on buried cable, to the spring action type grounding contacts employed in buried plant housings. The harness consists of a tinned ring terminal, crimped to one end of a green PVC insulated #14 AWG stranded tinned copper wire, and a tinned spring action contact, crimped to the opposite end. Overall length is 15 inches.

#### Ordering Information

**EM-GH-18** Standard packaging: 25 units per bag, shipping weight 12 oz. approx.

### EM-GH-19 Grounding Harness



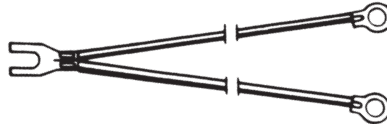
(former Siecor # 27-026-14)

The EM-GH-19 grounding harness is designed to interconnect the ground stud of a shield bonding connector, installed on buried cable, to the spring action type grounding contacts employed in buried plant housings. The harness consists of a tinned ring terminal, crimped to one end of a green PVC insulated #14 AWG stranded tinned copper wire, and a tinned spring action contact, crimped to the opposite end. Overall length is 36 inches.

#### Ordering Information

**EM-GH-19** Standard packaging: 25 units per bag, shipping weight 24 oz. approx.

### EM-GH-20 Grounding Harness



(former Siecor # 27-027-14)

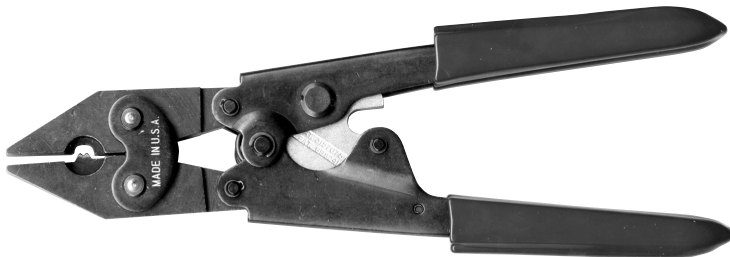
The EM-GH-20 grounding harness is designed to interconnect and ground the shields of spliced cables, employing shield bonding connectors with studs, to common grounding studs. The harness consists of two lengths of green PVC insulated #14 AWG stranded tinned copper wire, joined together with a tinned spade terminal. A tinned ring terminal is crimped to the opposite end of each wire. Overall length of each wire is 21 inches.

#### Ordering Information

**EM-GH-20** Standard packaging: 25 units per bag, shipping weight 2 lb. approx.

### EM-GHT-1 Compression Tool

(former Siecor # 27-001-15)



The EM-GHT-1 compression tool is designed to insure a high degree of reliability in making the ground harness to shield bond for harnesses employing TERMI-FOIL® type connectors. The EM-GHT-1 is equipped with a special ratchet which controls, and assures, correct pressure at the shield bond before the tool will release.

#### Ordering Information

**EM-GHT-1** Standard packaging: one tool per box, shipping weight 21 oz. approx.

\*TERMI-FOIL® is a registered trademark of TE Connectivity.

# Bonding & Grounding Straps, Harnesses & Braid

## Hand-Held Crimp Tool

#8-#2 AWG conductor range covers red, blue, grey, and brown compression lugs that are made from tubing. Ergonomic design features cushioned grips, easy-grip jaws, and rotating tool nest. Manufactured in the U.S.A.

### Features

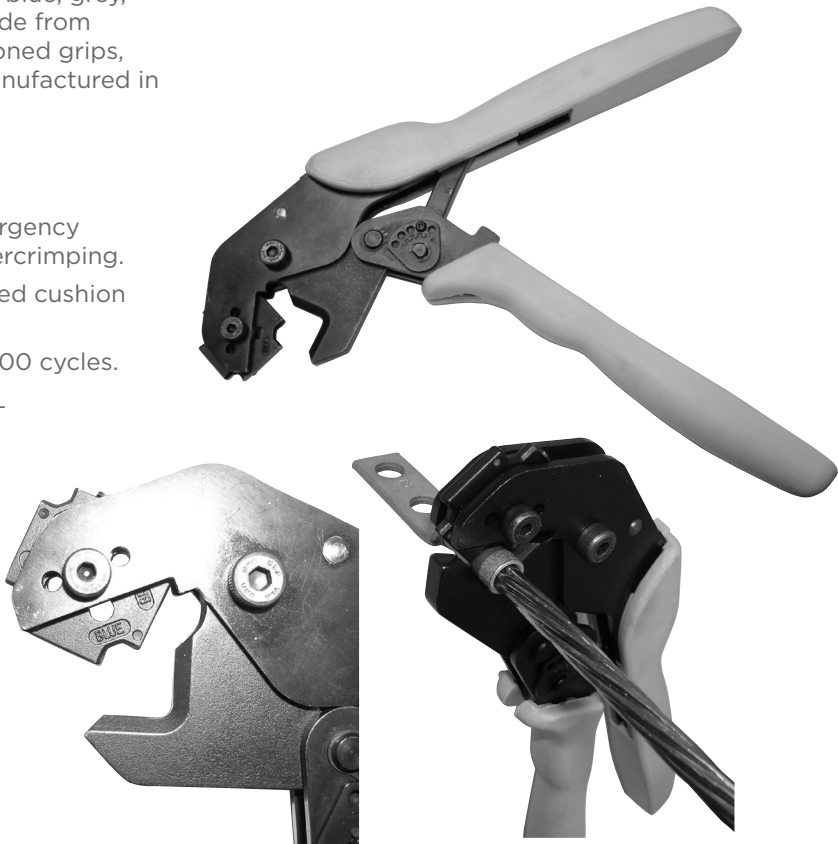
- Positive ratcheting assembly with emergency release, prevents overcrimping or undercrimping.
- High mechanical advantage with molded cushion grips minimize user fatigue.
- Tool life is conservatively rated at 50,000 cycles.
- Crimps designed to meet or exceed UL tensile requirements.

### Ordering Information

#### EM-4290CT -

Hand-Held Crimp Tool, #8-#2 AWG

Die Index Number	Gage Die (In.) Min. - Max.		Wire Size
Red	.178	.200	8
Blue	.220	.238	6
Gry	.265	.275	4
Brn	.325	.347	2



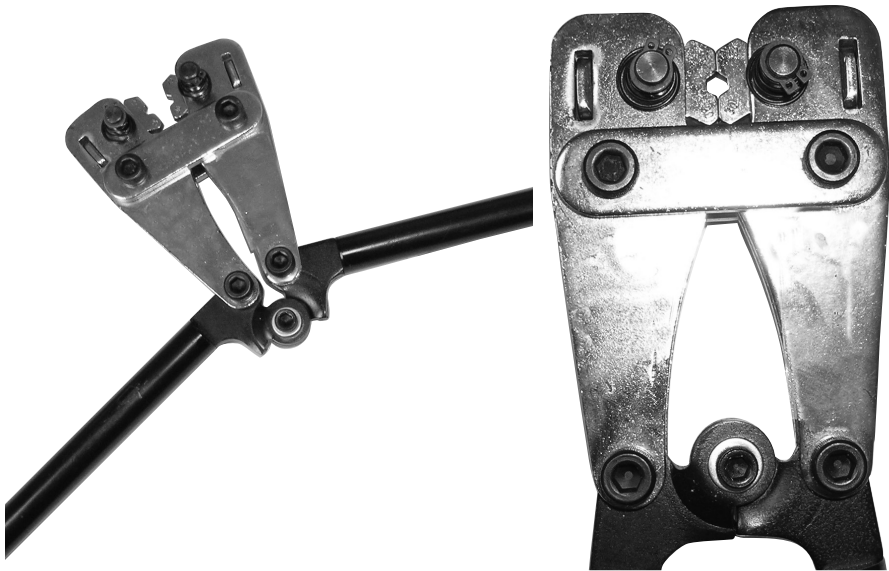
## Crimp Tool

For crimping #8-1/0 AWG crimp lugs and splices. Rotating crimp dies are color coded for easy identification and selection. Long handles and compound lever action provide superb mechanical advantage and positive stop at the end of the crimp cycle.

### Ordering Information

#### EM-080CT

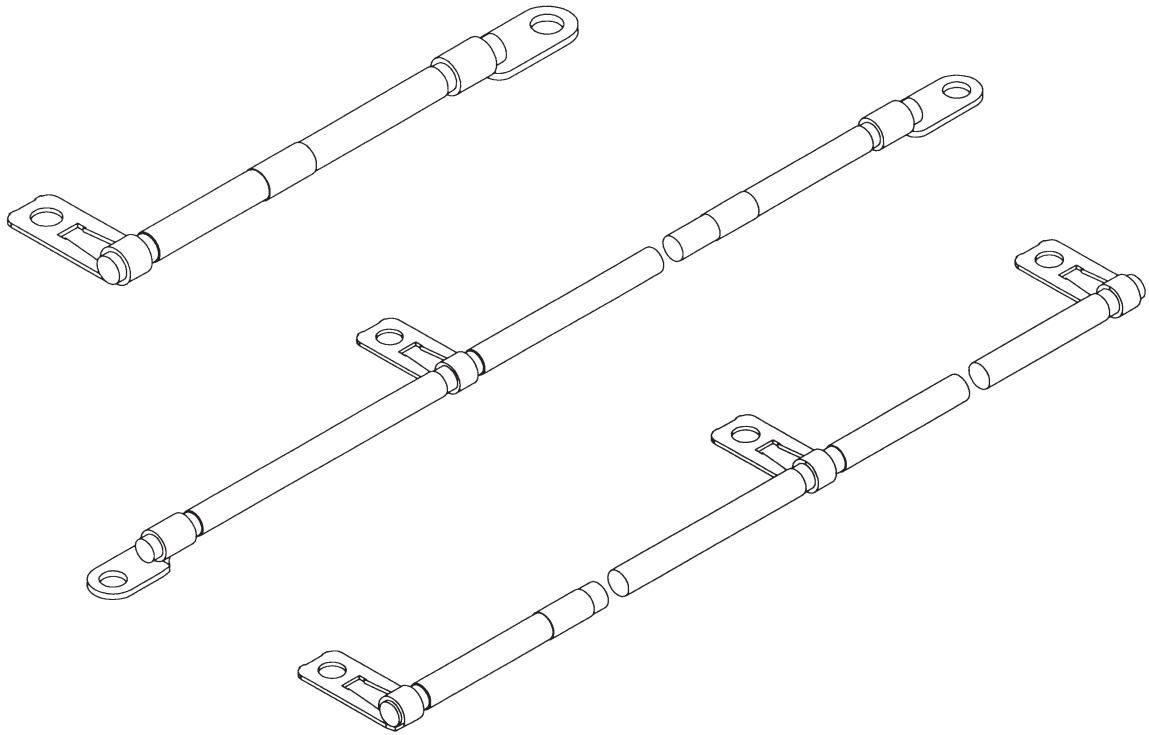
Standard packaging: 1 / bx, 9 lb / bx



## Bonding & Grounding Straps, Harnesses & Braid

### #6 AWG Harnesses with Flag Terminals

Insulated rope-lay, various lengths available, various combinations of flag/ring terminals available.



*Call sales office for ordering information.*



# Connectors



## Connectors – Pedestal Ground Brackets

### Pedestal ground brackets

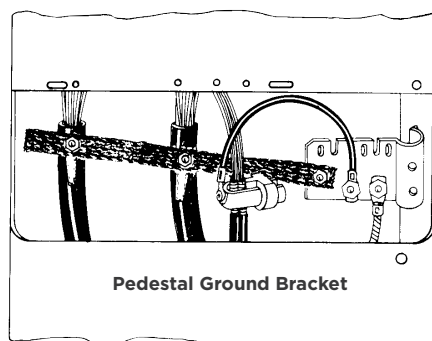
All stainless steel. Studs are pressed in and staked.

#### Applications

New installations and rehabilitation of pedestal grounds to accept new #6 AWG bonding harnesses or braid.

#### Features

- Includes hardware to connect bonding harnesses or ground braid
- Slots and holes can mount standard BSW shield connectors.



#### Ordering Information

EM-6300-01 – Studs protrude away from angle  
Standard packaging: 200/bx, 25 lb/bx

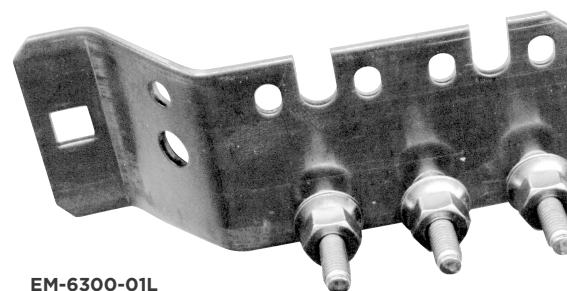
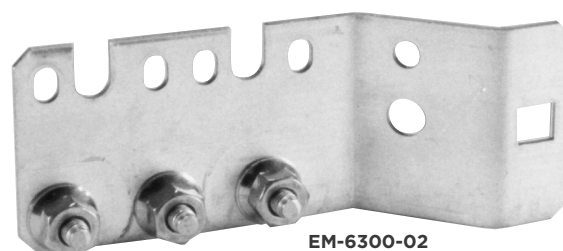
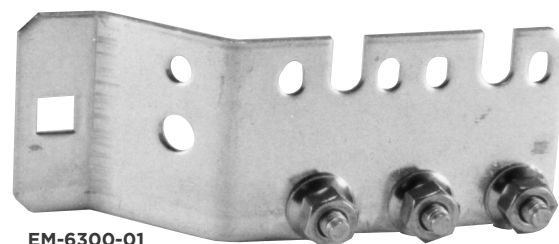
EM-6300-02 – Studs protrude toward angle  
Standard packaging: 200/bx, 25 lb/bx

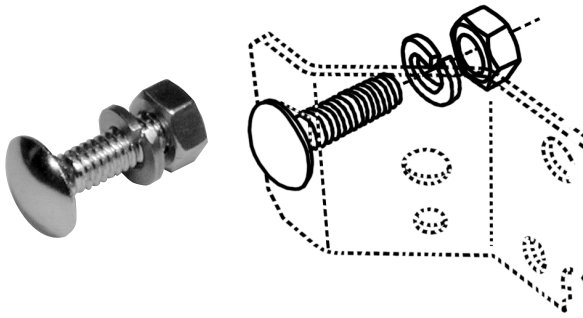
Add suffix -TC for a tinned copper bracket.

Add suffix -TB for a tinned brass bracket.

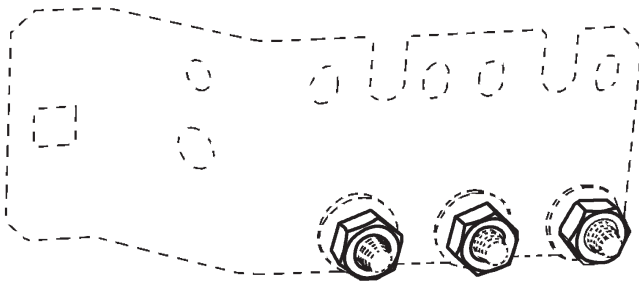
Add suffix -L for longer studs.

Add suffix -NBL to include nut, bolt, and lock washer (opposite page, EM-63NBL).

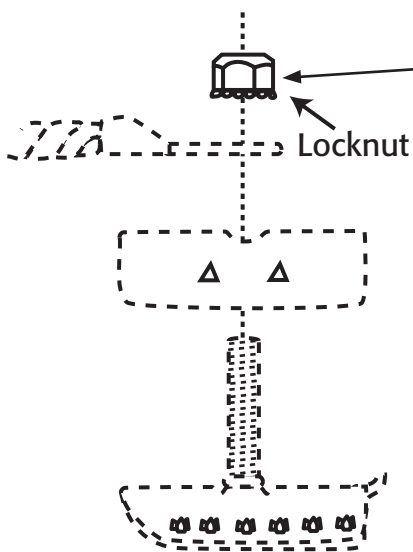




**EM-63NBL** – Stainless steel nut, carriage bolt, and lock washer used to attach pedestal ground brackets to pedestal. See page G36.



**EM-63NUT** – Stainless steel conical Keps nut. See page G36.

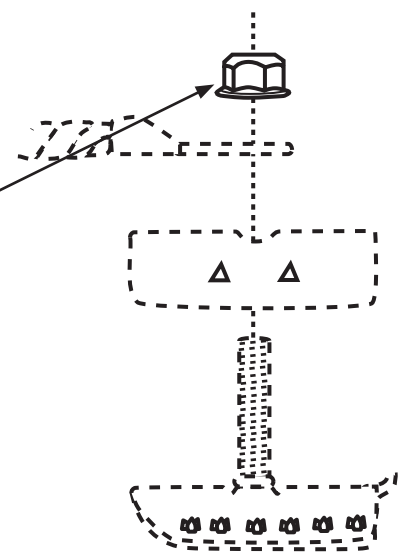


**EM-BNUT**

10-24 coarse thread tinned bronze locknut for B-bond clamp cable shield connector. See pages G104 and G105.

**EM-10NBC**

10-32 fine thread whiz nut, zinc-plated steel, for B-bond clamp cable shield connector. See pages G104 and G105.



## Connectors – Pedestal Ground Brackets

### Pedestal Ground Bracket Stud Extender

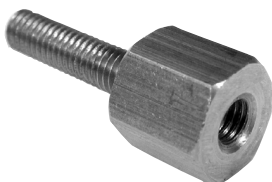
This can be used when the existing ground bracket studs are full. Simply remove the existing nut, thread on the stud extender (see picture, right). This gives 3/4" additional stud length. The nut that was removed is now used to capture the bonds on the stud extender.

#### Ordering Information

**EM-63MG-SS** – Stainless steel

**EM-63MG-TB** – Tinned brass

**EM-63MG-TSB** – Tinned silicon bronze



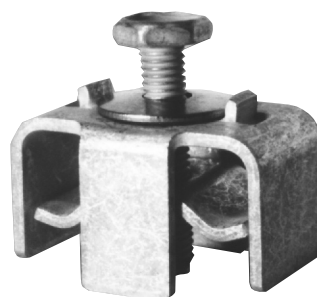
### "C" Service wire clamp

Buried service wire connector for pedestal applications. Attaches to the ground brackets on opposite page.

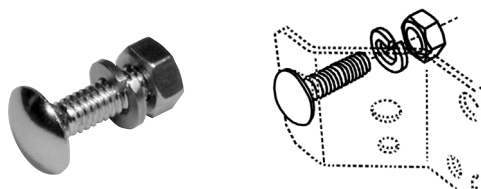
#### Ordering Information

**EM-6250**

*Standard packaging: 10/bg, 100/bx, 7 lb/bx.*

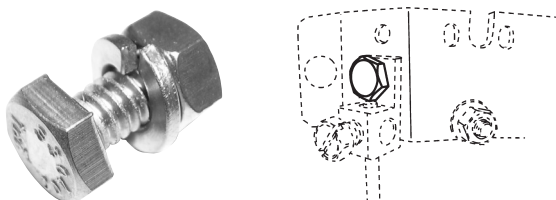


### Hardware



Stainless steel nut, carriage bolt, and lock washer used to attach pedestal ground brackets (opposite page) to pedestal.

#### Ordering Information EM-63NBL



1/4-20 x 1/2 hex head cap screw with nut and lockwasher, for attaching cast ground lug to ground bracket.

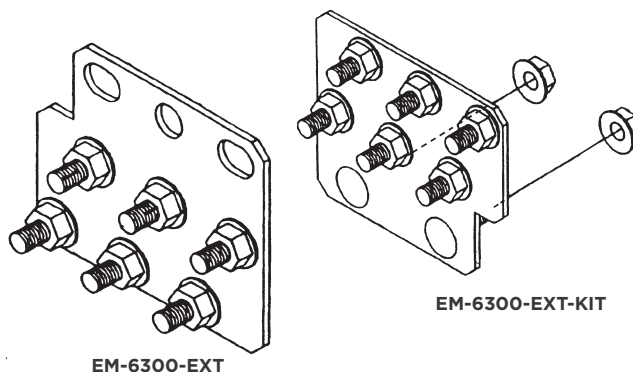
#### Ordering Information

**EM-63SS** – Stainless steel

**EM-63BR** – Brass/bronze

**EM-63TBR** – Tinned brass bronze

### Pedestal Ground Bracket Extenders



#### Ordering Information

**EM-6300-EXT** – Stainless steel plate with 6 short studs staked into it; also 6 Keps nuts.

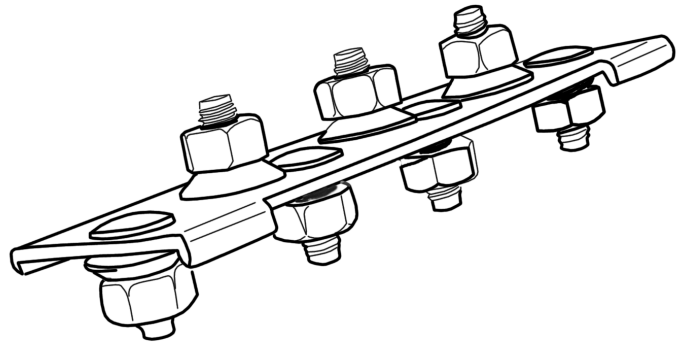
**EM-6300-EXT-KIT** – Stainless steel plate with 6 short studs staked into it, and 2 extra mounting studs; also 8 Keps nuts.

Add suffix -TC for a tinned copper bracket extender (studs and nuts still stainless steel).

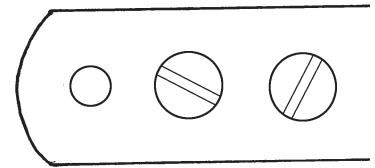
## Connectors – Pedestal Ground Brackets

### Pedestal Ground Bar Extender for Channell MAH Pedestals

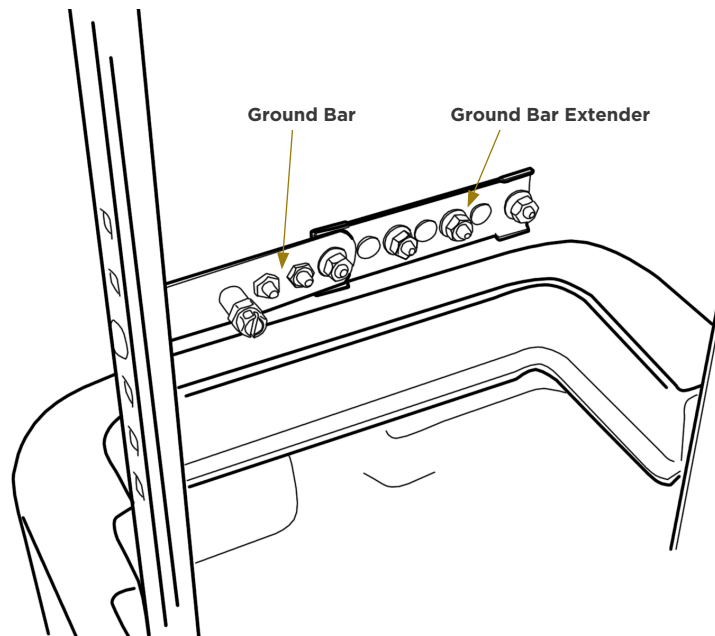
The Ground Bar Extender EM-6305 is to be used in Channell pedestals to increase the capacity of the pedestal to handle more buried service wires and cables.



The existing Channell ground bar has a single hole in the end. Mount one of the end studs in that hole, and the ground bar extension gives the installer three more studs for BSW floating bond shield connectors (SSI/PID # 700244330) on the BSW side. The opposite side will provide three additional studs to connect cable shield flexible bond straps SSI/PID # 001460997.



Shown: EM-6305  
used in MAH1010



#### Ordering Information

**EM-6305** – Pedestal Ground Bar Extender (6 extra studs).

**EM-6308** – Pedestal Ground Bar Extender (14 extra studs).

## Connectors – Screw-on Terminals

### Screw-On Terminals

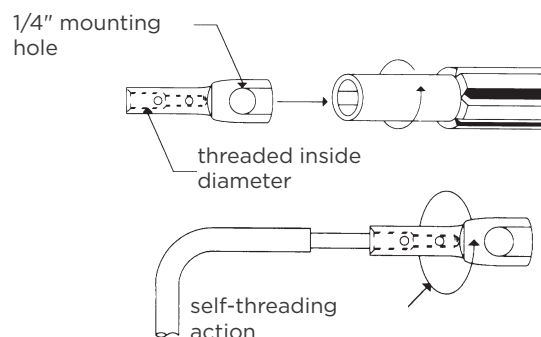
Tin-plated copper connector with internal self-cutting threads, for terminating solid wires at connecting points. These small terminals are applied with a can wrench. They cut their own thread on solid #6 or #10 AWG copper ground wire.












**RECOGNIZED**  
Grounding and  
Bonding Lug

#### Features

- Installs with a standard (3/8") terminal wrench
- Self-threading terminal cuts through any oxidation
- Threaded connection will not vibrate loose 1/4" hole fits #10 through 1/4" studs
- Tin plated for corrosion resistance
- Copper alloy construction



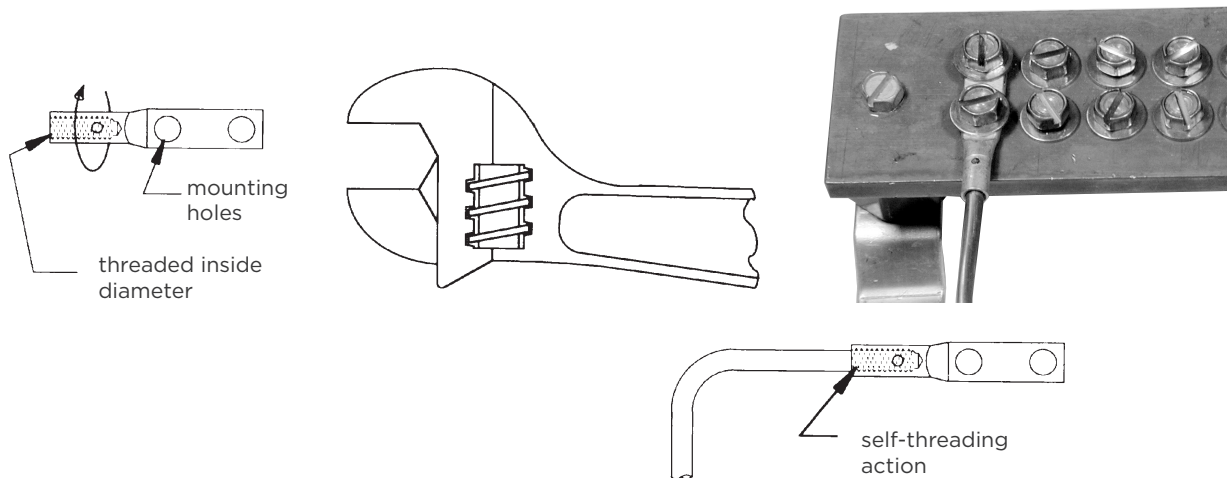
#### Ordering Information :

	<b>EM-2525</b>	Screw-on ring terminal for solid #6 AWG. <i>Standard packaging: 10/bg, 100/sm bx, 1000/lg bx, 2 lb/sm bx.</i>	
	<b>EM-252510</b>	Same as above, with #10 mounting hole.	
	<b>EM-2525375</b>	Same as above, with 3/8" diameter ring terminal.	
	<b>EM-2525T3125</b>	Screw-on ring terminal for solid #6 AWG, with thin blade and 5/16" diameter hole. <i>Standard packaging: 10/bg, 100/sm bx, 1000/lg bx, 2 lb/sm bx.</i>	
	<b>EM-2510</b>	Screw-on ring terminal for solid #10 AWG. <i>Standard packaging: 10/bg, 100/sm bx, 1000/lg bx, 2 lb/sm bx.</i>	
	<b>EM-251010</b>	Same as above, with #10 stud mounting hole.	
	<b>EM-2510SI</b>	Screw-on ring terminal for solid #10 AWG. <i>Standard packaging: 10/bg, 100/sm bx, 1000/lg bx, 2 lb/sm bx.</i>	
	<b>EM-2610</b>	Combination screw-on ring terminal for either #6 or #10 AWG. <i>Standard packaging: 10/bg, 100/sm bx, 1000/lg bx, 16 lb/lg bx.</i>	
	<b>EM-2610375</b>	Same as above, 3/8" diameter hole.	
	<b>EM-2610375THIN</b>	Same as above, with thin blade and 3/8" diameter hole. <i>Standard packaging: 10/bg, 100/sm bx, 1000/lg bx, 2 lb/sm bx.</i>	
	<b>EM-2610BS</b>	Combination screw-on terminal #6 and #10 AWG with break-away into spade. <i>Standard packaging: 10/bg, 100/sm bx, 1000/lg bx, 2.3 lb/sm bx.</i>	
	<b>EM-2610BH</b>	Combination screw-on terminal #6 and #10 AWG with break-away into hook. <i>Standard packaging: 10/bg, 100/sm bx, 1000/lg bx, 2 lb/sm bx.</i>	
	<b>EM-2610T3125</b>	Combination screw-on terminal #6 and #10 AWG, with thin blade and 5/16" diameter hole. <i>Standard packaging: 10/bg, 100/sm bx, 1000/lg bx, 2 lb/sm bx.</i>	







# Connectors – Screw-on Terminals

## Larger Screw-on Terminals

These larger and double-hole terminals are applied with an adjustable wrench. They cut their own thread on solid #2, #4, and #6 copper ground wire.



### Ordering Information :

	<b>EM-2522SH</b>	Screw-on ring terminal, single 5/16" hole, for solid #2 AWG. Standard packaging: 10/bg, 50/sm bx, 500/lg bx, 21.8 lb/lg bx	
	<b>EM-2522DH7510</b>	Screw-on ring terminal, double 5/16" holes, 3/4" spacings, for solid #2 AWG.	
	<b>EM-2522DH1000</b>	Screw-on ring terminal, double 5/16" holes, 1" spacings, for solid #2 AWG.	
	<b>EM-2522DH1750</b>	Screw-on ring terminal, double 5/16" holes, 1-3/4" spacings, for solid #2 AWG.	
	<b>EM-2522DH625</b>	Screw-on ring terminal, double 5/16" holes, 5/8" spacings, for solid #2 AWG Standard packaging: 5/bg, 50/sm bx, 500/lg bx, 33 lb/lg bx	
	<b>EM-2522DH75312</b>	Screw-on ring terminal, double 5/16" holes, 3/4" spacings, for solid #2 AWG Standard packaging: 5/bg, 50/sm bx, 500/lg bx, 33 lb/lg bx	



## Connectors – Screw-on Terminals

### Larger Screw-on Terminals (continued)

**EM-2522DH875**

Screw-on ring terminal, double 5/16" holes, 7/8" spacings, for solid #2 AWG.

*Standard packaging: 5/bg, 50/sm bx, 500/lg bx, 33 lb/lg bx*

**EM-2522DH875625**

Screw-on ring terminal, 5/16" hole and 5/16" slot, for solid #2 AWG, fits studs spaced 5/8"-7/8".

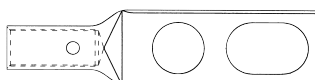
*Standard packaging: 5/bg, 50/sm bx, 500/lg bx, 44 lb/lg bx*

**EM-2522DH625437**

Screw-on ring terminal, double 7/16" holes, 5/8" spacing, for solid #2 AWG.

**EM-2522DH1000437**

Screw-on ring terminal, double 7/16" holes, 1" spacing, for solid #2 AWG.

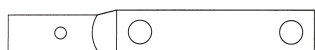
**EM-2522DH875-625437**

Screw-on ring terminal, 7/16" hole and 7/16" slot, for solid #2 AWG, fits studs spaced 5/8"-7/8".

**EM-2524SH**

Screw-on ring terminal, single 1/4" hole, for solid #4 AWG.

*Standard packaging: 10/bg, 50/sm bx, 500/lg bx, 22 lb/lg bx*

**EM-2524DH1750**

Screw-on ring terminal, double 1/4" holes, 13/4" spacings, for solid #4 AWG.

**EM-2524DH625**

Screw-on ring terminal, double 1/4" holes, 5/8" spacings, for solid #4 AWG.

**EM-2525DH625**

Screw-on ring terminal, double 1/4" holes, 5/8" spacings, for solid #6 AWG (can also be applied with can wrench).

*Standard packaging: 10/bg, 50/sm bx, 500/lg bx, 13 lb/lg bx*

**EM-2526**

Screw-on terminal, 5/8" spade, for solid #6 AWG.

*Standard packaging: 10/bg, 50/sm bx, 500/lg box, 38.4 lb/lg bx*

**EM-2627R**
















Screw-on ring terminal, 3/8" mounting hole, for solid #6 AWG.



## Connectors – Screw-on Terminals

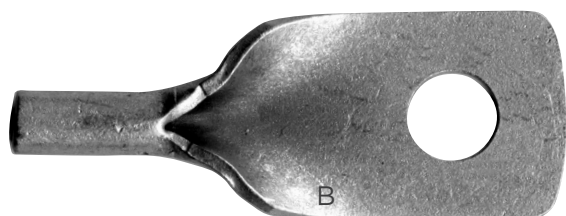
## All Screw-On Terminals (Continued)

At a glance . . .

Part Number	Accommodates	Mounting Hole(S)	Spacing	Listing
EM-2525	#6 AWG	1/4"		
EM-252510	#6 AWG	#10		
EM-2525375	#6 AWG	3/8"		
EM-2525T3125	#6 AWG	5/16", Thin blade		
EM-2510	#10 AWG	1/4"		
EM-251010	#10 AWG	#10		
EM-2510SI	#10 AWG	1/4", Insulated barrel		
EM-2610	#6 & #10 AWG	1/4"		
EM-2610375	#6 & #10 AWG	3/8"		
EM-2610BS	#6 & #10 AWG	1/4", Breakaway into spade		
EM-2610BH	#6 & #10 AWG	1/4", Breakaway into hook		
EM-2610T3125	#6 & #10 AWG	5/16", Thin blade		
EM-2522SH	#2 AWG	5/16"		
EM-2522DH7510	#2 AWG	Double #10	3/4"	
EM-2522DH1000	#2 AWG	Double 5/16"	1"	
EM-2522DH875-625437	#2 AWG	7/16" Hole, 7/16" slot	5/8"-7/8"	
EM-2522DH1750	#2 AWG	Double 5/16"	1-3/4"	
EM-2522DH625	#2 AWG	Double 5/16"	5/8"	
EM-2522DH75312	#2 AWG	Double 5/16"	3/4"	
EM-2522DH875	#2 AWG	Double 5/16"	7/8"	
EM-2522DH875625	#2 AWG	5/16" Hole, 5/16" slot	5/8"-7/8"	
EM-2522DH625437	#2 AWG	7/16"	5/8"	
EM-2522DH1000437	#2 AWG	7/16"	1"	
EM-2524SH	#4 AWG	1/4"		
EM-2524DH1750	#4 AWG	Double 1/4"	1-3/4"	
EM-2524DH625	#4 AWG	Double 1/4"	5/8"	
EM-2525DH625	#6 AWG	Double 1/4"	5/8"	
EM-2526	#6 AWG	5/8" Spade		
EM-2627R	#6 AWG	3/8"		

# Connectors – Self-Tapping Terminals

## Larger-Holed Self-Tapping Terminals



Screw-on terminals cut their own thread on solid copper ground wire.

### Ordering Information:

**EM-250** - - -

Gauge:  
2, 4, or 6

Size/shape:  
A, B, or C (see  
pictures, above left)

Mounting hole size:  
insert fraction, (e.g., EM-  
2506B5/16 has a 5/16" mounting hole).

*Note: Size B will accommodate a mounting hole up to 5/8".*



## Ground Wire Connector

Inline connector with breakaway hex heads. Available for #6 or #10 AWG solid.

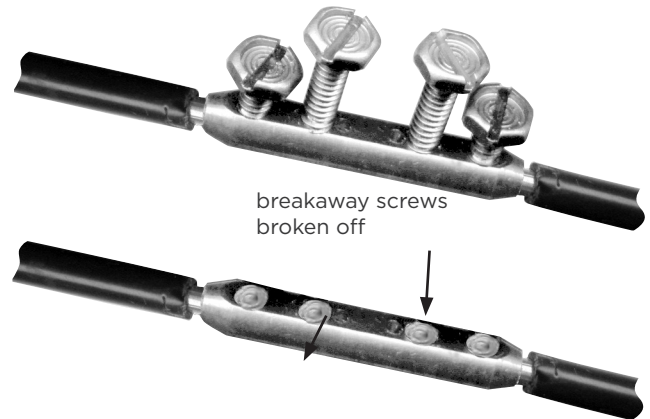
### Ordering information

**EM-4544** Accommodates #6 AWG

**EM-4542** Accommodates #10 AWG

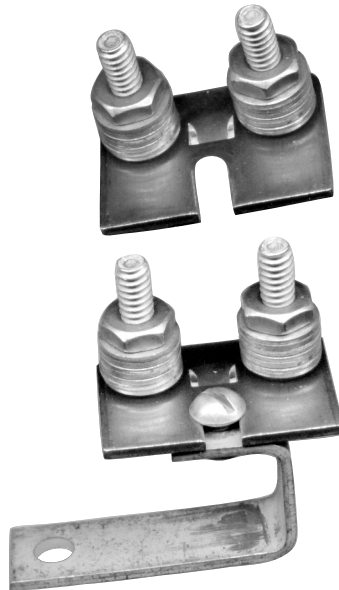
**EM-4542-1010** Accommodates three #10 AWG

*Standard packaging: 2/bg, 50/bx, 5 lb/bx.*



## Ground Strips

A plate equipped with two binding posts and washers. The plate has a “U”-shaped slot to receive the mounting screw and a depressed tab which serves to prevent turning after installation. The Ground Strip is intended for use in terminals equipped with G type or H type binding post chambers, or LA type or LB type fuse chambers.



### Ordering Information

**EM-2A** Ground Strip

*Standard packaging: 100/bx, 7 lb/bx.*

**EM-2B** Ground Strip with Bracket added

*Standard packaging: 100/bx, 9 lb/bx.*

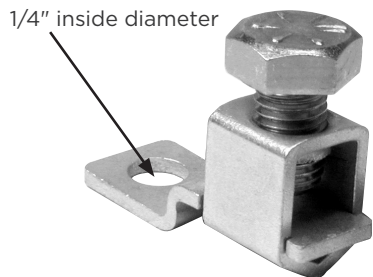


BONDING & GROUNDING

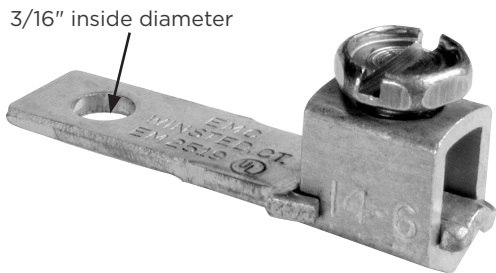
# Connectors – Ground Lugs

## Solderless Ground Lugs

Ordering Information required.

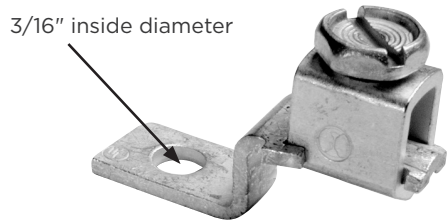


**EM-2513** – Fits #14–#4 AWG.  
Tin-plated copper housing and  
mounting tang. 1/4" mounting hole.

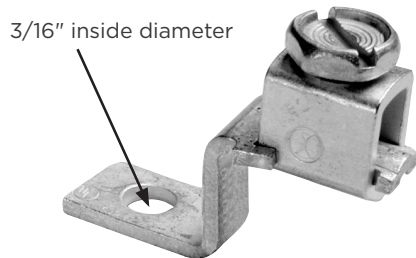


**EM-2519-01** – Fits solid #10–#6 AWG.  
Copper housing and mounting  
tang.

Standard packaging: 1000/bx, 25 lb/bx



**EM-2519-03** – Fits #12–#6 AWG,  
90° bend in mounting tang.  
Copper housing, tin-plated copper  
mounting tang.



**EM-2519-04** – Fits #12–#6 AWG,  
90° bend in mounting tang.  
Copper housing, tin-plated copper  
mounting tang.

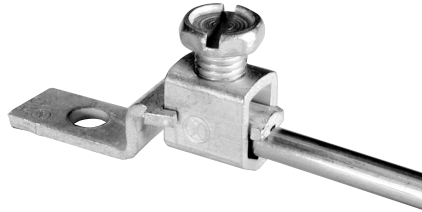
### At a glance . . .

Part Number	Accommodates	Mounting Tang Length/Angle/Ht.	Mounting Hole Dia./Spacing	Screw	Listing
EM-2513	#14–4	1" / 90° Bend / 1/4"	1/4"	1/2" Hex head	None
EM-2519-01	Solid #10–6	1" / Straight	3/16"	3/8" Hex head	UL
EM-2519-03	#12–6	3/4" / 90° Bend / 1/2"	3/16"	3/8" Hex head	None
EM-2519-04	#12–6	3/4" / 90° Bend / 7/8"	3/16"	3/8" Hex head	None

## Solderless Ground Lugs (continued)

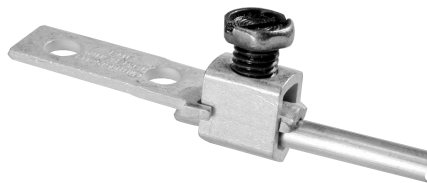
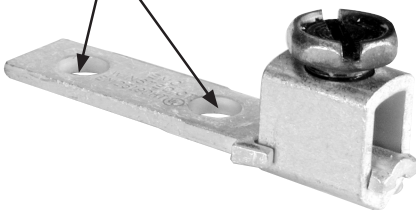
Ordering Information required.

3/16" inside diameter



**EM-2519-05** – Fits #12–#6 AWG, 90° bend in mounting tang. Tin-plated copper housing and mounting tang.

3/16" inside diameter

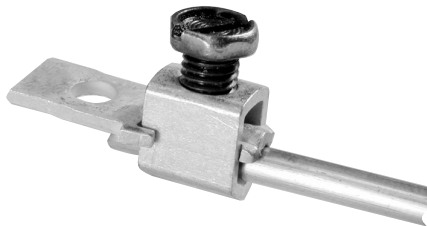
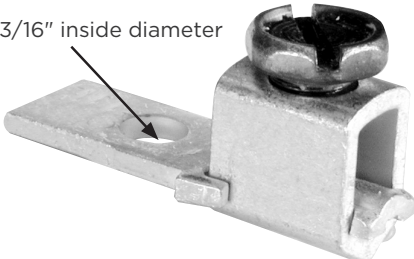


**EM-2519DHT-01** – Fits #10–#6 AWG, double hole, 5/8" spacing. Tin-plated copper housing and mounting tang.

Standard packaging: 1000/bx, 28 lb/bx



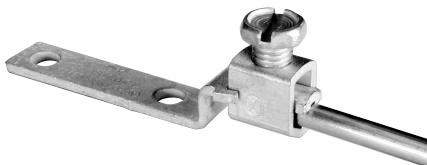
3/16" inside diameter



**EM-2519HT** – Fits #12–#6 AWG. Tin-plated copper housing and mounting tang.

Standard packaging: 1000/bx, 28 lb/bx

3/16" inside diameter



**EM-2519DHT-02** – Fits #10–#6 AWG, double hole, 1" spacing, offset bend in mounting tang. Tin-plated copper housing and mounting tang.

Standard packaging: 500/bx, 19 lb/bx



### At a glance . . .

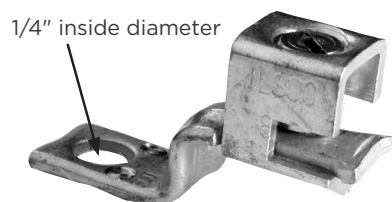
Part Number	Accommodates	Mounting Tang Length/Angle/Ht.	Mounting Hole Dia./Spacing	Screw	Listing
<b>EM-2519-05</b>	#12–6	5/8" / 90° Bend / 3/8"	3/16"	3/8" Hex head	None
<b>EM-2519DHT-01</b>	#10–6	1-3/16" / Straight	3/16" / 5/8"	3/8" Hex head	UL
<b>EM-2519HT</b>	#12–6	1/2" / Straight	3/16"	3/8" Hex head	None
<b>EM-2519DHT-02</b>	#10–6	1-1/2" / 90° Bend / 3/8"	3/16" / 1"	3/8" Hex head	UL



## Connectors – Ground Lugs

### Solderless Ground Lugs (continued)

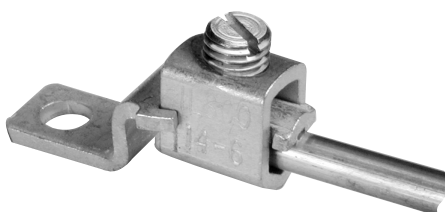
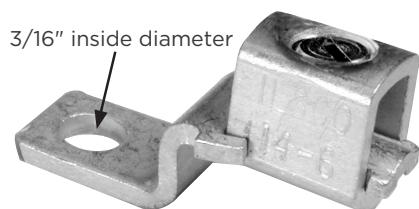
Ordering Information required.



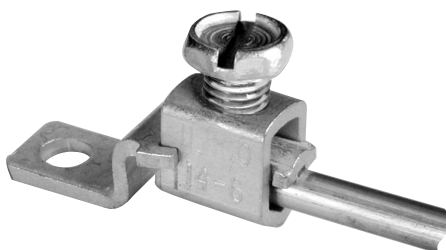
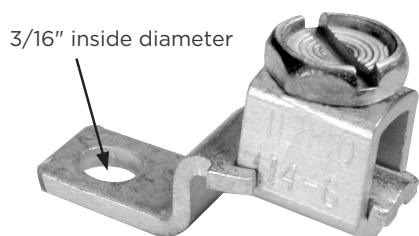
**EM-2518** – Fits solid #6 AWG at right angle. Copper housing and mounting tang.

Standard packaging: 100/bx, 6 lb/bx

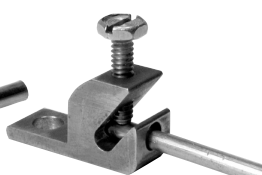
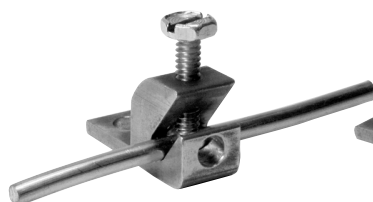
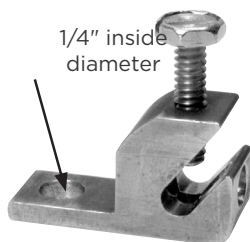
Add suffix -NBL for nut, bolt, and lockwasher, to attach to a pedestal grounding bracket.



**EM-2519-06** – Fits solid #10-#6 AWG, offset bend in mounting tang. Tin-plated copper housing and mounting tang.



**EM-2519-06HH** – Fits solid #12-#6 AWG, offset bend in mounting tang. Tin-plated copper housing and mounting tang.



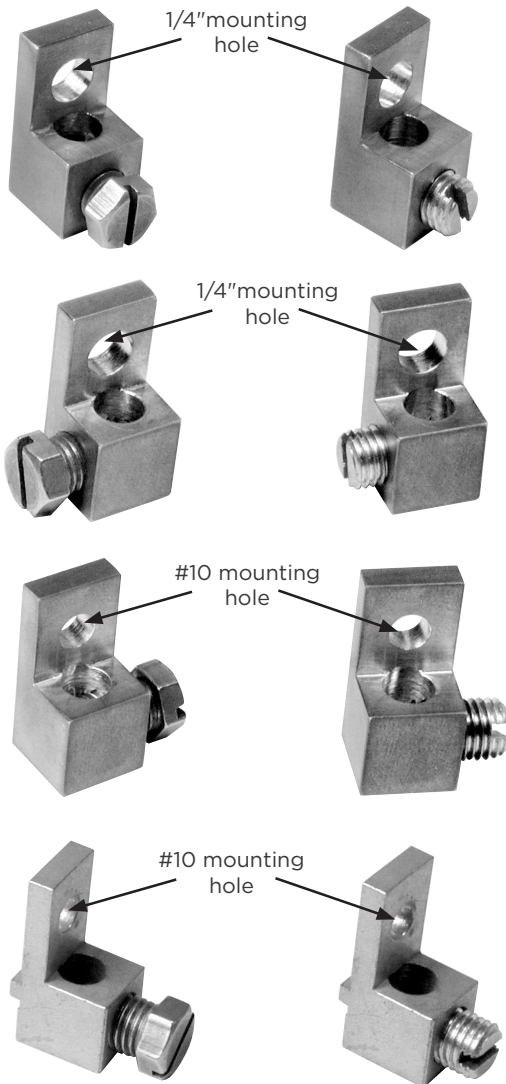
**EM-2512** – Extruded connector fits solid and stranded #6 AWG. Wire can be connected in either direction.

**EM-2512T** – EM-2512, with tin-plated copper body and tin-plated screw.

#### At a glance . . .

Part Number	Accommodates	Mounting Tang Length/Angle/Ht.	Mounting Hole Dia./Spacing	Screw	Listing
<b>EM-2518</b>	Solid #6	5/8" / 90° Bend / 3/8"	3/16"	9/32" Slotted	None
<b>EM-2519-06</b>	#10-6	1/2" / 90° Bend / 3/8"	3/16"	9/32" Slotted	UL
<b>EM-2519-06HH</b>	#12-6	1/2" / 90° Bend / 3/8"	3/16"	3/8" Hex head	None
<b>EM-2512</b>	Solid/stranded #6	3/4" / Straight	1/4"	3/8" Hex head	None
<b>EM-2512T</b>	Solid/stranded #6	3/4" / Straight	1/4"	3/8" Hex head	None

## L-Shaped Ground Lugs



L-shaped ground lugs accommodate ground wires from #14–6 AWG. 3/8" hex head bolts fit standard 216B tool. All lugs are available with either 1/4" or #10 size mounting hole.

### Ordering information

**EM-6620** L-shaped ground lug with hex head bolt in front

**EM-6621** L-shaped ground lug with headless set screw in front

*1/4" mounting hole is standard on these two products. For #10 size hole, please add suffix .10.*

**EM-6622** L-shaped ground lug with hex head bolt on left.

**EM-6622HL** L-shaped ground lug with headless set screw on left

*1/4" mounting hole is standard on these two products. For #10 size hole, please add suffix .10.*

**EM-6624** L-shaped ground lug with hex head bolt on right

**EM-6625** L-shaped ground lug with headless set screw on right

*#10 size mounting hole is standard on these two products. For 1/4" hole, please add suffix .25.*

**EM-6626** L-shaped ground lug with hex head bolt in front, and lip in back to prevent rotation on ground bar or bracket

**EM-6627** L-shaped ground lug with headless set screw in front, and lip in back to prevent rotation on ground bar or bracket

*#10 size mounting hole is standard on these two products. For 1/4" hole, please add suffix .25.*

*Add suffix **-NBL** for nut, bolt, and lockwasher, to attach any of the above ground lugs to a pedestal grounding bracket.*

### At a glance . . .

Part Number	Bolt/Screw Location	Bolt/Screw Head	Mounting Hole Size	Distinguishing Feature	Listing
<b>EM-6620</b>	Front	Hex head	1/4"	None	UL
<b>EM-6621</b>	Front	Headless	1/4"	None	UL
<b>EM-6622</b>	Left	Hex head	1/4"	None	UL
<b>EM-6622HL</b>	Left	Headless	1/4"	None	UL
<b>EM-6624</b>	Right	Hex head	#10	None	UL
<b>EM-6625</b>	Right	Headless	#10	None	UL
<b>EM-6626</b>	Front	Hex head	#10	Anti-rotation lip	UL
<b>EM-6627</b>	Front	Headless	#10	Anti-rotation lip	UL



## Connectors – Ground Lugs

### Ground Lug

For attaching #6 AWG solid or stranded ground wires to cabinets, closures, terminals, etc. Headless set screw comes in from the side.

**Ordering information – EM-3538**

### Double-Hole Ground Lugs

Plated zinc die cast alloy for mechanical strength and electrical conductivity. Accommodate #6–#2 AWG ground wires, solid or stranded.

#### Ordering information

**EM-6630** Double-Hole Ground Lug

**EM-6631** Double-Hole Ground Bar Lug with parallel mounting tang.



EM-6630



Headless set screw



EM-6631

### Transformer (Tank) Ground Lugs

#### Application

For bonding telco plant to the electrical transformer in joint use situations. Hex-shaped body installs with typical hand tools and captures #6 AWG solid copper conductor.

- Brass components for electrical conductivity and corrosion resistance
- Installed with typical hand tools
- #6 AWG solid copper compatibility
- Available in two sizes to fit most transformers

#### Ordering information

**EM-TGL38** Transformer Ground Lug, 3/8"

**EM-TGL48** Transformer Ground Lug, 1/2"

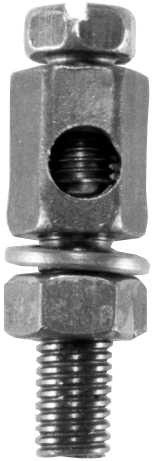
**EM-TGL58** Transformer Ground Lug, 5/8"

**EM-TGL58.240** Transformer Ground Lug, 5/8" with .240 diameter hole to accommodate #4 AWG

Add suffix -T for tin plating.



## Pedestal Ground Lug



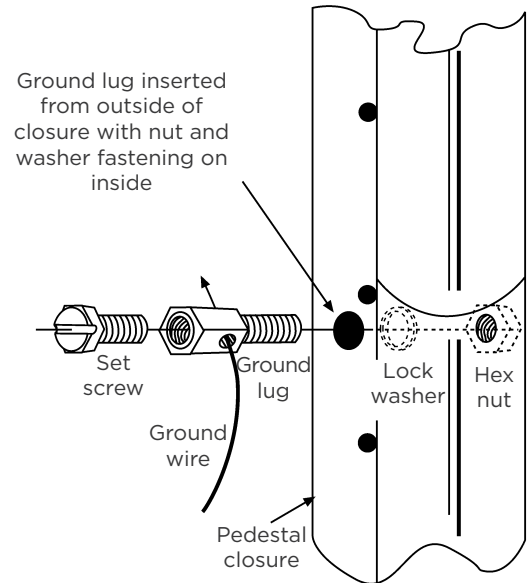
For bonding closures adjacent to power sources; connects #6 AWG solid or stranded ground wires.

### Ordering information EM-3535

Standard packaging: 1/bg, 100/bx, 6 lb/bx.



Other designs are available;  
call for information



## Pedestal Ground Lug



The EM-5900SB can be used in a ground bar or bracket, or through the housing of a pedestal or cabinet. All copper alloy construction. Can also be tin plated, and is also available with a lock washer and nut.

### Features

- 1/4-20 x 1/2 threaded shank
- Captures #6 AWG and smaller
- Silicon bronze construction for strength, electrical conductivity, and corrosion resistance

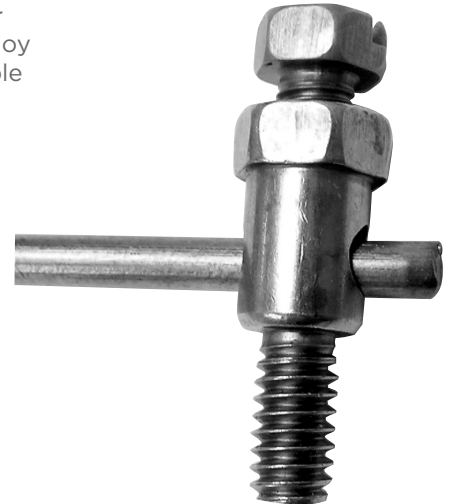
### Ordering information

**EM-5900SB** Pedestal Ground Lug

**EM-5900SB-LN** Pedestal Ground Lug with lock washer and nut

**EM-5900SBXL-LN** Pedestal Ground Lug with 3/4" threaded shank, with lock washer and nut

Add suffix -T for tin plating.



## Connectors – Ground Blocks

### Ground blocks

Can be mounted in terminals, cabinets, and enclosures to provide a convenient means for connecting ground wires. All ground blocks are copper, unless otherwise noted.

Add suffix -MSK to include mounting screws.

Add suffix -ISK to include isolator mounting screws.

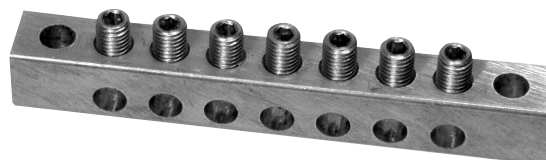


### Ordering information

#### EM-4200-7-0

7-position ground block, copper, 1/2" x 1/2", set screws with Allen heads, 1/4" mounting holes.

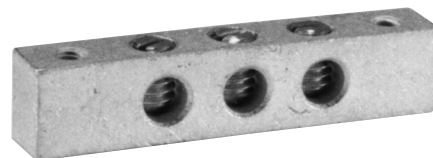
Standard packaging: 250/bx, 30 lb/bx.



#### EM-4201

3-position ground block, #8-32 mounting holes.

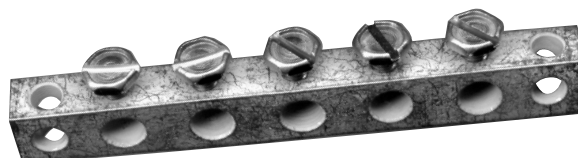
Standard packaging: 250/bx, 30 lb/bx.



#### EM-4201-5S

5-position ground block with screws, .219" mounting holes.

Standard packaging: 250/bx.



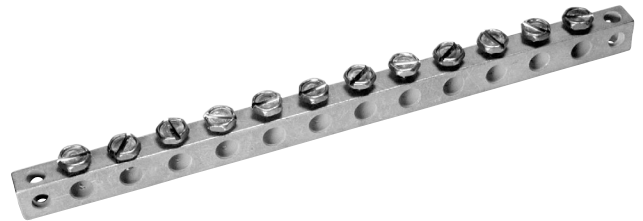
## Ground blocks (continued)

### Ordering information

#### EM-4201-12S

12-position ground block made from 3/8" x 1/2", 10 x 32 threads, with screws, .220" mounting holes.

*Standard packaging: 100/bx, 36 lb/bx.*



#### EM-4202

Multiport ground block, with headless set screws, #10-32 mounting holes.

*Standard packaging: 100/bx, 22 lb/bx.*



#### EM-4203

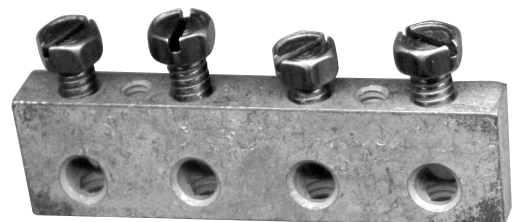
4-position ground block made from 1/2" x .375" with 1/4 x 20 tapped holes all the way through, and headless set screws, #10-24 mounting holes.

*Standard packaging: 200/bx.*



#### EM-4204

4-position ground block made from 3/8" x 3/4", brass hex head screws, #10-24 mounting holes.



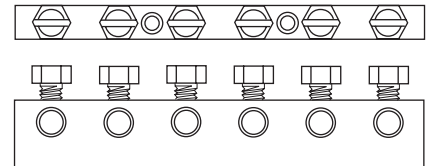
# Connectors – Ground Blocks

## Ground blocks (continued)

### Ordering information

#### EM-4204-6BOH

6-position ground block made from 3/8" x 3/4", tin-plated brass hex cap screws, #10-32 mounting holes.



#### EM-4250-8H

8-position ground block with 1/4-20 hex cap screws, #10-24 mounting holes.



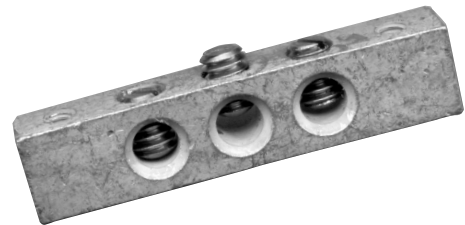
#### EM-4250-8HAS

8-position ground block, 360 brass, with 1/4-20 hex cap screws with slots, through holes, 1/4" mounting holes.



#### EM-4250-3SSO

Ground block, three screws, stainless steel oval point set screws, #8-32 mounting holes.

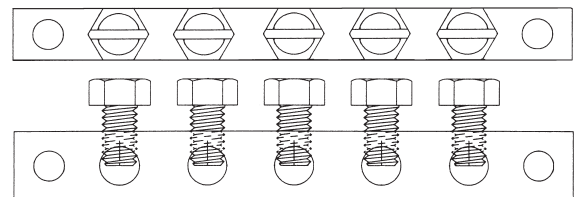


Standard packaging: 250/bx, 27 lb/bx.

#### EM-4250-5BOH

5-position ground block with 1/4 - 20 x 7/16 slotted brass hex head screws, .219" mounting holes.

Standard packaging: 50/bx, 12 lb/bx.

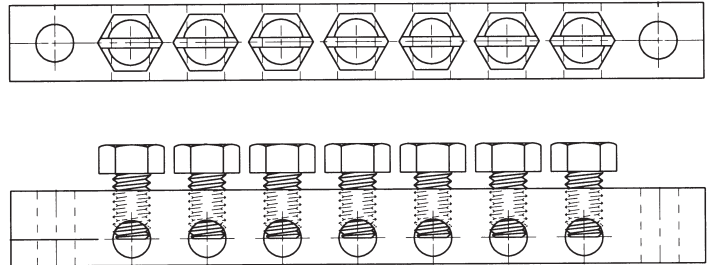


## Ground blocks (continued)

### Ordering information

#### EM-4251-7-BOH

7-position ground block, 1/2" x 1/2" with 1/4" mounting holes, brass hex head screws with slots.

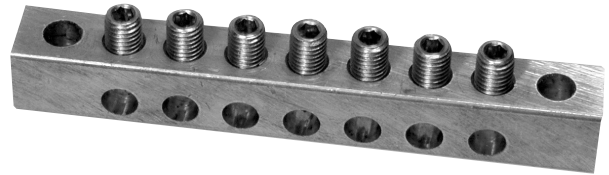


#### EM-4251-7-SS-O

7-position ground block, 1/2" x 1/2", oval point Allen 1/4-28 set screws, stainless steel, copper material, no tin, 1/4" mounting holes.



Standard packaging: 250/bx, 46 lb/bx.



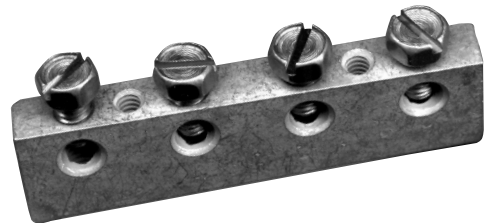
#### EM-4254-12

12-position aluminum ground block with 1/4 - 28 slotted stainless steel screws, oval point. #10 mounting holes.



#### EM-4255-4BOM

4-position ground block, 3/8" x 3/4" with brass hex head screws. #10-32 mounting holes.



Please see next page for at-a-glance comparison of all ground blocks.

Other designs are available; call for information, or see next page for specifying custom ground blocks. Add suffix -MSK to include mounting screws. Add suffix -ISK to include isolator mounting screws.



# Connectors – Ground Blocks

## Ground blocks (continued)

### At a glance . . .

Part Number	Positions	Dimensions	Mounting Holes	Mounting Hole Spacing	Screws	Listing
EM-4200-7-0	7	1/2" x 1/2" x 3-3/4"	.25"	3-1/4"	Allen	None
EM-4201	3	3/8" x 1/2" x 2-1/4"	#8-32	1-3/4"	Headless set screws	None
EM-4201-5S	5	3/8" x 1/2" x 4"	.219"	3-1/2"	Hex head	None
EM-4201-12S	12	3/8" x 1/2" x 8"	.220"	7-1/2"	Hex head	None
EM-4202	3	9/16" x 9/16" x 2-7/8"	#10-32	2-3/8", 1-15/16"	Headless set screws	None
EM-4203	4	3/8" x 1/2" x 2-1/2"	#10-24	1-3/16"	Headless set screws	None
EM-4204	4	3/8" x 3/4" x 3"	#10-24	1-1/2"	Brass hex head	None
EM-4204-6BOH	6	3/8" x 3/4" x 4-1/2"	#10-32	1-1/2"	Tin-plated brass hex head	None
EM-4250-8H	8	3/8" x 1/2" x 6-3/4"	#10-24	3-1/2"	Hex cap	None
EM-4250-8HAS	8	3/8" x 3/4" x 6-5/8"	1/4"	5-7/8"	Hex cap	None
EM-4250-3SSO	3	3/8" x 1/2" x 2-1/4"	#8-32	1-3/4"	Stainless steel oval point	UL
EM-4250-5BOH	5	3/8" x 1/2" x 4"	.219"	3-1/2"	Brass hex head	None
EM-4251-7-BOH	7	1/2" x 1/2" x 4-1/2"	1/4"	4"	Brass hex head	None
EM-4251-7-SS-O	7	1/2" x 1/2" x 3-3/4"	1/4"	3-1/4"	Oval point, Allen	UL
EM-4254-12	12	5/16" x 7/16" x 4-7/16"	#10	4"	Oval point, stainless, slotted	None
EM-4255-4BOM	4	3/8" x 3/4" x 3"	#10-32	1-1/2"	Brass hex head	None

## Custom Ground Blocks

**EM-4250-XYZ** Ground block made from 3/8" x 1/2" material:

**X** = number of positions (1-24)

**Y** = material of set screw (B = brass, S = steel, SS = stainless)

**Z** = type of point on set screw (O = oval, C = cup)



**EM-4252-XYZ** Ground block made from 9/16" x 9/16" material, UL listed:

**X** = number of positions (1-24)

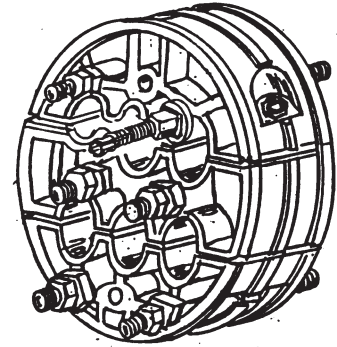
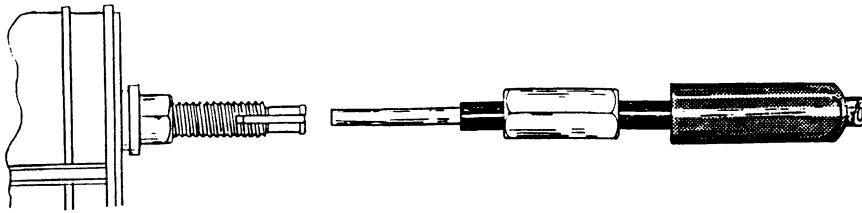
**Y** = material of set screw (B = brass, S = steel, SS = stainless)

**Z** = type of point on set screw (O = oval, C = cup)



## In-Line Connector (Stud - #6 AWG)

The EM-0366WR In-Line Ground Connector allows the installer to make a low-resistance, externally removable ground wire connection to the outside of a PLP Coyote Splice™ closure.

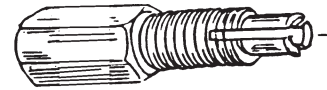


### Ordering information

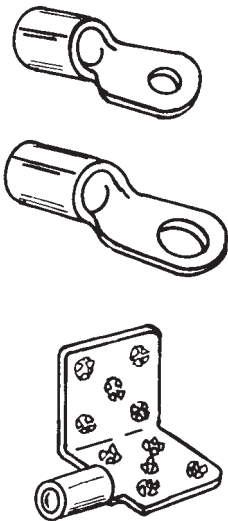
**EM-0366WR** In-Line Connector

**EM-0366WRL**

Longer In-Line Connector (actual in-line connector is 1/2" longer than EM-0366WR)



## Loose Piece Crimp Terminals



### Ordering information

**EM-6-10-R**

#6 AWG Tin-Plated Copper Ring, #10 mounting hole.

Standard packaging: 100/sm bx, 1000/lg bx, 1.5 lb/sm bx, 13 lb/lg bx.

**EM-6-25-R**

#6 AWG Tin-Plated Copper Ring, 1/4" mounting hole.

Standard packaging: 100/sm bx, 1000/lg bx, 1.5 lb/sm bx, 13 lb/lg bx.

**EM-14-TF**

#14 AWG TERMI-FOIL®.

Standard packaging: 100/bg, 1000/bx, 1.16 lb/bg.

**EM-10-F**

#10 and #12 AWG TERMI-FOIL®.

Standard packaging: 100/bg, 1000/bx.

# Connectors

## Tang And Collar Lugs, Single And Double Mounting Holes - Offset Type De & 2De

### Features

- Electrolytic copper tang and collar
- Unplated; for tin plating, add suffix -P to end of catalog number.

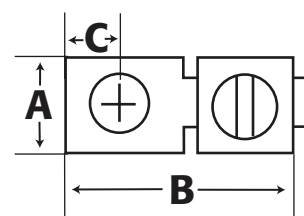


Fig. 1

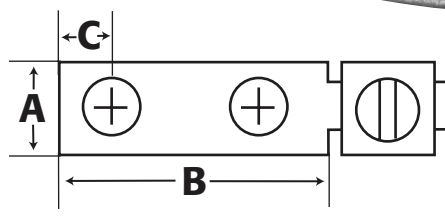
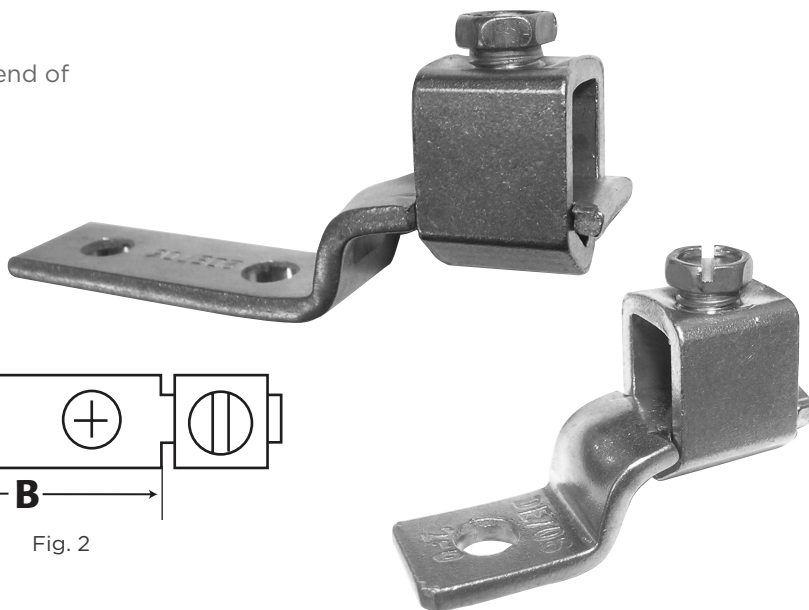


Fig. 2



Fig. 3



### Ordering Information

Figure	A	B	C	D	T	Wire Range	Amp	Mounting Holes		Catalog Number
								Hole Size	C To C	
1	5/16"	31/32"	3/16"	3/4"	1/16"	10-14 str.	25	#6	-	EM- <sup>*</sup> DE-703
1	3/8"	1-1/4"	7/32"	25/32"	1/16"	6-14 str.	35-50	#10	-	EM-DE-704
1	1/2"	1-1/2"	9/32"	1-1/16"	5/64"	2-8 str.	70-90	1/4	-	EM- <sup>*</sup> DE-705
1	5/8"	1-7/8"	3/8"	1-11/32"	1/8"	1/0-6 str.	125	1/4	-	EM-DE-706
1	1"	2-3/4"	1/2"	1-3/4"	1/8"	4/0-2 str.	225	5/16	-	EM- <sup>*</sup> DE-707
1	1-1/2"	4-1/4"	15/16"	2-45/64"	3/16"	500 MCM-1/0 str.	400	3/8	-	EM- <sup>*</sup> DE-708
1	2"	4-5/8"	1-3/16"	3-7/8"	1/4"	1000-600 MCM	650	1/2	-	EM-DE-709
2	5/16"	1-23/32"	3/16"	3/4"	1/16"	10-14 str.	25	#6	3/4	EM-2DE-703
2	3/8"	2-1/4"	7/32"	25/32"	1/16"	6-14 str.	35-50	#10	1	EM-2DE-704
2	1/2"	2-7/16"	1/4"	1-1/16"	5/64"	2-8 str.	70-90	1/4	1	EM-2DE-705
2	5/8"	2-15/16"	7/16"	1-11/32"	1/8"	1/0-6 str.	125	1/4	1	EM-2DE-706
2	1"	3-5/8"	1/2"	1-3/4"	1/8"	4/0-2 str.	225	5/16	1	EM-2DE-707
2	1-1/2"	6"	3/4"	2-45/64"	3/16"	500 MCM-1/0 str.	400	1/2	1-3/4	EM-2DE-708
2	2"	6-1/4"	3/4"	3-7/8"	1/4"	1000-600 MCM	650	1/2	1-3/4	EM-2DE-709

**Tang And Collar Lugs, Single And Double Mounting Holes - Straight Type De & 2De****Features**

- Electrolytic copper tang and collar
- Unplated; for tin plating, add suffix -P to end of catalog number.
- Sizes 704 and 706 not UL listed

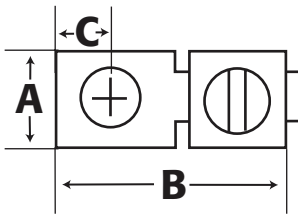
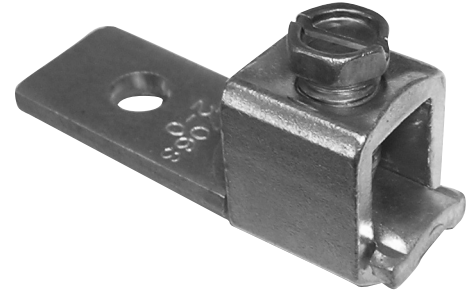


Fig. 1

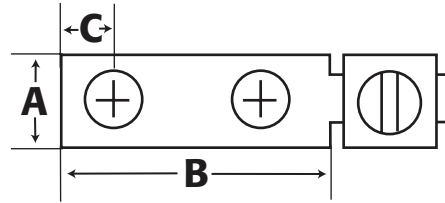


Fig. 2

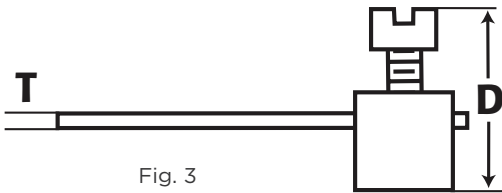


Fig. 3

**Ordering Information**

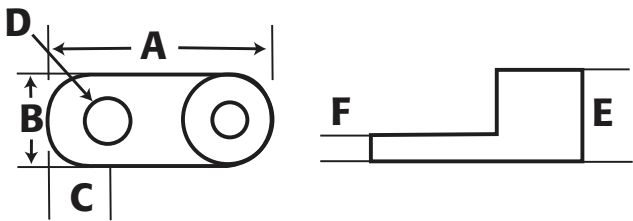
Figure	A	B	C	D	T	Wire Range	Amp	Mounting Holes		Catalog Number
								Hole Size	C To C	
1	5/16"	61/64"	3/16	3/4"	1/16"	10-14 str.	25	#8	-	EM-*DES-703
1	3/8"	1-1/4"	7/32"	3/4"	1/16"	6-14 str.	35-50	#10	-	EM-DES-704
1	1/2"	1-1/2"	9/32"	1-3/32"	5/64"	2-8 str.	70-90	1/4	-	EM-*DES-705
1	5/8"	1-7/8"	3/8"	1-25/32"	1/8"	1/0-6 str.	125	1/4	-	EM-DES-706
1	1"	2-3/8"	1/2"	1-27/32"	1/8"	4/0-2 str.	225	5/16	-	EM-*DES-707
1	1-1/2"	3-7/8"	15/16"	2-9/16"	3/16"	500 MCM-1/0 str.	400	3/8	-	EM-*DES-708
1	2"	5-1/8"	1-3/16"	3-3/4"	1/4"	1000-600 MCM	650	1/2	-	EM-*DES-709
2	5/16"	1-5/64"	3/16"	3/4"	1/16"	10-14 str.	25	#8	3/4	EM-2DES-703
2	3/8"	2-1/4"	7/32"	3/4"	1/16"	6-14 str.	35-50	#10	1	EM-2DES-704
2	1/2"	2-7/16"	1/4"	1-3/32"	5/64"	2-8 str.	70-90	1/4	1	EM-2DES-705
2	5/8"	2-15/16"	7/16"	1-25/32"	1/8"	1/0-6 str.	125	1/4	1	EM-2DES-706
2	1"	3-5/8"	1/2"	1-27/32"	1/8"	4/0-2 str.	225	5/16	1	EM-2DES-707
2	1-1/2"	5-5/8"	3/4"	2-9/16"	3/16"	500 MCM-1/0 str.	400	1/2	1-3/4	EM-2DES-708
2	2"	6-7/8"	3/4"	3-3/4"	1/4"	1000-600 MCM	650	1/2	1-3/4	EM-2DES-709

Connectors

Single Terminal Lug for Copper Conductor – Type TL for Cable to Stud or Screw

Features

- Forged high-conductivity copper mechanical lugs
- Suffix -P indicates tin plating.

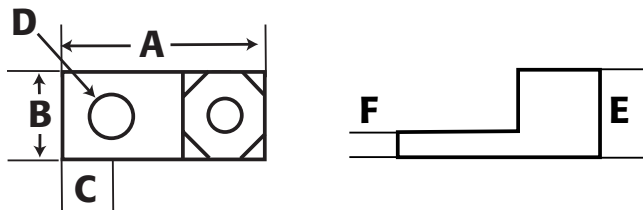


Ordering Information

Amp Rating	Conductor Range		A	B	C	D	E	F	Bolt Size	Screw Style	Standard Carton	Catalog Number
	Maximum	Minimum										
35	8 str.	14 sol.	53/64	3/8	7/32	13/64	31/64	3/32	#10	Slotted	100	EM-•TL-1
35	8 str.	14 sol.	53/64	3/8	7/32	13/64	31/64	3/32	#10	Slotted	100	EM-•TL-1-P
70	4 str.	14 sol.	1-1/8	17/32	9/32	9/32	9/16	7/64	1/4	Slotted	100	EM-•TL-2
70	4 str.	14 sol.	1-1/8	17/32	9/32	9/32	9/16	7/64	1/4	Slotted	100	EM-•TL-2-P
125	1/0 str.	6 sol.	1-31/64	23/32	3/8	21/64	49/64	7/64	5/16	Socket	100	EM-•TL-3
125	1/0 str.	6 sol.	1-31/64	23/32	3/8	21/64	49/64	7/64	5/16	Socket	100	EM-•TL-3-P
125	1/0 str.	6 sol.	1-31/64	23/32	3/8	21/64	61/64	7/64	5/16	Hex	50	EM-•TL-4
125	1/0 str.	6 sol.	1-31/64	23/32	3/8	21/64	61/64	7/64	5/16	Hex	50	EM-•TL-4-P
250	250 MCM	2/0 str.	1-63/64	61/64	31/64	25/64	1-1/16	1/8	3/8	Socket	25	EM-•TL-5
250	250 MCM	2/0 str.	1-63/64	61/64	31/64	25/64	1-1/16	1/8	3/8	Socket	25	EM-•TL-5-P
250	250 MCM	2/0 str.	1-63/64	61/64	31/64	25/64	1-15/16	1/8	3/8	Hex	12	EM-•TL-6
250	250 MCM	2/0 str.	1-63/64	61/64	31/64	25/64	1-15/16	1/8	3/8	Hex	12	EM-•TL-6-P

**Cast Terminal Lugs - Type CTL for Cable to Stud or Screw****Features**

- Forged high-conductivity copper mechanical lugs
- Suffix -P indicates tin plating.
- Add suffix -H for hex head screw.

**Ordering Information**

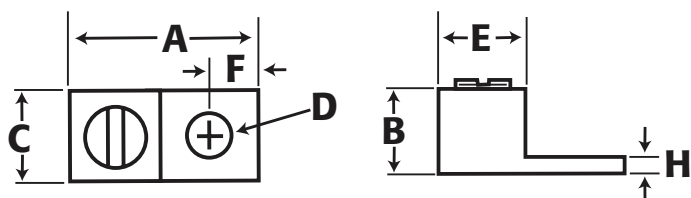
Conductor Range		A	B	C	D	E	F	Bolt Size	Screw Style	Standard Carton	Catalog Number
Maximum	Minimum										
1 str.	4 str.	1-1/2	3/4	13/32	1/4	13/16	3/16	1/4	Socket	50	EM-CTL-1
1 str.	4 str.	1-1/2	3/4	13/32	1/4	13/16	3/16	1/4	Socket	50	EM-CTL-1-P
1/0 str.	4 str.	1-15/32	3/4	13/32	11/32	13/16	3/16	5/16	Socket	50	EM-CTL-1/0
1/0 str.	4 str.	1-15/32	3/4	13/32	11/32	13/16	3/16	5/16	Socket	50	EM-CTL-1/0-P
2/0 str.	4 str.	1-3/4	3/4	3/8	13/32	7/8	3/16	3/8	Socket	25	EM-CTL-2/0
2/0 str.	4 str.	1-3/4	3/4	3/8	13/32	7/8	3/16	3/8	Socket	25	EM-CTL-2/0-P
4/0 str.	1 str.	1-13/16	1	7/16	13/32	1-1/32	7/32	3/8	Socket	12	EM-CTL-4/0
4/0 str.	1 str.	1-13/16	1	7/16	13/32	1-1/32	7/32	3/8	Socket	12	EM-CTL-4/0-P
500 MCM	4/0 str.	3-1/16	1-7/16	3/4	9/16	1-1/2	7/32	3/8	Socket	6	EM-CTL-500
500 MCM	4/0 str.	3-1/16	1-7/16	3/4	9/16	1-1/2	7/32	3/8	Socket	6	EM-CTL-500-P

# Connectors

## Universal Terminal - For Single Aluminum and Copper Conductor

### Features

- Dual-rated, one-conductor lugs
- Constructed from high-strength, high-conductivity aluminum alloy
- Electro-tin plated for low-contact resistance



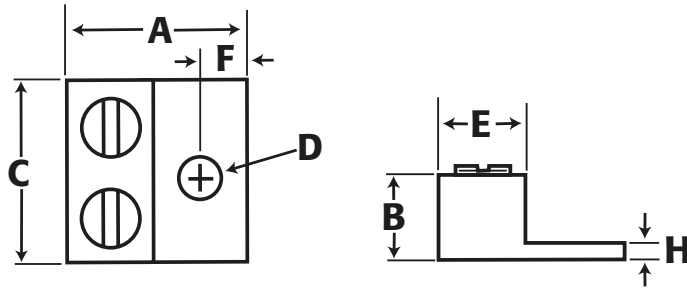
### Ordering Information

Screw Type	Wire Range AL9CU	A	B	C	D	E	F	H	Catalog Number
Slotted	4-14	0.835	0.5	0.375	0.193	0.375	0.25	0.1	EM-6T
Slotted	4-14	1.062	0.5	0.5	0.265	0.375	0.25	0.094	EM-4T
Slotted	4-14	1.156	0.56	0.5	0.265	0.47	0.25	0.1	EM-2T
Slotted	1/0-14	1.468	0.781	0.625	0.265	0.625	0.437	0.187	EM-0T
Slotted	1/0-14	1.171	0.671	0.625	0.265	0.578	0.25	0.13	EM-0T1
Hex socket	2/0-14	1.468	0.781	0.625	0.265	0.625	0.437	0.187	EM-2/0T
Hex socket	2/0-14	1.625	0.75	0.656	0.265	0.625	0.437	0.25	EM-2/0T1
Hex socket	3/0-6	1.875	0.89	0.7	0.265	0.88	0.5	0.145	EM-3/0T
Hex socket	250 MCM-6	2	1.125	1	0.328	1	0.406	0.25	EM-250T
Hex socket	300 MCM-6	2	1.125	1	0.281	1	0.5	0.25	EM-300T
Hex socket	350 MCM-6	2.25	1.25	1.125	0.406	1.125	0.5	0.25	EM-350T
Hex socket	500 MCM-4	2.812	1.562	1.5	0.406	1.218	0.875	0.312	EM-500T
Hex socket	600 MCM-2	3.125	1.562	1.5	0.531	1.375	0.875	0.437	EM-600T
Hex socket	750 MCM-4/0	3.375	1.937	1.625	0.531	1.625	0.875	0.5	EM-750T
Hex socket	800 MCM- 300 MCM	3.375	1.937	1.575	0.656	1.625	0.875	0.5	EM-800T
Hex socket	1000 MCM- 500 MCM	3.375	1.937	1.75	0.656	1.625	0.875	0.5	EM-1000T

## Universal Terminal - For Double Aluminum and Copper Conductor

### Features

- Dual-rated, two-conductor lugs
- Constructed from high-strength, high-conductivity aluminum alloy
- Electro-tin plated for low-contact resistance



### Ordering Information

Screw Type	Wire Range AL9CU	A	B	C	D	E	F	H	Catalog Number
Slotted	Two 2-14	1.156	0.56	0.906	0.272	0.47	0.25	0.1	EM-2-2T
Slotted	Two 1/0-14	1.468	0.781	1.12	0.265	0.625	0.328	0.187	EM-2-0T
Hex socket	Two 2/0-14	1.468	0.781	1.12	0.265	0.625	0.328	0.187	EM-2-2/0T
Hex socket	Two 3/0-6	1.75	0.844	1.375	0.266	0.78	0.468	0.187	EM-2-3/0T
Hex socket	Two 250 MCM-6	2.562	1.187	1.625	0.391	1	0.875	0.25	EM-2-250T
Hex socket	Two 350 MCM-6	2.875	1.25	1.937	0.562	1.125	0.875	0.25	EM-2-350T
Hex socket	Two 500 MCM-4	2.812	1.562	2.266	0.562	1.218	0.875	0.312	EM-2-500T
Hex socket	Two 600 MCM-2	3.125	1.562	2.406	0.531	1.375	0.625	0.437	EM-2-600T
Hex socket	Two 750 MCM-4/0	3.375	1.937	2.875	0.531	1.625	0.875	0.5	EM-2-750T
Hex socket	Two 800 MCM-300 MCM	3.375	1.937	2.925	0.656	1.625	0.875	0.5	EM-2-800T
Hex socket	Two 1000 MCM-500 MCM	3.375	1.937	3.187	0.656	1.625	0.875	0.5	EM-2-1000T



# Connectors

## Hand-Held Crimp Tool

#8-#2 AWG conductor range covers red, blue, grey, and brown compression lugs that are made from tubing. Ergonomic design features cushioned grips, easy-grip jaws, and rotating tool nest. Manufactured in the U.S.A.

### Features

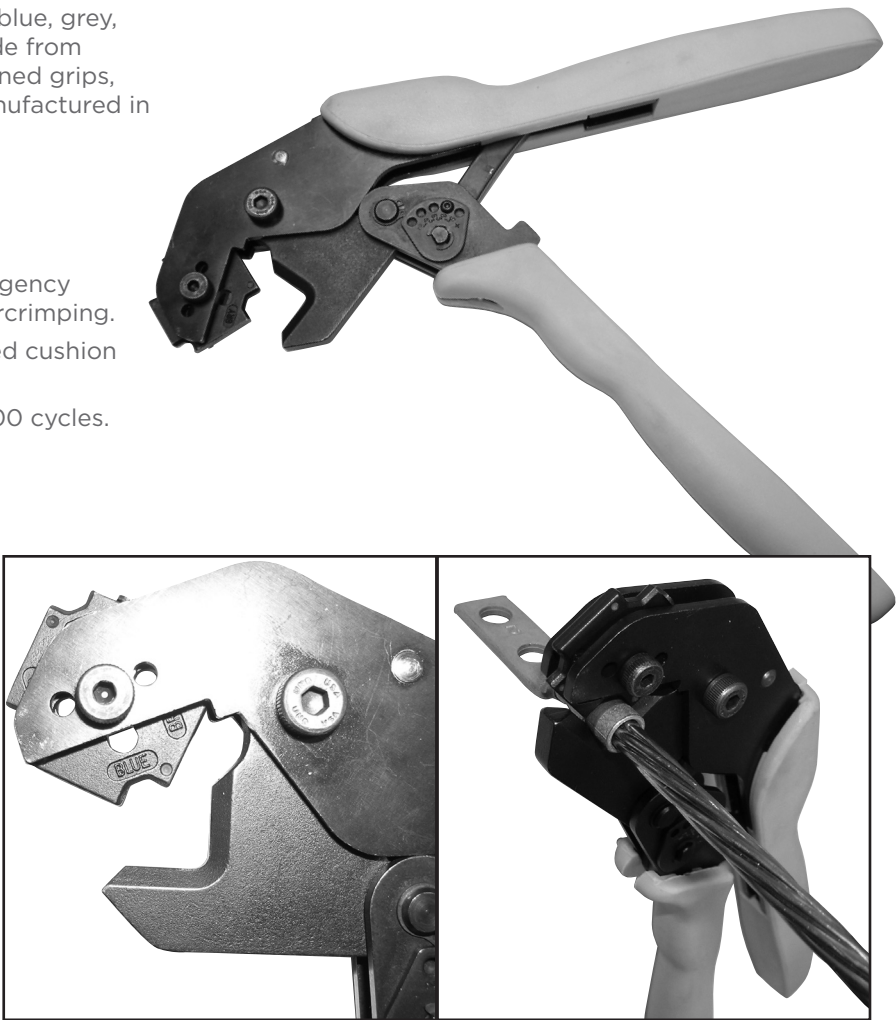
- Positive ratcheting assembly with emergency release, prevents overcrimping or undercrimping.
- High mechanical advantage with molded cushion grips minimize user fatigue.
- Tool life is conservatively rated at 50,000 cycles.
- Crimps designed to meet or exceed UL tensile requirements.

### Ordering information

EM-4290CT

Hand-Held Crimp Tool, #8-#2 AWG

Die Index Number	Gage Die (In.)		Wire Size
	Min.	Max	
Red	.178	.200	8
Blue	.220	.238	6
Grey	.265	.275	4
Brown	.325	.347	2



## Crimp Tool

For crimping #8-1/0 AWG crimp lugs and splices. Rotating crimp dies are color coded for easy identification and selection. Long handles and compound lever action provide superb mechanical advantage and positive stop at the end of the crimp cycle.

### Ordering information

EM-080CT

Standard packaging: 1/bx, 9 lb/bx



# Clamps – Bronze Vise Type Connectors

## Bronze Vise Type Connectors

Silicon bronze clamps adjustable by single hex head screws, used to connect various size grounding conductors, as well as pole line apparatus to grounding conductors.

### Features

- Casting and bolt are both made of silicon bronze for greater strength, conductivity, and corrosion resistance.
- Install using the standard can wrench.

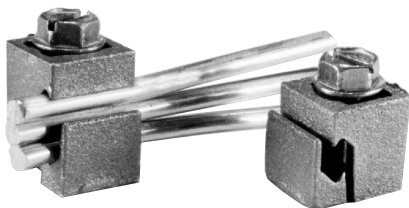
### Ordering information

**EM-2370** is manufactured to Bell Spec CA08980 (H1). It accommodates:

- Single or multiple #6 AWG wires solid or stranded
- #6 AWG to #10 or #12 AWG
- From single 2-pair BSW metallic shield, to three 2-pair BSW metallic shields

Standard packaging: 100/bx, 8 lb/bx.

**EM-2370NS** Same as above, with no slot.



**EM-2371** is similar to the EM-2370, only with the addition of “tongue and groove” type alignment channels to keep the two halves of the clamp in proper alignment with each other.

### Ordering information

#### EM-2371

Silicon Bronze Clamp

Standard packaging: 5/bg, 100/bx, 10 lb/bx.

#### EM-2371-2

Silicon Bronze Clamp with a vibration-resistant screw

Standard packaging: 5/bg, 100/bx, 9 lb/bx.

Add suffix -T for a tin-plated clamp.

Add suffix -BA for a torque shear head.

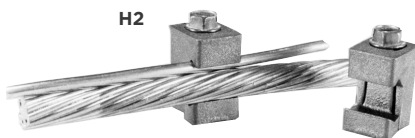


H1



RUS  
Listed

EM-2371 with  
torque shear  
head bolt



H2

### Ordering information

#### EM-2372

H2 Silicon Bronze Clamp.

Standard packaging: 5/bg, 100/bx, 15lb/bx.

#### EM-2372-2

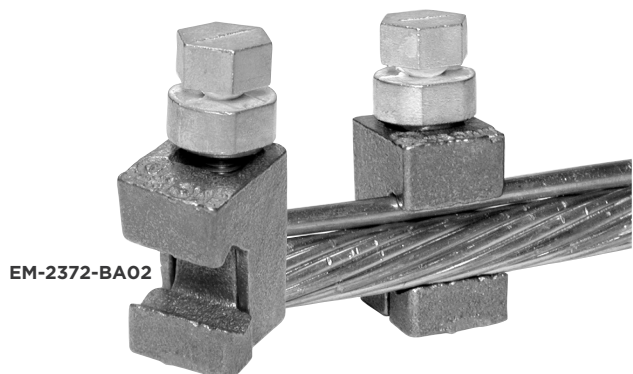
H2 Silicon Bronze Clamp with a vibration-resistant screw

**EM-2372-BA02** H2 Silicon Bronze Clamp with a vibration-resistant screw and torque shear head

Add suffix -T for a tin-plated clamp.

### Accommodates:

- #12-#4 AWG solid
- #1/0 B, C, or D stranded copper to #6, #8, #10, #12 AWG solid bare copper wire
- 6.6-10M support strand to #6, #8, #10, #12 AWG solid bare copper wire



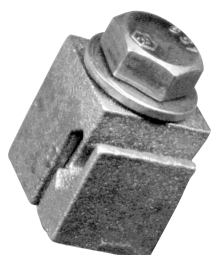
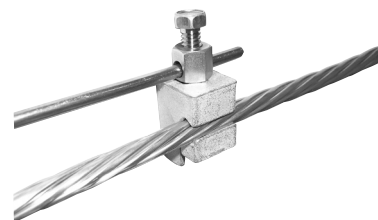
EM-2372-BA02

## Clamps – Bronze Vise Type Connectors

### Bronze Vise Type Connectors (continued)

**EM-2372CC** is similar to EM-2372 (see previous page), with the addition of:

- Tin plating for corrosion resistance and compatibility with aluminum;
- Additional wire termination point for capturing extra wires, to allow the connection of dissimilar wires, such as copper and aluminum.;
- Stainless steel bolt for mechanical strength and corrosion resistance.



**EM-2374** is used for attaching a solid or stranded #4 AWG through #8 AWG wire to a #4 AWG conductor run.

*Standard packaging: 100/bx, 16 lb/bx.*

Add suffix -SH for a shear-off bolt.

Add suffix -BR for a shear-off zinc cap.

Add suffix -BV for a shear-off zinc cap and anti-loosening device.

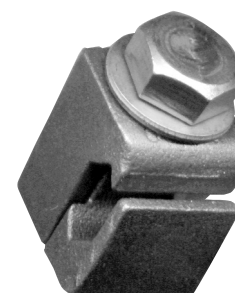
Add suffix -P for tin plating.

**EM-2375** is used for attaching a solid or stranded #2 AWG through #6 AWG wire to a #2 AWG conductor run.

*Standard packaging: 100/bx, 3 lb/bx.*

Add suffix -SH for a shear-off bolt.

Add suffix -BR for a shear-off zinc cap.



### At a glance . . .

Part Number	Accommodates	Distinguishing Features	Listing
<b>EM-2370</b>	#6-#6, #10, #12; Up to 3 2-pair bsw	Mfd to Bell Spec CA08980 (H1)	
<b>EM-2371</b>	(Same)	Tongue & groove channels	UL
<b>EM-2371-2</b>	(Same)	Vibration-resistant screw	
<b>EM-2372</b>	#12-#4 Awg solid; 1/0 b, c, or d stranded To #6-#12 awg solid; 6.6-10m support Strand to #6-#12 awg solid	H2-Mfd. to Bell Spec CA08980	UL
<b>EM-2372-2</b>	(Same)	Vibration-resistant screw	
<b>EM-2372-BA02</b>	(Same)	Vibration-resistant screw, torque shear head	
<b>EM-2372CC</b>	(Same in the jaws) #6-#14 Awg solid or stranded In the bolt head	Tin plating; stainless steel bolt; additional wire termination point	
<b>EM-2374</b>	#4-#8 Awg to #4 awg conductor run		
<b>EM-2374-SH</b>	(Same)	Shear-off bolt	
<b>EM-2374-BR</b>	(Same)	Shear-off zinc cap	
<b>EM-2374-BV</b>	(Same)	Shear-off zinc cap, anti-loosening	
<b>EM-2375</b>	#2-#6 Awg to #4 awg conductor run		
<b>EM-2375-SH</b>	(Same)	Shear-off bolt	
<b>EM-2375-BR</b>	(Same)	Shear-off zinc cap	

# Clamps – Bronze Vise Type Connectors

## Bronze Vise Type Connectors (continued)



Accommodates #6 AWG-#2 AWG str., .162"-.320" (4.12-8.14 mm)

### Ordering information

**EM-2376-SH**

Add suffix -SS for a stainless steel bolt.

Remove suffix -SH for a clamp without torque shear head.

Accommodates #2 AWG solid-#2/O AWG str., .286"-.438" (7.28-11.15mm)

### Ordering information

**EM-2377-SH**

Add suffix -SS for a stainless steel bolt.

Remove suffix -SH for a clamp without torque shear head.



Accommodates #1/O AWG str-#4/O AWG str .390"-.552" (9.93-14.05mm)

### Ordering information

**EM-2379-SH**

Add suffix -SS for a stainless steel bolt.

Remove suffix -SH for a clamp without torque shear head.

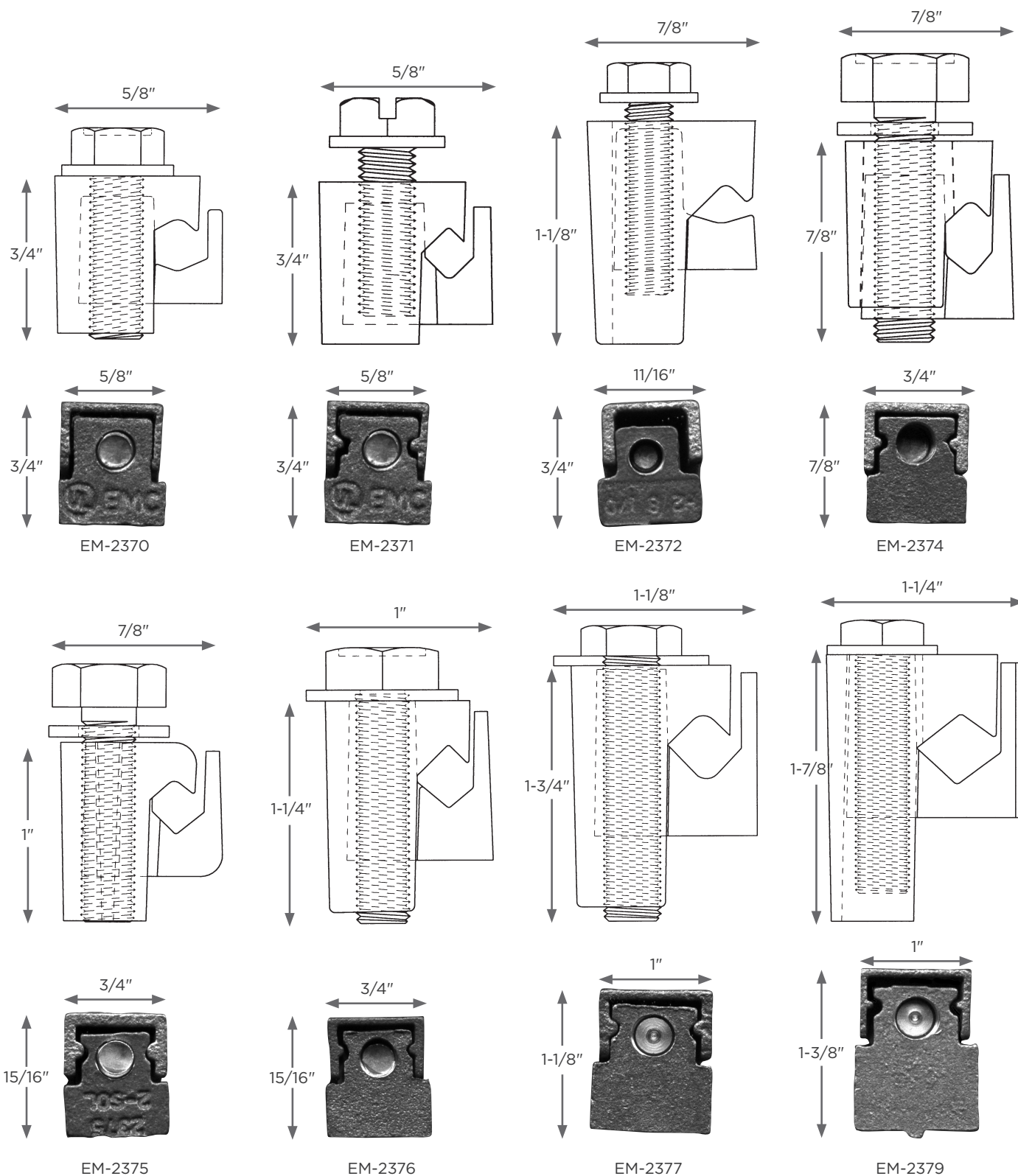
### At a glance . . .

Part Number	Accommodates	Distinguishing Features	Listing
<b>EM-2376</b>	#6-#2 Awg str., .162"-.320" (4.12-8.14mm)		
<b>EM-2376-SH</b>	(Same)	Torque shear head	
<b>EM-2376-SS</b>	(Same)	Stainless steel bolt	
<b>EM-2377</b>	#2 Solid-#2/O awg str., .286"-.438" (7.28-11.15mm)		
<b>EM-2377-SH</b>	(Same)	Torque shear head	
<b>EM-2377-SS</b>	(Same)	Stainless steel bolt	
<b>EM-2379</b>	#1/O-#4/O Awg str., .390"-.552" (9.93-14.05mm)		
<b>EM-2379-SH</b>	(Same)	Torque shear head	
<b>EM-2379-SS</b>	(Same)	Stainless steel bolt	

# Clamps - Bronze Vise Type Connectors

Size at a glance . . .

Clamps shown actual size.





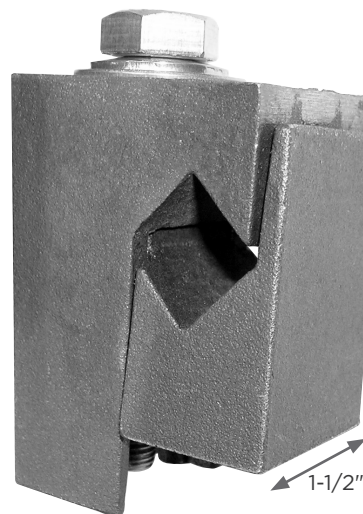
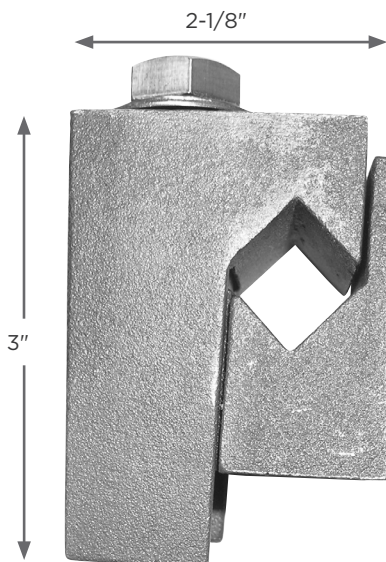
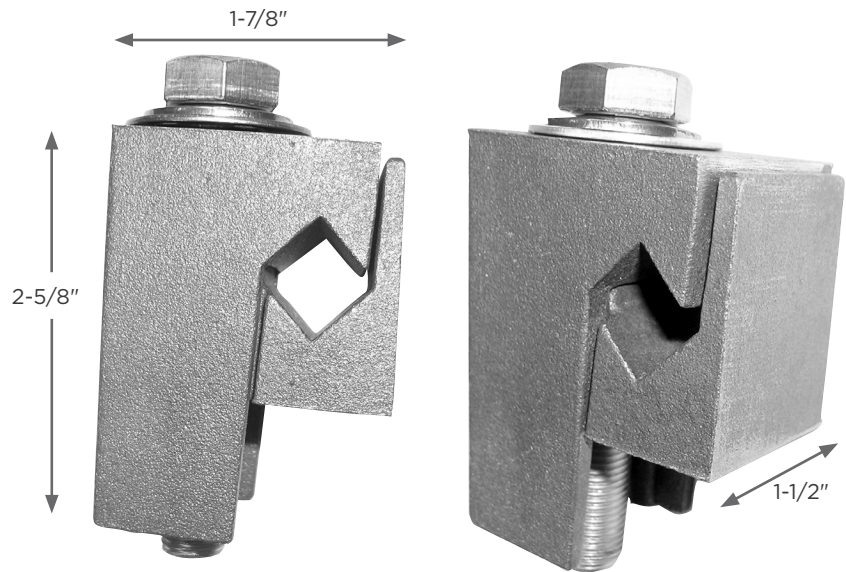
# Clamps - Bronze Vise Type Connectors

## Bronze Vise Type Connectors (continued)

Accommodates two conductors, 1/0 str-350 kcmil, .325"-.710" (8.27-18.07mm). 1/2-20 bolt, 3/4" hex head. Stainless steel bolt and Belleville washer.

### Ordering information

EM-2380



Accommodates two conductors, 4/0 str-500 kcmil, .522"-.813" (13.28-20.69mm). 1/2-20 bolt, 3/4" hex head. Stainless steel bolt and Belleville washer.

### Ordering information

EM-2381

BONDING & GROUNDING

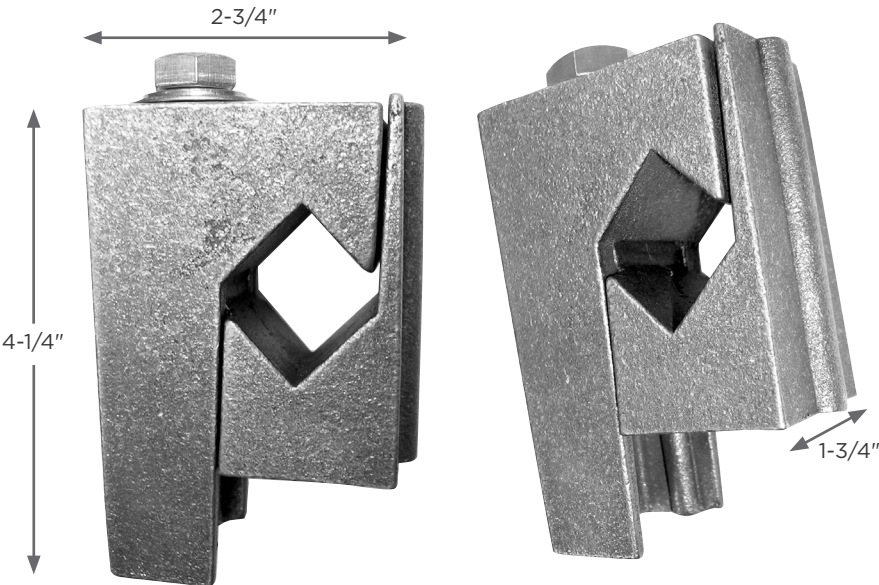
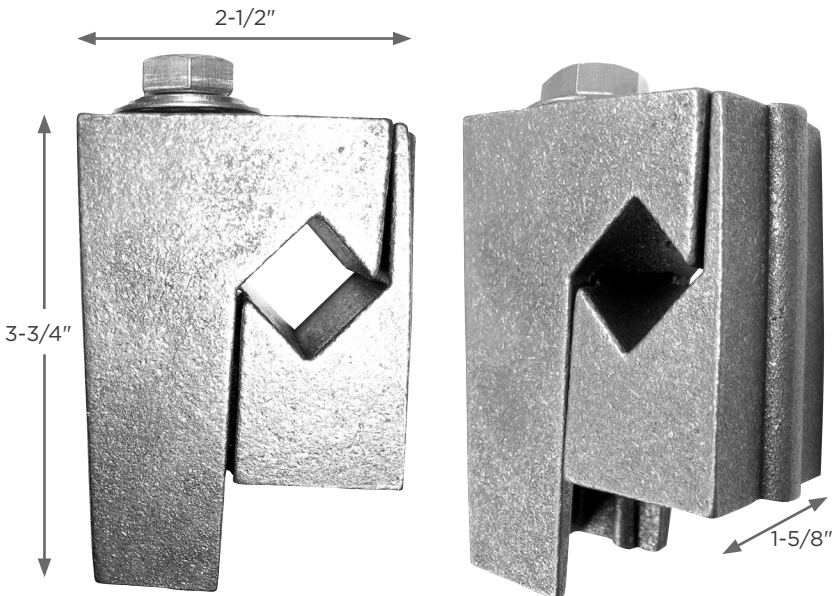
# Clamps – Bronze Vise Type Connectors

Bronze Vise Type Connectors (continued)

Accommodates two conductors, 250-750 kcmil, .550"-998" (14.00-25.40mm). 1/2-20 bolt, 3/4" hex head. Stainless steel bolt and Belleville washer.

Ordering information

EM-2382



Accommodates two conductors, 400-1000 kcmil, .726"-1.152" (18.48-29.32mm) 1/2-20 bolt, 3/4" hex head. Stainless steel bolt and Belleville washer.

Ordering information

EM-2383

At a glance . . .

Part Number	Accommodates
EM-2380	2 Conductors, #1/0 solid-350 kcmil
EM-2381	2 Conductors, #4/0 str-500 kcmil
EM-2382	2 Conductors, 250-750 kcmil
EM-2383	2 Conductors, 400-1000 kcmil



# Clamps – Bronze Vise Type Connectors

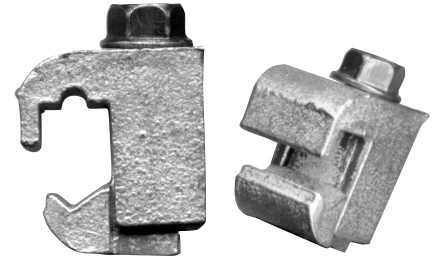
## Bronze Vise Type Connectors (continued)

### Ordering information

#### EM-0174P

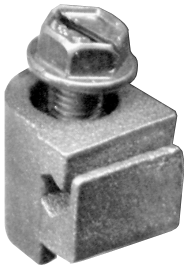
Connector for #1/0 str. and #6 AWG or plain bonding ribbon.

Standard packaging: 100/bx, 14 lb/bx.



#### EM-0174PBV

With shear-off zinc cap and anti-loosening device.



#### EM-2360

Round body clamp for:

- Single or multiple #6 AWG wires solid or stranded
- #6 AWG to #10 or #12 AWG
- From single 2-pair BSW metallic shield, to three 2-pair BSW metallic shields



#### EM-0164

Connector for plain bonding ribbon to plain bonding ribbon, or ribbon to #6 AWG solid ground wire

Standard packaging: 5/bg, 100/bx, 12 lb/bx.

#### EM-0164P

Tin plated

#### EM-0164BV

With shear-off zinc cap and anti-loosening device



LISTED  
84D8

RUS Listed

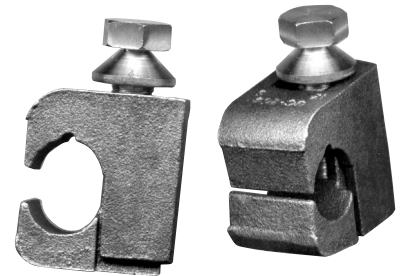


#### EM-GC-268

Bronze Grounding Connector, for conductor to 1/4"-5/8" ground rod. #6 solid AWG-#10 solid AWG

#### EM-GC-268-SS

Same as EM-GC-268 (above), with stainless steel bolt, non-breakaway head, and washer



### At a glance . . .

Part Number	Accommodates	Distinguishing Features	Listing
EM-0174P	#1/0 And #6 awg, or bonding ribbon		
EM-0174PBV	(Same)	Shear-off zinc cap, anti-loosening	
EM-2360	#6-#6, #10, #12; Up to 3 2-pair bsw	Round body clamp	UL
EM-0164	Plain bond ribbon to round #6 awg		UL
EM-0164P	(Same)	Tin plated	UL
EM-0164BV	(Same)	Shear-off zinc cap, anti-loosening	
EM-GC-268	1/4"-5/8" Ground rods		
EM-GC-268-SS	(Same)	Stainless steel bolt and washer, non-breakaway bolt head	

## Clamps – Bronze Vise Type Connectors

### C Connector

#### Ordering information

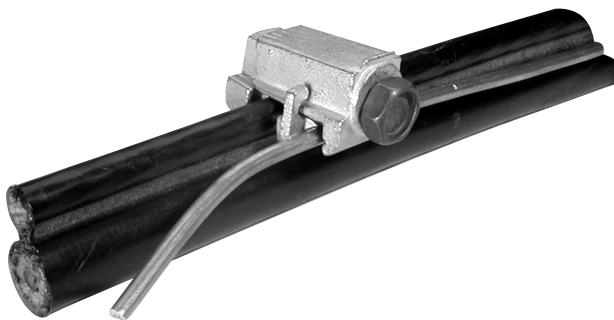
##### EM-0167

Tin-plated bronze connector with teeth for piercing the messenger insulation of Figure 8 cable. For messenger diameters of .146"–.312" (3.71–7.94mm) and ground conductor range of .146"–.312". Available with stainless steel or bronze bolt.

Standard packaging: 100/bx, 23 lb/bx.

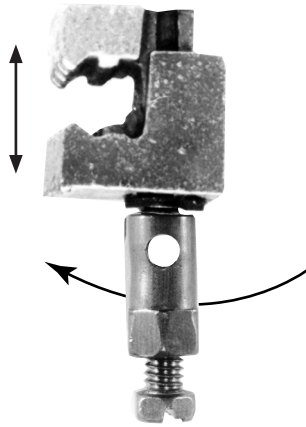
##### EM-0167BV

With shear-off zinc cap and anti-loosening device

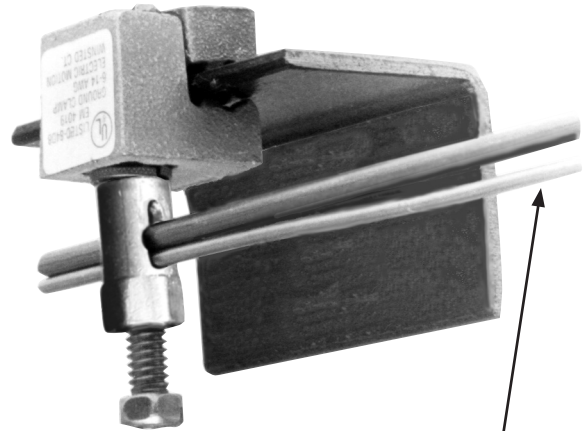


# Clamps – Trailer I-Beam Clamps

## Trailer I-Beam clamps



EM-4015  
Side view,  
open position



EM-4019  
Insert stranded or solid  
#6, #10, #12, or #14 AWG

A tin-plated bronze casting with teeth; brass hex thru-bolt with hole, brass set screw, and bronze lockwasher.

### Applications

- Grounding to metal buildings, bridges
- Provides connection for bonding and grounding wires, ribbons, and braid to I-beams
- Also used as strand clamp (electrical)

### Features

- Teeth penetrate through oxidation or undercoating for positive ground.
- Applied with the standard terminal wrench
- Tin plate reduces corrosion
- Silicon bronze for greater strength and conductivity
- Perforated bonding ribbon or braid with eyelets attaches under set screw.

# Clamps – Trailer I-Beam Clamps

## Trailer I-Beam clamps (continued)

### Ordering information :



**EM-4014** – With ground wire hole and short slot, enabling connection of #6 and #10 AWG simultaneously, as well as #6–#14 AWG individually.

*Standard packaging: 10/bg, 100/bx, 23 lb/bx*



**EM-4015** – With plain round ground wire hole to accept #6–#14 AWG.

*Standard packaging: 10/bg, 100/bx, 23 lb/bx*



**EM-4015C** – Larger diameter cross hole accommodates stranded #6 AWG ground wire, .228 diameter, and down to #14 AWG.



**EM-4018** – With ground wire hole for #6–#14 AWG, and long slot to also connect plain bond ribbon.

*Standard packaging: 10/bg, 100/bx, 24 lb/bx*



**EM-4019** – Hole and slot combinations accept ribbon, two wires simultaneously, or #6–#14 AWG individually.

*Standard packaging: 10/bg, 100/bx, 24 lb/bx*

### At a glance . . .

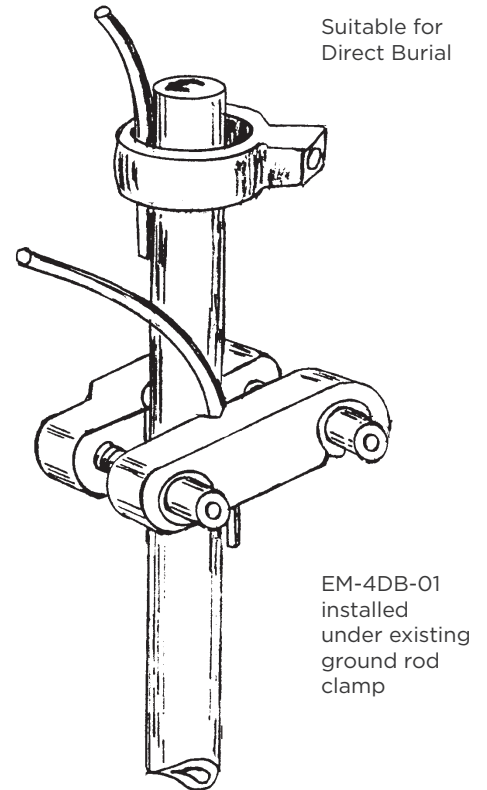
Part Number	Accommodates	Distinguishing Features	Listing
<b>EM-4014</b>	#6 and #10 AWG simultaneously #6–#14 AWG individually	Hole and short slot	UL, CSA
<b>EM-4015</b>	#6–#14 AWG		UL, CSA
<b>EM-4015C</b>	#6 stranded–#14 AWG	Larger hole	
<b>EM-4018</b>	Ground wire and plain bond ribbon #6–#14 AWG	Hole and long slot	UL, CSA
<b>EM-4019</b>	Ground wire, bond ribbon, and #6–#14 AWG individually	Hole, long and short slots	UL, CSA

## Ground Rod Clamps and Closure

A cast silicon bronze clamp for use on 1/2"-5/8" ground rods.

### Features

- Swivel design (EM-4DBs) or removable bolt designs allow installation anywhere on a ground rod, above or below an existing clamp.
- One size fits all variations of 1/2"-5/8" copper clad and galvanized ground rods.
- Foolproof installation—optional torque shear heads breakaway at a predetermined torque to prevent over- or undertorquing.
- No loosening of bolts—nylon lock mechanism maintains constant tension.
- Quick installation—"V"-shaped halves keep wire automatically centered on ground rod.
- Low resistance—wire comes in direct contact with ground rod, making best possible connection.
- No reversing necessary—design fits tightly on small size
- 1/2" rods, does not bottom out.
- Optional grease-filled closure helps prevent corrosion.
- Accommodates #12-#6 AWG solid ground wires.



### At a glance . . .

Part Number	Ground Rod	Wire Size	Distinguishing Feature	Listing
EM-4DB	5/8" & 1/2"	#12-6 sol.	Swivel unit	cULus, RUS
EM-4DB-01	5/8" & 1/2"	#12-6 sol.	Swivel unit, Torque shear heads, Anti-loosening	cULus, RUS
EM-4DB-02	5/8" & 1/2"	#12-6 sol.	Swivel unit, 1/2" torque shear heads, Anti-loosening	cULus, RUS
EM-4DB-02NB	5/8" & 1/2"	#12-6 sol.	Swivel unit, 1/2" hex heads	
EM-4DBBR	5/8" & 1/2"	#12-6 sol.	Swivel unit, Torque shear heads, Anti-loosening, Removable	cULus, RUS

# Ground Rod Clamps

## Ground Rod Clamps and Closure (continued)

### Ordering information :

#### EM-4DB

- 1/2"-5/8" ground rod clamp
- swivel unit
- regular 7/16" hex bolts
- non-breakaway
- no anti-loosening device
- accommodates #12-#6 AWG ground wires

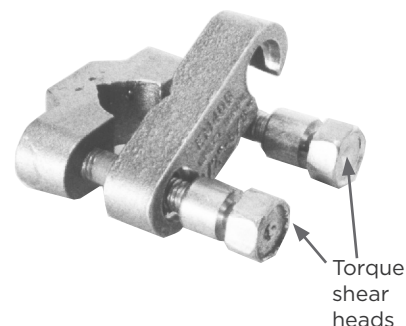
Standard packaging: 10/bg, 100/bx, 40 lb/bx



#### EM-4DB-01

- 1/2"-5/8" ground rod clamp
- swivel unit
- 7/16" torque shear heads
- anti-loosening device
- accommodates #12-#6 AWG ground wires

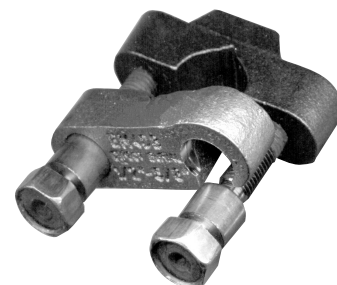
Standard packaging: 10/bg, 100/bx, 41 lb/bx



#### EM-4DB-02

- 1/2"-5/8" ground rod clamp
- swivel unit
- 1/2" torque shear heads
- anti-loosening device
- accommodates #12-#6 AWG ground wires
- add suffix -NB for no torque shear heads, no anti-loosening device

Standard packaging: 10/bg, 100/bx, 42 lb/bx



#### EM-4DBBR

- 1/2"-5/8" ground rod clamp
- swivel unit
- 7/16" torque shear heads (later removable)
- anti-loosening device
- accommodates #12-#6 AWG ground wires

Standard packaging: 10/bg, 100/bx, 35 lb/bx



## Ground Rod Clamp with Connector for Locating Wire

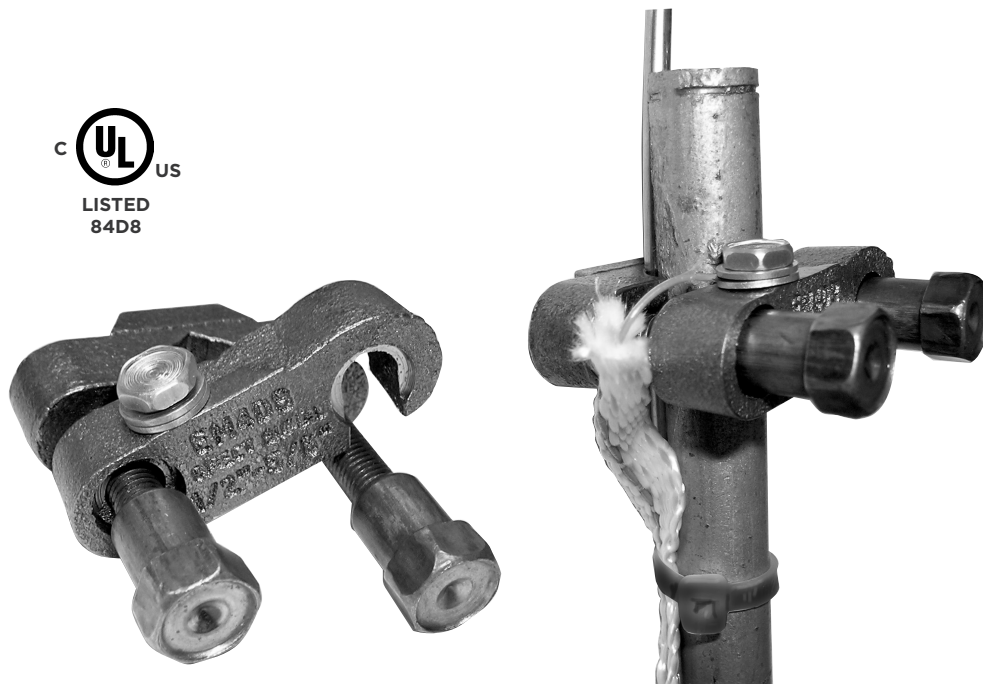
This clamp is perfect for FTTH. The swivel-open design allows placement under the existing power utility ground rod clamp, which is today's first choice. Made from silicon bronze castings, it is UL listed and direct buriable.

The separate connection for Mule Tape Locating Wire is convenient to disconnect and reconnect, for locating safely while maintaining a continuous ground.

### EM-4DB-V22

- 1/2"-5/8" ground rod clamp
- swivel unit
- 7/16" torque shear heads (later removable)
- anti-loosening device
- accommodates #10-#6 AWG, plus #22 AWG ground wires

*Standard packaging: 10/bg, 100/bx, 35 lb/bx*





# Ground Rod Clamps

## Ground Rod Clamps

Cast bronze, accommodate #12-1/0 AWG (unless otherwise noted).

### Features

- Two diameters allow for placement before or after the ground rod has been driven. (A peened-over ground rod is passed through the larger opening and secured in the smaller diameter.)
- Optional locking device prevents the bolt from loosening.
- Bronze material keeps corrosion to a minimum.
- Optional breakaway features provide for foolproof installation.

Clamps marked UL listed, and with a ground wire range of #12-1/0 solid or stranded, are listed as suitable for direct burial and the following ground wire combinations:

Single wire - #12 AWG-1/0 AWG

Two like wires - #6, #10, #12 AWG

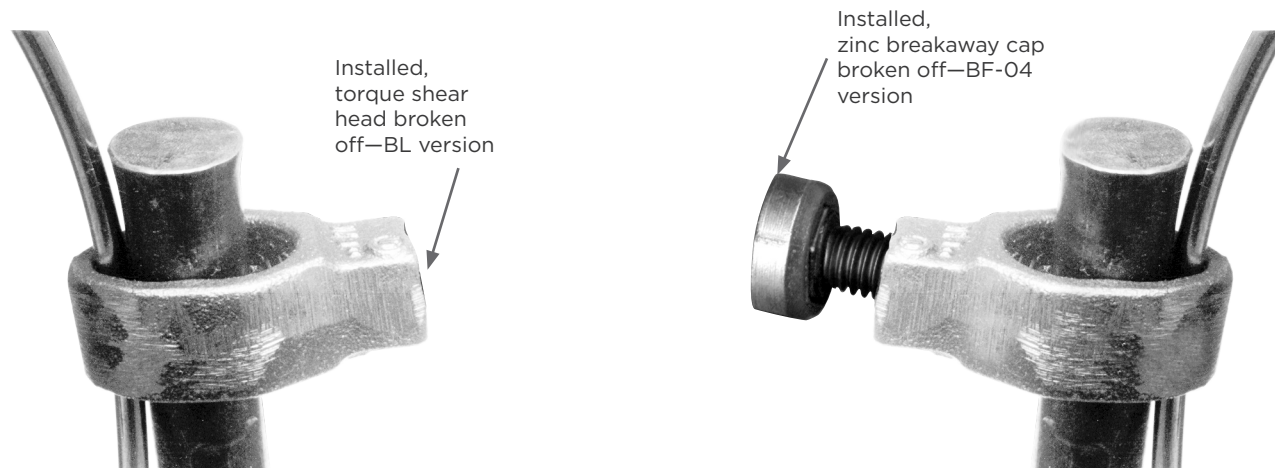
Three like wires - #6, #10, #12 AWG

Unlike wire combinations:

Two #2 AWG with one #6 AWG

One or two #10 AWG with one #12 AWG

One or two #12 AWG with one #10 AWG



### At a glance . . .

Part Number	Ground Rod	Wire Size	Distinguishing Features	Listings
EM-1DB	1/2"	#12-1/0	None—Standard clamp	cULus, RUS
EM-1DB-BL	1/2"	#12-1/0	Torque shear head, Nonremovable	cULus, RUS
EM-1DB-BF-04	1/2"	#12-1/0	Torque shear head, Removable	RUS
EM-2DB-01	5/8"	#12-1/0	None—Standard clamp	cULus, RUS
EM-2DB	5/8"	#12-1/0	Anti-loosening	cULus, RUS
EM-2DB-BL-01	5/8"	#12-1/0	Anti-loosening, Torque shear head, Nonremovable	cULus, RUS
EM-2DB-BF-03	5/8"	#12-1/0	Anti-loosening, Breakaway cap, Removable	cULus
EM-2DB-BF-04	5/8"	#12-1/0	Anti-loosening, Breakaway cap, Removable, Longer bolt	cULus, RUS
EM-6DB	5/8" & 1/2"	#12-2	Breakaway cap, Anti-loosening, Removable	cULus
EM-6DBP	5/8" & 1/2"	#12-2	None—Standard clamp	cULus

## Ground Rod Clamp (continued)

### Ordering information

#### EM-1DB

- 1/2" ground rod clamp
- no breakaway
- no anti-loosening
- accommodates #12-1/0 AWG

Standard packaging: 10/bg, 100/bx, 16 lb/bx.



#### EM-1DB-BL

- 1/2" ground rod clamp
- torque shear head at proper installation torque (nonremovable)
- accommodates #12-1/0 AWG

Standard packaging: 10/bg, 100/bx, 17 lb/bx.



#### EM-1DB-BF-04

- 1/2" ground rod clamp
- torque shear head at proper installation torque (removable with adjustable wrench)
- accommodates #12-1/0 AWG

Standard packaging: 10/bg, 100/bx, 16 lb/bx.

RUS  
Listed



#### EM-2DB-01

- 5/8" ground rod clamp
- no breakaway
- no anti-loosening
- accommodates #12-1/0 AWG



#### EM-2DB

- 5/8" ground rod clamp
- anti-loosening device
- accommodates #12-1/0 AWG

Standard packaging: 10/bg, 100/bx, 16 lb/bx.



# Ground Rod Clamps

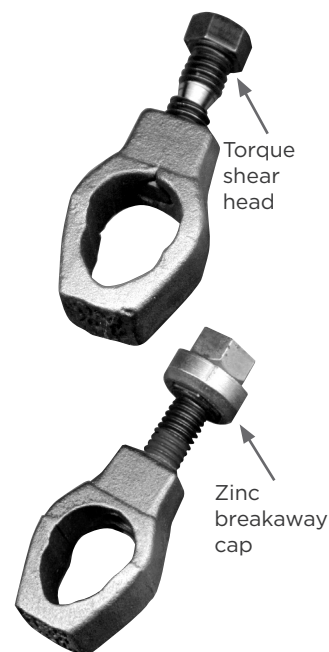
## Ground Rod Clamp (continued)

### Ordering information

#### EM-2DB-BL-01

- 5/8" ground rod clamp
- torque shear head at proper installation torque (nonremovable)
- anti-loosening device
- accommodates #12-1/0 AWG

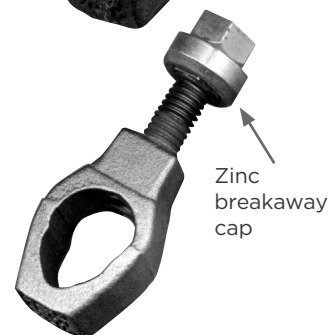
Standard packaging: 10/bg, 100/bx, 19 lb/bx.



#### EM-2DB-BF-04

- 5/8" ground rod clamp
- long bolt (1")
- zinc breakaway cap at proper installation torque (removable with adjustable wrench)
- anti-loosening device
- accommodates #12-1/0 AWG

Standard packaging: 10/bg, 100/bx, 19 lb/bx.



#### EM-6DB

- 5/8" and 1/2" ground rod clamp
- 1" long bolt
- anti-loosening device
- zinc breakaway cap at proper installation torque (removable with adjustable wrench).
- accommodates #12-2 AWG solid or stranded.



#### EM-6DBP

- 5/8" and 1/2" ground rod clamp
- 1" long bolt
- accommodates #12-2 AWG.



## Two-Bolt Ground Rod Clamps for Ground Rings

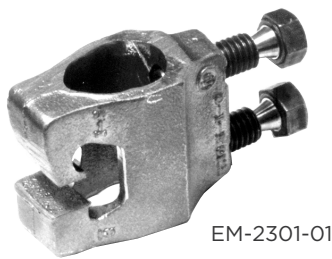
Heavy-duty cast silicon bronze body, headed silicon bronze clamping bolts, and nylon locking collars.

### Applications

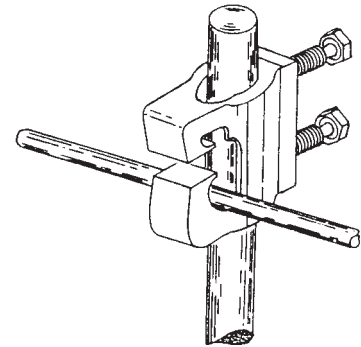
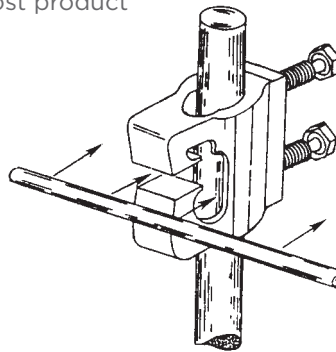
- Ground rings for equipment huts
- Any installation where added security of double bolts is necessary
- 5/8" ground rods

### Features

- Can accept ground wires from #10-1/0 AWG
- Available with a front "J" slot to accept #1, #2, or #6 AWG in a continuous "ring" around an equipment hut or building
- Available with pre-set torque shear heads for a pre-determined installation torque and to prevent vandalism
- Nylon locking collar prevents inadvertent loosening of bolts
- Uncomplicated design, craftfriendly, low-cost product



EM-2301-01



### Ordering information

**EM-2301-01** – 5/8" ground rod clamp, two-bolt type with "J" slot, torque shear heads (150 inch/lbs.), nylon lock collars. Connects #1, #2, or #6 AWG in the "J" slot.

Standard packaging: 5/bg, 25/bx, 14 lb/bx.

**EM-2301-01NB** – Same as above, with no torque shear heads.

**EM-2301.75** – Same as EM-2301-01, but accommodates 3/4" ground rod.



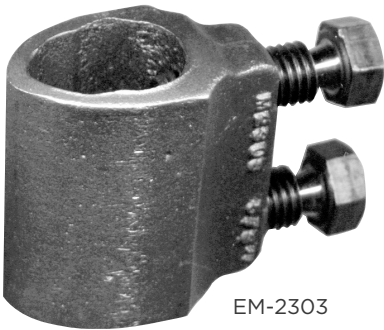
### At a glance . . .

Part Number	Ground Rod	Wire Size	Distinguishing Features	Listings
EM-2301-01	5/8"	#1, 2, 6	Torque shear heads	cULus, CSA
EM-2301-01NB	5/8"	#1, 2, 6	None	CSA
EM-2301.75	3/4"	#12-1/0	Torque shear heads	CSA

BONDING & GROUNDING

# Ground Rod Clamps

## Two-Bolt Ground Rod Clamps for Ground Rings (continued)



EM-2303

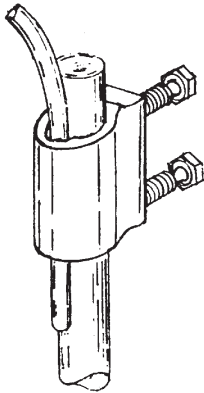


### Ordering information

**EM-2303** –5/8" ground rod clamp, two-bolt type with solid body. Torque shear heads at proper installation torque. Connects #12-1/0 AWG solid or stranded parallel to rod. Standard packaging: 5/bg, 25/bx, 12 lb/bx.

**EM-2303-NB** – Same as above, with no torque shear heads.

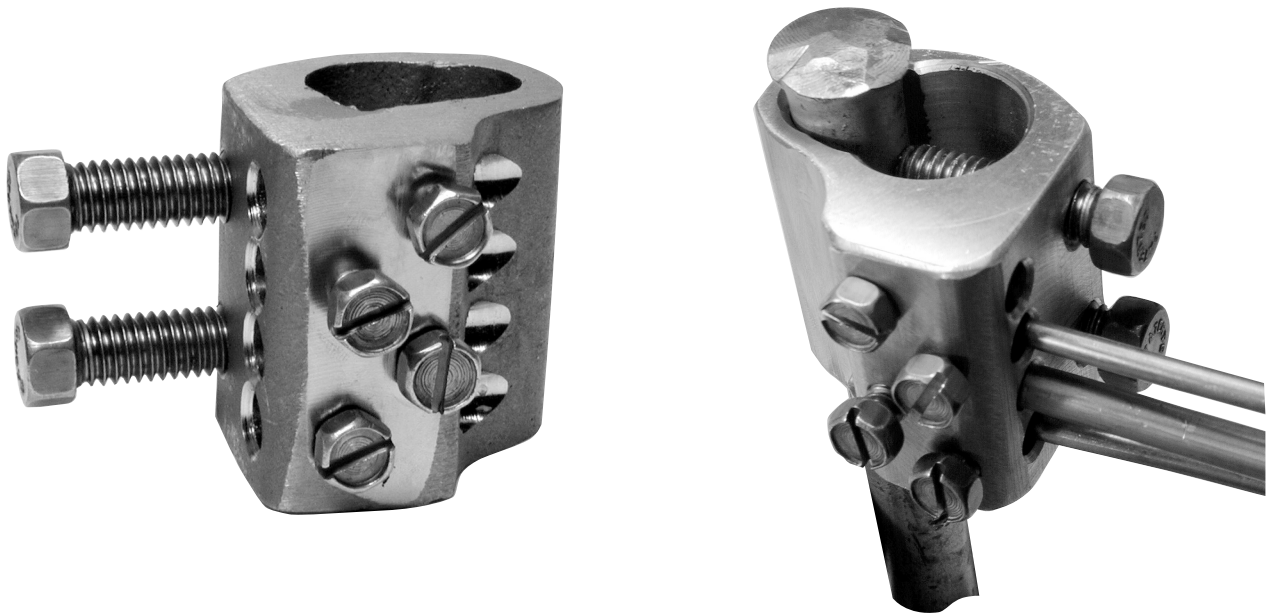
**EM-23037502** – Connects #2/0 to 1/2" or 5/8" rod. Torque shear heads and anti-loosening device.



### At a glance . . .

Part Number	Ground Rod	Wire Size	Distinguishing Features	Listings
EM-2303	5/8"	#12-1/0	Torque shear heads	cULus
EM-2303-NB	5/8"	#12-1/0	None	None
EM-23037502	5/8" or 1/2"	#2/0	Torque shear heads, anti-loosening	None

## Heavy Duty Ground Rod Clamp



### Description

A cast bronze two-bolt ground rod clamp for 5/8" or 3/4" diameter rods that will connect one or a multiple of ground wires. Accepts #2 AWG-#10 AWG.

### Features

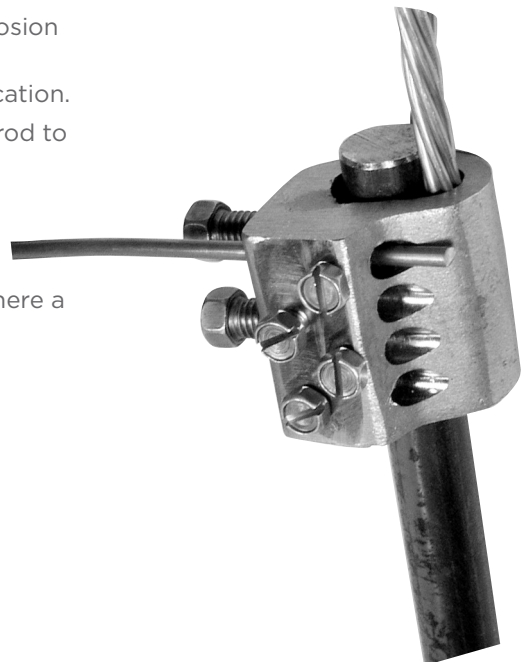
- Cast bronze for superior strength, electrical conductivity, and corrosion resistance.
- Ground wires are captured individually to simplify isolation and location.
- Enlarged opening allows for the "mushroomed" head of a ground rod to pass through without interference.

### Applications

Remote sites, central offices, repeater housings, substations — anywhere a single or multiple of ground wires are used.

### Ordering information

EM-2306SIET - HD bronze two-bolt clamp for 5/8"-3/4" ground rod.



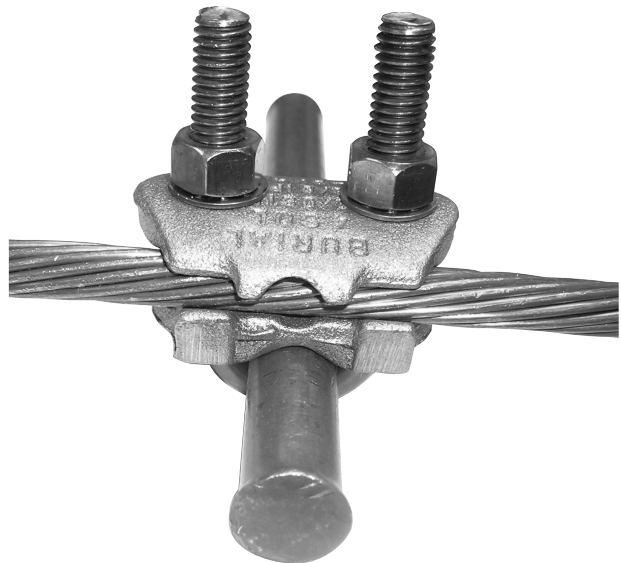
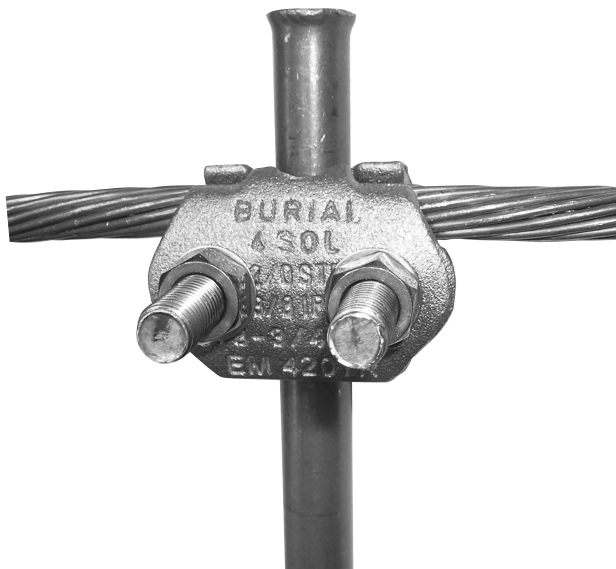


## Ground Rod Clamps

### Heavy Duty Ground Rod Clamp (continued)

#### Features

- For parallel or 90° copper cable connections
- Acceptable for direct burial
- Installs with one wrench
- Silicon bronze hardware
- Tube IPS 3/8
- 5/8"-3/4" ground rod size
- Cable size #4-2/0 str (.126-.414)
- Installation torque 240 in./lb.



#### Ordering information

EM-420TR



## Universal Ground Clamps

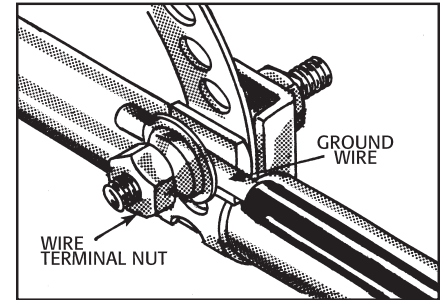
A 12" or 7" copper strip with a brass bolt assembly.

### Applications

Connecting ground wires to water pipes, ground rods, and power masts.

### Features

- Fits around any size water pipe, ground rod, or power mast
- Works with all the materials commonly used in grounding electrodes, i.e. copper water pipes, galvanized pipes, copper clad ground rods, plain steel ground rods
- Connects all the ground wire sizes from #14 AWG to solid #6 Flat bottom on dome-shaped washer will not nick small gauge wire.
- Can be daisy-chained to be able to fit around very large diameter pipes
- Ground wires can be added or changed without removing ground clamp.
- Tin-plated version available to be used with aluminum power masts
- EM-5510 and EM-5517 versions have two extra flat washers so that small gauge (#10, #12, #14 AWG) wires can be connected between washers while #6 solid bond wire is captured in through hole. Therefore, one ground clamp can be used where two were necessary before.

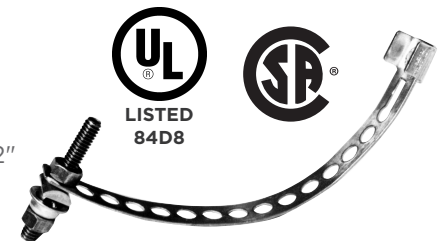


### Ordering information

**EM-5500** – 12" long strap connects #6-#14 AWG, fits all grounding electrodes 3/8"-31/2" OD.  
Standard packaging: 10/bg, 100/bx, 15 lb/bx.

**EM-5507** – 7" version connects #6-#14 AWG, fits all grounding electrodes 3/8"-2" OD.  
Standard packaging: 10/bg, 100/bx, 13 lb/bx.

Add suffix -T for tin-plated version.

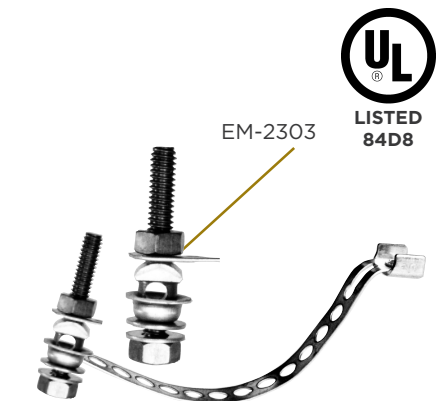


### Ordering information

**EM-5510** – 12" version, connects #6-#14 AWG wires for grounding electrodes from 3/8" to 31/2" OD. Clamp has two extra flat washers to connect both station ground wires and bond wire simultaneously.  
Standard packaging: 10/bg, 100/bx, 15 lb/bx.

**EM-5517** – 7" version, same as above, for grounding electrodes from 3/8" to 2" OD.  
Standard packaging: 10/bg, 100/bx, 13 lb/bx.

Add suffix -T for tin-plated version.



### At a glance . . .

Part Number	Grounding Electrodes	Wire Size	Length	Distinguishing Features	Listings
<b>EM-5500</b>	3/8"-31/2" OD	#6-#14 AWG	12"		CSA, UL
<b>EM-5507</b>	3/8"-2" OD	#6-#14 AWG	7"		CSA, UL
<b>EM-5510</b>	3/8" to 3-1/2" OD	#6-#14 AWG	12"	Extra flat washers	UL
<b>EM-5517</b>	3/8" to 2" OD	#6-#14 AWG	7"	Extra flat washers	UL

# Ground Clamps

## Universal Ground Clamp with Clip Nut



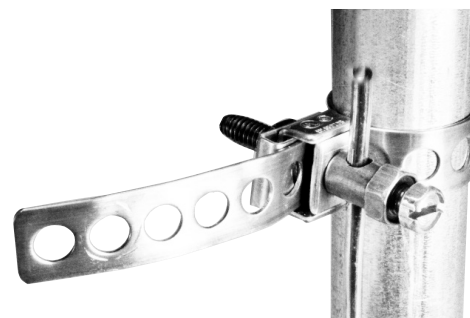
A perforated copper strap with a threaded clip and bronze bolt assembly. Offered in lengths of 7, 9, 12, or 14 inches.

### Application

Connecting ground wires to water pipes, ground rods, and power masts.

### Features

- Fits around any size water pipe, ground rod, or power mast.
- Works with all the materials commonly used for grounding electrodes, i.e., copper water pipes, galvanized pipes, copper clad ground rods, plain steel ground rods.
- Connects all the ground wire sizes from #14-#6 AWG solid or stranded.
- Can be daisy-chained to be able to fit around very large diameter pipes.
- Ground wires can be added or changed without removing ground clamp.
- Tin-plated version available to be used with aluminum power masts.
- Clamp is installed and wire is attached from the same side, making application easier in confined spaces.
- Available with a slotted ground wire hole to accommodate two wires simultaneously.
- Available as "suitable for direct burial."



### Ordering information

**EM-5907** 7-inch strap, for grounding electrodes 3/8"-2" diameter.

*Standard packaging: 10/bg, 100/bx, 13 lb/bx.*

**EM-5907-2** 7-inch strap, for grounding electrodes 3/8" - 2" diameter, larger hole accommodates #2-14 AWG.

**EM-5909** 9-inch strap, for grounding electrodes 3/8"-2-3/4" diameter.

*Standard packaging: 10/bg, 100/bx, 15 lb/bx.*

**EM-5912** 12-inch strap, for grounding electrodes 3/8"-3 1/2" diameter.

*Standard packaging: 10/bg, 100/bx, 17 lb/bx.*

**EM-5914** 14-inch strap, for grounding electrodes 3/8"-4" diameter.

*Standard packaging: 10/bg, 100/bx, 18 lb/bx.*

**EM-5924** 24-inch strap, for grounding electrodes 3/8"-6.5" diameter.

Add suffix -T for tin-plated version.

Suffix

-S added to any of the above part numbers denotes a slotted ground wire hole to accommodate two ground wires simultaneously (#6 AWG with a #10 AWG).



### At a glance . . .

Part Number	Grounding Electrodes	Wire Size	Length	Distinguishing Features	Listings
<b>EM-5907</b>	3/8"-2" OD	#6-#14 AWG	7"		cULus
<b>EM-5907-2</b>	3/8"-2" OD	#2-#14 AWG	7"	Larger ground wire hole	cULus
<b>EM-5909</b>	3/8"-2-3/4" OD	#6-#14 AWG	9"		cULus
<b>EM-5912</b>	3/8"-3-1/2" OD	#6-#14 AWG	12"		cULus
<b>EM-5914</b>	3/8"-4" OD	#6-#14 AWG	14"		cULus
<b>EM-5924</b>	3/8"-6.5" OD	#6-#14 AWG	24"		cULus

## Universal Ground Clamps

For ground wire sizes up to #2 stranded AWG

Perforated, tin-plated copper straps with threaded clip and bronze bolt assembly. They are available with a smooth strap, or with teeth to bite into the grounding electrode.

### Application

Connecting ground wires to water pipes, ground rods, power masts, and conduits.

### Features

- Fits around any size water pipe, ground rod, or power mast.
- Works with all the materials commonly used for grounding electrodes, i.e., copper water pipes, galvanized pipes, copper clad ground rods, plain steel ground rods, conduits on riser poles.
- Connects all the ground wire sizes from #6 solid AWG-#2 stranded AWG. For other conductor ranges, please call us at 860/379-8515.
- Ground wires can be added or changed without removing ground clamp.
- Clamp is installed and wire is attached from the same side, making application easier in confined spaces.
- Toothed version bites through corrosion and paint for better electrical contact.

### Ordering information

**EM-59XX310** – Universal ground clamp with clip nut. “XX” in part number denotes strap length.

Add suffix -PT for toothed version.



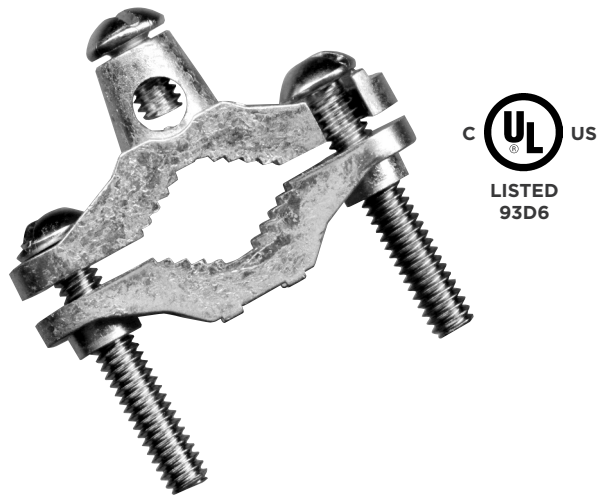
# Clamps

## Clamp for Pipe and Tubing

Plated zinc die cast alloy for mechanical strength and electrical conductivity. 1/2"-1" diameter. #6 AWG-#2 AWG wires.

### Ordering information

EM-2830Z



## Drewes Meter Box Clamp

With toothed strap and clip nut, designed to attach to the hub of an electrical meter box.

### Features

- Will not damage the factory-painted surface of meter box
- Will not collapse the box because it mounts on the strongest part of the box, the hub
- Neat low profile, inconspicuous appearance
- Does not inhibit entry to meter box
- Accommodates any cylindrical hub mounting
- Perforations on strap bite through corrosion and paint for better electrical contact.
- Accommodates ground wires #14-#6 AWG
- Simple two-piece construction for easy installation
- A copper and brass material for high conductivity
- Tin plated for corrosion resistance

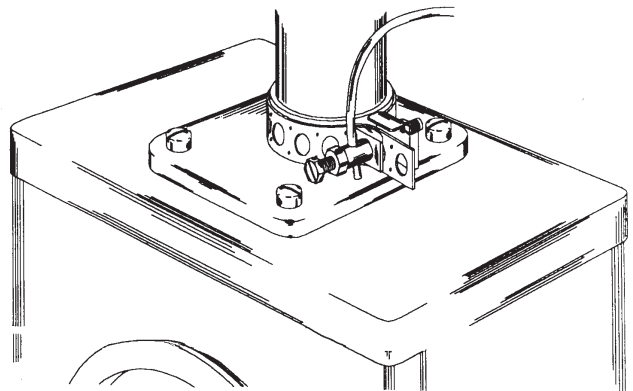


### Ordering information

**EM-5907PT** – 7" strap, #12-#16 AWG, 1/2"-2" OD  
Standard packaging: 10/bg, 100/bx, 14 lb/bx.

**EM-5912PT** – 12" strap, #12-#6 AWG, 1/2"-3 1/2" OD  
Standard packaging: 10/bg, 100/bx, 17 lb/bx.

**EM-59XXPT** – XX = length of strap (1"-120"), #12-#6 AWG, 1/2"-38" OD



## Meter Box Clamps with bottom-tightening groove contact point

### Description

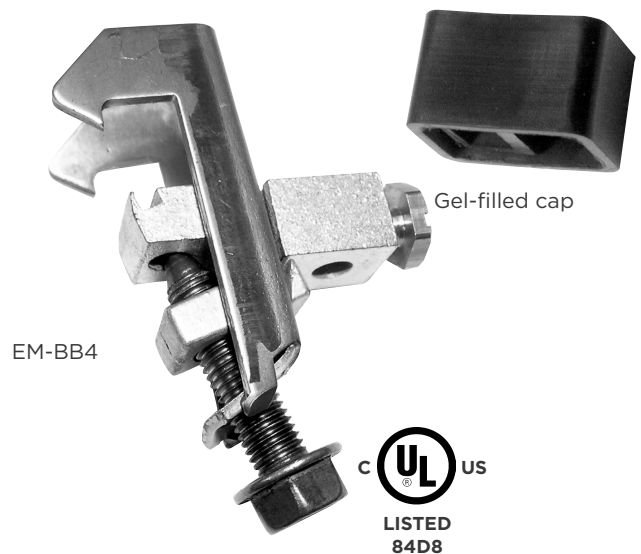
Meter box bonding and grounding connector.

### Application

Bonding and grounding telco and CATV to power ground.

### Features

- Stainless steel to reduce corrosion
- Applies with a standard terminal wrench—no special tools
- Gel-filled cap prevents corrosion on the locating points.
- UL listed for public safety
- Easy, foolproof installation
- Mounts on the side—does not interfere with the cover or collapse the sides
- Small and inconspicuous
- Accommodates #6-#14 AWG solid or stranded ground wire



### Ordering information

**EM-BB4-NP** – Meter Box Clamp, silicon bronze bolt, bottom-tightening groove contact point, alternate cap (not gelfilled) to cover the prongs

**EM-BB4** – Meter Box Clamp, silicon bronze bolt, bottom-tightening groove contact point, gel-filled cap

For more meter box clamps, see the Intersystem Bonding Terminal section, starting on page G94.



## Meter Box Clamps

### Meter Box Clamps with top-tightening groove contact point

#### Description

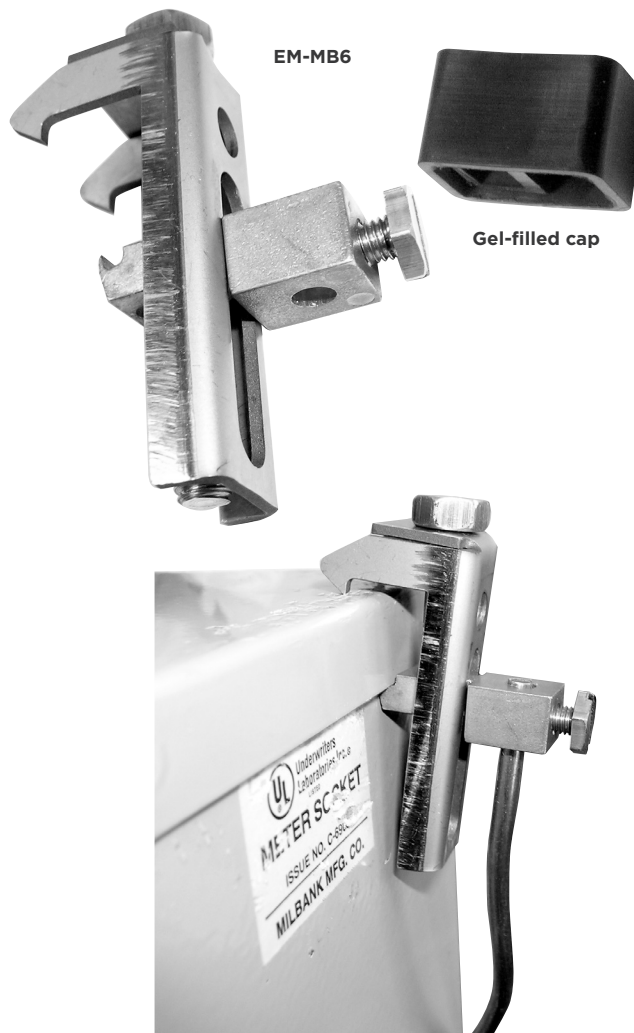
Meter box bonding and grounding connector

#### Application

Bonding and grounding telco and CATV to power ground.

#### Features

- Stainless steel and copper alloy to reduce corrosion.
- Applies with a standard terminal wrench/nut runner—no special tools.
- Gel-filled cap helps prevent corrosion at the piercing points.
- Easy, foolproof installation.
- Mounts on the side—does not interfere with the cover or collapse the sides.
- Small and inconspicuous.
- Accommodates #6-#14 AWG solid or stranded ground wire.
- Makes electrical contact under the drip cap of the box, on bare, unpainted metal.
- Available with an extra-long body, to accommodate meter boxes with an extended lip on the top cover.



#### Ordering information

**EM-MB6** – Meter Box Clamp with top-tightening groove contact point and gel-filled cap

**EM-MB6-NP** – Meter Box Clamp with top-tightening groove contact point and alternate cap (not gel-filled) to cover the prongs and bottom.

Add suffix -XL for extra-long body.

For more meter box clamps, see the Intersystem Bonding Terminal section, starting on page G94.

## Meter Box Clamps with top-tightening spade wedge contact point

### Description

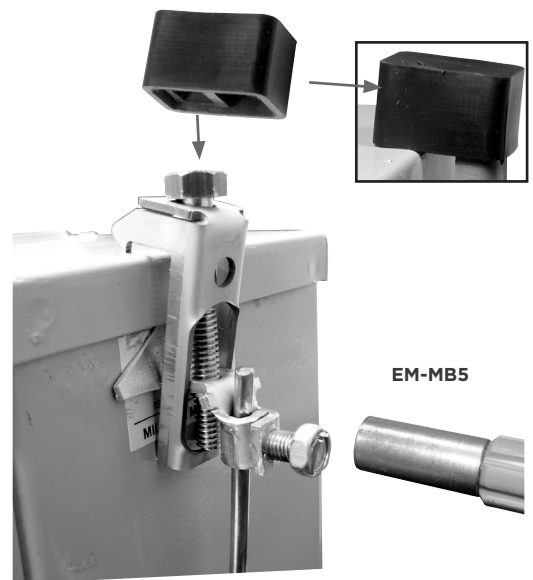
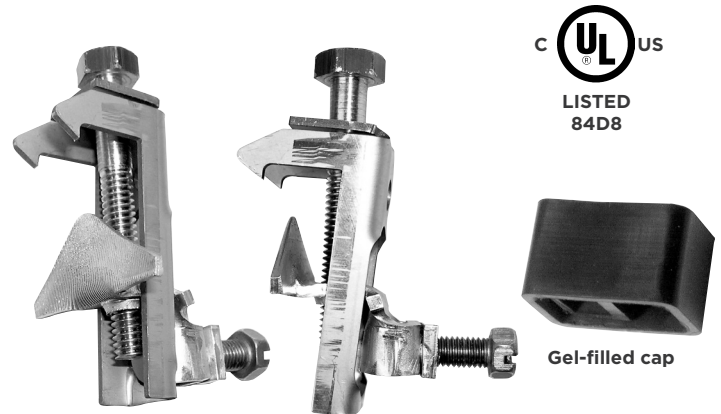
Meter box bonding and grounding connector

### Application

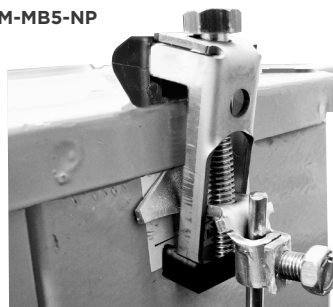
Bonding and grounding telco and CATV to power ground.

### Features

- Stainless steel and copper alloy construction to reduce corrosion
- Applies with a standard terminal wrench/nut runner— no special tools
- Gel-filled cap helps prevent corrosion at the piercing points.
- Easy, foolproof installation
- Mounts on the side—does not interfere with the cover or collapse the sides.
- Small and inconspicuous
- Accommodates #6–#14 AWG solid or stranded ground wire
- Makes electrical contact under the drip cap of the box, on bare, unpainted metal
- Available with an extra-long body, to accommodate meter boxes with an extended lip on the top cover



EM-MB5-NP



EM-MB5-XL



EM-MB5-H-F



### Ordering information

**EM-MB5** – Meter Box Clamp with top-tightening spade wedge contact point and gel-filled cap

**EM-MB5-NP** – Meter Box Clamp with top-tightening spade wedge contact point and alternate caps (not gel-filled) to cover the prongs and bottom

**EM-MB5-H-F** – Meter Box Clamp with top-tightening narrow spade wedge contact point and flat top and bottom (no need for caps)

Add suffix -XL for extra-long body.

For more meter box clamps, see the Intersystem Bonding Terminal section, starting on page G94.



## IntersystEM-Bonding

### Meter Box Ground Clamp for IntersystEM-Bonding with top-tightening spade wedge contact point, three ground wire connection points

#### Description

Meter box bonding and grounding connector for intersystEM-bonding

#### Application

Bonding and grounding telco and CATV to power ground.

#### Features

- Stainless steel and copper alloy construction to reduce corrosion
- Applies with a standard terminal wrench/nut runner—no special tools
- Gel-filled cap helps prevent corrosion at the piercing points
- Easy, foolproof installation
- Mounts on the side—does not interfere with the cover or collapse the sides.
- Accommodates #6-#14 AWG solid or stranded ground wire
- Makes electrical contact under the drip cap of the box, on bare, unpainted metal.
- Available with an extra-long body, to accommodate meter boxes with an extended lip on the top cover



#### NEC® Section 250.94 Requirements

- An intersystEM-bonding termination for connecting intersystEM-bonding and grounding connectors required for other systems shall be provided external to enclosures at the service equipment and at the disconnecting means for any additional buildings or structures.
- The intersystEM-bonding termination device shall not interfere with opening a service or metering equipment enclosure.
- **The intersystEM-bonding termination shall have the capacity for connection of not less than three intersystEM-bonding conductors.**

#### Ordering information

**EM-MB5-3** – Meter Box Ground Clamp

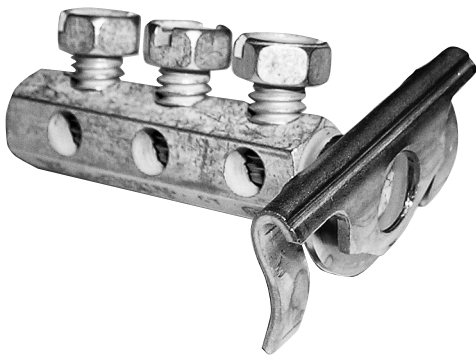
Add suffix -NP for alternate caps (not gel-filled) to cover the prongs and bottom.

Add suffix -XL for extra-long body.

Add suffix -H for narrow wedge.

Add suffix -F for flat points (top and bottom).

## IntersystEM-Bonding Terminal Service Disconnect Box Connector



### NEC® Section 250.94 Requirements

- An intersystEM-bonding termination for connecting intersystEM-bonding and grounding connectors required for other systems shall be provided external to enclosures at the service equipment and at the disconnecting means for any additional buildings or structures.
- The intersystEM-bonding termination device shall not interfere with opening a service or metering equipment enclosure.
- **The intersystEM-bonding termination shall have the capacity for connection of not less than three intersystEM-bonding conductors.**

### Features

- Can be used on galvanized steel or powder-coated steel
  - Becomes first choice for telephone, cable TV, or broadband
1. The service disconnect box connector is to be applied only to either side of the box, including both top and bottom of the box, never to the front.
  2. Position the connector at a side of the service disconnect box. Insert the pointed part of the clamp (without the bolt) between the weld points and tap the wedge into place, using a small hammer.
  3. Insert the bolt into the clamp threads and turn clockwise. Tighten to 20 in-lb.
  4. Secure ground wire in appropriate hole.
  5. This device can be used with solid and stranded 6-14 AWG copper ground conductors.



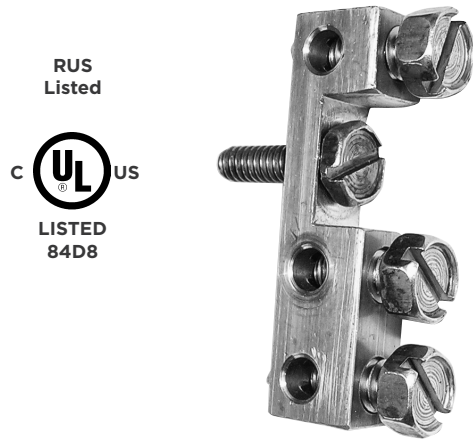
### Ordering information

EM-SDS-SUB-3 – Service Disconnect Box Connector



# IntersystEM-Bonding

## Service Disconnect Box Ground Connector for IntersystEM-Bonding



### Description

A ground connector that mounts to the front of the service disconnect cabinet. Provides connection holes for three ground wires.

### Application

Provides convenient access to ground for telephone systems, cable TV, or broadband. One location, all systEM-grounds commonly connected.

### Features

- Meets 2008 NEC (see left)
- Becomes first choice for grounding when installed
- Easily installed
- Remove one cover screw, replace with new screw and connector body.
- Accommodates #6-#14 AWG

### Ordering information

**EM-SDF-B-3** – Service disconnect box ground connector



## Cable Rack Bond Clamps

A mechanically galvanized steel clamp assembly.

### Application

For use when bonding cable racks to a ground point common with other hardware to aid in corrosion prevention.

### Features

- For use with all standard cable racks
- Works with a variety of conductors, i.e., solid or stranded #6AWG, bonding ribbons, and round or flat braid
- Eliminates “sandwiching” the conductor between two flatwashers
- Can be used with one conductor, or to connect two conductors
- Easily installed by hanging the clamp in a hook hole, inserting the conductor(s) and tightening
- Mechanically zinc plated for corrosion resistance

### Ordering information :

**EM-3777** – for bonding ribbon or #6 AWG wire to cable racking

Standard packaging: 10/bg, 100/bx, 19 lb/bx

**EM-3778** – for #1 & #2 AWG wire

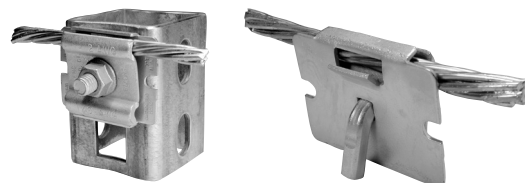
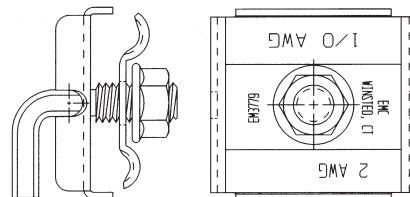
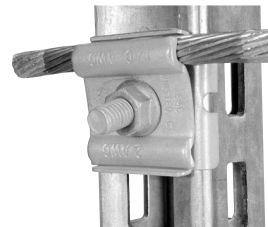
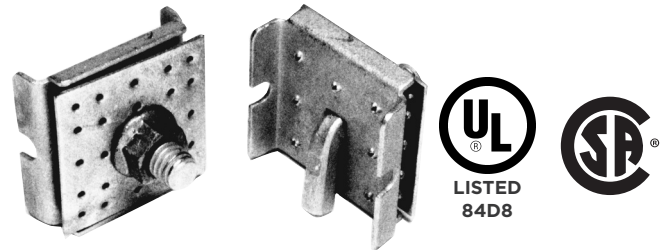
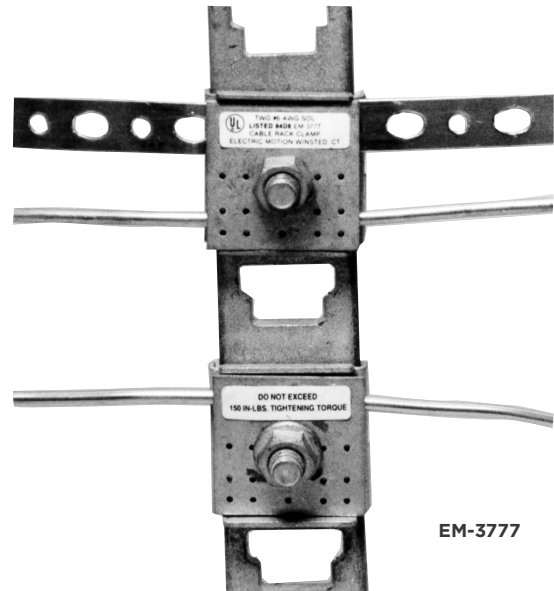
Standard packaging: 100/bx, 25 lb/bx

**EM-3779** – for Unistrut P16F cable entrance facilities, #1 & #2 AWG wire

Standard packaging: 100/bx, 18 lb/bx

**EM-3779-1** – for Unistrut P21H cable entrance facilities, 2-1/4" and 1-3/4"; flat back plate, with extra tang to keep back plate from slipping out of place

Standard packaging: 100/bx, 18 lb/bx





## Underground Hardware

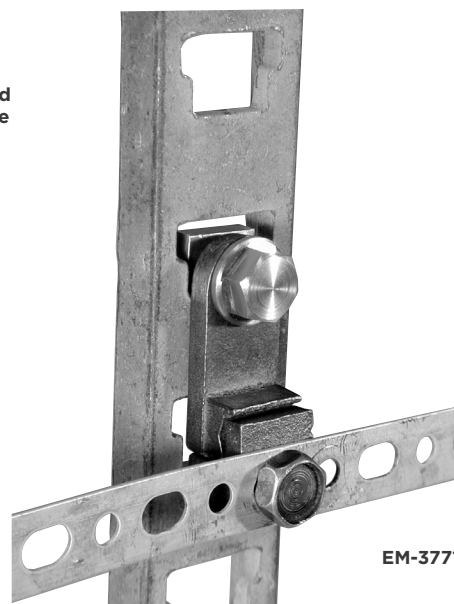
### Cable Rack Clamps

For T-slotted underground manhole racks and Unistrut P16F and P21H racks (both clamps fit all racks).  
For ground wires #6 through #1/0 AWG, 3/8" plain bonding ribbon, and perforated bonding ribbon.

#### Ordering information

**EM-3771** – Cable Rack Clamp with side-mounted 5/16" bolt for clamping conductor.

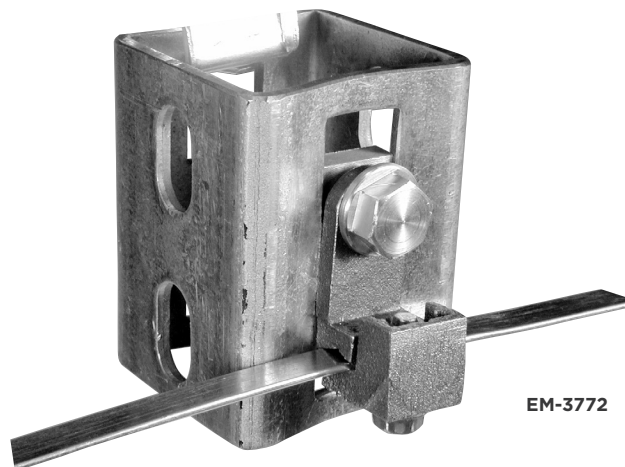
T-slotted  
manhole  
rack



EM-3771

**EM-3772** – Cable Rack Clamp with bottom-mounted 5/16" bolt for clamping conductor.

Add suffix -T for tin plating.



EM-3772

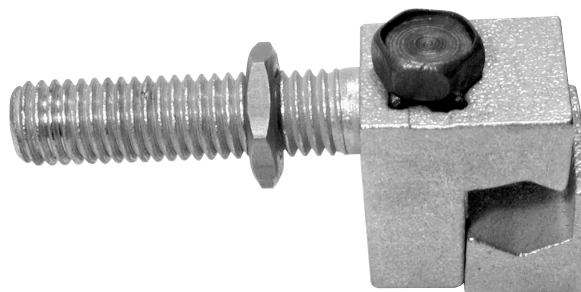
either Unistrut rack

### Cable Rack BOND Clamp

For ground wires #3 AWG solid through #4/0 AWG stranded. Tinned.

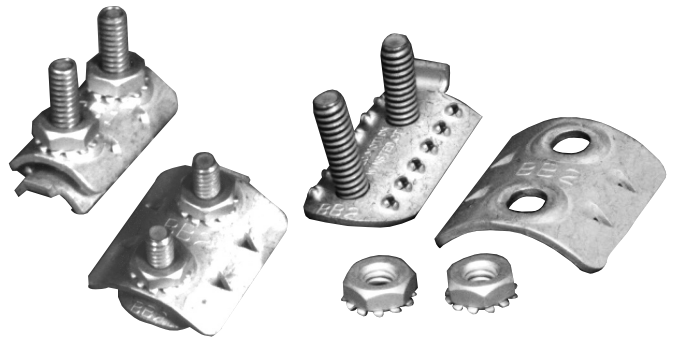
#### Ordering information

**EM-3773** – Cable Rack Bond Clamp

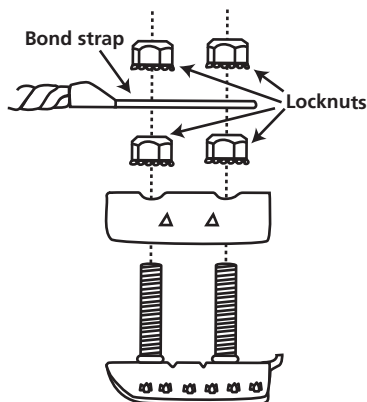


**B Bond Clamps – double stud****Features**

- Tin-plated bronze and copper construction for high conductivity
- 3/8" nuts fit standard terminal wrench.
- Piercings in bottom plate penetrate Mylar lining on inner surface of shield.
- Can be used with or without punching holes in sheath
- When cable shield is tabbed and punched, one size works on all cables.
- Two studs prevent loosening of connections due to counterclockwise movement of bond strap.
- Two studs offer lower resistance and higher current carrying capacity. This enables use of a smaller size shield connector.
- Two studs offer higher pullout strength.



See page G140 for the double hole punch to go with these double stud B bonds.

**Ordering information**

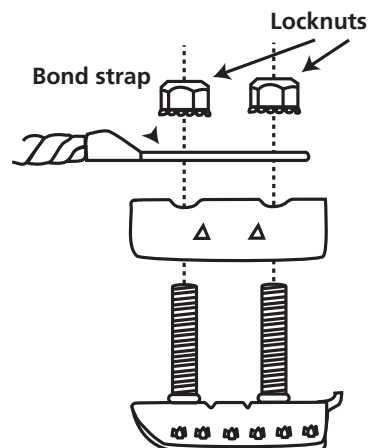
Double stud with double nut per stud

**EM-2BBM** – up to .5" cable

**EM-2BB1** – .5"–.8" cable

**EM-2BB2** – .8"–1.6" cable

**EM-2BB3** – 1.6"–up

**Ordering information**

Double stud with single nut per stud

**EM-1BBM** – up to .5" cable

**EM-1BB1** – .5"–.8" cable

**EM-1BB2** – .8"–1.6" cable

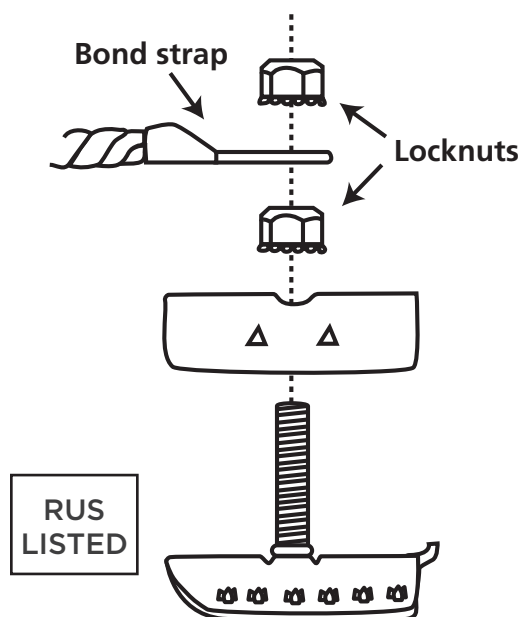
**EM-1BB3** – 1.6"–up

# Underground Hardware

## B Bond Clamps - Single stud

### Features

- Tin-plated bronze and copper construction for high conductivity
- 3/8" nuts fit standard terminal wrench.
- Piercings in bottom plate penetrate Mylar lining on inner surface of shield.
- Can be used with or without punching holes in sheath
- When cable shield is tabbed and punched, one size works on all cables.



### Ordering information

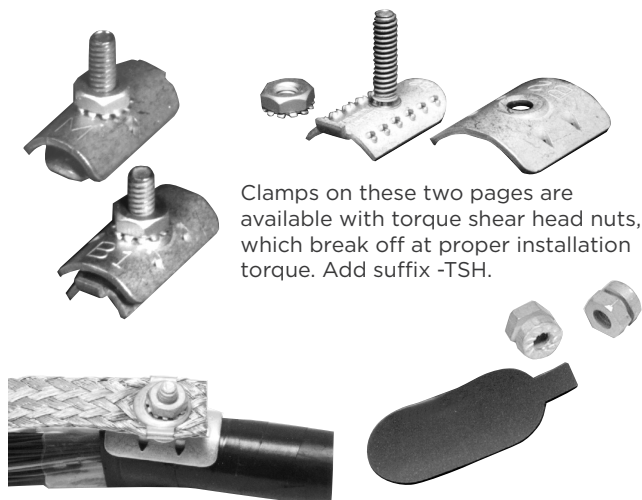
Single stud with double nut per stud

**EM-20BM** - up to .5" cable. Standard packaging: 1/bg, 10/pkg, 500/bx, 22 lb/bx

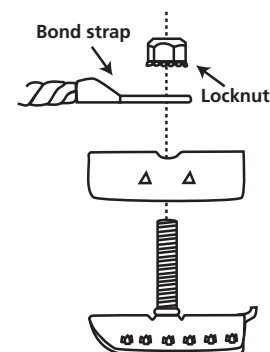
**EM-20B1** - .5"-.8" cable. Standard packaging: 1/bg, 10/pkg, 500/bx, 23 lb/bx

**EM-20B2** - .8"-1.6" cable. Standard packaging: 1/bg, 10/pkg, 500/bx, 28 lb/bx

**EM-20B3** - 1.6"-up. Standard packaging: 1/bg, 10/pkg, 500/bx, 27 lb/bx



Clamps on these two pages are available with torque shear head nuts, which break off at proper installation torque. Add suffix -TSH.



For optional flat plastic pair saver, add suffix -P.

To order the flat plastic pair saver separately, use part number EM-PSAVER.



For optional pair saver molded to bottom plate, add suffix -MP.

### Ordering information

Single stud with single nut per stud

**EM-10BM** - up to .5" cable. Standard packaging: 1/bg, 500/bx, 20 lb/bx

**EM-10B1** - .5"-.8" cable. Standard packaging: 1/bg, 500/bx, 22 lb/bx

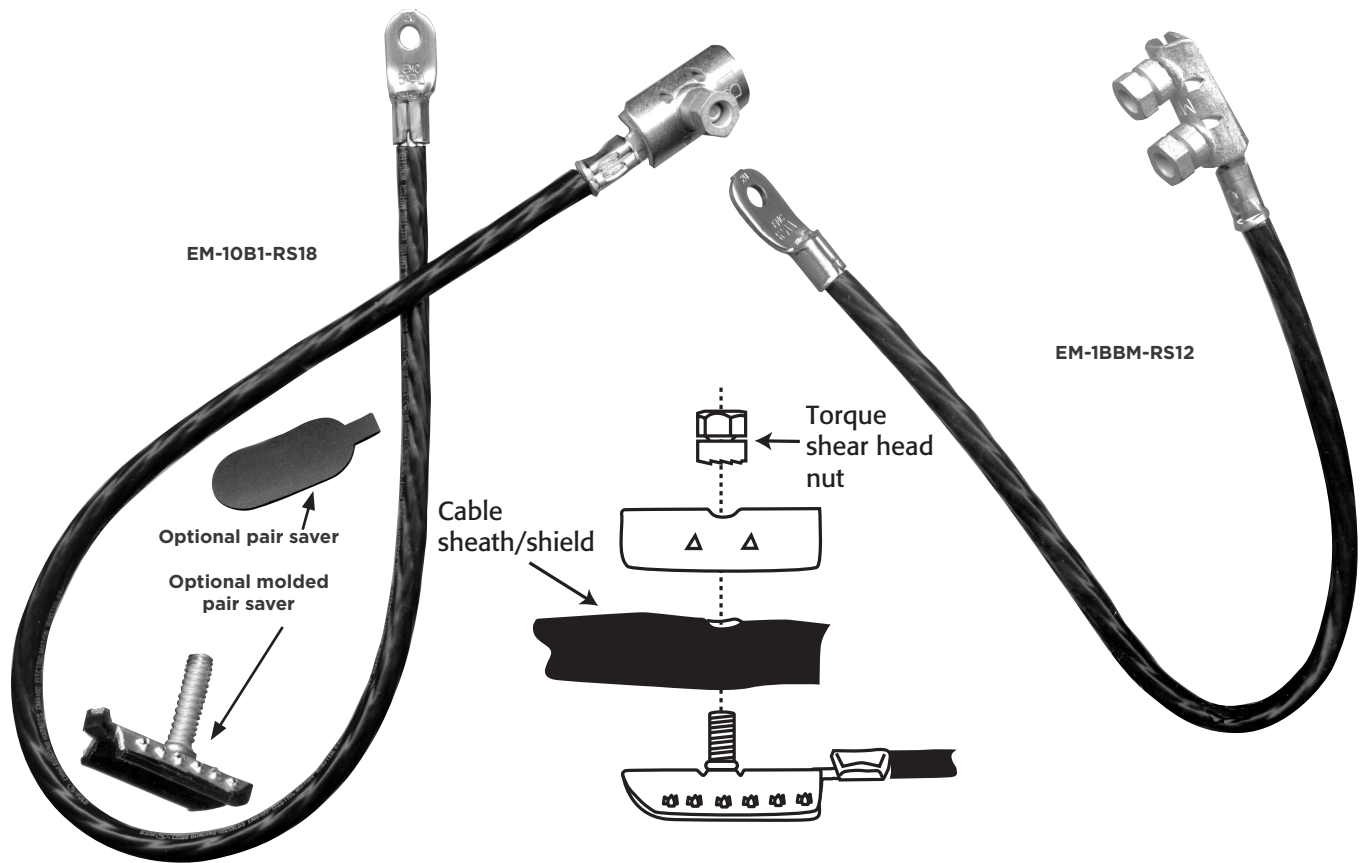
**EM-10B2** - .8"-1.6" cable. Standard packaging: 1/bg, 500/bx, 26 lb/bx

**EM-10B3** 1.6"-up. Standard packaging: 1/bg, 500/bx, 26 lb/bx

Longer studs: For 1" studs, add suffix -XL1. For 1.1" studs, add suffix -XL1.1.

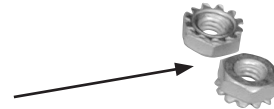


## RS B-Bond Shield Connector – with Attached Harness For Pedestals

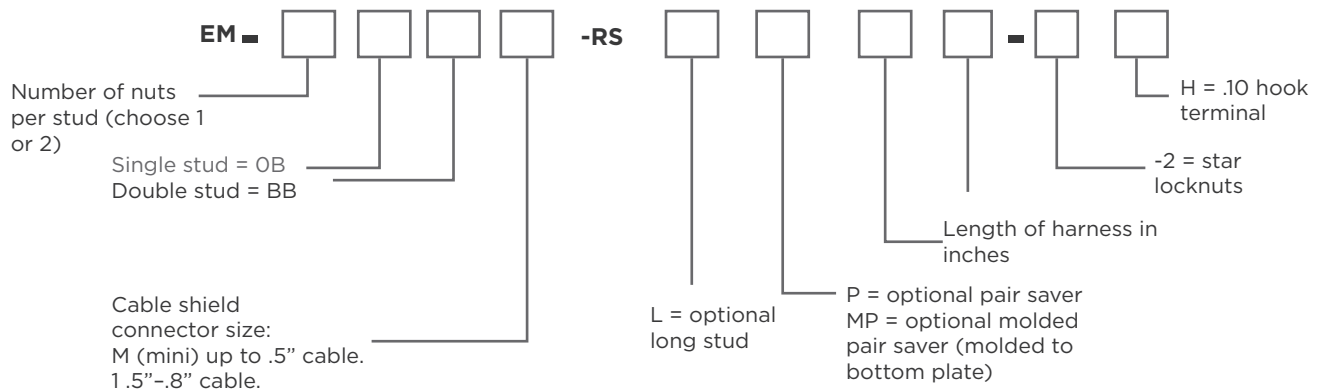


### Description

The bottom plate of a B-Bond shield connector (see variations below) is attached to a #6 AWG harness, with a #10 stud hole ring terminal on the other end. Nuts have torque shear heads standard, or add suffix -2 for optional star locknuts.



### Part Numbering Variations Matrix



**Example:**  
**EM-2BBM-RSLP18-2**

EM-10B1-RS18-10B1

Optional pair saver

Optional molded pair saver

Cable sheath/shield

Torque shear head nut

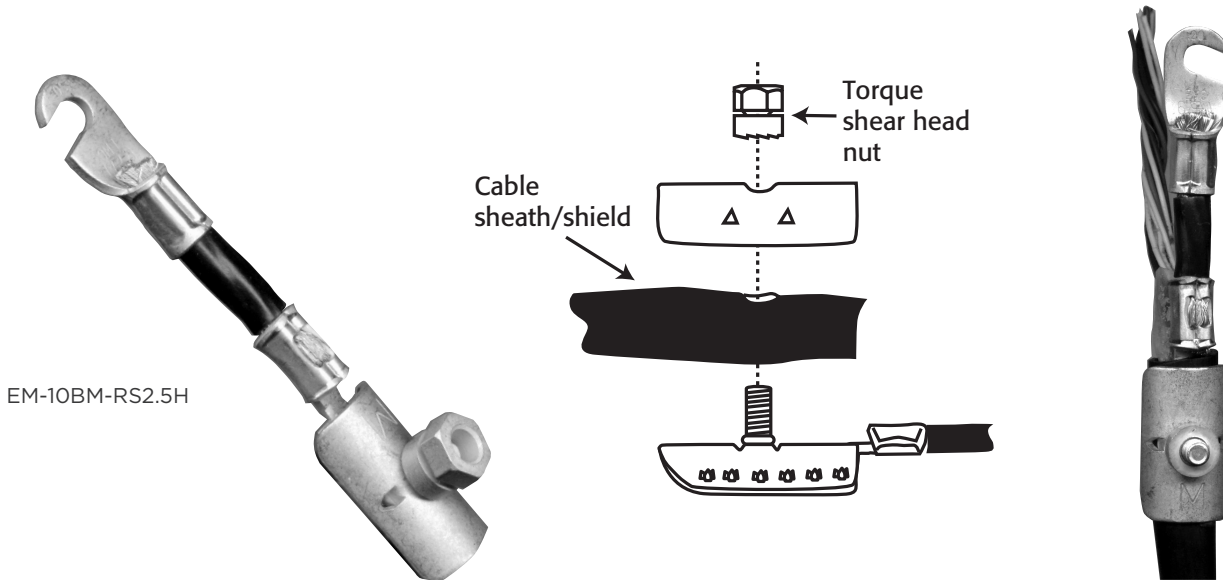
The bottom plate of a B-Bond shield connector (see variations below) is attached to either end of a #6 AWG harness. Nuts have torque shear heads standard, or add suffix -2 for optional star locknuts.

The diagram illustrates the structure of a cable harness part number, which is a sequence of boxes and hyphens. Callouts explain the meaning of each segment:

- EM**: Number of nuts per stud (choose 1 or 2)
- [Box]**: Single stud = 0B, Double stud = BB
- [Box]**: Cable shield connector size: M (mini) up to .5" cable. 1.5"-.8" cable.
- [Box]**: L = optional long stud
- [Box]**: P = optional pair saver, MP = optional molded pair saver (molded to bottom plate)
- [Box]**: Length of harness in inches
- [Box]**: Number of nuts per stud (choose 1 or 2)
- [Box]**: Single stud = 0B, Double stud = BB
- [Box]**: Cable shield connector size: M (mini) up to .5" cable. 1.5"-.8" cable.
- [Box]**: -2 = star locknuts

**Example:**  
EM-2BBM-RSLP18-2BBM-2

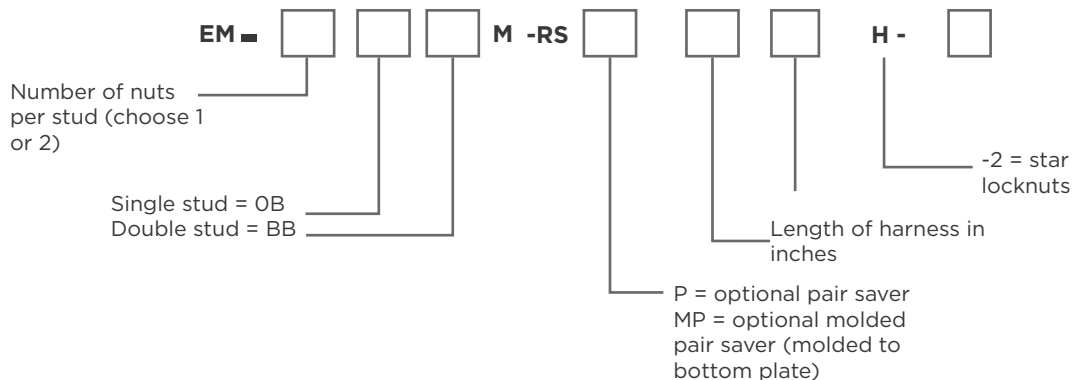
## RS B-Bond Shield Connector - with Attached Harness For NIDs



### Description

The bottom plate of a Mini B-Bond shield connector (accommodates up to .5" cable) is attached to a 2.5" #6 AWG harness (standard length; others are available), with a hook terminal on the other end. Nuts have torque shear heads standard, or add suffix -2 for optional star locknuts.

### Part Numbering Variations Matrix



### B-Bond Shield Connector - with short stud and harness

Top plate of 10B1 shield connector (see p. 169) is connected to a #6 AWG harness. The free terminal of the harness has paint-penetrating teeth to bite through powder coating.

Ordering information

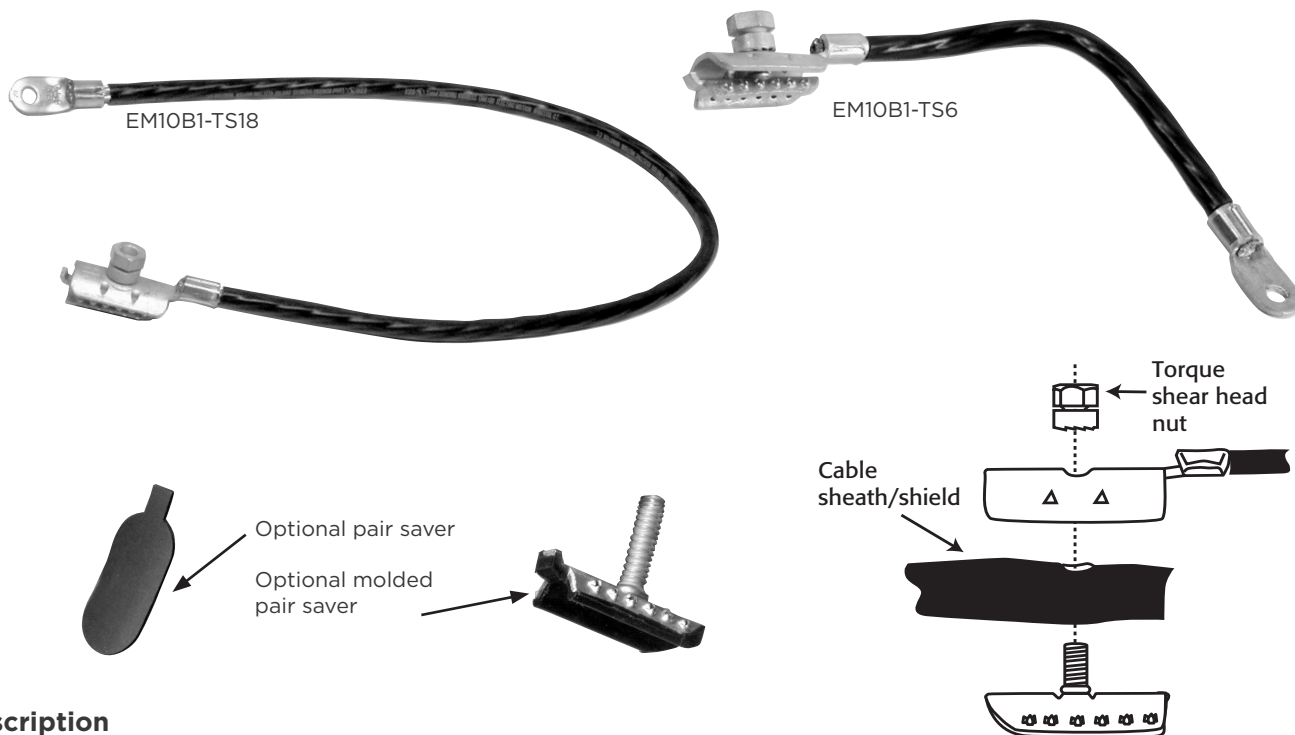
EM-10B1/8100-6 HUB 6" harness

EM-10B1/8100-10 HUB 10" harness



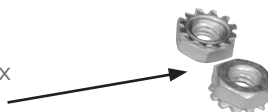
# TS Shield Connectors

## TS Cable Shield Connector with Attached Harness

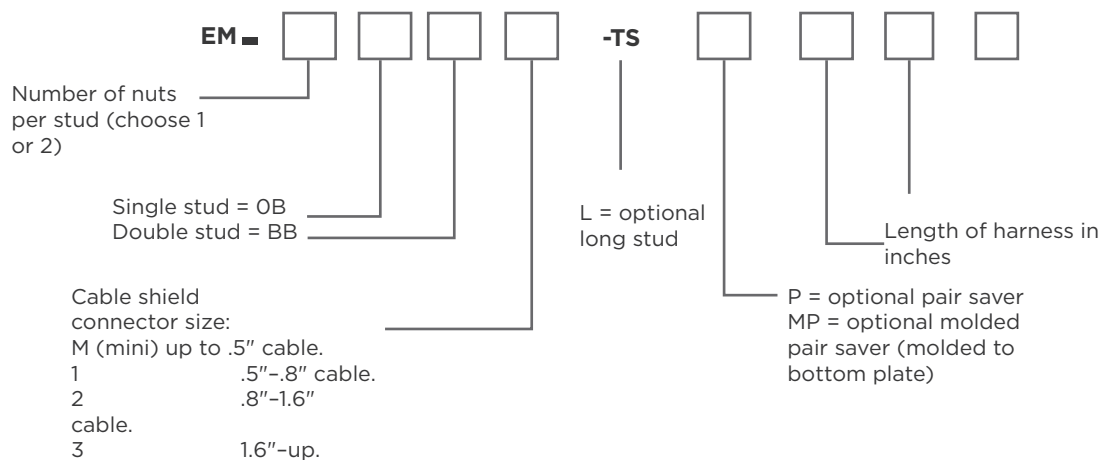


### Description

The top plate of the TS cable shield connector (see variations below) is attached to a #6 AWG harness, with a #10 stud hole ring terminal on the other end. Nuts have torque shear heads standard, or add suffix -2 for optional locknut washer.



### Part Numbering Variations Matrix



Example:  
EM-2BBM-TSLP18

## U-Shaped Buried Service Wire Shield ConnectorS – with Optional Pair Protection

Electric Motion's shield connector, complete with pair protection, is designed to provide customers with a versatile, craft-friendly system for terminating all types of industry standard shielded buried service wires.

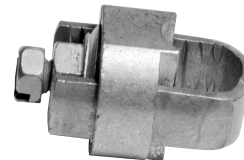
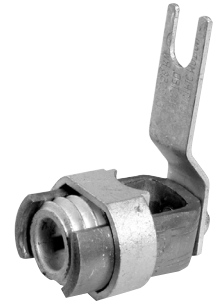
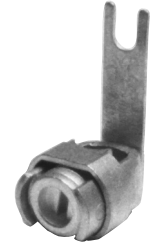
### Applications

- Permits easy and reliable termination of metallic shields at network interface devices (NIDs), station protector devices, pedestals, optical network unit and terminal locations.
- Facilitates termination of all corrugated or flat-shield buried service wire designs.

### Features

- Multi-functional and customized for customer's specific application.
- Preparation of the buried service wire and installation of each connector follows the same basic procedures.
- Results in faster on-site connections.
- Provides anti-crush protection and excellent strain relief.
- Connectors stay securely fastened long after connections are made.
- Provides superior pullout strength during subsequent wiring or repair activity.
- Pairs are insulated from sharp edges of metallic shield; virtually eliminates metallic troubles at the shield/connector interface.

- Pair protectors are available to accommodate the various shield designs, multiple or single wire applications, and different wire sizes: 2, 3, 4, 5, 6, & 12 pairs, 19/22 AWG.
- Available in fork, hook, ring, and flag terminal end configurations.
- All metallic components are constructed of brass, tin-plated or die-cast zinc to provide low-resistance connections even in the harshest outside plant environments.
- Strong, corrosion-resistant components
- Re-useable
- High quality



## U-Shaped BSW Shield Connectors

### EM-3955 Series – Connectors with Floating Bonding Harnesses

#### Ordering information

**EM-3955-10S** U-shaped BSW connector with 6 inches of #10 AWG lead wire and 1-inch long yoke for one or two service wires.

*Standard packaging: 10/bg, 100/bx, 11 lb/bx.*

Also available: **EM-3955-10L** – Same as above, with 11/2-inch long yoke for multiple service wires.

#### EM-3955-6L

U-shaped BSW connector with 6 inches of #6 AWG lead wire and 11/2-inch long yoke for multiple service wires.

*Standard packaging: 10/bg, 100/bx, 15 lb/bx.*

Also available: **EM-3955-6S** – Same as above, with 1-inch long yoke for one or two service wires.



### Pedestal Buried Service Wire – Shield Connectors with Teeth

#### Ordering information

##### EM-3955-10S (BT)

U-shaped BSW connector with 6 inches of #10 AWG lead wire, 1-inch long yoke for one or two service wires, and baby teeth both inside bottom of fork and inside back of pusher ring.

*Standard packaging: 100/bx, 10 lb/bx.*

##### EM-3955-10SPB (BT)

Same as above, with pair protector and rectangular boot.

##### EM-3955-SP (BT)

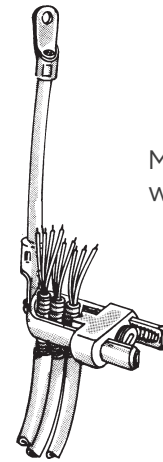
Just the yoke and pusher ring with baby teeth and pair protector, but without the lead or the boot.



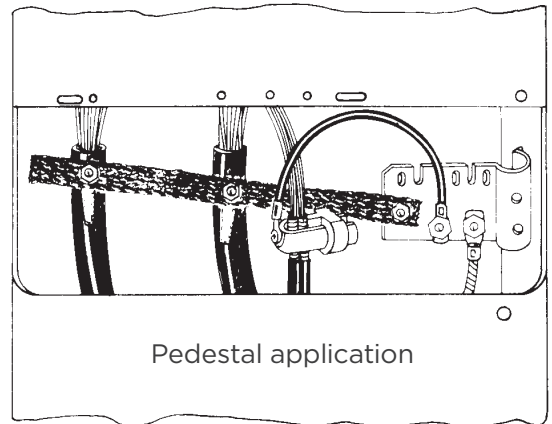
BONDING & GROUNDING

# U-Shaped BSW Shield Connectors

## EM-3955 Series – Pedestal Buried Service Wire Shield Connector #6 AWG with Floating Bonding Harness



Multiple service wires in one clamp



Pedestal application

### Application

For bonding and grounding buried service wire shields in pedestals.

### Features

- Long version of connector allows the installer to stack multiples of buried service wires.
- Connector screw end is removable to allow easy adding of new buried service wires or easy toning.
- #6 AWG allows maximum current capacity.
- Flexible lead allows for bonds to float so connection will not loosen.
- UL and RUS listed for safety

### Ordering information

#### EM-3955-6L/8100-15

Connector assembly with 15" #6 AWG lead.

Standard packaging: 00/bx, 23 lb/bx.

#### EM-3955-6L/8100-36

Connector assembly with 36" #6 AWG lead.

Standard packaging: 100/bx, 39 lb/bx.

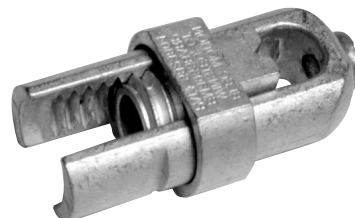
### Connector with Screw

#### Ordering information

##### EM-3955-L

Long U-shaped connector with screw for mounting to your own harness or mounting bracket. Can accommodate 1-3 BSWs.

Standard packaging: 10/bg, 100/bx, 9 lb/bx.



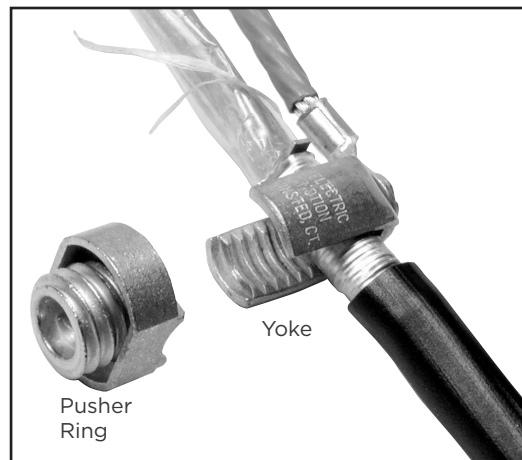


## U-Shaped BSW Shield Connectors

### EM-3956 Series – Short U-Shaped Buried Service Wire Connectors with Floating Bonding Harnesses

Order from the connectors listed on the next few pages, or customize your own connectors:

- Wire gauge can be changed with the first number suffix: EM-3956-\_\_ S (#10, #6), e.g., EM-3956-10S.
- Yoke length can be changed with the first letter suffix: EM-3956-10\_ (S = short, L = long), e.g., EM-3956-10S.
- Wire length can be changed by adding a number suffix: EM-3956-10S-\_\_ (inches), e.g., EM-3956-10S-18.
- Terminal type can be changed by adding a letter suffix: EM-3956-10S-18-\_\_ (R = ring, F = fork, H = hook), e.g., EM-3956-10S-18-F.



### Connector with 6" lead, #10 AWG

#### Ordering information

##### EM-3956-10S

Short U-shaped BSW shield connector with 6 inches of #10 AWG flexible lead wire, hook terminal.

Standard packaging: 10/bg, 100/bx, 7 lb/bx.

##### EM-3956-10SP

Above connector with pair protector.



### Optional Accessories

#### Pair Protector

Ordering information **EM-3905**  
Standard packaging: 100/bg, 1000/bx, 6 lb/bx.

Also available singly with any connector shown by adding the suffix -P to the part number.

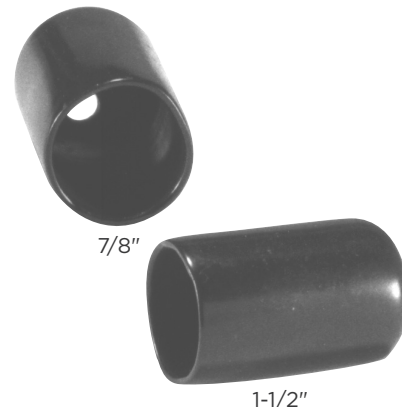


1"

#### Vinyl Boot Insulator

Ordering information **EM-3901-L**  
Standard packaging: 25/bg, 100/bx, 2 lb/bx.

Also available singly with any connector shown by adding the suffix -B to the part number.



1-1/2"

# U-Shaped BSW Shield Connectors

## EM-3956 Series – Short U-Shaped Buried Service Wire Connectors with Floating Bonding Harnesses



### Connector with 12" lead, #10 AWG

#### Ordering information

EM-3956-10S12R

Short U-shaped BSW shield connector with 12 inches of #10 AWG flexible lead wire, ring terminal.



### Connector with 18" lead, #10 AWG

#### Ordering information

EM-3956-10S18R

Short U-shaped BSW shield connector with 18 inches of #10 AWG flexible lead wire, ring terminal.

3/4"

3/4"



### Connector with 6" lead, #6 AWG

#### Ordering information

EM-3956-6S

Short U-shaped BSW shield connector with 6 inches of #6 AWG flexible lead wire, ring terminal.



3/4"

3/4"

## U-Shaped BSW Shield Connectors

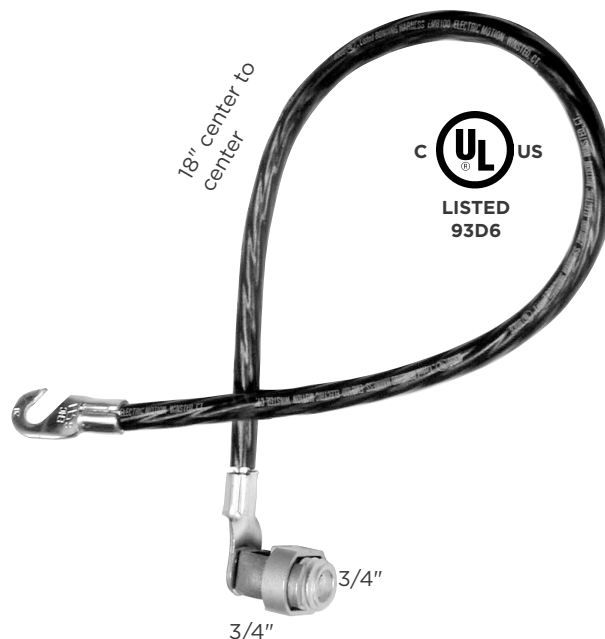
### EM-3956 Series – short U-Shaped Buried Service Wire Connectors with Floating Bonding Harnesses

#### Connector with 18" lead, #6 AWG

##### Ordering information

EM-3956-6S18RH

Short U-shaped BSW shield connector with 18 inches of #6 AWG flexible lead wire, hook terminal.



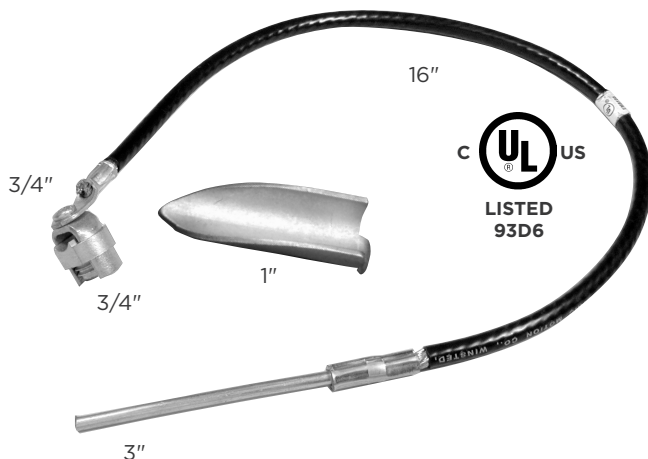
#### Connector with flexible/solid harness

##### Ordering information

EM-3956-163SP

Short U-shaped BSW shield connector with 16 inches of #6 AWG flexible lead wire, 3 inches of solid #6 AWG, pair protector.

Standard packaging: 1 kit/bg, 25 kits/bx, 14 lb/bx.



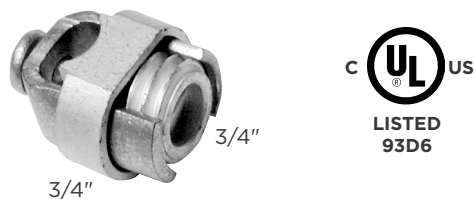
#### Connector with screw

##### Ordering information

EM-3956-S

Short U-shaped BSW connector with a screw for use with your own harness or mounting bracket.

Standard packaging: 25/bg, 100/bx, 5 lb/bx.

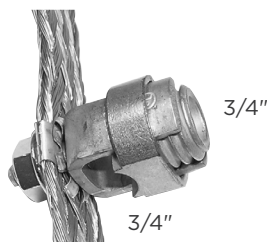


#### Connector with stud and nut

##### Ordering information

EM-3956-SWZ

Short U-shaped BSW connector with a screw and a whiz nut for use with your own bonding braid with eyelets



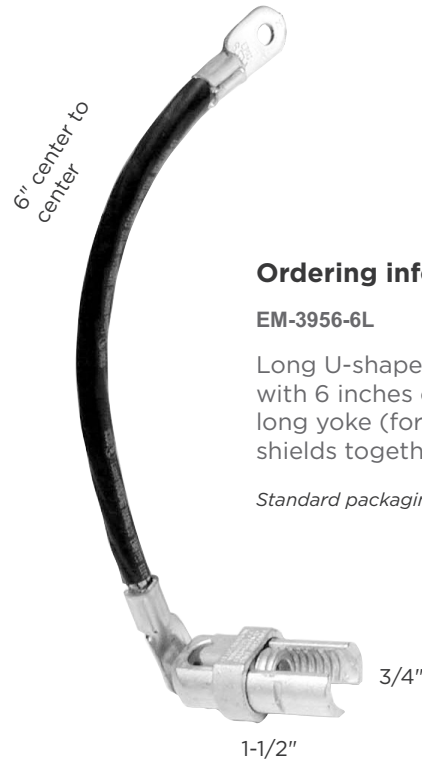
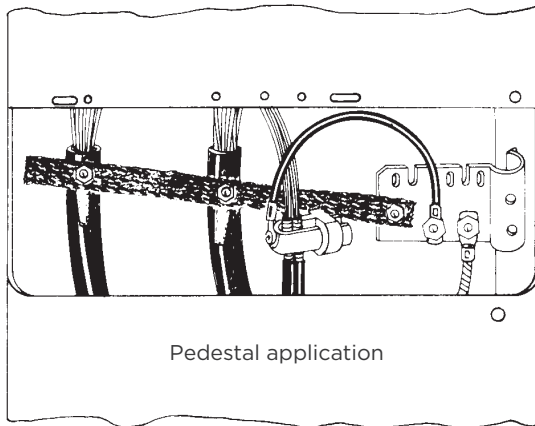
BONDING & GROUNDING

# U-Shaped BSW Shield Connectors

## EM-3956 Series - Long U-Shaped Buried Service Wire Connectors with Floating Bonding Harnesses



### Connector with 6" lead, #6 AWG



### Ordering information

#### EM-3956-6L

Long U-shaped BSW shield connector with 6 inches of #6 AWG lead wire and long yoke (for one or multiple BSW shields together).

Standard packaging: 10/bg, 100/bx, 14 lb/bx.

### Order the connector above, or customize your own connectors:

- Wire gauge can be changed with the first number suffix: EM-3956-\_\_ S (#10, #6), e.g., EM-3956-10S.
- Yoke length can be changed with the first letter suffix: EM-3956-10\_ (S = short, L = long), e.g., EM-3956-10S.
- Wire length can be changed by adding a number suffix: EM-3956-10S-\_\_ (inches), e.g., EM-3956-10S-18.
- Terminal type can be changed by adding a letter suffix: EM-3956-10S-18-\_\_ (R = ring, F = fork, H = hook), e.g., EM-3956-10S-18-F.



F = fork



H = hook



R = ring



FL = flag

# U-Shaped BSW Shield Connectors

## EM-3956 Series – Short U-Shaped Buried Service Wire Shield Connectors with Rigid Mounting Bars

Tin-plated brass clamp designed to make a low-resistance connection between a service wire shield and ground point.



### Features

- Fits compactly in most NIDs
- Can be used on 2 pair–6 pair buried service wire
- Open-ended design allows the installation of this clamp onto a wire already in service. Also, it can be taken apart to isolate the ground

### Ordering information :

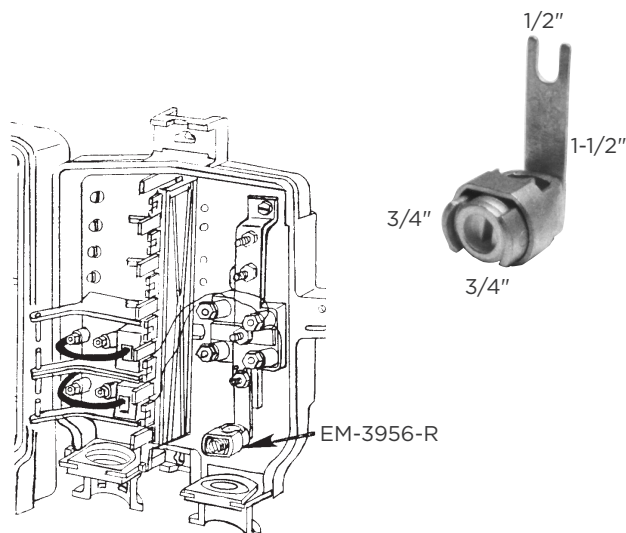
### Connector with Rigid Mounting Bar

#### Ordering information

EM-3956-R

Short U-shaped BSW shield connector with tin-plated brass mounting bar (for single BSW).

Standard packaging: 25/bg, 100/bx, 6 lb/bx



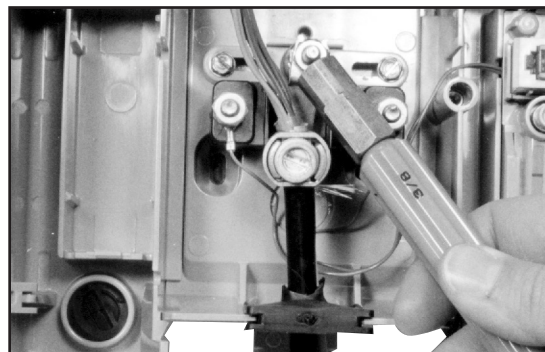
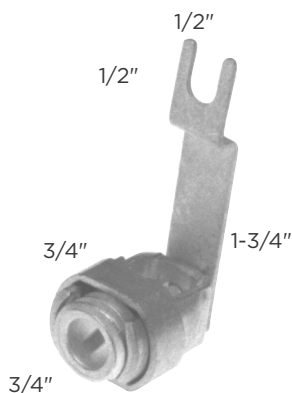
### Connector with Offset Rigid Mounting Bar

#### Ordering information

EM-3956-RO

Short U-shaped BSW shield connector with offset bar

Standard packaging: 25/bg, 100/bx, 5 lb/bx



# U-Shaped BSW Shield Connectors

## EM-3956 Series – Short U-Shaped Buried Service Wire Shield Connectors with Rigid Mounting Bars

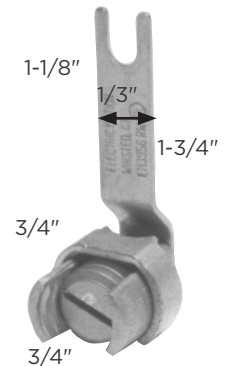
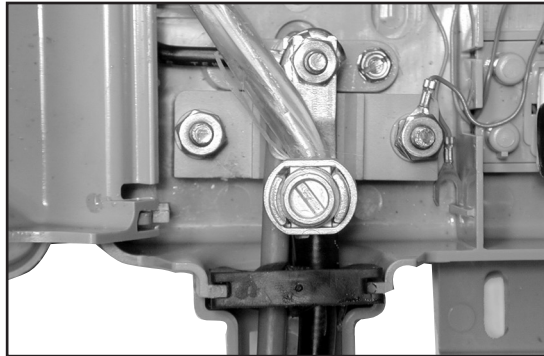
### Connector with 45° Offset Rigid Mounting Bar

#### Ordering information

EM-3956-RW

Short U-shaped BSW connector with 45° unplated offset bar.

Standard packaging: 10/bg, 100/bx, 6 lb/bx



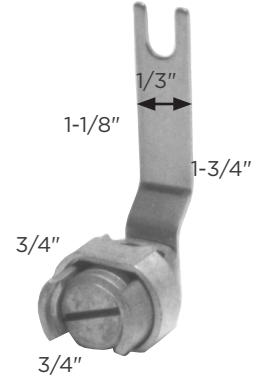
### Connector with Reversed 45° Offset Rigid Mounting Bar

#### Ordering information

EM-3956-RR

Short U-shaped BSW connector with 45° unplated offset reversed bar.

Standard packaging: 25/bg, 100/bx, 6 lb/bx.



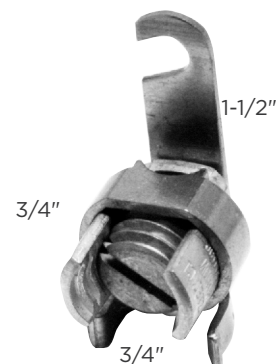
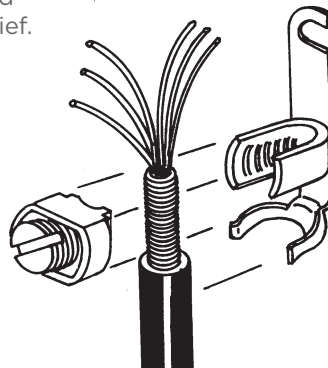
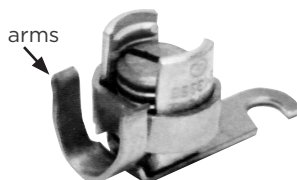
### Connector with Hook-Shaped Rigid Mounting Bar

#### Ordering information

EM-3956-H

Short U-shaped BSW connector with hook-shaped ground bar. Wraparound arms provide a strain relief.

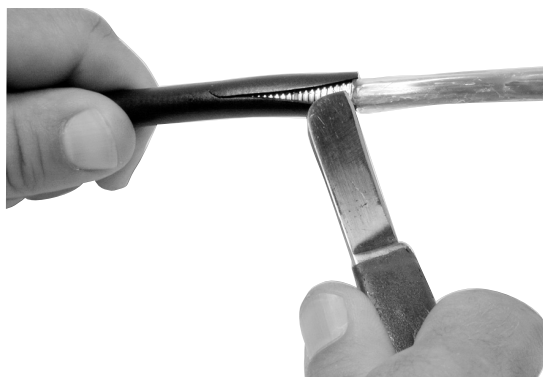
Standard packaging: 25/bg, 100/bx, 6 lb/bx





## U-Shaped BSW Shield Connectors

**EM-3956M Series – Medium U-Shaped Buried Service Wire Shield Connectors**  
for use with double-tab pair protector for built-in strain relief



Remove the appropriate amount of sheath necessary for wire termination. Make a lengthwise slit in the jacket 1" from the end.



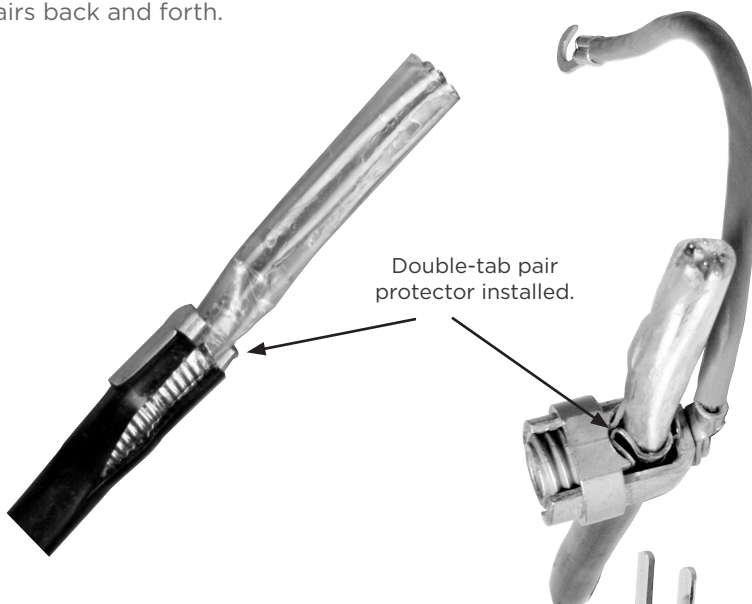
Make room for the pair protector by moving the pairs back and forth.



EM-3900-2



Insert pair protector between shield and pairs. This serves as a strain relief and protects the pairs from crushing.



Double-tab pair protector installed.

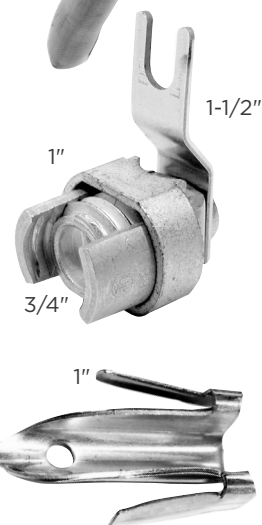
### Connector with 40° Offset Rigid Mounting Bar

#### Ordering information

**EM-3956M-RW15P**

NIU Connector for 2-pair through 6-pair service wire..

*Standard packaging: 50/bx,  
5 lb/bx.*





## U-Shaped BSW Shield Connectors

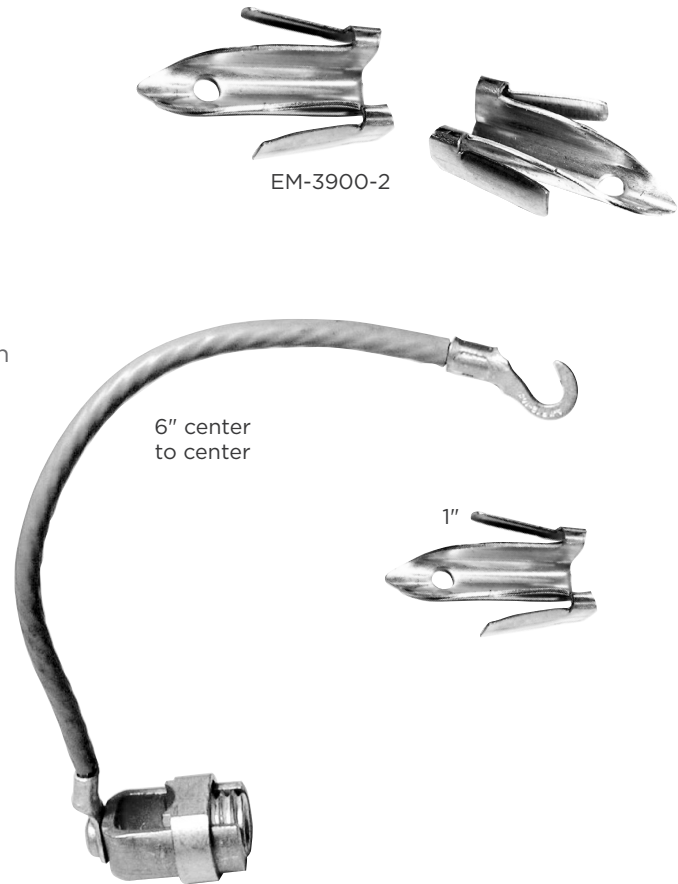
**EM-3956M Series – Medium U-Shaped Buried Service Wire Shield Connectors for use with double-tab pair protector for built-in strain relief**

### Connector with 6" Lead, #10 AWG

#### Ordering information

EM-3956M-10SP

Medium U-shaped BSW connector for single wire with flexible 6" lead, hook terminal.

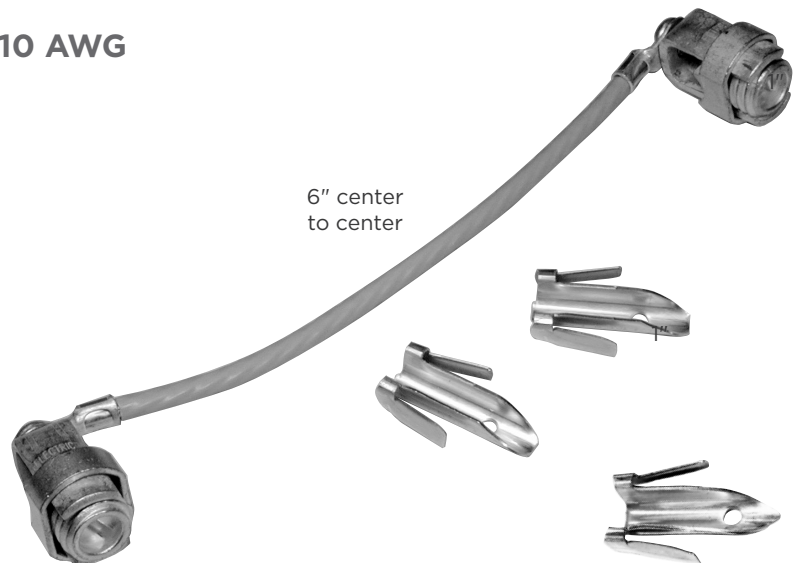


### Double Connector with 6" Lead, #10 AWG

#### Ordering information

EM-3956-PM

Two U-shaped BSW shield connectors with medium yokes, connected by a 6" #10 AWG flexible lead, and packaged with two double-tab pair protectors, for use with Kold-n-Klose, for in-line splicing of buried service wires. Permits straight splice configuration without creating a second joint.



## U-Shaped BSW Shield Connectors

### EM-3956M Series – Medium U-Shaped Buried Service Wire Shield Connectors For Use with Bonded Aluminum Shield

#### Connector with 6" Lead, #10 AWG

##### Ordering information

EM-3956M-10SP-04

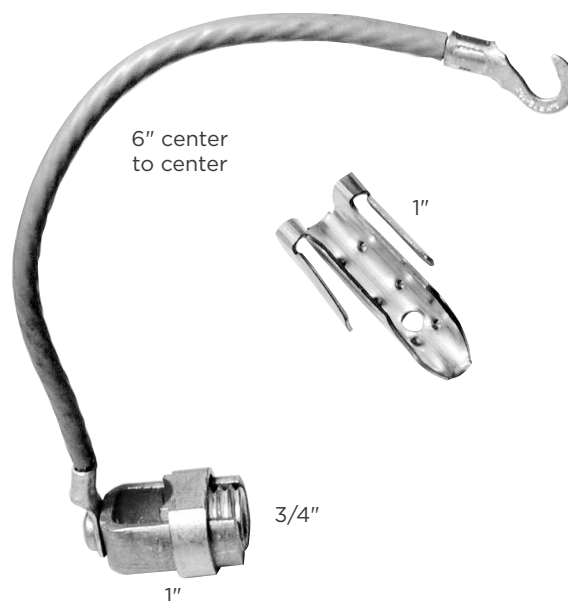
Medium U-shaped BSW connector with 6" of #10 AWG lead wire, for 2-pair through 6-pair BSW. Pair protector has perforations to penetrate protective coating on shield, for better continuity.

EM-3956M-10SP10-04

Same as above, with 10" lead.



EM-3900-04

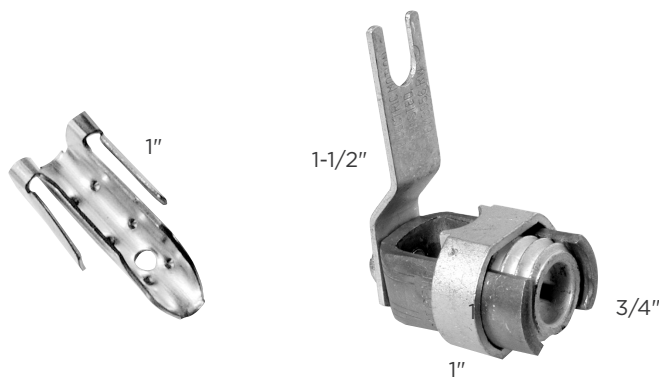


#### Connector with 40° Offset Mounting Bar

##### Ordering information

EM-3956M-RW1.5-04

Medium U-shaped BSW connector with 40° offset, 1-1/2" long mounting bar, for 2-pair through 6-pair BSW. Pair protector has perforations to penetrate protective coating on shield, for better continuity.



#### Pair Protector with Perforations

##### Ordering information

EM-3900-04



# U-Shaped BSW Shield Connectors

## EM-3954 Series – long U-Shaped Buried Service Wire Shield Connectors for pedestals

For Use with double-tab pair protector for built-in strain relief

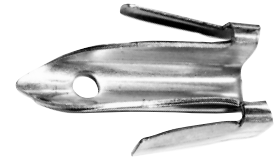
### Connector with 45° Offset Mounting Bar

#### Ordering information

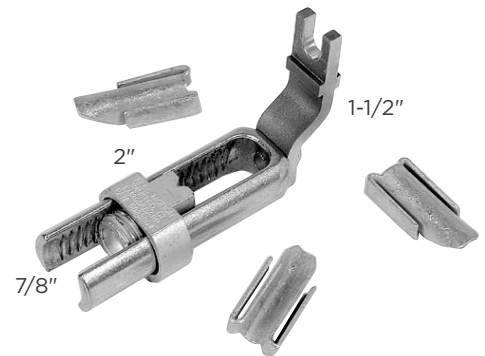
##### EM-3954-ROP

Long U-shaped BSW connector with 45° offset bar. Accommodates 1 to 3 service wires, 2 pair through 6 pair.

Standard packaging: 50/bx,  
6 lb/bx.



EM-3900-2

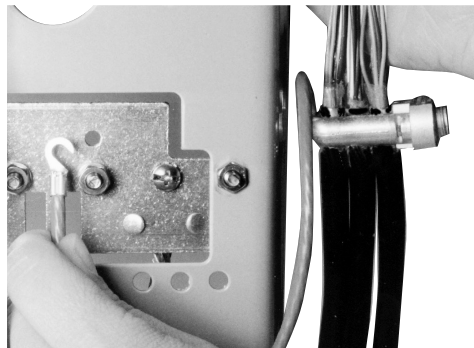


### Connector with 10" Lead, #10 AWG

#### Ordering information

##### EM-3954-10SP/10

Long U-shaped BSW connector with #10 AWG ground lead, 10" long, hook terminal. Accommodates 1 to 3 service wires, 2 pair through 6 pair.

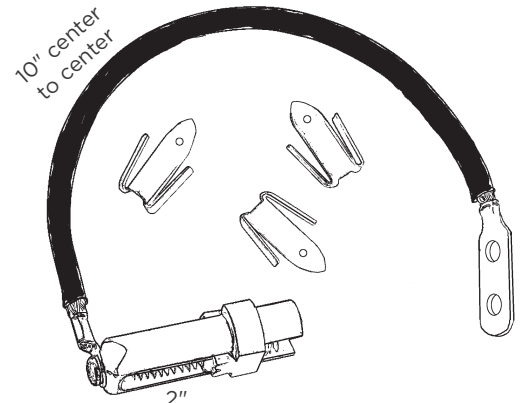


### Connector with 10" Lead, #6 AWG, double ring terminal

#### Ordering information

##### EM-3954-6L/8100-10-DHP

Long U-shaped BSW connector with #6 AWG ground lead, 10" long, double-hole ring terminal. Accommodates 1 to 3 service wires, 2 pair through 6 pair.



## U-Shaped BSW Shield Connectors

### EM-3958 Series – Larger Diameter U-Shaped Buried Service Wire Shield Connectors

Shield connector for 12-pair buried service wire. Available with anti-crush devices for three different shield sizes: .41", .48", .52". Also available with flexible insulated harness, or with tapped fork and loose 10/32 screw.

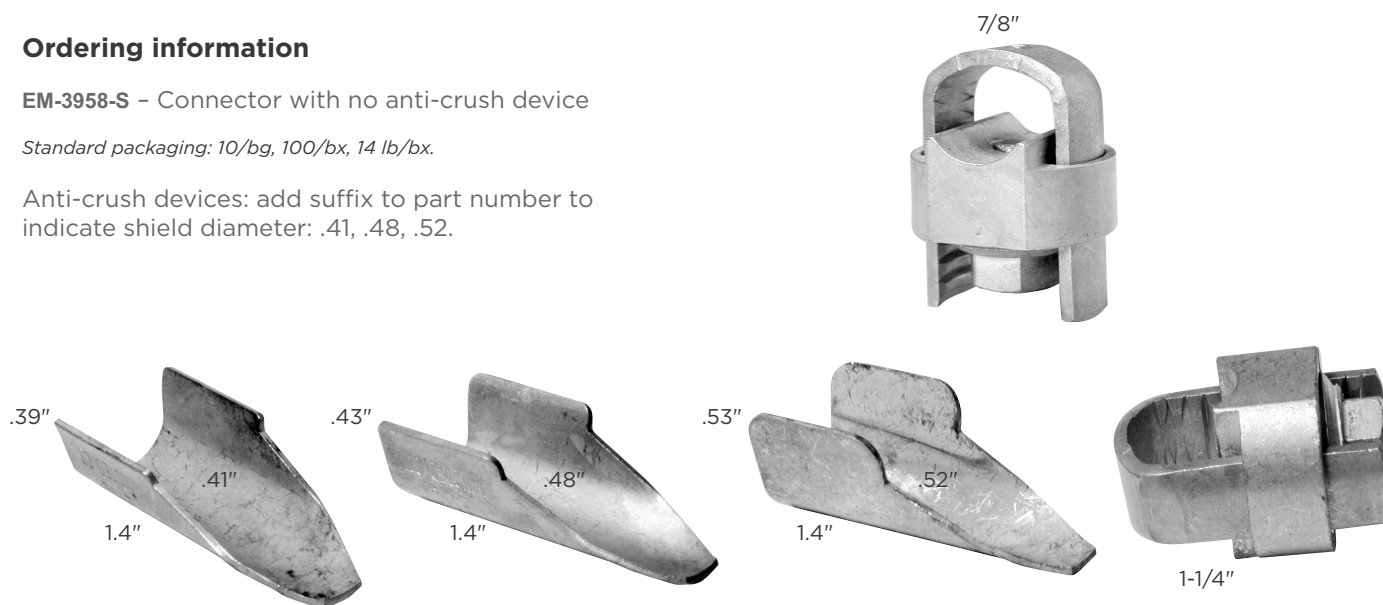
#### 12-Pair Connector

##### Ordering information

**EM-3958-S** – Connector with no anti-crush device

Standard packaging: 10/bg, 100/bx, 14 lb/bx.

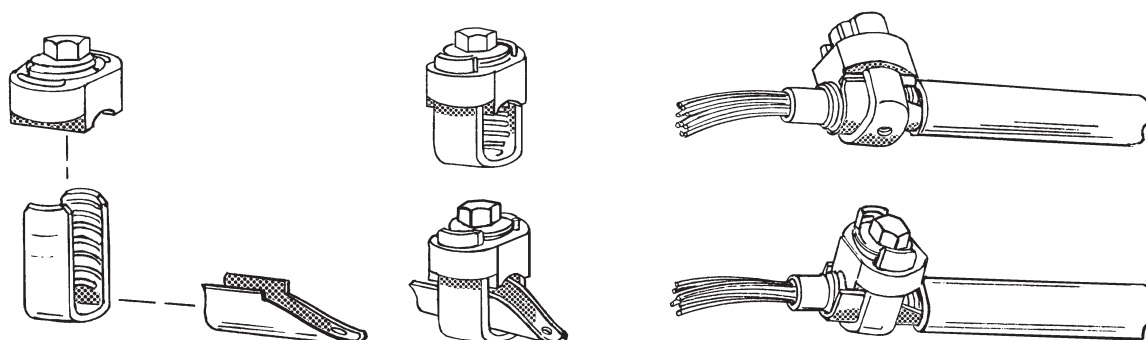
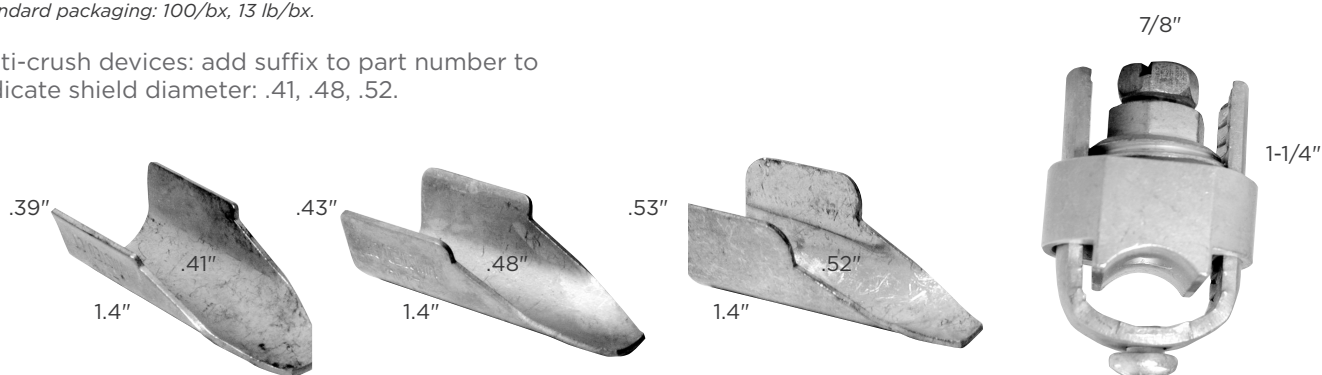
Anti-crush devices: add suffix to part number to indicate shield diameter: .41, .48, .52.



**EM-3958-SS** – Connector with no anti-crush device, with tapped fork and loose 10/32 screw

Standard packaging: 100/bx, 13 lb/bx.

Anti-crush devices: add suffix to part number to indicate shield diameter: .41, .48, .52.



# U-Shaped BSW Shield Connectors

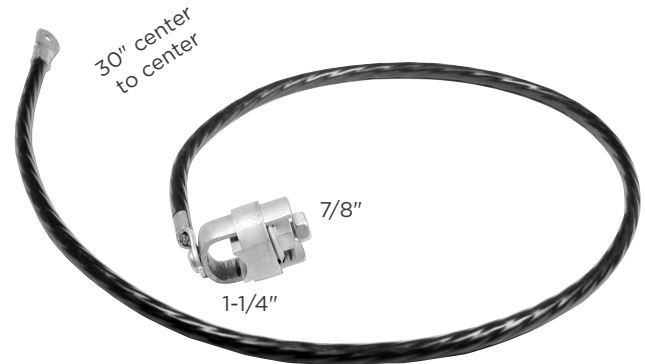
## EM-3958 Series – Larger Diameter U-Shaped Buried Service Wire Shield Connectors

### Connector with 30" Lead, #6 AWG for Pedestals

#### Ordering information

**EM-3958-S/30** – Large U-shaped BSW connector with no anti-crush device, with 30" flexible insulated harness, #6 AWG, with ring terminal, #10 size mounting hole.

Standard packaging: 100/bx, 44 lb/bx.



### Connector with 20" Lead and Anti-Crush Devices

#### Ordering information

**EM-3958-S/20 P3** – Large U-shaped BSW connector with 20" flexible insulated harness, #6 AWG, with ring terminal, #10 size mounting hole, and all three of the anti-crush devices on p. 476 Use the one that fits; discard the other two.

Standard packaging: 100/bx.



### Connector with 10" Lead for NIDs

Designed for the large-diameter 6-pair 19 AWG buried service wire or 12-pair buried service wire. Also available with #12 or #6 AWG ground wire lead.

#### Features

- Opens like a book to allow ease of installation
- Can be disassembled quickly to isolate the ground

#### Applications

Can be used on network interface devices, protectors, and terminals.

#### Ordering information

**EM-3958-S1010** – Large U-shaped BSW Shield Connector with 10" of #10 AWG wire and a hook terminal.

Standard packaging: 100/bx, 16 lb/bx.



# U-Shaped BSW Shield Connectors

## BARP Series – Spark Gap Shield Termination

### Description

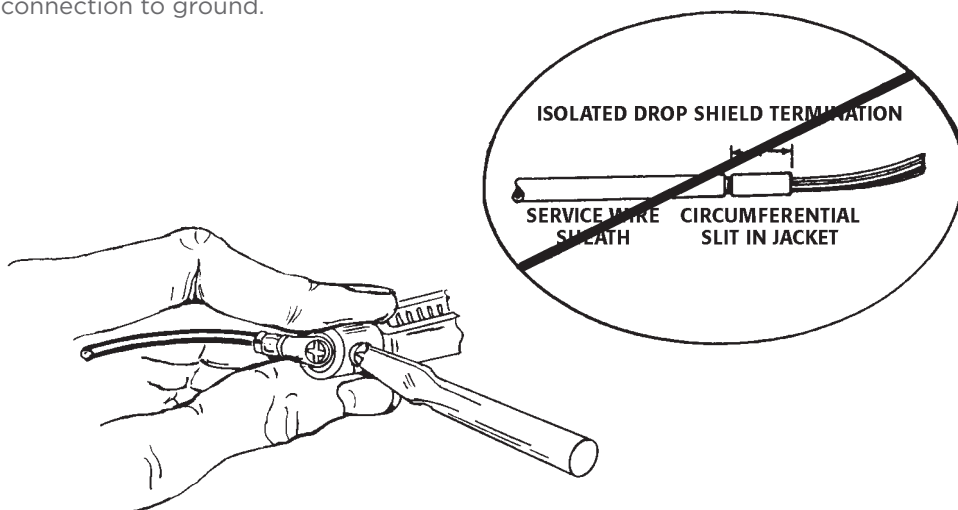
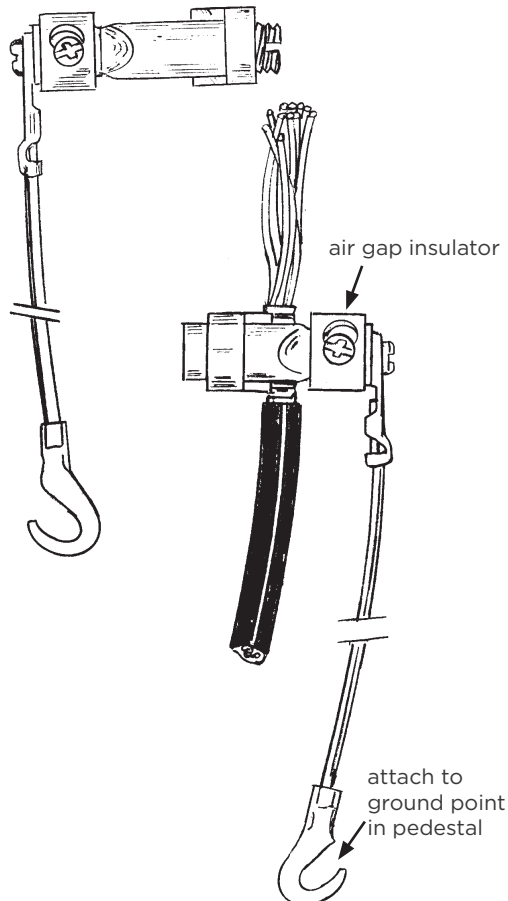
These clamps are designed for use in the distribution pedestal where an indirect or isolated type of connection is desired. This method of termination prevents the shield of the buried service wire from becoming a conductor of unwanted stray voltages, yet allowing higher voltages, such as lightning, to go safely to ground.

### Applications

Works with 2 pair–6 pair shielded buried service wire if the jacket can be stripped from the shield. Works with all of the major pedestals.

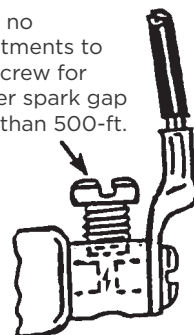
### Features

- The spark gap is built into the clamp itself, eliminating the craft-sensitive methods of termination, such as a circumferential knife cut in the jacket, or a buildup of electrical tape.
- Available with an insulator boot.
- Minimum spark-over voltage is 1–3 KV.
- Meets Bellcore criteria for lightning surge per spec #TR-NWT-001001.
- Spark gap electrodes can be easily bypassed, if desired, by tightening the side screw in the insulator. This bridges across the electrodes, making a direct connection to ground.

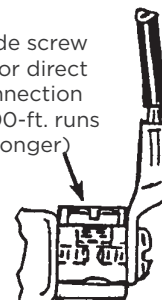


Loosen side screw, rotate plastic collar to the larger portion of the slot, and re-tighten.

Make no adjustments to this screw for proper spark gap (less than 500-ft. runs)



\*Side screw in for direct connection (500-ft. runs or longer)



See next page for ordering information.



## U-Shaped BSW Shield Connectors

### BARP Series – Spark Gap Shield Termination

#### Connector with 10" Lead, #10 AWG

##### Ordering information

EM-3955-BARP

Spark Gap U-Shaped BSW Shield Connector with 10" #10 AWG flexible lead and hook terminal.

Standard packaging: 10/bg, 100/bx, 14 lb/bx.



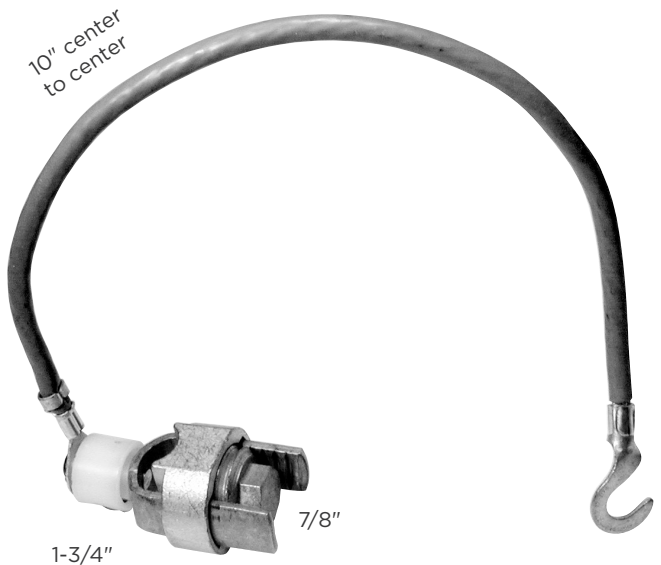
#### Larger Diameter Connector with 10" Lead, #10 AWG

##### Ordering information

EM-3958-S1010BARP

Spark Gap U-Shaped BSW Shield Connector works with large diameter 6 pair/19 AWG shielded buried service wire.

Standard packaging: 100/bx, 17 lb/bx.





# U-Shaped BSW Shield Connectors

## BARP Series – Spark Gap Shield Termination

RUS Listed

### Connector with 15" or 36" Lead, #6 AWG

#### Ordering information

##### EM-3955-6S/8100-15 BARP

Spark Gap U-Shaped BSW Shield Connector with 15" #6 AWG flexible lead, ring terminal, PVC insulator hood, and warning tag.

Standard packaging: 100/bx, 27 lb/bx.

##### EM-3955-6S/8100-36 BARP

Spark Gap U-Shaped BSW Shield Connector with 36" #6 AWG flexible lead, ring terminal, PVC insulator hood, and warning tag.

Standard packaging: 100/bx.

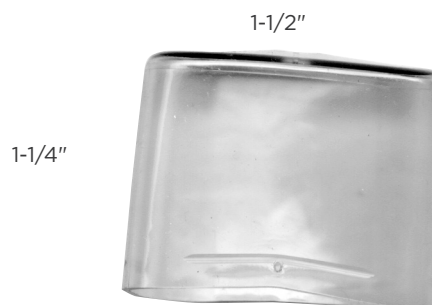


### Clear PVC Insulator Hood

#### Ordering information

EM-3902

Can be ordered separately.



## Optional Accessories

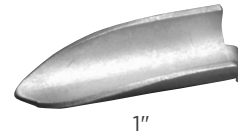
### Pair Protector

#### Ordering information

EM-3905

Standard packaging: 100/bg, 1000/bx, 6 lb/bx.

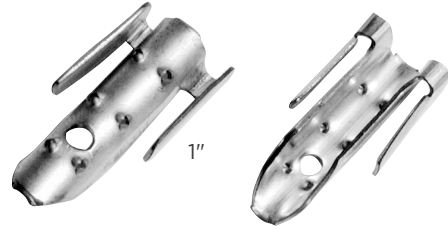
Also available singly with BSW shield connector by adding suffix -P to the part number.



### Double-Tab Pair Protector with Blossoms

#### Ordering information

EM-3900-04



### Pair Protector with Two Tabs

#### Ordering information

EM-3900-2

For use in single or multiple BSW applications, for built-in strain relief.



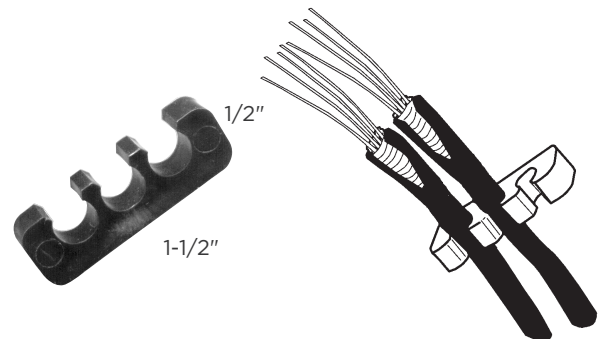
### Buried Service Wire Holder

#### Ordering information

EM-3906 – BSW holder for 3-pair BSWs

EM-3904 – BSW holder for 2-pair BSWs

For positioning and holding BSW in long yoke BSW connectors.



### Vinyl Boot Insulator

#### Ordering information

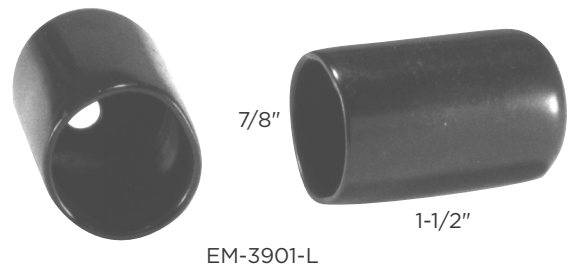
EM-3901 – 1" long, 7/8" dia.

EM-3901-M – 1" long, 1" dia.

EM-3901-L – 1-1/2" long, 7/8" dia.

Standard packaging: 25/bg, 100/bx, 2 lb/bx.

Also available singly with corresponding BSW connector by adding suffix -B to the part number.



# BSW Shield Connectors

## Buried Service Wire Floating Bond

The EM-FB series of buried service wire bonds are designed for a fast, easy, foolproof installation from the shield of a buried service wire to the ground point of a network interface device, protector, terminal, or pedestal.

### Features

- The connector opens like a book so the installer doesn't have to thread the pairs through the connector.
- The conductor pairs emerge from the top of the connector, eliminating the danger of pinching the pairs between the two halves of the clamp.
- Works with 2-pair through 6-pair buried service wire.
- Wire lead allows the bond to "float" so that frost, vibration, ground shrinkage, and settling won't contribute to shield breakage.
- Connector wraps completely around the shield for greater surface area contact.
- Compact design fits in many of today's crowded enclosures.
- Available with #10, #12, or #14 AWG wire lead, in any length.
- Available with a hook, fork, ring, or flag terminal.

### Ordering information

Standard part number: **EM-FB-1406F** – Connector with a #14 AWG wire, 6 inches long, fork terminal.

cULus Listed, 93D6: #10 AWG wire, any length, any terminal.

### Variations:

- Wire gauge can be changed with the first two numbers: EM-FB-\_\_06F (#10, #12, #14 AWG)
- Wire length can be changed with the last two numbers: EM-FB-14\_\_F (2"– 36")
- Terminal can be changed with the last letter: EM-FB-1406\_ (F, H, R, FL)



F = fork



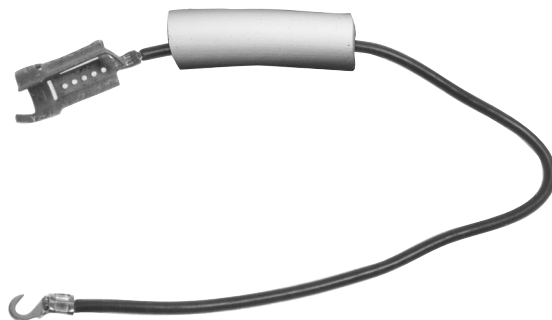
H = hook



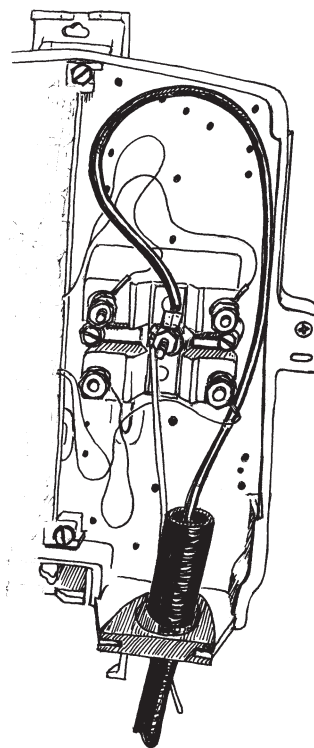
R = ring



FL = flag



Closeup, after  
attaching to  
buried service wire



Installation in a  
NID

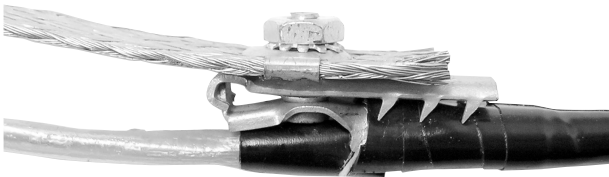
## Rocket 88 – Buried Service Wire Shield Connectors

### Description

A small radius shield connector.

### Features

- Brass for strength and conductivity
- Tin plated for corrosion compatibility with aluminum, copper, and steel
- Shaped bottom plate facilitates insertion into small cables and buried service wires
- Teeth on top plate give high pull-out strength.
- Standard size stud accommodates all bonding and grounding harnesses.
- Meets Bellcore electrical specifications
- Circular, rounded bottom plate electrically isolates shield from cable pairs to prevent shorts and grounds.
- Designed to work with corrugated or flat/bonded shields
- Provides excellent pullout strength without punching a stud hole
- Universal design



### Applications

- Bonding and grounding buried service wires (2-12 pairs)
- Bonding and grounding small cables up to 25 pair

### Ordering information

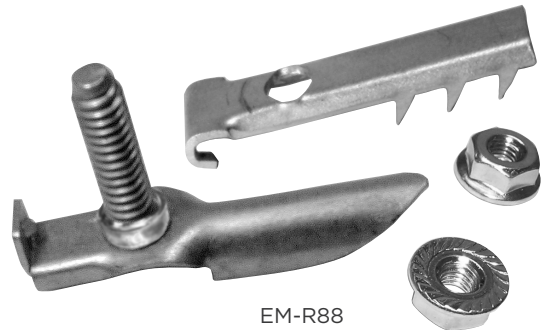
**EM-R88** – Small radius shield connector: bottom plate with stud, top plate, two star washer nuts, used to bond and ground 2- to 4-pair buried service wires. See suffix -E for larger count buried service wire and cables.

Add suffix -TSH for torque shear nut.

Add suffix -B for blossoms on bottom plate.

Add suffix -S for short stud.

Add suffix -E for expanded radius, to accommodate 5- to 12-pair cables.



EM-R88



EM-R88-TSH  
torque shear nut



EM-R88-B  
blossoms



EM-R88-S  
short stud

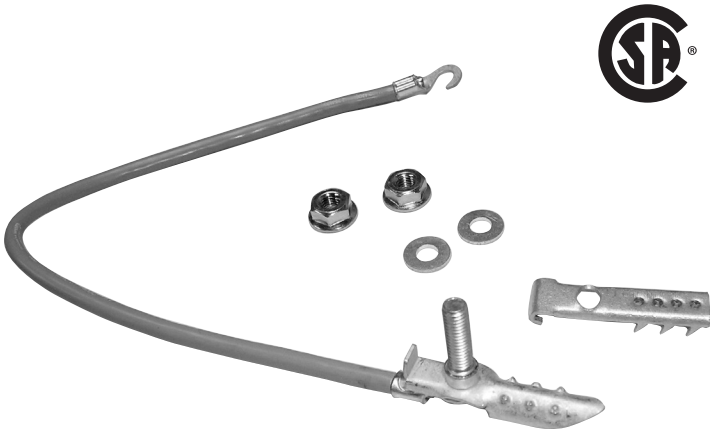
# Rocket 88 Shield Connectors

## Rocket 88 – Shield Connectors with Attached Leads

### Cat 3-7 Shield Connectors

#### Description

This all-inclusive shield connector can be used to terminate both buried and aerial service wires manufactured with a metallic shield, as well as inside wiring for equipment grounds. Comes with a factory-mounted #10 flexible lead that provides a simple way for the technician to bond and ground the shield of the service wire where the ground post or point is distanced from the wire terminal or protector block. Also works well in situations where access to the station equipment is tight or wire rework is expected.



#### Options

- #10 lead is available in any length specified.
- Lead can be provided as loose piece (separate from connector).
- Available with ring or hook terminals

#### Features

- Designed to work with corrugated or flat/bonded shields
- Provides excellent pullout strength without punching a stud hole
- Universal design

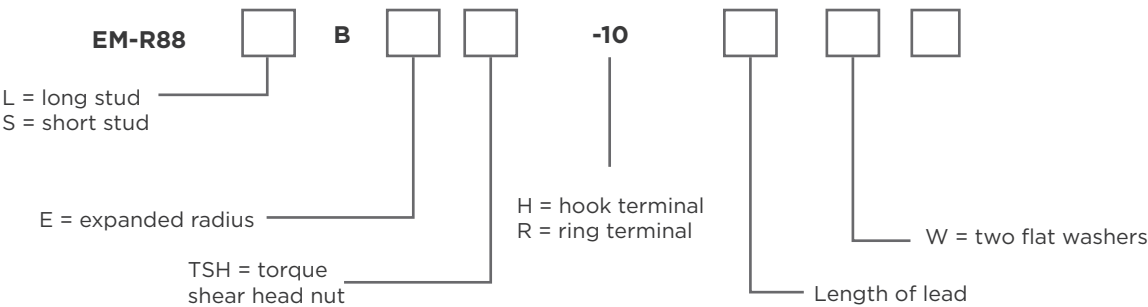
#### Ordering information

**EM-R88LB10H10** – Small radius shield connector for 2–4 pairs, with 10" #10 lead

**EM-R88LBE10H10** – Expanded radius shield connector for 5–12 pairs, and cables up to 25 pairs, with 10" #10 lead

**EM-R88LB10P24** – Cat. 5 25-pair shield connector with expanded radius and blossoms. #10 AWG stranded wire, green insulation, with plain end (no terminal), 24" long, with two flat washers, one whiz nut

### Part Numbering Variations Matrix



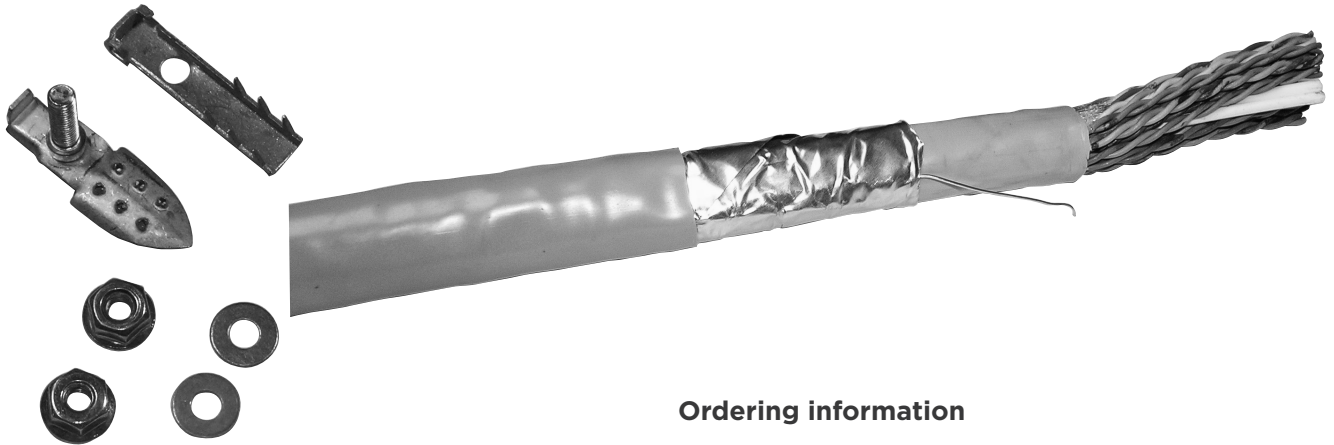
Example:

**EM-R88LBE-10R12 =**

Shield connector with long stud, expanded radius, 12" #10 lead with a ring terminal.

# Rocket 88 Cat 5 Cable Shield Connectors

## Shield Connectors for Cat 5 Cables



### Ordering information

#### EM-R88LB

2-6-pair Cat. 5 Cable Shield Connector with long stud and blossoms.

#### EM-R88LBE

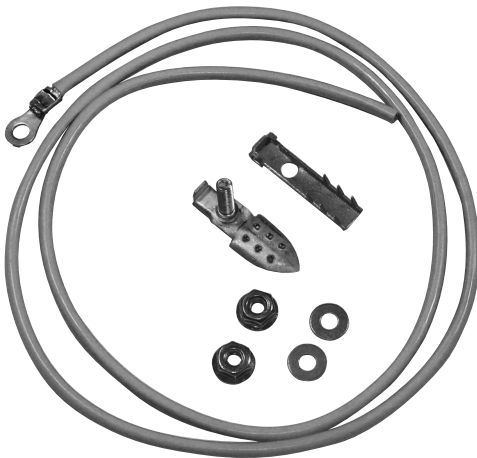
25-pair Cat. 5 Cable Shield Connector with long stud, blossoms, and expanded radius.

#### EM-R88LBE-CS1036P

25-pair Cat. 5 Cable Shield Connector with long stud, blossoms, expanded radius, and 103" #10 AWG stranded wire with green insulation, with a ring terminal on one end.

#### EM-R88LBE-10H10

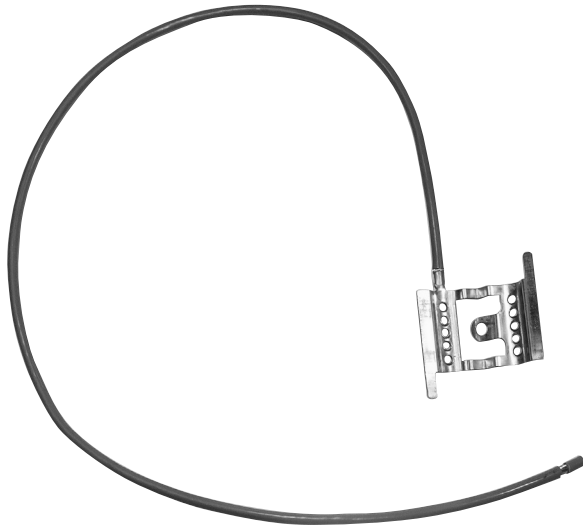
25-pair Cat. 5 Cable Shield Connector with long stud, blossoms, expanded radius, and 10" lead, #10 AWG, with #10 hook terminal. No washers, one nut.





## Shield Connectors

### 25-Pair Cat 5 Cable Shield Connector



Extra-large shield connector for 25-pair Cat. 5 cable, with #10 AWG stranded wire with green insulation crimped to connector 36" long and plain end (no terminal).



#### Features

- Connector surrounds the shield almost 360°
- Crimps with standard 9" pliers
- Lead wire provides maximum float
- Blossoms on inside make contact through blue coating

#### Ordering information

EM-FBXL25

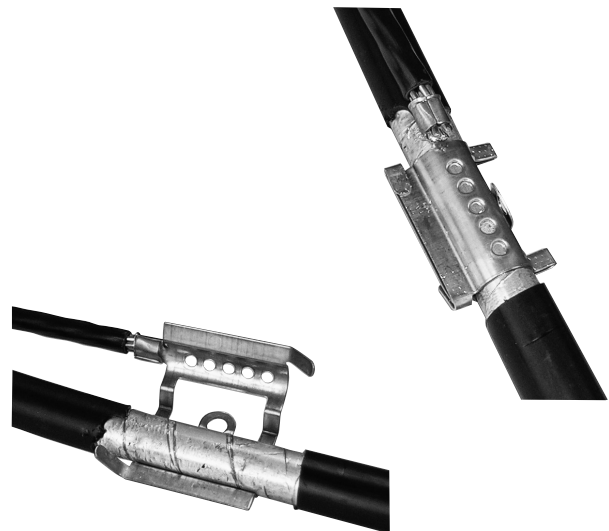
### 25-Pair Cat 5 Cable Shield Connector

Extra-large shield connector for 500 coaxial cable, attached to 30"-long #6 AWG 7-strand wire with black insulation and plain end (no terminal).

Packaged with two-hole copper compression terminal lug and tie wrap.

#### Ordering information

EM-FBXL-500-7S-30





## Shield Connector for 12-Pair Stub Cable, #10 lead

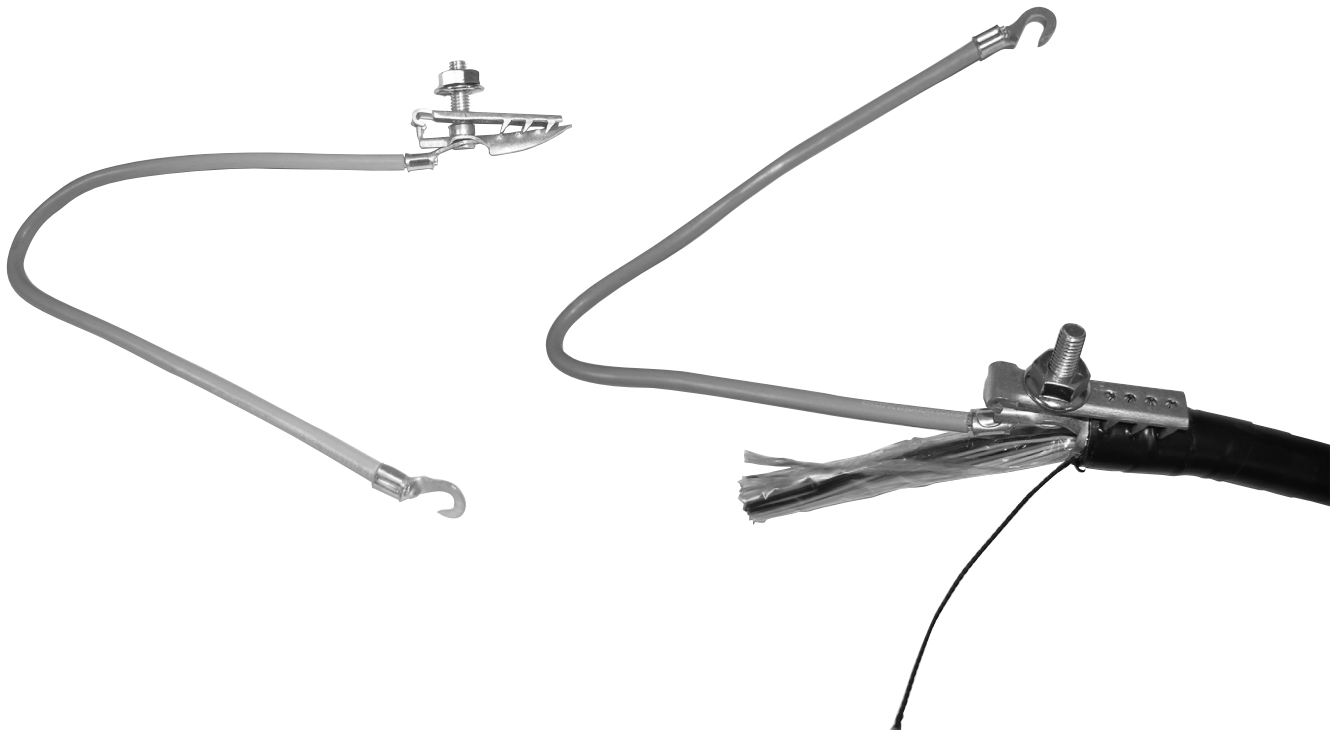


### Description

EM-R88 shield connector with a .350" radius and blossoms on the bottom plate. 10" lead, #10 AWG, with #10 hook terminal. No washers, one nut.

### Ordering information

EM-R88LB350-10H10 – Shield connector for 12-pair stub cable



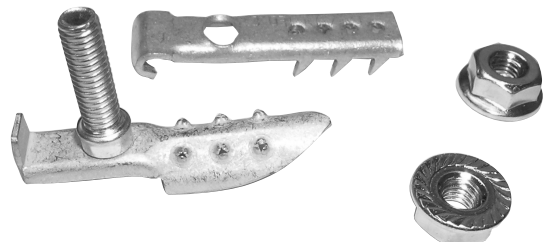
## Shield Connector for 12-Pair Stub Cable

### Description

EM-R88 shield connector with a .350" radius and blossoms on the bottom plate, same as above, with no lead. No washers, one nut.

### Ordering information

EM-R88LB350 – Shield connector for 12-pair stub cable



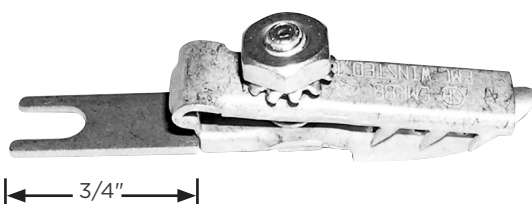
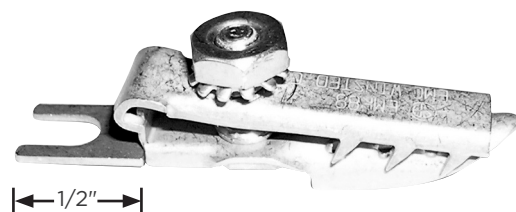
# Rocket 88 Shield Connectors

## Rocket 88 Shield Connectors with Rigid Bars



### Shield Connectors with Rigid Bars

Rocket 88 shield connector with blossoms, with attached rigid, forked bar. Available in any length. Used to ground buried service wire and small diameter cables where a ground post or stud is provided. EM-R88BE-R and EM-R88BE-RXT may also be used to ground the shield of small cables up to 25 pairs. Custom fork length are available.



### Ordering information

**EM-R88B-R** – With short fork, accommodates 2- to 4-pair buried service wire

**EM-R88BE-R** – With short fork, for 5- to 12-pair BSW

**EM-R88B-RXT** – With long fork, for 2- to 4-pair BSW

**EM-R88BE-RXT** – With long fork, for 5- to 12-pair BSW

Add suffix -TSH for torque shear nut.

Add suffix -S for short stud (shown at right).

### At a glance . . .

Part Number	Accommodates	Distinguishing Features	Listing
<b>EM-R88</b>	2-4 Pair bsw		CSA
<b>EM-R88-TSH</b>	(Same)	Torque shear head nut	CSA
<b>EM-R88-B</b>	(Same)	Blossoms on bottom plate	CSA
<b>EM-R88-S</b>	(Same)	Short stud	CSA
<b>EM-R88E</b>	5-12 Pair bsw	Expanded radius	CSA
<b>EM-R88LB10H10</b>	2-4 Pair bsw	10" #10 flexible harness	CSA
<b>EM-R88LBE10H10</b>	5-12 Pair bsw	10" #10 flexible harness, expanded radius	CSA
<b>EM-R88B-R</b>	2-4 Pair bsw	Blossoms, attached 1/2" fork	CSA
<b>EM-R88BE-R</b>	5-12 Pair bsw	Blossoms, attached 1/2" fork, expanded radius	CSA
<b>EM-R88B-RXT</b>	2-4 Pair bsw	Blossoms, attached 3/4" fork	CSA
<b>EM-R88BE-RXT</b>	5-12 Pair bsw	Blossoms, attached 3/4" fork, expanded radius	CSA
<b>EM-R88B __ -TAB</b>	2-4 Pair bsw	Blossoms, removable fork	CSA
<b>EM-R88LB350-10H10</b>	12-Pair stub cable	Blossoms, 10" #10 flexible harness, .350" radius	CSA
<b>EM-R88LB350</b>	12-Pair stub cable	Blossoms, .350" radius	CSA

## Rocket 88 Shield Connectors with Rigid Bars

### Shield Connectors with Removable Fork Tab

Rocket 88 shield connector with breakaway rigid, forked lead. Lead (or tab) is 1/2" long. Used for bonding and grounding buried service wire and small diameter cables at pedestals, terminals, NIDs, station protectors, or buried splices. May also be used to ground the drain wire and/or metallic foil shield of new generation aerial service wires.

#### Applications

- Bonding and grounding buried service wires (2-12 pairs)
- Bonding and grounding small cables up to 25 pair

#### Features

- Universal design reduces the number of parts carried on service vehicle.
- Can be connected to a ground post (with fork) or to an eyelet or ground bar with holes (with stud).
- Designed to ground either corrugated or flat bonded shields.
- Fork length can be manufactured to suit specific applications.
- Simple to install, significantly reduces installation time.

#### Ordering information

EM-R88-B\_\_ -TAB -

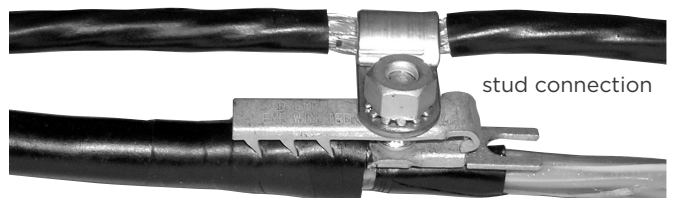
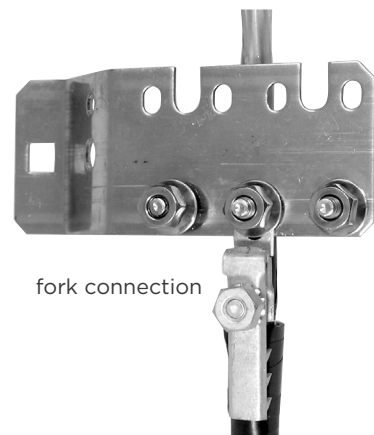
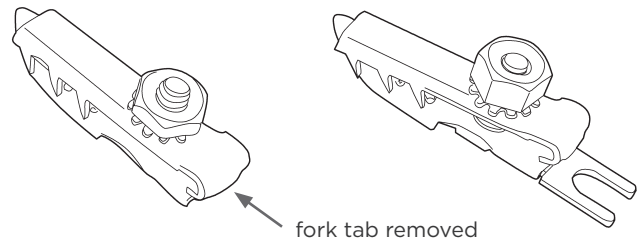
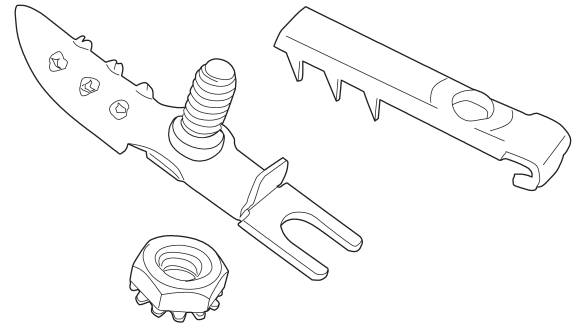
Two- to four-pair shield connector with breakaway rigid lead. See suffix -E for larger count buried service wire and cables up to 25 pairs.

Add suffix -S f or short stud (shown at right).

Add suffix -E for expanded radius to accommodate 5-25 pairs.

Add suffix -TSH for torque shear nut.

Add suffix -XT for long tab (3/4").



# Rocket 88 Shield Connectors

## Rocket 88 Accessories

### Grounding Harness

This versatile harness is perfect for grounding the shield of buried service wires within pedestals and terminals where wire management is important. Hook or ring terminal permits easy connection to standard ground bar or post. Permits the technician to freely install the R88 bond clamp and then make the connection to ground. Available in custom configurations, #6 or #10 stranded AWG, green or black insulation. Comes assembled with five high-quality flag terminals and one hook or ring terminal.

#### Ordering information

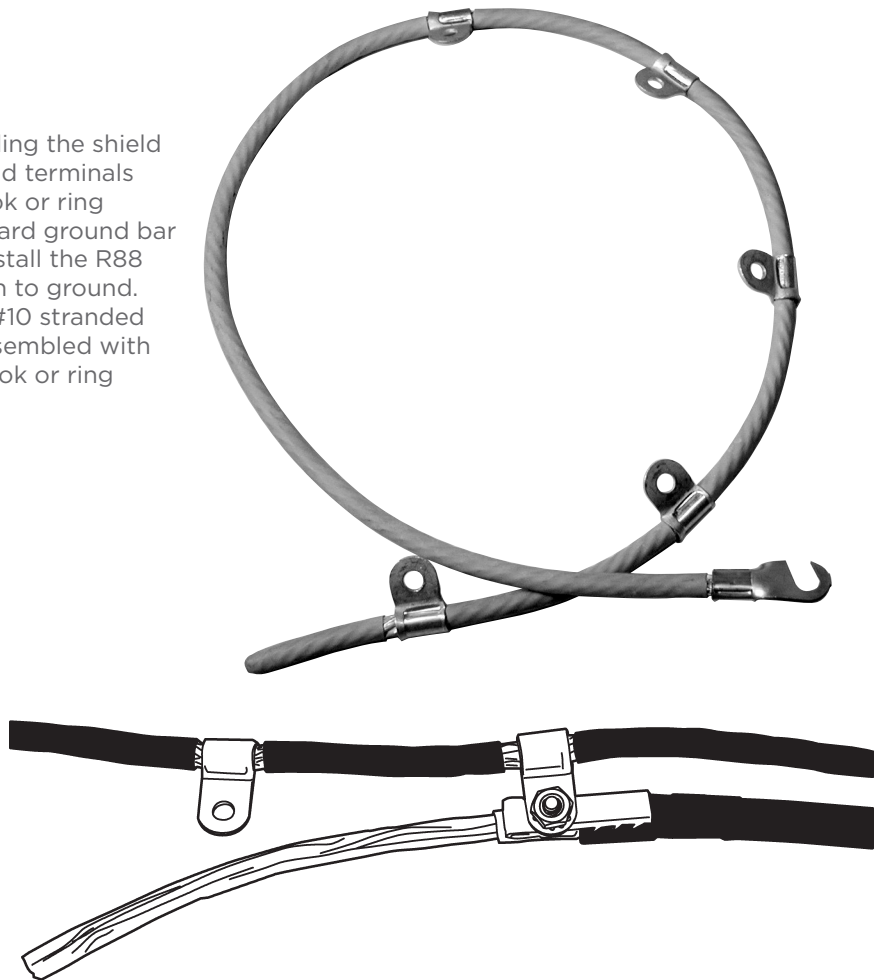
EM-R88H-XX

Add suffix -G for green insulation.

Add suffix -B for black insulation

Add suffix -10 for #10 AWG

Add suffix -6 for #6 AWG

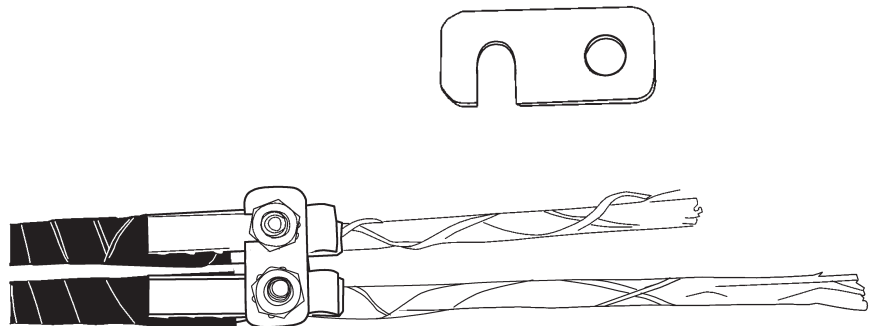


### Bridge Connector

Ideal for bonding the shields of buried service wire at splice locations. Small size works well with standard repair and closure systems. Equivalent to #6 AWG, tin plated.

#### Ordering information

EM-R88-BC – Bridge Connector



## Shielded Aerial Service Wire Bond Kit

This kit consists of one shield connector for shielded aerial service wire, and one 32"-long piece of clear green Microbond.

### Application

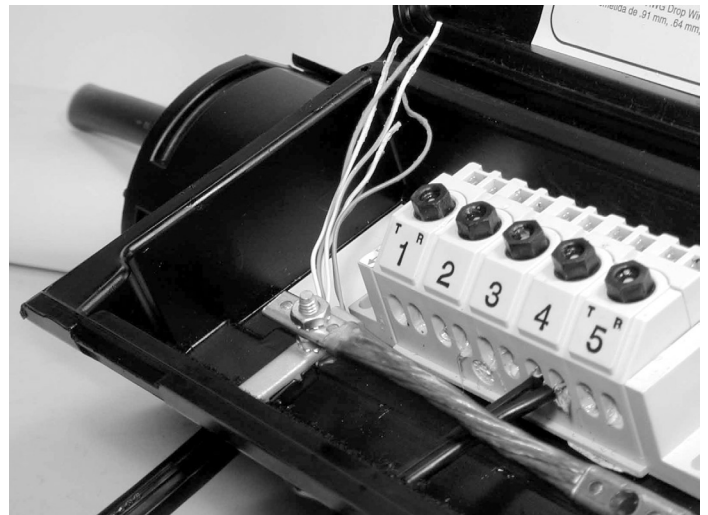
Bonding multiple shielded drop wires at aerial terminals.



### Ordering information

**EM-3923 KIT** – Shielded Aerial Service Wire Bond Kit

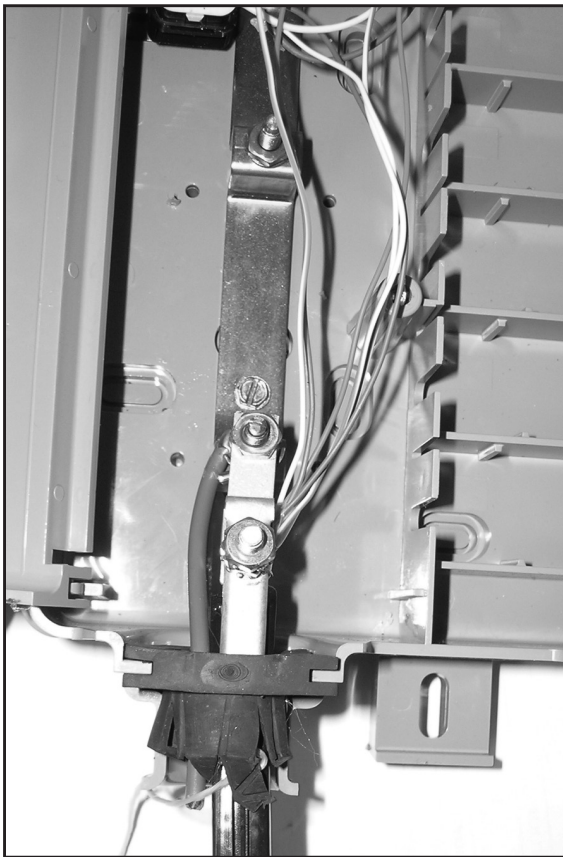
**EM-3923** – Connector only: top plate, bottom plate, two nuts



## Shield Connectors

### Shielded Aerial Service Wire Bond Kit for NIDs

Shield connector with bottom and top plates and one star washer nut, and 6" #10 AWG harness with #10 ring terminal on one end, #10 hook terminal on the other.



#### Ordering information

**EM-3925** – Shielded Service Wire Bond Kit for NIDs

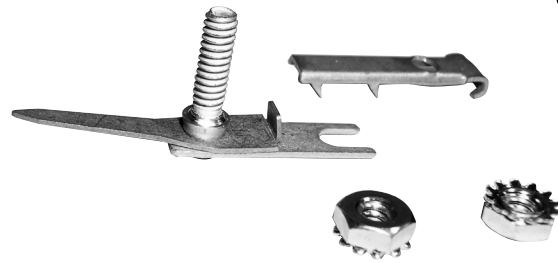
**EM-3925R** – Shielded Service Wire Bond Kit for NIDs, with #10 ring terminal on each end.

## Shielded Aerial Service Wire Connector

Shield connector with long stud, short breakaway rigid lead fork, and two nuts.

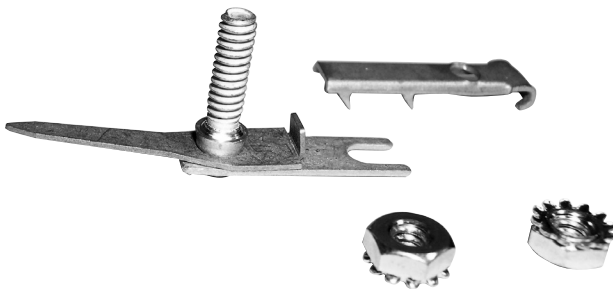
### Ordering information

EM-3928 – Shielded Aerial Service Wire Connector



## Shielded Aerial Service Wire Bond Kit for NIDs

Shielded aerial service wire kit includes 32" of Microbond with green insulation (see page G16), with one end stripped, and one EM-3928 shield connector with long stud, short breakaway rigid lead fork, and two nuts.



### Ordering information

EM-3928 KIT – Shielded Aerial Service Wire Ground Kit



## Shield Connectors

### Shield Connector for T1 Cable

Two shield connectors attached with a bridge connector, with 10" #10 AWG lead and 1/4" hook terminal.

#### Ordering information

EM-3928GLWC – Shield Connector for T1 Cable



### Bonding Coin

#### Ordering information

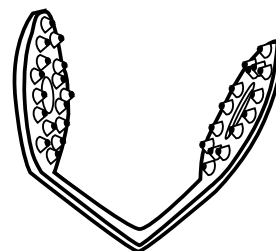
EM-0055

Bonding coin with protrusions on each side, and two flat washers. 1-5/16" center to center

Standard packaging: 100/bx, 2 lb/bx.

EM-0056

13/16" center to center



### Bonding Stud Coin

#### Ordering information

EM-0057

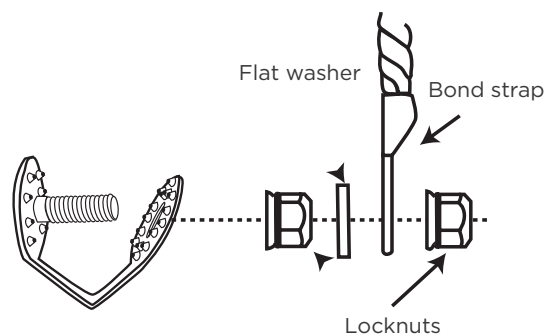
Bonding coin with protrusions on each side, attached bolt, one flat washer, and one nut with compression washer.

Standard packaging: 100/bx, 3 lb/bx.

EM-0058

Bonding coin with 8 protrusions on each side, attached bolt, one flat washer, and two nuts with compression washers.

Standard packaging: 1000



## Fiber Optic Cable Shield Connectors

This tool is designed to punch through the shield and sheath of a cable. The spring-loaded handles allow easy, convenient operation. The reach is controlled by an adjustable gauge.

### Ordering information

#### EM-HPT

**EM-HPT(S)** - To make it easy to punch holes in cable sheath/shield to accommodate either single- or double-stud B-bond, TS, or RS shield connectors, this version of the hole punch tool is marked at the three appropriate positions.



# Fiber Optic Cable Shield Connectors

A fiber optic shield connector for both shielded fiber and shielded with strength members (LXE). Available with anti-crush devices for three different shield sizes: .41", .48", .52". Also available with flexible insulated harness, or with tapped fork and loose 10/32 screw.

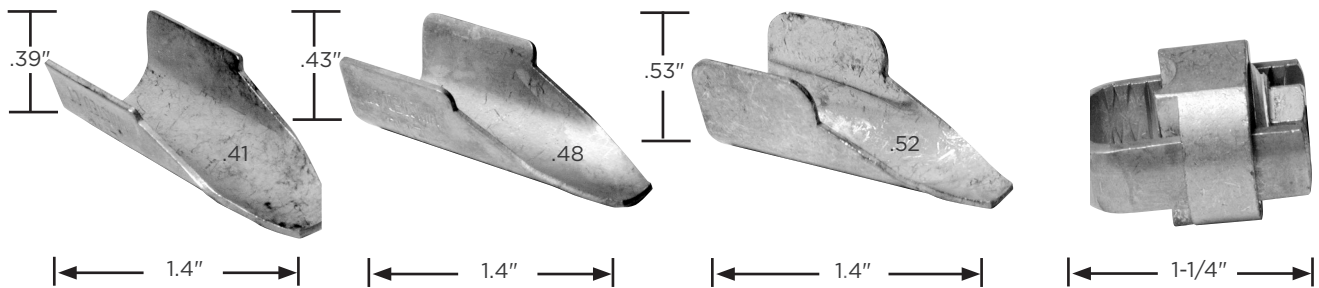
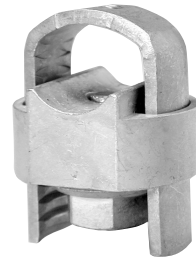
## Ordering information

**EM-3958-S** - Connector with no anti-crush device

Standard packaging: 10/bg, 100/bx, 14 lb/bx.

Anti-crush devices: add suffix to part number to indicate shield diameter: .41, .48, .52.

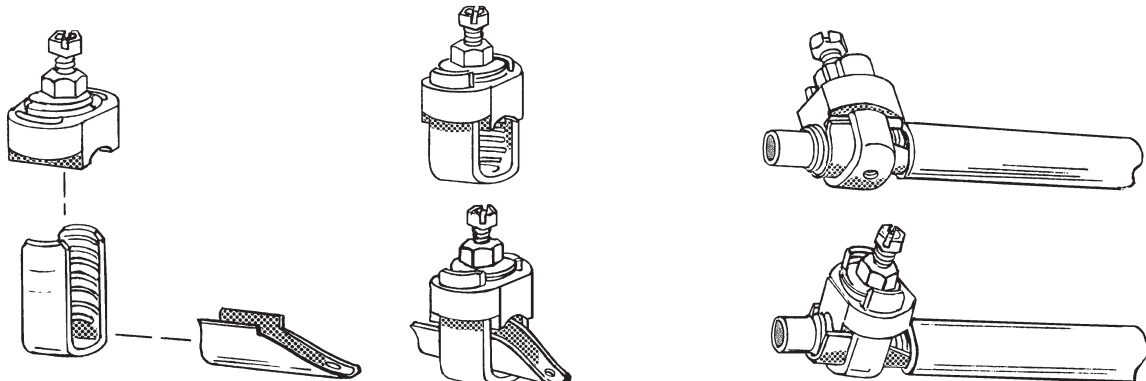
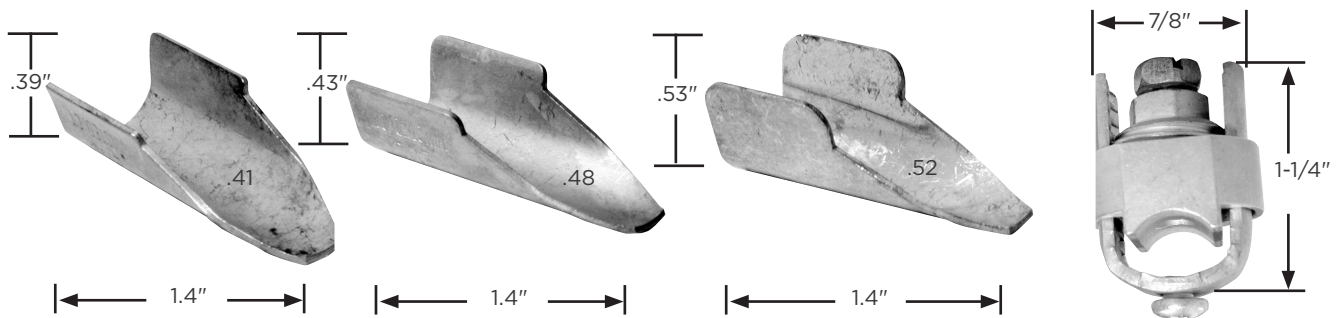
7/8"



**EM-3958-SS** - Connector with no anti-crush device, with tapped fork and loose 10/32 screw

Standard packaging: 100/bx, 13 lb/bx.

Anti-crush devices: add suffix to part number to indicate shield diameter: .41, .48, .52.



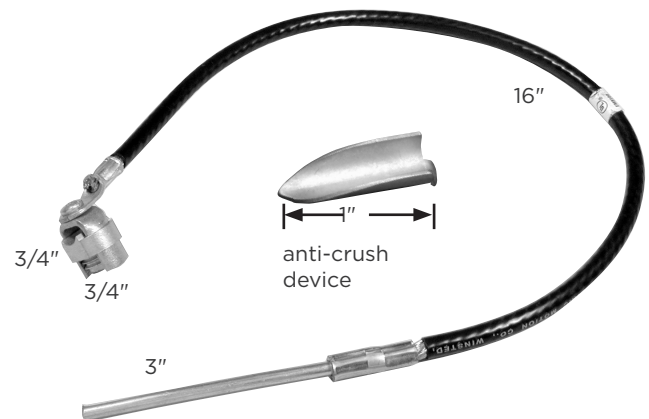
# Fiber Optic Cable Shield Connectors

With combination flexible (16") and solid (3") harness, and anti-crush device.

## Ordering information

EM-3956-163SP

Standard packaging: 1 kit/bg, 25 kits/bx, 14 lb/bx.

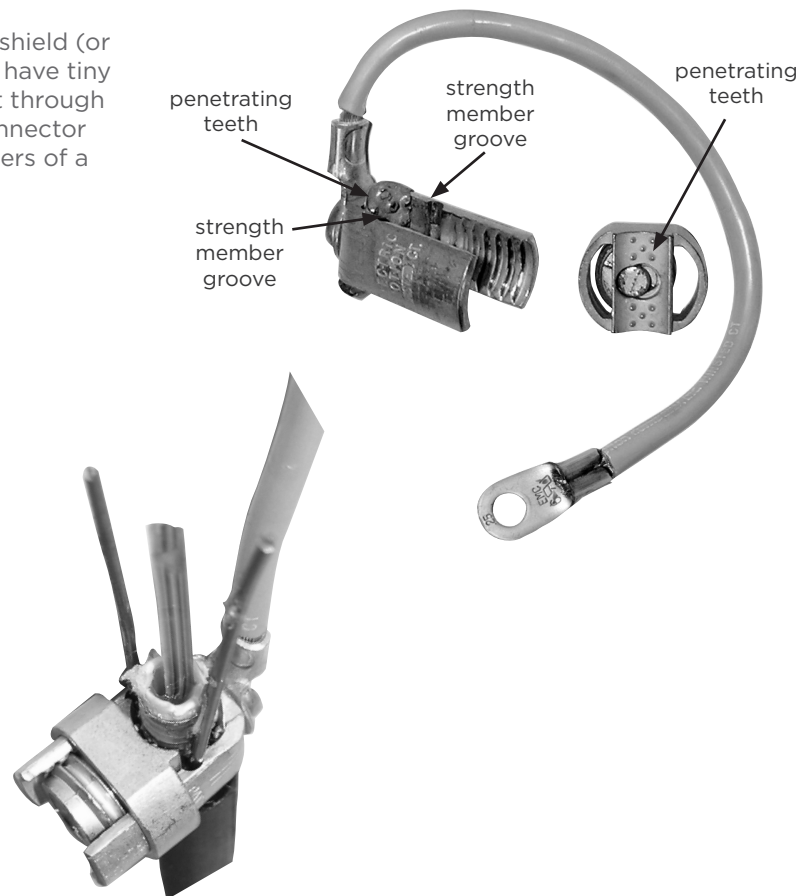


## Shielded Fiber Optic Drop Wire Shield Connector

Used for 6- or 12-fiber cable with a metallic shield (or armor). Inside of both yoke and pusher ring have tiny penetrating teeth to make electrical contact through the coating of the shield. The legs of the connector yoke have grooves to fit the strength members of a 12-fiber cable.

## Ordering information

EM-3956-DD



## Fiber Optic Cable Shield Connectors

6" insulated bonding harness (#10 AWG) with 3/8" ring terminal at one end, and fiber optic cable shield connector with blossoms at the other end.

### Ordering information

EM-6111

Standard packaging: 20/bd, 200/bx, 9 lb/bx.



Insulated bonding harness with 1/4" ring terminal at one end, and 3/4" x 3/4" fiber optic cable shield connector with 9 blossoms at the other end. Crimp termination and harness formed up at 45° angle from top surface of connector. Utilizes #6 AWG bonding harness.

### Ordering information

EM-6116-6 – 6" harness

EM-6116-8 – 8" harness

Standard packaging: 500/bx, 46 lb/bx.



EM-6116-12 – 12" harness

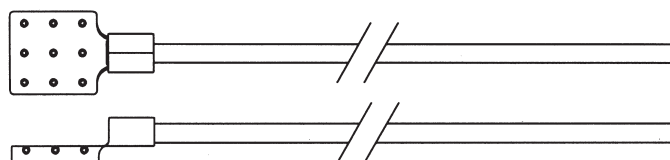
Standard packaging: 300/bx, 41 lb/bx.

EM-6116-15 – 15" harness

Cable shield connector, straight with a crimp sleeve and 26" of solid #6 tinned.

### Ordering information

EM-6116-26T

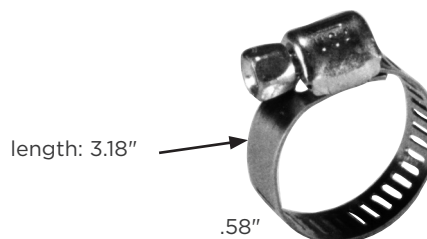


## Hose Clamp

### Ordering information

EM-6112

Standard packaging: 20/bg, 100/bx, 3 lb/bx. No minimum order.



## Cross Connect/Frame & Jumper Wire

A twisted pair of #22 or #24 AWG tinned, solid copper conductor with a semi-rigid PVC insulation. Used on distributing frames and cross-connecting racks, and for wiring various central office equipment. Standard lengths are 250, 400, 800, 1000 feet/spool. Standard color combinations are: red/white, violet/white, blue/white, green/white, orange/white, black/white, brown/white. A twisted pair of #22 or #24 AWG tinned, solid copper conductor with a semi-rigid PVC insulation. Used on distributing frames and cross-connecting racks, and for wiring various central office equipment. Standard lengths are 250, 400, 800, 1000 feet/spool. Standard color combinations are: red/white, violet/white, blue/white, green/white, orange/white, black/white, brown/white.



### Ordering information:

#22 AWG:

**EM-0222** RW-XXX (length)

**EM-0222** GW-XXX

**EM-0222** VW-XXX

**EM-0222** BKW-XXX

**EM-0222** BW-XXX

**EM-0222** BR-XXX

#24 AWG:

**EM-0224** GW-XXX

**EM-0224** OW-XXX

**EM-0224** RW-XXX

### Shipping information—standard packaging

#22 AWG:

250' sp, 24 sp/bx

400' sp, 20 sp/bx

800' sp, 12 sp/bx.

1000' sp, 12 sp/bx

#24 AWG:

250' sp, 24 sp/bx

400' sp, 20 sp/bx

800' sp, 24 sp/bx

1000' sp, 12 sp/bx

EM-0224 BR-800 CT5 - 1 pr #24 AWG blue/red, 800 ft spool, Cat. 5 twist.

## 5-Conductor Twisted Wire, #22 or #24 AWG



Tinned conductor, PVC insulation. For T1 lines. Fifth conductor can be used for tracing. Colors: red/green/white/black/blue or any other combination.

### Ordering information:

**EM-0522** RGWBKBL-XXX (length) #22 AWG

**EM-0524** RGWBKBL-XXX (length) #24 AWG

## Miscellaneous

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### Foam Tape

Open cell plastic tape for centering wire works in a closure.

#### Ordering information :

**EM-4800** – 2-1/2" x 1/4" x 72"

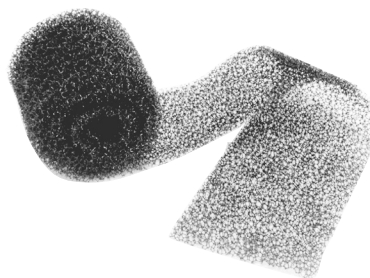
*Standard packaging: 100 rl/bx, 8 lb/bx*

**EM-4804** – 4" x 1/4" x 72"

*Standard packaging: 50 rl/bx, 7 lb/bx*

**EM-4808** – 18" x 1/4" x 72"

*Standard packaging: 20 rl/bx, 12 lb/bx*



### Warning Tags

#### Ordering information

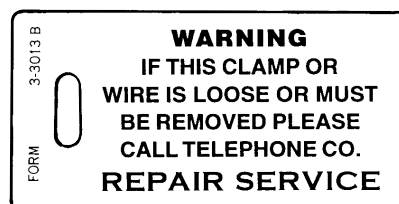
**EM-3040-TAG** Round "INTERNAL GROUND DO NOT REMOVE" tag. Plastic, UV resistant.

*Standard packaging: 500/bx, 25/bg, 2 lb/bx.*



**EM-5050-TAG** Rectangular "WARNING" tag. Plastic, UV-resistant.

*Standard packaging: 2 lb/ 200 pcs.*



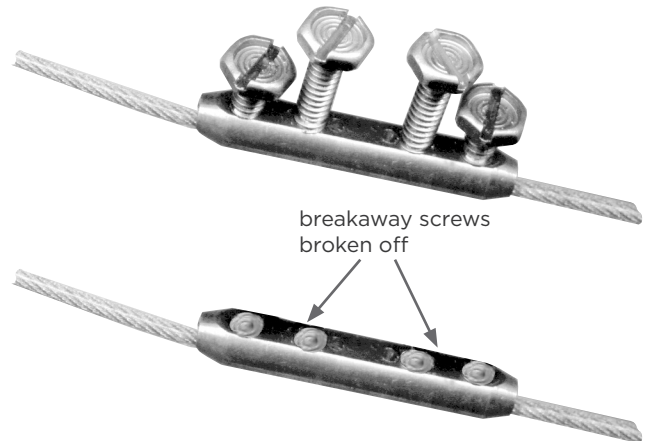


## Toning Wire Connector

### Ordering information

EM-4543

Standard packaging: 2/bg, 50/bx, 5 lb/bx.



## Toning Wire

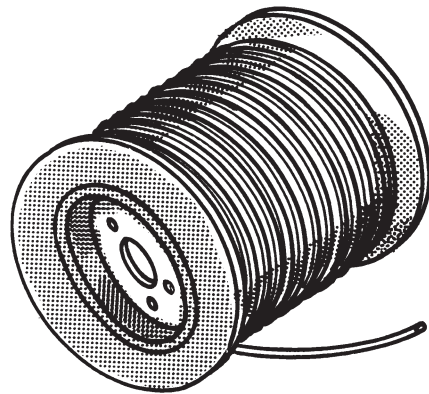
1/16" diameter, stainless steel cable, 7 x 7 construction, vinyl coated.

### Ordering information :

EM-4545 2.5 - 2,500-ft. spool, 29 lb

EM-4545 5.0 - 5,000-ft. spool, 52 lb

EM-4545-XXXX - XXXX = any requested length



## Miscellaneous – Ground Bars

### Ground Bars

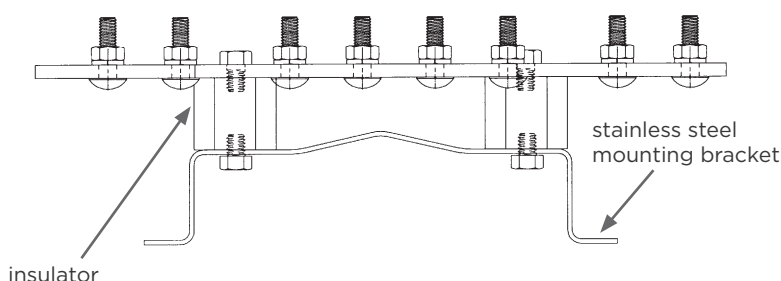
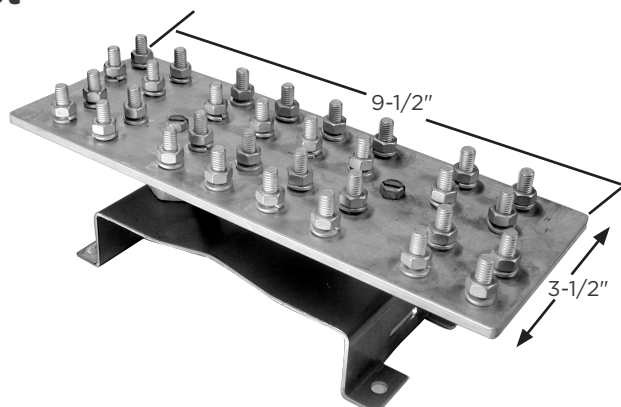
#### 16 Position Ground Bar with Bracket

3/4" spacing, 8 positions on top, 8 on bottom.  
9-1/2" long, 3-1/2" wide. Tin plated. Two insulators,  
1" thick. 6mm studs. Stainless steel mounting  
bracket for mounting on pole or on side of building.

#### Ordering information:

EM-411675ISM6

Standard packaging: 2/bx, 9 lb/bx.



#### 6 Position Ground Bar

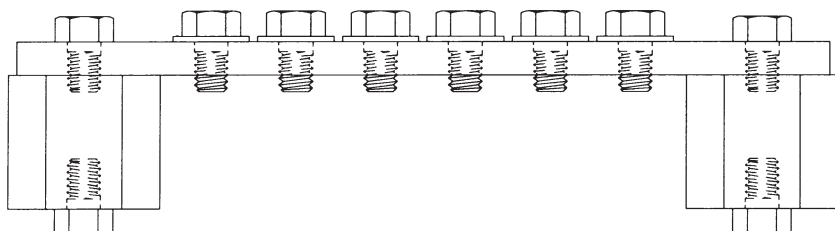
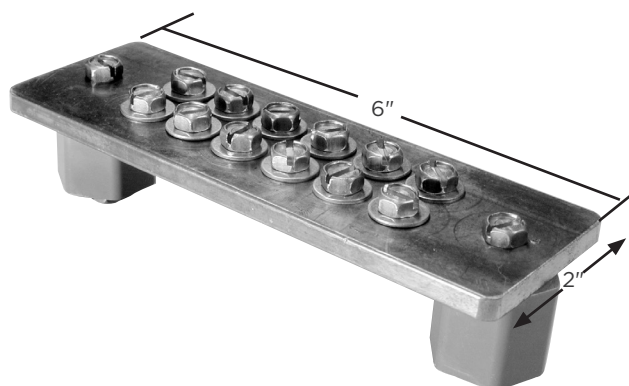
6" long, 5/8" spacing, two 5/16" diameter mounting  
holes. Six sets of 1/4 x 20 tapped holes, 8 sets brass  
hex screws, 6 sets flat washers, and two 1" long plastic  
insulators.

#### Ordering information:

EM-4120

Standard packaging: 10/bx, 14 lb/bx.

Add suffix -T for tin plating.



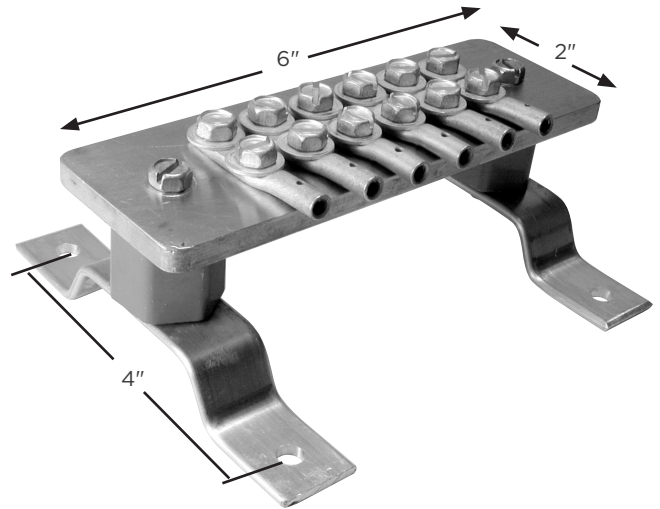
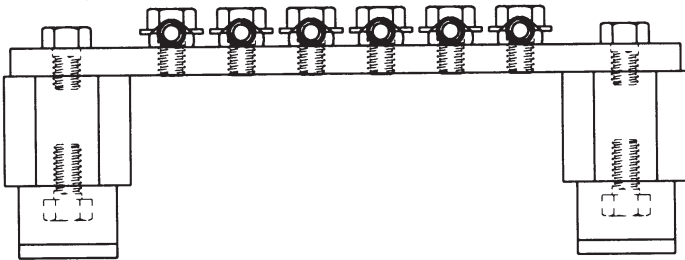
## 6 Position Ground Bar with Screw-on Terminals

6" long, 2" wide, 5/8" spacing, six mounting positions across. Mounting brackets attached, as well as six double-holed screw-on terminals.

### Ordering information:

EM-4120-1

Add suffix -T for tin plating.



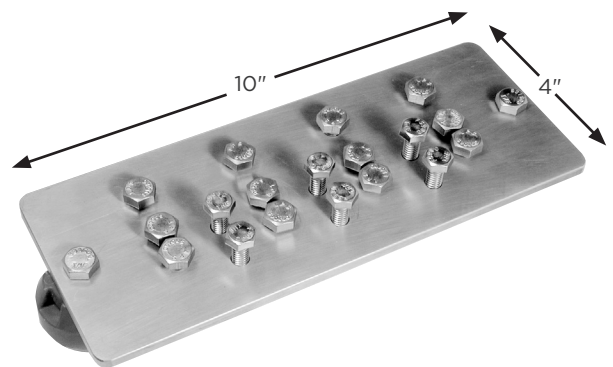
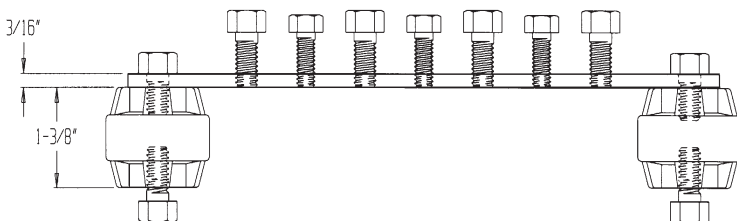
## 7 Position Copper Ground Bar

10" long, 4" wide, 5/8" spacing, 7 mounting positions across, and two isolator mounting holes, 3/8" thru. Pattern from left: 3 holes 3/8 x 16; 2 holes 5/16 x 18; repeat. Stainless steel hex head screws, Glastic isolators.

### Ordering information:

EM-4121

Standard packaging: 2/bx, 9 lb/bx.



## Miscellaneous – Ground Bars

### Ground Bars, continued

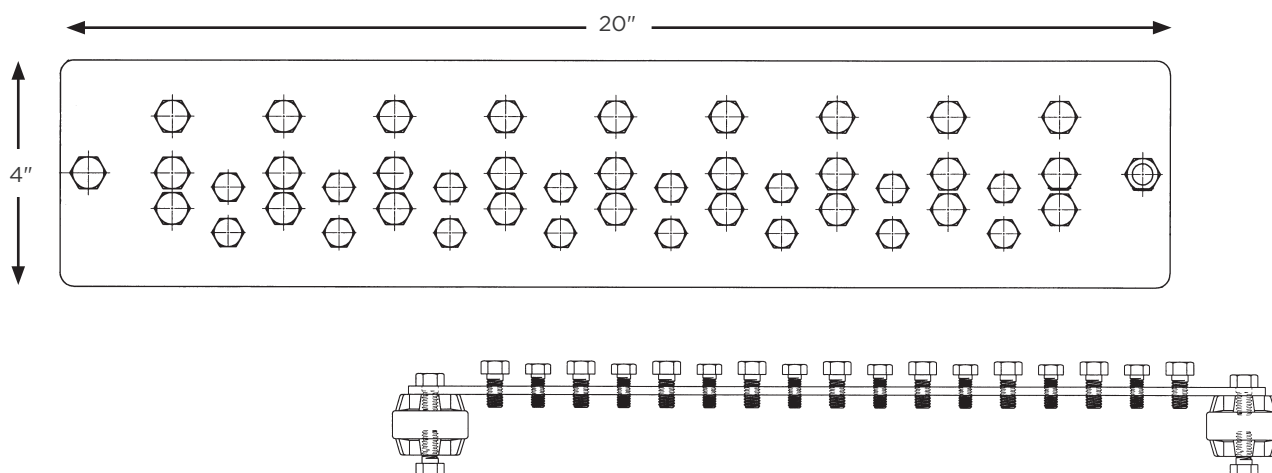
### 17 Position Copper Ground Bar

20" long, 4" wide, 5/8" spacing, 17 mounting positions across with hex head screws, and two insulators.

#### Ordering information:

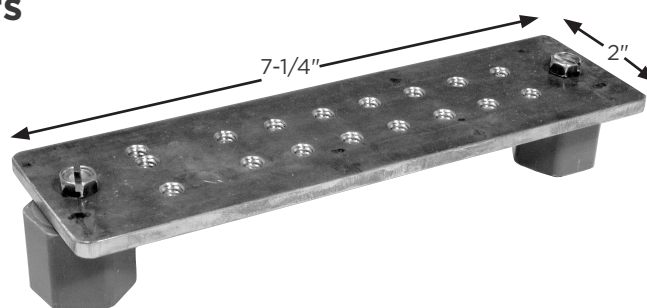
EM-4122

Standard packaging: 28 lb/4 pcs.



### 8 Position Ground Bar with Isolators

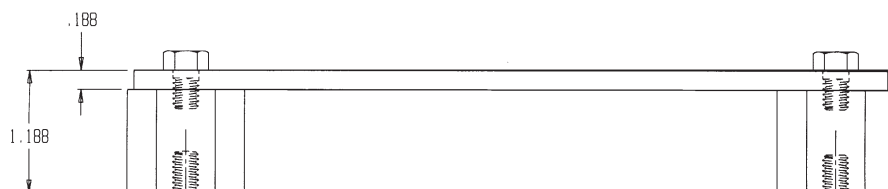
7-1/4" long, 2" wide, 5/8" spacing, two 5/16" diameter mounting holes.



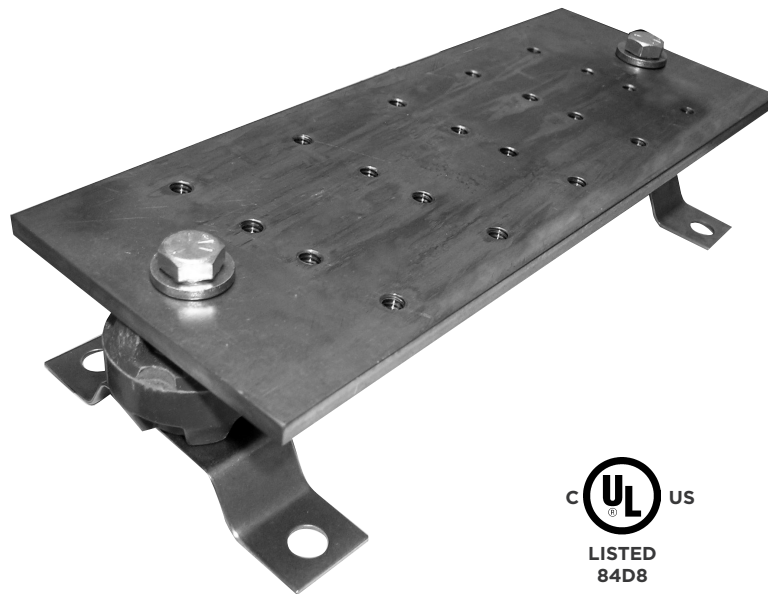
#### Ordering information:

EM-4123

Standard packaging: 15/bx, 16 lb.bx.

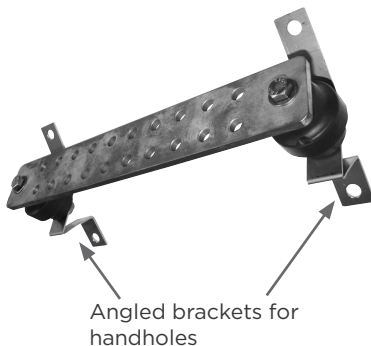
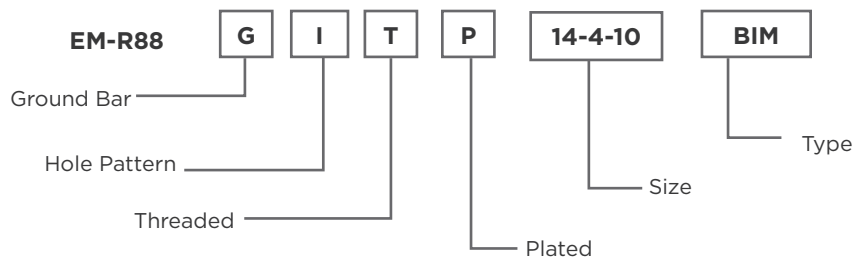


## Specifying Ground Bars



## Ground Bar Numbering System

Follow the three steps below to specify the type and size of ground bar you need. The example pictured above is a ground bar with wall mounting brackets and insulators. The ground bar is 1/4" thick, 4" wide, and 10" long. It has a hole pattern "I" with tapped holes.



1. HOLE PATTERN: See page G153 to specify hole pattern. Add suffix -T after hole pattern for 1/4 x 20 threaded holes.
2. SIZE: Thickness, width, length in inches.
3. TYPE:
  - B — Plain ground bar
  - BI — Ground bar with insulators
  - BIM — Ground bar with wall mounting brackets and insulators.

Add suffix -P after type designation for tin plating.

Add suffix -A after type designation for wall mounting brackets angled for handholes.

See next page for ground bar types.

## Miscellaneous – Ground Bars

### Ground Bar Types

See previous page to build a part number.

### Ground Bar Type B

Plain ground bar



### Ground Bar Type BI

Ground bar with insulators



### Ground Bar Type BM

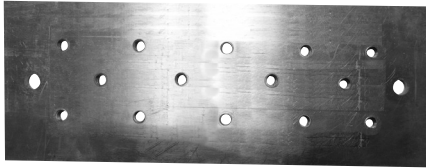
Ground bar with 1" high mounting brackets



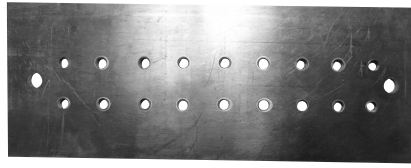


**Ground Bar Hole Patterns**

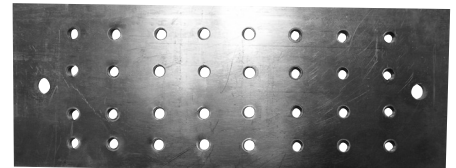
*See page G151 to build a part number.*



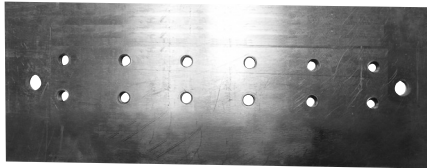
**Pattern A**



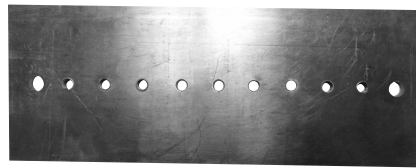
**Pattern G**



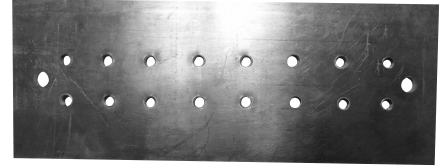
**Pattern Q**



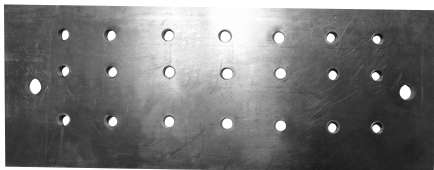
**Pattern B**



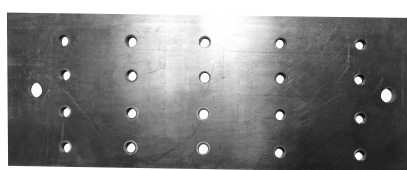
**Pattern H**



**Pattern X**



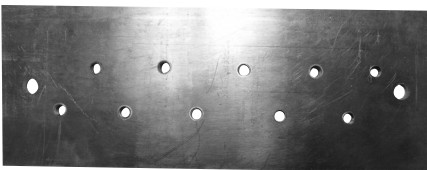
**Pattern C**



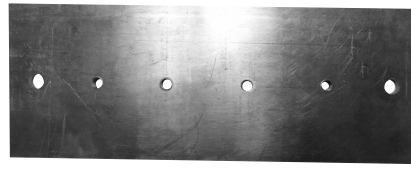
**Pattern I**



**Pattern N**



**Pattern D**



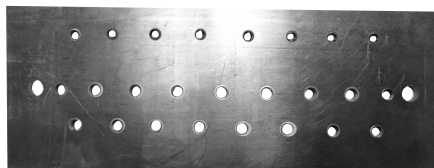
**Pattern J**



**Pattern E**



**Pattern K**



**Pattern F**

*Maximum conductor size is 2/0.*

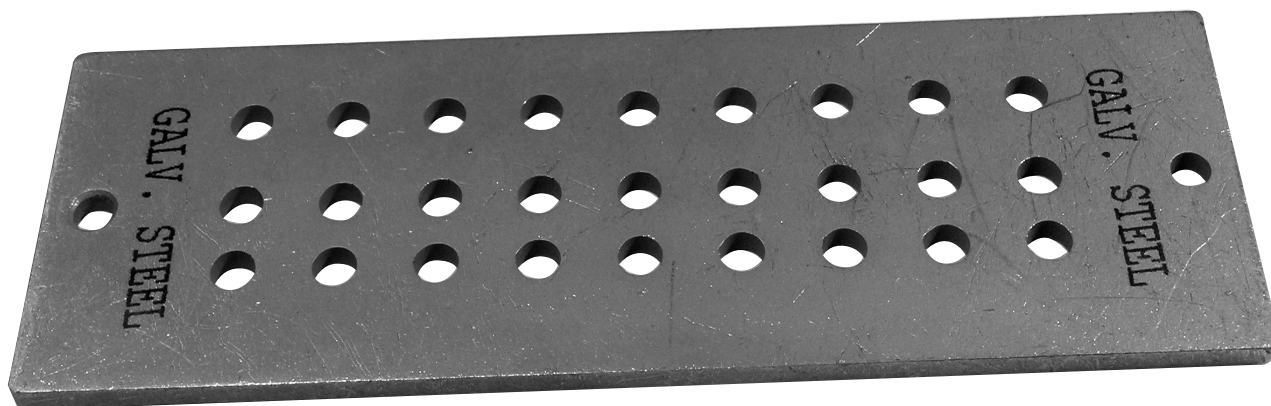


## Miscellaneous – Ground Bars

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### Galvanized Steel Ground Bars

#### BAR ONLY – Verizon Wireless Galvanized Steel Ground Bar Replacement



#### Ordering information:

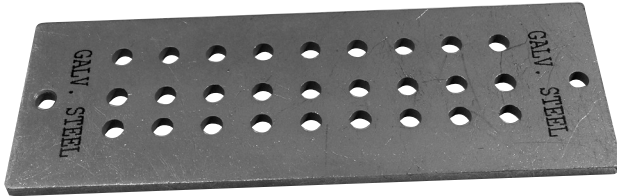
EM-SGC 49-VZW	Galvanized ground bar, 1/4" x 4" x 9" with 7/16" mounting holes (bar only).
EM-SGC 412-VZW	Galvanized ground bar, 1/4" x 4" x 12" with 7/16" mounting holes (bar only).
EM-SGC 418-VZW	Galvanized ground bar, 1/4" x 4" x 18" with 7/16" mounting holes (bar only).
EM-SGC 420-VZW	Galvanized ground bar, 1/4" x 4" x 20" with 7/16" mounting holes (bar only).
EM-SGC 424-VZW	Galvanized ground bar, 1/4" x 4" x 24" with 7/16" mounting holes (bar only).

**Galvanized Steel Ground Bars continued**

**NONREMOVABLE**

**BAR ONLY, WITH ANTI-THEFT HARDWARE**

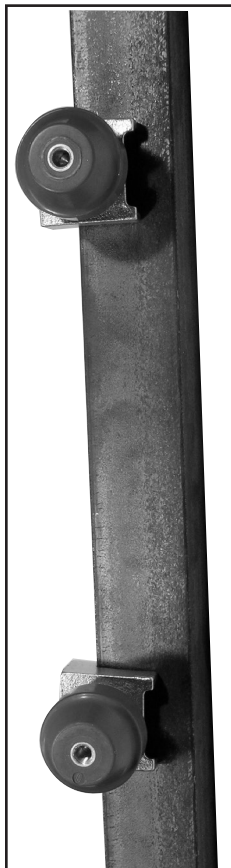
**Verizon Wireless Galvanized Steel Ground Bar Replacement**



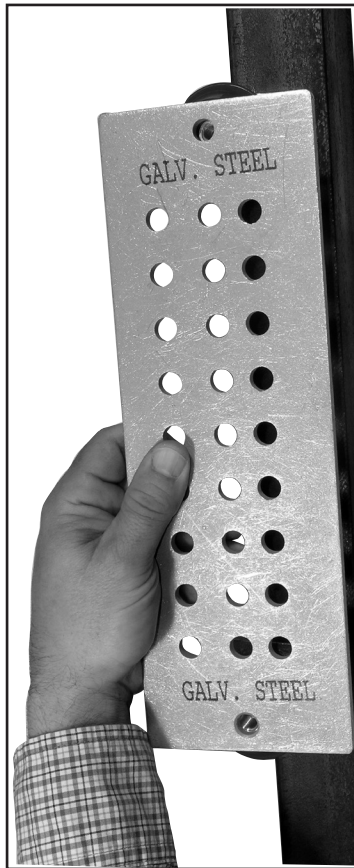
Galvanized steel ground bar



Two 3/8" torque shear head stainless steel bolts (nonremovable) with anti-loosening compound in threads



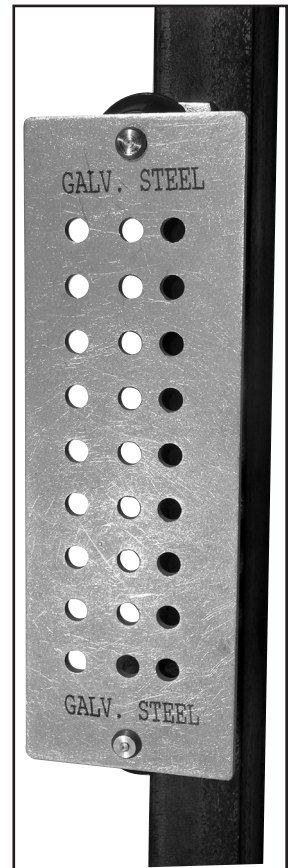
Isolators and mounting hardware remaining after ground bar has been stolen.



Align replacement ground bar with isolators.



Insert torque shear head bolts. Tighten bolts until heads shear off.



Heads broken off.

# Miscellaneous – Ground Bars

## Galvanized Steel Ground Bars (continued)

## NONREMOVABLE

### BAR ONLY, WITH ANTI-THEFT HARDWARE Verizon Wireless Galvanized Steel Ground Bar Replacement

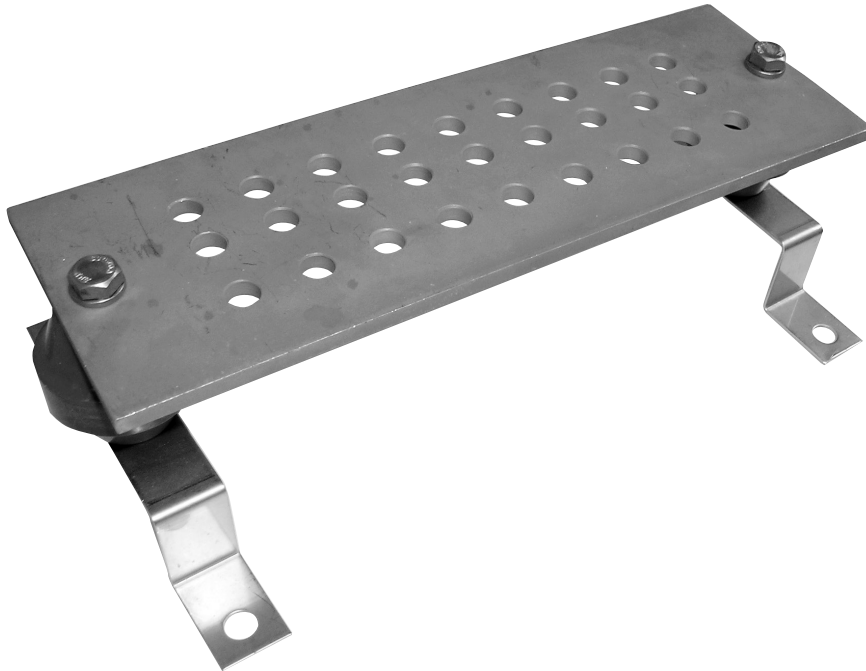
Ordering information:

EM-SGC 49-VZW-NR	Galvanized ground bar, 1/4" x 4" x 9" with 7/16" mounting holes and two stainless steel torque shear head bolts. With anti-loosening compound. Nonremovable.
EM-SGC 412-VZW-NR	Galvanized ground bar, 1/4" x 4" x 12" with 7/16" mounting holes and two stainless steel torque shear head bolts. With anti-loosening compound. Nonremovable.
EM-SGC 418-VZW-NR	Galvanized ground bar, 1/4" x 4" x 18" with 7/16" mounting holes and two stainless steel torque shear head bolts. With anti-loosening compound. Nonremovable.
EM-SGC 420-VZW-NR	Galvanized ground bar, 1/4" x 4" x 20" with 7/16" mounting holes and two stainless steel torque shear head bolts. With anti-loosening compound. Nonremovable.
EM-SGC 424-VZW-NR	Galvanized ground bar, 1/4" x 4" x 24" with 7/16" mounting holes and two stainless steel torque shear head bolts. With anti-loosening compound. Nonremovable.

For a 1/2" bolt, add suffix .5.

**Galvanized Steel Ground Bars (continued)**

**WITH ISOLATORS AND WALL MOUNTING BRACKET**  
**Verizon Wireless Galvanized Steel Ground Bar**



**Ordering information:**

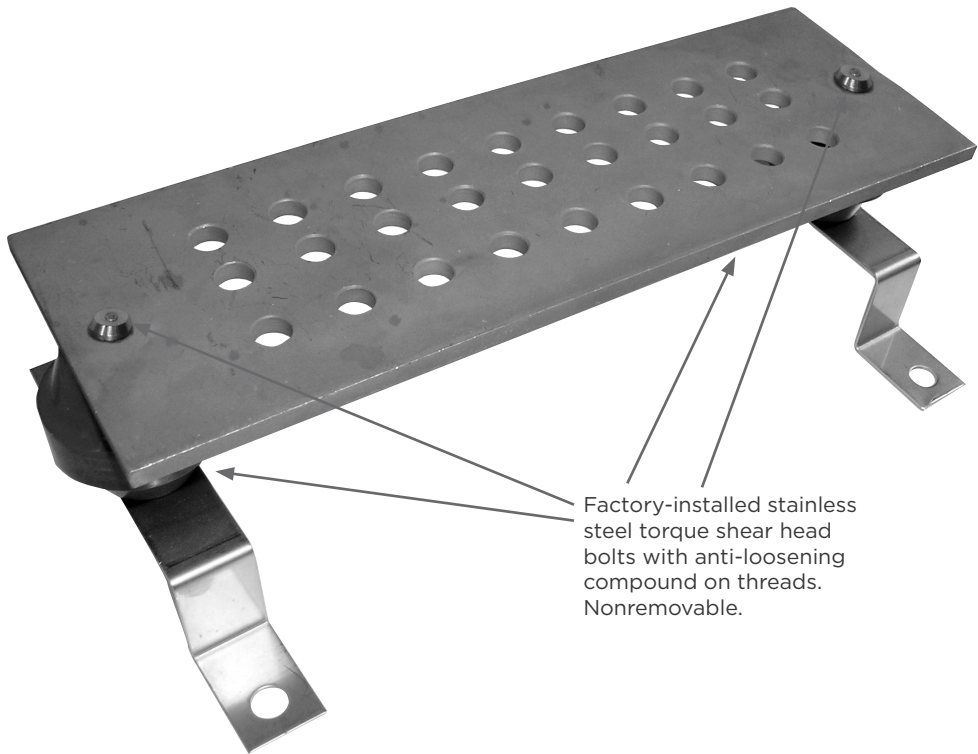
EM-SGC 49-VZW-BIM	Galvanized ground bar, 1/4" x 4" x 9" with 7/16" mounting holes, isolators, and wall mounting bracket.
EM-SGC 412-VZW-BIM	Galvanized ground bar, 1/4" x 4" x 12" with 7/16" mounting holes, isolators, and wall mounting bracket.
EM-SGC 418-VZW-BIM	Galvanized ground bar, 1/4" x 4" x 18" with 7/16" mounting holes, isolators, and wall mounting bracket.
EM-SGC 420-VZW-BIM	Galvanized ground bar, 1/4" x 4" x 20" with 7/16" mounting holes, isolators, and wall mounting bracket.
EM-SGC 424-VZW-BIM	Galvanized ground bar, 1/4" x 4" x 24" with 7/16" mounting holes, isolators, and wall mounting bracket.

# Miscellaneous – Ground Bars

Galvanized Steel Ground Bars (continued)

NONREMOVABLE

WITH ISOLATORS AND WALL MOUNTING BRACKET  
Verizon Wireless Galvanized Steel Ground Bar

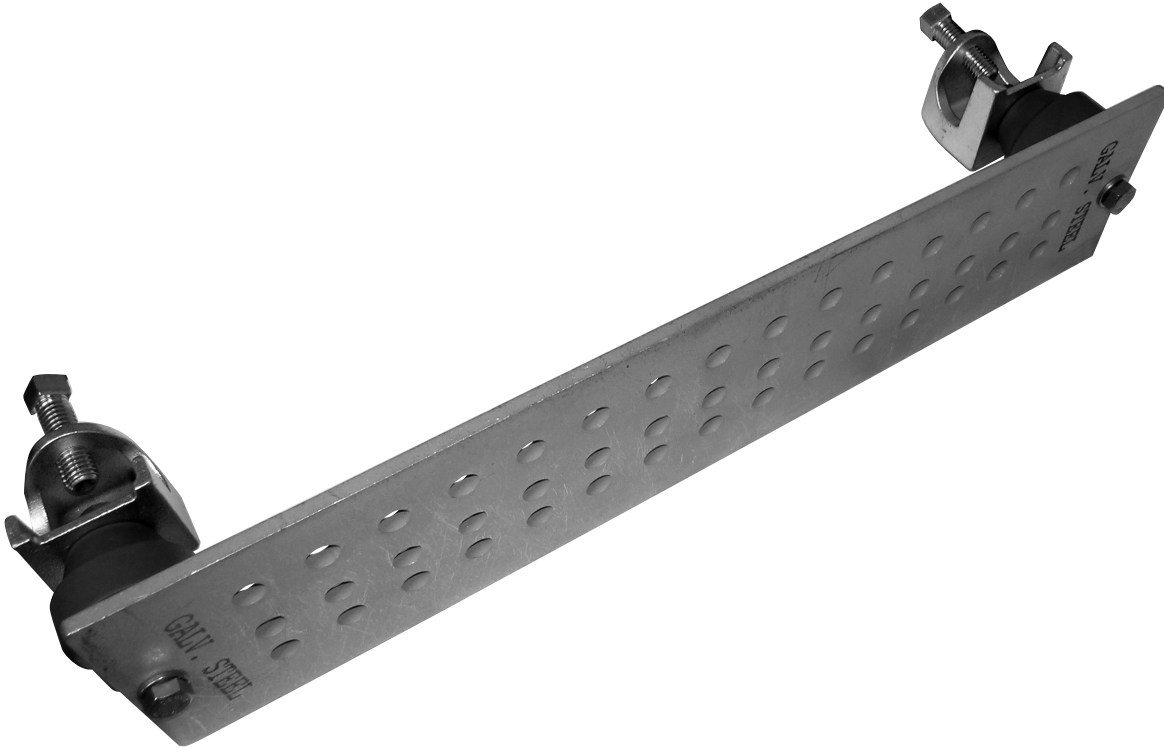


Ordering information:

EM-SG 9-VZW-BIM-NR	Galvanized ground bar, 1/4" x 4" x 9" with 7/16" mounting holes, isolators, and wall mounting bracket. Nonremovable.
EM-SG 12-VZW-BIM-NR	Galvanized ground bar, 1/4" x 4" x 12" with 7/16" mounting holes, isolators, and wall mounting bracket. Nonremovable.
EM-SG 18-VZW-BIM-NR	Galvanized ground bar, 1/4" x 4" x 18" with 7/16" mounting holes, isolators, and wall mounting bracket. Nonremovable.
EM-SG 20-VZW-BIM-NR	Galvanized ground bar, 1/4" x 4" x 20" with 7/16" mounting holes, isolators, and wall mounting bracket. Nonremovable.
EM-SG 24-VZW-BIM-NR	Galvanized ground bar, 1/4" x 4" x 24" with 7/16" mounting holes, isolators, and wall mounting bracket. Nonremovable.

**Galvanized Steel Ground Bars (continued)**

**WITH ISOLATORS AND I-BEAM SUPPORT CLAMP**  
**Verizon Wireless Galvanized Steel Ground Bar**



**Ordering information:**

EM-SGC 49-VZW-BIIB	Galvanized ground bar, 1/4" x 4" x 9" with 7/16" mounting holes, isolators, and I-beam support clamp.
EM-SGC 412-VZW-BIIB	Galvanized ground bar, 1/4" x 4" x 12" with 7/16" mounting holes, isolators, and I-beam support clamp.
EM-SGC 418-VZW-BIIB	Galvanized ground bar, 1/4" x 4" x 18" with 7/16" mounting holes, isolators, and I-beam support clamp.
EM-SGC 420-VZW-BIIB	Galvanized ground bar, 1/4" x 4" x 20" with 7/16" mounting holes, isolators, and I-beam support clamp.
EM-SGC 424-VZW-BIIB	Galvanized ground bar, 1/4" x 4" x 24" with 7/16" mounting holes, isolators, and I-beam support clamp.



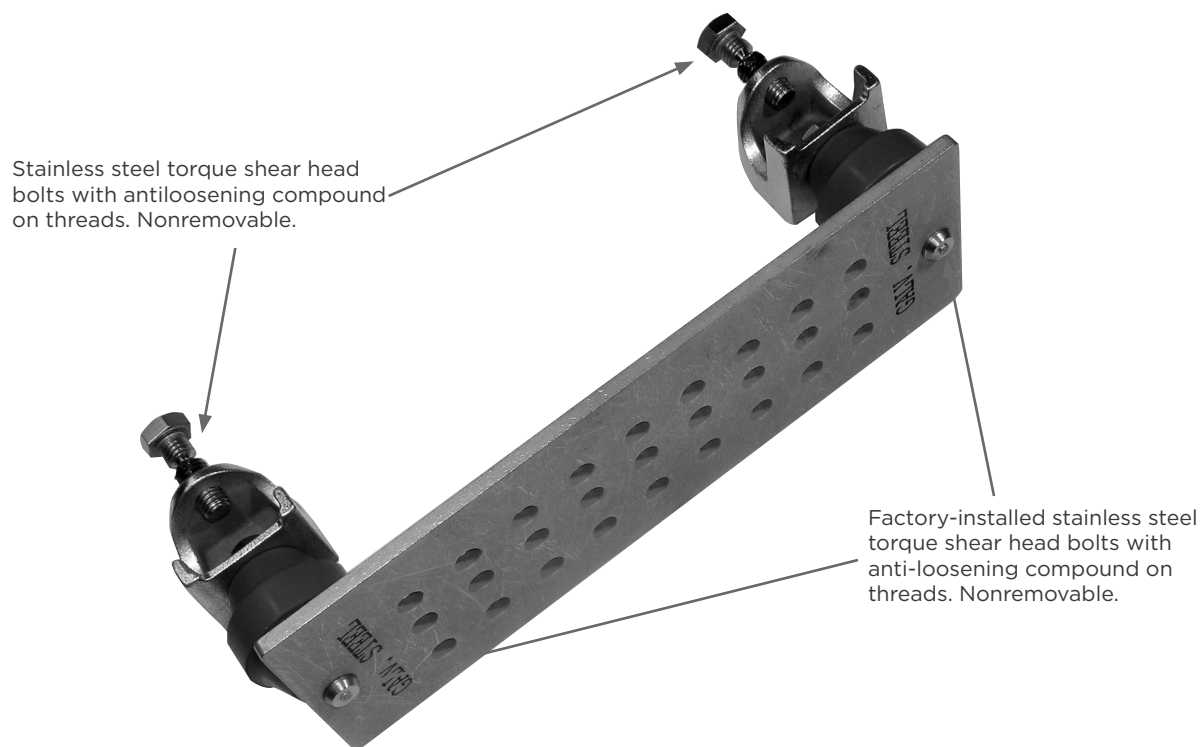
## Miscellaneous – Ground Bars

### Galvanized Steel Ground Bars (continued)

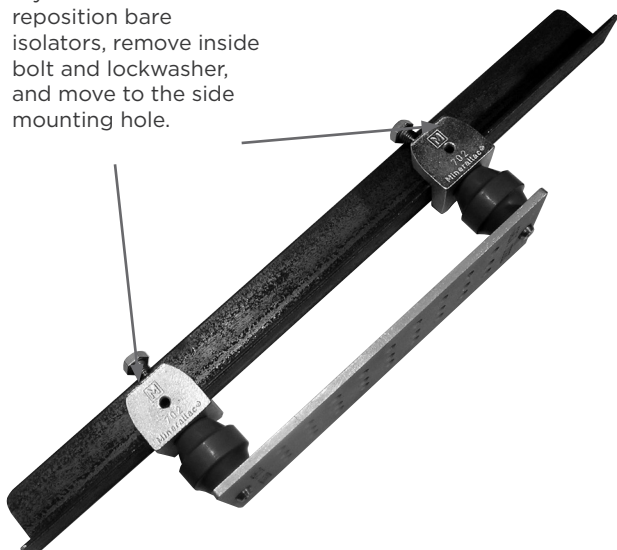
**NONREMOVABLE**

#### WITH ISOLATORS AND I-BEAM SUPPORT CLAMP

#### Verizon Wireless Galvanized Steel Ground Bar



If you need to reposition bare isolators, remove inside bolt and lockwasher, and move to the side mounting hole.



Re-align ground bar to proper position. Tighten bolts until the heads shear off.

Align ground bar on structure or tower where needed.

*Please see next page for ordering information.*



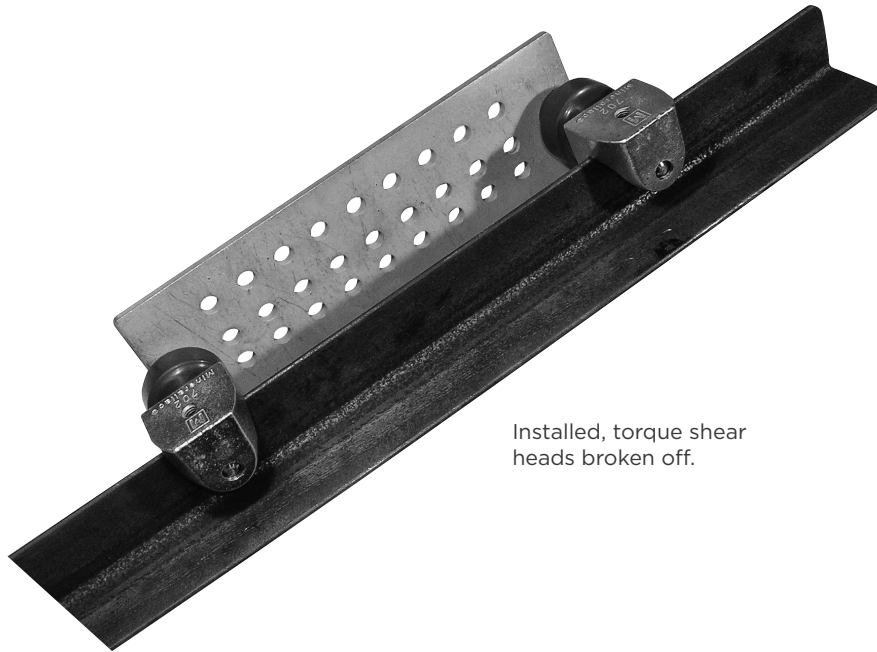
## Miscellaneous – Ground Bars

### Galvanized Steel Ground Bars (continued)

### NONREMOVABLE

#### WITH ISOLATORS AND I-BEAM SUPPORT BRACKET

#### Verizon Wireless Galvanized Steel Ground Bar



Installed, torque shear heads broken off.

#### Ordering information:

EM-SG 9-VZ-BIIB-NR	Galvanized ground bar (nonremovable), 1/4" x 4" x 9" with 7/16" mounting holes, isolators, and I-beam support clamp.
EM-SG 12-VZ-BIIB-NR	Galvanized ground bar (nonremovable), 1/4" x 4" x 12" with 7/16" mounting holes, isolators, and I-beam support clamp.
EM-SG 18-VZ-BIIB-NR	Galvanized ground bar (nonremovable), 1/4" x 4" x 18" with 7/16" mounting holes, isolators, and I-beam support clamp.
EM-SG 20-VZ-BIIB-NR	Galvanized ground bar (nonremovable), 1/4" x 4" x 20" with 7/16" mounting holes, isolators, and I-beam support clamp.
EM-SG 24-VZ-BIIB-NR	Galvanized ground bar (nonremovable), 1/4" x 4" x 24" with 7/16" mounting holes, isolators, and I-beam support clamp.

## Miscellaneous – Ground Bars

---

### Galvanized Steel Ground Bars (continued)

#### WITH ISOLATORS AND POLE SUPPORT CLAMP

#### Verizon Wireless Galvanized Steel Ground Bar



#### Ordering information:

<b>EM-SGC 49-VZW-BIPS</b>	Galvanized ground bar, 1/4" x 4" x 9" with 7/16" mounting holes, isolators, and pole support clamp.
<b>EM-SGC 412-VZW-BIPS</b>	Galvanized ground bar, 1/4" x 4" x 12" with 7/16" mounting holes, isolators, and pole support clamp.
<b>EM-SGC 418-VZW-BIPS</b>	Galvanized ground bar, 1/4" x 4" x 18" with 7/16" mounting holes, isolators, and pole support clamp.
<b>EM-SGC 420-VZW-BIPS</b>	Galvanized ground bar, 1/4" x 4" x 20" with 7/16" mounting holes, isolators, and pole support clamp.
<b>EM-SGC 424-VZW-BIPS</b>	Galvanized ground bar, 1/4" x 4" x 24" with 7/16" mounting holes, isolators, and pole support clamp.

**Galvanized Steel Ground Bars (continued)**

**NONREMOVABLE**

**WITH ISOLATORS AND POLE SUPPORT CLAMP**  
**Verizon Wireless Galvanized Steel Ground Bar**



**Ordering information:**

<b>EM-SG 9-VZ-BIIB-NR</b>	Galvanized ground bar, 1/4" x 4" x 9" with 7/16" mounting holes, isolators, and pole support clamp. Nonremovable.
<b>EM-SG 12-VZ-BIPS-NR</b>	Galvanized ground bar, 1/4" x 4" x 12" with 7/16" mounting holes, isolators, and pole support clamp. Nonremovable.
<b>EM-SG 18-VZ-BIPS-NR</b>	Galvanized ground bar, 1/4" x 4" x 18" with 7/16" mounting holes, isolators, and pole support clamp. Nonremovable.
<b>EM-SG 20-VZ-BIPS-NR</b>	Galvanized ground bar, 1/4" x 4" x 20" with 7/16" mounting holes, isolators, and pole support clamp. Nonremovable.
<b>EM-SG 24-VZ-BIPS-NR</b>	Galvanized ground bar, 1/4" x 4" x 24" with 7/16" mounting holes, isolators, and pole support clamp. Nonremovable.

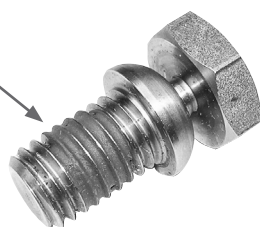
## Miscellaneous – Ground Bars

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### Galvanized Steel Ground Bar Accessories

#### NONREMOVABLE Replacement Bolt for Galvanized Steel Ground Bars with 1/2" mounting hole, 1/2" isolator mounting hole

Fits 1/2" isolator  
mounting hole



#### Ordering information:

**EM-12TSHB-SS** Stainless Steel Bolt, 1/2-13. Torque-shear head with anti-loosening compound on threads. Nonremovable

#### NONREMOVABLE Replacement Bolt for Galvanized Steel Ground Bars with 1/2" mounting hole, 3/8" isolator mounting hole

Fits 3/8" isolator  
mounting hole

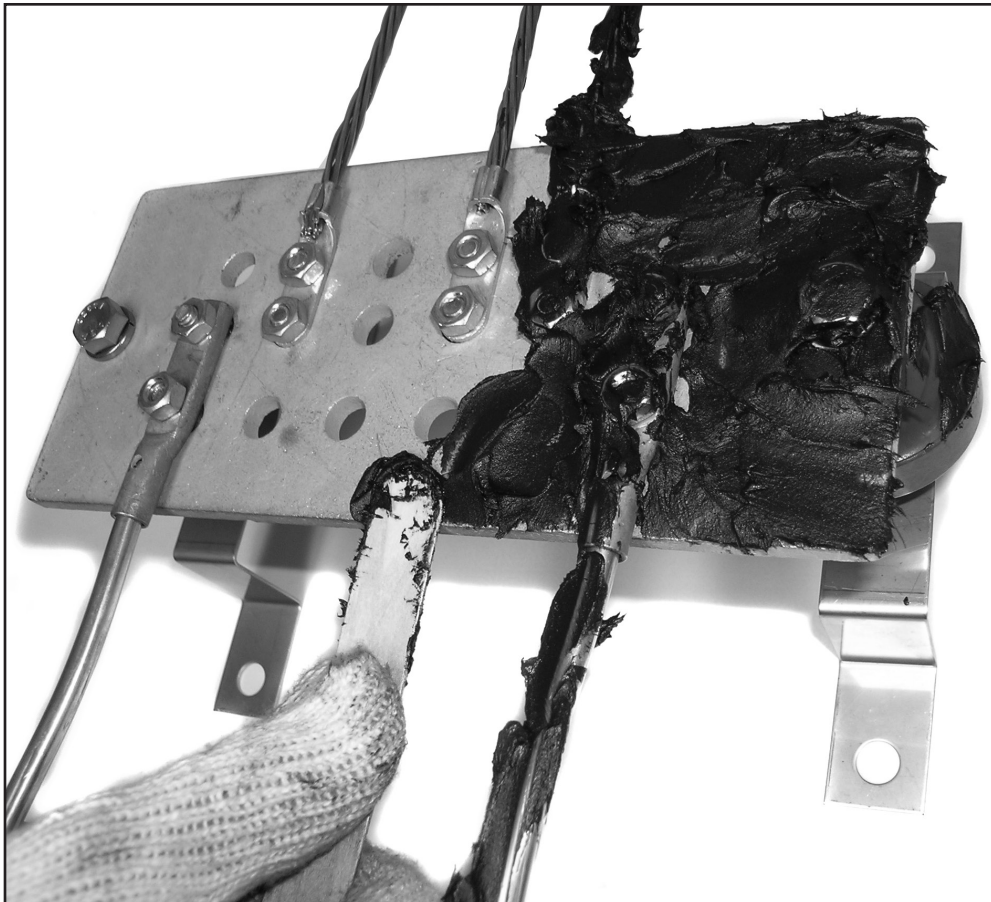


#### Ordering information:

**EM-38TSHB-SS.5** Stainless Steel Bolt, 3/8-16, with 1/2" shoulder. Torque-shear head with anti-loosening compound on threads. Nonremovable

## Galvanized Steel Ground Bar Accessories (continued)

### Anti-Theft Compound



A highly conductive compound, nasty to touch, and very difficult to clean off your clothing. To be used on master ground bars, copper conductors, or any copper that is exposed to theft.

#### Ordering information:

EM-5101	Anti-theft compound, 1 quart
EM-5102	Anti-theft compound, 1 gallon

## Miscellaneous

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### Dry Box Splice Connector Housing

#### Description

An impact-resistant plastic housing for containing service wire splice connectors.

#### Features/ Applications

- Lightweight
- Inexpensive
- Mounts easily to the side of a house, under the rafter eaves, in the basement

#### Ordering information ( )

EM-9215 – Gray plastic dry box

Standard packaging: 50/bx, 5 lb/bx.

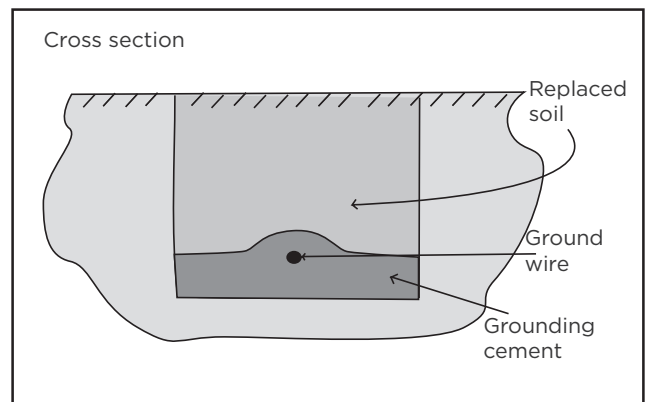
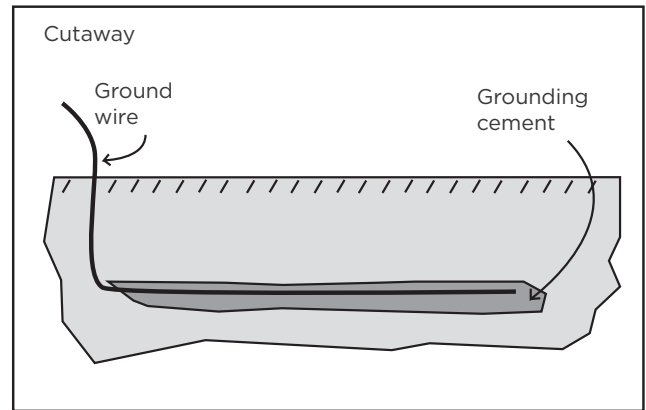




## Lo-Ohm Grounding Cement

Lo-Ohm Grounding Cement is a fine powder packaged in 55-lb. bags which provides an environmentally safe, long-term solution to many grounding problems. Lo-Ohm Grounding Cement grounding electrodes are easily installed by spreading the dry powder in a strip over and around a conductor in a horizontal trench. When the trench is refilled, Lo-Ohm Grounding Cement absorbs moisture from the surrounding soil and hardens to become part of the grounding electrode. The surface area of the electrode is thus dramatically increased, and resistance to ground is substantially reduced. In addition, surge impedance is also lowered significantly.

Lo-Ohm Grounding Cement was developed in the 1970s to aid in the grounding of electric power transmission lines in mountainous areas where construction is difficult and soil resistivities tend to be high. Since then, it has proven effective in a wide variety of other applications, including power station grids, telecommunication switches, radio transmission towers, and cathodic protection systems. The consistent performance of Lo-Ohm Grounding Cement grounding systems has been confirmed through long-term monitoring of installed electrodes. Independent testing has shown that Lo-Ohm Grounding Cement is environmentally safe, and has proven that Lo-Ohm Grounding Cement-covered copper electrodes last ten times longer than bare copper ground wires.



### Features

- Reduces resistance to ground
- Lowers surge impedance significantly
- Environmentally safe
- Provides ideal contact with the surrounding soil
- Reduces corrosion in grounding conductors
- Cost-efficient and maintenance-free

### Applications

- Electric transmission and distribution towers
- Power plant grounding grids
- Substation ground systems
- Cathodic protective systems
- Central office switches
- Cellular systems
- Remote digital switches
- Radio transmission towers
- Central office DC power



### Ordering information

EM-M5C – Standard packaging: 55 lb. bag.



## Miscellaneous

### Shield Connector for Cat 5 Cables

The EM-9556BW S(.218) C(.31) is a small cable shield connector that can be installed on a small cable that is already placed.

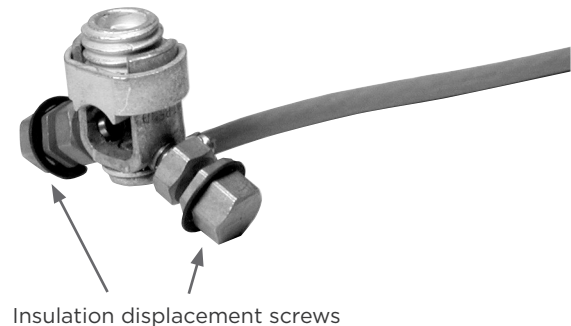
The take-apart design fits around cables proximately .3-.45 diameter, but each diameter or style of cable should be submitted to the factory. After basic installation (1), insulation displacement screws are run down (2) to contact the shield with no loss or attenuation.

Connector can be used for both bonding and grounding or locating. No need to open sheath and shield. Comes as a standard with 36"-long #10 AWG green lead.

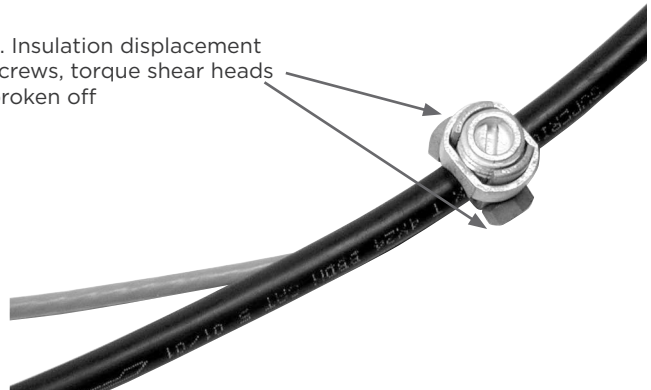
#### Ordering information

**EM-9556-BW S(.218) C(.31)** – Small cable shield connector

##### 1. Basic installation



##### 2. Insulation displacement screws, torque shear heads broken off



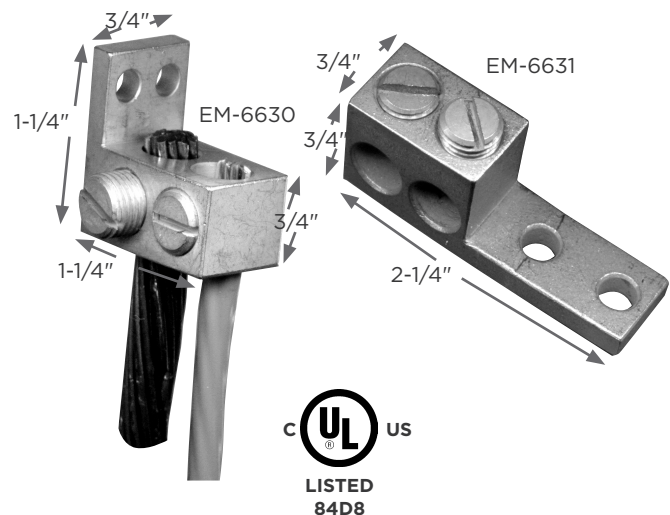
### Double-Hole Ground Lugs

Accommodate #6-#2 AWG ground wires, solid or stranded.

#### Ordering information

**EM-6630** Double-Hole Ground Lug

**EM-6631** Double-Hole Ground Bar Lug with parallel mounting tang



**Corrosion-Resistant Hardware**

EMC hardware is available for use in new construction, maintenance, and retrofitting in OSP and central office. It is available in copper alloy (brass or bronze), stainless steel, or galvanized steel.

**Hex Head Screws – Coarse Thread**

Length Diameter- Thread	1/2	3/4	1	1-1/4	1-1/2	1-3/4	2
10 - 24	EM-10C12B	EM-10C34B	EM-10C1B	EM-10C114B	EM-10C112B	EM-10C134B	EM-10C2B
1/4 - 20	EM-14C12B	EM-14C34B	EM-14C1B	EM-14C114B	EM-14C112B	EM-14C134B	EM-14C2B
5/16 - 18	EM-516C12B	EM-516C34B	EM-516C1B	EM-516C114B	EM-516C112B	EM-516C134B	EM-516C2B
3/8 - 16	EM-38C12B	EM-38C34B	EM-38C1B	EM-38C114B	EM-38C112B	EM-38C134B	EM-38C2B
1/2 - 13	EM-12C12B	EM-12C34B	EM-12C1B	EM-12C114B	EM-12C112B	EM-12C134B	EM-12C2B

**Hex Head Screws – Fine Thread**

Length Diameter- Thread	1/2	3/4	1	1-1/4	1-1/2	1-3/4	2
10 - 32	EM-10F12B	EM-10F34B	EM-10F1B	EM-10F114B	EM-10F112B	EM-10F134B	EM-10F2B
1/4 - 28	EM-14F12B	EM-14F34B	EM-14F1B	EM-14F114B	EM-14F112B	EM-14F134B	EM-14F2B
5/16 - 24	EM-516F12B	EM-516F34B	EM-516F1B	EM-516F114B	EM-516F112B	EM-516F134B	EM-516F2B
3/8 - 24	EM-38F12B	EM-38F34B	EM-38F1B	EM-38F114B	EM-38F112B	EM-38F134B	EM-38F2B
1/2 - 20	EM-12F12B	EM-12F34B	EM-12F1B	EM-12F114B	EM-12F112B	EM-12F134B	EM-12F2B

**Ordering information**

To order, find the part number of the hardware you need in the above charts, and add a material suffix as follows:

SB = silicon bronze or brass

SS = stainless steel

GS = galvanized steel

## Miscellaneous

### Corrosion-Resistant Hardware (continued)



#### Nuts - Coarse Thread

Length Diameter-Thread	P/N
10 - 24	EM-10CN
1/4 - 20	EM-14CN
5/16 - 18	EM-516CN
3/8 - 16	EM-38CN
1/2 - 13	EM-12CN



#### Nuts - Fine Thread

Length Diameter-Thread	P/N
10 - 32	EM-10FN
1/4 - 28	EM-14FN
5/16 - 24	EM-516FN
3/8 - 24	EM-38FN
1/2 - 20	EM-12FN



#### Lock Washers

Diameter	P/N
10	EM-10L
1/4	EM-14L
5/16	EM-516L
3/8	EM-38L
1/2	EM-12L



#### Flat Washers

Diameter	P/N
10	EM-10F
1/4	EM-14F
5/16	EM-516F
3/8	EM-38F
1/2	EM-12F

### Ordering information

To order, find the part number of the hardware you need in the above charts, and add a material suffix as follows:

SB = silicon bronze or brass

SS = stainless steel

GS = galvanized steel

All the hardware on these two pages is also available packaged as kits: screw, nut, and washer. Please call 860-379-8515 or e-mail [customerservice@electricmotioncompany.com](mailto:customerservice@electricmotioncompany.com) for details.

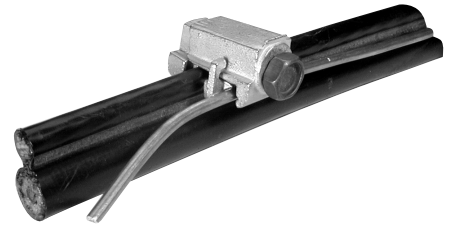
## C Connector

Tin-plated bronze connector with teeth for piercing the messenger insulation of Figure 8 cable. For messenger diameters of .146"-.312" and ground conductor range of .146"-.312".

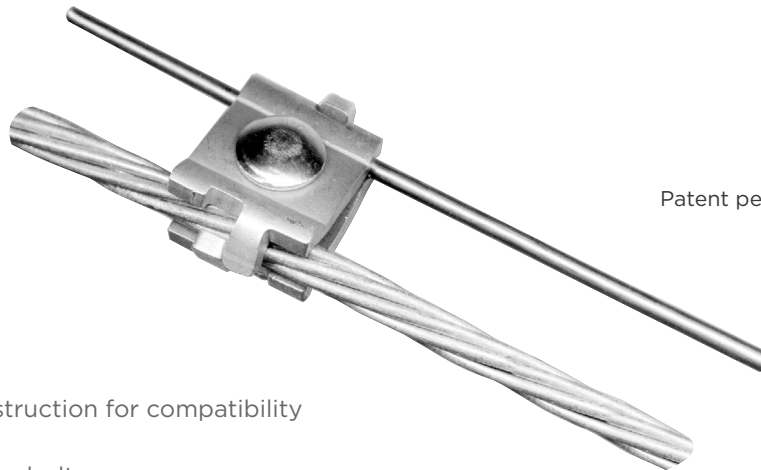
### Ordering information

**EM-0167**

*Standard packaging: 100/bx, 23 lb/bx.*



## Strand Bond Clamp



Patent pending

### Features

- Galvanized steel construction for compatibility with strand.
- Stainless steel carriage bolt.
- Standard 1/2" nut captured.
- Bow design creates spring action tension on clamp.
- Single clamping action connects strand/ground wire.
- Wraparound design grips strand more securely

### Applications

- Connecting #6 AWG solid to #6 AWG solid ground wire
- Connecting strand to strand (1/4" [6.6M]-7/16" [16M])
- Connecting #6 AWG to strand

### Ordering information

**EM-4811**

*Standard packaging: 10/bg, 100/bx, 21 lb/bx.*

**EM-4811SS**

Strand bond clamp, all stainless steel body and hardware

# Pole Line Hardware

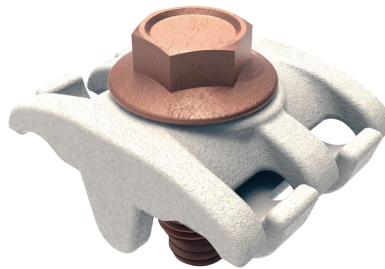
## KUL Bonding Clamp

### Description

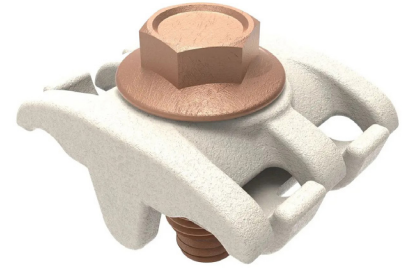
Used to Bond 1/4" to 7/16" Strand to #8 to 2/0 Copper Wire.

### Features/ Applications

- Tin plated for corrosion protection
- High strength copper alloy
- Half-inch hex head silicon bronze bolt
- 1/4" - 7/16" strand
- #8 - #2/0 copper wire



EM-KUL14716



EM-KUL14716BG

## Jumper Clamp

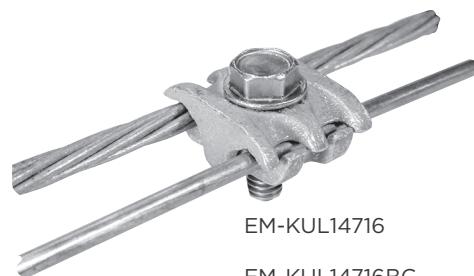
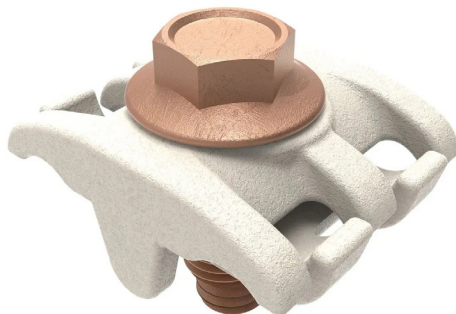
A tin-plated bronze clamp with interlocking jaws.

### Features

- Tin plated for corrosion protection
- High strength copper alloy
- UL listed for public safety
- Half-inch hex head silicon bronze bolt

### Applications

- 1/4"-7/16" strand
- #8-#2/0 copper wire



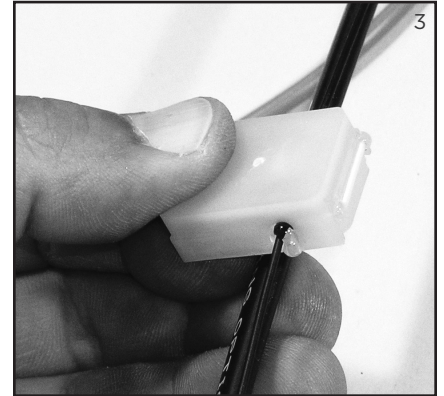
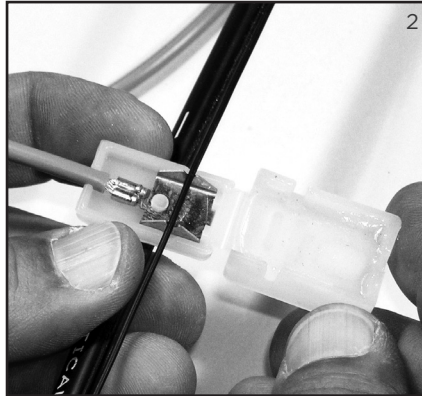
EM-KUL14716

EM-KUL14716BG

## Fiber-to-the-Home Drop Locate Wire Ground Harness

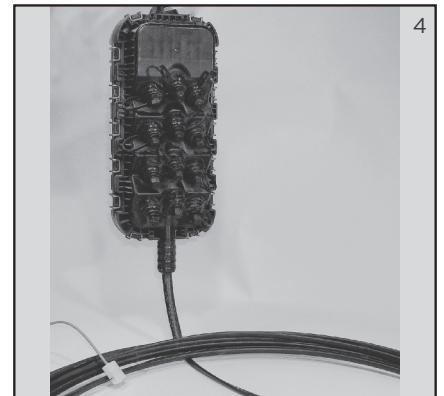
### Description

A gel-filled insulation-displacement connector to ground #24 AWG locate wires in the handhole or the pedestal, or at the residence.



### Handhole Installation

1. Carefully make an 8" slit in the web of the fiber drop, generally in the first slack coil in the bottom of the handhole.
2. Remove the release paper from the gel on connector EM-9181. Slide the connector into the slit area under the locate wire.
3. Position the locate wire at the entrance to the brass IDC terminal, then close the cover.
4. Attach the green ground wire to one of the studs on the grounding location.



### Benefits

- Allows locate wire to be grounded in the handhole and not bring lightning into the ONT or ONU.
- No stripping of locate wire
- Flexible lead allows "float"
- Waterproof for underground
- Low-cost
- Allows extending a broken locate wire

### Ordering information :

EM-9181-XX-X - Toneable Fiber Flat Drop Cable Connector with attached grounding harness. Specify length of #14 AWG green harness (XX), and either .10 or .25 diameter mounting hole on ring terminal on free end (X). Connects to #24 AWG without stripping.

[illegible]



[illegible]

# HUBBELL

## Power Systems

Hubbell Power Systems, Inc. (HPS) manufactures a wide variety of transmission, distribution, substation, OEM and telecommunications products used by utilities.

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