# CHARCE® Aluminum Hardware & Apitong Wood

Catalog 5B November 2015







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November 2015



# **CHANCE**<sup>®</sup>

# Braces, Crossarm, Apitong Wood

#### Dense-fiber Apitong wood from sustainably-managed forest

- High Strength Lightweight
- Pressure-treated preservative for protection against decay, fungi and insects

#### Aluminum end fittings

- Lightweight and Corrosion Resistant
- Tongue-and-groove connection
- Pinned to wood section

#### Two Mounting Positions . . . Three Popular Sizes

- Side-arm mounting
- Flat Brace  $\frac{13}{16}$  x  $1\frac{3}{4}$  wood section
- Under-arm mounting
  - 1¼" sq. wood section
  - $1\frac{3}{4}$ " sq. wood section

### Sold in Pairs — Reversible for simple, easy installation

#### **RUS** listed

 CONVENIENT MASTER PACKAGES Side-Arm Braces, 10 pairs each Under-Arm Braces, 5 pairs each



- For ordering specifications, please see next page.
- END FITTING SHAPES ARE DESIGNED TO SERVE SPECIFIC APPLICATIONS







### Braces, Crossarm, Apitong Wood





Side-Arm Mount $\frac{13}{16}$ " x $1\frac{3}{4}$ "-flat Apiton				ood Section	
Catalog Number	Span	Drop	Length	Pole Mounting Hole	Crossarm Mounting Hole
PSCAF626*	38"	18"	26"	9/16"	7/16"

Catalog number includes a pair of braces

\* RUS Listed cu - Brace, crossarm, wood

Under-Arm Mount $1_4^{\prime\prime}$ -square Apitong Wood Section						
Catalog Number	Span	Drop	Length	Pole Mounting Hole	Crossarm Mounting Hole	
PSCAF4814	48"	14"	28"	11/16"	9/16"	
PSCAF4818	48"	18"	30"	11/16"	9/16"	
PSCAF4824	48"	24"	34"	11/16"	9/16"	
PSCAF6018	60"	18"	35"	11/16"	9/16"	
PSCAF6030	60"	30"	42"	11/16"	9/16"	
PSCAF7222	72"	22"	42"	11/16"	9/16"	

Catalog number includes a pair of braces



Under-Arm	Under-Arm Mount 1 <sup>3</sup> / <sub>4</sub> "-square Apitong Wood Section							
Catalog Number	Span	Drop	Length	Pole Mounting Hole	Crossarm Mounting Hole			
PSCRA4814	48 "	14"	28"	11/16"	9/16"			
PSCRA4818	48"	18"	30"	11/16"	9/16"			
PSCRA4824	48"	24"	34"	11/16"	9/16"			
PSCRA6018*	60"	18"	35"	11/16"	9/16"			
PSCRA6030*	60"	30"	42"	11/16"	9/16"			
PSCRA7222	72"	22"	42"	11/16"	9/16"			
PSCRA7236	72"	36"	51"	11/16"	9/16"			

Catalog number includes a pair of braces

\* RUS Listed cu - Brace, crossarm, wood



# **CHANCE**<sup>®</sup>

### Braces, Side Arm (Alley Arm), Apitong Wood Brace used to support a crossarm that is unevenly balanced on one side of the pole

- Dense-fiber Apitong wood from sustainably-managed forest
- Pressure-treated preservative for protection against decay, fungi and insects

#### Features

- Braces are reversible style for left or right installation
- End fittings are tongue-and-groove connection, pinned to wood section
- Includes factory-assembled lineman's step

#### Material

- Structural member Apitong wood
- Fittings Aluminum 6061-T6

Catalog No.	Lineman's Step Included	Overall Length hole-to-hole A	Step Position B	Approx. Ship Wt. per Each
CRAAB60	Yes	60"		14 lbs.
CRAAB60LS	No	60		14.3 lbs.
CRAAB76	Yes	76 "	20¾"	17 lbs.
CRAAB76LS	No	76"	20%	17.3 lbs
CRAAB84	Yes	84"		19 lbs.
CRAAB84LS	No	04		19.3 lbs





Assembled band with buckle

### **Banding, for Pole Attachments**

A no-drilling way to attach components to a pole of any size or shape.

- Attaches to steel, concrete, composite or wood poles of any shape and size.
- Type 201 stainless steel bands in widths of 3/4" and 1 1/4".

#### Features

- Easily installs with standard hand tools
- Adjustable for any sized pole
- Can be cut to length at installation or orderd in pre-cut lengths

#### 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

Stanness Steer Bana Kits		Standard Eengens, melddes e			
Catalog Number	Band Width	Length	Approx. Ship Wt. Each	Buckle Catalog No.	
CBAB3836	3/4"	36"	2.0 lbs.	CBAB38	
CBAB3840	3/4"	40"	2.0 lbs.	CBAB38	
CBAB3848	3/4"	48"	2.0 lbs.	CBAB38	
CBAB3860	3/4"	60"	2.0 lbs.	CBAB38	
CBAB3872	3/4"	72"	2.0 lbs.	CBAB38	
CBAB3884	3/4"	84"	2.0 lbs.	CBAB38	
CBAB5836	1 1/4"	36"	3.0 lbs.	CBAB58	
CBAB5840	1 1/4"	40 "	3.0 lbs.	CBAB58	
CBAB5848	1 1/4"	48"	3.0 lbs.	CBAB58	
CBAB5860	1 1/4"	60"	3.0 lbs.	CBAB58	
CBAB5872	1 1/4"	72"	3.0 lbs.	CBAB58	
CBAB5884	1 1/4"	84"	3.0 lbs.	CBAB58	

#### When determining the band length, add 6" to the circumfrence of the structure. Stainless Steel Band Kits - Standard Lengths, Includes One Buckle

#### Stainless Steel Bands - 100' Coils

Catalog Number	Band Width	Length	Approx. Ship Wt. Each	Buckle Catalog No.
C34201SSB100	3/4"	100'	8.0 lbs	CBAB38
C114201SSB100	1 1/4"	100'	20.0 lbs.	CBAB58

Note: Order quantity 1 for one 100' coil

#### **General Purpose Mounting Brackets**

Catalog Number	Description	Band Width	Approx. Ship Wt. Each
	Bracket with standard		
	5/8" x 2" bolt	3/4"	0.65 lbs.
	Bracket with Grade 5,		
CHDBB1511H3H	5/8" x 3" bolt	3/4"	0.70 lbs.
CD4080	Aluminum bracket	1 1/4"	2.30 lbs.



Each Kit includes band and buckle



#### **Buckles for Bands**

Catalog Number	Band Width	Approx. Ship Wt. Each
CBAB38	3/4"	1.50 lbs.
CBAB58	1 1/4"	1.50 lbs.





### Bracket, Cable Positioning For Riser Cable Catalog No. CCS820

# for 0.75" to 3" O.D. Cable

This easy-to-install kit supports conductor at the transition from overhead to underground service. The Cable Positioner simply attaches to a suitable bracket with  $1/_2$ " mounting hardware (not included).

Each unit includes illustrated instructions and comes in a plastic bag. Packaged 36 per box, each unit weighs 1 lb. (0.45 kg.).









# **Brackets, Cabinet Mounting**

### Aluminum — T-Slot Shapes

- 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  $\frac{1}{2}$ " fasteners, not included.
- Adjust for various hole patterns. See ordering information for ranges.
- Consists of one vertical support, two horizontal supports and stainless steel mounting hardware.
- Shipped unassembled



Two 9/16" holes for 1/2" mounting hardware (not included).

Catalog Number	Mountin	g Range			Wt. Ea. (per
	А	В	Α'	В'	lbs.)
CCMB812	1" - 7 <sup>1</sup> / <sub>4</sub> "	2" - 12"	8"	16³/ <sub>8</sub> "	2.25
CCMB1218	1" - 11 <sup>1</sup> / <sub>4</sub> "	2" - 18"	12"	22 <sup>3</sup> / <sub>8</sub> "	3.00
CCMB1624	1" - 15 <sup>1</sup> / <sub>4</sub> "	2" - 24"	16"	28 <sup>3</sup> / <sub>8</sub> "	3.75
CCMB1830	1" - 17 <sup>1</sup> / <sub>4</sub> "	2" - 30"	18"	34 <sup>3</sup> / <sub>8</sub> "	4.25

#### **ORDERING INFORMATION**



### **CHANCE**<sup>®</sup> Brackets, Conduit Standoff



A multi-purpose bracket for mounting 1" through 6" conduit in a variety of ways. Bracket will mount up to four 6" conduits with unlimited adjustability. 4-Way T-Slot extrusion eliminates field drilling. Unit mounts to the pole on  $3^{5}/_{8}$ " hole centers using  $5/_{8}$ " thrubolt and  $1/_{2}$ " lag (not supplied). **Conduit straps are not included**, **order below.** Additional T-Slot Shapes are available on the following page.

Catalog Number	Dimensional Data		Weight each
	А	В	
C6CSO12	6"	12"	4 lb.
C6CSO24	6"	24"	5 lb.
C6CSO36	6"	36"	6 lb.
C9CSO12	9"	12"	4 lb.
C9CSO24	9"	24"	5 lb.
C9CSO36	9"	36"	6 lb.



4-Way T-Slot



### **Conduit Strap Kits**

Strap kits with the following variations are available for use with the conduit standoff brackets above. Material size is 0.090" x 1.5". The straps have two holes for mounting one conduit section. Each strap kit contains a strap, two each  $\frac{1}{2}$ " x  $1\frac{1}{4}$ " hex head bolts, lockwashers and hex nuts.

Conduit Size	Catalog No.	"A" Dim.	"B" Dim.	"C" Dim.	Weight
1 inch	CSTK1	1¾"	3"	11/4"	0.3 lb.
$1\frac{1}{2}$ inch	CSTK15	17⁄8"	31/2"	1 <sup>7</sup> ⁄ <sub>8</sub> "	0.4 lb.
2 inch	CSTK2	2 <sup>3</sup> / <sub>8</sub> "	3 <sup>15</sup> / <sub>16</sub> "	2 <sup>1</sup> / <sub>4</sub> "	0.5 lb.
$2\frac{1}{2}$ inch	CSTK25	27/8"	4 <sup>7</sup> / <sub>16</sub> "	2 <sup>3</sup> / <sub>4</sub> "	0.6 lb.
3 inch	CSTK3	31/2"	5½″	3 <sup>3</sup> / <sub>8</sub> "	0.6 lb.
$3\frac{1}{2}$ inch	CSTK35	4"	5%_"	3 <sup>15</sup> / <sub>16</sub> "	0.6 lb.
4 inch	CSTK4	4 <sup>1</sup> / <sub>2</sub> "	6 <sup>1</sup> / <sub>16</sub> "	5 <sup>3</sup> / <sub>8</sub> "	0.6 lb.
5 inch	CSTK5	5%_"	7½"	51/2"	0.7 lb.
6 inch	CSTK6	6 <sup>5</sup> / <sub>8</sub> "	8 <sup>3</sup> / <sub>8</sub> "	61/2"	0.7 lb.







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 $\frac{1}{2}$ " x  $1\frac{1}{4}$ " hex head bolt



# **T-Slot Shapes**

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

### 4-Way T-Slot

Captures the heads of  $\frac{1}{2}$ " dia. bolts



A multi-purpose extrusion for mounting equipment in four directions using  $\frac{1}{2}$ " diameter hardware.



Catalog Number	<b>Dimension A</b>	Weight each
C4WT12	12"	1.25 lb.
C4WT24	24"	2.25 lb.
C4WT36	36"	3.25 lb.
C4WT48	48"	4.50 lb.
C4WT60	60"	5.50 lb.
C4WT120	120"	11.00 lb.

### 2-Way T-Slot



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# **Brackets, Current Transformer Mounting**

Brackets for securing current and potential transformers to pole or wall for primary metering applications



#### Example shown below: Two Position Bracket CCTM2



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### **Brackets, Equipment, Apitong Type** For three-phase mounting of cutouts, arresters, cable terminators

- Dense-fiber Apitong wood from sustainablymanaged forest
- Pressure-treated preservative for protection against decay, fungi and insects

#### Features

- Shipped preassembled
- Includes all equipment mounting hardware (pole through-bolts must be ordered separately)
- Lightweight and corrosion resistant

#### Material

- Support arms Apitong wood
- Fittings Aluminum 6061-T6
- Fasteners Galvanized Steel





Catalog No.	Spacing End-to-End A	Position Spacing B	Position Spacing C	Approx. Ship Wt. per Each
CW3CA35	35"	<b>12</b> ½"	N/A	16.95 lbs.
CW3CA48	48"	24"	N/A	21.0 lbs.
CW3CA57OS	55"	<b>41</b> ½"	13½"	19.5 lbs.
CWT3CA48	46¾"	<b>18</b> <sup>3</sup> ⁄ <sub>16</sub> "	N/A	24.0 lbs.





### Brackets, Equipment, Banded Pole Mounting For cluster mounting of cutouts, arresters and potheads on round poles

- Aluminum construction for ease of handling
- Two, four or six mounting positions

#### **Features**

- Suitable for wood, metal, fiberglass or concrete round shaped poles
- For  $7\frac{3}{4}$ " to  $12\frac{1}{4}$ " diameter poles
- Grounding lug included







### Brackets, Equipment, Bolted Pole Mounting For bolted pole mounting of cutouts, arresters or potheads

#### Features

- Brackets mount to pole with two 5/8" through bolts
- Each bracket rated for 500lbs. loading
- C1PB bracket can be added to any model for additional options

#### Material

- Bracket Aluminum 6061-T6
- Fasteners Galvanized Steel



Catalog No.	Туре	Pole Offset - A	Mounting Bolt Spacing - B	Equipment Bolt Spacing C	Approx. Ship Wt. per Each
C1HCAC	Single Mounting	13¾"	15¾ <sub>16</sub> "	N/A	2.95 lbs.
C1HCAC18	Single Mounting	18"	18"	N/A	4.85 lbs.
C1HCA2C	Single L Bracket	14 <sup>3</sup> ⁄ <sub>8</sub> "	15¾ <sub>16</sub> "	4¼"	2.15 lbs.
C1HCA2C18	Mounting	18"	18"	4¼"	4.10 lbs.
C1HCA	Duel Meuntine	12¾"	15¾ <sub>16</sub> "	6"	2.40 lbs.
C1HCA18	Dual Mounting	17"	18"	10"	4.30 lbs.
C1PB	Offset Extension Bracket	6½"	18½"	N/A	2.95 lbs.

Add 1PB suffix to catalog number to order C1PB bracket extension assembled to desired unit.







### Bracket, Equipment, Curved Type

For three phase pole mounting of cutouts, arresters or cable terminators

#### **Key Points**

- Compact Curved Design
- Lightweight Aluminum Construction

#### Features

- Shipped pre-assembled
- Braces provide extra rigidity for operating cutouts
- Stainless steel ground lug on each unit

#### Material

- Bracket Aluminum 6061-T6
- Fasteners Galvanized steel
- Ground lug Stainless steel

Catalog Number	Equipment Mounting Fittings	Width "A"	Center Pole Offset "B"	Equipment bolt spacing "C"	Approx. Ship Wt. Each	
CR3CAC	1 Bolt Horizon-	38 5/8"	12 7/8"	N/A	13 lbs.	
CR3CAC48	tal	52 1/4"	12 //0	N/A	15 lbs.	"в"
CR3CA	2 Bolt Horizon-	34 1/2"	12 3/4"	6"	14 lbs.	A B
CR3CA48	tal	48"	15"	10"	18 lbs.	
CR3CA2C	2 Dolt ) (ortical	36 3/16"	11 5/16	4 7/1C" +> E 2/1C"	13 lbs.	' <b>∢</b> ────────────────────────────────────
CR3CA2C48	2 Bolt Vertical	49 3/16"	11 5/16"	4 7/16" to 5 3/16"	17 lbs.	CR3CAC or CR3AC48

- Mounts to pole with one 5/8" machine bolt and one 1/2" lag screw in base. Two 1/2" lag screws in braces. All fasteners purchased separately.
- Mounting hole spacing of pole base is 3 5/8"
- Installed height (brace hole to bottom of curved horizontal member) is approximately 17"
- To order brackets without braces add the suffix "LB" to catalog number



CR3CA OR CR3CA48

CR3CA2C or CR3CA2C48





# Bracket, Equipment, Straight Type

For three phase pole mounting of cutouts, arresters or cable terminators

Extruded aluminum material offers lightweight for easy handling. Mounts to pole with 5/8" thru-bolt and 1/2" lag screw. Shipped completely assembled. Mounting hardware is purchased separately.



Components can be ordered separately. See following page.



Components can be ordered separately. See following page.





### Bracket, Equipment, Straight Type For three phase pole mounting of arresters or cable terminators



HUBBELL

### **CHANCE**<sup>®</sup>

### **Bracket, Heavy Duty Equipment, Curved Type** For three-phase pole mounting of single-phase disconnect switches with arresters

#### **Key Points**

- Compact Curved Design
- Lightweight Aluminum Construction

#### Features

- Shipped pre-assembled
- Braces provide extra rigidity for operating disconect switches
- Stainless steel ground lug (2 each)
- Front switch mounts may be field adjusted for 90 or 20 degree vertical orientation



- Mounts to pole with two 5/8" machine bolts in base and two 1/2" lag screws in braces. All fasteners purchased separately.
- Mounting hole spacing of pole base is 7 1/8".
- Installed width (brace hole to face of middle vertical mounting position) is approximately 23 1/2".

Catalog Number	Width	Approx. Ship Wt. Each
CR3CSA48	48"	31 lbs.





### **Brackets, Primary Meter** Bracket for securing current and potential transformers to pole for primary metering applications

- Lightweight aluminum construction
- Predrilled or can be field drilled
- 1, 2 or 3 mounting positions (2, 4 or 6 pieces of equipment)
- Regular duty or heavy duty

#### Features

- Pre-assembled units for easy installation
- Equipment can be assembled on the ground or off site
- Eyenuts for lifting

#### Material

• Aluminum 6061-T6



Catalog Number	Description	Pieces of Equipment	Mounting Style	Catalog Page	Approx. Ship Wt. Each
CTBPMM2	1 Position Bracket, Regular Duty Bracket	2	Bolted	5D-1.4	9.8 lb.
CBPMM2K	1 Position Bracket, Regular Duty Bracket	2	Banded	5D-1.4	16.6 lb.
CPMM4	2 Position Bracket, Regular Duty Bracket	4	Bolted	5D-1.5	29.7 lb.
CPMM6	3 Position Bracket, Regular Duty Bracket	6	Bolted	5D-1.5	45.8 lb.
CHDPMM4	2 Position , Heavy Duty Bracket	4	Bolted	5D-1.6	186.5 lb.
CHDPMM6	3 Position , Heavy Duty Bracket	6	Bolted	5D-1.7	261.5 lb.

### **1** Position Regular Duty Brackets



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# **Brackets, Primary Meter**

Continued on next two pages.







# Brackets, Primary Meter See previous page and following page.

2 Position Heavy Duty Bracket CHDPMM4







## **Brackets, Primary Meter**

See previous two pages.

#### **3 Position Heavy Duty Bracket**





# **Brackets**, Recloser

### For cluster mounting recloser banks on utility distribution poles

- Aluminum lightweight construction
- Available for mounting 1, 2 or 3 reclosers
- Banded units for where through-bolt holes are not possible

#### **Features**

- Banded style fits pole diameters from 7 3/4" to 12 1/4"
- C3SPR66 bracket includes arrester mounting provisions
- Compact circular arrangement of banded style offers 9" extenson from pole face

#### Material

- Bracket Aluminum 6061-T6
- Fasteners Galvanized steel



CRSM1









Catalog No.	Positions	Mounting Type	Approx. Ship Weight, Each
CRSM1	1		10 lbs.
CRSM2	2	Banded	12 lbs.
CRSM3	з		15 lbs.
C3SPR66	5	Bolted	48 lbs.





# Brackets, Transformer, Banded Type

**Alumium Construction** 

Continued on next page.....

**IMPORTANT!** 

The following condensed instructions are provided for general information and to aid the buyer in product selection. They are not to be used in actual product installation. Complete installation instructions and safety information are provided with each Cluster Mount unit.

#### **Quick Installation**

Rugged

#### Convenient

One worker can install the mount in 6061T6 aluminum alloy is extruded for Factory preassembled and boxed. Easy minutes. Typically less than five minutes high strength. Corrosion resistant. to store. including transformer.



1. Remove from box. Hardware included with the mount.

#### Installation



2. Using the tape provided, measure pole at the desired mounting height. Cluster mount will adjust to a wide variety of poles. Adjustment can be made at the ground.



4. Tighten double-arming bolts. Mount transformers.



3. Use a lag screw installed into the pole to locate where you want the cluster mount positioned. The lag screw is used for positioning only and not to bear the load.



# CHANCE<sup>®</sup> Models to mount one, two, or three transformers Double-band mounts for 3kVA - 100kVA transformers

For 3 through 100kVA transformers, use double band cluster mounts. Use any combination of 12" or 24" EEI-NEMA type A and B lugs as required. If adapters (page 5B-4) are used with the mounts, 167 through 250kVA transformers with EEI-NEMA type C lugs can be mounted.







Mounts Three Transformers			
Model	From pole	Wt. (lb./kg.)	
C15M36*	6"	40/18.14	(
C15M39	9"	54.2/24.58	
C15M3969	9"-6"-9"	50/22.67	

Mounts Two Transformers			
Model	From pole	Wt. (lb./kg.)	
C10M26	6"	38/17.24	
C10M29	9"	52/23.59	

Mounts One Transformer				
Model	From pole	Wt. (lb./kg.)		
C5M16	6"	35.7/16.19		
C5M19	9"	50/22.68		

\* RUS Listed

### • Single-band mounts for 3kVA - 50kVA transformers

For 3KVA through 50kVA, single-band cluster mounts may be used with 12" EEI-NEMA type A lugs.







Mounts Three Transformers				
Model	From pole	Wt. (lb./kg.)		
C6M36*	6"	24.6/11.15		
C6M39	9"	29.4/13.33		
C6M3969	9"-6"-9"	28/12.7		

Mounts Two Transformers					
lodel From pole Wt. (lb./kg.	)				
4M26 6" 22/9.97					
4M29 9" 27/12.24					

Mounts One Transformer						
Model From pole Wt. (lb./kg						
C2M16M	6"	20/9.07				
C2M19M	9"	25/11.33				

\* RUS Listed

### For extra pole bearing surface

Use Model C6M36M when extra pole bearing surface is required.

Includes  $\frac{5}{8}$ " transformer mounting hardware and ground clamp for mounting three 3kVÅ through 50kVA transformers with 12" EEI-NEMA type A lugs. Gives extra pole bearing surface for increased support on extremely soft or older poles. Ideal where appearance requires transformers to remain in a vertical position. Shipping weight: 31.3 lb. / 14.2 kg.



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# **CHANCE**<sup>®</sup>

# C → HPS ← 5. 192

### Model C321A Adapter Plate

Shipping weight: 4.0 lb. (1.8 kg.)

**Accessories** 

Use when mounting 167kVA and larger transformers with EEI-NEMA type C lugs (two plates required per transformer). Slot secures 3/4" mounting bolt head and permits one-hand tightening of bolt while providing jump proof feature. Each plate includes two 5/8" x 2" hot-dip galvanized machine bolts with nuts and lockwashers. Other mounting hardware is included with the cluster mount.

### **Model CEP18 Extension Plate**

Shipping weight: 4.2 lb. (1.9 kg.)

One CEP18 extension plate required for each band.

Example: C6M36 (single band) use one CEP18 C15M36 (double band) use two CEP18's



CEP18 Extension Plates can be used with any Hubbell aluminum band-type cluster mount to increase pole range. (see chart below). Extra bolts, nuts, and washers are provided.

Pole Sizes	Туре	Pole Dia.	Cat. No.	Example	EP18 Will Increase Max. Dia. To
Hubbell band type Cluster Mounts		6 <sup>1</sup> / <sub>2</sub> " - 11 <sup>1</sup> / <sub>2</sub> "	Add 5 to Standard Model No.	C6M365 C15M365	16 <sup>1</sup> /2"
can be mounted on poles $6\frac{1}{2}$ " to 19" in diameter.	Standard	7 <sup>3</sup> / <sub>4</sub> " - 12 <sup>1</sup> / <sub>4</sub> "	Standard Models	C6M36 C15M36	171/4"
	Large	9 <sup>1</sup> / <sub>2</sub> " - 14 <sup>1</sup> / <sub>2</sub> "	Add 14 to Standard Model No.	C6M3614 C15M3614	19 <sup>1</sup> / <sub>2</sub> "

#### **Mount Loading**

Cluster mounts are subjected to eccentric loading in service because transformer mounting brackets are located away from the lines of action of their gravity loads. Although the distance between the mounting face and the gravity load (the moment arm of the load) is often taken at 14", in reality it varies among the different models of transformer. By changing the bending moment associated with the vertical load, this variation may greatly affect the ability of the cluster mount to support the various transformers. Because the resisting stresses produced in the cluster mount are related to both the vertical load itself and to its associated moment, a single formula based on the moment arm will not satisfactorily predict safe loading. It is recommended that the moment arms be taken into account along with the weights of any transformers, to be supported by cluster mounts. The table below shows minimum ultimate strength or her tables of several Hubbell cluster mounts, suggested maximum transformer weights,



and resultant safety factors for four selected values of moment arm. Trained personnel with adequate technical skills may find this information helpful in selecting an appropriate cluster mount to support a specific transformer.

Catalog Number	Distance (D) from transformer mounting surface to load's line of action	Minimum Ultimate Strength (lbs.)	Maximum recommended Transformer load (lbs.) per position	Safety Factor
C5M19 C10M29 C15M39 C15M3969	14" 18" 22" 26"	6,000 3,900 3,200 2,800	2500 1950 1600 1350	2.4 2 2 2.1
C2M16 C4M26 C6M36	14" 18" 22" 26"	3,400 2,400 2,100 1,650	1275 1000 820 690	2.7 2.4 2.6 2.4
C5M16 C10M26 C15M36	14' 18" 22" 26"	6,400 5,000 4,000 3,450	3200 2500 2000 1725	2 2 2 2 2





# Brackets, Transformer, Banded Type Jumbo Model

### for 3 to 500kVA Transformers with EEI-NEMA A, B or \*C lugs

• Three-band clusters mount up to three 500kVA transformers and regulators with EEI-NEMA \*C lugs (36" vertical spacing).

• Field adaptable for EEI-NEMA A or B lugs (12" or 24" vertical spacing).

Stainless Steel / Grounding Lug

- Mounts to poles with diameters from  $9\frac{1}{2}$ " to  $14\frac{1}{2}$ ". Each unit includes three CEP18 extension plates (page 5B-4) to increase diameter by 5" (to  $19\frac{1}{2}$ ").
- To accommodate four-hole EEI-NEMA \*C lug mountings, C321A adapter plates can be purchased separately (page 5B-4).



Catalog Number,	Distance from Pole	Weight, each	Distance from Mounting Pad to Center of Equipment			
Jumbo Mount	to	Jumbo Mount	14"	18"	22"	26"
	Mounting Pad		Maximum Recommended Equipment Load per Phase			
C15M361436	6"	77 lb./34.9 kg.	5,000 lb.	3,900 lb.	3,200 lb.	2,700 lb.
C15M391436	9"	80 lb./36.3 kg.	4,000 lb.	3,100 lb.	2,550 lb.	2,100 lb.



# **Bracket, Transformer, Three Position - Wing Type**

### For pole mounting a three-phase transformer bank

- Aluminum construction make these brackets strong but light in weight
- Bolt on design installs guickly
- Optional lifting eye accepts closed hook for lifting of installed transformers (units with "L" suffix) **Features**

Spacing

Between

Outside

Positions

24"

25″

24″

30″

- Each unit has postions for 1, 2 or 3 transformers • Fits NEMA A or B transformer lugs
- Supplied with universal fitting, high strength bolts for both NEMA A or B lug transformers
- Pre-assembled for easy installation
- Includes ground lug

#### Material

Catalog

Number

C3MW24

C3MW24M

C3MW24ML

C11MW24

C11MW24L

C12MW24

C12MW30

- Body Aluminum 6061-T6
- Fasteners Galvanized steel
- Ground lug Stainless steel



Transformer

Lug Style

NEMA A

NEMA A or B

C3MW24ML

Pole

Offset

7 1/2"

9"

8″

8″

#### Center Pole Approximate Position Mounting

Hole

Spacing

12"

13″

12" or 18"

15"

**Optional Lifting Eye** 

Ship Weight,

Each

20 lbs.

20 lbs.

22.5 lbs.

34 lbs.

35.5 lbs.

34 lbs.

36 lbs.

C11MW24L



The values below represent the maximum recommended equipment load per phase (simultaneous loading) for common distances from the mounting position face to the center of gravity of the equipment installed.

Catalog Number	14″	18″	22″	26″				
C3MW24	625 lbs.	500 lbs.	410 lbs.	350 lbs.				
C3MW24M	1.250 lbc	1.000 lbc	820 lbs.	700 lbs.				
C3MW24ML	1,250 lbs.	1,000 lbs.	820 lbs.	700 lbs.				
C11MW24	2 500 lbc	2.000 lbs	1.640 lbc	1 295 lbs				
C11MW24L	2,500 lbs.	2,000 lbs	1,640 lbs.	1,385 lbs.				
C12MW24	2,500 lbs.	1,950 lbs.	1,600 lbs.	1,350 lbs.				
C12MW30	2,000 lbs.	1,550 lbs.	1,275 lbs.	1,075 lbs.				





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### Bracket, Transformer, Dual Position, Bolted Pole Mounting

### For pole mounting a two-phase transformer bank

- Aluminum construction make these brackets strong but light in weight
- Bolt on design installs quickly

#### Features

- Each unit has postions for 2 transformers
- Fits NEMA A or B transformer lugs
- Pre-assembled for easy installation
- Includes ground lug
- Includes transformer mounting hardware

#### Material

- Body Aluminum 6061-T6
- Fasteners Galvanized steel
- Ground lug Stainless steel





Catalog Number	Transfomer Size	Transformer Lug Style	Mounting Pole Offset	Pole Mounting Hole Spacing	Pole Mounting Bolt Size	Approx. Ship Weight Each
CDM2M2	3kVA to 50kVA	NEMA A	5″	12″	5/8″	8.0 lbs.
CDM4M2	3kVA to 100kVA	NEMA A or B	5	25 3/4"	3/4″	14 lbs.





# Brackets, Transformer, Single Position, Bolted Pole Mounting

for Transformer, Recloser or Sectionalizer with NEMA A, B or \*C lugs

- For mounting one 3kVA 50kVA Transformer, Recloser or Sectionalizer with NEMA A lugs
- Maximum capacity is 2,000 lb.
- Mounts to pole with two  $\frac{5}{8}$ " thru-bolts (not included)
- Illustrated instructions included with each unit

Catalog No.	Mounting Distance from Pole	Weight
CTB2M16	6"	7.2 lb./3.3 kg.
CTB2M19	9"	8.3 lb./3.8 kg.



- For mounting one 3kVA 100kVA Transformer, Recloser or Sectionalizer with NEMA A or B lugs (Readily field adapts for NEMA A lugs.)
- \*For mounting one 167kVA 333kVA Transformer,
- Recloser or Sectionalizer with NEMA C lugs, add two C321A adapter plates\*
- Maximum capacity is 2,000 lb. with two thru-bolts and 3,000 lb. with three thru-bolts
- Mounts to pole with two or three  $\frac{3}{4}$ " thru-bolts (not included)
- Illustrated instructions included with each unit

Catalog No.	Mounting Distance from Pole	Weight
CTB5M16	6"	12.1 lb./5.5 kg.
CTB5M19	9"	13.7 lb./6.2 kg.

\*Optional, for mounting one transformer, recloser or sectionalizer with NEMA Type C lugs (see Catalog page 5B-4)

Catalog No.	Description	Weight, each
C321A	*Adapter Plate (two required) for	4 lb./1.8 kg.
	use with CTB5M16 or CTB5M19	





# **Platforms, Heavy Equipment**

Shipped fully assembled on removable wheels for easy mobility

Built for fast, simple mounting of transformers, reclosers and other distribution control equipment.

- Capacities range up to 33,000 lb.
- 4 duty ratings 12-ft. to 21-ft.
- Optional 41"-wide walkway
- 2-pole mounting

For equipment too heavy for single-pole mounting, Hubbell Aluminum Platforms carry three relative ratings:

- Uniform vertical load
- Single center vertical load
- Three vertical loads

These criteria provide flexible information to match varying circumstances in the case-by-case process of specifying a platform. Since both weight and dimensions of equipment are factors, the same size specified for an individual item at one location may serve to support two to three items elsewhere.

To serve a wide range of uses, Hubbell offers a large selection. In the following four series, these lengths\* are available at each increment of 2 feet:

- Regular Duty ..... 12 to 16 feet\*
- Heavy Duty......14 to 18 feet\*
- Extra Heavy Duty ..... 13 to 21 feet\*
- Super Extra Heavy Duty......13 to 21 feet\* \*Inside poles, face to face

#### Pre-assembly saves you time and money

All Hubbell platforms are delivered in an assembled state, ready for mounting. This saves \$200 to \$300 on average in labor per platform.

#### High-strength and walkway option for all sizes

All platforms are constructed with  $11\frac{1}{2}$ " main I-beams (two each for all series but the Super Extra Heavy Duty series, which has four main beams each)., Extruded-aluminum sections are all 6061-T6 material. Fasteners are all steel galvanized per ASTM A153 or ASTM B695 Class 55.



**Extra Heavy** 

Duty Design Shown (above and below)

Each platform has six adjustable hat-channel crossmembers that can slide to necessary positions and lockbolt in place.

All come with illustrated, detailed mounting instructions.

Each unit may be ordered with an optional 41-inch-wide parallel walkway with hand railing and supports. Planks are not included, must be provided by the customer.

#### For ordering information, see next page.





### **Platforms, Heavy Equipment** Shipped fully assembled for 2-pole mounting

#### **Ordering Information**

Catalog	Inside Poles,	Beams,	Vertical Load Ratings			Weight,	
Number			Uniform Vertical Load	Single Center Vertical Load	Three Vertical Loads	each	
<b>Regular Duty Platforms — 42" WIDE —</b> Each attaches by <b>eight</b> $\frac{3}{4}$ " machine bolts (not supplied), <b>four</b> bolts in each pole.							
CP122	12 feet	<b>2</b> x 14 ft.	8,000 lb.	5,000 lb.	2,000 lb.	233 lb.	
CP142	14 feet	<b>2</b> x 16 ft.	6,000 lb.	4,000 lb.	1,800 lb.	254 lb.	
CP162	16 feet	<b>2</b> x 18 ft.	5,000 lb.	3,100 lb.	1,400 lb.	275 lb.	

Walkway option for Regular Duty Platforms — For single walkway (41 inches wide x length of platform beams) with supports and hand railings (walkway planks not supplied), add to Catalog No. suffix: WKY. For double walkway, add suffix: 2WKY.

Heavy Duty Platforms — 42" WIDE — Each attaches by eight 3/4" machine bolts (not supplied), four bolts in each pole.

CPHD142	14 feet	<b>2</b> x 16 ft.	14,000 lb.	7,500 lb.	4,600 lb.	265 lb.
CPHD162	16 feet	<b>2</b> x 18 ft.	14,000 lb.	7,500 lb.	4,600 lb.	286 lb.
CPHD182	18 feet	<b>2</b> x 20 ft.	14,000 lb.	7,500 lb.	3,633 lb.	307 lb.

Walkway option for Heavy Duty Platforms — For single walkway (41 inches wide x length of platform beams) with supports and hand railings (walkway planks not supplied), add to Catalog No. suffix: WKY. For double walkway, add suffix: 2WKY.

Extra Heavy Duty Platforms – 42" WIDE – Each attaches by fourteen $\frac{3}{4}$ machine bolts (not supplied), seven bolts in each pole.
---

CPEHD142	13 feet	<b>2</b> x 16 ft.	22,000 lb.	10,000 lb.	6,220 lb.	409 lb.
CPEHD162	15 feet	<b>2</b> x 18 ft.	17,742 lb.	10,000 lb.	4,667 lb.	430 lb.
CPEHD182	17 feet	<b>2</b> x 20 ft.	13,813 lb.	8,633 lb.	3,700 lb.	451 lb.
CPEHD202	19 feet	<b>2</b> x 22 ft.	11,058 lb.	6,911 lb.	2,909 lb.	471 lb.
CPEHD222	21 feet	<b>2</b> x 24 ft.	9,052 lb.	5,657 lb.	2,381 lb.	503 lb.

Walkway option for Extra Heavy Duty Platforms — For single walkway (41 inches wide x length of platform beams) with supports and hand railings (walkway planks not supplied), add to Catalog No. suffix: WKY. For double walkway, add suffix: 2WKY.

	Super Extra Heavy Duty Platforms – 48" WIDE -	<ul> <li>Each attaches by fourteen <sup>3</sup></li> </ul>	," machine bolts (not supplied	), <b>seven</b> bolts in each pole.
--	---	--	--------------------------------	-------------------------------------

CPSEHD142	13 feet	<b>4</b> x 16 ft.	33,000 lb.	20,000 lb.	10,400 lb.	665 lb.
CPSEHD162	15 feet	<b>4</b> x 18 ft.	31,000 lb.	18,000 lb.	9,334 lb.	709 lb.
CPSEHD182	17 feet	<b>4</b> x 20 ft.	27,626 lb.	17,266 lb.	7,266 lb.	751 lb.
CPSEHD202	19 feet	<b>4</b> x 22 ft.	22,116 lb.	13,822 lb.	5,818 lb.	801 lb.
CPSEHD222	21 feet	<b>4</b> x 24 ft.	18,104 lb.	11,314 lb.	4,762 lb.	856 lb.

Walkway option for Super Extra Heavy Duty Platforms — For single walkway (41 inches wide x length of platform beams) with supports and hand railings (walkway planks not supplied), add to Catalog No. suffix: WKY. For double walkway, add suffix: 2WKY.

#### **Platform Accessories**

CATTDK	Equipment tie-down kit. Includes "L" tabs, bolts, washers and nuts for one piece of equipment
CPEPKRD	Extra pole kit for regular duty platform
CPEPKHD	Extra pole kit for heavy duty platform
CPEPKEHD	Extra pole kit for extra heavy duty platform
CPEPKSEHD	Extra pole kit for super extra heavy duty platform



# CHANCE®

### **Racks, Capacitor**

- Five sizes for one to twelve 200-kvar capacitors
- Shipped fully assembled to go up fast

#### Lightweight and pre-assembled for installation ease

To save you installation time and money, all Hubbell aluminum capacitor racks are fully assembled. Five sizes are designed for mounting capacitors with a  $15^{5/8}$ " lug spacing and weighing up to 80 pounds each. The racks are notably light in weight compared to their strength ratings.

Each capacitor rack is furnished complete with a ground wire clamp secured by a  $\frac{3}{8}$ " bolt.

Mounting bolts are not included. The single-unit (CCR1) rack requires a  $\frac{5}{8}$ " through bolt and a lag bolt; the largest rack (CCR912) requires two  $\frac{3}{4}$ " through bolts; and each

of other three racks (CCR3, CCR34, CCR6) requires two  ${}^{5/}{}_{8}$ " through bolts. All come with illustrated mounting instructions.

#### Adjustability of multi-unit models

Every unit comes with two pre-spaced  $\frac{3}{8}$ " hold-down bolts (each with a flat washer, a lockwasher and a nut) per capacitor, up to the rack's maximum.

These hold-down bolt heads are trapped in the T-slot channel to ensure proper spacing for mounting. Whether mounting the maximum or fewer capacitors, they must be evenly spaced in the rack for proper load distribution.







# NOTES




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Catalog 5B