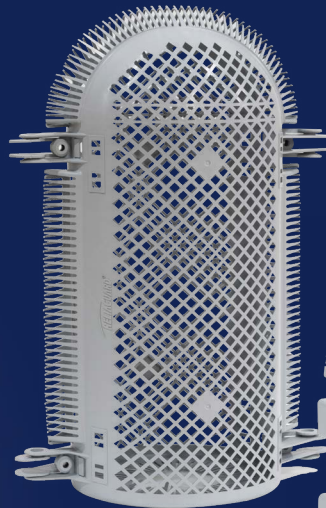




# PROTECT YOUR ASSETS FROM WILDLIFE CONTACT







*Reliaguard® is dedicated to the manufacture of injection molded and thermoformed guards as well as conductor cover – all intended for use in the prevention of animal and bird-caused power outages.*



*Reliaguard parts are produced on a volume basis and priced affordably for large volume purchases.*



*Reliaguard's GreyEEL and EEL Slider form an important part of any animal mitigation solution.*



*Reliatanium™ was formulated to meet demanding, outdoor high voltage applications. It is UV stable and UL94 V-0 flame retardant.*

## **CONTACT RELIAGUARD**

27151 Burbank Street | Foothill Ranch, CA | 92610 | USA

Telephone: 949 305 3311

Email: [reliaguardsales@hubbell.com](mailto:reliaguardsales@hubbell.com)

[www.reliaguard.com](http://www.reliaguard.com)

Fax: 949 666 8588



# INTRODUCTION

## INTRODUCING THE RELIAGUARD PRODUCT LINE

Reliaguard manufactures guards for common powerline equipment to prevent animal and bird caused outages. Reliaguard parts are designed to have a superior fit for the underlying equipment to prevent gaps in coverage which can lead to an animal or bird caused power outage. Reliaguard parts are made from a proprietary material known as Reliatanium.

Reliaguard recommends that all of it's guards be installed with GreyEEL conductor cover to extend the area of coverage. For more information on GreyEEL and to find out more about the EEL Slider application tools visit [www.reliaguard.com](http://www.reliaguard.com).

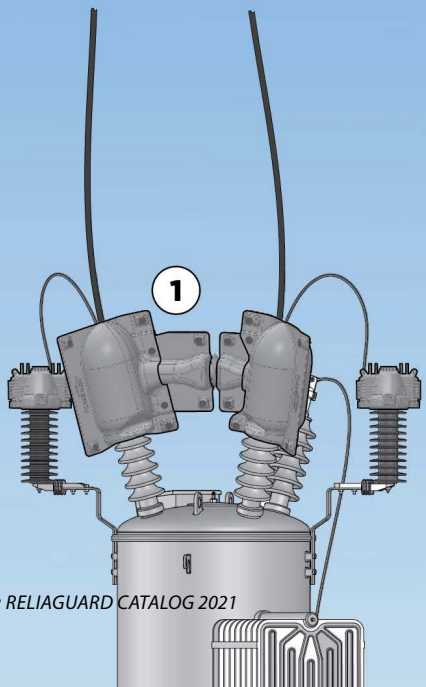
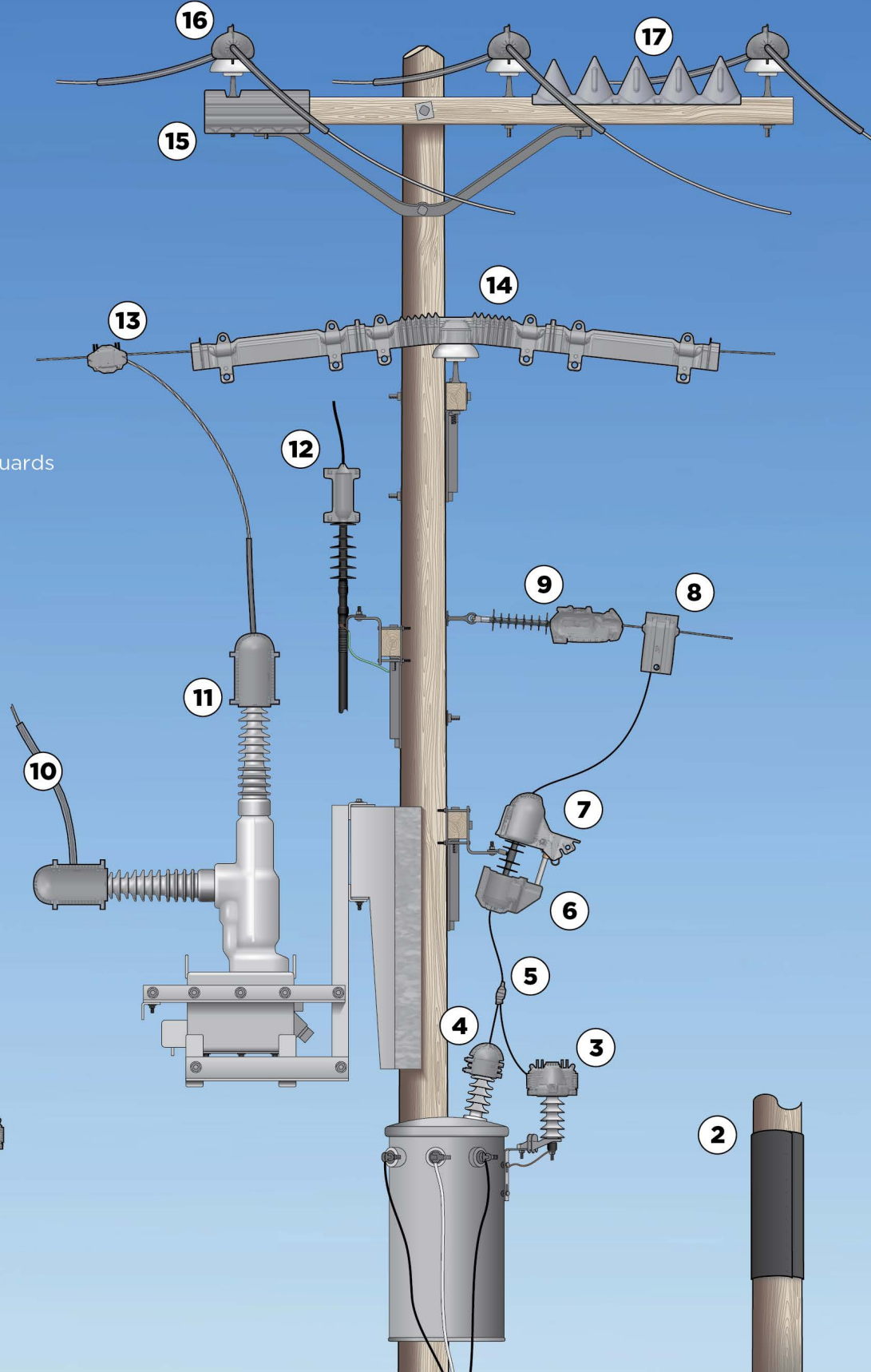
## TABLE OF CONTENTS

Introduction	3	K-Line Clamp-Top Insulator Guard	19
Reliaguard Distribution Product Infographic	4	Dead End Guards	20
Design Features of Guards	5	External Back Up Fuse Guard	21
Design Features of Guards: Multiport LA Guards	6	Cable Terminator Guards	22
Design Features: Mesh and Solid Bushing Guards	7	Hot Stickable Tie Top Insulator Guard	23
Design Features: Cutout Guards	8	Tie Top Insulator Guard	24
Transformer Bushing Guards Medium	9	Cross-Arm Guard	25
Transformer Bushing Guards Small	10	Pipe Bus & Angle Bus Guards	26
Handwheel Guard	11	Protection Disc	27
Lightning Arrester Guards	12	Wildlife Hot Stick Disc	28
Cutout Guards	13	ReliaWrap Pole Wrap	29
Loadbreak Cutout / Solid Blade Disconnect Guard & Disconnect Blade Guard	14	Wedge Clamp Guards	30
Recloser Kit	15	Overhead Bail Clamp Guard	31
Voltage Regulator Kit Cooper	16	Reliaguard Substation Product Infographic	32 - 33
Universal Regulator Kit	17	GreyEEL Conductor Cover	34
Perch Preventer	18	GreyEEL Product Specs	35
		EEL Slider Application Tool	36
		OEM and Custom Design Process	37
		Reliaguard Product Specs	38 - 40
		Improving the Grid's Reliability	41



### PRODUCT SHOWCASE

- 1. Voltage Regulator Kits
- 2. ReliaWrap Pole Wrap
- 3. Lightning Arrester Guards
- 4. Transformer Bushing Guards
- 5. Self-Fusing Tape
- 6. Cutout Lower Bracket Guards
- 7. Cutout Guards
- 8. Overhead Bail Clamp Guards
- 9. Deadend Guards
- 10. GreyEEL Conductor Cover
- 11. Recloser Kits
- 12. Cable Terminator Guards
- 13. Wedge Clamp Guards
- 14. Hot Stickable Tie Top Insulator Guards
- 15. Cross-Arm Guards
- 16. Tie Top Insulator Guards
- 17. Perch Preventers





# WHY ARE DESIGN FEATURES OF GUARDS SO IMPORTANT?

## THE 3 MAIN DESIGN OBJECTIVES OF COVER-UP GUARDS ARE:

1. **Effective materials and coverage** to mitigate contact risk between energized phases or phase to ground, taking into consideration animal reach or wingspan.
2. **Easy application**, taking into consideration linemen glove wear, methods and tools.
3. **Robust Retention Features**, so guards stay where they are installed and do not dislodge.

To address these 3 important design elements, Reliaguard has worked with it's linemen and designers to collaborate on guard designs that are highly effective.



Reliaguard's design team is composed of professional CAD technicians, mechanical engineers, and industrial designers who develop guards specifically for electrical equipment applications.

Their expertise is supported by a team of linemen who collectively have 100 years of field experience working with electrical equipment on the powerline and in substations. This expertise is further supported by a collaborative customer approach to problem-solving in mitigating against animal and bird-caused outages since 2001.

Reliaguard will work with customers to design guards specific to their needs. Examples include a frog guard and a theft prevention guard that were designed through the collaboration of Reliaguard and its customers to solve unique challenges.

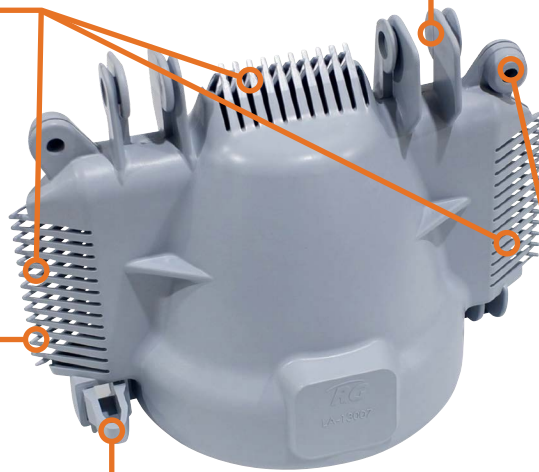
# RELIAGUARD MULTIPORT LIGHTNING ARRESTER GUARD EXCLUSIVE FEATURES EXAMPLE

### THREE CABLE EXITS

Three cable exits allow easy vertical, right angle and feed-thru connections common on many lightning arresters and capacitor banks.

### ROBUST MECHANICAL HINGES

Strong hinges ensure the integrity of the guard is maintained in transport, installation or on re-application of the product without breakdown.



### OVERLAPPING FINGERS

Overlapping fingers are a critical feature for guards as they deter access and prevent animals from using the opening to a guard cavity as a place to store food or nesting materials.

### OPTIONAL PERMANENT CLOSURE

A feature that is optionally used by some customers is to permanently close the cover by applying a push fastener or tie wrap.

### GLOVE FRIENDLY LOOP LATCHES

Reliaguard's loop latch design provides best in class security and allows easy operation by lineman wearing high-voltage gloves.

### MADE FROM RELIATANIUM

Reliatanium is Reliaguard's own proprietary material formulation. It is UV stable, track resistant and flame retardant.



## RELIAGUARD BUSHING GUARDS (MESH AND SOLID) EXCLUSIVE FEATURES EXAMPLE

### MADE FROM RELIATANIUM

Reliatanium is Reliaguard's own proprietary material formulation. It is UV stable, track resistant and flame retardant.

### 180° CABLE EXIT

The 180 degree exit on Reliaguard's bushings allows the cable to exit in its natural position without putting strain on the guard, which could compromise protection.

### OPTIONAL PERMANENT CLOSURE

A feature that is optionally used by some customers is to permanently close the cover by applying a push fastener or tie wrap.

### ROBUST MECHANICAL HINGES

Strong hinges ensure the integrity of the guard is maintained in transport, installation or on re-application of the product without breakdown.

### OVERLAPPING FINGERS

Overlapping fingers are a critical feature for guards as they deter access and prevent animals from using the opening to a guard cavity as a place to store food or nesting materials.

### GLOVE FRIENDLY LOOP LATCHES

Reliaguard's loop latch design provides best in class security and allows easy operation by linemen wearing high-voltage gloves.

### MULTIPLE BOTTOM OPENING SIZES

Reliaguard products are available with a wide selection of base port sizes to ensure the guards fit properly and provide optimal protection on energized risk points



# RELIAGUARD CUTOUT GUARD EXCLUSIVE FEATURES EXAMPLE

### OVERLAPPING FINGERS

Overlapping fingers are a critical feature for guards as they deter access and prevent animals from using the opening to a guard cavity as a place to store food or nesting materials.

### POSITIVE FRONT CLOSURE

The front slide latch ensures the guard remains closed and does not gap open.

### BI-DIRECTIONAL RETENTION PIN AND FRONT CLOSURE

The front slide latch ensures the guard remains closed and does not gap open.

### 180° CABLE EXIT

The 180 degree exit on Reliaguard's bushings allows the cable to exit in its natural position without putting strain on the guard, which could compromise protection.

### WON'T INTERFERE WITH TOOLS

The guard has been designed with appropriate clearance to allow easy operation of the larger end of stick attachments such as a loadbreak tool.

### EASY HOTSTICK INSTALLATION

Reliaguard's universal cutout guard fits most brands of porcelain and polymer cutouts. Multiple attachment points and unique features allow for easy installation of the product by a single lineman with a hotstick.

### MADE FROM RELIATANIUM

Reliatanium is Reliaguard's own proprietary material formulation. It is UV stable, track resistant and flame retardant.



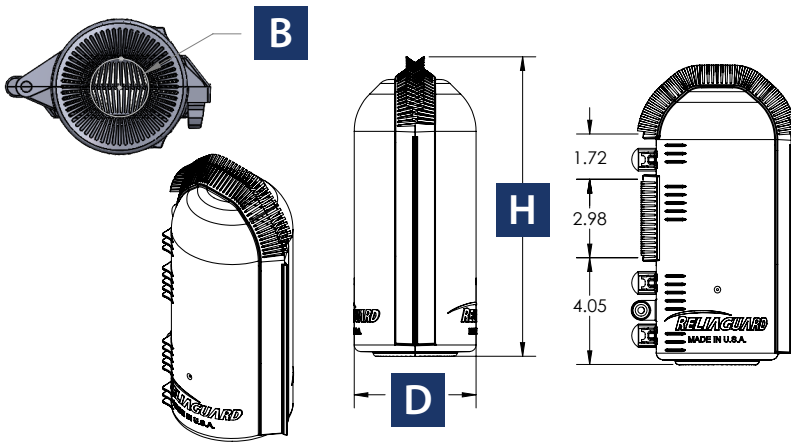


# BUSHING GUARDS - MEDIUM

Transformers are easily the most common perch point for wildlife. Transformer bushing guards protect endangered species, birds, squirrels, raccoons, snakes, feral cats and other wildlife from contact with energized risk points. The contact risk points on a bushing are typically from a phase to ground contact.

## FEATURES

- Overlapping fingers to prevent birds and animals from using gaps to store food or nesting materials
- Secure closure and latch designs ensure guards stay in place
- Accommodates conductors exiting at various angles
- Manufactured from a proprietary material known as Reliatanium™
- Reliatanium achieves a UL 94 V-0 flammability rating



Product Name	Part Number	Height Dimension*	Diameter Dimension*	Additional Dimension*	Pack Size (MOQ)
#4 - Medium Bushing Guard w/ Loop Latch <sup>1</sup>	BC-14992	10.4 (264.2)	4.4 (111.8)	1.8 (45.7) base port	24
#5 - Medium Bushing Guard - Small Base 1.8" <sup>1</sup>	BC-16006	8.1 (205.7)	5 (127)	1.8 (45.7) base port	24
#5 - Medium Bushing Guard - Mesh - Small Base 1.8" <sup>1</sup>	BC-16008	8.1 (205.7)	5 (127)	1.8 (45.7) base port	24
#5 - Medium Bushing Cover - 2.25" base <sup>1</sup>	BC-15011	8.1 (205.7)	5 (127)	2.25 (57.2) base port	24
#5 - Medium Bushing Cover - Mesh - 2.25" base <sup>1</sup>	BC-15013	8.1 (205.7)	5 (127)	2.25 (57.2) base port	24
#5 - Medium Bushing - Solid - 2.8" base <sup>1</sup>	BC-16201	8.1 (205.7)	5 (127)	2.8 (71.1) base port	24
#5 - Medium Bushing - Mesh - 2.8" base <sup>1</sup>	BC-16203	8.1 (205.7)	5 (127)	2.8 (71.1) base port	24
#7 - Medium Bushing Guard <sup>2</sup>	BC-15021	11.8 (299.7)	7 (177.8)	2.5 (63.5) base port	12
#7 - Medium Bushing Guard - Mesh <sup>2</sup>	BC-15023	11.8 (299.7)	7 (177.8)	2.5 (63.5) base port	12
#8 - Medium Bushing Guard <sup>2</sup>	BC-15031	17.8 (452.1)	8 (203.2)	3.5 (88.9) base port	6
#8 - Medium Bushing Guard - Mesh <sup>2</sup>	BC-15033	17.8 (452.1)	8 (203.2)	3.5 (88.9) base port	6
#10 - Medium Bushing Guard <sup>2</sup>	BC-15041	19.8 (502.9)	10.5 (266.7)	4.6 (116.8) base port	6
#10 - Medium Bushing Guard - Mesh <sup>2</sup>	BC-15043	19.8 (502.9)	10.5 (266.7)	4.6 (116.8) base port	6

<sup>1</sup>Security pins are optional and not included  
<sup>2</sup>Security pins included  
 \*Dimensions in inches (millimeters)



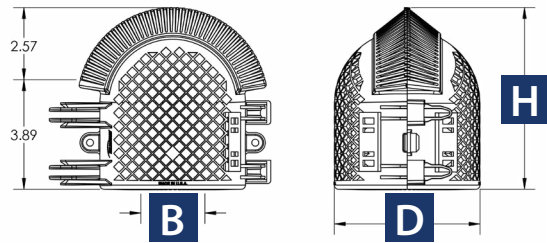
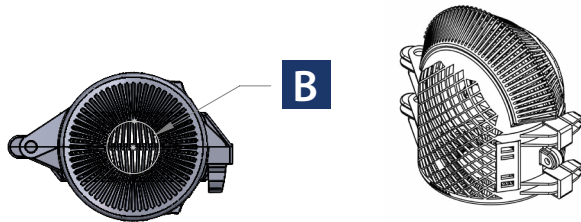
## BUSHING GUARDS - SMALL

Transformers are easily the most common perch point for any animal or bird. According to Cindy Kemper, (Patterns of Raptor Electrocutation Mortality on Distribution Power Lines in Southeast Alberta), three-phase transformer poles cause more contact outages and more electrocutions of birds than any other structure. When utilities are making selections for guards, transformers must be a priority. The contact risk points on a bushing are typically from a phase to ground contact.

Reliaguard® Bushing Guards are designed to stay in place. Retention of the guard once applied is a critical design feature to be considered. Reliaguard guards are manufactured with a superior closure design to ensure the bushing guards stay where they are installed. The lock fastener included with each guard provides an optional method of ensuring guards can't be inadvertently dislodged.

### FEATURES

- **Overlapping fingers to prevent birds and animals from using gaps to store food or nesting materials**
- **Manufactured with a superior closure design to ensure the bushing covers stay where they are installed**
- **Covers can accommodate conductor exiting at various angles**
- **Manufactured from a proprietary material known as Reliatanium™**
- **Reliatanium achieves a UL 94 V-0 flammability rating**



Product Name	Part Number	Height Dimension (H) *	Diameter Dimension (D)*	Base Port Dimension (B)*	Pack Size (MOQ)
#4 - Small Bushing Guard w/ Loop Latch <sup>1</sup>	BC-14991	5.7 (144.8)	4.4 (111.8)	1.8 (45.7) base port	24
#5 - Small Bushing Guard - Small Base 1.8" <sup>1</sup>	BC-16003	5.6 (142.2)	5 (127)	1.8 (45.7) base port	24
#5 - Small Bushing Cover - Mesh - Small Base 1.8" <sup>1</sup>	BC-16005	5.6 (142.2)	5 (127)	1.8 (45.7) base port	24
#5 - Small Bushing Guard - Mesh - 2.25" base <sup>1</sup>	BC-15008	5.6 (142.2)	5 (127)	2.25 (57.2) base port	24
#5 - Small Bushing Guard - Solid- 2.25" base <sup>1</sup>	BC-15010	5.6 (142.2)	5 (127)	2.25 (57.2) base port	24
#5 - Small Bushing – Solid - 2.8" base <sup>1</sup>	BC-15997	5.6 (142.2)	5 (127)	2.8 (71.1) base port	24
#5 - Small Bushing – Mesh - 2.8" base <sup>1</sup>	BC-15999	5.6 (142.2)	5 (127)	2.8 (71.1) base port	24
#8 - Small Bushing Guard <sup>2</sup>	BC-15028	15 (381)	8.25 (210)	3.5 (88.9)	6
#8 - Small Bushing Guard - Mesh <sup>2</sup>	BC-15030	15 (381)	8.25 (210)	3.5 (88.9)	6

<sup>1</sup>Security pins are optional and not included  
<sup>2</sup>Security pins included  
 \*Dimensions in inches (millimeters)

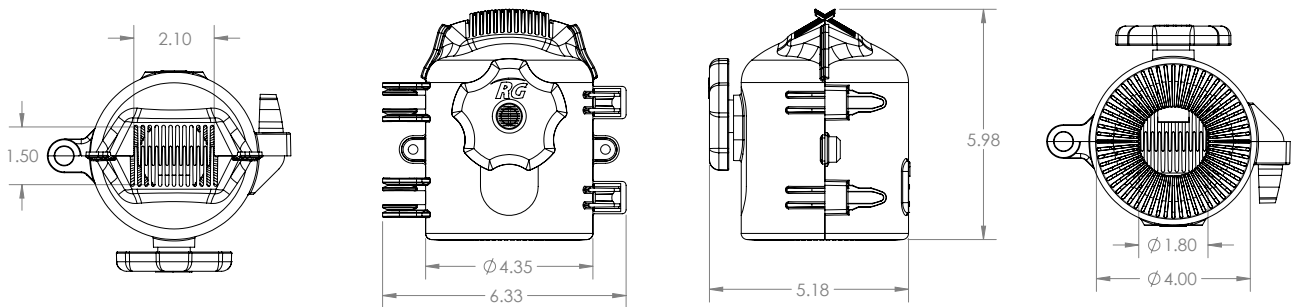


# HANDWHEEL GUARD

The handwheel guard provides complete coverage for transformer bushing terminals. A design that installs under the first skirt ensures there are no gaps in protection. A convenient handwheel allows linemen to tighten or loosen the connection terminal without the use of tools.

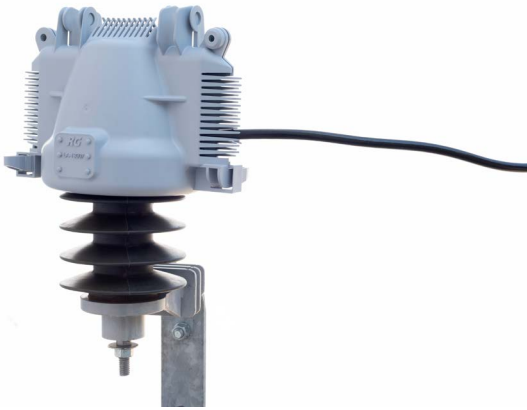
## FEATURES

- **Overlapping fingers to prevent birds and animals from using gaps to store food or nesting materials**
- **Design that mounts under the first skirt**
- **Lineman friendly loop latches**
- **Optional push pin closure for permanent installation**
- **Convenient handwheel for tool-less tightening of connection terminal**
- **Also available without handwheel**



Product Name	Part Number	Height Dimension*	Body Diameter*	Max Skirt Diameter*	Base Port*	Pack Size (MOQ)
Handwheel Bushing Guard Kit - Standard <sup>1</sup>	BC-13010K	5.98 (151.9)	4.35 (110.5)	3.9 (99.1)	1.8 (45.7)	24
#4 XS Bushing Guard - Standard (non-handwheel) <sup>1</sup>	BC-14983	5.98 (151.9)	4.35 (110.5)	3.9 (99.1)	1.8 (45.7)	24
Handwheel Bushing Guard Kit - Bell Bottom <sup>1</sup>	BC-13020K	6.48 (164.6)	4.35 (110.5)	4.5 (114.3)	1.8 (45.7)	24
#4 XS Bushing Guard - Bell Bottom (non-handwheel) <sup>1</sup>	BC-14985	6.48 (164.6)	4.35 (110.5)	4.5 (114.3)	1.8 (45.7)	24

<sup>1</sup> Security pins are optional and not included  
\*Dimensions in inches (millimeters)



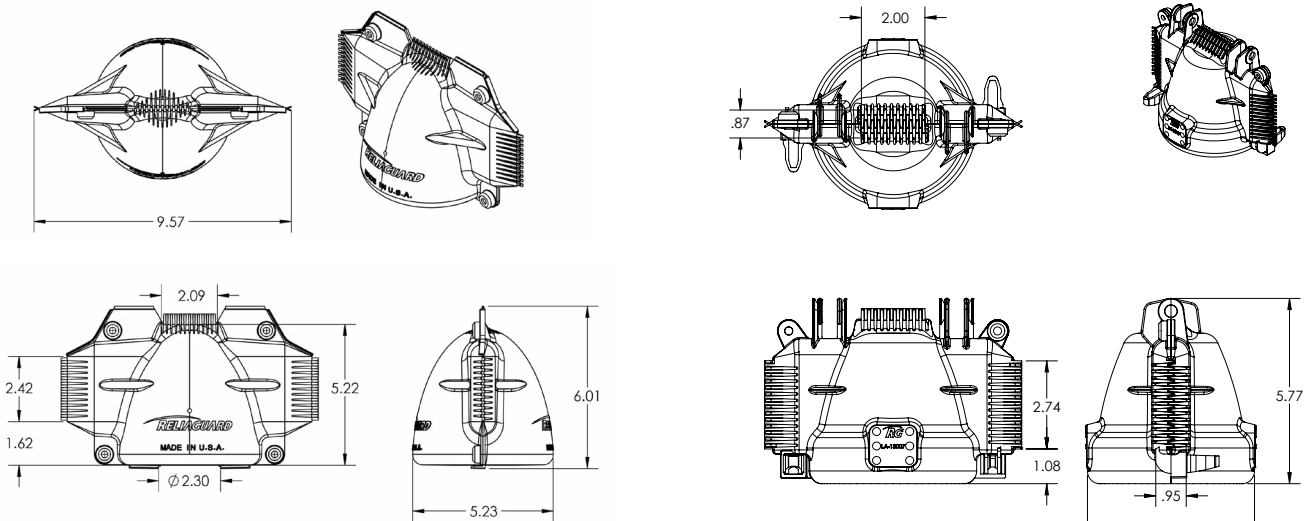
# LIGHTNING ARRESTER GUARDS

The lightning arrester cap that is usually included with new arresters often doesn't provide enough coverage to fully protect the wire connection or properly overlap the stripped section of poly-covered conductor at the connection point. According to ArresterWorks (Wildlife Protective Devices for Arresters by Jonathan Woodworth), lightning arrester protection should consider that the higher the voltage the further the coverage needs to extend.

With current surges being diverted through arresters, it is critically important that the arresters and associated guards are non-flammable. Reliaguard Lightning Arrester Guards ensure better coverage, are more securely retained in place, are non-flammable and can accommodate a wide range of conductor diameters.

## ARRESTER GUARD PRODUCT THAT IS NON-FLAMMABLE

- **Installs over the first skirt/flight of the insulator preventing wildlife activity from taking place under the guard**
- **Accommodates a wide range of conductor diameters**
- **Easily accommodates feed through conductors**
- **Also a great fit for the feed through connections on capacitor banks**



Product Name	Part Number	Height Dimension *	Diameter Dimension *	Additional Dimension*	Pack Size (MOQ)
Lightning Arrester - Multi Port	LA-13002	6.0 (152.4)	5 (127)	2.3 (58.4) base port	24
Lightning Arrester - Multiport (Loop Latch) <sup>1</sup>	LA-13007	5.8 (147.3)	5 (127)	2.0 (50.8) base port	24

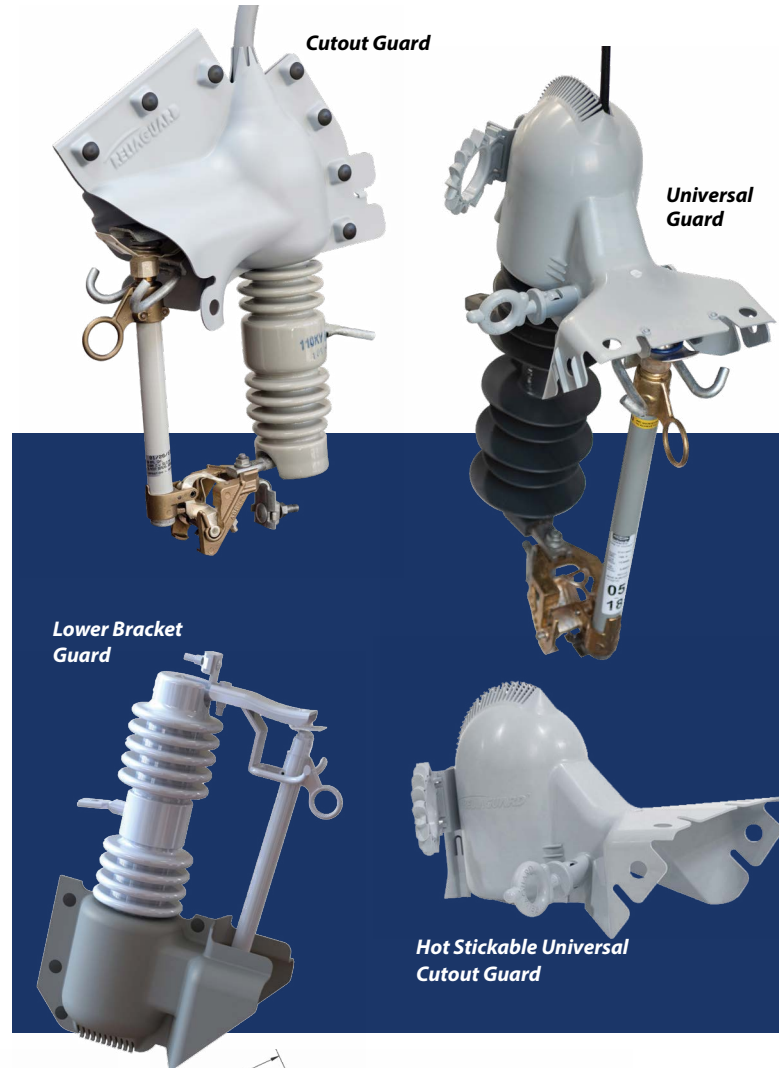
<sup>1</sup>Security pins are optional and not included  
 \*Dimensions in inches (millimeters)

# HOT STICKABLE UNIVERSAL CUTOUT GUARD

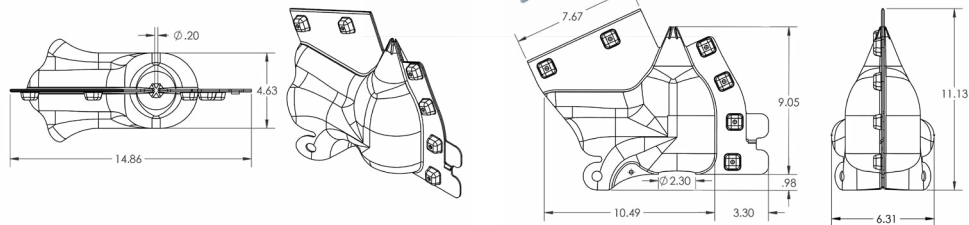
- Can be used for both energized and de-energized installations
- Fully enclosed bolted connections
- Accomodate various conductor diameters
- Fits Polymer and Porcelain conventional Cutouts
- Clip secures conductor opening
- Retaining pin installs from either side

## CUTOUT GUARD

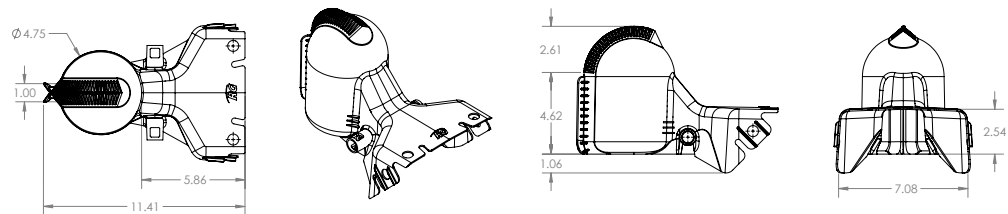
- Reliaguard® Cutout Guards are designed to ensure superior retention as not to be dislodged by weather, vibration or animals
- Designed to accommodate various conductor diameters
- Fits both porcelain and polymer Cutouts
- Manufactured from a proprietary material known as Reliatanium™
- For manual, permanent installation where hot-stick installation and ease of removal are not required



Technical Drawing for Cutout Guard



Technical Drawing for Hot Stickable Universal Cutout Guard



Product Name	Part Number	Height Dimension *	Diameter Dimension *	Base Port*	Pack Size (MOQ)
Hot Stickable Universal Cutout Guard	CO-10007	5.5 (137.5)	4.59 (116.5)	2.9 (73.7)	24
Switch Cover - Short Hood	CO-10005	6.65 (169)	4.5 (114.3)	2.3 (58.4)	12
Cutout Cover Upper and Lower Bracket Kit - Std.	CO-10205K	6.65 (169)	4.5 (114.3)	2.3 (58.4)	12
Cutout Cover Upper and Lower Bracket Kit - Large	CO-10206K	7.38 (187)	5.6 (25.4)	3.25 (82.5)	12

\*Dimensions in inches (millimeters)



*Solid Blade Disconnect Guard 900 amp*



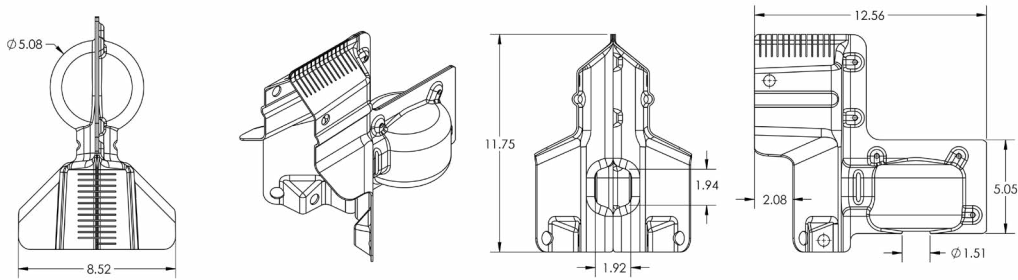
*Loadbreak Cutout Guard*

## **LOADBREAK CUTOUT GUARD**

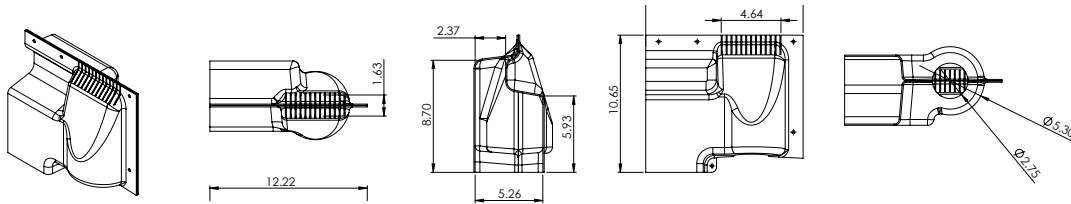
- Reliaguard Loadbreak Cutout Guards offer complete coverage for the connection terminal and arc chute
- Universal fit
- Accommodates a wide range of conductor diameters

## **SOLID BLADE DISCONNECT GUARD**

- Reliaguard® Solid Blade Disconnect Guards are designed to stay in place. Retention of the cover once applied is a critical design feature to be considered
- Guards can accommodate various conductor diameters
- Fits a wide range of porcelain and polymer switches
- Reliaguard Disconnect Guards are made in hot-stickable versions



**Technical Drawing for Solid Blade Disconnect Guard 900 amp**



**Technical Drawing for Loadbreak Cutout Guard**

Product Name	Part Number	Height Dimension *	Diameter Dimension *	Base Port*	Pack Size (MOQ)
Solid Blade Disconnect Guard	CO-20002	11.75 (298.5)	4.9 (124.5)	1.51 (38.4)	12
Loadbreak Cutout Guard	CO-20101	10.65 (270.5)	5.26 (133.6)	2.75 (69.9)	12

\*Dimensions in inches (millimeters)

# RECLOSER KITS

Bird and animal contact risk points on reclosers commonly exist between energized bushings of adjacent phases and when reclosers are configured in close proximity to support structures. By fully protecting the energized connections of recloser bushings, which includes covering bare conductors, contact risks can be eliminated.

Reliaguard® Recloser Kits effectively enclose bushing connections and are designed to ensure long-term retention. The push fastener included with each guard provides an optional method of safeguarding guards from being inadvertently opened and dislodged.

## FEATURES

- Superior closure design ensures guards stay on
- Guards accommodate many conductor exit angles
- Solid or mesh options
- Drainage holes in solid covers for horizontal insulators
- Option to include additional arrester guards not shown



Reliaguard KIT Description	FITS	Part Number	Bushing Qty	Conductor Cover	EEL Tool
Recloser Kit V-ST (Viper ST) - Solid	G&W Viper	RCK-12001K	6	0.75" OD <sup>1</sup>	1
Recloser Kit V-ST (Viper ST) - Mesh	G&W Viper	RCK-12006K	6	0.75" OD <sup>1</sup>	1
Recloser Kit - VSTLA (w/ LA) (Viper ST) *	G&W Viper	RCK-12020K	6	0.75" OD <sup>1</sup>	1
Recloser Kit - NVA - Solid (4' C.C.)	Cooper Nova	RCK-12201K	6	0.75" OD <sup>1</sup>	1
Recloser Kit - NVA - Mesh (4' C.C.)	Cooper Nova	RCK-12207K	6	0.75" OD <sup>1</sup>	1
Recloser Kit Single SPE - Solid (4' C.C.)	Cooper Nova/Spear	RCK-12210K	2	0.75" OD <sup>2</sup>	1
Recloser Kit Single SPE - Mesh (4' C.C.)	Cooper Nova/Spear	RCK-12215K	2	0.75" OD <sup>2</sup>	1
Recloser Kit ELAB - Solid (4' C.C.)	Elastimold/ABB	RCK-13001K	6	0.75" OD <sup>1</sup>	1
Recloser Kit ELAB - Mesh (4' C.C.)	Elastimold/ABB	RCK-13005K	6	0.75" OD <sup>1</sup>	1
Recloser Kit ELAB - Mesh (4' C.C.-.500" max)	Elastimold/ABB	RCK-13006K	6	0.50" OD <sup>1</sup>	1
Recloser Kit Single ELAB - Solid (4' C.C.)	Elastimold/ABB	RCK-13101K	2	0.75" OD <sup>2</sup>	1
Recloser Kit Single ELAB - Mesh (4' C.C.)	Elastimold/ABB	RCK-13105K	2	0.75" OD <sup>2</sup>	1
Recloser Kit Single ELAB - Mesh (4' C.C.-.375" max)	Elastimold/ABB	RCK-13106K	2	0.375" OD <sup>2</sup>	1

<sup>1</sup>6 - 4ft sections of conductor cover and EEL Slider tool  
<sup>2</sup>2 - 4ft sections of conductor cover and EEL Slider tool

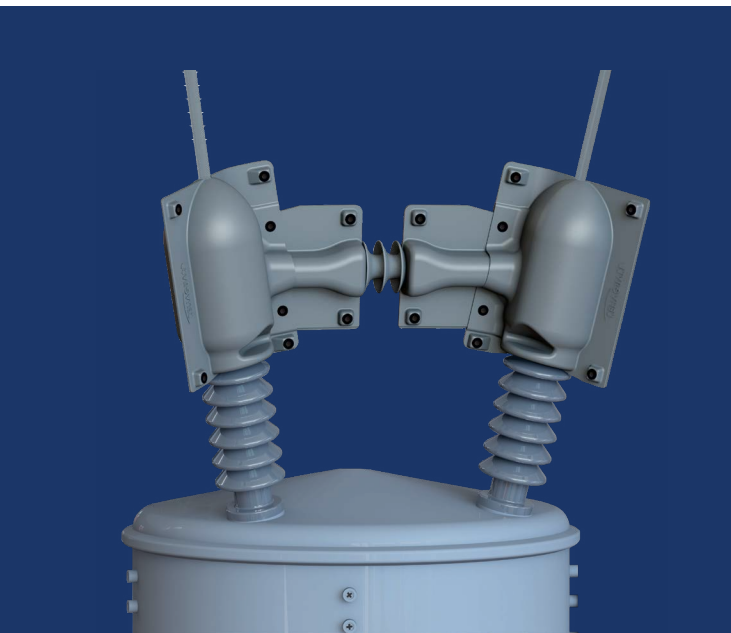
\*Includes 6 - lightning arrester guards  
 \*Dimensions in inches (millimeters)



## VOLTAGE REGULATOR KIT - COOPER

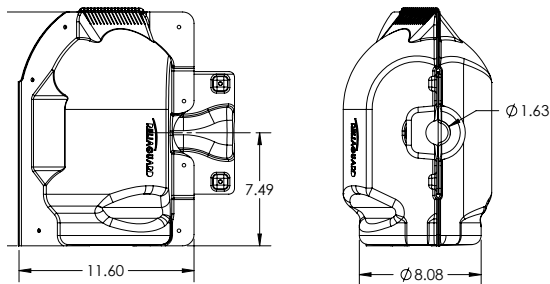
Regulators typically have reduced clearances because of their characteristic design and how they are commonly configured. These nominal clearances create a high risk for bird and animal contact. The high cost of replacing a regulator is another reason why it is crucial to protect such an important system asset.

Reliaguard® Regulator Guards offer complete coverage of energized components including series arresters and brackets, bushing terminals, and wire connectors. Reliaguard Regulator Guards have an overlapping design to ensure there are no gaps in coverage.

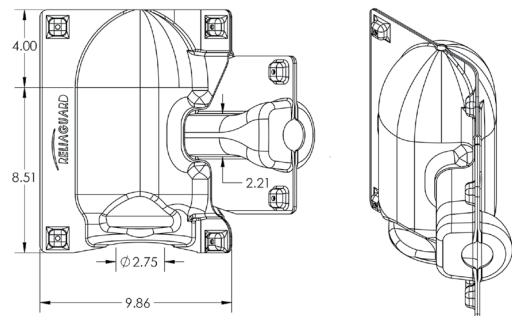


### FEATURES

- Designed for Cooper 50 amp to 400 amp, and Cooper 500 amp
- Complete comprehensive coverage of the insulator and shunt connections, no gaps
- Adjustable design



Technical Drawing for Voltage Regulator Kit - C500



Technical Drawing for Voltage Regulator Kit - C400

Product Name	Part Number	Height Dimension *	Diameter Dimension *	Additional Dimension*	Pack Size (MOQ)
Voltage Regulator Kit – C400 <sup>1</sup>	RK-11001K	12 (304.8)	6.3 (160)	2.75 (69.9) base port	1
Voltage Regulator Kit – C500 <sup>2</sup>	RK-11002K	14.5 (368.3)	9.25 (247.7)	3.50 (88.9) base port	1

<sup>1</sup> (Regulator Kit includes 2 bushing covers and 2 arrester bracket covers; fits Cooper Regulators - 50 Amp to 400 Amp)

<sup>2</sup> (Regulator Kit includes 2 bushing covers and 2 arrester bracket covers; fits Cooper Regulator - 500 Amp)

\*Dimensions in inches (millimeters)



# UNIVERSAL REGULATOR KIT

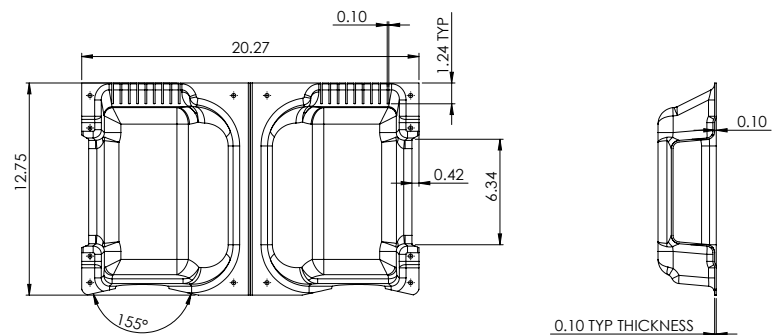
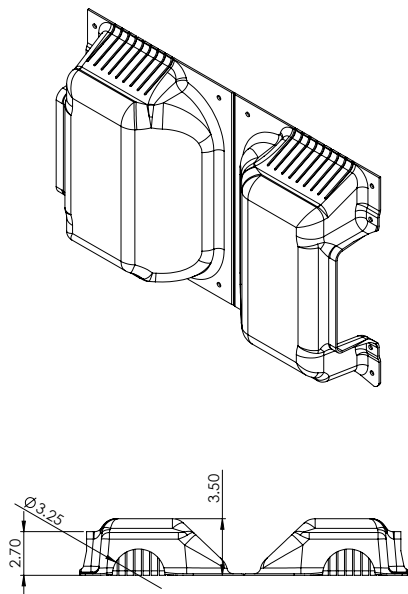
Regulators typically have reduced clearances because of their characteristic design and how they are commonly configured. These nominal clearances create a high risk for bird and animal contact. The high cost of replacing a regulator is another reason why it is crucial to protect such an important system asset.

Reliaguard® Regulator Guards offer complete coverage of energized components including series arresters and brackets, bushing terminals, and wire connectors. Reliaguard Regulator Guards have an overlapping design to ensure there are no gaps in coverage.



## FEATURES

- **Adjustable design to accommodate a wide variety of shunt arresters and connection angles**
- **Overlapping design to ensure there are no gaps in coverage**
- **One box solution - all parts needed to protect one single phase regulator**



Product Name	Part Number	Height Dimension*	Width Diameter*	Depth Dimension*	Pack Size (MOQ)
Universal Regulator Kit	RK-11101K	13 (330.2)	10 (254)	7 (177.8)	1

\*Dimensions in inches (millimeters)

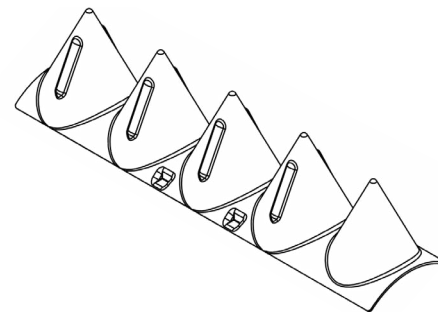
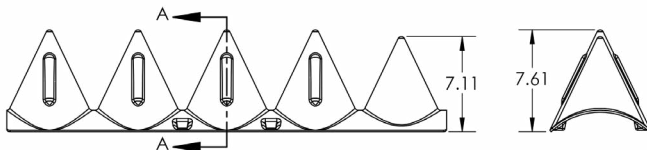
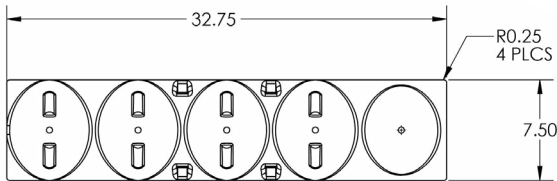
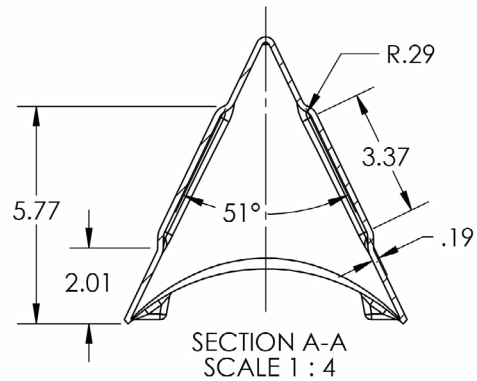
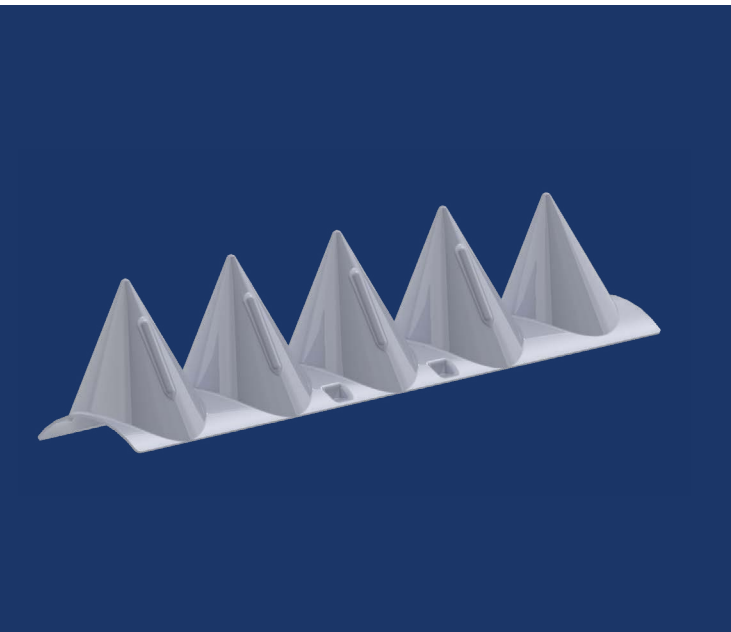


# PERCH PREVENTER

Reliaguard Perch Preventer is designed to discourage birds from landing or nesting on power line structures. The product can be used individually or in multiples, which would use our interlocking cone concept, to extend over long distances. Can be mounted to round or flat structures. Perch Preventer is made from our Reliatanium material which has excellent electrical properties and is also UV stable as well as Flame Retardant with a rating of UL-94 V-0.

## FEATURES

- Discourages both perching and nesting
- Can be extended to any length
- Can be mounted to many different types of surfaces
- Made from Reliatanium FR, UV Stable
- Excellent Electrical Properties
- Stackable for easy storage



Product Name	Part Number	Height Dimension*	Width Diameter*	Depth Dimension*	Pack Size (MOQ)
Perch Preventer	PP-10010	7.1 (180.3)	32.75 (831.8)	7.5 (190.5)	6

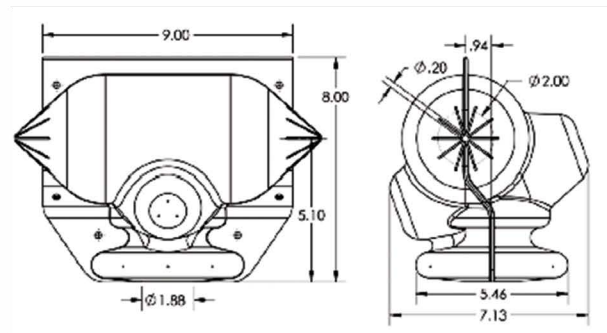
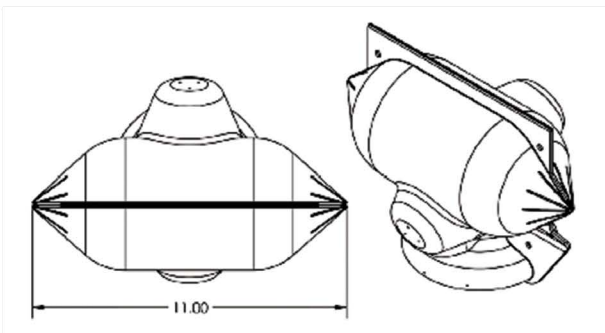
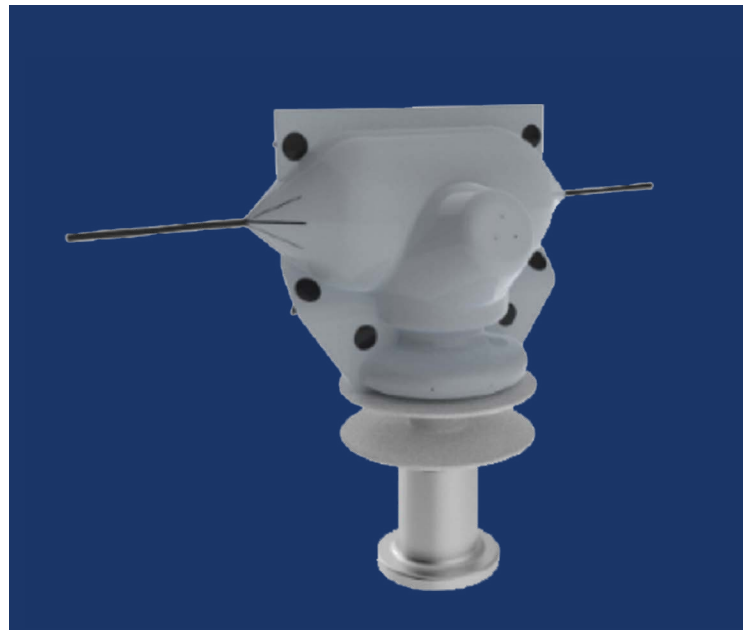
\*Dimensions in inches (millimeters)

# K-LINE CLAMP TOP INSULATOR GUARD

For most powerline structures, post insulators are situated on perch locations preferred by birds. Phase to phase or phase to ground contact from wingspans are common. The Reliaguard Clamp-Top Insulator Guard specifically accommodates the K-Line Insulator. The guard is designed to remain securely retained in place without compromising an insulator's BIL rating.

## FEATURES

- The Reliaguard Clamp-Top Insulator Guard accommodates the K-Line Insulator
- When used with conductor cover the Reliaguard K-line Clamp-Top Insulator Guard provides complete coverage
- Manufactured from a proprietary material known as Reliatanium™
- Reliatanium achieves a UL 94 V-0 flammability rating



Product Name	Part Number	Height Dimension *	Diameter Dimension *	Additional Dimension*	Pack Size (MOQ)
K-line Clamp-Top Insulator Guard	PI-12002	7 (177.8)	5.37 (136.4)	1.88 (47.8) base port	12

\*Dimensions in inches (millimeters)





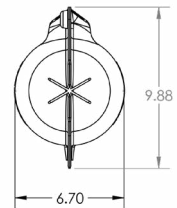
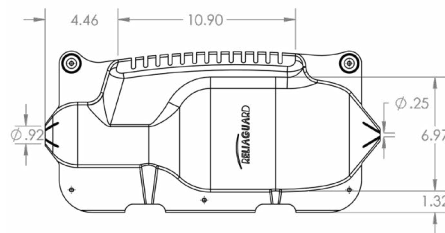
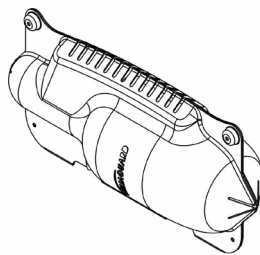
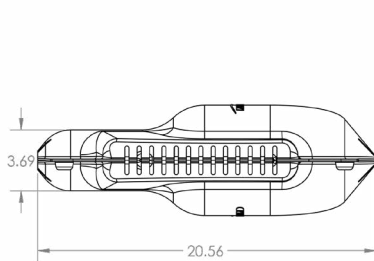
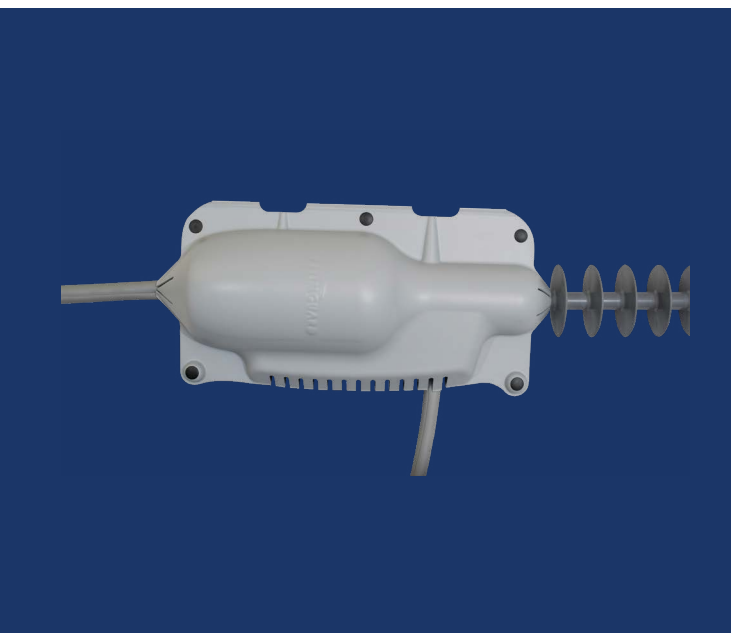
## DEAD END GUARDS

Dead ends, used extensively throughout power distribution systems, are often situated in close proximity to grounded structures. These minimal clearances can often lead to bird and animal contacts.

Reliaguard® Dead End Guards allow for a wide range of conductor exit angles. Further, the exit points accommodate a wide range of conductor diameters.

## FEATURES

- Complete comprehensive coverage, no gaps
- Fits all common dead-end sizes
- Permanent push pin closure
- Manufactured from a proprietary material known as Reliatanium™
- Reliatanium achieves a UL 94 V-0 flammability rating



Product Name	Part Number	Height Dimension *	Diameter Dimension *	Additional Dimension*	Pack Size (MOQ)
Dead End Guard	DE-16001	18.2 (462.3)	6.3 (160)	0.91 (23.1) side port	6

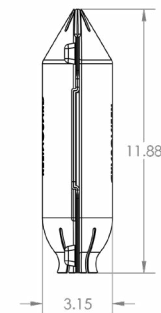
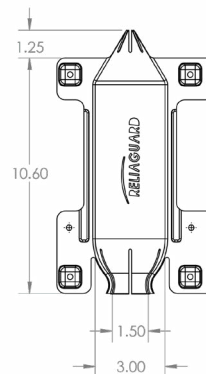
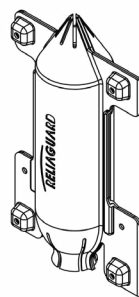
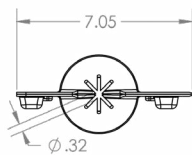
\*Dimensions in inches (millimeters)

# EXTERNAL BACK UP FUSE GUARD

Points of connections are typically configured near grounded support structures or bonded brackets and are important to protect from animal reach or bird wingspan.

## FEATURES

- Fuse guards are designed to accommodate a wide variety of conductor diameters and offer complete coverage of the bolted connection and the compression cable connector
- Manufactured from a proprietary material known as Reliatanium™
- Reliatanium achieves a UL 94 V-0 flammability rating



Product Name	Part Number	Height Dimension *	Diameter Dimension *	Additional Dimension*	Pack Size (MOQ)
External Back Up Fuse Guard	TC-20001	11.88 (302)	3 (76.2)	1.5 (38.1) base port	12

\*Dimensions in inches (millimeters)

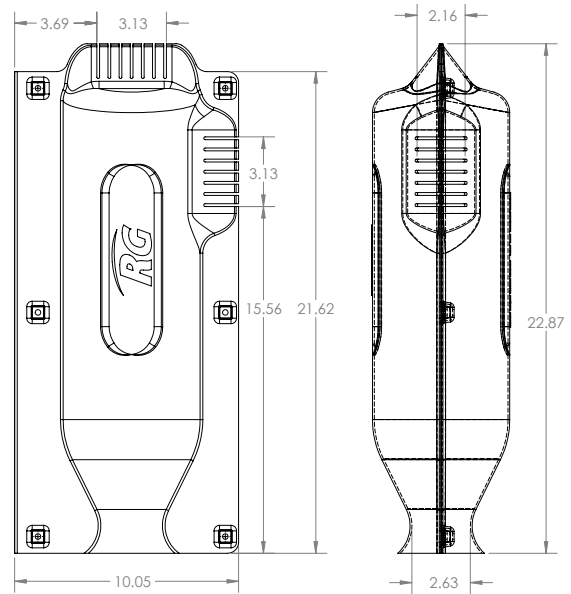
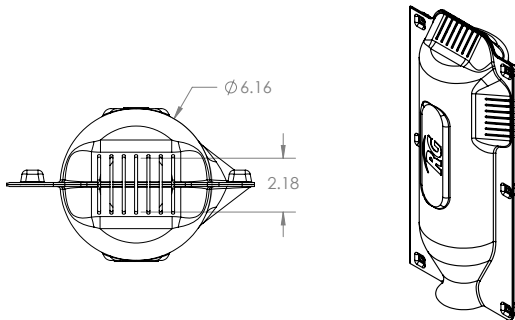
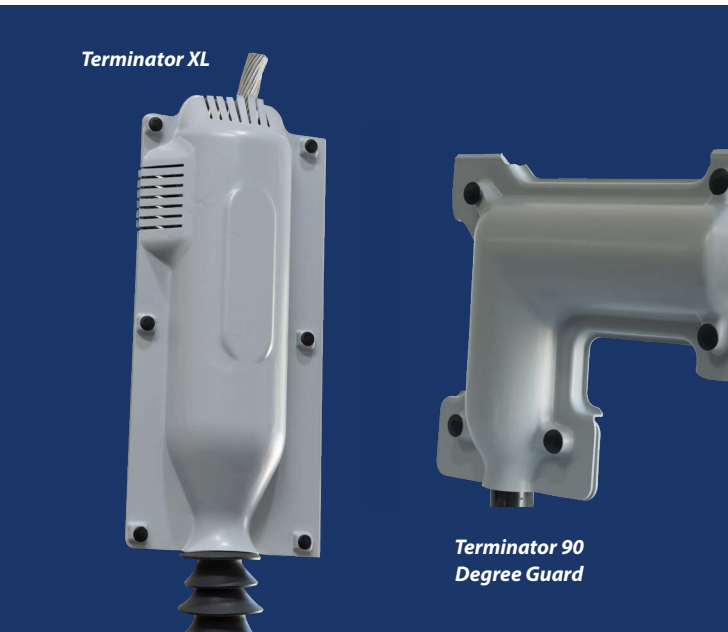


# CABLE TERMINATOR GUARDS

Points of termination are typically configured near grounded support structures or bonded brackets and are important to protect from animal reach or bird wingspan. Terminators are often situated next to arresters and like lightning arresters are susceptible to high intensity heat which is why protecting them with a non-flammable product is critically important.

## FEATURES

- Reliaguard Terminator Guards can accommodate a wide variety of conductor diameters
- Complete coverage of the bolted connection and compression cable connector
- Manufactured from a proprietary material known as Reliatanium™
- Reliatanium achieves a UL 94 V-0 flammability rating



Product Name	Part Number	Height Dimension *	Diameter Dimension *	Additional Dimension*	Pack Size (MOQ)
Terminator Guard	TC-14002	10.59 (269)	3 (76.2)	1.5 (38.1) base port	12
Terminator XL	TC-14030	21.62 (549.1)	6.16 (156.5)	2.63 (66.8) base port	12
Terminator 90 Degree Guard	TC-14101	6.96 (176.8)	3.16 (80.3)	1.5 (38.1) base port	12

\*Dimensions in inches (millimeters)

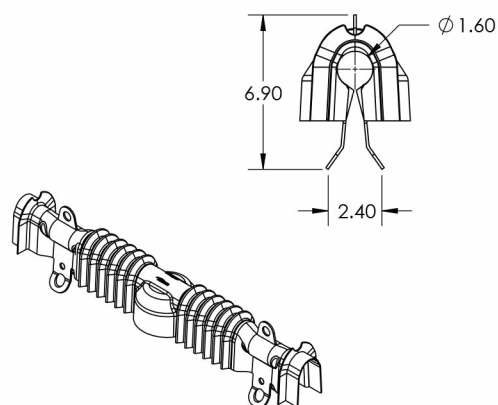
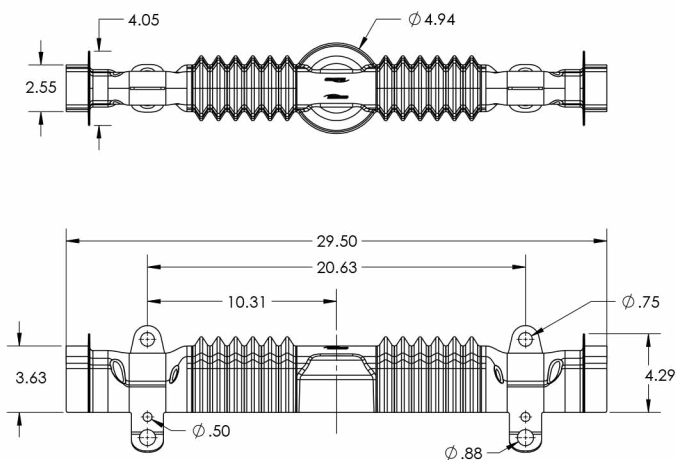
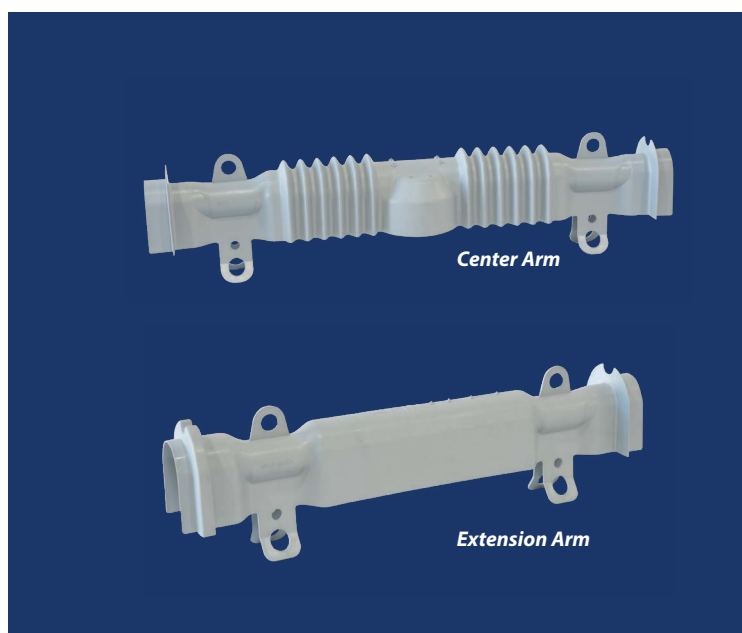


# HOT STICKABLE TIE TOP INSULATOR GUARD

For most powerline structures, Tie Top insulators are situated on perch locations preferred by birds. Phase to phase or phase to ground contact from wingspans are common. Reliaguard Tie Top Insulator Guards prevent outages, protecting endangered species, birds, squirrels, raccoons, snakes, feral cats and other wildlife from contact with energized risk points. These guards are a perfect addition to your Avian Protection Plan.

## FEATURES

- Reliaguard Tie Top Insulator Guards are designed to stay in place. Retention of the guard once applied is a critical design feature to be considered.
- Fits wire sizes #6 AWG to 954 kcmil
- Fits ANSI class 55-3 through 55-7 and ANSI class 56-1 polymer and porcelain insulators
- Accordion design easily accommodates angled installations
- Manufactured from a proprietary material known as Reliatanium™
- Reliatanium achieves a VUL 94 V-0 flammability rating



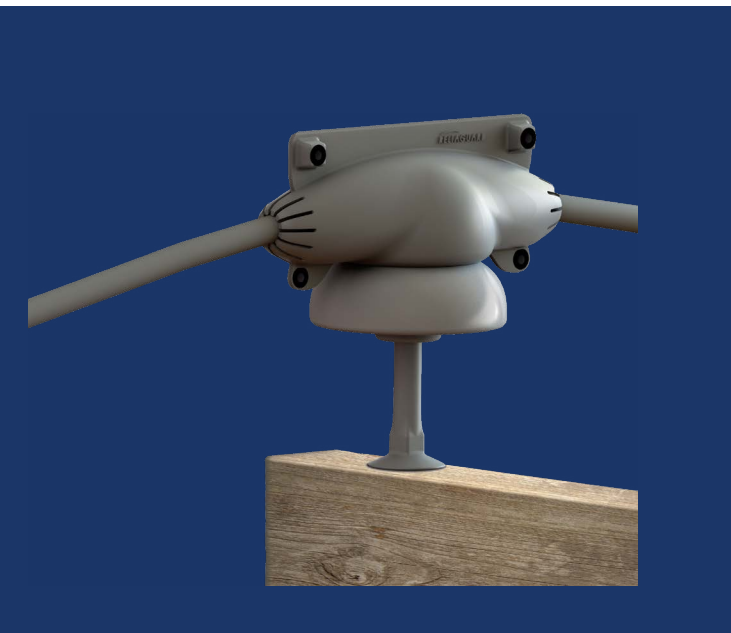
Product Name	Part Number	Length Dimension* <sup>3</sup>	Pack Size (MOQ)
HS Tie Top Pin Insulator CFJ Kit <sup>1</sup>	PI-13010K	73 (1854.2)	3
22" Extension Arms <sup>2</sup>	PI-13024	22 (558.8)	12

<sup>1</sup>Dimensions in inches (millimeters)

<sup>2</sup>Center piece and (2) Arms

<sup>3</sup>Add-on extension Arms for more coverage

<sup>3</sup>Assembled length for kit

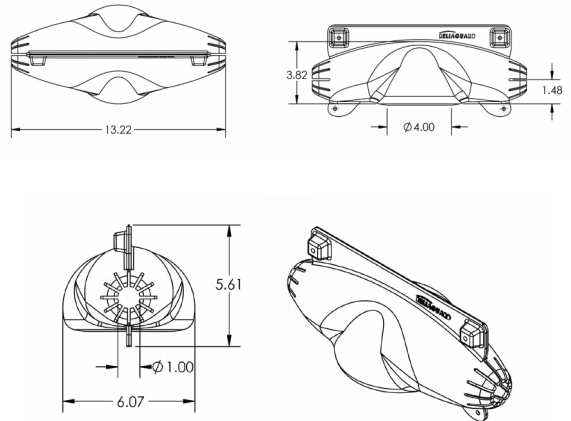


## TIE TOP INSULATOR GUARD

For most powerline structures, Tie Top insulators are situated on perch locations preferred by birds. Phase to phase or phase to ground contact from wingspans are common. Reliaguard Tie Top Insulator Guards protect endangered species, birds, squirrels, raccoons, snakes, feral cats and other wildlife from contact with energized risk points.

### FEATURES

- Designed to remain securely in place without compromising an insulator's BIL rating
- Accommodate a wide range of wire sizes and configurations
- Guards can be adapted to fit various insulator neck types for volume orders
- Manufactured from a proprietary material known as Reliatanium™
- Reliatanium achieves a UL 94 V-0 flammability rating



Product Name	Part Number	Height Dimension *	Diameter Dimension *	Additional Dimension*	Pack Size (MOQ)
Tie Top Insulator Guard - K - 4.003	PI-12001	3.25 (82.5)	5.75 (146)	4.00 (101.6)	12
Tie Top Insulator Guard - C - 2.253	PI-12003	3.25 (82.5)	5.75 (146)	2.25 (57.15)	12
Tie Top Insulator Guard - F - 2.873	PI-12004	3.25 (82.5)	5.75 (146)	2.87 (72.90)	12
Tie Top Insulator Guard - J - 3.503	PI-12005	3.25 (82.5)	5.75 (146)	3.50 (88.90)	12
Tie Top Insulator Kit - K - 4.00 <sup>1</sup>	PI-22001K	3.25 (82.5)	5.75 (146)	4.00 (101.6)	6
Tie Top Insulator Kit - C - 2.25 <sup>1</sup>	PI-22003K	3.25 (82.5)	5.75 (146)	2.25 (57.15)	6
Tie Top Insulator Kit - F - 2.87 <sup>1</sup>	PI-22004K	3.25 (82.5)	5.75 (146)	2.87 (72.90)	6
Tie Top Insulator Kit - J - 3.50 <sup>1</sup>	PI-22005K	3.25 (82.5)	5.75 (146)	3.50 (88.90)	6

\* Dimensions in inches (millimeters)

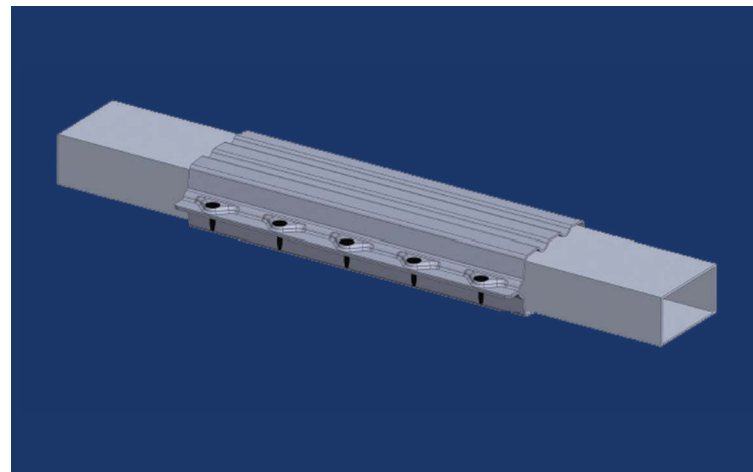
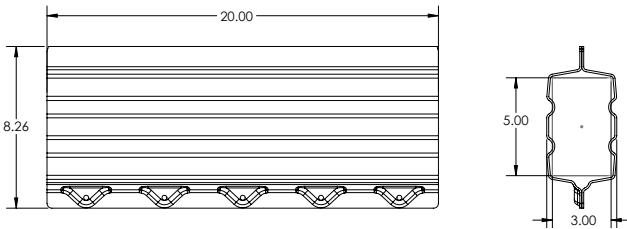
<sup>1</sup>Kits include 7ft of Conductor Cover

# CROSS-ARM GUARD

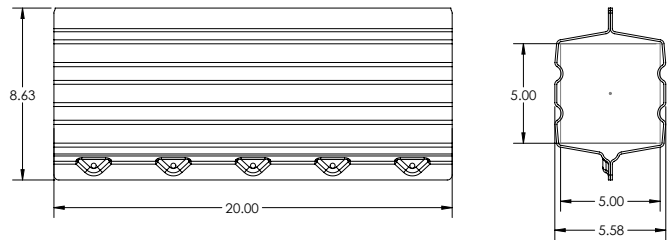
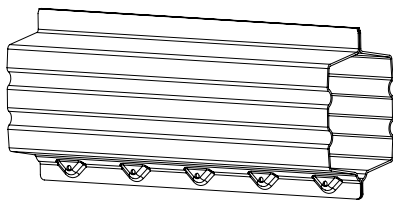
Reliaguard's Cross Arm Guard is specifically produced for steel cross arms on poles. Phase to ground outages occur with equipment that is installed on these arms such as switches and cut outs. Squirrels or raccoons sitting underneath these arms when they open create situations where outages may occur.

## FEATURES

- Cross Arm Guards effectively enclose steel cross arms and are designed to ensure long-term retention
- The push fasteners included with each guard provide a reliable method of protecting guards from being inadvertently opened and dislodged
- Manufactured from a proprietary material known as Reliatanium™
- Reliatanium achieves a UL 94 V-0 flammability rating



Technical Drawing for Cross Arm 3x3



Technical Drawing for Cross Arm 5x5

Product Name	Part Number	Height Dimension*	Width Diameter*	Length Dimension*	Pack Size (MOQ)
Cross Arm 3x3	BB-30520-S	3.00 (76.2)	5.00 (127)	20.00 (508)	12
Cross Arm 3x3	BB-30542-S	3.00 (76.2)	5.00 (127)	44.00 (1117.6)	12
Cross Arm 5x5	BB-50520-S	5.00 (127)	5.00 (127)	20.00 (508)	12
Cross Arm 5x5	BB-50542-S	5.00 (127)	5.00 (127)	44.00 (1117.6)	12

\* Dimensions in inches (millimeters)

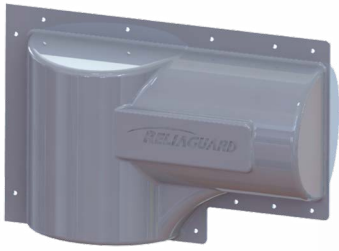
# PIPE BUS & ANGLE BUS GUARDS

Reliaguard's Pipe Bus and Angle Bus Guards are available in a range of diameters to suit a variety of substation bus work. Bus coverage may be required when tight clearances create a greater risk for bird and animal contact. Whether phase to ground or phase to phase protection is needed, Reliaguard's Pipe Bus and Angle Bus Guards are designed to couple together allowing for a quick and easy application no matter the lengths required.

Reliaguard Pipe Bus and Angle Bus Guards are formed from Reliatanium™, Reliaguard's proprietary dielectric material.

## FEATURES

- Pipe Bus and Angle Bus Guards are available in multiple lengths and dimensions
- Guards are clamshell design for easy opening by hand
- Easy coupling of mated connections
- Push through pins are provided to easily install the Pipe Bus and Angle Bus Guards by hand
- Retention of the guard once applied is a critical design feature to be considered



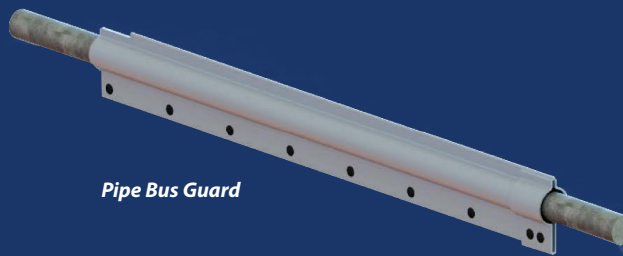
L-Shaped Bus Guard



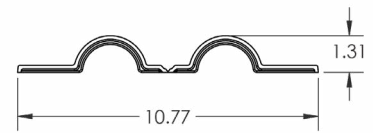
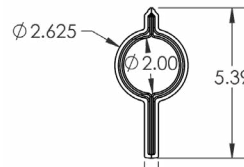
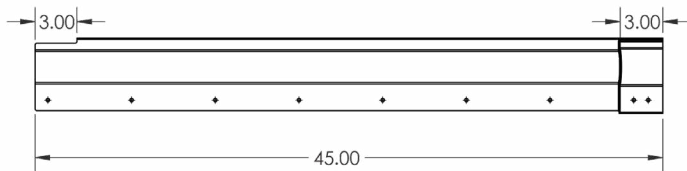
L Angle Bus Guard



T-Shape Bus Guard



Pipe Bus Guard



Product Name	Part Number	Diameter*	Length*	Pack Size (MOQ)
Pipe Bus Guard – 2"	BB-20045-R	2.00 (50.8)	45.00 (1143)	6
Pipe Bus Guard – 2.5"	BB-25045-R	2.50 (63.5)	45.00 (1143)	6
Pipe Bus Guard – 4"	BB-40045-R	4.00 (101.6)	45.00 (1143)	6
Pipe Bus Guard – 4.5"	BB-45045-R	4.50 (114.3)	45.00 (1143)	6
T-Shape Bus Guard	SS-10001	7.5 (190.5)	22 (558.8)	6
L-Shape Bus Guard	SS-20001	7(177.8)	14 (355.6)	6
L Angle Bus Guard - 3.5"	BB-35045-L	3.5 (88.9)	51.5 (1308.1)	6

\* Dimensions in inches (millimeters)

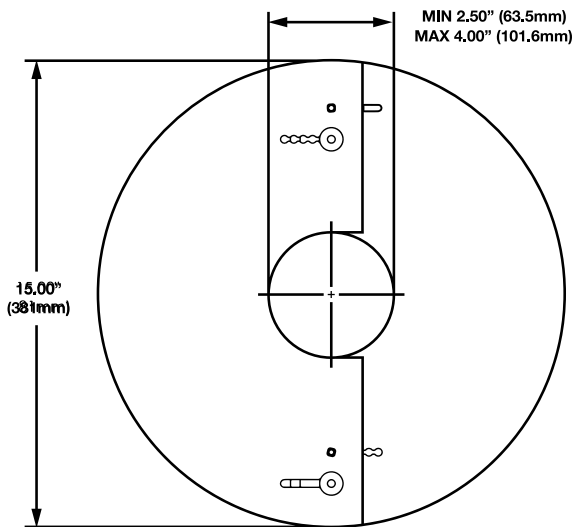
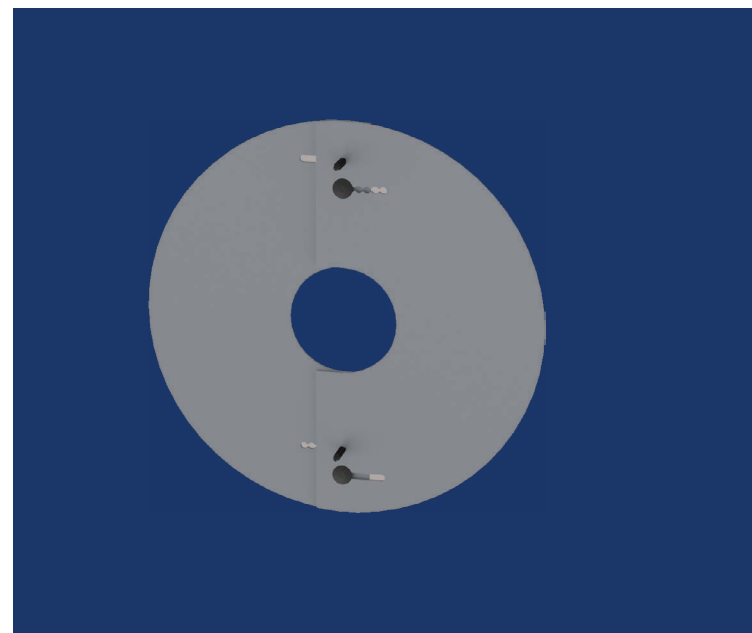


# PROTECTION DISC

Reliaguard Protection Disc is a barrier used to isolate climbing animals thus preventing them from making a phase to ground contact. Protection disks are typically used on poles. Protection Disc Guards protect tree frogs, squirrels, raccoons, snakes, other wildlife from contact with energized risk points. The contact risk points are typically from a phase to ground contact.

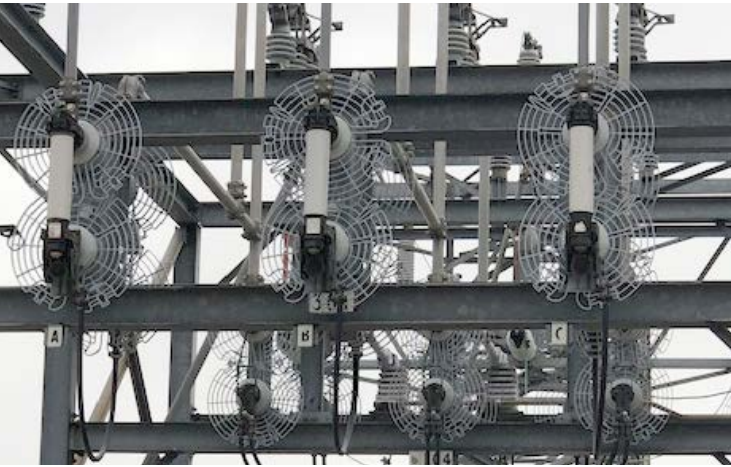
## FEATURES

- Reliaguard® Protection Discs are designed to stay in place. Retention of the cover once applied is a critical design feature to be considered.
- Protection discs are a 2-piece adjustable size product
- Easy to install, the Protection Disc is supplied with push through pins to secure the disc for the required diameter of the center opening
- Fits a wide range of insulators



Product Name	Part Number	Outside Diameter*	Inside Diameter*	Width*	Pack Size (MOQ)
Protection Disc - 4" ID Max - 15" OD - Flat	PD-0415F	16 (406.4)	2.5-4.0 (63.5-101.6)	0.125 (3.2)	12
Protection Disc - 5" ID Max - 22" OD - Flat	PD-0522F	22 (558.8)	2.5-5.0 (63.5-127)	0.125 (3.2)	12

\* Dimensions in inches (millimeters)

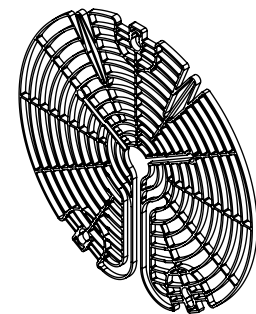
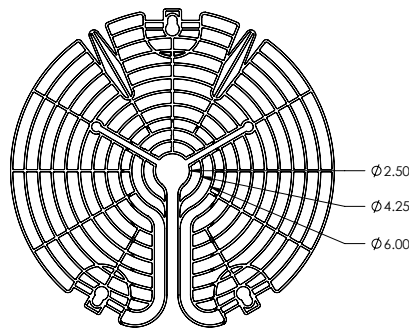
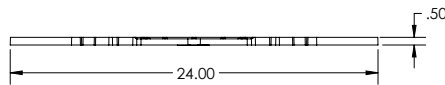
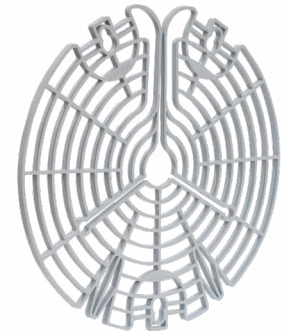


## WILDLIFE HOT STICK DISC

The Reliaguard Wildlife Hot Stick Disc is a barrier used to isolate climbing animals thus preventing them from making a phase to ground contact. Wildlife Hot Stick Discs are typically used on poles and substations. These guards protect tree frogs, squirrels, raccoons, snakes, other wildlife from contact with energized risk points. The contact risk points are typically from a phase to ground contact.

### FEATURES

- Simple, one-step energized installation or removal
- No assembly required, reusable
- Easily field trimmed to suit a wide range of insulator/ bushing diameters



Product Name	Part Number	Outside Diameter	Inside Diameter	Width	Pack Size (MOQ)
Wildlife Hot Stick Disc -24	PD-0624	24 (609.6)	2.5-6.0 (63.5-152.4)	0.5 (12.7)	8
Wildlife Hot Stick Disc -20	PD-0620	20 (508)	2.5-6.0 (63.5-152.4)	0.5 (12.7)	8
Wildlife Hot Stick Disc -16	PD-0616	16 (406.4)	2.5-6.0 (63.5-152.4)	0.5 (12.7)	12

\* Dimensions in inches (millimeters)

# RELIAWRAP™ PREMIUM GRADE POLE WRAP

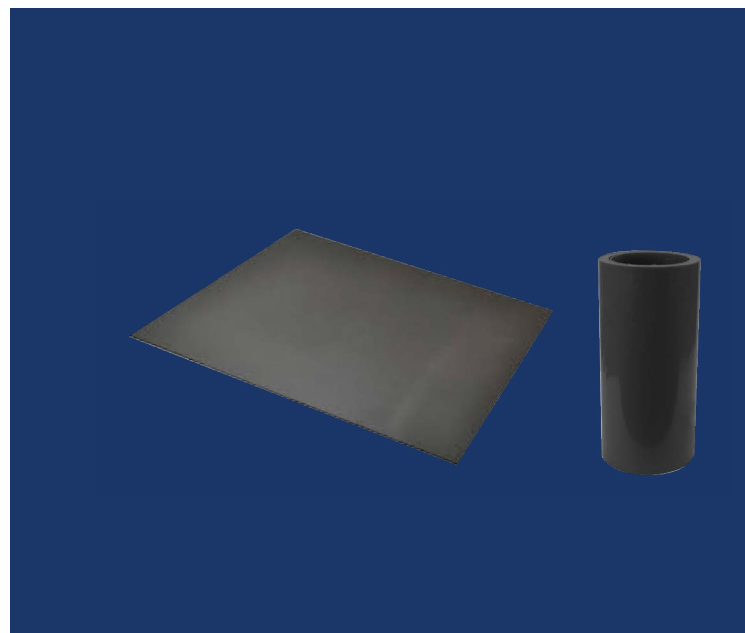
ReliaWrap™ is a premium grade pole wrap, formed from a 0.040" thick UV stabilized polymer. ReliaWrap is designed as a mechanical barrier to prevent animals such as squirrels and raccoons from climbing and destructive species such as woodpeckers from damaging poles.

## FEATURES

- ReliaWrap is fastened with nails or screws
- ReliaWrap will not rip or tear
- Packaged in 12 pre-cut sheets of 36"x36" and 36"x48" or 30"x100' rolls



Material Properties	Results
UV - Stabilized Polymer Specific Gravity	0.94 g/cc
Tensile Yield	4490 psi
Elongation %	300 %



Product #	Description / Size
RW-30100	ReliaWrap - 30" x 100' - Rolls
RW-36036	ReliaWrap - 36" x 36" - pre-cut sheet*
RW-36048	ReliaWrap - 36" x 48" - pre-cut sheet*

\* "Pre-Cut Sheets" packaged in quantities of 12

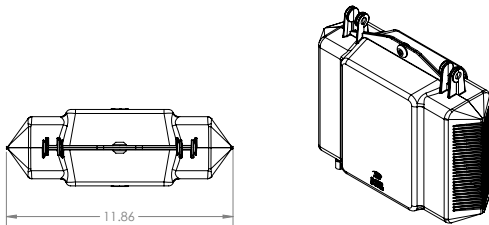
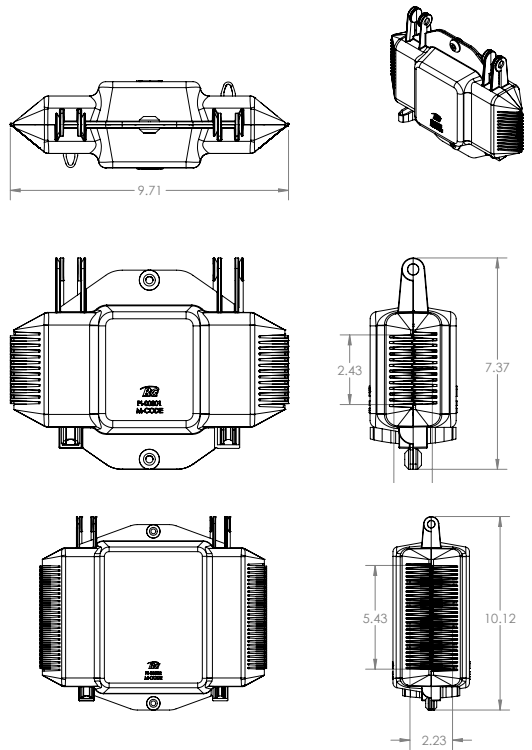
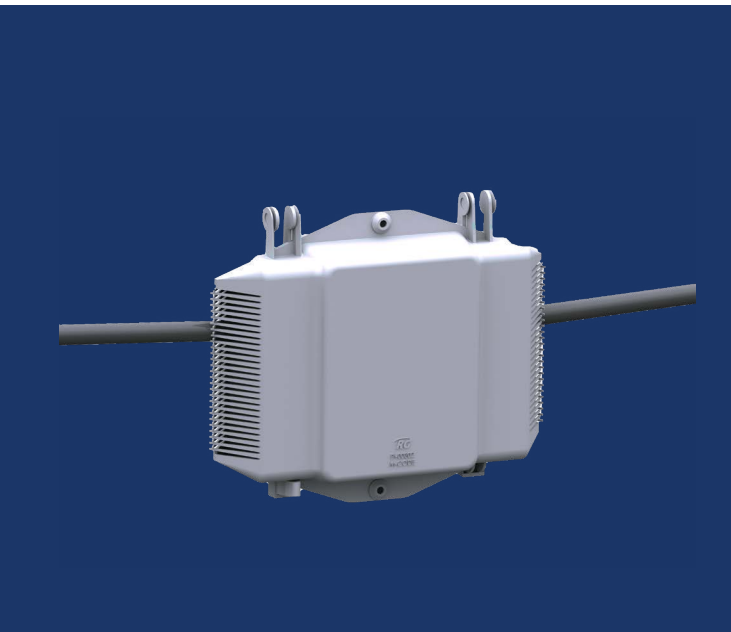


## WEDGE CLAMP GUARDS

Reliaguard's Wedge Clamp Guards are designed to completely insulate overhead clamps. Lineman friendly mechanical hinges and loop latches ensure easy installation and long-term retention on many common clamp and conductor sizes. The guards are made from our Reliatanium™ material which has excellent outdoor electrical properties, is UV stable and is flame retardant to UL-94 with a rating of V-0, the highest rating available.

### FEATURES

- Completely covers the clamp assembly and connections
- Tested to ensure retention in high winds
- Made from Reliatanium™ - FR, UV stable
- Excellent electrical properties
- Can be used in conjunction with GreyEEL conductor cover to provide complete protection from avian contact



Product Name	Part Number	Height Dimension*	Width Dimension*	Depth Dimension*	Pack Size (MOQ)
Medium Wedge Clamp Guard	PI-00301	7.37 (188)	9.7 (246.4)	3 (76.2)	24
Large Wedge Clamp Guard	PI-00302	10.12 (257.1)	11.86 (301.2)	4 (101.6)	24

\* Dimensions in inches (millimeters)

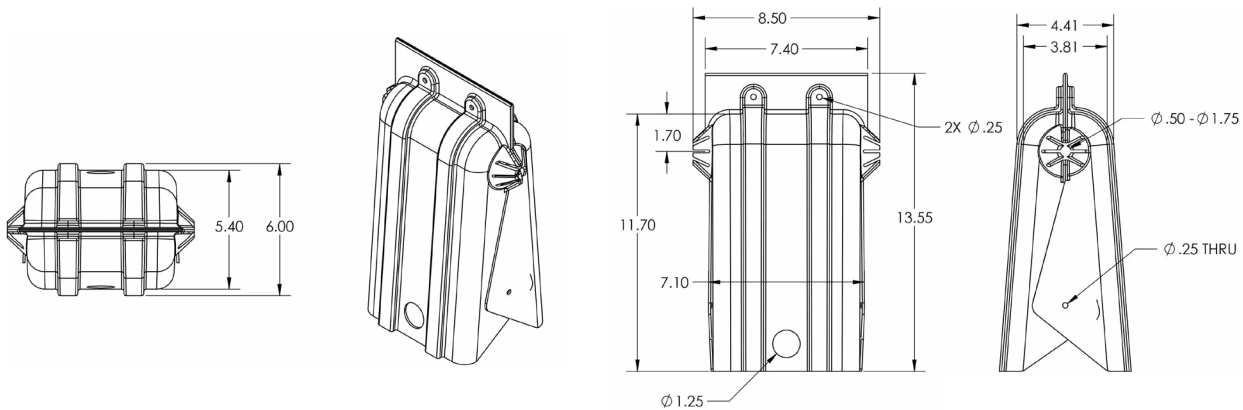


# OVERHEAD BAIL CLAMP GUARD

Reliaguard's Overhead Bail Clamp Guard is designed to completely insulate bail clamps (also known as hot line taps). It installs easily over all common conductor and clamp sizes with secure push pin closure. The guard is made from our Reliatanium™ material which has excellent outdoor electrical properties, is UV stable and is flame retardant to UL-94 V-0.

## FEATURES

- **Completely covers the entire bail clamp assembly and connections**
- **Tested to ensure retention in high winds**
- **Made from Reliatanium™ – FR, UV Stable**
- **Excellent electrical properties**
- **Should be used in conjunction with GreyEEL conductor cover to provide complete protection from avian contact**

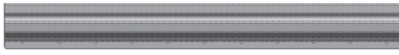


Product Name	Part Number	Height Dimension *	Width Dimension *	Depth Dimension*	Pack Size (MOQ)
Overhead Bail Clamp Guard	PI-00100	11.7 (297.2)	7.1 (180.3)	4.4 (111.8)	12

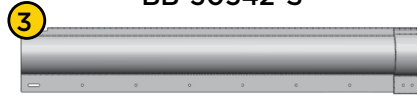
\* Dimensions in inches (millimeters)



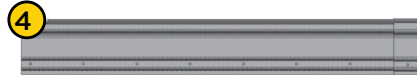
Protection Disc Guard  
PD-0415F



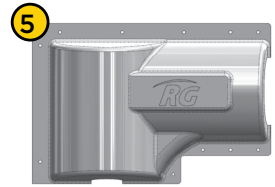
Cross Arm Guard  
BB-30542-S



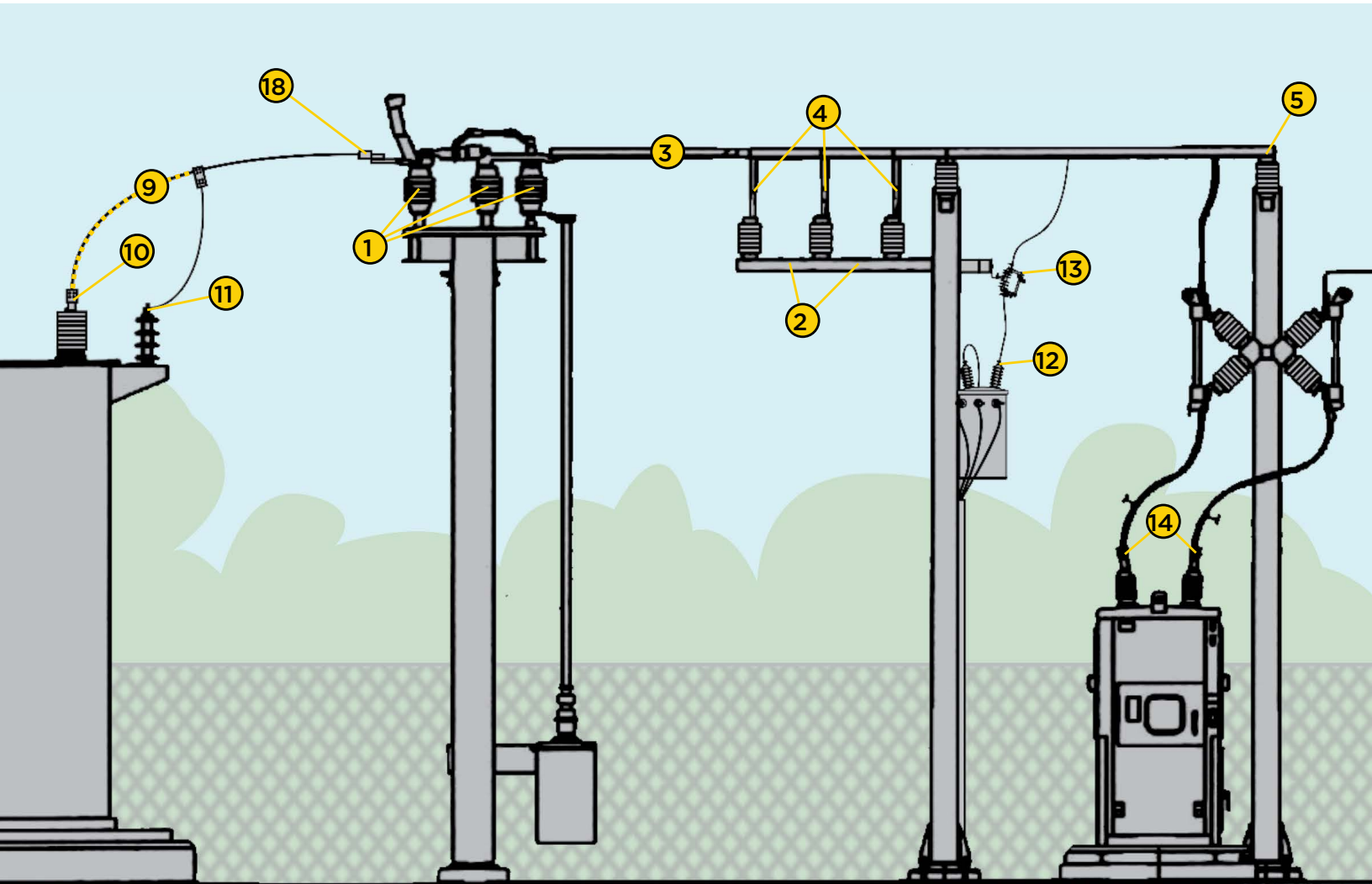
Pipe Bus Guard  
BB-40045-R



L Angle Bus Guard  
BB-35045-L



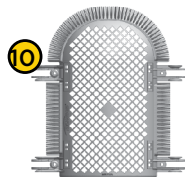
L Shape Bus Guard  
SS-20001



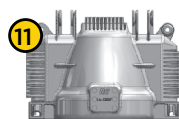
GreyEEL Conductor Guard  
EEL-07501000



Mesh Bushing Guard  
BC-15023



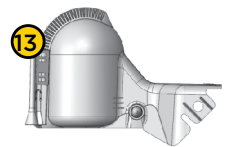
Lightning Arrester Guard  
LA-13007

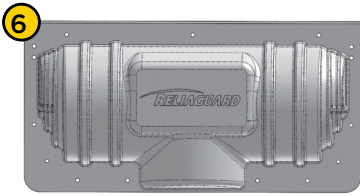


Solid Bushing Guard  
BC-15010

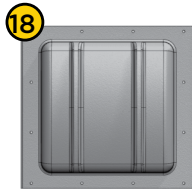


Cutout Guard  
CO-10007

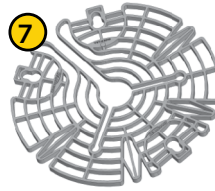




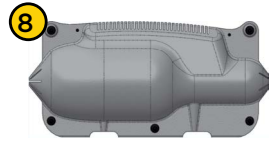
**T Shape Bus Guard  
SS-10001**



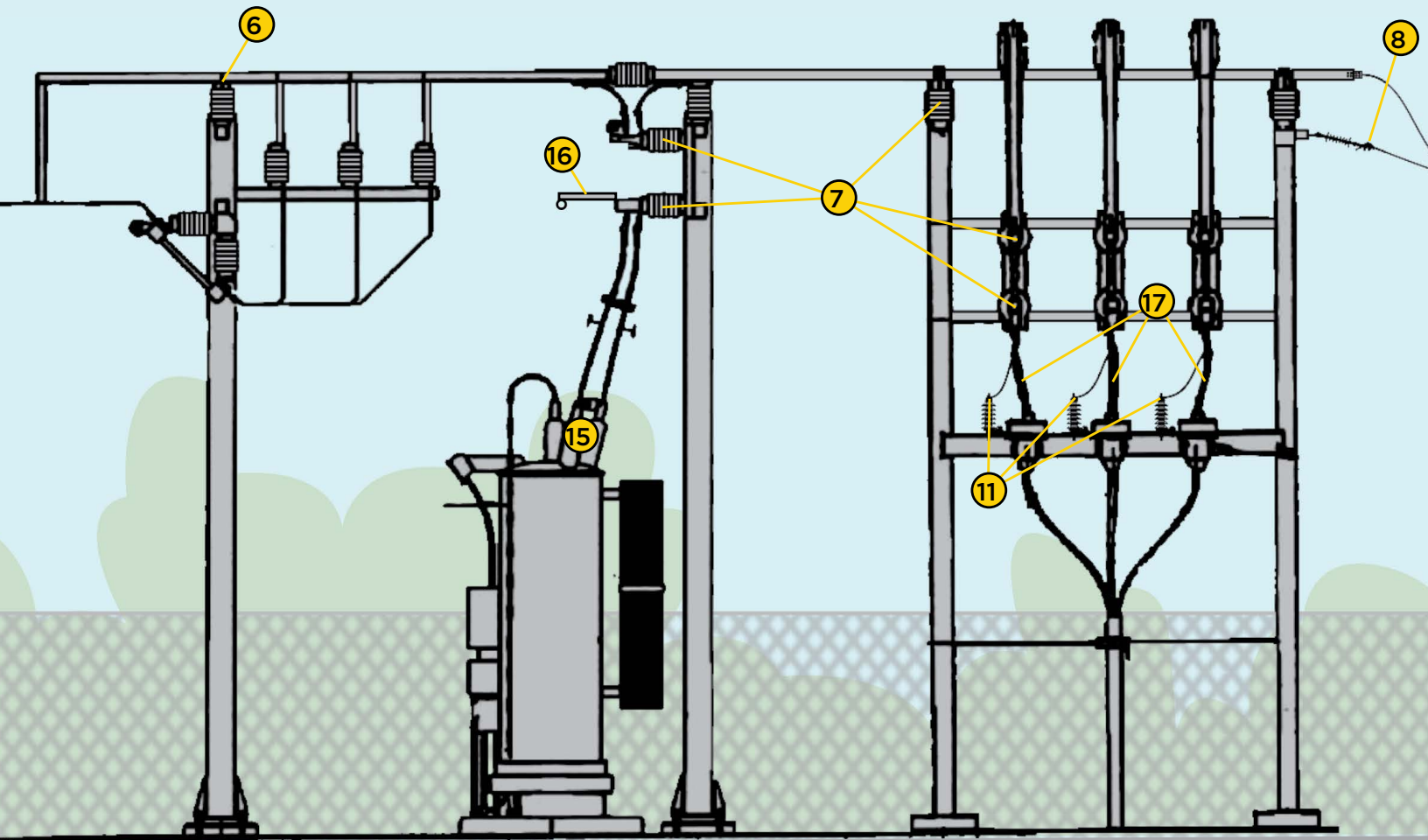
**Bus Box Guard  
SSB-121206**



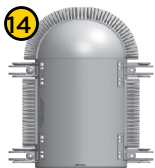
**Wildlife HS Disc  
PD-0624**



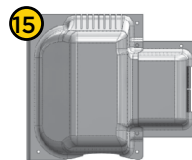
**Dead End Guard  
DE-16001**



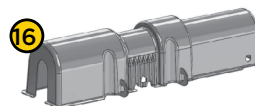
**Solid Bushing Guard  
BC-15021**



**Universal Regulator Kit  
RK-11101K**



**Disconnect Blade Guard  
SW-20001**



**Terminator XL Guard  
TC-14030**



## GREYEEL™ CONDUCTOR COVER

*Provides Exceptional Coverage – orders ship with the EEL Slider application tool*

Protecting conductors is an essential component when applying effective guards to prevent animal and bird caused outages. Reliaguard's GreyEEL Conductor Cover helps prevent contacts by eliminating gaps in coverage. The product's improved protection is achieved with a significantly overlapped seam design and material memory technology that supports exceptional closure performance.



## GREYEEL EXTENSIVE COVERAGE

Reliaguard strongly recommends the use of conductor cover with all animal guards. The extended coverage achieved with conductor cover can prevent a phase to phase or phase to ground contact from occurring. Consider for instance how easily a bird's wingspan or the reach of a squirrel or raccoon can bridge the difference in potential on unprotected equipment.





## GREYEEL™ PRODUCT SPECS

GreyEEL Part #	Wire / Conductor Type	Conductor Size Range	Cover OD Size (inches)	Length Per Box
EEL-02503750-50-Y	4, 3, 2,1, 1/0	0.200" - 0.370"	3/8	50 ft (15.24 m)
EEL-03750500-50-Y	2/0, 3/0, 4/0	0.375" - 0.495"	1/2	50 ft (15.24 m)
EEL-05000750-50-Y	266.88, 336.4, 397.5	0.500" - 0.745"	3/4	50 ft (15.24 m)
EEL-07501000-50-Y	447, 556.5, 636, 605, 715.5, 900, 666.6	0.750" - 1.000"	1	50 ft (15.24 m)
EEL-10001250-50-Y	795, 954, 1033.5, 1113, 1192.5	1.005" - 1.295"	1 1/4	50 ft (15.24 m)
EEL-12501500-50-Y	1272, 1351.5, 1431, 1590	1.300" - 1.450"	1 1/2	50 ft (15.24 m)
EEL-15001750-25-Y	1780, 2156, 2167	1.500" - 1.750"	1 3/4	25 ft (7.62 m)
EEL-17502000-25-Y	2312, 2515	1.800" - 2.000"	2	25 ft (7.62 m)
EEL-2500BUSP-06-Y	GreyEEL Bus Cover - 2.5" bus Round	2" - 2.5"	2.5	24ft (4 pcs)
EEL-3500BUSP-06-Y	GreyEEL Bus Cover - 3.5" bus Round	2.5" - 3.5"	3.5	24ft (4 pcs)
EEL-4500BUSP-06-Y	GreyEEL Bus Cover - 4.5" bus Round	3.5" - 4.5"	4.5	18ft (3 pcs)

### Material Properties

Material	Silicone
Color	Grey
Specific Gravity	1.65
Durometer	55 to 75
Tensile, PSI	640
Elongation %	220
Electrical Rating – Phase to Ground	20 kV

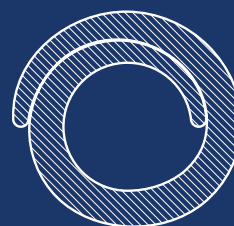
### SELF-FUSING TAPE

Reliaguard's Self-Fusing Tape, is a self-amalgamating, heat and moisture resistant tape that has superior weathering characteristics and is excellent for covering odd shape / complicated connections or equipment.



### USAGE / APPLYING:

Apply in a dry environment. Start with one full overlap wrap and continue using a 2/3 overlap technique. Do not stretch more than 30%. Finish with another full overlap wrap to minimize flagging of end.



EEL-10001250-50-Y



EEL-07501000-50-Y



EEL-05000750-50-Y

Product Name	Part Number	Size Range	Rolls Per Box	Color
Tape 1" x 0.030"	TA-30100G	0.030 x 1"	12	Gray
Tape 2" x 0.030"	TA-30200G	0.030 x 2"	12	Gray

\* Each roll is 36 feet in length



## EEL SLIDER™ APPLICATION TOOL

### Revolutionary EEL Slider tool

Reliaguard has developed the revolutionary EEL Slider tool to apply GreyEEL. The EEL Slider is designed for use with the rubber glove work method or for de-energized installation. The difficulty of applying conductor cover by hand is eliminated with the EEL Slider.

Ergonomically designed and easy to use, the EEL Slider optimizes safety, dexterity and the speed of applying GreyEEL.



### A Tool for all power linemen

The EEL Slider™ will be a welcome addition to the tool belt of all power linemen tasked with the job of applying conductor cover. Typically, conductor cover requires that the seam be split by hand which can be difficult when wearing the required protective gloves.

With the EEL Slider™, GreyEEL™ Conductor Cover slides onto conductors easily in a matter of seconds.

EEL Sliders are available in 3/8", 1/2", 3/4", 1", 1 1/4" and 1 1/2" with orders of 50ft or more of GreyEEL.

Part Number	Part Description	Cover Range	Color
EST-00375	3/8" Tool	0.25" - 0.38"	Orange
EST-00500	1/2" Tool	0.375" - 0.5"	Red
EST-00750	3/4" Tool	0.50" - 0.75"	Grey
EST-01000	1" Tool	0.75" - 1.00"	Blue
EST-01500	1-1/2" Tool	1.00" - 1.50"	Green

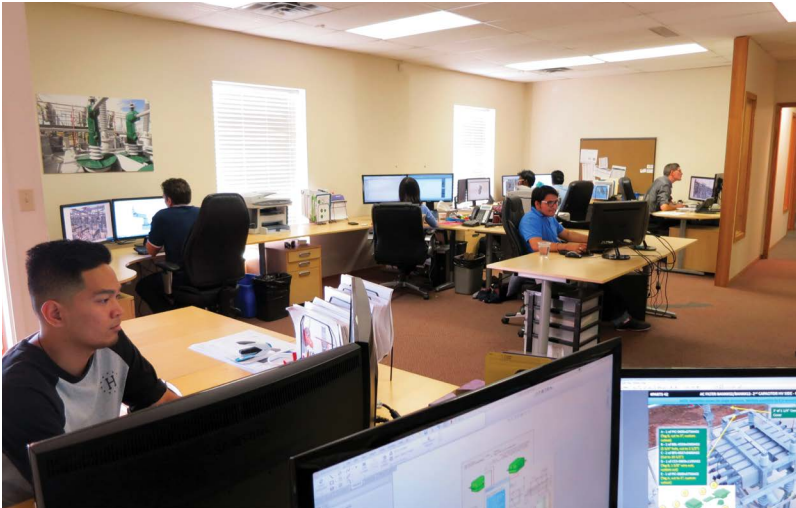
# OEM AND CUSTOM DESIGN PROCESS

## PROFESSIONAL CAD DESIGNERS

Reliaguard’s design team is composed of professional CAD technicians, mechanical engineers, and industrial designers who develop guards specifically for electrical equipment applications.

Their expertise is supported by a team of linemen who collectively have 100 years of field experience working with electrical equipment on the powerline and in substations. Their expertise is further supported by a collaborative customer approach to problem-solving in mitigating against animal and bird-caused outages since 2001.

Reliaguard will work with customers to design guards specific to their needs. Examples include a frog guard and a theft prevention guard that were designed through the collaboration of Reliaguard and its customers to solve unique challenges. The Reliaguard design team has the expertise to create specialized guards by working with the defined custom process described here in the right sidebar.



### Data Collection

Data is collected from equipment through supplied manufacturer drawings, CAD models, and processing images to determine dimensions using photogrammetry.

### Solution Defined

Drawings and renderings of proposed solutions provided.

### Prototype

In-house rapid prototyping utilized to quickly provide working samples of proposed solutions.

### Pre-production Sample

Used on occasion for fine-tuning designs and ensuring functionality.

### Manufacture

Based on quantities required, production methods are determined and tooling is initiated.

\*Dimensions in inches (millimeters)

Reliaguard parts are made from Reliatanium which achieves V-0 Flammability rating

Product Name	Part Number	Height Dimension*	Diameter Dimension*	Additional Dimension*	Pack Size (MOQ)
2 piece Hot Stick Spur Kit	BC-10012K	-	-	-	12
4 piece Hot Stick Spur Kit	BC-10014K	-	-	-	12
#4 - Small Bushing Guard w/ Loop Latch <sup>1</sup>	BC-14991	5.7 (144.8)	4.4 (111.8)	1.8 (45.7) base port	24
#4 - Medium Bushing Guard w/ Loop Latch <sup>1</sup>	BC-14992	10.4 (264.2)	4.4 (111.8)	1.8 (45.7) base port	24
#5 - Small Bushing Guard - Mesh - 2.25" base <sup>1</sup>	BC-15008	5.6 (142.2)	5 (127)	2.25 (57.2) base port	24
#5 - Small Bushing Guard - Solid - 2.25" base <sup>1</sup>	BC-15010	5.6 (142.2)	5 (127)	2.25 (57.2) base port	24
#5 - Small Bushing Guard - Small Base 1.8" <sup>1</sup>	BC-16003	5.6 (142.2)	5 (127)	1.8 (45.7) base port	24
#5 - Small Bushing Cover - Mesh - Small Base 1.8" <sup>1</sup>	BC-16005	5.6 (142.2)	5 (127)	1.8 (45.7) base port	24
#5 - Small Bushing - Solid - 2.8" base <sup>1</sup>	BC-15997	5.6 (142.2)	5 (127)	2.8 (71.1) base port	24
#5 - Small Bushing - Mesh - 2.8" base <sup>1</sup>	BC-15999	5.6 (142.2)	5 (127)	2.8 (71.1) base port	24
#5 - Medium Bushing Guard - Small Base 1.8" <sup>1</sup>	BC-16006	8.1 (205.7)	5 (127)	1.8 (45.7) base port	24
#5 - Medium Bushing Guard - Mesh - Small Base 1.8" <sup>1</sup>	BC-16008	8.1 (205.7)	5 (127)	1.8 (45.7) base port	24
#5 - Medium Bushing Cover - 2.25" base <sup>1</sup>	BC-15011	8.1 (205.7)	5 (127)	2.25 (57.2) base port	24
#5 - Medium Bushing Cover - Mesh - 2.25" base <sup>1</sup>	BC-15013	8.1 (205.7)	5 (127)	2.25 (57.2) base port	24
#5 - Medium Bushing - Solid - 2.8" base <sup>1</sup>	BC-16201	8.1 (205.7)	5 (127)	2.8 (71.1) base port	24
#5 - Medium Bushing - Mesh - 2.8" base <sup>1</sup>	BC-16203	8.1 (205.7)	5 (127)	2.8 (71.1) base port	24
#7 - Medium Bushing Guard <sup>2</sup>	BC-15021	11.8 (299.7)	7 (177.8)	2.5 (63.5) base port	12
#7 - Medium Bushing Guard - Mesh <sup>2</sup>	BC-15023	11.8 (299.7)	7 (177.8)	2.5 (63.5) base port	12
#8 - Small Bushing Guard <sup>2</sup>	BC-15028	15 (381)	8.25 (210)	3.5 (88.9)	6
#8 - Small Bushing Guard - Mesh <sup>2</sup>	BC-15030	15 (381)	8.25 (210)	3.5 (88.9)	6
#8 - Medium Bushing Guard <sup>2</sup>	BC-15031	17.8 (452.1)	8 (203.2)	3.5 (88.9) base port	6
#8 - Medium Bushing Guard - Mesh <sup>2</sup>	BC-15033	17.8 (452.1)	8 (203.2)	3.5 (88.9) base port	6
#10 - Medium Bushing Guard <sup>2</sup>	BC-15041	19.8 (502.9)	10.5 (266.7)	4.6 (116.8) base port	6
#10 - Medium Bushing Guard - Mesh <sup>2</sup>	BC-15043	19.8 (502.9)	10.5 (266.7)	4.6 (116.8) base port	6

<sup>1</sup> Security pins are optional and not included

<sup>2</sup> Security pins included

Product Name	Part Number	Height Dimension*	Body Diameter*	Max Skirt Diameter*	Base Port*	Pack Size (MOQ)
Handwheel Bushing Guard Kit - Standard <sup>1</sup>	BC-12010K	5.98 (151.9)	4.35 (110.5)	3.9 (99.1)	1.8 (45.7)	24
#4 XS Bushing Guard - Standard (non-handwheel) <sup>1</sup>	BC-14983	5.98 (151.9)	4.35 (110.5)	3.9 (99.1)	1.8 (45.7)	24
Handwheel Bushing Guard Kit - Bell Bottom <sup>1</sup>	BC-13020K	6.48 (164.6)	4.35 (110.5)	4.5 (114.3)	1.8 (45.7)	24
#4 XS Bushing Guard - Bell Bottom (non-handwheel) <sup>1</sup>	BC-14985	6.48 (164.6)	4.35 (110.5)	4.5 (114.3)	1.8 (45.7)	24

<sup>1</sup> Security pins are optional and not included

Product Name	Part Number	Length Dimension* <sup>3</sup>	Pack Size (MOQ)
HS Tie Top Pin Insulator CFJ Kit <sup>1</sup>	PI-13010K	73 (1854.2)	3
22" Extension Arms <sup>2</sup>	PI-13024	22 (558.8)	12

<sup>1</sup> Center piece and (2) Arms

<sup>2</sup> Add-on extension Arms for more coverage

<sup>3</sup> Assembled length for kit



\*Dimensions in inches (millimeters)

Reliaguard parts are made from Reliatanium which achieves V-0 Flammability rating

Product Name	Part Number	Height Dimension*	Diameter Dimension*	Additional Dimension*	Pack Size (MOQ)
Cross Arm 3x3	BB-30520-S	3.00 (76.2)	5.00 (127)	20.00 (508)	12
Cross Arm 3x3	BB-30542-S	3.00 (76.2)	5.00 (127)	44.00 (1117.6)	12
Cross Arm 5x5	BB-50520-S	5.00 (127)	5.00 (127)	20.00 (508)	12
Cross Arm 5x5	BB-50542-S	5.00 (127)	5.00 (127)	44.00 (1117.6)	12
Switch Guard - Short Hood	CO-10005	6.65 (169)	4.5 (114.3)	2.3 (58.4) base port	12
Hot Stick Universal Cut Out	CO-10007	5.5 (137.5)	4.59 (116.5)	2.9 (73.7) base port	24
Cutout Cover Upper and Lower Bracket Kit - Std.	CO-10205K	6.65 (169)	4.5 (114.3)	2.3 (58.4)	12
Cutout Cover Upper and Lower Bracket Kit - Large	CO-10206K	7.38 (187)	5.6 (25.4)	3.25 (82.5)	12
Dead End Guard	DE-16001	18.2 (462.3)	6.3 (160)	0.91 (23.1) side port	6
Lightning Arrester - Multi Port	LA-13002	6.0 (152.4)	5 (127)	2.3 (58.4) base port	24
Lightning Arrester – Multiport (Loop Latch) <sup>5</sup>	LA-13007	5.8 (147.3)	5 (127)	2.0 (50.8) base port	24
K-line Clamp Top Insulator Guard	PI-12002	7 (177.8)	5.37 (136.4)	1.88 (47.8) base port	12
Tie Top Insulator Guard - K - 4.003	PI-12001	3.25 (82.5)	5.75 (146)	4.00 (101.6) base port	12
Tie Top Insulator Guard - C - 2.253	PI-12003	3.25 (82.5)	5.75 (146)	2.25 (57.15) base port	12
Tie Top Insulator Guard - F - 2.873	PI-12004	3.25 (82.5)	5.75 (146)	2.87 (72.90) base port	12
Tie Top Insulator Guard - J - 3.503	PI-12005	3.25 (82.5)	5.75 (146)	3.50 (88.90) base port	12
Tie Top Insulator Kit - K - 4.00 <sup>1</sup>	PI-22001K	3.25 (82.5)	5.75 (146)	4.00 (101.6)	6
Tie Top Insulator Kit - C - 2.25 <sup>1</sup>	PI-22003K	3.25 (82.5)	5.75 (146)	2.25 (57.15)	6
Tie Top Insulator Kit - F - 2.87 <sup>1</sup>	PI-22004K	3.25 (82.5)	5.75 (146)	2.87 (72.90)	6
Tie Top Insulator Kit - J - 3.50 <sup>1</sup>	PI-22005K	3.25 (82.5)	5.75 (146)	3.50 (88.90)	6
Voltage Regulator Kit – C400 <sup>1</sup>	RK-11001K	12 (304.8)	6.3 (160)	2.75 (69.9) base port	1
Voltage Regulator Kit – C500 <sup>2</sup>	RK-11002K	14.5 (368.3)	9.25 (247.7)	3.50 (88.9) base port	1
Universal Regulator Kit	RK-11101K	13 (330.2)	10 (254)	7 (177.8) - Depth	1
ReliaWrap - 30" x 100' - Rolls	RW-30100	-	-	30" x 100' - Rolls	1
Reliawrap 36" x 36"	RW-36036	-	-	"36" x 36" - pre-cut sheet 4"	1
Reliawrap 36" x 48"	RW-36048	-	-	"36" x 48" - pre-cut sheet 4"	1
External Back Up Fuse Guard	TC-20001	11.88 (302)	3 (76.2)	1.5 (38.1) base port	12
Terminator Guard	TC-14002	10.59 (269)	3 (76.2)	1.5 (38.1) base port	12
Terminator XL	TC-14030	21.62 (549.1)	6.16 (156.5)	2.63 (66.8) base port	
Terminator 90 Degree Guard	TC-14101	6.96 (176.8)	3.16 (80.3)	1.5 (38.1) base port	
Tape 1" x 0.030" (36ft)	TA-30100G	-	-	1" x 36ft	
Tape 2" x 0.030" (36ft)	TA-30200G	-	-	2" x 36ft	
Security Pin 1.25"-Blk (250pcs)	SP-124030N250	-	-	-	
Security Pin 1.25"-Blk (50pcs)	SP-124030N50	-	-	-	
Solid Blade Disconnect Guard	CO-20002	11.75 (298.5)	4.9 (124.5)	1.51 (38.4) base port	
Loadbreak Cutout Guard	CO-20101	10.65 (270.5)	5.26 (133.6)	2.75 (69.9)	

<sup>1</sup> Tie Top Kits include 7ft of Conductor Cover

<sup>1</sup> Regulator Kit includes 2 bushing covers and 2 arrester bracket covers; fits Cooper Regulators - 50 amp to 400 amp

<sup>2</sup> Regulator Kit includes 2 bushing covers and 2 arrester bracket covers; fits Cooper Regulator - 500 amp

<sup>3</sup> Regulator Kit includes 2 bushing covers; fits Siemens Regulators - 219 amp to 489 amp) covers; fits Cooper Regulator - 500 amp

<sup>4</sup> "Pre-Cut Sheet" packaged in quantities of 12 per box

<sup>5</sup> Security pins are optional and not included

*\*Dimensions in inches (millimeters)*

*Reliaguard parts are made from Reliatanium which achieves V-0 Flammability rating*

Product Name	Part Number	Height Diameter*	Length Dimension*	Neck Diameter*	Pack Size (MOQ)
Disconnect Blade Guard	SW-20001	7.69 (195.3)	32.64 (829.1)	3.82 (97.0)	6

Product Name	Part Number	Height Dimension*	Width Diameter*	Depth Dimension*	Pack Size (MOQ)
Perch Preventer	PP-10010	7.1 (180.3)	32.75 (831.8)	7.5 (190.5)	6
Overhead Bail Clamp Guard	PI-00100	11.7 (297.2)	7.1 (180.3)	4.4 (111.8)	12
Medium Wedge Clamp Guard	PI-00301	7.37 (188)	9.7 (246.4)	3 (76.2)	24
Large Wedge Clamp Guard	PI-00302	10.12 (257.1)	11.86 (301.2)	4 (101.6)	24

Product Name	Part Number	Diameter*	Length*	Pack Size (MOQ)
Pipe Bus Guard – 2"	BB-20045-R	2.00 (50.8)	45.00 (1143)	6
Pipe Bus Guard – 2.5"	BB-25045-R	2.50 (63.5)	45.00 (1143)	6
Pipe Bus Guard – 4"	BB-40045-R	4.00 (101.6)	45.00 (1143)	6
Pipe Bus Guard – 4.5"	BB-45045-R	4.50 (114.3)	45.00 (1143)	6
T-Shape Bus Guard	SS-10001	7.5 (190.5)	22 (558.8)	6
L-Shape Bus Guard	SS-20001	7 (177.8)	14 (355.6)	6
L Angle Bus Guard - 3.5"	BB-35045-L	3.5 (88.9)	51.5 (1308.1)	6

Product Name	Part Number	Outside Diameter*	Inside Diameter*	Width*	Pack Size (MOQ)
Wildlife Hot Stick Disc -24	PD-0624	24 (609.6)	2.5-6.0 (63.5-152.4)	0.5 (12.7)	8
Wildlife Hot Stick Disc -20	PD-0620	20 (508)	2.5-6.0 (63.5-152.4)	0.5 (12.7)	8
Wildlife Hot Stick Disc -16	PD-0616	16 (406.4)	2.5-6.0 (63.5-152.4)	0.5 (12.7)	12
Protection Disc - 4" ID Max - 15" OD – Flat	PD-0415F	16 (406.4)	2.5-4.0 (63.5-101.6)	0.125 (3.2)	12
Protection Disc - 5" ID Max - 22" OD – Flat	PD-0522F	22 (558.8)	2.5-5.0 (63.5-127)	0.125 (3.2)	12

Reliaguard KIT Description	FITS	Part Number	Bushing Qty	Conductor Cover	EEL Tool
Recloser Kit V-ST (Viper ST) - Mesh	G&W Viper	RCK-12006K	6	0.75" OD <sup>1</sup>	1
Recloser Kit V-ST (Viper ST) - Solid	G&W Viper	RCK-12001K	6	0.75" OD <sup>1</sup>	1
Recloser Kit - VSTLA (w/ LA) (Viper ST)*	G&W Viper	RCK-12020K	6*	0.75" OD <sup>1</sup>	1
Recloser Kit - NVA - Solid (4' C.C.)	Cooper Nova	RCK-12201K	6	0.75" OD <sup>1</sup>	1
Recloser Kit - NVA - Mesh (4' C.C.)	Cooper Nova	RCK-12207K	6	0.75" OD <sup>1</sup>	1
Recloser Kit Single SPE -Solid (4' C.C.)	Cooper Nova/Spear	RCK-12210K	2	0.75" OD <sup>2</sup>	1
Recloser Kit Single SPE -Mesh (4' C.C.)	Cooper Nova/Spear	RCK-12215K	2	0.75" OD <sup>2</sup>	1
Recloser Kit ELAB - Solid (4' C.C.)	Elastimold/ABB	RCK-13001K	6	0.75" OD <sup>1</sup>	1
Recloser Kit ELAB - Mesh (4' C.C.)	Elastimold/ABB	RCK-13005K	6	0.75" OD <sup>1</sup>	1
Recloser Kit ELAB - Mesh (4' C.C.-.500" max)	Elastimold/ABB	RCK-13006K	6	0.50" OD <sup>1</sup>	1
Recloser Kit Single ELAB -Solid (4' C.C.)	Elastimold/ABB	RCK-13101K	2	0.75" OD <sup>2</sup>	1
Recloser Kit Single ELAB -Mesh (4' C.C.)	Elastimold/ABB	RCK-13105K	2	0.75" OD <sup>2</sup>	1
Recloser Kit Single ELAB -Mesh (4' C.C.-.375" max)	Elastimold/ABB	RCK-13106K	2	0.375" OD <sup>2</sup>	1

<sup>1</sup> 6 - 4ft sections of conductor cover and EEL Slider tool)

<sup>2</sup> 2 - 4ft sections of conductor cover and EEL Slider tool

\* Includes 6 - lightning arresters

# IMPROVING THE GRID'S RELIABILITY

Today's dependence on a reliable power supply is greater than ever. Guaranteed reliability is required by government and health care for essential services. From government supplied essential services to emergency health services; business and manufacturing operations fueling employment and the economy; daily household requirements and powering of individual electronic devices - all are critically dependent on a highly reliable power grid.

Animal and bird caused outages are a significant cause of power interruptions accounting for between 12% and 20% of all outages (Source: EPRI 2001). These types of outages are preventable with the right solution.

To support the reliability of the North American grid, Reliaguard offers product solutions for a variety of equipment types with much more currently in development. Working together with our customers and equipment manufacturers we're able to develop more comprehensive solutions for animal and bird mitigation issues. Examples of custom guards to date include theft prevention covers and frog guards with more unique solutions in development under our OEM and custom design process.

In addition to preventing outages, Reliaguard is focused on preventing takes of all wildlife including protected and endangered species through insightful design and risk analysis.



## UP TO 20% OF ALL OUTAGES ARE CAUSED BY ANIMALS AND BIRDS

### RELIAGUARD POWERLINE AND SUBSTATION GUARDS

Reliaguard® is focused on the development of bird and animal guards for the power line and for common parts in substations. Reliaguard® also manufactures conductor cover to be used in conjunction with its guards.

Manufactured in California, USA, Reliaguard® parts are produced on a volume basis and are priced affordably for large volume purchases.

Reliaguard was formed based on a need in the industry for powerline solutions that offered a superior fit and priced for volume purchases.

Reliaguard, GreyEEL and The EEL Slider are all trademarks owned by Hubbell Power Systems.



***SUPERIOR PORTFOLIO OF WILDLIFE MITIGATION PRODUCTS***

***CONTACT RELIAGUARD***

27151 Burbank Street | Foothill Ranch, CA | 92610 | USA

Telephone: 949 305 3311

Email: [reliaguardsales@hubbell.com](mailto:reliaguardsales@hubbell.com)

Fax: 949 666 8588

[hubbellpowersystems.com](http://hubbellpowersystems.com)

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