HIGH VOLTAGE SWITCHGEAR & AUTOMATION EQUIPMENT

SECTION 6
Brackets, Mounts & Misc. Hardware

CAT. NO: 040930G
May, 2008
BRACKETS, MOUNTS & HARDWARE

- Insulator Brackets for Overhead Lines 6.10-6.16
- Vault Brackets and Junction Cabinets 6.30-6.33
- Substation Flexible Jumpers 6.50-6.51
- Miscellaneous Hardware 6.70-6.73
- Self-Design Worksheet Last page
Tri-Frame brackets reduce installation time and crossarm replacement. They are available in 15 kV - 69 kV versions with either standard clearances or raptor protection clearances. They are available either with or without insulators.

3/4" X 1-3/4" GRADE 5 HEX BOLTS AND LOCK WASHERS SUPPLIED WITH 34.5 KV TINNED UNIVERSAL CLAMP TYPE SILICONE INSULATORS.

TORQUE INSULATOR MOUNTING BOLTS TO 65-75 FT. LBS.

This drawing is for illustrative purposes only and therefore; may, or may not reflect the current revision of this drawing. Please request the current revision from the factory.
Special application insulator mounting brackets. Lightweight, durable; available with or without insulators.

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**Material:** Al or HDG Steel

**Description:** Pole or Tree Mounted Insulator Brackets

**Drawn by:**

**Date:** 11/03/00

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**POLE OR TREE MOUNTED INSULATOR BRACKETS ARE AVAILABLE IN:**

- A36 HOT DIP GALVANIZED STEEL
- 6061-T6 ANODIZED ALUMINUM

**Drawing No:** 9-359M

**Revision:**
Order 10 or 10,000 custom standoff brackets, built to your specifications

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9-341M
Horizontal Insulator Crossarm Mounting Bracket

9-342-1M
6" Offset, Line Post Mounting Bracket
with 9/16" Arrestor Mounting Hole
5/16" Hot Rolled Steel Hot Dipped Galvanized

9-342-2M
6" Offset, Line Post Mounting Bracket
5/16" Hot Rolled Steel Hot Dipped Galvanized

<table>
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<th>HDG Steel</th>
<th>Description:</th>
<th>Drawing No:</th>
<th>Revision:</th>
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Order 10 or 10,000 custom standoff brackets, built to your specifications

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**Description:**

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**2.0" X 20° X 8.0" MOUNTING INSULATOR STANDOFF BRACKET**

5,000 LB. VERTICAL LOAD

9-366-1M

**4.25" X 20° X 8.0" MOUNTING INSULATOR STANDOFF BRACKET**

2,000 LB. VERTICAL LOAD

9-366-2M
Twin circuit insulator brackets reduce installation time and crossarm replacement. They are available in 15 kV - 69 kV versions with either standard clearances or raptor protection clearances. They are available either with or without insulators.

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**Material:** 6061-T6 Al  
**Description:** Termination Bracket, 69 kV Single Phase

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**Drawing No:** 9-420AM  
**Revision:** 0
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**MATERIAL:**
- 6061 ALUMINUM FRAME
- 304 STAINLESS LOADBREAK ELBOW PARKING STANDS
- STAINLESS STEEL FASTENERS

**Description:**
Wall Mounted, 200 A Elbow Parking Stand

**Material:**
- As described

**Finish:**
- 

**Scale:**
- NTS

**Drawn by:**
- 

**Date:**
- 07/11/01
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Material: ALL 300 SERIES STAINLESS STEEL

Finish: FASTENERS AND COMPONENTS

Scale: Ø 9/16"

ALL 300 SERIES STAINLESS STEEL FASTENERS AND COMPONENTS

- Ø9/16"x11/16" SLOTS (4X)
- 8"
- 8"
- 8-1/4"
- 5-1/2"
- 19-3/4"
- 22-1/2"

Description: Elbow Parking Stand, 3-Position

Drawing No: 9-086M

Revision: 0

Date: 05/03/04
This drawing is for illustrative purposes only and therefore; may, or may not reflect the current revision of this drawing. Please request the current revision from the factory.
Eliminate bushing fatigue and failures caused by rigid conductors or corroded, once flexible, conductors with custom super-flexible jumpers. Use our stainless steel shear-nuts with the jumpers to make repeatable and reliable electrical connections to electrical equipment.

1 KA PADS ARE 2 HOLE NEMA
2 KA, 3 KA AND 4 KA ARE 4-HOLE NEMA
OR 6-HOLE NEMA PADS PER CUSTOMER SPECIFICATIONS

TINNED COPPER SUPER-FLEX, ROPE LAY, TINNED COPPER CONDUCTOR

SPECIFY LENGTH IN ONE FOOT INCREMENTS

90 DEGREE 4-HOLE ADAPTER PADS ARE AVAILABLE

5.0''

TINNED COPPER SUPER-FLEX, ROPE LAY, TINNED COPPER CONDUCTOR

2 KA AND 3 KA JUMPERS ARE SUPPLIED WITH CONDUCTOR SPAWNERS

5.0''

SHORT SPAN FLEX BRAID JUMPERS: 1 KA, 2 KA, 3 KA AND 4 KA

EXIST. PAD

1/2" S.S. BOLTS, BELLEVILE WASHERS, FLAT WASHERS AND NUTS AS REQUIRED

HORIZONTAL ARMS FOR SHIPPING

(1X-4X) 750 MCM Cu.

3" TO 8" RADIUS

12"-24" Busbar Separation

3/4"X4" Cu. @ 90°

(1X-4X) 750 MCM Cu.

12"-18" Busbar Separation

CRIMP PAD (4X)

3/4"X4" Cu. @ 90° (2 PLACES)

ALL JUMPERS ARE DESIGNED TO HAVE A MAXIMUM TEMPERATURE RISE OF 33°C AT 25°C AMBIENT TEMPERATURE.

JUMPERS CAN BE SUPPLIED WITH UV STABLE, TRACK RESISTANT INSULATION FOR WILDLIFE PROTECTION. CONSULT FACTORY FOR YOUR SPECIFIC REQUIREMENTS.

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Swaged, tinned copper, flexible flat braids are available in customer specified lengths. Terminal pad configuration are available in 150 to 1200 A continuous current ratings. Use Inertia stainless steel shear-nuts with the jumpers to make repeatable and reliable electrical connections to electrical equipment.

\[
\begin{align*}
\text{Ø0.563"} & \quad 1.75" \quad 3.0" \quad .62" \quad 1.0" \quad .50" \\
2.0" & \quad 4/0 \text{TINNED COPPER BRAID (2 PIECES) FOR 800 AMP CONTINUOUS} \\
2-3/8" & \quad \text{TIN PLATED COPPER NEMA PADS} \\
\end{align*}
\]

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Standoffs- for replacing pin cap insulators with stronger station post insulators and conversion from 5” bolt circle insulators to 3” bolt circle insulators and vice versa.

(4)Ø 0.687 HOLES ON 5.00" B.C. AT 90°

3/8" PLATES
A36 H.R.S.
HOT DIP GALV.

Ø 9/16" (4X)
Ø 11/16" (4X)

9-202M
5" BC TO 3" BC INSULATOR STAND-OFF

9-348M
5" BC x 4" INSULATOR STAND-OFF

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Lightweight and economical conductor spacers install in seconds and provide long service life. The shedded design provides extended wet creepage distance. The UV resistant, silicone finish provide years of service in the most severe environments.

PHASE SPACER FOR SMALL CROSSECTION OVERHEAD CONDUCTOR. LIGHTWEIGHT SOLUTION TO PREVENT PHASES FROM CONTACTING EACH OTHER DURING HIGH WIND CONDITIONS.

INSTALLATION:
1. SLIDE CONDUCTOR INTO SLOT UNTIL GRIPPED BY CAPTIVATING WIRE CUTOUT. 
   NOTE: SMALL HOLE IS FOR NO. 6 WIRE, LARGE HOLE IS FOR NO. 2 WIRE.
2. GRIP SPRING CLAMP WITH PLIERS AND SLIDE IT UP TO THE CONDUCTOR.

SPECIFICATIONS:
MATERIAL: DELRIN 527
SILICONE FINISH .001 IN. MIN.
TENSILE STRENGTH MIN. AT 100°C: 4.8kpsi
ELECTRICAL WET WITHSTAND: 4,500 VOLTS/in.
ULTRAVIOLET RESISTANCE: 80% MAX ELONGATION AT 600kj/m²
COLOR: SKY GRAY
WEIGHT: 5.0 OZ.

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**Pole top fuse canisters** provide storage for unique or uncommon fuses not routinely carried on service vehicles. Site-specific fuses can be stored on the pole where these fuses are used, making them available when and where they are needed.

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Stainless steel shear-nuts make repeatable and reliable electrical connections to electrical apparatus. Zinc, die cast shear nuts can be used for lower torque requirements. Installing rod guides, steps and other hardware to fiberglass poles or crossarms can damage the fiberglass pole or crossarm when excessive torque is applied. Shear nuts mitigate this problem.

The above sizes are used for field connections to electrical equipment where specific torque values are required to compress Belleville washers and ensure a good electrical connection without the need for torque wrenches and the associated calibration of that tool. Other sizes, materials and torque-limits are available. Consult the factory for your specific needs.

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<table>
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<tr>
<th>Shear Nut Size</th>
<th>Construction Material</th>
<th>Shear Point</th>
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<tr>
<td>1/2-13</td>
<td>304 Stainless steel</td>
<td>45-55 lbs</td>
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<tr>
<td>1/2-13</td>
<td>Zinc, Die Cast</td>
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