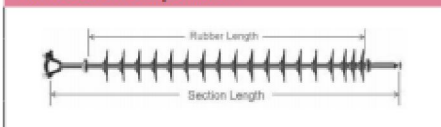


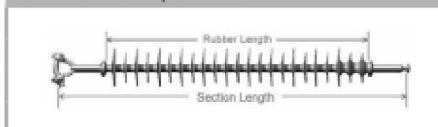
Polymer Suspension Insulators

Suspension Insulator Smart Catalog Number							
S1	40	80	045	V	X	SS	022
SML	Tower EF	Line EF	Rubber Length	Leakage	Corona Ring	Shed Pattern	Shed Count
S1 ■ 25K S5 ■ 30K S6 ■ 36K S2 ■ 50K S4 ■ 80K	4_ ■ Y-Clevis 5_ ■ Tongue 6_ ■ Clevis 7_ ■ Socket 8_ ■ Ball 9_ ■ Oval Eye XX ■ None	Linear Distance from End Fitting to End Fitting			Tower Line X ■ None None A ■ None 8" B ■ None 12" C ■ None 17" D ■ 8" 8" E ■ 12" 12" F ■ 17" 17" G ■ 8" 12" H ■ 12" 17" V ■ 8" 17"	SS ■ Standard 6S ■ Standard EHV1 9S ■ Standard EHV2 5S ■ Standard UHV AL ■ Standard Alt. 6L ■ Std. Alt. EHV1 9L ■ Std. Alt. EHV2 5L ■ Std. Alt. UHV AM ■ Maximum Alt. A6 ■ Max. Alt. EHV1 A9 ■ Max. Alt. EHV2 A5 ■ Max. Alt. UHV TS ■ Triple AIL T6 ■ Triple AIL EHV1 T9 ■ Triple AIL EHV2 T5 ■ Triple AIL UHV	
V = Variable Leakage = Modular / Extruded Manufacturing Process M = Molded Leakage = Injection Molded Manufacturing Process							

VX Modular Suspension



MX Molded Suspension



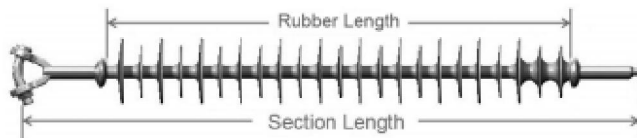
Polymer Suspension Insulators

25 kip Molded Insulators



Features

- S1 - MX Series is the Standard MPS Suspension for 25K SML
- Available in all standard end fitting combinations (see below)
- For additional end fitting combinations, log into MRD
- Published FO values are without corona ring
- For Corona Ring Applications, see next spread
- For custom leakage, see the S1 - VX Series



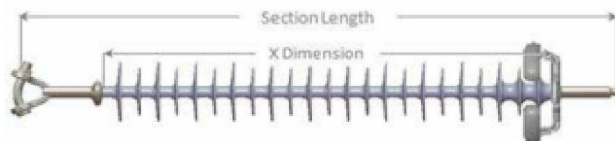
Polymer Suspension Insulators

25 kip Molded Insulators with Corona Ring



Features

- S1 - MX Series is the Standard MPS Suspension for 25K SML
- Available in all standard end fitting combinations (see below)
- For additional end fitting combinations, log into MRD
- Published FO values are without corona ring
- For Corona Ring Applications, see next spread
- For custom leakage, see the S1 - VX Series



Polymer Suspension Insulators

25 kip Modular Insulators



Features

- 8" Corona ring required at 230kV and above, but can be added to any voltage as required
- Available in all standard end fitting combinations (see below)
- For additional end fitting combinations, log into MRD
- Published FO values are without corona ring
- For Corona Ring Applications, see next page

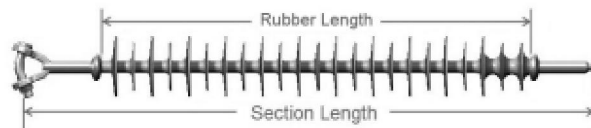
Polymer Suspension Insulators

30 kip Molded Insulators



Features

- SS - MX Series is the Standard MPS Suspension for 30K SML
- Available in all standard end fitting combinations (see below)
- For additional end fitting combinations, log into MRD
- Published FO values are without a corona ring
- For corona ring options, see next spread
- For custom leakage, see the next spread



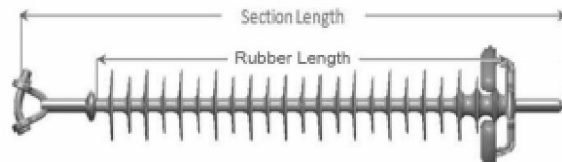
Polymer Suspension Insulators

30 kip Molded Insulators with Corona Ring



Features

- SS - MX Series is the Standard MPS Suspension for 30K SML
- Available in all standard end fitting combinations (see below)
- For additional end fitting combinations, log into MRD
- Published FO values are with 8" corona ring
- For custom leakage, see the S1 - VX Series





Bell Equivalent Suspension Insulators



BE Series 35 kV - 69 kV

MacLean Power Systems' polymer mold-on bell equivalent insulator is targeted at maintenance applications where insulators need to be the same length. Traditionally with insulators 69kV and under, to achieve the same electrical and strength ratings of a porcelain insulator, the polymer insulator needs to be longer, which isn't possible on existing lines.

The strength of the polymer insulator is achieved by crimping metal end fittings to the fiberglass core. These end fittings are approximately the length of one porcelain or glass disk causing that much shorter of a dry arcing distance, which is necessary for the electrical ratings of the insulator. MPS designed the "Bell Equivalent" to overcome this length obstacle by molding the silicone housing over the end fittings, leaving just the socket and ball exposed for the connection to the conductor hardware and tower. By molding over the metal end fittings, the polymer insulator now has the same electrical properties and length as its porcelain counterpart.

Some of the benefits of using MacLean Power Systems' Bell Equivalent insulators over porcelain or glass insulators include:

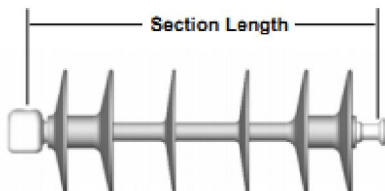
- Installation right out of the box – eliminates the assembly of the individual bells of a porcelain string
- Silicone housing has 20% more leakage distance – superior performance in contaminated environment
- Corrosion resistant E-glass core – eliminates concern of brittle fracture failure
- Higher mechanical strength – 25k SML v. 15k SML

Features

- 4, 5, & 6 Bell equivalents

Insulator Strength Ratings		
	SML	RTL
B1	25 klb	12.5 klb
	112 kN	55 kN

- High strength 25k SML
- Silicone housing
- 20% higher leakage than porcelain
- Corrosion Resistant E-Glass
- ANSI 52-5 socket & ball end fittings
- 82% lighter weight compared to porcelain



Benefits

- Direct length replacement for bells
- 15k SML for bells
- Hydrophobicity / encapsulation
- Superior performance for contamination
- Eliminates brittle fracture concerns
- Fits standard socket / ball hardware
- Lower installation labor

Catalog Number	# Bells	Section Length		Leakage Distance		Dry Arcing Distance		Dry	Wet	CIPD+	CIPD-	Weight lbs.
		in	mm	in	mm	in	mm	kV	kV	kV	kV	
S178023BE04	4	23.0	584	55.1	1400	24.0	610	255	190	430	435	5.6
S178023BE05	5	28.7	730	69.4	1763	29.8	756	315	245	500	510	6.3
S178023BE06	6	34.5	876	84.0	2134	35.4	900	375	305	580	510	7.3

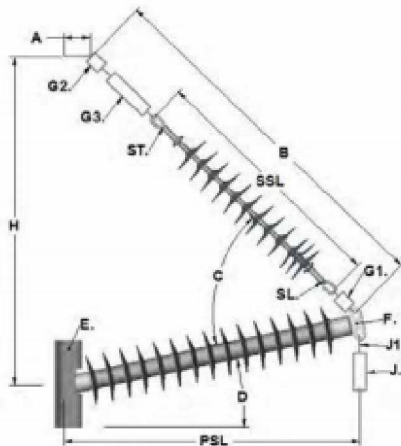
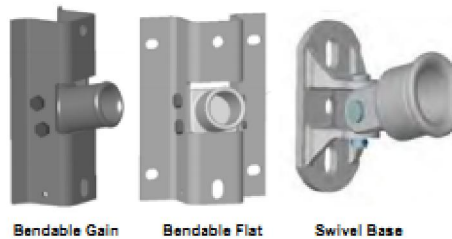
Braced Post Insulators

Braced Post Design Options

Insulator Options

Line Post: Typically, the line post of the braced post assembly will have a tongue line end fitting (F), and a bendable base tower connection (E). The bendable base is available as a gain or flat design type, or it can be replaced with a swivel or pivoting base, depending on the requirements of the application.

Brace Insulator: The suspension insulator that makes up the brace can be comprised of many end fitting combinations, per customer preference. The Eye / Eye combination is a commonly used design, it offers a greater degree of articulation when combined with anchor shackles.



Bendable Base – Formed steel base that mates with an anchor end fitting on the insulator via 2 mounting bolts. These bases provide some vertical articulation of the post, which offers adjustment for the brace and connection hardware to the pole. Bendable bases come in gain and flat designs, with 0° & 12° up-sweep angles, as required for by application.

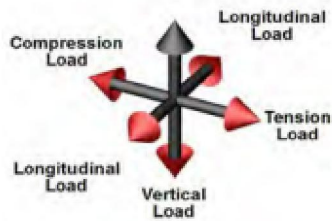
Gain Base – Base design used to mate the insulator to a round pole surface. This base is attached to the pole through the center bolt mount holes.

Flat Base – Base design used to mate the insulator to a flat surface, using either the 4 bolt holes along the ears of the base, or the 2 center mount bolt holes.

Swivel Base or Pivoting Base – This base provides articulation in the vertical and longitudinal directions. This design is typically used in areas where high longitudinal loading is required to compensate for unbalanced loads or broken conductor conditions.

Pole Band Assemblies – Another method of attaching a braced post assembly to a tower is by means of a pole band assembly. Pole bands are used on poles when mount holes are not available and cannot be drilled, or for maintenance / emergency response applications. Contact MPS for additional details.

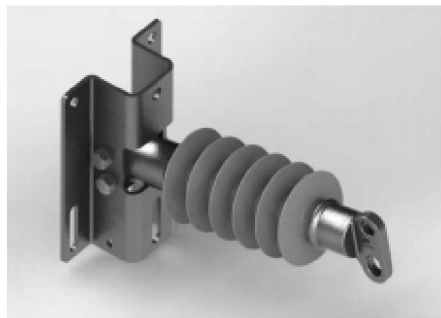
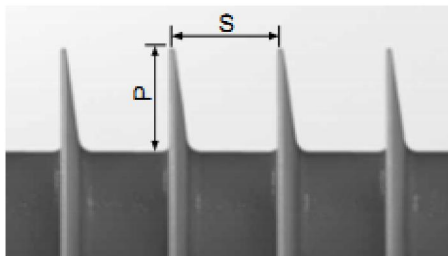
Braced Post Insulators



Line Post Insulators

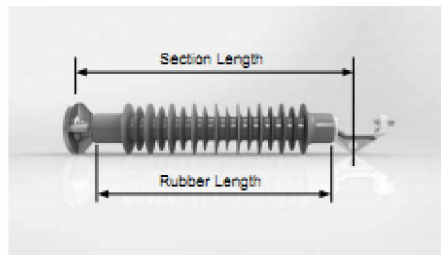
Line Posts

MacLean Power Systems has



Line Post Insulators

1.75" Line Post - Horizontal Trunnion / 3/4" Stud Base



Polymer Insulators

2" Line Post • Fixed Gain Base / Trunnion

