

## Braced Post Insulator Assembly B2901045T12073MX

1) H2 90 10 035 MX SS 018	[1]
2) S1 40 80 031 MX AL 019	[1]
3) Socket/Y-Clevis (SYC-56)	[1]
4) Turnbuckle (G-227-NBC-3/4x12C)	[1]
5) Shackle (ASH-55-BC)	[1]

### ASSEMBLY DIMENSIONAL VALUES

Post Section Length (PSL)	45.4 in	1,153 mm
Suspension Section Length (SSL)	42.2 in	1,072 mm
Height of Assembly (H)	73.0 in	1,854 mm
Length of Brace (B)	75.8 in	1,925 mm
Upper Pole Connection Offset (A)*	2.0 in	51 mm
Angle Between Insulators (C)		67 Degrees
Dry Arc Distance	32.8 in	833 mm
Leakage Distance	85.2 in	2,164 mm

\*This connection bracket to be supplied by customer

### ASSEMBLY ELECTRICAL VALUES\*

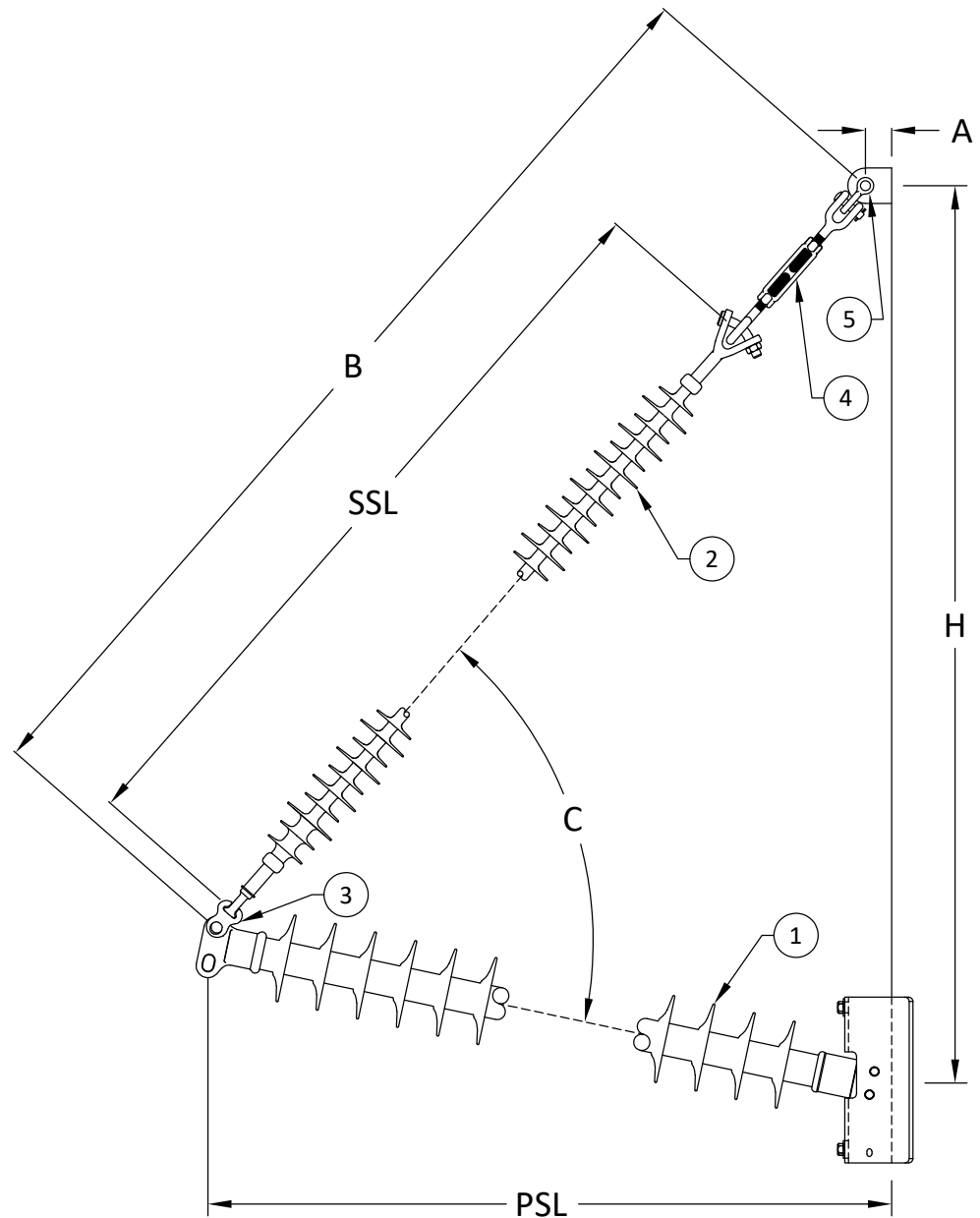
60 Hz Dry F.O. (Min. Withstand)	320 kV	(300) kV
60 Hz Wet F.O. (Min. Withstand)	295 kV	(229) kV
CIFO+ (Min. Withstand)	547 kV	(490) kV
CIFO- (Min. Withstand)	640 kV	(526) kV

\*Values shown are based on minimum electricals for the assembly

### ASSEMBLY MECHANICAL VALUES

Maximum Working Vertical Load	11,823 lbs	52.6 kN
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MPS Catalog Number

**H2 90 10 035 MX SS 018**

Date: 03/23/2022

**End Fittings**

Tower End Fitting:

Gain / 12 deg / Steel

Line End Fitting:

2 HL Drop Tongue / Galv. Ductile Iron

**Material**

Corona Ring (Line):

None

Corona Rings are recommended for applications of 230 kV and above

Mounting Angle:

12 deg

Number of Sheds:

18

Rod Diameter:

2.5 in

Weight Estimate:

53.4 lbs

24 kg

**Dimensional Values**

Section Length (L):

45.4 in 1,153 mm

Rubber Length (X):

35 in 889 mm

Shed spacing (S):

1.95 in 50 mm

Shed Projection (P):

1.86 in 47 mm

Dry Arc Distance:

37.3 in 947 mm

Leakage Distance:

95.6 in 2,427 mm

**Electricals Values**

60 Hz dry Flashover (Min. Withstand):

360 kV 338 kV

60 Hz Wet Flashover (Min. Withstand):

333 kV 260 kV

CIFO Positive (Min. Withstand):

618 kV 553 kV

CIFO Negative (Min. Withstand):

705 kV 590 kV

**Mechanical Values**

Max. Design Cant. Load (MDCL):

2,103 lbs 9.4 kN

Specified Cant. Load (SCL):

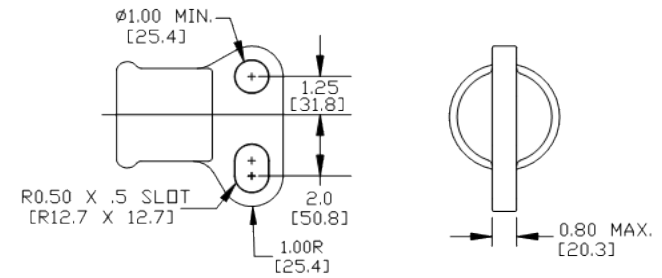
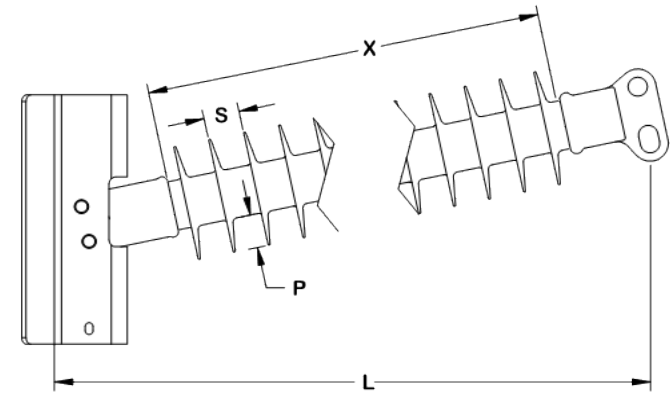
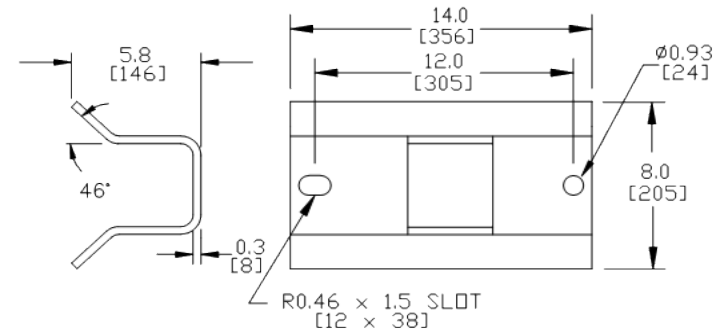
4,206 lbs 18.7 kN

Specified Tensile Load (STL):

15,000 lbs 66.7 kN

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Notes:



Dimension: inches [millimeters]

NOTE: Drawing not actual depiction of insulator appearance.

Silicone rubber sheath and sheds complies with applicable ANSI and IEC standards.

Prepared By: Stephen Lucci

MPS Catalog Number

**S1 40 80 031 MX AL 019**

Date: 03/23/2022

**End Fittings**

Tower End Fitting:

Y-Clevis / Forged Steel

Line End Fitting:

Ball / Forged Steel  
/ (ANSI 52-5)

**Material**

Corona Ring (Line):

None

Corona Rings are recommended for applications of 230 kV and above

Number of Sheds:

9 large      10 standard

Rod Diameter:

16 mm

Weight Estimate:

8.2 lbs      4 kg

**Dimensional Values**

Section Length (L):

42.2 in      1,072 mm

Rubber Length (X):

31 in      787 mm

Standard Shed Height (P1):

1.5 in      38 mm

Large Shed Height (P2):

2 in      51 mm

Projection Ration (S/P):

-      1.5

Shed Spacing (S):

3 in      76 mm

Dry Arc Distance:

32.8 in      833 mm

Leakage Distance:

85.2 in      2,164 mm

**Electricals Values**

60 Hz dry Flashover (Min. Withstand):

327 kV      304 kV

60 Hz Wet Flashover (Min. Withstand):

295 kV      257 kV

CIFO Positive (Min. Withstand):

566 kV      487 kV

CIFO Negative (Min. Withstand):

605 kV      531 kV

**Mechanical Values**

Specified Mech. Load (SML):

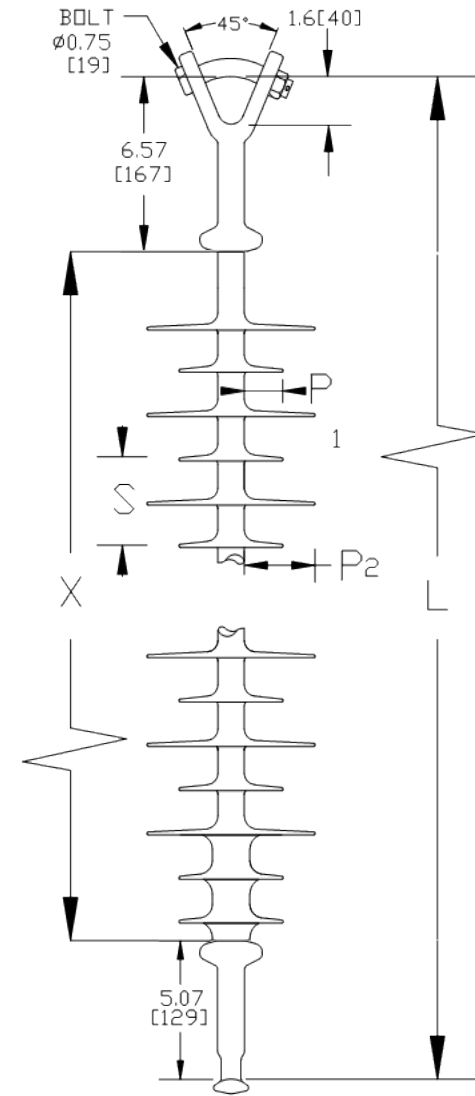
25,000 lbs      111.2 kN

Routine Test Load (RTL):

12,500 lbs      55.6 kN

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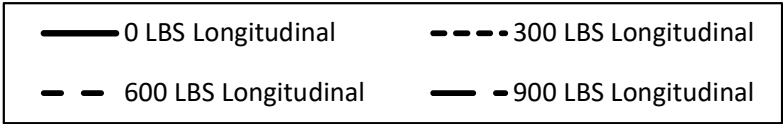
Prepared By: Stephen Lucci



MacLean Power Systems

## B2901045T12073MX Ultimate Combined Load Curve

Factor of Safety = 1



**Assumptions:**  
-Loading sequence is Longitudinal, Vertical, Transverse  
-Factor of Safety applied to entire system  
-Negligible downward tip deflection  
-Static moduli values  
-Confidence level of 95%

