

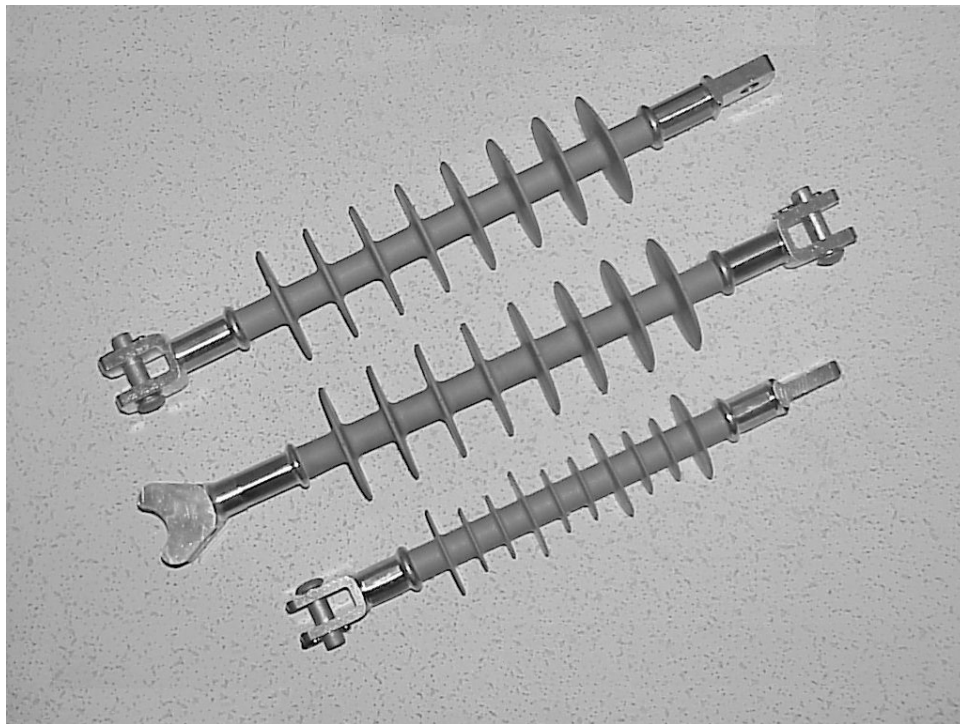


K-LINE INSULATORS LIMITED  
TORONTO, ONTARIO, CANADA

# Catalogue D-DS

## DISTRIBUTION SILICONE INSULATORS *Deadend / Suspension* *15 kV to 69 kV*

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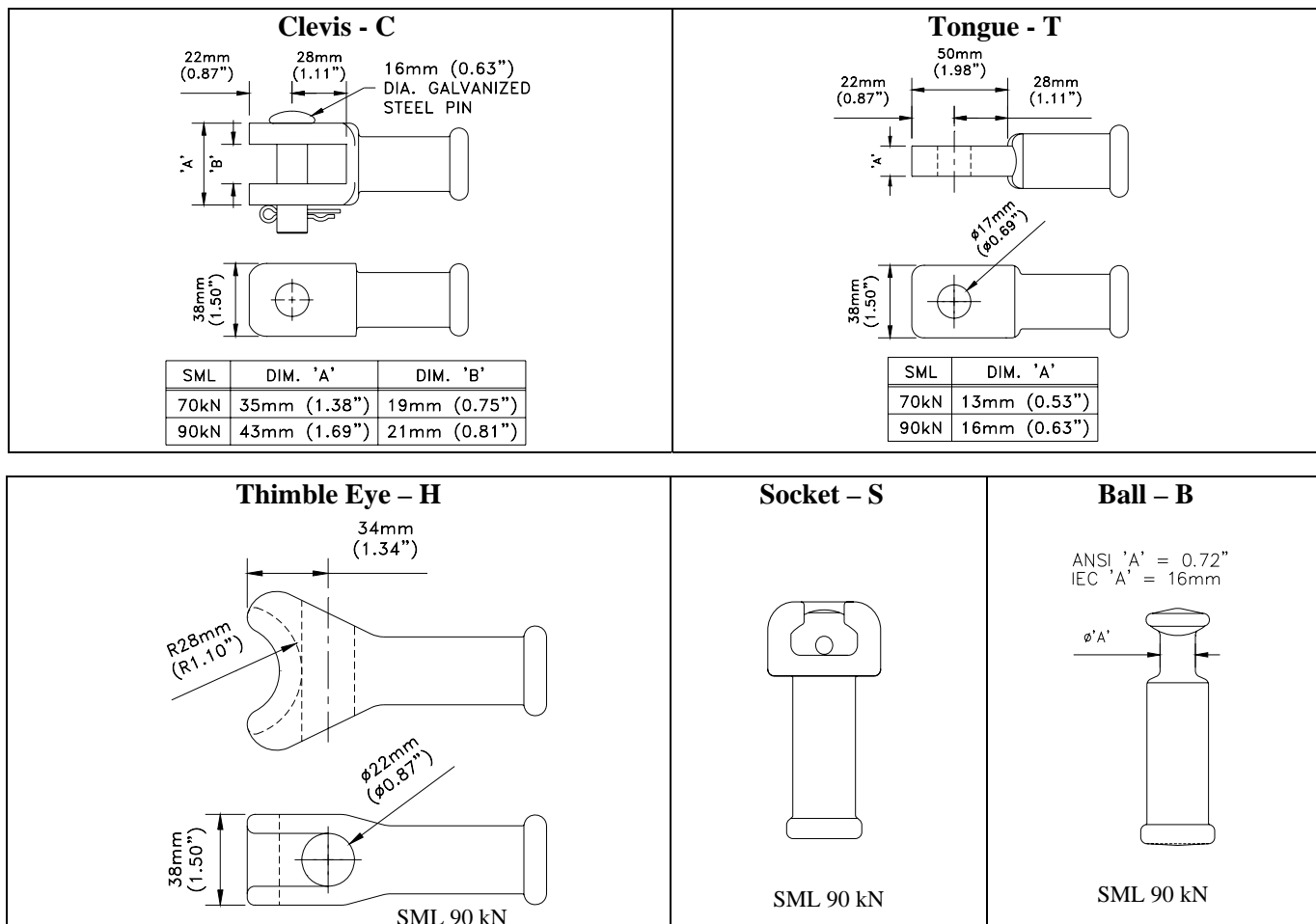
## END FITTINGS

There are five standard end fittings that are available on the deadend/suspension insulators: clevis, tongue, thimble eye, socket, and ball (See Below). The clevis, tongue, and thimble eye fittings are made from high strength, corrosion resistant extruded aluminum. While the socket and ball fittings are hot-dip galvanized iron. The end fittings are crimped on to the core rod to provide the mechanical performance. A watertight seal between the rubber and end fittings eliminates possible moisture ingress. This special silicone rubber to metal fittings sealing process provides total exclusion of moisture.

The end fittings of the distribution class deadend/suspension are rated for a specified mechanical strength, SML of 70 kN (15,700 lb) or 90 kN (20,200 lb).

The clevis and tongue end fittings are the two most common fittings used with additional adaptors and clamps. The thimble eye end fitting is a unique design that integrates the insulator tongue end fitting and a preformed conductor grip adapter to attach to the line conductor. This thimble eye essentially eliminates one item in the assembly and from inventory.

For other special end fittings please contact K-Line Insulators.



### K-LINE INSULATORS LIMITED

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# Distribution Silicone Insulators

## Deadend / Suspension

In general Overhead Distribution Lines tend to experience a large number of outages and interruptions due to insulation failures. These failures may be from surface contamination or wetting on line insulators that result in flashovers or pole fires.

Silicone deadend/suspension insulators offer the ultimate solution in improved performance. Because of its hydrophobicity, this material inherently resists water filming thereby limiting leakage currents. Insulators with reduced leakage currents, even when contaminated, require less frequent washing. The savings in such maintenance costs are added benefits of using silicone insulators.

K-Line silicone polymer distribution deadend/suspension insulators are manufactured and tested to world-class polymer insulator standards; CEA LWIWG-01, ANSI C29.13, and IEC 1109. K-Line Insulators Limited is registered to ISO 9001 Quality Systems.

### PERFORMANCE BENEFITS

The performance benefits of K-Line Insulators distribution deadend/suspension insulators are listed below.

- Improves Reliability (by minimizing interruptions and outages due to vandalism, pole fires, and flashovers in all types of environments)
- Eliminates or Reduces Maintenance (such as washing and trouble calls) and is compatible with existing plant
- Improves Power Quality (less RI and TVI)
- Energy Efficiency (lower losses due to lower leakage currents)
- Safety (light weight for handling and installation)
- Service Life (consistent performance over its service life)
- Life Cycle Cost (savings over porcelain insulators)

### APPLICATION

Distribution deadend/suspension insulators are used on overhead lines operating at or below 69 kV. These insulators are used to support line conductors in suspension or deadend modes such as line terminations, angles, and tangents. These insulators can be used with bare or covered conductors.

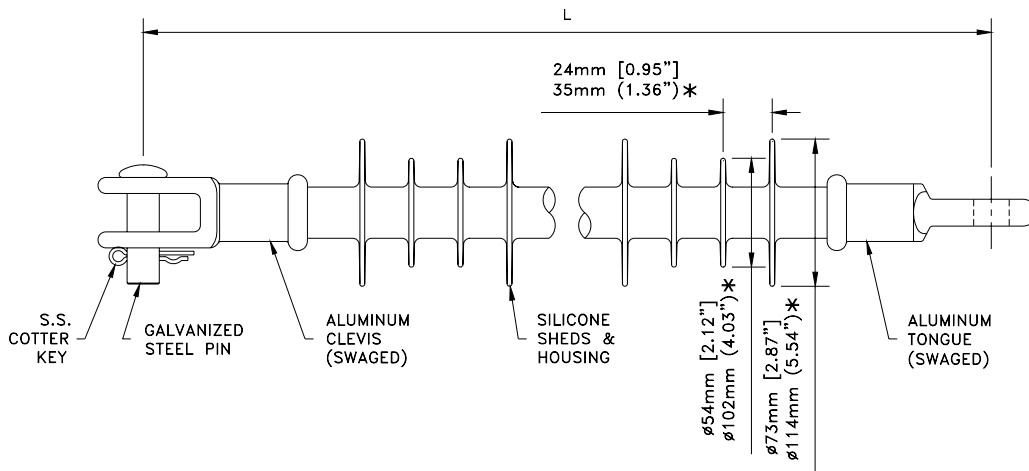
### CORE MATERIAL

The core rod of the distribution deadend/suspension insulator is made of a high quality fiberglass that has been specially formulated for electrical and mechanical applications.

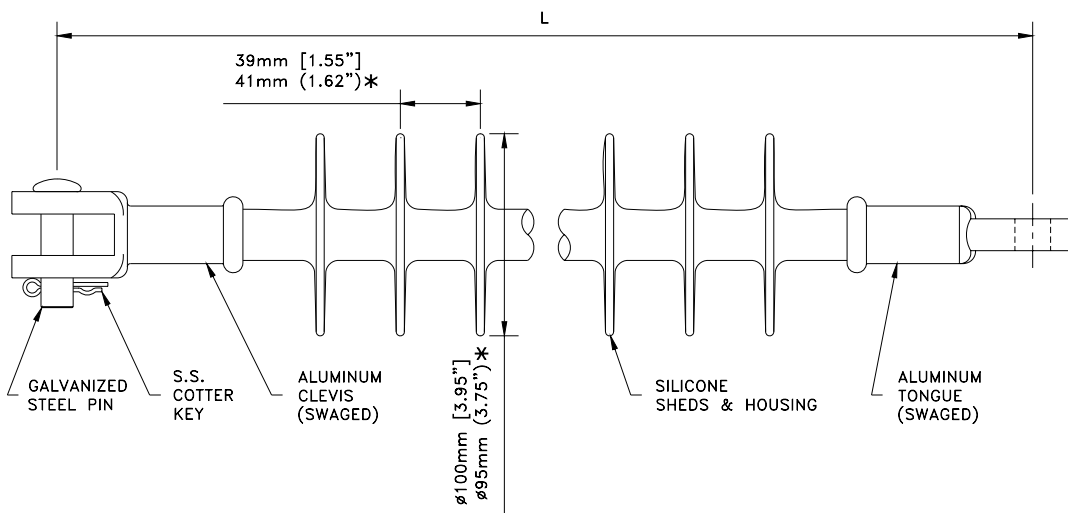
### HOUSING AND SHEDS

The housing and sheds of the insulator are one piece, injected molded silicone rubber that is chemically bonded to the core rod. This ensures that the interface between the rubber and rod is impenetrable against moisture ingress.

## DISTRIBUTION DEADEND/SUSPENSION INSULATOR



KL15ASCTM, KL28ASCTM, & KL69HC1T116\*



KL35SCTM\* &amp; KL46SCT

## TECHNICAL DATA

SPECIFICATIONS		UNIT	CATALOGUE NUMBER**					
			KL15ASCTM	KL28ASCTM	KL35SCTM	KL46SCT	KL46SCTA	KL69HC1T116
Voltage Class		kV	15	28	35	46	46	69
CEA & ANSI Class		-	DS15	DS28	DS35	DS46	-	DS69
Section Length “L”		mm (in)	322 (12.7)	433 (17.0)	486 (19.1)	574 (22.6)	646 (25.4)	733 (28.9)
Dry Arcing Distance		mm (in)	193 (7.6)	290 (11.4)	348 (13.7)	419 (16.5)	490 (19.3)	627 (24.7)
Leakage Distance		mm (in)	384 (15.1)	590 (23.2)	750 (29.5)	988 (38.9)	1059 (41.7)	1798 (70.8)
Low-Frequency Flashover	Dry	kV	100	135	153	180	200	260
	Wet	kV	70	105	144	150	155	205
Impulse Critical Flashover (Pos.)		kV	145	225	264	300	355	425
Radio Influence Voltage (RIV) at 1 MHz	Test	kV	15	20	30	30	30	44
	Max.	μV	Below 1	Below 1	Below 3	Below 3	Below 5	Below 2
Specified Mechanical Load (SML)		kN (lb)	70 (15,700)	70 (15,700)	70 (15,700)	90 (20,200)	90 (20,200)	90 (20,200)
Torsional Load		N•m (ft•lb)	83 (62)	83 (62)	83 (62)	83 (62)	83 (62)	83 (62)
Approx. Weight		kg (lb)	0.7 (1.5)	0.8 (1.8)	1.1 (2.5)	1.4 (3.0)	1.6 (3.5)	2.2 (4.8)
Standard Packaging		-	15	15	12	12	12	3

\*\* The catalogue numbers in the above table are for “CT” clevis-tongue fittings. For other combinations of end fittings or mechanical strengths, see End Fittings Section.