

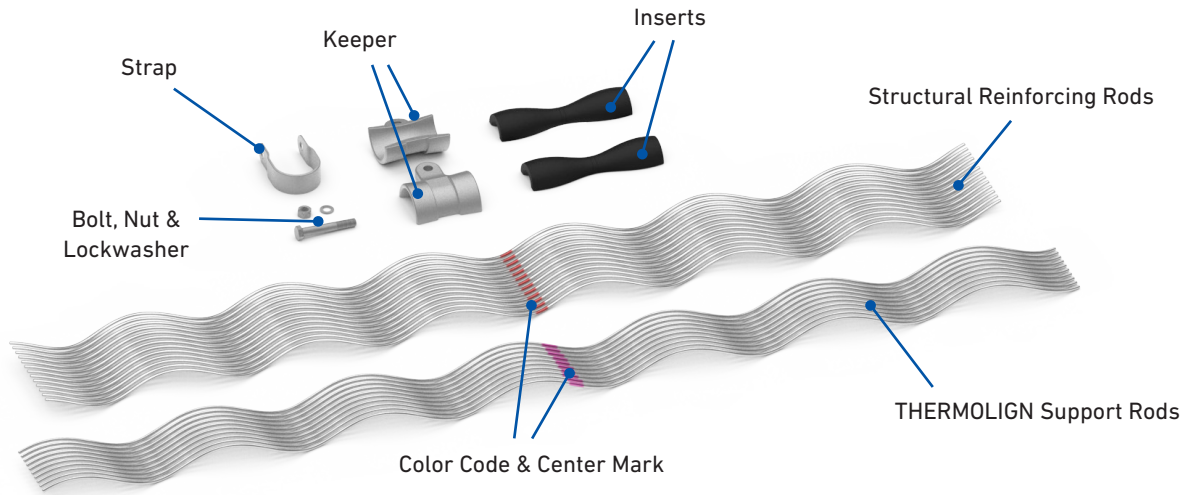
## THERMOLIGN<sup>®</sup> SUSPENSION

The **THERMOLIGN Suspension** is specifically designed for applications on aluminum-based high-temperature conductors that will be operated at continuous temperatures above 200°C. It utilizes ARMOR-GRIP<sup>®</sup> Suspension rods, an additional set of structural reinforcing rods, and elastomer cushion inserts that significantly reduce static and dynamic bending stresses on the conductor at the attachment point.

### FEATURES AND BENEFITS

- Multi-layer design for maximum mechanical performance and maximum heat dissipation
- Minimal heat transferred to mating hardware and insulators
- Cushioned insert surrounds the conductor to provide superior protection against wind- and ice-induced dynamic forces
- Shipped fully assembled with no loose parts to avoid lost hardware
- Available with PARROT-BILL<sup>®</sup> Rod ends for EHV applications (345 kV and above)
- Compatible with standard attachment hardware

## COMPONENTS



### THERMOLIGN® Suspension

Characteristic	Specification
Unbalanced/Slip Load	Approximately 20% of conductor rated breaking strength
Maximum Vertical Load	Varies per assembly (consult dimensional chart for specific ranges)
Maximum Line Angle	30° for single suspension, 60° for double suspension



## ORDERING INFORMATION

- Add the appropriate suffix code(s) to the THERMOLIGN Suspension catalog number to include attachment fittings. "YC" for Y-Clevis, "CE" for Clevis Eye, or "SE" for Socket Eye. **(EXAMPLE: CGS-1095GYC, CGS-1095GCE, or CGS-1095GSE).**
- For Double THERMOLIGN Suspension applications, see the section for THERMOLIGN Suspension: Double

### THERMOLIGN® Suspension

Catalog Number		Diameter Range		Length (overall)		Color Code	
				in (m)			
Single	Double	in	mm	Single	Double	Inner	Outer
TLS-0093	TLS-0293	0.574 - 0.590	14.6 - 15.0	98 (2.5)	120 (3.1)	Yellow	Green
TLS-0094	TLS-0294	0.619 - 0.636	15.7 - 16.2	98 (2.5)	120 (3.1)	Black	Black
TLS-0092	TLS-0292	0.637 - 0.673	16.2 - 17.1	100 (2.5)	120 (3.1)	Red	Brown
TLS-0095	TLS-0295	0.674 - 0.708	17.1 - 18.0	98 (2.5)	125 (3.2)	Orange	Orange
TLS-0096	TLS-0296	0.709 - 0.726	18.0 - 18.4	100 (2.5)	129 (3.3)	Green	Purple
TLS-0097	TLS-0297	0.727 - 0.759	18.5 - 19.3	100 (2.5)	129 (3.3)	Pink	Red
TLS-0098	TLS-0298	0.760 - 0.786	19.3 - 20.0	100 (2.5)	129 (3.3)	White	Blue
TLS-0099	TLS-0299	0.787 - 0.814	20.0 - 20.7	100 (2.5)	129 (3.3)	Purple	Green
TLS-0100	TLS-0300	0.815 - 0.855	20.7 - 21.7	100 (2.5)	129 (3.3)	Red	Yellow
TLS-0101	TLS-0301	0.856 - 0.894	21.7 - 22.7	100 (2.5)	132 (3.4)	Blue	Black
TLS-0102	TLS-0302	0.895 - 0.916	22.7 - 23.3	100 (2.5)	132 (3.4)	Black	White
TLS-0103	TLS-0303	0.917 - 0.942	23.3 - 23.9	100 (2.5)	132 (3.4)	Orange	Brown
TLS-0104	TLS-0304	0.943 - 0.977	23.9 - 24.8	100 (2.5)	132 (3.4)	Green	Orange
TLS-0105	TLS-0305	0.978 - 1.016	24.8 - 25.8	100 (2.5)	132 (3.4)	Pink	Purple
TLS-0106	TLS-0306	1.017 - 1.057	25.8 - 26.8	100 (2.5)	132 (3.4)	Purple	Red
TLS-0107	TLS-0307	1.058 - 1.079	26.8 - 27.4	112 (2.8)	149 (3.8)	White	Blue
TLS-0108	TLS-0308	1.080 - 1.112	27.4 - 28.2	112 (2.8)	149 (3.8)	White	Green
TLS-0109	TLS-0309	1.113 - 1.150	28.2 - 29.2	112 (2.8)	149 (3.8)	Yellow	Yellow
TLS-0110	TLS-0310	1.151 - 1.188	29.2 - 30.2	112 (2.8)	149 (3.8)	Yellow	Black
TLS-0111	TLS-0311	1.189 - 1.208	30.2 - 30.7	112 (2.8)	149 (3.8)	Yellow	White

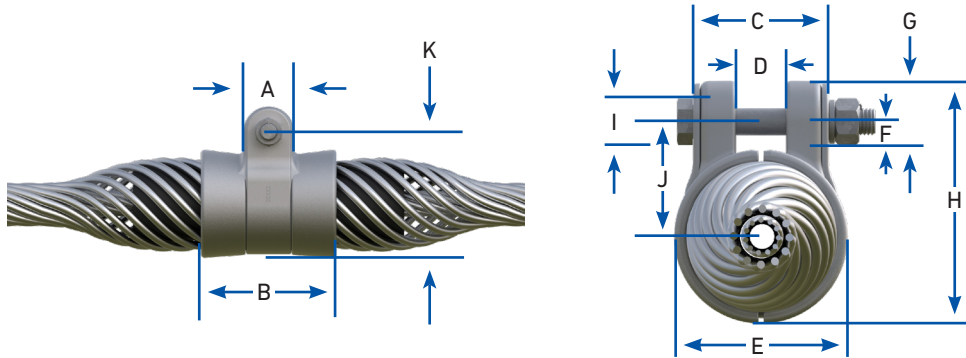
## ORDERING INFORMATION

### THERMOLIGN® Suspension

Catalog Number		Diameter Range		Length (overall)		Color Code	
				in (m)			
Single	Double	in	mm	Single	Double	Inner	Outer
TLS-0112	TLS-0312	1.209 - 1.262	30.7 - 32.1	125 (3.2)	154 (3.9)	Brown	Red
TLS-0113	TLS-0313	1.263 - 1.308	32.1 - 33.2	125 (3.2)	154 (3.9)	Brown	Blue
TLS-0114	TLS-0314	1.309 - 1.338	33.2 - 34.0	125 (3.2)	154 (3.9)	Red	Green
TLS-0115	TLS-0315	1.339 - 1.368	34.0 - 34.7	125 (3.2)	154 (3.9)	Red	Yellow
TLS-0116	TLS-0316	1.369 - 1.409	34.7 - 35.7	125 (3.2)	154 (3.9)	Blue	Black
TLS-0117	TLS-0317	1.410 - 1.449	35.7 - 36.8	125 (3.2)	154 (3.9)	Black	White
TLS-0118	TLS-0318	1.450 - 1.490	36.8 - 37.9	125 (3.2)	154 (3.9)	Orange	Brown
TLS-0119	TLS-0319	1.491 - 1.530	37.9 - 38.9	125 (3.2)	154 (3.9)	Green	Orange
TLS-0120	TLS-0320	1.531 - 1.572	38.9 - 39.9	125 (3.2)	154 (3.9)	Pink	Purple



## DIMENSIONS

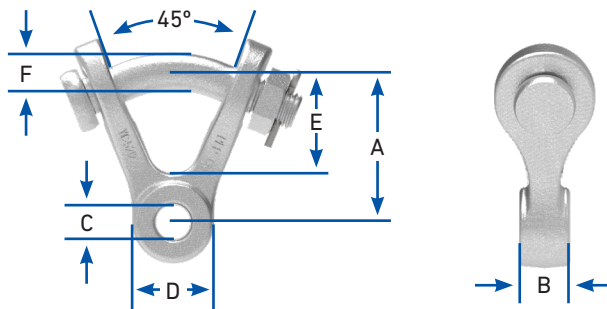


### THERMOLIGN® Suspension

Conductor Range		Dimensions											Maximum Vertical Load
		in (mm)											
in	mm	A	B	C	D	E	F	G	H	I	J	K	lb (kN)
0.574 - 0.708	14.6 - 18.0	2-1/4 (57.2)	5-1/2 (139.7)	3-1/2 (88.9)	1-3/16 (30.2)	4-5/32 (105.6)	1 (25.4)	2-1/8 (54.0)	5-29/32 (150.0)	5/8 (15.9)	2-45/64 (68.7)	4-25/32 (121.4)	25,000 (111)
0.709 - 0.855	18.0 - 21.7	2-1/4 (57.2)	6 (152.4)	3-5/8 (92.1)	1-1/4 (31.8)	4-13/16 (122.2)	1-1/4 (31.8)	2-3/8 (60.3)	6-11/16 (169.9)	3/4 (19.1)	3-5/32 (80.2)	5-9/16 (141.3)	25,000 (111)
0.856 - 1.057	21.7 - 26.9	2-1/4 (57.2)	6-1/2 (165.1)	4-1/8 (104.8)	1-3/8 (34.9)	5-1/16 (128.6)	1-1/8 (28.6)	2-1/4 (57.2)	6-5/8 (168.3)	3/4 (19.1)	2-31/32 (75.4)	5-1/2 (139.7)	25,000 (111)
1.058 - 1.262	26.9 - 32.1	2-1/4 (57.2)	7 (177.8)	4-11/16 (119.1)	2-1/4 (57.2)	5-19/32 (142.1)	1-1/8 (28.6)	2-3/8 (60.3)	7-1/4 (184.2)	3/4 (19.1)	3-3/16 (81.0)	6 (152.4)	25,000 (111)
1.263 - 1.613	32.1 - 41.0	2-1/4 (57.2)	7-1/2 (190.5)	5-7/32 (132.6)	2-13/32 (61.1)	6-1/16 (154.0)	1-3/16 (30.2)	2-7/16 (61.9)	7-25/32 (197.6)	3/4 (19.1)	3-1/2 (88.9)	6-17/32 (165.9)	30,000 (133)

**NOTE:** CE-5106 and YC-5211 are rated at 25,000 lb Maximum Vertical Load. ARMOR-GRIP® Suspension Rod length and diameter for individual sizes can be taken from the catalog number tables.

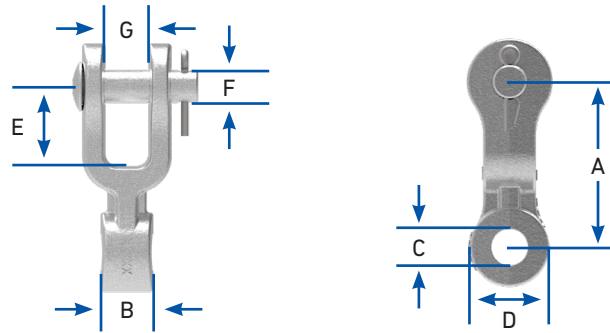
## HARDWARE FITTINGS



### Y-Clevis Eye

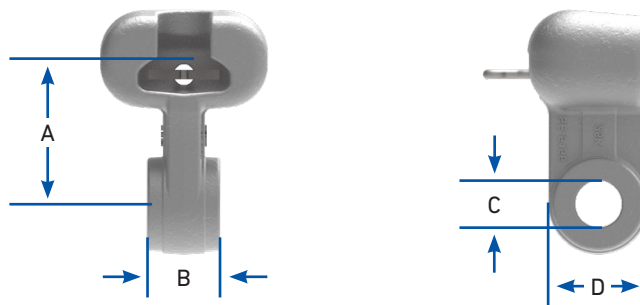
Catalog Number	Conductor Size Range		Dimensions						Maximum Vertical Load
			in (mm)						
	in	mm	A	B	C	D	E	F	lb (kN)
YC-5209	0.574 - 1.057	14.6 - 26.8	2-1/2 (63.5)	1-1/16 (27.0)	13/16 (20.6)	1-5/8 (41.3)	1-1/2 (38.1)	3/4 (19.0)	25,000 (111)
YC-5211	1.058 - 1.572	26.8 - 39.9	2-1/2 (63.5)	2-1/8 (54.0)	13/16 (20.6)	1-5/8 (41.3)	1-1/2 (38.1)	3/4 (19.1)	25,000 (111)

## HARDWARE FITTINGS



### Clevis Eye

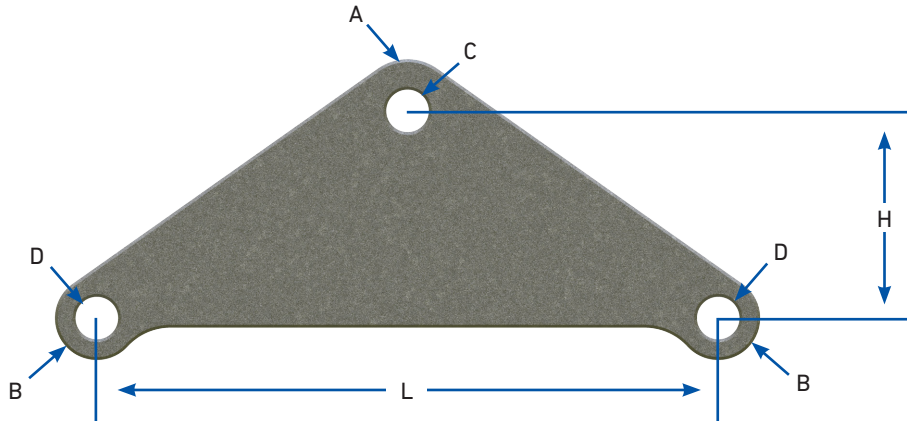
Catalog Number	Conductor Size Range		Dimensions							Maximum Vertical Load
			in (mm)							
	in	mm	A	B	C	D	E	F Pin Diameter	G	lb (kN)
CE-5105	0.574 - 1.057	14.6 - 26.8	3-1/8 (79.4)	1-1/16 (27.0)	13/16 (20.6)	1-1/2 (38.1)	1-1/2 (38.1)	5/8 (15.9)	13/16 (20.6)	25,000 (111)
CE-5106	1.058 - 1.572	26.8 - 39.9	3-1/8 (79.4)	2-1/8 (54.0)	13/16 (20.6)	1-1/2 (38.1)	1-1/2 (38.1)	5/8 (15.9)	13/16 (20.6)	25,000 (111)



### Socket Eye

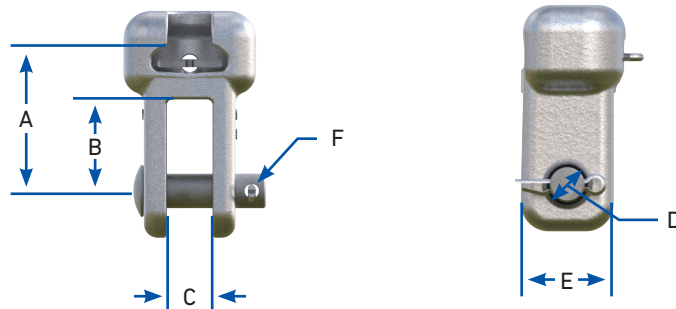
Catalog Number	Conductor Size Range		Dimensions				Maximum Vertical Load
			in (mm)				
	in (mm)	mm	A	B	C	D	lb (kN)
SE-5154	0.574 - 1.057	14.6 - 26.8	2-5/16 (58.8)	1-1/16 (27.0)	13/16 (20.6)	1-1/2 (38.1)	25,000 (111)
SE-5155	1.058 - 1.572	26.8 - 39.9	2-5/16 (8.8)	2-1/8 (54.0)	13/16 (20.6)	1-1/2 (38.1)	30,000 (133)

## HARDWARE FITTINGS



### Yoke Plate

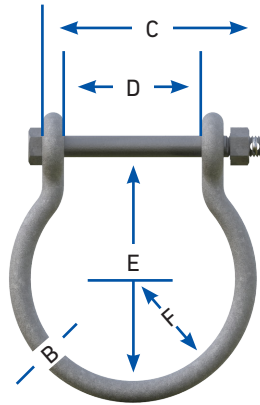
Catalog Number	Dimensions						Plate Thickness	Maximum Vertical Load
	in (mm)							
	A Radius	B Radius	C Diameter	D Diameter	L	H	in	lb (kN)
YP-5907	1 (25.4)	13/16 (20.6)	13/16 (20.6)	13/16 (20.6)	12 (304.8)	4 (101.6)	1/2 (12.7)	30,000 (133)



### Socket Clevis

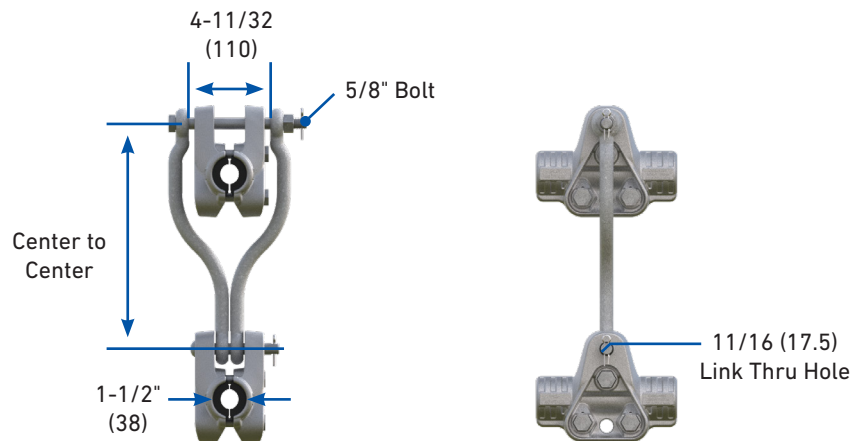
Catalog Number	Dimensions						Maximum Vertical Load	For use with Insulators per ANSI Class Spec C29.2-71
	in (mm)							
	A	B	C	D	E	F	lb (kN)	
SC-5194	2-5/8 (66.7)	1-5/8 (41.3)	13/16 (20.6)	11/16 (17.5)	1-3/4 (44.5)	5/8 (15.9)	30,000 (133)	52-3 & 52-5
SC-50	2-13/16 (71.4)	2-1/4 (57.0)	1-1/8 (28.6)	15/16 (23.8)	2-1/16 (53.0)	7/8 (22.2)	50,000 (222)	52-8 & 52-11

## HARDWARE FITTINGS



### Hold Down Shackles

Catalog Number	Compatible CGS	Conductor Diameter Range		Dimensions					
		in	mm	in (mm)					
				Bolt Diameter	B	C	D	E	F
HDS-06	CGS-1096	0.609 - 0.883		5/8 (15.9)	5/8 (15.9)	5-7/8 (149.0)	3-7/8 (98.4)	6-1/4 (159.0)	2-7/8 (73.0)
	CGS-1097	0.884 - 1.196	22.4 - 30.4						
	CGS-1098	1.197 - 1.545	30.4 - 39.2						



### Vertical Bundling Link

Catalog Number	Compatible CGS	Center to Center	Maximum Vertical Load
		in (mm)	lb (kN)
VBLMS11244	All Sizes	12 (305)	30,000 (133)
VBLMS11302	All Sizes	18 (457)	40,000 (222)