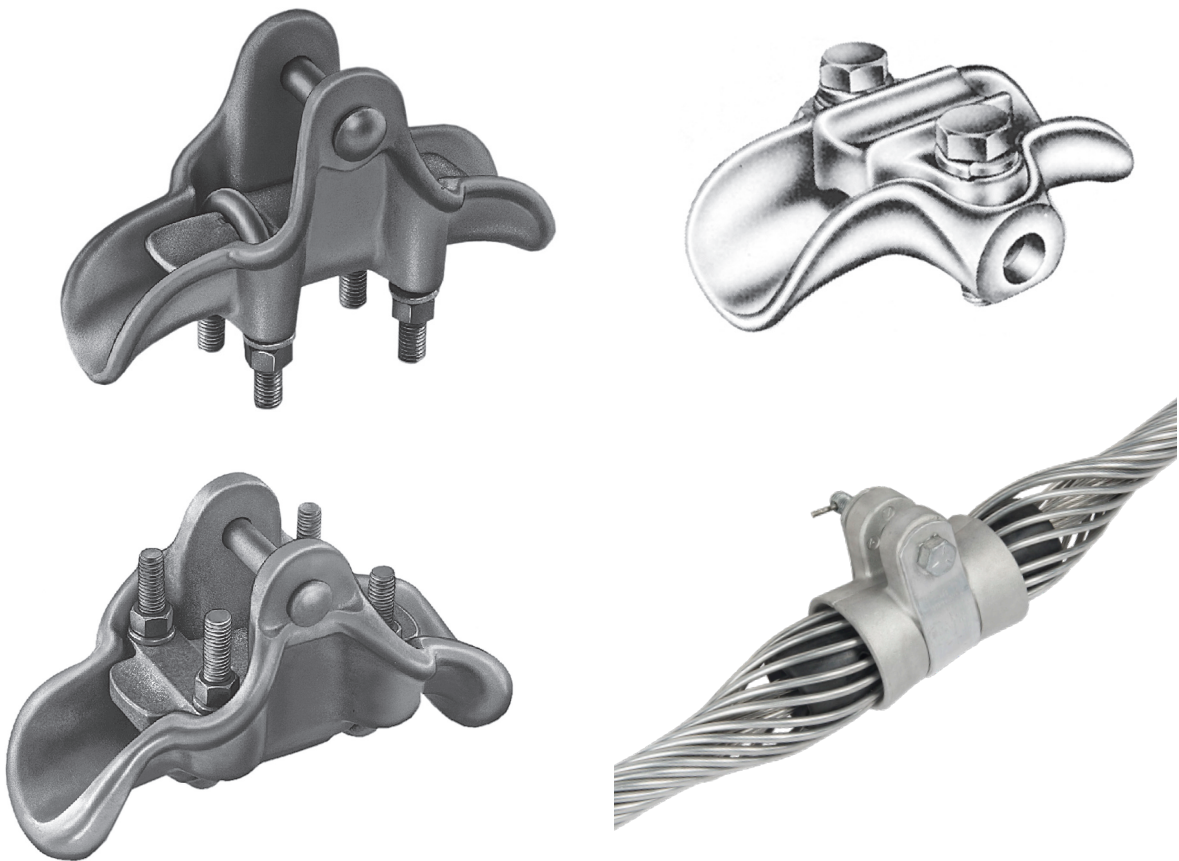


<http://waterheatertimer.org/Names-of-parts-on-electric-pole.html>

## Suspension Clamps



# performance

# Suspension Clamps Index

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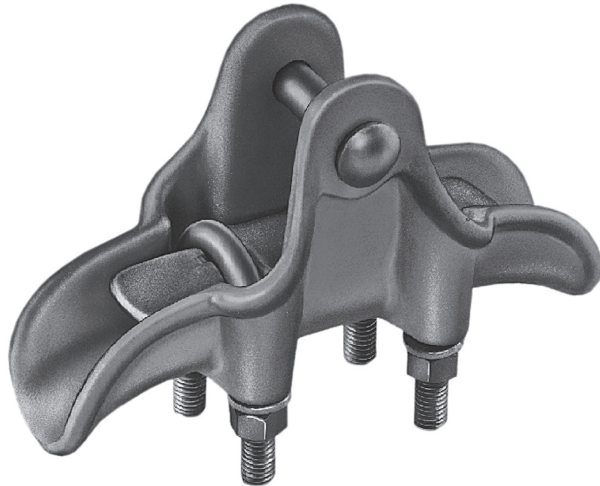
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# Suspension Clamps — Aluminum

## Aluminum Clamp

For standard voltage application with all aluminum, ACSR, or aluminum alloy conductor. See Catalog Reference section for maximum conductor temperature guidelines.

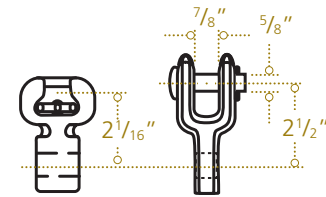
**Material:** Body and Keeper – aluminum alloy  
Hardware – galvanized steel  
Socket and Clevis – galvanized ductile iron  
Cotter Pin – stainless steel



ALUMINUM

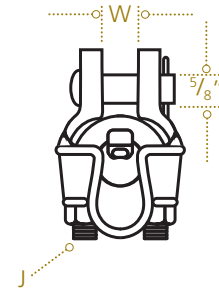
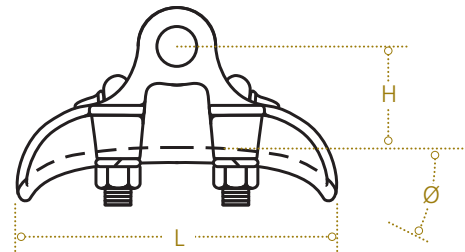
HAS

B  
1



Socket  
Type SA

Clevis  
Type CA



# Suspension Clamps — Aluminum

B  
2

## Product Data

Catalog Number	Fitting		Clamping Range Inches (mm)	Ultimate Body Strength lb (kN)	Max Take-Off Angle	Dimensions Inches (mm)				Approx Wt Each lb (kg)
	Type	Cat No				L	W	H	J	
HAS62N HAS62S HAS62C	None Socket Clevis	— SA04 CA04	.20-.62 (5.08-15.75)	17,000 (76)	30°	6 <sup>3</sup> / <sub>4</sub> (171.45)	2 <sup>9</sup> / <sub>32</sub> (23.02)	2 <sup>9</sup> / <sub>32</sub> (57.94)	1/2 (12.70)	1.9 (.86) 3.2 (1.45) 3.5 (1.59)
HAS85N HAS85S HAS85C	None Socket Clevis	— SA06 CA06	.40-.85 (10.16-21.59)	18,000 (80)	30°	7 <sup>1</sup> / <sub>2</sub> (190.50)	1 <sup>5</sup> / <sub>16</sub> (23.81)	2 <sup>9</sup> / <sub>16</sub> (65.09)	1/2 (12.70)	2.1 (.95) 3.4 (1.54) 3.8 (1.72)
HAS104N HAS104S HAS104C	None Socket Clevis	— SA10 CA101	.50-1.04 (12.70-26.42)	25,000 (111)	30°	8 <sup>1</sup> / <sub>8</sub> (206.38)	1 <sup>5</sup> / <sub>32</sub> (29.37)	2 <sup>3</sup> / <sub>4</sub> (69.85)	1/2 (12.70)	2.5 (1.13) 3.9 (1.77) 4.2 (1.91)
HAS118N HAS118S HAS118C	None Socket Clevis	— SA10 CA101	.70-1.18 (17.78-29.97)	25,000 (111)	22.5°	8 (203.20)	1 <sup>11</sup> / <sub>32</sub> (34.13)	2 <sup>3</sup> / <sub>4</sub> (69.85)	1/2 (12.70)	2.8 (1.27) 4.2 (1.91) 4.5 (2.04)
HAS139N HAS139S HAS139C	None Socket Clevis	— SA13 CA13	.90-1.39 (22.86-35.31)	25,000 (111)	22.5°	8 <sup>7</sup> / <sub>8</sub> (225.43)	1 <sup>17</sup> / <sub>32</sub> (38.89)	3 (76.20)	1/2 (12.70)	3.2 (1.45) 4.9 (2.22) 5.0 (2.27)
HAS147N HAS147S HAS147C	None Socket Clevis	— SA13 CA13	1.00-1.47 (25.40-37.34)	25,000 (111)	22.5°	9 <sup>3</sup> / <sub>16</sub> (233.36)	1 <sup>1</sup> / <sub>16</sub> (39.69)	3 <sup>1</sup> / <sub>8</sub> (79.38)	1/2 (12.70)	3.5 (1.59) 5.2 (2.36) 5.3 (2.40)
HAS162N HAS162S HAS162C	None Socket Clevis	— SA13 CA13	1.10-1.62 (27.94-41.15)	25,000 (111)	22.5°	9 <sup>1</sup> / <sub>2</sub> (241.30)	1 <sup>13</sup> / <sub>16</sub> (46.04)	3 <sup>5</sup> / <sub>64</sub> (78.18)	1/2 (12.70)	3.8 (1.72) 5.5 (2.49) 5.6 (2.54)
HAS182N HAS182S HAS182C	None Socket Clevis	— SA16 CA16	1.25-1.82 (31.75-46.23)	25,000 (111)	25°	10 (254)	1 <sup>15</sup> / <sub>16</sub> (49.21)	3 <sup>3</sup> / <sub>8</sub> (85.73)	1/2 (12.70)	5.0 (2.27) 6.8 (3.08) 7.0 (3.18)
HAS204N HAS204S HAS204C	None Socket Clevis	— SA16 CA16	1.40-2.04 (35.56-51.82)	25,000 (111)	20.5°	10 <sup>1</sup> / <sub>2</sub> (266.70)	2 <sup>11</sup> / <sub>64</sub> (55.17)	3 <sup>17</sup> / <sub>32</sub> (89.69)	1/2 (12.70)	4.9 (2.22) 6.7 (3.04) 6.9 (3.13)
HAS213N HAS213S HAS213C	None Socket Clevis	— SA16 CA16	1.40-2.13 (35.56-54.10)	25,000 (111)	22°	10 <sup>1</sup> / <sub>2</sub> (266.70)	2 <sup>1</sup> / <sub>4</sub> (57.15)	3 <sup>5</sup> / <sub>8</sub> (92.08)	5/8 (15.88)	6.0 (2.72) 7.8 (3.54) 8.0 (3.63)
HAS252N HAS252S HAS252C	None Socket Clevis	SA22 CA22	2.00-2.52 (50.80-64.01)	30,000 (133) 30,000 (133) 25,000 (111)	17.5°	12 (304.80)	2 <sup>11</sup> / <sub>16</sub> (68.26)	4 <sup>1</sup> / <sub>4</sub> (107.95)	5/8 (15.88)	9.0 (4.08) 10.8 (4.90) 11.3 (5.13)

**NOTE:** Recommended torque on U-bolts: 1/2" — 480 in-lb 5/8" — 720 in-lb. Bolt and nut may be substituted for clevis pin by adding suffix "BNK" to catalog number.



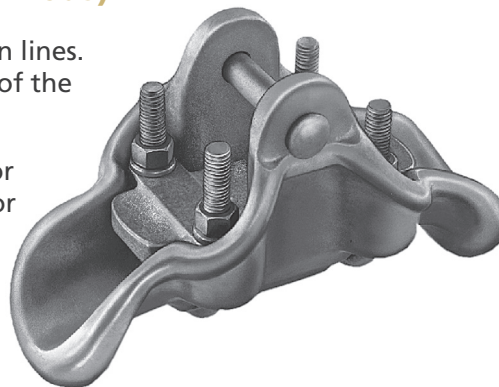
# Suspension Clamps — Aluminum

## Corona Free Clamp (For Use with Armor Rods)

Designed for use on extra-high voltage transmission lines. Corona and RIV are controlled through the design of the clamp, thus eliminating the need for control rings.

Type CFS is recommended for all aluminum, ACSR or aluminum alloy conductors with straight, tapered or formed armor rods. See Catalog Reference section for maximum conductor temperature guidelines.

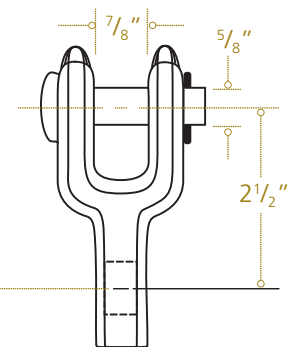
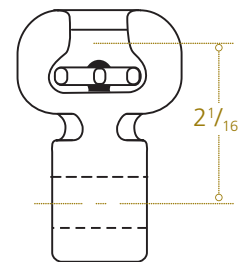
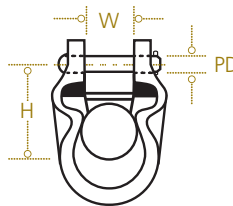
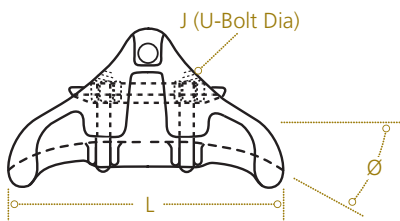
**Material:** Body and Keeper – aluminum alloy  
 Hardware – galvanized steel  
 Socket and Clevis – galvanized ductile iron  
 Cotter Pin – stainless steel  
 Grommet – neoprene



ALUMINUM

CFS

B  
3



Socket Type SA

Clevis Type CA

### Product Data

Catalog Number	Fitting		Clamping Range Inches (mm)	Ultimate Body Strength lb (kN)	Max Take-Off Angle <sup>(1)</sup>	Dimensions Inches (mm)					Approx Wt Each lb (kg)
	Type	Cat No				L	W	H	J	PD	
CFS182N CFS182S CFS182C	None Socket Clevis	— SA16 CA16	1.55-1.82 (39.4-46.2)	25,000 (111)	17 1/2°	10 (254)	2 1/16 (52.4)	3 1/4 (82.5)	1/2 (12.7)	5/8 (15.9)	4.5 (2.04) 6.3 (2.86) 6.3 (2.86)
CFS204N CFS204S CFS204C	None Socket Clevis	— SA16 CA16	1.73-2.04 (43.94-51.82)	25,000 (111)	17 1/2°	10 1/2 (266)	2 7/32 (56.4)	3 1/2 (88.9)	1/2 (12.7)	5/8 (15.9)	5.0 (2.27) 6.8 (3.08) 6.8 (3.08)
CFS213N CFS213S CFS213C	None Socket Clevis	— SA16 CA16	1.80-2.13 (45.72-54.10)	25,000 (111)	17 1/2°	11 (279.40)	2 5/16 (58.74)	3 5/8 (92.08)	5/8 (15.9)	5/8 (15.9)	6.2 (2.81) 8.0 (3.63) 8.0 (3.63)
CFS252N CFS252S CFS252C	None Socket Clevis	— SA22 CA22	2.14-2.52 (54.36-64.01)	30,000 (133) 30,000 (133) 25,000 (111)	20°	12 (305)	2 11/16 (68.26)	4 1/2 (114.3)	5/8 (15.9)	5/8 (15.9)	6.2 (2.81) 8.0 (3.63) 8.0 (3.63)
CFS280N CFS280S CFS280C	None Socket Clevis	— SA2613 CA2413	2.29-2.80 (58.17-71.12)	36,000 (160) 30,000 (133) 25,000 (111)	20°	14 (355)	3 (76.2)	5 1/32 (127)	5/8 (15.9)	3/4 (19.1)	11.4 (5.17) 14.3 (6.46) 14.4 (6.51)

**NOTE:** Recommended torque on U-bolts: 1/2" — 480 in-lb, 5/8" — 720 in-lb. Bolt and nut may be substituted for clevis pin by adding suffix "BNK" to catalog number.

(1) For larger angles, a special corona free angle clamp is available. For information on special clamps, contact factory.

# Suspension Clamps — Aluminum

## Corona Free Clamp (For Use without Armor Rods)

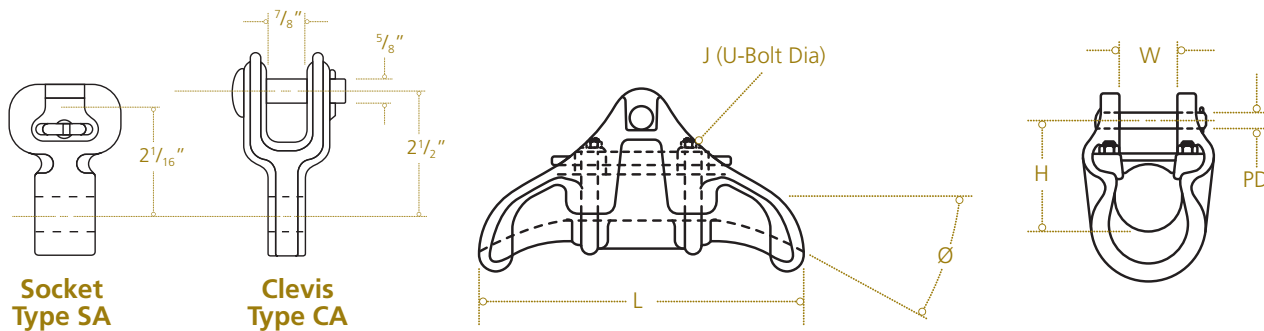
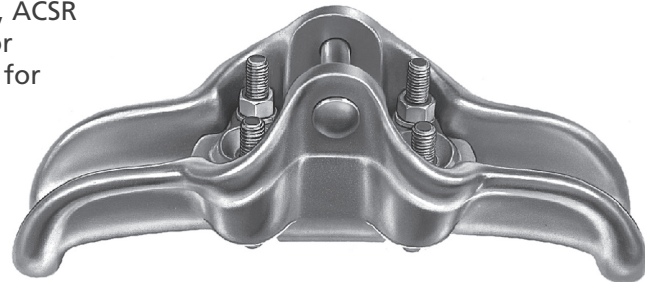
ALUMINUM

CFS (LONG)

Designed for use on extra-high voltage transmission lines. Corona and RIV are controlled through the design of the clamp, thus eliminating the need for control rings.

Type CFS (Long) is recommended for all aluminum, ACSR or aluminum alloy conductor. Maximum conductor temperature 130 C. See Catalog Reference section for maximum conductor temperature guidelines.

**Material:** Body and Keeper – aluminum alloy  
 Hardware – galvanized steel  
 Socket and Clevis – galvanized ductile iron  
 Cotter Pin – stainless steel  
 Grommet – neoprene



### Product Data

Catalog Number	Fitting		Clamping Range Inches (mm)	Ultimate Body Strength lb (kN)	Max Take-Off Angle <sup>(1)</sup>	Dimensions Inches (mm)					Approx Wt Each lb (kg)
	Type	Cat No				L	W	H	J	PD	
CFS11810N CFS11810S CFS11810C	None Socket Clevis	— SA10 CA101	1.0-1.20 (25.40-30.48)	25,000 (111)	17 1/2°	10 (254)	1 5/16 (33.34)	2 1/2 (63.50)	1/2 (12.70)	5/8 (15.88)	4.0 (1.81) 5.4 (2.45) 5.7 (2.59)
CFS139105N CFS139105S CFS139105C	None Socket Clevis	— SA13 CA13	1.18-1.39 (29.97-35.31)	25,000 (111)	17 1/2°	10-1/2 (266.70)	1 7/32 (38.89)	2 7/8 (73.03)	1/2 (12.70)	5/8 (15.88)	4.7 (2.13) 6.4 (2.90) 6.5 (2.94)
CFS14711N CFS14711S CFS14711C	None Socket Clevis	— SA13 CA13	1.25-1.47 (31.75-37.34)	25,000 (111)	17 1/2°	11 (279.40)	1 5/8 (41.28)	3 3/16 (80.96)	1/2 (12.70)	5/8 (15.88)	5.2 (2.36) 6.9 (3.13) 7.0 (3.17)
CFS16212N CFS16212S CFS16212C	None Socket Clevis	— SA13 CA13	1.38-1.62 (35.05-41.15)	25,000 (111)	17 1/2°	12 (304.80)	1 3/4 (44.45)	3 1/4 (82.55)	1/2 (12.70)	5/8 (15.88)	5.5 (2.49) 7.2 (3.27) 7.3 (3.31)
CFS18214N CFS18214S CFS18214C	None Socket Clevis	— SA16 CA16	1.55-1.82 (39.37-46.23)	25,000 (111)	17 1/2°	14 (355.60)	1 31/32 (50.01)	3 1/4 (82.55)	1/2 (12.70)	5/8 (15.88)	6.5 (2.95) 8.3 (3.76) 8.5 (3.86)

**NOTE:** Recommended torque on U-bolts; 1/2" — 480 in-lb. Bolt and nut may be substituted for clevis pin by adding suffix "BNK" to catalog number.

(1) For larger angles a special corona free angle clamp is available. For information on special clamps, contact factory.

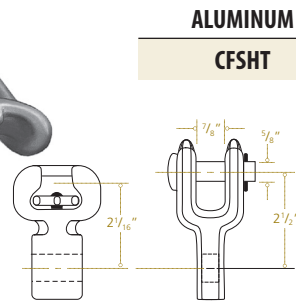
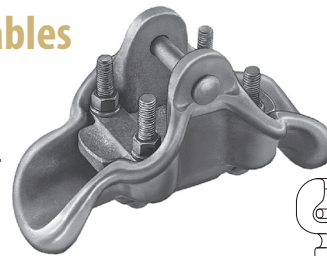
# Suspension Clamps — Aluminum

## Corona Free Clamp for High Temperature Cables (For Use with Armor Rods)

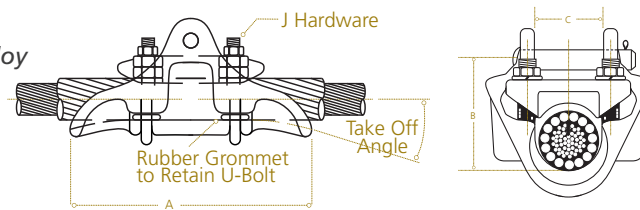
Designed for use on extra-high voltage transmission lines. Corona and RIV are controlled through the design of the clamp, thus eliminating the need for control rings.

Type CFSHT is designed for use on conductors operating at continuous temperatures up to 250° C. Armor rods or line guards required on conductors with continuous temperatures exceeding 200° C.

**Material:** Clamp Body – high-temperature aluminum alloy  
Keeper – aluminum alloy  
Hardware – galvanized steel  
Socket and Clevis – galvanized ductile iron  
Cotter Pin – stainless steel  
Grommet – neoprene



Socket Type SA    Socket Type CA



ALUMINUM  
CFSHT

B  
5

### Product Data

Catalog Number	Fitting		Clamping Range Inches (mm)	Ultimate Strength lb (kN)	Max Take-Off Angle <sup>(1)</sup>	Dimensions Inches (mm)					Approx Wt Each lb (kg)
	Type	Cat No				A	B	C	PD	J	
CFSHT120N	None	—		25,000 (111)							5.0 (2.27)
CFSHT120S	Socket	SA10	0.90-1.22 (22.86-30.99)	25,000 (111)	17.5°	9.15 (232.4)	2.52 (64.0)	1.42 (36.07)	.62 (15.88)	.50 (12.70)	7.1 (3.22)
CFSHT120C	Clevis	CA101		25,000 (111)							7.1 (3.22)
CFSHT139N	None	—		25,000 (111)							5.6 (2.54)
CFSHT139S	Socket	SA13	1.18-1.39 (29.97-35.31)	25,000 (111)	17.5°	9.45 (240.03)	3.00 (76.2)	1.63 (41.40)	.62 (15.88)	.50 (12.70)	7.6 (3.44)
CFSHT139C	Clevis	CA13		25,000 (111)							7.6 (3.44)
CFSHT182N	None	—		30,000 (133)							6.9 (3.13)
CFSHT182S	Socket	SA16	1.38-1.82 (39.37-46.23)	30,000 (133)	17.5°	10.19 (258.83)	3.34 (84.84)	2.03 (51.56)	.62 (15.88)	.50 (12.70)	9.0 (4.08)
CFSHT182C	Clevis	CA16		25,000 (111)							9.0 (4.08)
CFSHT213N	None	—		30,000 (133)							8.9 (4.04)
CFSHT213S	Socket	SA20	1.80-2.13 (45.72-54.10)	30,000 (133)	20°	11.75 (298.45)	3.62 (91.95)	2.39 (60.70)	.62 (15.88)	.50 (12.70)	10.7 (4.86)
CFSHT213C	Clevis	CA16		25,000 (111)							10.7 (4.86)
CFSHT252N	None	—		30,000 (133)							11.0 (5.0)
CFSHT252S	Socket	SA24	2.14-2.52 (54.36-64.01)	30,000 (133)	20°	12.75 (323.85)	4.02 (102.1)	2.79 (70.87)	.62 (15.88)	.50 (12.70)	12.9 (5.86)
CFSHT252C	Clevis	CA24		25,000 (111)							13.3 (6.04)

**NOTE:** Recommended torque on U-bolts: ½" — 480 in-lb, ⅝" — 720 in-lb. Bolt and nut may be substituted for clevis pin by adding suffix "BNK" to catalog number.

(1) For larger angles, a special corona free angle clamp is available. For information on special clamps, contact factory.



In addition to industry standard markings for connectors, CFSHT suspension clamps are permanently marked with the IEC standard symbol for hot surface, allowing construction inspectors to easily verify that the installed clamps

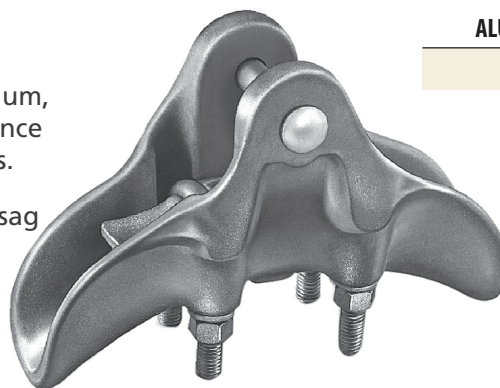
# Suspension Clamps — Aluminum

## Angle Clamp

For standard voltage angle construction with all aluminum, ACSR, or aluminum alloy conductor. See Catalog Reference section for maximum conductor temperature guidelines.

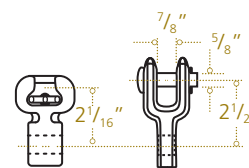
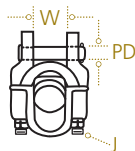
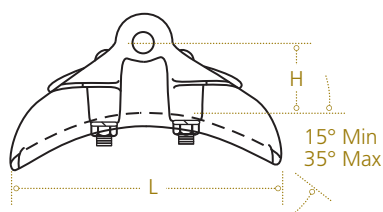
Designed for use in turning angles up to 70° (including sag and turn angle).

**Material:** Body and Keeper – aluminum alloy  
 Hardware – galvanized steel  
 Socket and Clevis – galvanized ductile iron  
 Cotter Pin – stainless steel



ALUMINUM

HAC



Socket Type SA    Clevis Type CA

### Product Data

Catalog Number	Fitting		Clamping Range Inches (mm)	Ultimate Body Strength lb (kN)	Dimensions Inches (mm)					Approx Wt Each lb (kg)
	Type	Cat No			L	W	H	J	PD	
HAC118N	None	—		35,000 (156)						3.6 (1.63)
HAC118S	Socket	SA10	1.00-1.18 (25.40-29.97)	30,000 (133)	9 <sup>7</sup> / <sub>8</sub> (250.83)	1 <sup>9</sup> / <sub>32</sub> (32.54)	2 <sup>3</sup> / <sub>4</sub> (69.85)	1 <sup>1</sup> / <sub>2</sub> (12.70)	5 <sup>5</sup> / <sub>8</sub> (15.88)	5.0 (2.27)
HAC118C	Clevis	CA101		25,000 (111)						5.3 (2.40)
HAC147N	None	—		35,000 (156)						4.0 (1.81)
HAC147S	Socket	SA13	1.25-1.47 (31.75-37.34)	30,000 (133)	9 <sup>3</sup> / <sub>4</sub> (247.65)	1 <sup>11</sup> / <sub>64</sub> (42.86)	3 <sup>1</sup> / <sub>4</sub> (82.55)	1 <sup>1</sup> / <sub>2</sub> (12.70)	5 <sup>5</sup> / <sub>8</sub> (15.88)	5.7 (2.59)
HAC147C	Clevis	CA13		25,000 (111)						5.8 (2.63)
HAC182N	None	—		40,000 (178)						4.8 (2.18)
HAC182S	Socket	SA1613	1.55-1.82 (39.37-46.23)	30,000 (133)	10 <sup>7</sup> / <sub>8</sub> (257.18)	2 <sup>1</sup> / <sub>32</sub> (51.59)	3 <sup>1</sup> / <sub>2</sub> (88.90)	1 <sup>1</sup> / <sub>2</sub> (12.70)	3 <sup>4</sup> / <sub>8</sub> (19.05)	6.6 (3.02)
HAC182C	Clevis	CA1613		25,000 (111)						6.8 (3.08)
HAC204N	None	—		40,000 (178)						5.6 (2.54)
HAC204S	Socket	SA1613	1.73-2.04 (43.94-51.82)	30,000 (133)	11 <sup>1</sup> / <sub>4</sub> (285.75)	2 <sup>11</sup> / <sub>64</sub> (55.17)	3 <sup>1</sup> / <sub>2</sub> (88.90)	1 <sup>1</sup> / <sub>2</sub> (12.70)	3 <sup>4</sup> / <sub>8</sub> (19.05)	7.4 (3.36)
HAC204C	Clevis	CA1613		25,000 (111)						7.6 (3.45)
HAC213N	None	—		40,000 (178)						6.0 (2.72)
HAC213S	Socket	SA1613	1.81-2.13 (45.97-54.10)	30,000 (133)	11 <sup>1</sup> / <sub>4</sub> (285.75)	2 <sup>1</sup> / <sub>4</sub> (57.15)	3 <sup>3</sup> / <sub>4</sub> (95.25)	5 <sup>5</sup> / <sub>8</sub> (15.88)	3 <sup>4</sup> / <sub>8</sub> (19.05)	7.9 (3.58)
HAC213C	Clevis	CA1613		25,000 (111)						8.0 (3.63)

**NOTE:** Recommended torque on U-bolts: 1/2" — 480 in-lb; 5/8" — 720 in-lb. Bolt and nut may be substituted for clevis pin by adding suffix "BNK" to catalog number.

# Suspension Clamps — Aluminum

## Trunnion Clamp

ALUMINUM

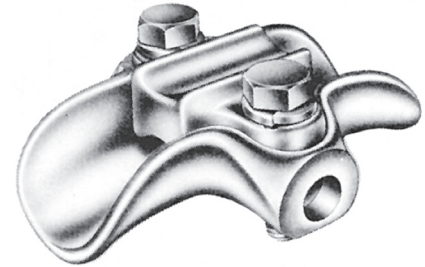
TSC

For standard voltage applications with AAC, ACSR or AAAC conductor. See Catalog Reference section for maximum conductor temperature guidelines.

Designed for use on tangent suspension spans with horizontal or vertical post insulators.

Keeper is reversible for proper fit on different size conductors.

**Material:** Body and Keeper – aluminum alloy  
Hardware – galvanized steel  
Anti-static Spring – stainless steel<sup>(1)</sup>



B  
7

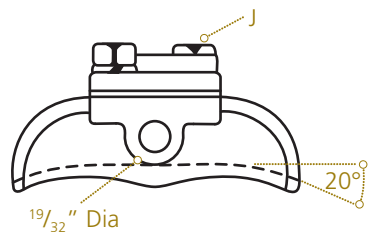
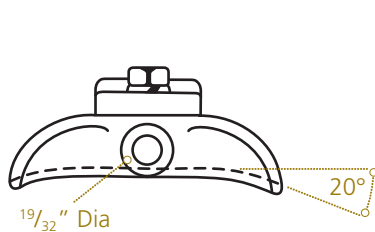
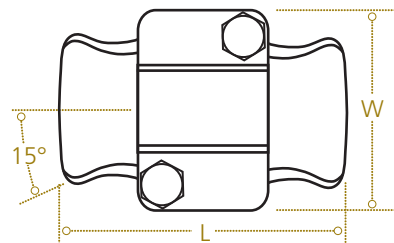
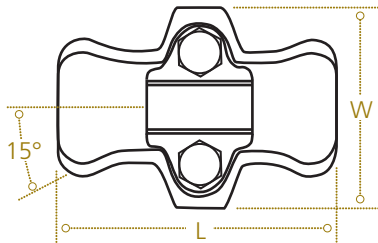


Figure 1

Figure 2

### Product Data

Catalog Number	Figure Number	Clamping Range Inches (mm)	Ultimate Body Strength lb (kN)	Dimensions Inches (mm)			Approx Wt Each lb (kg)
				L	W	J	
TSC57	1	.25-.57 (6.3-14.4)	2,800 (12)	5¼ (133.3)	3⅞ (98.4)	½ (12.7)	.81 (.37)
TSC86	1	.35-.86 (8.8-21.8)	2,800 (12)	5¼ (133.3)	3⅞ (98.4)	½ (12.7)	.95 (.43)
TSC106	1	.50-1.06 (12.7-26.9)	2,800 (12)	5¼ (133.3)	3⅞ (98.4)	½ (12.7)	.98 (.44)
TSC150	1	1.00-1.50 (25.4-38.1)	2,800 (12)	5¼ (133.3)	3⅞ (98.4)	½ (12.7)	1.09 (.49)
TSC200	2	1.50-2.00 (38.1-50.8)	2,800 (12)	5¼ (133.3)	3⅞ (98.4)	½ (12.7)	1.33 (.60)

**NOTE:** Recommended torque on bolts: ½" — 300 in-lb.

(1) Anti-static spring can be supplied by adding "ARIV" to catalog number. Example, TSC57ARIV.

(2) Uplift load rating is 1,000 lbs. continuously for the life of the clamp



# Suspension Clamps — Aluminum

## Trunnion Clamp for High Temperature Cables (For Use with Armor Rods)

ALUMINUM

TSCHT

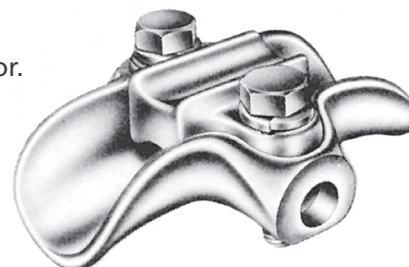
B  
8

Type TSCHT is designed for use on conductors operating at continuous temperatures up to 250° C. Armor rods or line guards required to limit heat transfer from conductor to post insulator cap.

Also for standard voltage applications with AAC, ACSR or AAAC conductor.

Designed for use on tangent suspension spans with horizontal or vertical post insulators.

Keeper is reversible for proper fit on different size conductors.



**Material:** Clamp Body – high-temperature aluminum alloy  
Keeper – aluminum alloy  
Hardware – galvanized steel  
Anti-static Spring – stainless steel<sup>(1)</sup>

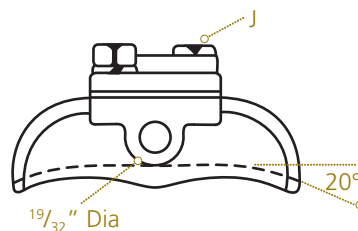
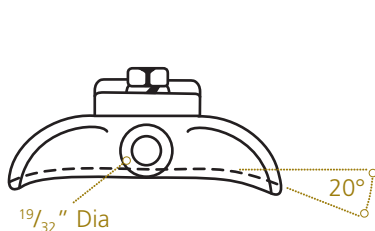
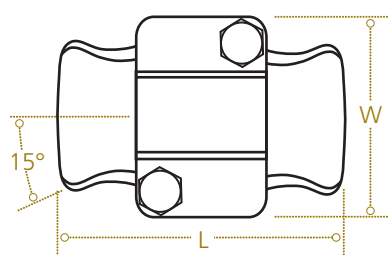
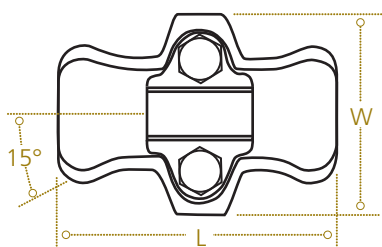


Figure 1

Figure 2

### Product Data

Catalog Number	Figure Number	Clamping Range Inches (mm)	Ultimate Body Strength lb (kN)	Dimensions Inches (mm)			Approx Wt Each lb (kg)
				L	W	J	
TSCHT150	1	1.00-1.50 (25.4-38.1)	2,800 (12)	5¼ (133.3)	3⅞ (98.4)	½ (12.7)	1.34 (.61)
TSCHT200	2	1.50-2.00 (38.1-50.8)	2,800 (12)	5¼ (133.3)	3⅞ (98.4)	½ (12.7)	1.54 (.70)

**NOTE:** Recommended torque on bolts: ½" — 300 in-lb.

(1) Anti-static spring can be supplied by adding "ARIV" to catalog number. Example, TSCHT150ARIV.



In addition to industry standard markings for connectors, TSCHT suspension clamps are permanently marked with the IEC standard symbol for hot surface, allowing construction inspectors to easily verify that the installed



# Jumper Clamps and Assemblies

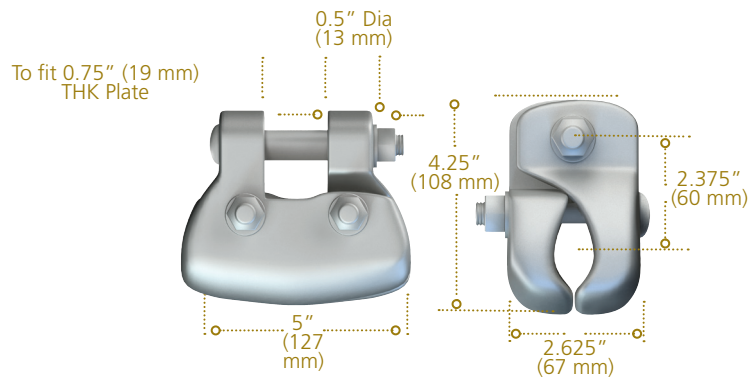


Figure 1

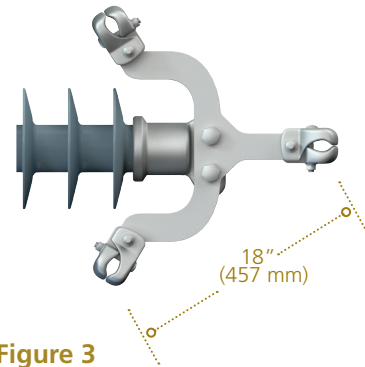


Figure 3

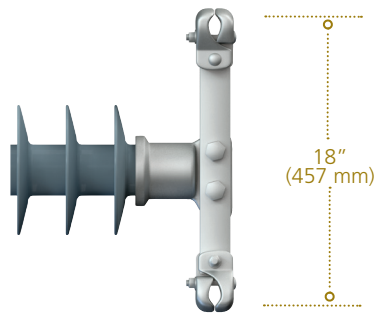


Figure 2

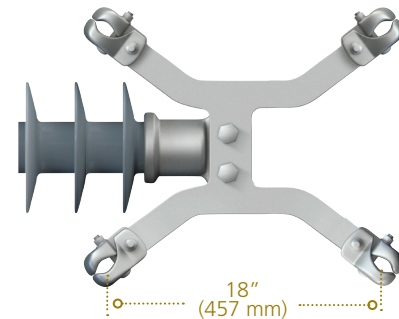


Figure 4

A practical application of Quadri\*Sil® line posts is for support of jumper loops on transmission lines.

Horizontal motion of the jumper is restricted, and the factor of wind sway is eliminated. Additionally, the crossarm length may be reduced. The difference in cost of insulation is not significant, but the savings in tower cost can be attractive. Regardless of cost, the use of a jumper support improves construction.

If using a single clamp, clamp position relative to the insulator may be changed by bolting the clamp through the upper hole in the insulator end fitting.

Jumper clamps are not intended for tangent span applications.

**Material:** Clamps – aluminum alloy  
Yoke and Hardware – galvanized steel

## Product Data

Figure Number	Catalog Number	Yoke Type	Clamping Range Inches (mm)
1	976423002	None	1.00 - 1.40 (25 - 36)
1	976423003	None	1.40 - 1.60 (36 - 41)
1	600643001	None	1.60 - 2.00 (41 - 51)
2	2717243001	Dual	1.00 - 1.40 (25 - 36)
2	2717253001	Dual	1.40 - 1.60 (36 - 41)
2	2717263001	Dual	1.60 - 2.00 (41 - 51)
3	2721763001	Triple	1.00 - 1.40 (25 - 36)
3	2721773001	Triple	1.40 - 1.60 (36 - 41)
3	2721783001	Triple	1.60 - 2.00 (41 - 51)
4	2721793001	Quad	1.00 - 1.40 (25 - 36)
4	2721803001	Quad	1.40 - 1.60 (36 - 41)
4	2721813001	Quad	1.60 - 2.00 (41 - 51)

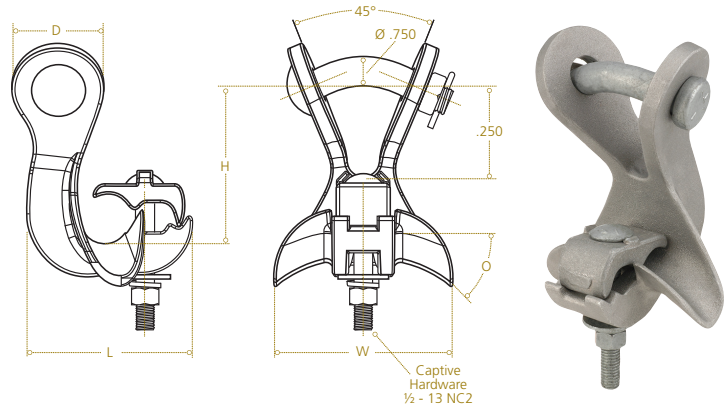
# Suspension Clamps — Aluminum

## Angle Clamp

Intended for angle construction with AAC, ACSR or AAAC conductor. See Catalog Reference section for maximum conductor temperature guidelines.

Built-in Y-Clevis Fitting allows compound horizontal and vertical angles necessary for residential and urban construction.

**Material:** Body and Keeper – aluminum alloy  
Hardware – galvanized steel  
Cotter Pin – stainless steel



ALUMINUM

YAAC

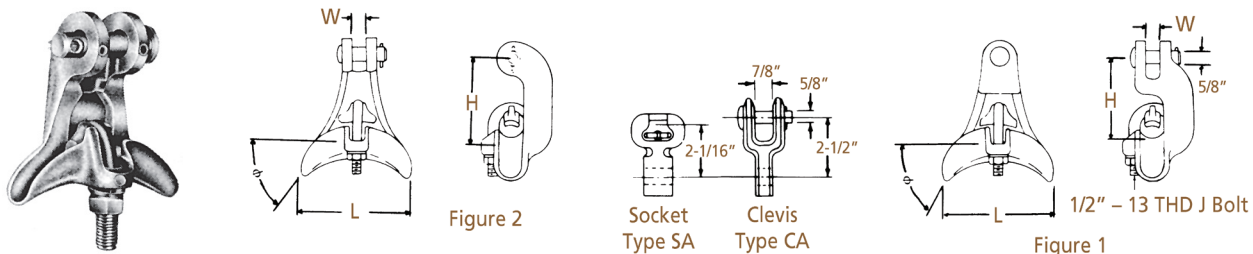
### Product Data

Catalog Number	Clamping Range Inches (mm)	Ultimate Body Strength lb (kN)	Max Take-Off Angle	Dimensions Inches (mm)				Approx Wt Each lb (kg)
				D	L	W	H	
YAAC125	.50-1.25 (12.70-31.75)	12,000 (53)	45°	2.45 (62.23)	4.50 (114.3)	4.83 (122.68)	4.27 (108.46)	2.0 (.91)

**NOTE:** Recommended torque on 1/2" clamping bolt: 300 in.-lb.

Intended for angle construction with all aluminum, ACSR or aluminum alloy conductor.

**Material:** Body and Keeper – 356-T6 aluminum alloy  
Hardware – galvanized steel  
Cotter Pin – #302 stainless steel



ALUMINUM

AAC

### Product Data

Catalog Number	Fig. No.	Clamping Range Inches (mm)	Ultimate Body Strength lb (kN)	Max Take-Off Angle	Dimensions Inches (mm)			Approx Wt Each lb (kg)
					L	W	H	
AAC301	2	.198-.732 (5.03-18.59)	7,000 (31)	45°	4-1/4 (107.95)	11/16 (17.46)	2-7/8 (73.02)	1.25 (.57)
AAC302	1	.198-.732 (5.03-18.59)	7,000 (31)	45°	4-1/4 (107.95)	11/16 (17.46)	2-7/8 (73.02)	1.25 (.57)
AAC104N	1	.50-1.10 (12.70-27.94)	12,000 (53)	60°	5-1/4 (133.35)	11/16 (17.46)	4-1/8 (104.77)	2.3 (1.04)
AAC10490N	2	.50-1.10 (12.70-27.94)	12,000 (53)	60°	5-1/4 (133.35)	11/16 (17.46)	4-1/8 (104.77)	2.2 (1)

**NOTES:** (1) Sockets and clevises can be supplied by adding "S" or "C" to catalog number. Example, AAC10490S.  
(2) Recommended torque on 1/2" J-bolts: 300 in.-lbs.

# Suspension Clamps — Bronze

## Clamp

For use with copper or Copperweld® cable.

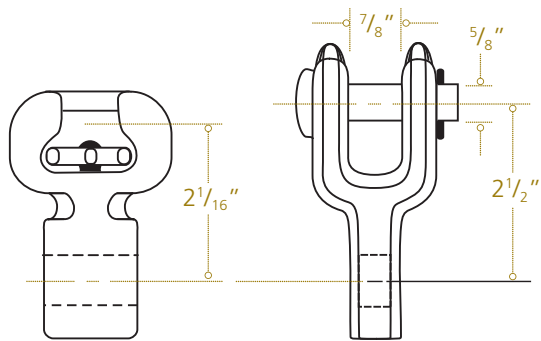
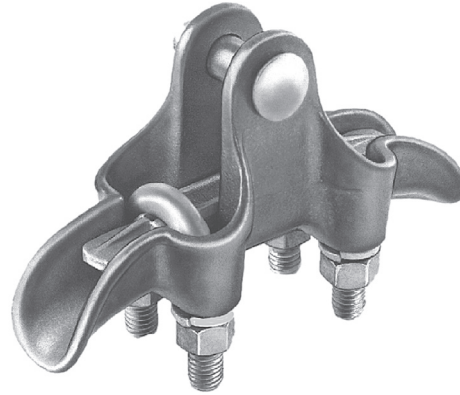
Through the use of these clamps hysteresis and eddy current power losses are reduced to a minimum. Liners are not required.

**Material:** Body – high tensile bronze alloy  
 Keeper – bronze  
 Hardware – galvanized steel<sup>(1)</sup>  
 Socket and Clevis – galvanized ductile iron  
 Cotter Pin – stainless steel

BRONZE

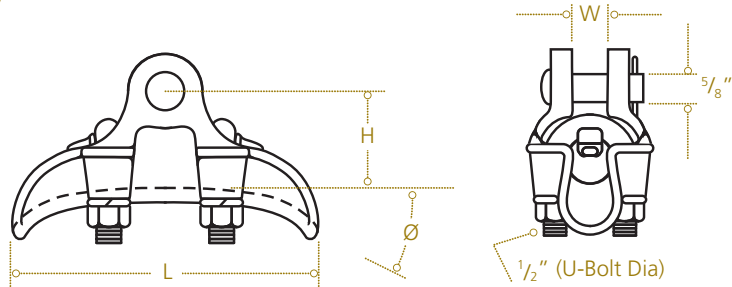
BRS

B  
11



Socket Type SA

Clevis Type CA



### Product Data

Catalog Number	Fitting		Clamping Range Inches (mm)	Ultimate Body Strength lb (kN)	Max Take-Off Angle	Dimensions Inches (mm)			Approx Wt Each lb (kg)
	Type	Cat No				L	W	H	
BRS60N BRS60S BRS60C	None Socket Clevis	— SA04 CA04	.20-.60 (5.08-15.24)	16,000 (71)	15°	6½ (165.10)	¾ (19.05)	2¼ (57.15)	2.9 (1.32) 4.4 (1.90) 4.5 (2.04)
BRS83N BRS83S BRS83C	None Socket Clevis	— SA06 CA06	.40-.83 (10.16-21.08)	18,000 (80)	15°	7¼ (184.15)	¾ (24.6)	2¾ (60.33)	3.7 (1.68) 5.0 (2.27) 5.4 (2.45)
BRS100N BRS100S BRS100C	None Socket Clevis	— SA07 CA101	.625-1.00 (15.88-25.40)	22,000 (98)	15°	8 (203.20)	1⅛ (28.58)	2½ (63.50)	4.5 (2.04) 5.9 (2.68) 6.3 (2.81)
BRS118N BRS118S BRS118C	None Socket Clevis	— SA11 CA101	.70-1.18 (17.78-29.97)	25,000 (111)	20°	8 (203.20)	1⅞ (32.55)	2½ (63.50)	4.9 (2.22)

**NOTE:** Recommended torque on U-bolts: ½" — 480 in-lb.

(1) Bronze U-bolts, nuts and washers can be furnished by adding suffix "ED" to catalog number. Example, BRS60NED.

# Suspension Clamps — Ductile Iron

## Clamp

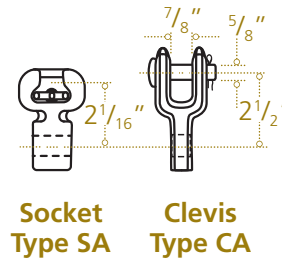
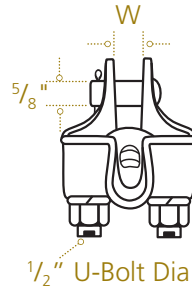
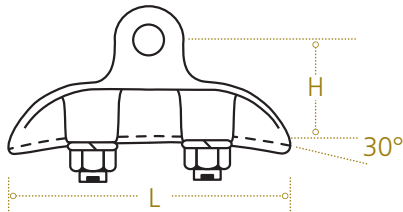
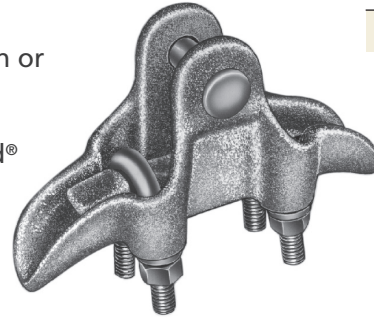
For ground wire application with galvanized steel cable with or without armor rods.

Type MS may also be used to suspend copper or Copperweld® cable. Magnetic induction heating will occur.

**Material:** Body and Keeper – galvanized ductile iron  
Hardware – galvanized steel  
Cotter Pin – stainless steel

DUCTILE IRON

MS



Socket Type SA

Clevis Type CA

### Clamp Recommendations for Galvanized Overhead Ground Wire

Steel Cable Size	Bare Conductor		Formed Armor Rods	
	Clamp Cat No	Diameter Inches (mm)	Clamp Cat No	Diameter Inches (mm)
¼"–7 str	MS46	.240 (6.10)	MS46	.412 (10.46)
⅜"–7 str	MS46	.312 (7.92)	MS60	.512 (13.00)
½"–7 str	MS46	.360 (9.14)	MS60	.560 (14.22)
¾"–7 str	MS46	.435 (11.05)	MS82	.673 (17.09)
1½"–7 str	MS60	.495 (12.57)	MS82	.771 (19.58)
2"–7 str	MS70	.621 (15.77)	—	—

### Product Data

Catalog Number	Fitting		Clamping Range Inches (mm)	Ultimate Body Strength lb (kN)	Dimensions Inches (mm)			Approx Wt Each lb (kg)
	Type	Cat No			L	H	W	
MS46N MS46S MS46C	None Socket Clevis	— SA04 CA04	.20-.46 (5.08-11.68)	16,000 (71)	5/8 (142.88)	2 (50.8)	7/8 (22.2)	2.15 (.98) 3.4 (1.54) 3.8 (1.73)
MS60N MS60S MS60C	None Socket Clevis	— SA04 CA04	.20-.60 (5.08-15.24)	16,000 (71)	67/16 (163.51)	2 (50.8)	7/8 (22.2)	2.65 (1.20) 3.9 (1.77) 4.3 (1.95)
MS70N MS70S MS70C	None Socket Clevis	— SA05 CA05	.30-.70 (7.62-17.78)	18,000 (80)	63/8 (161.93)	2 (50.8)	15/16 (23.8)	2.90 (1.32) 4.2 (1.91) 4.6 (2.09)
MS82N MS82S MS82C	None Socket Clevis	— SA06 CA06	.40-.82 (10.16-20.83)	18,000 (80)	7 1/2 (190.50)	23/8 (60.33)	15/16 (23.8)	3.25 (1.47) 4.7 (2.13) 5.0 (2.27)
MS104N MS104S MS104C	None Socket Clevis	— SA07 CA06	.50-1.04 (12.70-26.42)	25,000 (111)	8 (203.2)	23/4 (69.9)	1 1/8 (28.6)	5.70 (2.59) 7.1 (3.22) 7.4 (3.36)

**NOTE:** Recommended torque on U-bolts: ½" — 480 in-lb. Bolt and nut may be substituted for clevis pin by adding suffix "BNK" to catalog number

# Suspension Clamps — Ductile Iron

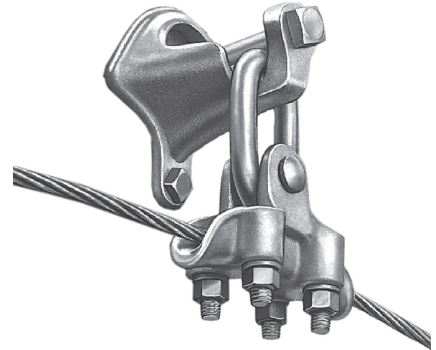
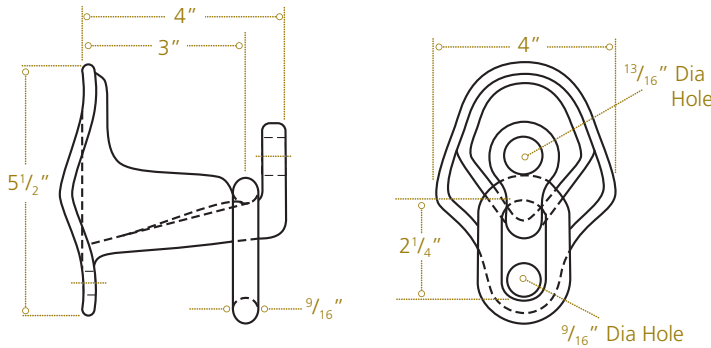
## Ground Wire Support Bracket

DUCTILE IRON

GWB1S

Designed to be used with most types of suspension clamps (aluminum or ferrous). May be mounted with through bolt and lag screw.

**Material:** Body – galvanized ductile iron  
Link – galvanized forged steel



### Product Data

Catalog Number	Mounting Hardware Max Diameter Inches (mm)		Mounting Bolt Spacing Inches (mm)	Ultimate Strength Vertical lb (kN)	Approx Weight Each lb (kg)
	Bolt	Lag Screws			
GWB1S	3/4 (19.05)	1/2 (12.70)	3 5/16 (84.14)	5,000 (22)	2.6 (1.18)

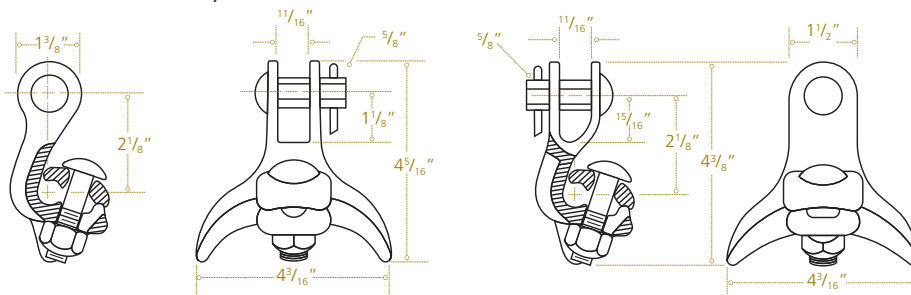
## Angle Clamp

DUCTILE IRON

814/828

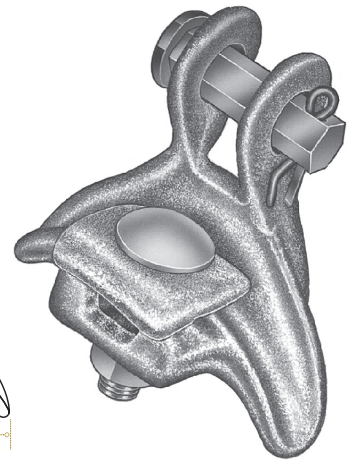
Intended for use in angle construction with galvanized steel overhead ground wire or copper and Copperweld® phase wire. Magnetic induction heating will occur.

**Material:** Body and Keeper – galvanized ductile iron  
Hardware – galvanized steel  
Cotter Pin – stainless steel  
Grommet – neoprene



Catalog Number 82860

Catalog Number 81460



### Product Data

Catalog Number	Clamping Range Inches (mm)		Ultimate Body Strength lb (kN)	Max Take-Off Angle	Approx Wt Each lb (kg)
	Small Groove	Large Groove			
814602000	.162-.25	.25-.60	7,000	60°	1.5
828602000	(4.11-6.35)	(6.35-15.24)	(31)		

**NOTE:** Recommended torque on 1/2" bolt — 480 in-lb.



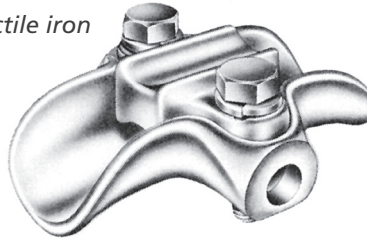
# Suspension Clamps — Ductile Iron

## Trunnion Clamp

For ground wire applications with galvanized steel cable. Designed for use on tangent suspension spans with horizontal or vertical post insulators.

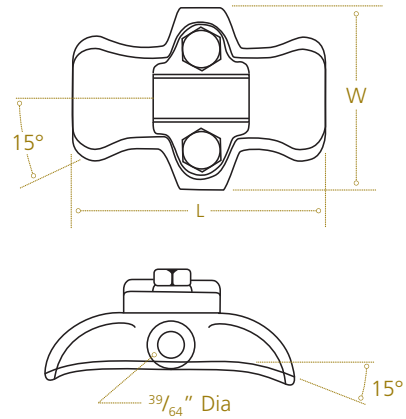
Keeper is reversible for proper fit on different size conductors.

**Material:** Body and Keeper – galvanized ductile iron  
Hardware – galvanized steel  
Anti-Static Spring – stainless steel



DUCTILE IRON

270



### Product Data

Catalog Number	Clamping Range Inches (mm)	Ultimate Body Strength lb (kN)	Dimensions Inches (mm)			Approx Weight Each lb (kg)
			L	W	J	
2706503001	.25-.56 (6.13-14.2)	2,800 (12)	5¼ (133.3)	3⅞ (98.4)	½ (12.7)	2.50 (1.13)
2706513001	.50-1.06 (12.7-26.9)	2,800 (12)	5¼ (133.3)	3⅞ (98.4)	½ (12.7)	2.75 (1.24)
2706523001	1.06-1.50 (26.9-38.1)	2,800 (12)	5¼ (133.3)	3⅞ (98.4)	½ (12.7)	3.00 (1.36)

**NOTE:** Recommended torque on bolts: ½" — 480 in-lb. Anti-static spring can be supplied by adding "ARIV" to catalog number. Example, 2706513001ARIV.

## Ground Wire Support Bracket

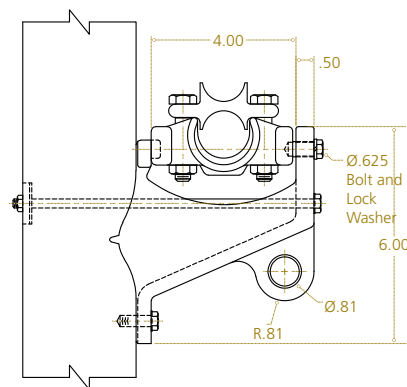
Designed to accommodate most (aluminum or ferrous) trunnion type clamps. May be mounted with one bolt and lag screw or two bolts.

**Material:** Body – galvanized ductile iron



DUCTILE IRON

GWB1R



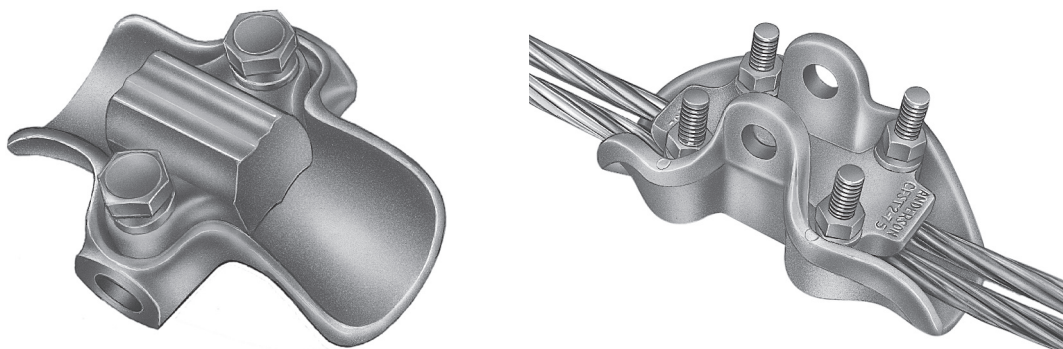
### Product Data

Catalog Number	Mounting Hardware Maximum Diameter Inches (mm)		Mounting Bolt Spacing Inches (mm)	Ultimate Strength Vertical lb (kN)	Approx Wt Each lb (kg)
	Bolt	Lag Screw			
GWB1R	5/8 (15.88)	½ (12.70)	3¼ (82.55)	5,000 (22)	3.1 (1.40)

**NOTE:** Mounting hardware by others.



## Suspension and Stirrup Clamps — For T2 Conductors



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15

T2 is the designation for a type of conductor developed in the mid-1960s by Kaiser Aluminum Company. The “T” is for “twisted” and the “2” indicates two wires twisted together. T2 is actually two regular round conductors of any type (ACSR, AAC, ACAR, AAAC, etc.) twisted around each other at 9-foot intervals. The main purpose of the twisted design is to prevent galloping by constantly varying the cable diameter face. This wind-induced galloping phenomena occurs primarily in the Midwestern U.S.

Some utilities prefer suspension and strain clamps with “double groove” clamping, while others find that single-groove standard clamps, properly sized and tested, perform adequately on T2.

Anderson™ offers both single and double groove clamps. In the early days of T2, filler rods were used and designed for round conductors. After years of field service and testing, Anderson believes filler rods are no longer necessary, and we do not recommend them.

Another clamp approach is to separate the two round conductors at the clamping point and use two separate single-groove clamps attached to a small yoke plate.

Anderson can supply your T2 clamp needs regardless of your construction preference.








safety

# Suspension and Stirrup Clamps — For T2 Conductors

## Product Data

### Suspension and Stirrup Clamps

#### Recommended Application Chart of Anderson™ Clamps for T2 Conductor

Conductor Data		Recommended Clamps								
Code Word	Conductor Size (Qty) AWG	Dual Conductors Outside Dimensions Inches	T2 Conductor Ultimate Strength lb							
T-2 Iris	2-7 str AAC <sup>(2)</sup>	.292 x .584	2532	—	—	—	—	HAS85	TSC57 <sup>(1)</sup>	AHLS024019-E
T-2 Sparrow	2-6/1 ACSR <sup>(2)</sup>	.316 x .682	5580	—	—	TSC72150	TSC072150	HAS85	TSC86 <sup>(2)</sup>	AHLS024019-E
T-2 Raven	1/0-6/1 ACSR <sup>(2)</sup>	.398 x .796	8560	HAST2118	—	TSC72150	TSC072150	HAS104	TSC86 <sup>(1)</sup>	AHLS397021-E
T-2 Quail	2/0-6/1 ACSR <sup>(2)</sup>	.447 x .894	10,690	HAST2118	—	TSC72150	TSC072150	HAS104	TSC106T2 <sup>(1)</sup>	AHLS397021E
T-2 Pigeon	3/0-6/1 ACSR <sup>(2)</sup>	.502 x 1.004	13,350	HAST2118	—	TSC72150	TSC072150	HAS118	TSC150T2 <sup>(2)</sup>	AHLS954022E
T-2 Penquin	4/0-6/1 ACSR <sup>(2)</sup>	.562 x 1.126	16,840	HAST2139	—	TSC72150	TSC072150	HAS139	TSC150-T2 <sup>(1)</sup>	AHLS954022-E
T-2 Partridge	266.8-26/7 ACSR <sup>(2)</sup>	.642 x 1.284	22,500	HAST2139	—	TSC72200	TSC072200	HAS139	TSC150-T2 <sup>(1)</sup>	—
T-2 Linnet	336.4-26/7 ACSR <sup>(2)</sup>	.721 x 1.442	28,100	HAST2182	—	TSC72200	TSC072200	HAS162	TSC150-T2 <sup>(1)</sup>	—
T-2 Chickadee	397.5-18/1 ACSR <sup>(2)</sup>	.743 x 1.486	20,080	HAST2182	—	TSC72200	TSC072200	HAS182	—	—
T-2 Ibis	397.5-26/7 ACSR <sup>(2)</sup>	.783 x 1.566	32,380	HAST2182	CFST288	TSC72200	TSC072200	HAS182	—	—
T-2 Pelican	477.0-18/1 ACSR <sup>(2)</sup>	.814 x 1.628	23,740	HAST2182	CFST288	TSC72200	TSC072200	HAS182	—	—
T-2 Mistletoe	556.5-37 str AAC <sup>(2)</sup>	.858 x 1.716	19,660	HAST2204	CFST288	TSC72200	TSC072200	HAS204	—	—
T-2 Hawk	477.0-26/7 ACSR <sup>(2)</sup>	.858 x 1.716	38,860	HAST2204	CFST288	TSC72200	TSC072200	HAS204	—	—
T-2 Osprey	556.5-18/1 ACSR <sup>(2)</sup>	.879 x 1.758	27,700	HAST2204	CFST288	TSC72200	TSC072200	HAS204	—	—
T-2 Hen	447.0-30/7 ACSR <sup>(2)</sup>	.883 x 1.766	46,600	HAST2204	CFST288	TSC72200	TSC072200	HAS204	—	—
T-2 Parakeet	556.5-18/1 ACSR <sup>(2)</sup>	.914 x 1.828	39,700	HAST2204	CFST2130	—	—	—	—	—
T-2 Arbutus	795-37 str A <sup>9</sup> AC <sup>(2)</sup>	1.026 x 2.052	27,540	HAST2252	CFST2130	—	—	—	—	—
T-2 Dove	556.5-26/7 ACSR <sup>(2)</sup>	.927 x 1.854	44,800	HAST2204	CFST2130	—	—	HAS204	—	—
T-2 Rook	636.0-24/7 ACSR <sup>(2)</sup>	.977 x 1.954	45,200	HAST2252	CFST2130	—	—	—	—	—
T-2 Grosbeak	636.0-26/7 ACSR <sup>(2)</sup>	.990 x 1.980	50,000	HAST2252	CFST2130	—	—	HAS227	—	—
T-2 Tern	795.0-45/7 ACSR <sup>(2)</sup>	1.063 x 2.126	45,800	HAST2252	CFST2130	—	—	HAS252T2	—	—
T-2 Rail	954.0-45/7 ACSR <sup>(2)</sup>	1.165 x 2.330	53,800	HAST2252	CFST2130	—	—	HAS252T2	—	—
T-2 BlueJay	1113.0-45/7 ACSR <sup>(2)</sup>	1.259 x 2.518	61,800	HAST2252	CFST2130	—	—	HAS280	—	—

(1) On catalog type TSC use large side of keeper on cable specified.

(2) On catalog type TSC use small side of keeper on cable specified.

# Suspension Clamps — Aluminum

## Double Groove Clamp

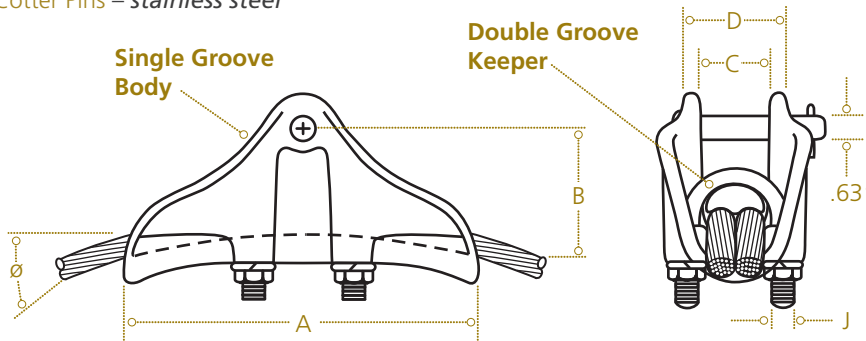
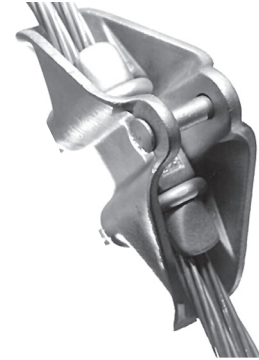
ALUMINUM

HAST2

Made with double groove keeper to accommodate twin conductor.

For standard voltage application with all aluminum, ASCR, or aluminum alloy conductor. Maximum conductor temperature 130 C. See Catalog Reference section for maximum conductor temperature guidelines.

**Material:** Body and Keeper – *aluminum alloy*  
 Sockets and Clevises – *galvanized ductile iron*  
 Hardware – *galvanized steel*  
 Cotter Pins – *stainless steel*



### Product Data

Catalog Number	Fitting		Clamping Range			Dimensions Inches						Ultimate Body Strength lb (kN)	Approx Wt Each lb (kg)
	Type	Catalog Number	ACSR	Inches	Aluminum	A	B	C	D	Ø	J		
HAST2118S HAST2118C HAST2118N	Socket Clevis None	SA10 CA101 —	1/0 to 3/0	.398 to .502	2/0-7 str to 3/0-19 str	8.00	2.75	1.41	2.41	22.5	½	25,000 (111)	4.40 (2.00) 4.50 (2.04) 2.80 (1.27)
HAST2139S HAST2139C HAST2139N	Socket Clevis None	SA13 CA13 —	134-12/7 to 266.8-26/7	.522 to .642	4/0-7 str to 300-61 str	8.88	3.00	1.63	2.56	22.5	½	25,000 (111)	4.90 (2.22) 5.00 (2.27) 3.30 (1.50)
HAST2182S HAST2182C HAST2182N	Socket Clevis None	SA16 CA16 —	336-18/1 to 477-18/1	.684 to .814	350-37 str to 500-37 str	10.00	3.25	2.06	3.00	25.0	½	25,000 (111)	6.00 (2.72) 6.10 (2.77) 4.30 (1.95)
HAST2204S HAST2204C HAST2204N	Socket Clevis None	SA16 CA16 —	477-26/7 to 556.5-26/7	.858 to .927	556-37 str to 636-37 str	10.50	3.53	2.17	3.13	20.5	½	25,000 (111)	6.60 (3.00) 6.70 (3.03) 4.90 (2.22)
HAST2252S	Socket	SA22	636-24/7 to 954-45/7	.977 to 1.165	750-61 str to 1,000-61 str	12.00	4.25	2.68	3.81	17.5	⅝	30,000 (133)	11.80 (5.35)
HAST2252C	Clevis	CA22										25,000 (111)	12.30 (5.58)
HAST2252N	None	—										30,000 (133)	10.00 (4.54)

**NOTE:** Recommended torque on U-bolts: ½" — 480 in-lb, ⅝" — 720 in-lb. Bolt and nut may be substituted for clevis pin by adding suffix "BNK" to catalog number. Clamp may be furnished with ⅝"-11 galvanized steel bolt and nut with stainless steel cotter pin by adding "BNK" suffix to catalog number. Example: HAST2118SBNK.

# Suspension Clamps — Aluminum

## Double Groove Corona Free Clamp

ALUMINUM

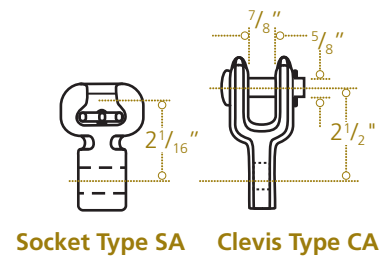
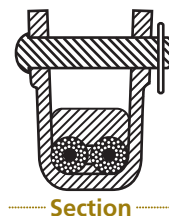
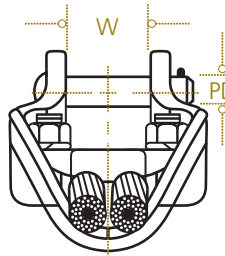
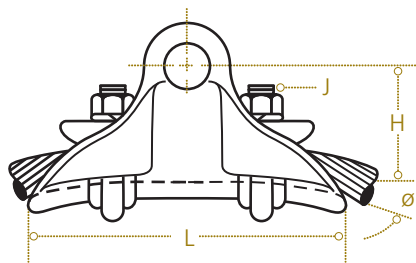
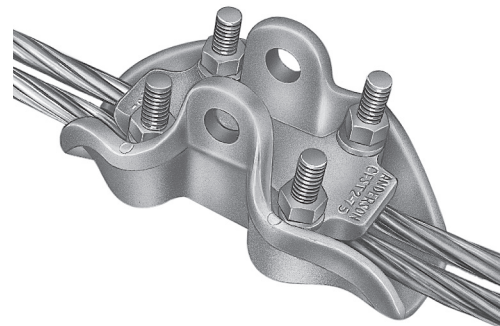
CFST2

Type CFST2 is recommended for AAC, ACSR or AAAC T2 conductors. Maximum conductor temperature 130 C. See Catalog Reference section for maximum conductor temperature guidelines.

Designed with double grooves for use on standard or extra-high voltage T2 transmission lines. Corona and RIV are controlled through the design of the clamp, thus eliminating the need for control rings.

U-bolts are retained in place by grommets.

**Material:** Body and Keeper – aluminum alloy  
 Hardware – galvanized steel  
 Socket and Clevis – galvanized ductile iron  
 Cotter Pin – stainless steel  
 Grommet – neoprene



### Product Data

Catalog Number	Fitting		Clamping Range Inches (mm)	Ultimate Body Strength Inches (kN)	Max Take-Off Angle	Dimensions Inches (mm)					Approx Wt Each lb (kg)
	Type	Catalog Number				L	W	H	J	PD	
CFST288N CFST288S CFST288C	None Socket Clevis	— SA16 CA16	.753-.883 (19.13-22.43)	20,000 (89)	17.5°	8 <sup>7</sup> / <sub>16</sub> (214.38)	2 (50.80)	2 <sup>1</sup> / <sub>2</sub> (63.50)	1 <sup>1</sup> / <sub>2</sub> (12.70)	5 <sup>5</sup> / <sub>8</sub> (15.88)	2.8 (1.134) 4.2 (1.905) 4.3 (1.951)
CFST2130N CFST2130S CFST2130C	None Socket Clevis	— SA22 CA24	.88-1.30 (22.35-33.0)	25,000 (111)	17.5°	10 <sup>1</sup> / <sub>2</sub> (266.7)	3 (76.2)	3 (76.2)	1 <sup>1</sup> / <sub>2</sub> (12.70)	5 <sup>5</sup> / <sub>8</sub> (15.88)	6.0 (2.7) 7.9 (3.6) 8.3 (3.8)

**NOTE:** Recommended torque on U-bolts: 1/2" — 480 in-lb. Bolt and nut may be substituted for clevis pin by adding suffix "BNK" to catalog number.

# Suspension Clamps — Aluminum/Ductile Iron

## Double Groove Trunnion Clamp

ALUMINUM/DUCTILE  
TSCT2/TSCDT2

For standard voltage applications with AAC, ACSR, or AAAC T2 conductor. See Catalog Reference section for maximum conductor temperature guidelines.

Designed with double groove keeper for use on tangent suspension spans with horizontal or vertical post insulators.

Keeper is reversible for proper fit on different size conductors.

**Material:** TSCT2: Body and Keeper – aluminum alloy  
TSCDT2: Body – galvanized ductile iron  
Keeper – aluminum alloy  
Hardware – galvanized steel  
Anti-static Spring – stainless steel

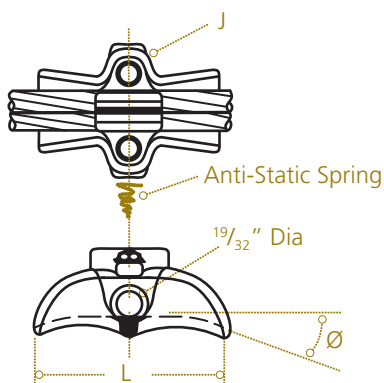
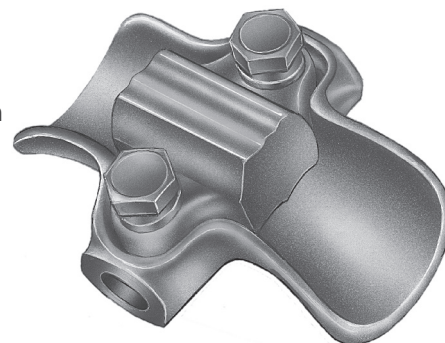


Figure 1

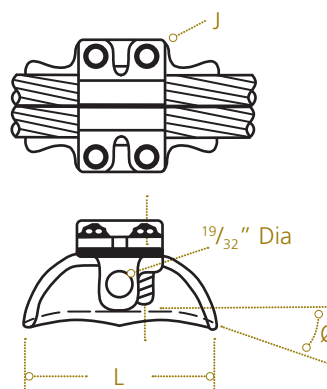


Figure 2



### Product Data

Catalog Number	Figure Number	Clamping Range Inches (mm)	Ultimate Body Strength lb (kN)	Max Take-Off Angle	Dimensions Inches (mm)			Approx Wt Each lb (kg)
					L	W	J	
TSCT2150	1	.316-.563 (8.03-14.3)	2,800 (12)	20°	5¼ (133.3)	3⅞ (98.4)	½ (12.7)	1.14 (.52)
TSCT2200	2	.642-.927 (16.31-23.54)	2,800 (12)	20°	5¼ (133.3)	3⅞ (98.4)	½ (12.7)	1.75 (.79)
TSCDT2150	1	.316-.563 (8.03-14.3)	2,800 (12)	15°	5¼ (133.3)	3⅞ (98.4)	½ (12.7)	2.50 (1.13)
TSCDT2200	2	.642-.927 (16.31-23.54)	2,800 (12)	20°	5¼ (133.3)	3⅞ (98.4)	½ (12.7)	2.94 (1.33)

**NOTE:** Recommended torque on ½" clamping bolts: 300 in-lb. Anti-static springs can be supplied by adding "ARIV" to catalog number.



# Transmission Connectors — *Helical Cushion*

## 250° Continuous HV and EHV

The HCSA is a bolted aluminum suspension clamp. It is designed to provide enhanced conductor support and protection. The HCSA combines a cast aluminum clamp assembly with helical aluminum alloy rod sets and EPDM rubber inserts. The rubber inserts are assembled directly onto the conductor and are held in place with the helical rods. The clamp assembly is then bolted around the helical wrapped rubber supporting inserts to complete the install.

### Familiar Anderson Catalog Conventions (# Indicates Max Cable O.D.):

EX: HCSA**1516** covers conductors with OD within 1.478-**1.516"**.

ADD "**E**" suffix for EHV version (HCSA1516**E**).

### HCSA Delivered:

- Familiar Design (Look, Feel & Function)
- Corona test proven designs
- Packaging similar to existing industry experience
- Drawings & test reports available

\*One part number for both **Standard** and **High Temperature** applications





# Suspension Clamps — Helical Cushion

## Aluminum Clamp (Assembly 250°C)

ALUMINUM

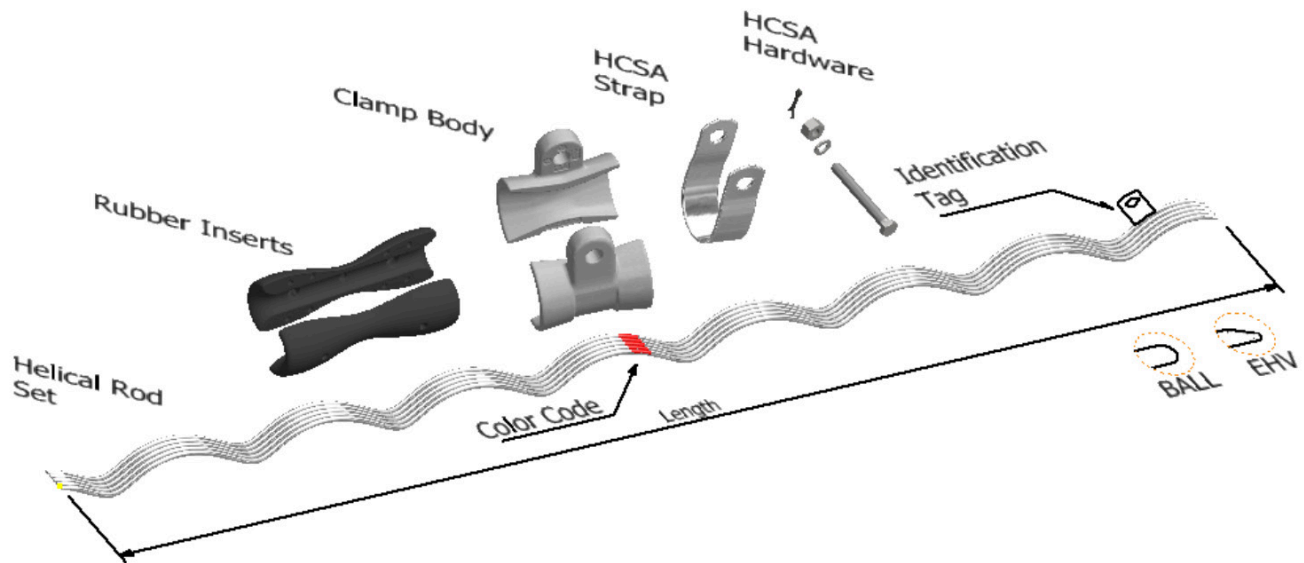
HCSA

For standard voltage application with all aluminum, ACSR, ACSS, or aluminum alloy conductor. See Catalog Reference section for maximum conductor temperature guidelines.

**Material:** Clamp Body, Strap – *aluminum alloy*  
Rubber Insert – *EPDM rubber*  
Helical Rods – *aluminum alloy*  
Hardware (Bolt, FW, LW, Nut) – *galvanized steel*  
Cotter Pin – *stainless steel*

### Application:

EX: HCSA**1516** covers conductors with OD within 1.478-**1.516"**.  
ADD "**E**" suffix for EHV version (HCSA1516**E**).



### General Use:

Helical Cushion Suspension Assembly is designed to provide additional conductor strand protection at the point of attachment. It lowers the mechanical and thermal stresses which can be caused by a bend, compression, abrasion, or arc flashover.

# Suspension Clamps — Helical Cushion

## Corona Free Clamp (Assembly 250°C)

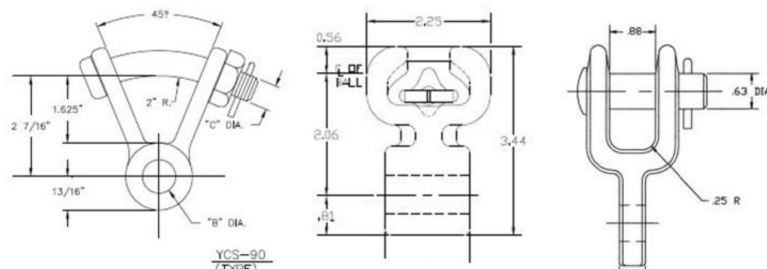
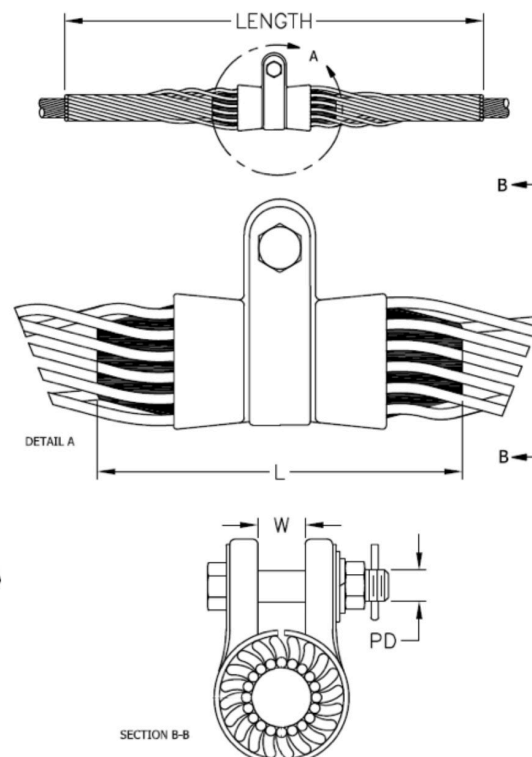
ALUMINUM

HCSA

Designed for use on standard voltage transmission lines. Corona and RIV tested up to 230kV applications for respective conductor sizes.

HCSA is recommended for all aluminum, ACSR, ACSS, or aluminum alloy conductor. Example: HCSA1118. Add suffix "ANCO" to include ANCO® locknut. Example: HCSA1118ANCO. Add suffix "S, C, or Y90" for respective Socket, Clevis, or Y90-Clevis Fitting. Example: HCSA1118S or HCSA1118ANCOS

**Material:** Clamp Body, Strap – aluminum alloy  
 Rubber Insert – EPDM rubber  
 Helical Rods – aluminum alloy  
 Hardware (Bolt, FW, LW, Nut) – galvanized steel  
 Cotter Pin – stainless steel



### Fittings

Conductor Dia. Range Inches [mm]	W Inches [mm]	PD Inches [mm]	Y-90 Clevis Y90	Ult. Strength (LBS)	Socket- Eye S	Ult. Strength (LBS)	Clevis- Eye C	Ult. Strength (LBS)	ANCO® Locknut
0.543-0.645 [13.79-16.38]									
0.646-0.750 [16.41-19.05]									
0.751-0.907 [19.08-23.04]									
0.908-1.005 [23.06-25.53]	0.94 [24]	0.63 [15.9]	YCS0690	25,000	SA06	25,000	CA06	25,000	1043620000
1.006-1.208 [25.55-30.68]	1.30 [33]	0.63 [15.9]	YCS1059013	30,000	SA10513	30,000	CA1013	25,000	1043620000
1.209-1.355 [30.71-34.42]	1.38 [35]	0.75 [19.1]	YCS1059013	30,000	SA10513	30,000	CA1013	25,000	1044250000
1.356-1.557 [34.44-39.55]	1.42 [36]	0.75 [19.1]	YCS1059013	30,000	SA10513	30,000	CA1013	25,000	1044250000

- (1) Helical rods are right-hand lay standard. (2) HCSA is supplied with BNK and does not include fittings. (3) Hardware fitting packaged separately. (4) ANCO® Locknut packaged separately.

# Suspension Clamps — Helical Cushion

## Single Suspension

ALUMINUM

HCSA

For AAC, AAAC, ACAR, ACSR, ACSR/TW, ACSS, ACSS/TW applications up to 250°C.

Maximum Takeoff Angle = 30°

Slip load is 15-20% of respective conductor RBS

Application O.D. = (Helical Rod O.D. x 2) + Conductor O.D.

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### Product Data and Conductor Size

Catalog Number	Conductor Dia. Range Inches [mm]	Nominal Conductor Size (AWG or KCMIL)		ULT. Body Strength (LBS)	Applied Rod Length Inches [mm]	Rod Dia. Inches	Rods Per Set	Std. Pack		As-sembly Wt. (LBS)	L Inches [mm]	Helical Rod Color Code
		ACSR/ ACSS	AAC/ AAAC					Rods	Clamp			
HCSA0555	"0.543-0.555 [13.79-14.10]"	NA	NA	10000	44	0.182	10	12	12	2.55	58	Black
HCSA0573	"0.556-0.573 [14.12-14.55]"	4/0 (6/1)	"246.7 (7) 250 (7)"	10000	44	0.182	11	12	12	2.76	58	White
HCSA0594	"0.574-0.594 [14.58-15.09]"	NA	"250 (19) 266.8 (7) 266.8 (19)"	10000	45	0.182	11	12	12	2.8	58	Brown
HCSA0606	"0.595-0.606 [15.11-15.39]"	NA	NA	10000	46	0.182	11	12	12	2.85	58	Orange
HCSA0619	"0.607-0.619 [15.42-15.72]"	266.8 (18/1)	NA	10000	46	0.182	11	12	12	2.85	58	Purple
HCSA0645	"0.620-0.645 [15.75-16.36]"	266.8 (26/7)	"312.8 (19) 300 (19)"	10000	50	0.182	12	12	12	2.9	66	Red
HCSA0673	"0.646-0.673 [16.41-17.09]"	NA	336.4 (19)	15000	54	0.204	11	12	12	4	72	Blue
HCSA0690	"0.674-0.690 [17.12-17.53]"	"300 (26/7), 336.4 (18/1)"	350 (19)	15000	54	0.204	11	12	12	4	72	Green
HCSA0710	"0.691-0.710 [17.55-18.03]"	NA	NA	15000	54	0.204	12	12	12	4.13	72	Yellow
HCSA0731	"0.711-0.731 [18.06-18.57]"	NA	"394.5 (19) 397.5 (19)"	15000	55	0.204	12	12	12	4.2	72	Black
HCSA0750	"0.732-0.750 [18.59-19.05]"	"336.4 (30/7), 397.5 (18/1)"	NA	15000	56	0.204	12	12	12	4.26	72	White
HCSA0768	"0.751-0.768 [19.08-19.51]"	NA	NA	20000	60	0.25	10	6	6	5.66	78	Brown
HCSA0795	"0.769-0.795 [19.53-20.19]"	"397.5 (24/7) 397.5 (26/7)"	"450 (19) 465.4 (19) 477 (19) 477 (37)"	20000	60	0.25	11	6	6	5.93	78	Orange
HCSA0824	"0.796-0.824 [20.22-20.93]"	"397.5 (30/7) 477 (18/1)"	500 (19)	20000	61	0.25	11	6	6	6.04	78	Purple
HCSA0845	"0.825-0.845 [20.96-21.46]"	NA	"559.5 (19) 556.5 (19) 556.5 (37)"	20000	64	0.25	11	6	6	6.15	82	Red
HCSA0870	"0.846-0.870 [21.49-22.10]"	"477 (24/7) 477 (26/7)"	NA	20000	64	0.25	11	6	6	6.18	82	Blue
HCSA0893	"0.871-0.893 [22.12-22.68]"	"556.5 (18/1) 477 (30/7)"	600 (37)	20000	65	0.25	12	6	6	6.51	82	Green
HCSA0907	"0.894-0.907 [22.71-23.04]"	NA	NA	20000	65	0.25	12	6	6	6.55	82	Green

(1) Right-hand lay standard.

(2) For aluminum conductors types & sizes not listed, select catalog number based on dia. range to accommodate conductor.

# Suspension Clamps — Helical Cushion

## Single Suspension

ALUMINUM

HCSA

For AAC, AAAC, ACAR, ACSR, ACSR/TW, ACSS, ACSS/TW applications up to 250°C.

Maximum Takeoff Angle = 30°

Slip load is 15-20% of respective conductor RBS

Application O.D. = (Helical Rod O.D. x 2) + Conductor O.D.

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### Product Data and Conductor Size

Catalog Number	Conductor Dia. Range Inches [mm]	Nominal Conductor Size (AWG or KCML)		ULT. Body Strength (LBS)	Applied Rod Length Inches [mm]	Rod Dia. Inches	Rods Per Set	Std. Pack		As-sembly Wt. (LBS)	L Inches [mm]	Helical Rod Color Code
		ACSR/ ACSS	AAC/ AAAC					Rods	Clamp			
HCSA0920	0.908-0.920 [23.06-23.37]	556.5 (24/7)	636 (37W)	20,000	65.40 [1660]	0.250	12	9	9	81	8.80 [224]	YELLOW
HCSA0937	0.921-0.937 [23.39-23.80]	556.5 (26/7)	650 (61-91W)	20,000	66.00 [1676]	0.250	12	9	9	81	8.80 [224]	BLACK
HCSA0962	0.938-0.962 [23.83-24.43]	605 (24/7)		20,000	67.00 [1702]	0.250	12	9	9	81	8.80 [224]	WHITE
HCSA0986	0.963-0.986 [24.46-25.04]	636 (24/7)	715.5 (61W)	20,000	68.00 [1730]	0.250	13	9	9	87	8.80 [224]	BROWN
HCSA1005	0.987-1.005 [25.07-25.53]	636 (26/7)	750 (61W)	20,000	69.10 [1755]	0.250	13	9	9	87	8.80 [224]	ORANGE
HCSA1022	1.006-1.022 [25.55-25.96]	636 (30/19)		25,000	80.30 [2040]	0.310	11	6	6	73	9.00 [229]	PURPLE
HCSA1040	1.023-1.040 [25.98-26.42]	795 (36/1)	795 (37-61W)	25,000	81.10 [2060]	0.310	11	6	6	75	9.00 [229]	RED
HCSA1074	1.041-1.074 [26.44-27.28]	715.5 (26/7)	833.6 (37)	25,000	82.00 [2083]	0.310	11	6	6	75	9.00 [229]	BLUE
HCSA1090	1.075-1.090 [27.31-27.69]	715.5 (30/19)	874.5 (37W)	25,000	82.00 [2083]	0.310	12	6	6	78	9.00 [229]	GREEN
HCSA1118	1.091-1.118 [27.71-28.40]	795 (26/7)	900 (37-61W)	25,000	82.00 [2083]	0.310	12	6	6	78	9.00 [229]	YELLOW
HCSA1136	1.119-1.136 [28.42-28.85]	900 (45/7)	954 (37W)	25,000	82.00 [2083]	0.310	12	6	6	78	9.00 [229]	BLACK
HCSA1152	1.137-1.152 [28.88-29.26]	795 (30/19)	1000 (61W)	25,000	82.00 [2083]	0.310	12	6	6	78	9.00 [229]	WHITE

(1) Right-hand lay standard.

(2) For aluminum conductors types & sizes not listed, select catalog number based on dia. range to accommodate conductor.

# Suspension Clamps — Helical Cushion

## Single Suspension

ALUMINUM

HCSA

For AAC, AAAC, ACAR, ACSR, ACSR/TW, ACSS, ACSS/TW applications up to 250°C.

Maximum Takeoff Angle = 30°

Slip load is 15-20% of respective conductor RBS

Application O.D. = (Helical Rod O.D. x 2) + Conductor O.D.

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### Product Data and Conductor Size (continued)

Catalog Number	Conductor Dia. Range Inches [mm]	Nominal Conductor Size (AWG or KCMIL)		ULT. Body Strength (LBS)	Applied Rod Length Inches [mm]	Rod Dia. Inches	Rods Per Set	Std. Pack		As-sembly Wt. (LBS)	L Inches [mm]	Helical Rod Color Code
		ACSR/ ACSS	AAC/ AAAC					Rods	Clamp			
HCSA1175	1.153-1.175 [29.29-29.85]	954 (45/7)	1033.5 (37W)	25,000	82.00 [2083]	0.310	12	6	6	79	9.00 [229]	BROWN
HCSA1208	1.176-1.208 [29.87-30.68]	954 (54/7)	1092.3 (61)	25,000	82.00 [2083]	0.310	12	6	6	79	9.00 [229]	ORANGE
HCSA1226	1.209-1.226 [30.71-31.14]	1033.5 (45/7)	1113 (61W)	25,000	88.00 [2235]	0.365	11	3	3	55	12.00 [305]	PURPLE
HCSA1259	1.227-1.259 [31.17-31.98]	1033.5 (54/7)	1192.5 (61W)	25,000	88.00 [2235]	0.365	11	3	3	55	12.00 [305]	RED
HCSA1286	1.260-1.286 [32.00-32.66]	1113 (48/7)	1200 (91W)	25,000	88.00 [2235]	0.365	12	3	3	58	12.00 [305]	BLUE
HCSA1314	1.287-1.314 [32.69-33.38]	1192.5 (45/7)	1272 (61W)	25,000	88.00 [2235]	0.365	12	3	3	58	12.00 [305]	GREEN
HCSA1355	1.315-1.355 [33.40-34.42]	1272 (45/7)		25,000	88.00 [2235]	0.365	12	3	3	58	12.00 [305]	YELLOW
HCSA1394	1.356-1.394 [34.44-35.41]	1272 (54/19)	1431 (61W)	25,000	88.00 [2235]	0.365	12	3	3	60	11.00 [279]	BLACK
HCSA1416	1.395-1.416 [35.43-35.97]	1351 (54/19) AWAC	1500 (91W)	25,000	88.00 [2235]	0.365	13	3	3	61	11.00 [279]	WHITE
HCSA1442	1.417-1.442 [35.99-36.63]	1431 (45/7)	1510.5 (61W)	25,000	88.00 [2235]	0.365	13	3	3	62	11.00 [279]	BROWN
HCSA1477	1.443-1.477 [36.65-37.52]	1431 (54/19)	1590 (61- 91W)	25,000	88.00 [2235]	0.365	13	3	3	64	11.00 [279]	ORANGE
HCSA1516	1.478-1.516 [37.54-38.51]	1590 (45/7)	1700 (127W)	25,000	88.00 [2235]	0.365	13	3	3	64	11.00 [279]	PURPLE
HCSA1557	1.517-1.557 [38.53-39.55]	1590 (54/19)	1800 (127W)	25,000	88.00 [2235]	0.365	13	3	3	64	11.00 [279]	RED

(1) Right-hand lay standard.

(2) For aluminum conductors types & sizes not listed, select catalog number based on dia. range to accommodate conductor.

# Suspension Clamps — Helical Cushion (EHV)

## Corona Free Clamp (Assembly 250°C)

ALUMINUM

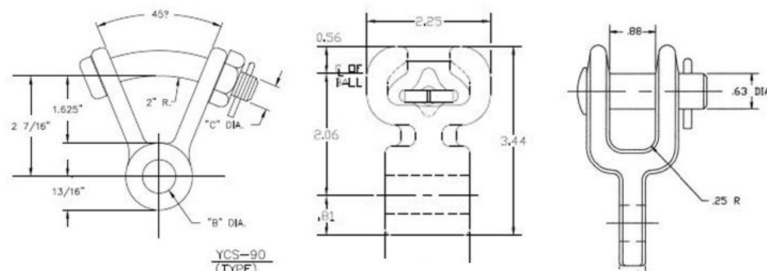
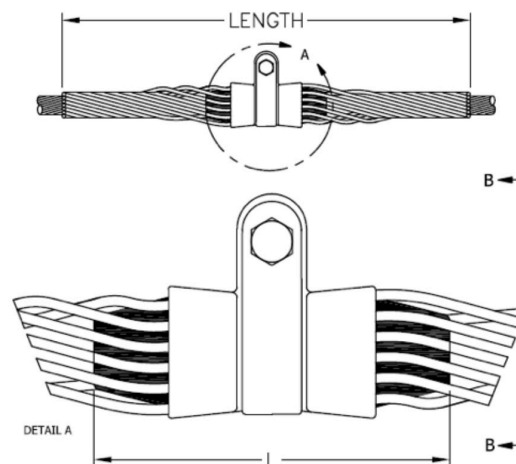
HCSA (EHV)

Designed for use on standard voltage transmission lines. Corona and RIV tested up to 500kV applications for respective conductor sizes.

HCSA EHV is recommended for all aluminum, ACSR, ACSS, or aluminum alloy conductor. For EHV add suffix "E."

Example: HCSA1118E. Add suffix "ANCO" to include ANCO® locknut. Example: HCSA1118EANCO. Add suffix "S, C, or Y90" for respective Socket, Clevis, or Y90-Clevis Fitting. Example: HCSA1118ES or HCSA1118EANCOS

**Material:** Clamp Body, Strap – *aluminum alloy*  
 Rubber Insert – *EPDM rubber*  
 Helical Rods – *aluminum alloy*  
 Hardware (Bolt, FW, LW, Nut) – *galvanized steel*  
 Cotter Pin – *stainless steel*



### Fittings

Conductor Dia. Range Inches [mm]	W Inches [mm]	PD Inches [mm]	Y-90 Clevis Y90	Ult. Strength (LBS)	Socket- Eye S	Ult. Strength (LBS)	Clevis- Eye C	Ult. Strength (LBS)	ANCO® Locknut
0.908-1.005 [23.06-25.53]	0.94 [24]	0.63 [15.9]	YCS0690	25,000	SA06	25,000	CA06	25,000	1043620000
1.006-1.208 [25.55-30.68]	1.30 [33]	0.63 [15.9]	YCS1059013	30,000	SA10513	30,000	CA1013	25,000	1043620000
1.209-1.355 [30.71-34.42]	1.38 [35]	0.75 [19.1]	YCS1059013	30,000	SA10513	30,000	CA1013	25,000	1044250000
1.356-1.557 [34.44-39.55]	1.42 [36]	0.75 [19.1]	YCS1059013	30,000	SA10513	30,000	CA1013	25,000	1044250000

- (1) Helical rods are right-hand lay standard
- (2) HCSA is supplied with BNK and does not include fittings.
- (3) Hardware fitting packaged separately.
- (4) ANCO® Locknut packaged separately.



# Suspension Clamps — Helical Cushion

## Single Suspension

ALUMINUM

HCSA (EHV)

For AAC, AAAC, ACAR, ACSR, ACSR/TW, ACSS, ACSS/TW applications up to 250°C.

Maximum Takeoff Angle = 30°

Slip load is 15-20% of respective conductor RBS

Application O.D. = (Helical Rod O.D. x 2) + Conductor O.D.

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### Product Data and Conductor Size

Catalog Number	Conductor Dia. Range Inches [mm]	Nominal Conductor Size (AWG or KCMIL)		ULT. Body Strength (LBS)	Applied Rod Length Inches [mm]	Rod Dia. Inches	Rods Per Set	Std. Pack		As-sembly Wt. (LBS)	L Inches [mm]	Helical Rod Color Code
		ACSR/ ACSS	AAC/ AAAC					Rods	Clamp			
HCSA0555E	"0.543-0.555 [13.79-14.10]"	NA	NA	10000	44	0.182	10	12	12	2.55	58	Black
HCSA0573E	"0.556-0.573 [14.12-14.55]"	4/0 (6/1)	"246.7 (7) 250 (7)"	10000	44	0.182	11	12	12	2.76	58	White
HCSA0594E	"0.574-0.594 [14.58-15.09]"	NA	"250 (19) 266.8 (7) 266.8 (19)"	10000	45	0.182	11	12	12	2.8	58	Brown
HCSA0606E	"0.595-0.606 [15.11-15.39]"	NA	NA	10000	46	0.182	11	12	12	2.85	58	Orange
HCSA0619E	"0.607-0.619 [15.42-15.72]"	266.8 (18/1)	NA	10000	46	0.182	11	12	12	2.85	58	Purple
HCSA0645E	"0.620-0.645 [15.75-16.36]"	266.8 (26/7)	"312.8 (19) 300 (19)"	10000	50	0.182	12	12	12	2.9	66	Red
HCSA0673E	"0.646-0.673 [16.41-17.09]"	NA	336.4 (19)	15000	54	0.204	11	12	12	4	72	Blue
HCSA0690E	"0.674-0.690 [17.12-17.53]"	"300 (26/7) 336.4 (18/1)"	350 (19)	15000	54	0.204	11	12	12	4	72	Green
HCSA0710E	"0.691-0.710 [17.55-18.03]"	NA	NA	15000	54	0.204	12	12	12	4.13	72	Yellow
HCSA0731E	"0.711-0.731 [18.06-18.57]"	NA	"394.5 (19) 397.5 (19)"	15000	55	0.204	12	12	12	4.2	72	Black
HCSA0750E	"0.732-0.750 [18.59-19.05]"	"336.4 (30/7) 397.5 (18/1)"	NA	15000	56	0.204	12	12	12	4.26	72	White
HCSA0768E	"0.751-0.768 [19.08-19.51]"	NA	NA	20000	60	0.25	10	6	6	5.66	78	Brown
HCSA0795E	"0.769-0.795 [19.53-20.19]"	"397.5 (24/7) 397.5 (26/7)"	"450 (19) 465.4 (19) 477 (19) 477 (37)"	20000	60	0.25	11	6	6	5.93	78	Orange
HCSA0824E	"0.796-0.824 [20.22-20.93]"	"397.5 (30/7) 477 (18/1)"	500 (19)	20000	61	0.25	11	6	6	6.04	78	Purple
HCSA0845E	"0.825-0.845 [20.96-21.46]"	NA	"559.5 (19) 556.5 (19) 556.5 (37)"	20000	64	0.25	11	6	6	6.15	82	Red
HCSA0870E	"0.846-0.870 [21.49-22.10]"	"477 (24/7) 477 (26/7)"	NA	20000	64	0.25	11	6	6	6.18	82	Blue
HCSA0893E	"0.871-0.893 [22.12-22.68]"	"556.5 (18/1) 477 (30/7)"	600 (37)	20000	65	0.25	12	6	6	6.51	82	Green
HCSA0907E	"0.894-0.907 [22.71-23.04]"	NA	NA	20000	65	0.25	12	6	6	6.55	82	Green

(1) Right-hand lay standard.

(2) For aluminum conductors types & sizes not listed, select catalog number based on dia. range to accommodate conductor.

# Suspension Clamps — Helical Cushion (EHV)

## Single Suspension

ALUMINUM

HCSA (EHV)

For AAC, AAAC, ACAR, ACSR, ACSR/TW, ACSS, ACSS/TW applications up to 250°C.

Maximum Takeoff Angle = 30°

Slip load is 15-20% of respective conductor RBS

Application O.D. = (Helical Rod O.D. x 2) + Conductor O.D.

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### Product Data and Conductor Size

Catalog Number	Conductor Dia. Range Inches [mm]	Nominal Conductor Size (AWG or KCMIL)		ULT. Body Strength (LBS)	Applied Rod Length Inches [mm]	Rod Dia. Inches	Rods Per Set	Std. Pack		Assem- bly Wt. (LBS)	L Inches [mm]	Heli- cal Rod Color Code
		ACSR/ ACSS	AAC/ AAAC					Rods	Clamp			
HCSA0920E	0.908-0.920 [23.06-23.37]	556.5 (24/7)	636 (37W)	20,000	65.40 [1660]	0.250	12	9	9	81	8.80 [224]	YEL- LOW
HCSA0937E	0.921-0.937 [23.39-23.80]	556.5 (26/7)	650 (61-91W)	20,000	66.00 [1676]	0.250	12	9	9	81	8.80 [224]	BLACK
HCSA0962E	0.938-0.962 [23.83-24.43]	605 (24/7)		20,000	67.00 [1702]	0.250	12	9	9	81	8.80 [224]	WHITE
HCSA0986E	0.963-0.986 [24.46-25.04]	636 (24/7)	715.5 (61W)	20,000	68.00 [1730]	0.250	13	9	9	87	8.80 [224]	BROWN
HCSA1005E	0.987-1.005 [25.07-25.53]	636 (26/7)	750 (61W)	20,000	69.10 [1755]	0.250	13	9	9	87	8.80 [224]	OR- ANGE
HCSA1022E	1.006-1.022 [25.55-25.96]	636 (30/19)		25,000	80.30 [2040]	0.310	11	6	6	73	9.00 [229]	PURPLE
HCSA1040E	1.023-1.040 [25.98-26.42]	795 (36/1)	795 (37-61W)	25,000	81.10 [2060]	0.310	11	6	6	75	9.00 [229]	RED
HCSA1074E	1.041-1.074 [26.44-27.28]	715.5 (26/7)	833.6 (37)	25,000	82.00 [2083]	0.310	11	6	6	75	9.00 [229]	BLUE
HCSA1090E	1.075-1.090 [27.31-27.69]	715.5 (30/19)	874.5 (37W)	25,000	82.00 [2083]	0.310	12	6	6	78	9.00 [229]	GREEN
HCSA1118E	1.091-1.118 [27.71-28.40]	795 (26/7)	900 (37-61W)	25,000	82.00 [2083]	0.310	12	6	6	78	9.00 [229]	YEL- LOW
HCSA1136E	1.119-1.136 [28.42-28.85]	900 (45/7)	954 (37W)	25,000	82.00 [2083]	0.310	12	6	6	78	9.00 [229]	BLACK
HCSA1152E	1.137-1.152 [28.88-29.26]	795 (30/19)	1000 (61W)	25,000	82.00 [2083]	0.310	12	6	6	78	9.00 [229]	WHITE

(1) Right-hand lay standard.

(2) For aluminum conductors types & sizes not listed, select catalog number based on dia. range to accommodate conductor.

# Suspension Clamps — Helical Cushion (EHV)

## Single Suspension

ALUMINUM

HCSA (EHV)

For AAC, AAAC, ACAR, ACSR, ACSR/TW, ACSS, ACSS/TW applications up to 250°C.

Maximum Takeoff Angle = 30°

Slip load is 15-20% of respective conductor RBS

Application O.D. = (Helical Rod O.D. x 2) + Conductor O.D.

### Product Data and Conductor Size

Catalog Number	Conductor Dia. Range Inches [mm]	Nominal Conductor Size (AWG or KCML)		ULT. Body Strength (LBS)	Applied Rod Length Inches [mm]	Rod Dia. Inches	Rods Per Set	Std. Pack		Assem- bly Wt. (LBS)	L Inches [mm]	Heli- cal Rod Color Code
		ACSR/ ACSS	AAC/ AAAC					Rods	Clamp			
HCSA1175E	1.153-1.175 [29.29-29.85]	954 (45/7)	1033.5 (37W)	25,000	82.00 [2083]	0.310	12	6	6	79	9.00 [229]	BROWN
HCSA1208E	1.176-1.208 [29.87-30.68]	954 (54/7)	1092.3 (61)	25,000	82.00 [2083]	0.310	12	6	6	79	9.00 [229]	OR- ANGE
HCSA1226E	1.209-1.226 [30.71-31.14]	1033.5 (45/7)	1113 (61W)	25,000	88.00 [2235]	0.365	11	3	3	55	12.00 [305]	PURPLE
HCSA1259E	1.227-1.259 [31.17-31.98]	1033.5 (54/7)	1192.5 (61W)	25,000	88.00 [2235]	0.365	11	3	3	55	12.00 [305]	RED
HCSA1286E	1.260-1.286 [32.00-32.66]	1113 (48/7)	1200 (91W)	25,000	88.00 [2235]	0.365	12	3	3	58	12.00 [305]	BLUE
HCSA1314E	1.287-1.314 [32.69-33.38]	1192.5 (45/7)	1272 (61W)	25,000	88.00 [2235]	0.365	12	3	3	58	12.00 [305]	GREEN
HCSA1355E	1.315-1.355 [33.40-34.42]	1272 (45/7)		25,000	88.00 [2235]	0.365	12	3	3	58	12.00 [305]	YEL- LOW
HCSA1394E	1.356-1.394 [34.44-35.41]	1272 (54/19)	1431 (61W)	25,000	88.00 [2235]	0.365	12	3	3	60	11.00 [279]	BLACK
HCSA1416E	1.395-1.416 [35.43-35.97]	1351 (54/19) AWAC	1500 (91W)	25,000	88.00 [2235]	0.365	13	3	3	61	11.00 [279]	WHITE
HCSA1442E	1.417-1.442 [35.99-36.63]	1431 (45/7)	1510.5 (61W)	25,000	88.00 [2235]	0.365	13	3	3	62	11.00 [279]	BROWN
HCSA1477E	1.443-1.477 [36.65-37.52]	1431 (54/19)	1590 (61-91W)	25,000	88.00 [2235]	0.365	13	3	3	64	11.00 [279]	OR- ANGE
HCSA1516E	1.478-1.516 [37.54-38.51]	1590 (45/7)	1700 (127W)	25,000	88.00 [2235]	0.365	13	3	3	64	11.00 [279]	PURPLE
HCSA1557E	1.517-1.557 [38.53-39.55]	1590 (54/19)	1800 (127W)	25,000	88.00 [2235]	0.365	13	3	3	64	11.00 [279]	RED

(1) Right-hand lay standard.

(2) For aluminum conductors types & sizes not listed, select catalog number based on dia. range to accommodate conductor.

# Suspension Clamps — *Helical Cushion*

## Double Helical Cushion Suspension Assembly

ALUMINUM

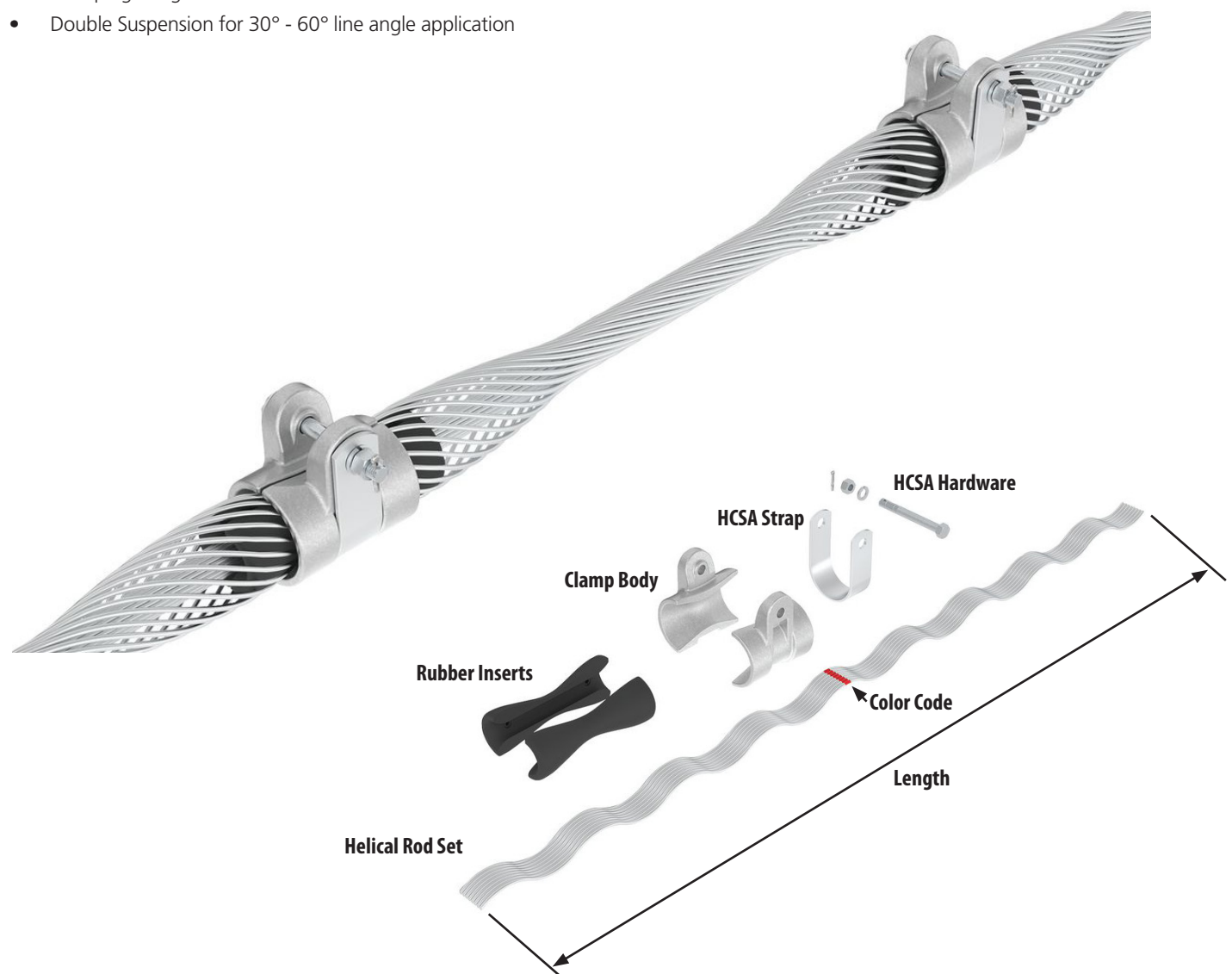
DHCSA

The DHCSA is a bolted aluminum suspension clamp designed to provide enhanced conductor support and protection.

The DHCSA combines a cast aluminum clamp assembly with helical aluminum alloy rod sets and epdm rubber inserts. The rubber inserts are assembled directly onto the conductor and are held in place with helical rods. The clamp assembly is then bolted around the helical wrapped rubber supporting inserts to complete the install.

### Features and Benefits:

- Rated for up to 250°C
- The DHCSA clamps are two HCSA clamps with one shared set of helical rods
- Designed for use on standard voltage applications with all aluminum, ACSR, ACSS, or aluminum alloy conductors
- Clamping Range of 0.543 - 0.907 inches
- Double Suspension for 30° - 60° line angle application



# Suspension Clamps — Helical Cushion

## Double Suspension

For AAC, AAAC, ACAR, ACSR, ACSR/TW, ACSS, ACSS/TW applications up to 250°

C. Maximum Takeoff Angle = 30°-60°

Slip load is 15-20% of respective conductor RBS

Application O.D. = (Helical Rod O.D. x 2) + Conductor O.D.

ALUMINUM

DHCSA

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### Product Data and Conductor Size

Catalog Number	Conductor Dia. Range Inches [mm]	Nominal Conductor Size (AWG or KCMIL)		ULT. Body	Applied Rod Length Inches [mm]	Rod Dia. Inches	Rods per Set	Std. Pack		Assem- bly Wt. (LBS)	L Inches [mm]	" Inches [mm]	Helical Rod Color Code
		ACSR/ACSS	AAC/AAAC					Rods	Clamp				
DHCSA0555	0.543-0.555 [13.79-14.10]	NA	NA	20000	58 [1473]	0.182	10	6	6	34	5.31 [135]	12.00	BLACK
DHCSA0573	0.556-0.573 [14.12-14.55]	4/0 (6/1)	246.7 (7) 250 (7)	20000	58 [1473]	0.182	11	6	6	35	5.31 [135]	12.00	WHITE
DHCSA0594	0.574-0.594 [14.58-15.09]	NA	250 (19) 266.8 (7) 266.8 (19)	20000	58 [1473]	0.182	11	6	6	35	5.31 [135]	12.00	BROWN
DHCSA0606	0.595-0.606 [15.11-15.39]	NA	NA	20000	58 [1473]	0.182	11	6	6	35	5.31 [135]	12.00	ORANGE
DHCSA0619	0.607-0.619 [15.42-15.72]	266.8 (18/1)	NA	20000	58 [1473]	0.182	11	6	6	35	5.31 [135]	12.00	PURPLE
DHCSA0645	0.620-0.645 [15.75-16.36]	266.8 (26/7)	312.8 (19) 300 (19)	20000	66 [1676]	0.182	12	6	6	37	5.31 [135]	18.00 [457.2]	RED
DHCSA0673	0.646-0.673 [16.41-17.09]	266.8 (30/7)	336.4 (19)	30000	72 [1829]	0.204	11	6	6	46	7.20 [183]	18.00 [457.2]	BLUE
DHCSA0690	0.674-0.690 [17.12-17.53]	300 (26/7) 336.4 (18/1)	350 (19)	30000	72 [1829]	0.204	11	6	6	46	7.20 [183]	18.00 [457.2]	GREEN
DHCSA0710	0.691-0.710 [17.55-18.03]	336.4 (22/7)	NA	30000	72 [1829]	0.204	12	6	6	47	7.20 [183]	18.00 [457.2]	YELLOW
DHCSA0731	0.711-0.731 [18.06-18.57]	336.4 (26/7)	394.5 (19) 397.5 (19)	30000	72 [1829]	0.204	12	6	6	47	7.20 [183]	18.00 [457.2]	BLACK
DHCSA0750	0.732-0.750 [18.59-19.05]	336.4 (30/7) 397.5 (18/1)	NA	30000	72 [1829]	0.204	12	6	6	47	7.20 [183]	18.00 [457.2]	WHITE
DHCSA0768	0.751-0.768 [19.08-19.51]	397.5 (20/7)	NA	40000	78 [1981]	0.250	10	3	3	34	8.00 [203]	18.00 [457.2]	BROWN
DHCSA0795	0.769-0.795 [19.53-20.19]	397.5 (24/7) 397.5 (26/7)	450 (19) 465.4 (19) 477 (19) 477 (37)	40000	78 [1981]	0.250	11	3	3	35	8.00 [203]	18.00 [457.2]	ORANGE

(1) Right-hand lay standard.

(2) For aluminum conductors types & sizes not listed, select catalog number based on dia. range to accommodate conductor.



# Suspension Clamps — Helical Cushion

## Double Suspension

ALUMINUM

DHCSA

For AAC, AAAC, ACAR, ACSR, ACSR/TW, ACSS, ACSS/TW applications up to 250°

C. Maximum Takeoff Angle = 30°-60°

Slip load is 15-20% of respective conductor RBS

Application O.D. = (Helical Rod O.D. x 2) + Conductor O.D.

B  
32

### Product Data and Conductor Size

Catalog Number	Conductor Dia. Range Inches [mm]	Nominal Conductor Size (AWG or KCMIL)		ULT. Body	Applied Rod Length Inches [mm]	Rod Dia. Inches	Rods per Set	Std. Pack		Assem- bly Wt. (LBS)	L Inches [mm]	"" Inches [mm]	Helical Rod Color Code
		ACSR/ACSS	AAC/AAAC					Rods	Clamp				
DHCSA0824	0.796-0.824 [20.22-20.93]	397.5 (30/7) 477 (18/1)	500 (19)	40000	78 [1981]	0.250	11	3	3	35	8.00 [203]	18.00 [457.2]	PURPLE
DHCSA0845	0.825-0.845 [20.96-21.46]	NA	559.5 (19) 556.5 (19) 556.5 (37)	40000	82 [2083]	0.250	11	3	3	36	8.00 [203]	18.00 [457.2]	RED
DHCSA0870	0.846-0.870 [21.49-22.10]	477 (24/7) 477 (26/7)	550 (37) 556.5 (19) 556.5 (37)	40000	82 [2083]	0.250	11	3	3	36	8.00 [203]	18.00 [457.2]	BLUE
DHCSA0893	0.871-0.893 [22.12-22.68]	556.5 (18/1) 477 (30/7)	600 (37)	40000	82 [2083]	0.250	12	3	3	37	8.00 [203]	18.00 [457.2]	GREEN
DHCSA0907	0.894-0.907 [22.71-23.04]	556.5 (22/7)	NA	40000	82 [2083]	0.250	12	3	3	37	8.00 [203]	18.00 [457.2]	GREEN

(1) Right-hand lay standard.

(2) For aluminum conductors types & sizes not listed, select catalog number based on dia. range to accommodate conductor.

# Suspension Clamps — *Helical Cushion*

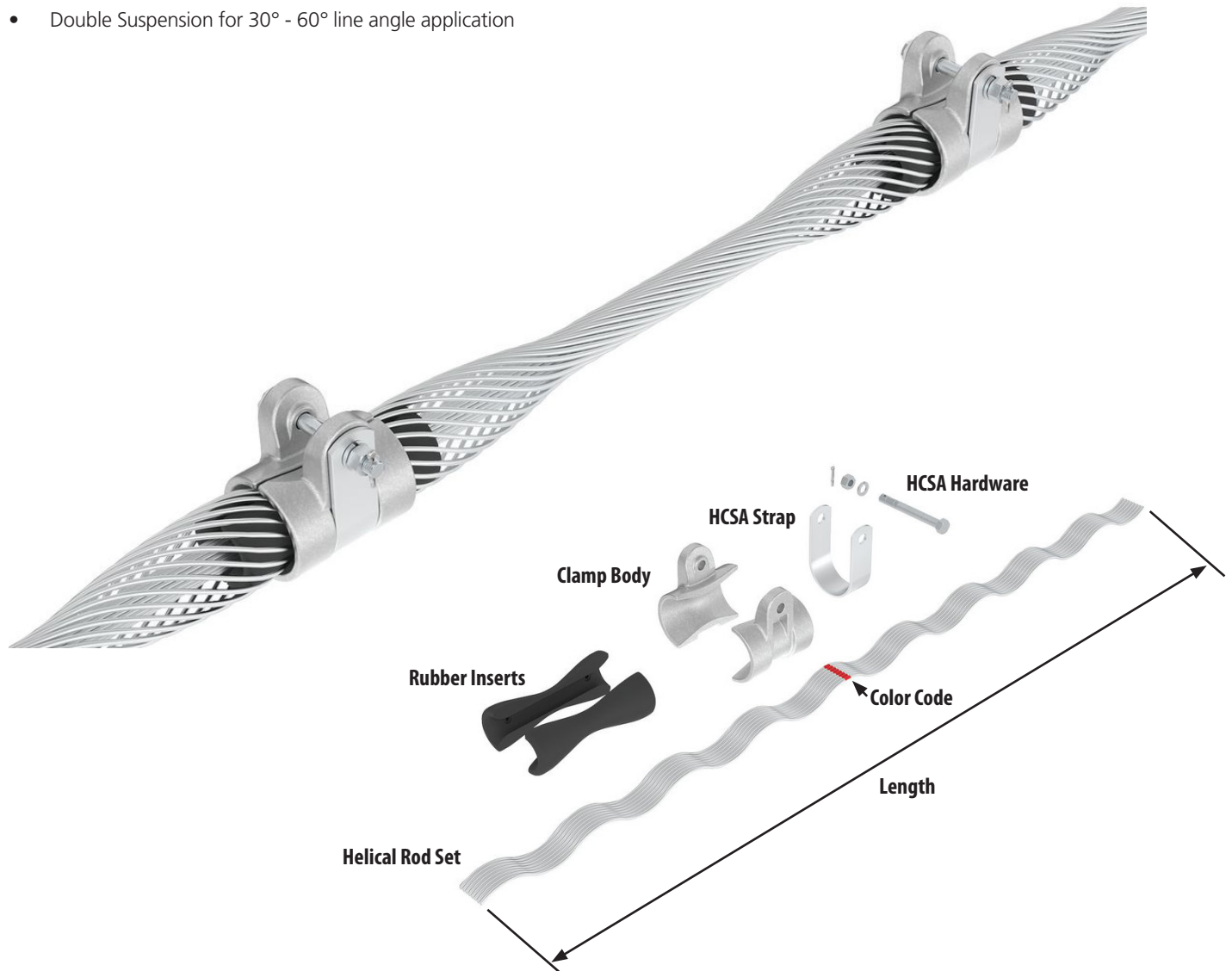
## Double Helical Cushion Suspension Assembly

The DHCSA (EHV) is a bolted aluminum suspension clamp designed to provide enhanced conductor support and protection.

The DHCSA (EHV) combines a cast aluminum clamp assembly with helical aluminum alloy rod sets and epdm rubber inserts. The rubber inserts are assembled directly onto the conductor and are held in place with helical rods. The clamp assembly is then bolted around the helical wrapped rubber supporting inserts to complete the install.

### Features and Benefits:

- Rated for up to 250°C
- The DHCSA clamps are two HCSA clamps with one shared set of helical rods
- Designed for use on standard voltage applications with all aluminum, ACSR, ACSS, or aluminum alloy conductors
- Clamping Range of 0.543 - 0.907 inches
- Double Suspension for 30° - 60° line angle application



ALUMINUM  
DHCSA (EHV)

B  
33

# Suspension Clamps — Helical Cushion (EHV)

## Double Suspension

ALUMINUM

DHCSA (EHV)

For AAC, AAAC, ACAR, ACSR, ACSR/TW, ACSS, ACSS/TW applications up to 250°

C. Maximum Takeoff Angle = 30°-60°

Slip load is 15-20% of respective conductor RBS

Application O.D. = (Helical Rod O.D. x 2) + Conductor O.D.

B  
34

### Product Data and Conductor Size

Catalog Number	Conductor Dia. Range Inches [mm]	Nominal Conductor Size (AWG or KCMIL)		ULT. Body	Applied Rod Length Inches [mm]	Rod Dia. Inches	Rods per Set	Std. Pack		Assem- bly Wt. (LBS)	L Inches [mm]	"" Inches [mm]	Helical Rod Color Code
		ACSR/ACSS	AAC/AAAC					Rods	Clamp				
DHCSA0555E	0.543-0.555 [13.79-14.10]	NA	NA	20000	58 [1473]	0.182	10	6	6	34	5.31 [135]	12.00	BLACK
DHCSA0573E	0.556-0.573 [14.12-14.55]	4/0 (6/1)	246.7 (7) 250 (7)	20000	58 [1473]	0.182	11	6	6	35	5.31 [135]	12.00	WHITE
DHCSA0594E	0.574-0.594 [14.58-15.09]	NA	250 (19) 266.8 (7) 266.8 (19)	20000	58 [1473]	0.182	11	6	6	35	5.31 [135]	12.00	BROWN
DHCSA0606E	0.595-0.606 [15.11-15.39]	NA	NA	20000	58 [1473]	0.182	11	6	6	35	5.31 [135]	12.00	ORANGE
DHCSA0619E	0.607-0.619 [15.42-15.72]	266.8 (18/1)	NA	20000	58 [1473]	0.182	11	6	6	35	5.31 [135]	12.00	PURPLE
DHCSA0645E	0.620-0.645 [15.75-16.36]	266.8 (26/7)	312.8 (19) 300 (19)	20000	66 [1676]	0.182	12	6	6	37	5.31 [135]	18.00 [457.2]	RED
DHCSA0673E	0.646-0.673 [16.41-17.09]	266.8 (30/7)	336.4 (19)	30000	72 [1829]	0.204	11	6	6	46	7.20 [183]	18.00 [457.2]	BLUE
DHCSA0690E	0.674-0.690 [17.12-17.53]	300 (26/7) 336.4 (18/1)	350 (19)	30000	72 [1829]	0.204	11	6	6	46	7.20 [183]	18.00 [457.2]	GREEN
DHCSA0710E	0.691-0.710 [17.55-18.03]	336.4 (22/7)	NA	30000	72 [1829]	0.204	12	6	6	47	7.20 [183]	18.00 [457.2]	YELLOW
DHCSA0731E	0.711-0.731 [18.06-18.57]	336.4 (26/7)	394.5 (19) 397.5 (19)	30000	72 [1829]	0.204	12	6	6	47	7.20 [183]	18.00 [457.2]	BLACK
DHCSA0750E	0.732-0.750 [18.59-19.05]	336.4 (30/7) 397.5 (18/1)	NA	30000	72 [1829]	0.204	12	6	6	47	7.20 [183]	18.00 [457.2]	WHITE
DHCSA0768E	0.751-0.768 [19.08-19.51]	397.5 (20/7)	NA	40000	78 [1981]	0.250	10	3	3	34	8.00 [203]	18.00 [457.2]	BROWN
DHCSA0795E	0.769-0.795 [19.53-20.19]	397.5 (24/7) 397.5 (26/7)	450 (19) 465.4 (19) 477 (19) 477 (37)	40000	78 [1981]	0.250	11	3	3	35	8.00 [203]	18.00 [457.2]	ORANGE

(1) Right-hand lay standard.

(2) For aluminum conductors types & sizes not listed, select catalog number based on dia. range to accommodate conductor.

# Suspension Clamps — Helical Cushion (EHV)

## Double Suspension

For AAC, AAAC, ACAR, ACSR, ACSR/TW, ACSS, ACSS/TW applications up to 250°

C. Maximum Takeoff Angle = 30°-60°

Slip load is 15-20% of respective conductor RBS

Application O.D. = (Helical Rod O.D. x 2) + Conductor O.D.

ALUMINUM

DHCSA (EHV)

B  
35

### Product Data and Conductor Size

Catalog Number	Conductor Dia. Range Inches [mm]	Nominal Conductor Size (AWG or KCMIL)		ULT. Body	Applied Rod Length Inches [mm]	Rod Dia. Inches	Rods per Set	Std. Pack		Assem- bly Wt. (LBS)	L Inches [mm]	"" Inches [mm]	Helical Rod Color Code
		ACSR/ACSS	AAC/AAAC					Rods	Clamp				
DHCSA0824E	0.796-0.824 [20.22-20.93]	397.5 (30/7) 477 (18/1)	500 (19)	40000	78 [1981]	0.250	11	3	3	35	8.00 [203]	18.00 [457.2]	PURPLE
DHCSA0845E	0.825-0.845 [20.96-21.46]	NA	559.5 (19) 556.5 (19) 556.5 (37)	40000	82 [2083]	0.250	11	3	3	36	8.00 [203]	18.00 [457.2]	RED
DHCSA0870E	0.846-0.870 [21.49-22.10]	477 (24/7) 477 (26/7)	550 (37) 556.5 (19) 556.5 (37)	40000	82 [2083]	0.250	11	3	3	36	8.00 [203]	18.00 [457.2]	BLUE
DHCSA0893E	0.871-0.893 [22.12-22.68]	556.5 (18/1) 477 (30/7)	600 (37)	40000	82 [2083]	0.250	12	3	3	37	8.00 [203]	18.00 [457.2]	GREEN
DHCSA0907E	0.894-0.907 [22.71-23.04]	556.5 (22/7)	NA	40000	82 [2083]	0.250	12	3	3	37	8.00 [203]	18.00 [457.2]	GREEN

(1) Right-hand lay standard.

(2) For aluminum conductors types & sizes not listed, select catalog number based on dia. range to accommodate conductor.

# Suspension Clamps — *Helical Cushion*

## Trunnion Helical Cushion Suspension Assembly

ALUMINUM

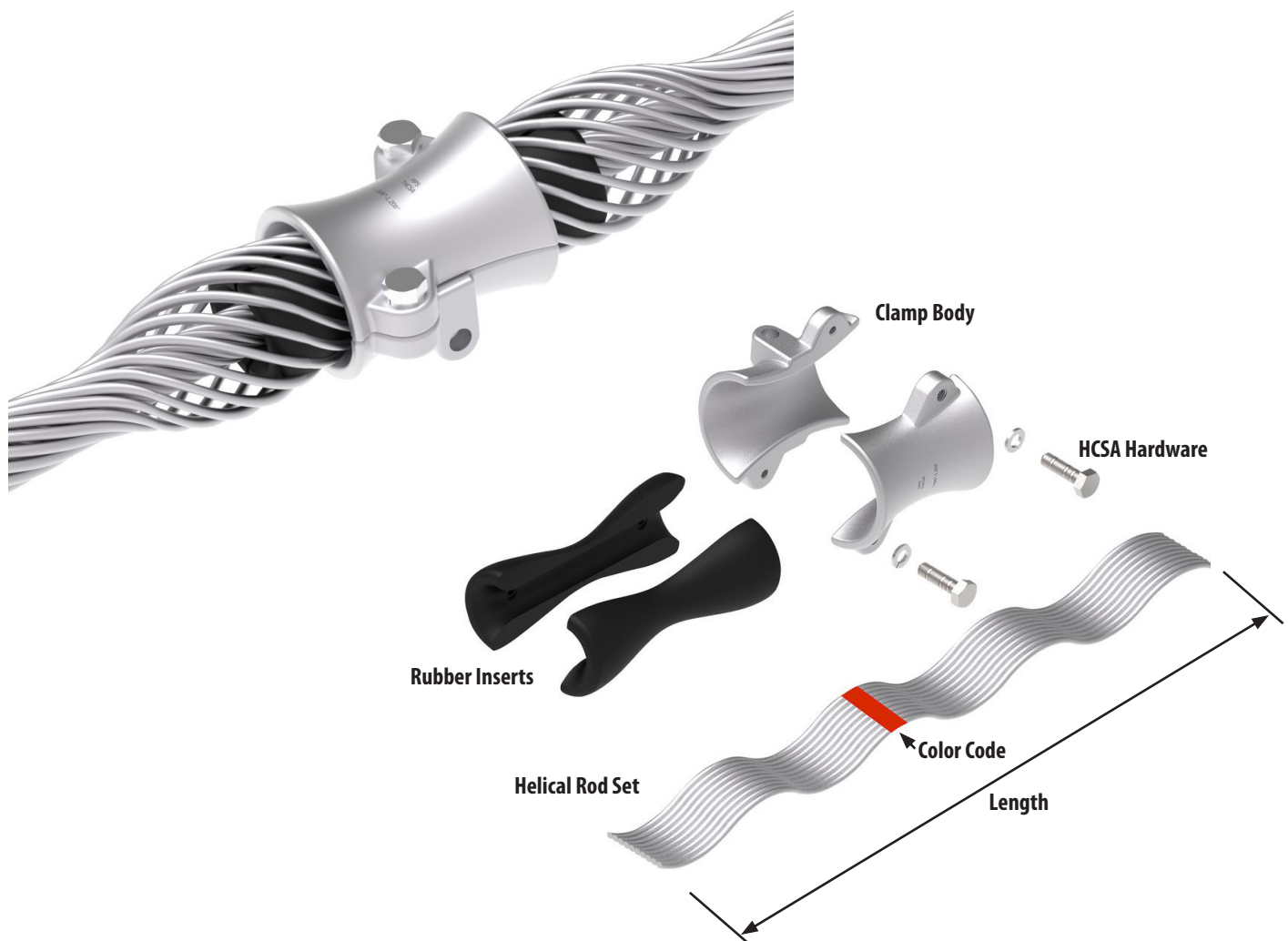
THCSA

The THCSA is a bolted aluminum trunnion suspension clamp designed to provide enhanced conductor support and protection.

The THCSA combines a cast aluminum clamp assembly with helical aluminum alloy rod sets and EPDM rubber inserts. The rubber inserts are assembled directly onto the conductor and are held in place with helical rods. The clamp assembly is then bolted around the helical wrapped rubber supporting inserts to complete the trunnion install.

### Features and Benefits:

- Rated for up to 250°C
- Designed for use on standard voltage applications with all aluminum, ACSR, ACSS, or aluminum alloy conductors
- Clamping Range of 0.908 - 1.208 inches.
- Trunnion Suspension for up to 30° line angle application





# Suspension Clamps — Helical Cushion

## Trunnion Support Suspension

ALUMINUM

THCSA

For AAC, AAAC, ACAR, ACSR, ACSR/TW, ACSS, ACSS/TW applications up to 250°

C. Maximum Takeoff Angle = 30°

Slip load is 15-20% of respective conductor RBS

Application O.D. = (Helical Rod O.D. x 2) + Conductor O.D.

### Product Data and Conductor Size

Catalog Number	Conductor Dia. Range Inches [mm]	Nominal Conductor Size (AWG or KCMIL)		ULT. Body Strength (LBS)	Applied Rod Length Inches [mm]	Rod Dia. Inches	Rods Per Set	Std. Pack		Assembly Wt. (LBS)	L Inches [mm]	Helical Rod Color Code
		ACSR/ ACSS	AAC/ AAAC					Rods	Clamp			
THCSA0920	0.908-0.920 [23.06-23.37]	556.5 (24/7)	636 (37W)	5000	65.40 [1660]	0.250	12	6	6	44	8.80 [224]	YELLOW
THCSA0937	0.921-0.937 [23.39-23.80]	555.6 (26/7)	650 (61-91W)	5000	66.00 [1676]	0.250	12	6	6	44	8.80 [224]	BLACK
THCSA0962	0.938-0.962 [23.83-24.43]	605 (24/7)		5000	67.00 [1702]	0.250	12	6	6	44	8.80 [224]	WHITE
THCSA0986	0.963-0.986 [24.46-25.04]	636 (24/7)	715.5 (61W)	5000	68.00 [1730]	0.250	13	6	6	44	8.80 [224]	BROWN
THCSA1005	0.987-1.005 [25.07-25.53]	636 (26/7)	750 (61W)	5000	69.10 [1755]	0.250	13	6	6	44	8.80 [224]	ORANGE
THCSA1022	1.006-1.022 [25.55-25.96]	636 (30/19)		5000	80.30 [2040]	0.310	11	3	3	32	9.00 [229]	PURPLE
THCSA1040	1.023-1.040 [25.98-26.42]	795 (36/1)	795 (37-61W)	5000	81.10 [2060]	0.310	11	3	3	32	9.00 [229]	RED
THCSA1074	1.041-1.074 [26.44-27.28]	715.5 (26/7)	833.6 (37)	5000	82.00 [2083]	0.310	11	3	3	32	9.00 [229]	BLUE
THCSA1090	1.075-1.090 [27.31-27.69]	715.5 (30/19)	874.5 (37W)	5000	82.00 [2083]	0.310	12	3	3	32	9.00 [229]	GREEN
THCSA1118	1.091-1.118 [27.71-28.40]	795 (26/7)	900 (37-61W)	5000	82.00 [2083]	0.310	12	3	3	32	9.00 [229]	YELLOW
THCSA1136	1.119-1.136 [28.42-28.85]	900 (45/7)	954 (37W)	5000	82.00 [2083]	0.310	12	3	3	32	9.00 [229]	BLACK
THCSA1152	1.137-1.152 [28.88-29.26]	795 (30/19)	1000 (61W)	5000	82.00 [2083]	0.310	12	3	3	32	9.00 [229]	WHITE
THCSA1175	1.153-1.175 [29.29-29.85]	954 (45/7)	1033.5 (37W)	5000	82.00 [2083]	0.310	12	3	3	32	9.00 [229]	BROWN
THCSA1208	1.176-1.208 [29.87-30.68]	954 (54/7)	1092.3 (61)	5000	82.00 [2083]	0.310	12	3	3	43	9.00 [229]	ORANGE

(1) Right-hand lay standard.

(2) For aluminum conductors types & sizes not listed, select catalog number based on dia. range to accommodate conductor.

# Suspension Clamps — *Helical Cushion*

## Trunnion Helical Cushion Suspension Assembly

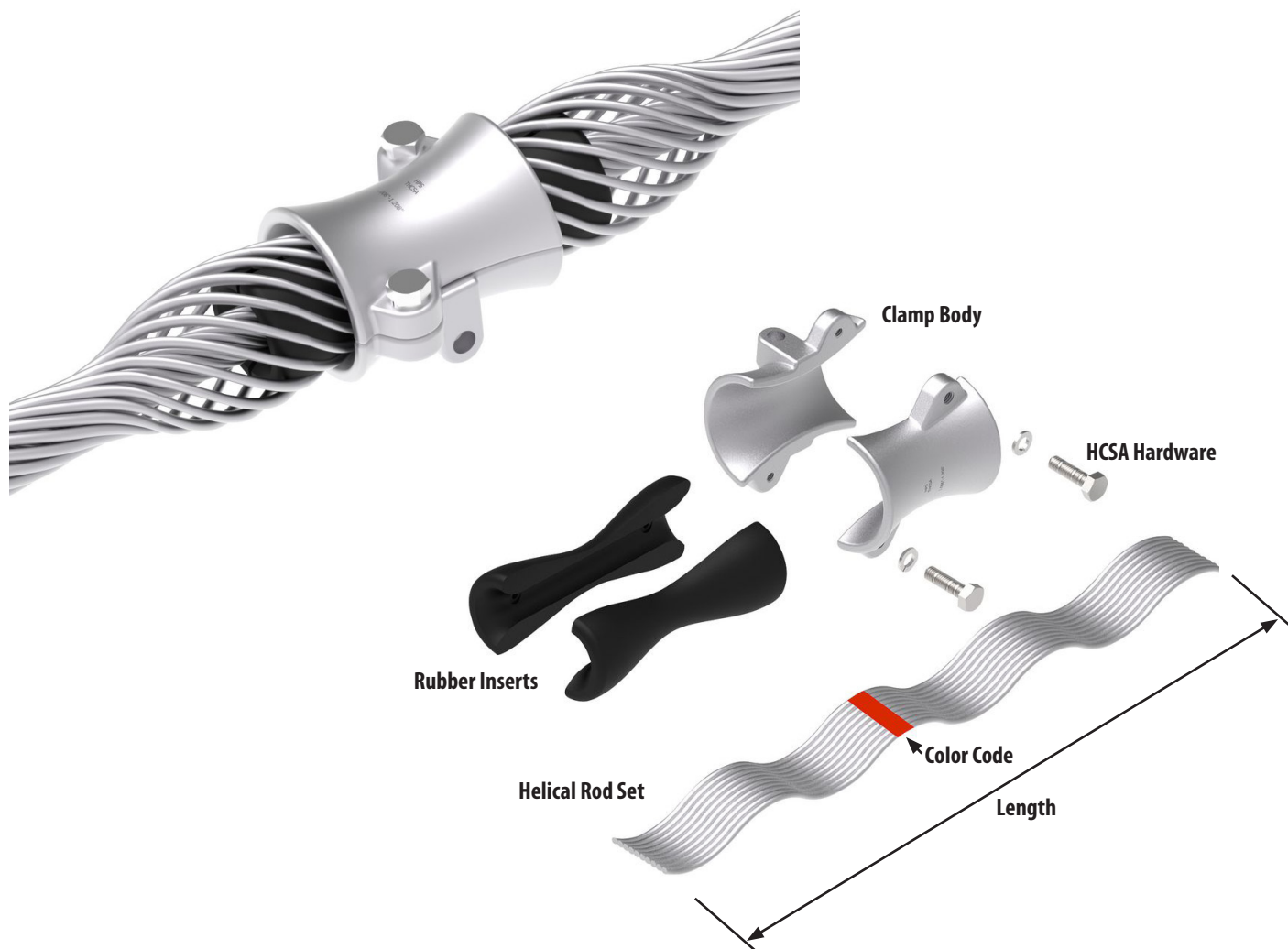
ALUMINUM  
THCSA (EHV)

The THCSA (EHV) is a bolted aluminum trunnion suspension clamp designed to provide enhanced conductor support and protection.

The THCSA (EHV) combines a cast aluminum clamp assembly with helical aluminum alloy rod sets and EPDM rubber inserts. The rubber inserts are assembled directly onto the conductor and are held in place with helical rods. The clamp assembly is then bolted around the helical wrapped rubber supporting inserts to complete the trunnion install.

### Features and Benefits:

- Rated for up to 250°C
- Designed for use on standard and EHV voltage applications with all aluminum, ACSR, ACSS, or aluminum alloy conductors
- Clamping Range of 0.908 - 1.208 inches
- Trunnion Suspension for up to 30° line angle application.



# Suspension Clamps — Helical Cushion (EHV)

## Trunnion Support Suspension

For AAC, AAAC, ACAR, ACSR, ACSR/TW, ACSS, ACSS/TW applications up to 250°C.

Maximum Takeoff Angle = 30°

Slip load is 15-20% of respective conductor RBS

Application O.D. = (Helical Rod O.D. x 2) + Conductor O.D.

ALUMINUM

THCSA (EHV)

B  
39

### Product Data and Conductor Size

Catalog Number	Conductor Dia. Range Inches [mm]	Nominal Conductor Size (AWG or KCMIL)		ULT. Body Strength (LBS)	Applied Rod Length Inches [mm]	Rod Dia. Inches	Rods Per Set	Std. Pack		Assem- bly Wt. (LBS)	L Inches [mm]	Heli- cal Rod Color Code
		ACSR/ ACSS	AAC/ AAAC					Rods	Clamp			
THCSA0920E	0.908-0.920 [23.06-23.37]	556.5 (24/7)	636 (37W)	5000	65.40 [1660]	0.250	12	6	6	44	8.80 [224]	YEL- LOW
THCSA0937E	0.921-0.937 [23.39-23.80]	555.6 (26/7)	650 (61-91W)	5000	66.00 [1676]	0.250	12	6	6	44	8.80 [224]	BLACK
THCSA0962E	0.938-0.962 [23.83-24.43]	605 (24/7)		5000	67.00 [1702]	0.250	12	6	6	44	8.80 [224]	WHITE
THCSA0986E	0.963-0.986 [24.46-25.04]	636 (24/7)	715.5 (61W)	5000	68.00 [1730]	0.250	13	6	6	44	8.80 [224]	BROWN
THCSA1005E	0.987-1.005 [25.07-25.53]	636 (26/7)	750 (61W)	5000	69.10 [1755]	0.250	13	6	6	44	8.80 [224]	OR- ANGE
THCSA1022E	1.006-1.022 [25.55-25.96]	636 (30/19)		5000	80.30 [2040]	0.310	11	3	3	32	9.00 [229]	PURPLE
THCSA1040E	1.023-1.040 [25.98-26.42]	795 (36/1)	795 (37-61W)	5000	81.10 [2060]	0.310	11	3	3	32	9.00 [229]	RED
THCSA1074E	1.041-1.074 [26.44-27.28]	715.5 (26/7)	833.6 (37)	5000	82.00 [2083]	0.310	11	3	3	32	9.00 [229]	BLUE
THCSA1090E	1.075-1.090 [27.31-27.69]	715.5 (30/19)	874.5 (37W)	5000	82.00 [2083]	0.310	12	3	3	32	9.00 [229]	GREEN
THCSA1118E	1.091-1.118 [27.71-28.40]	795 (26/7)	900 (37-61W)	5000	82.00 [2083]	0.310	12	3	3	32	9.00 [229]	YEL- LOW
THCSA1136E	1.119-1.136 [28.42-28.85]	900 (45/7)	954 (37W)	5000	82.00 [2083]	0.310	12	3	3	32	9.00 [229]	BLACK
THCSA1152E	1.137-1.152 [28.88-29.26]	795 (30/19)	1000 (61W)	5000	82.00 [2083]	0.310	12	3	3	32	9.00 [229]	WHITE
THCSA1175E	1.153-1.175 [29.29-29.85]	954 (45/7)	1033.5 (37W)	5000	82.00 [2083]	0.310	12	3	3	32	9.00 [229]	BROWN
THCSA1208E	1.176-1.208 [29.87-30.68]	954 (54/7)	1092.3 (61)	5000	82.00 [2083]	0.310	12	3	3	43	9.00 [229]	OR- ANGE

(1) Right-hand lay standard.

(2) For aluminum conductors types & sizes not listed, select catalog number based on dia. range to accommodate conductor.

# Suspension Clamps — *Helical Cushion*

## Shield Wire Helical Cushion Suspension Assembly

ALUMINUM

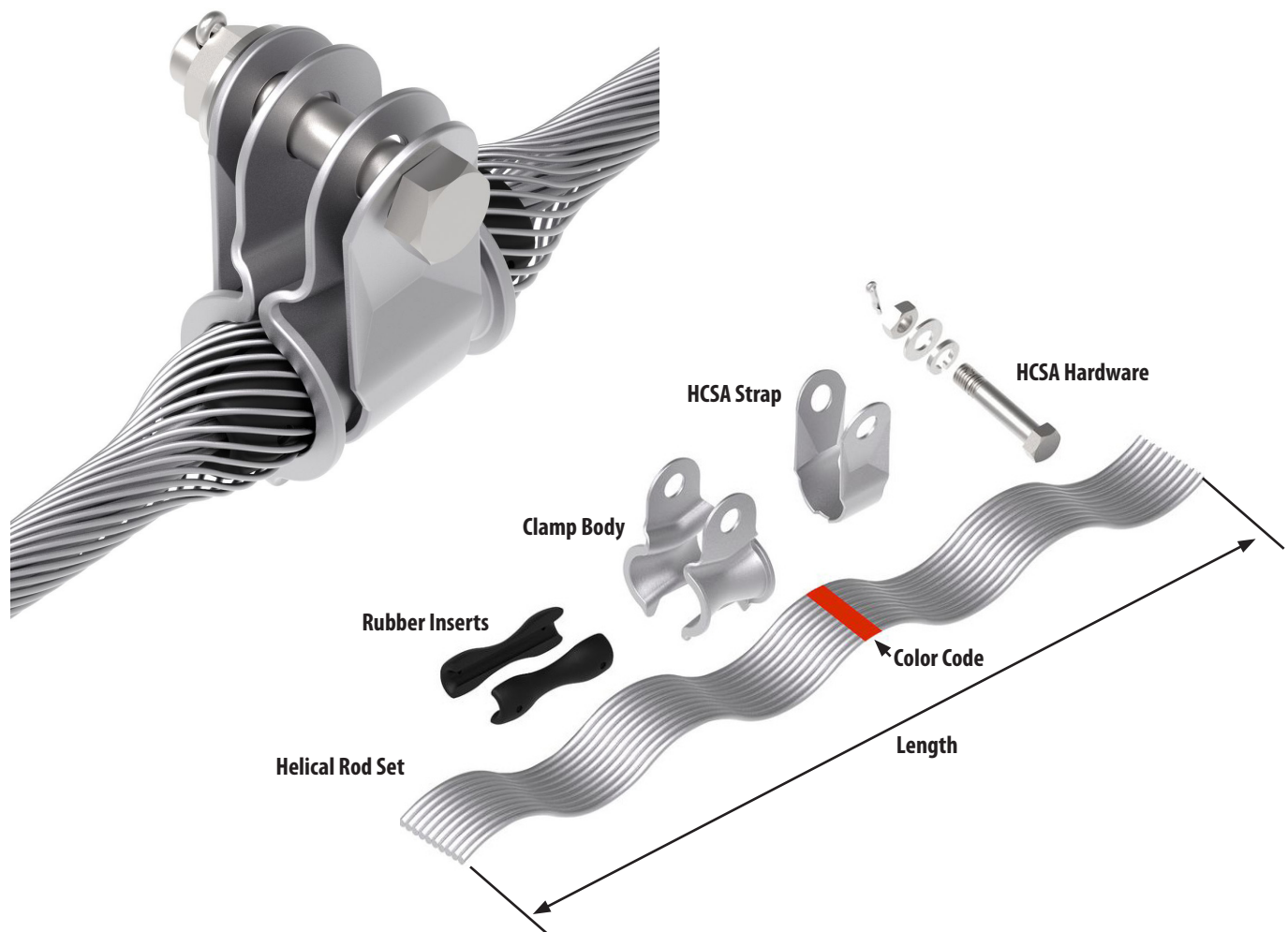
SWHCSA

The SWHCSA is a bolted aluminum suspension clamp designed to provide enhanced conductor support and protection.

The SWHCSA combines a cast aluminum clamp assembly with helical aluminum alloy rod sets and EPDM rubber inserts. The rubber inserts are assembled directly onto the conductor and are held in place with helical rods. The clamp assembly is then bolted around the helical wrapped rubber supporting inserts to complete the install.

### Features and Benefits:

- Helical rod suspension clamp for overhead shield wire
- SWHCSAGS for EHS overhead shield wire applications
- SWHCSAAW for Allumoweld® overhead shield wire applications
- Clamping Range of 0.272 - 0.500 inches



# Suspension Clamps — *Helical Cushion*

## Single Suspension

ALUMINUM

SWHCSA

For Alumoweld® and EHS Galvanized Steel applications.

Maximum Takeoff Angle = 30°

Slip load is 15-20% of respective conductor RBS Application O.D. =

(Helical Rod O.D. x 2) + Conductor O.D.

### Product Data and Conductor Size

Catalog Number	Conductor Dia. Range Inches [mm]	Nominal Conductor Size (AWG or KCMIL)		ULT. Body	Applied Rod Length Inches [mm]	Rod Dia. Inches	Rods Per Set	Std. Pack		Assembly Wt. (LBS)	L Inches [mm]	Helical Rod Color Code
		ACSR/ACSS	AAC/AAAC					Rods	Clamp			
SWHCSAGS0283	0.272-0.283 [6.91-7.19]			15000	26.00 [660]	0.119	8	15	15	31	3.25 [83]	BLUE
SWHCSAGS0294	0.284-0.294 [7.21-7.47]		2 (7)	15000	26.00 [660]	0.119	9	15	15	32	3.25 [83]	RED
SWHCSAGS0303	0.295-0.303 [7.49-7.70]			15000	26.00 [660]	0.119	9	15	15	32	3.25 [83]	BROWN
SWHCSAGS0315	0.304-0.315 [7.72-8.00]			15000	26.00 [660]	0.119	9	15	15	32	3.25 [83]	BLACK
SWHCSAGS0327	0.316-0.327 [8.02-8.31]	#2 (6/1) #2 (7/1)		15000	26.00 [660]	0.119	9	15	15	32	3.25 [83]	GREEN
SWHCSAGS0342	0.328-0.342 [8.33-8.69]		1 (7) 1 (19)	15000	26.00 [660]	0.119	10	15	15	34	3.25 [83]	PURPLE
SWHCSAGS0355	0.343-0.355 [8.71-9.02]	#1 (6/1)		15000	26.00 [660]	0.119	10	15	15	34	3.25 [83]	BROWN
SWHCSAGS0374	0.356-0.374 [9.04-9.45]		1/0 (7) 1/0 (19)	15000	26.00 [660]	0.119	10	15	15	34	3.25 [83]	ORANGE
SWHCSAGS0389	0.375-0.389 [9.47-9.88]			15000	26.00 [660]	0.119	10	15	15	34	3.25 [83]	BLUE
SWHCSAGS0404	0.390-0.404 [9.90-10.26]	1/0 (6/1)		15000	36.00 [914]	0.138	10	9	9	28	4.00 [102]	RED
SWHCSAGS0418	0.405-0.418 [10.28-10.62]		2/0 (7)	15000	36.00 [914]	0.138	10	9	9	28	4.00 [102]	BROWN
SWHCSAGS0434	0.419-0.434 [10.64-11.02]		2/0 (19)	15000	36.00 [914]	0.138	11	9	9	30	4.00 [102]	BLACK
SWHCSAGS0450	0.435-0.450 [11.04-11.43]	2/0 (6/1)		15000	36.00 [914]	0.138	11	9	9	30	4.00 [102]	GREEN
SWHCSAGS0470	0.451-0.470 [11.45-11.94]	101.8 (12/7)	3/0 (7) 3/0 (19)	15000	36.00 [914]	0.138	11	9	9	30	4.00 [102]	PURPLE
SWHCSAGS0481	0.471-0.481 [11.96-12.22]	110.8 (12/7)		15000	36.00 [914]	0.138	11	9	9	30	4.00 [102]	BROWN
SWHCSAGS0500	0.482-0.500 [12.24-12.70]			15000	45.00 [1143]	0.138	12	9	9	37	4.00 [102]	BLUE

(1) Right-hand lay standard.

(2) For aluminum conductors types & sizes not listed, select catalog number based on dia. range to accommodate conductor.



# Suspension Clamps — Helical Cushion

## Single Suspension

ALUMINUM

SWHCSA

For Alumoweld® and EHS Galvanized Steel applications.

Maximum Takeoff Angle = 30°

Slip load is 15-20% of respective conductor RBS Application O.D. =

(Helical Rod O.D. x 2) + Conductor O.D.

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### Product Data and Conductor Size

Catalog Number	Conductor Dia. Range Inches [mm]	Nominal Conductor Size (AWG or KCMIL)		ULT. Body	Applied Rod Length Inches [mm]	Rod Dia. Inches	Rods Per Set	Std. Pack		Assembly Wt. (LBS)	L Inches [mm]	Helical Rod Color Code
		ACSR/ACSS	AAC/AAAC					Rods	Clamp			
SWHCSAAW0283	0.272-0.283 [6.91-7.19]			15000	26.00 [660]	0.114	9	12	12	25	3.25 [83]	BLUE
SWHCSAAW0294	0.284-0.294 [7.21-7.47]		2 (7)	15000	26.00 [660]	0.114	9	12	12	25	3.25 [83]	RED
SWHCSAAW0303	0.295-0.303 [7.49-7.70]			15000	26.00 [660]	0.114	9	12	12	25	3.25 [83]	BLACK
SWHCSAAW0315	0.304-0.315 [7.72-8.00]			15000	26.00 [660]	0.114	9	12	12	25	3.25 [83]	BROWN
SWHCSAAW0327	0.316-0.327 [8.02-8.31]	#2 (6/1) #2 (7/1)		15000	26.00 [660]	0.114	10	12	12	27	3.25 [83]	PURPLE
SWHCSAAW0342	0.328-0.342 [8.33-8.69]		1 (7) 1 (19)	15000	26.00 [660]	0.114	10	12	12	27	3.25 [83]	GREEN
SWHCSAAW0355	0.343-0.355 [8.71-9.02]	#1 (6/1)		15000	26.00 [660]	0.114	10	12	12	27	3.25 [83]	BLACK
SWHCSAAW0374	0.356-0.374 [9.04-9.45]		1/0 (7) 1/0 (19)	15000	26.00 [660]	0.114	10	12	12	27	3.25 [83]	BROWN
SWHCSAAW0389	0.375-0.389 [9.47-9.88]			15000	26.00 [660]	0.114	11	12	12	27	3.25 [83]	RED
SWHCSAAW0404	0.390-0.404 [9.90-10.26]	1/0 (6/1)		15000	36.00 [914]	0.144	10	12	12	36	4.00 [102]	BLUE
SWHCSAAW0418	0.405-0.418 [10.28-10.62]		2/0 (7)	15000	36.00 [914]	0.144	10	12	12	36	4.00 [102]	ORANGE
SWHCSAAW0434	0.419-0.434 [10.64-11.02]		2/0 (19)	15000	36.00 [914]	0.144	10	12	12	36	4.00 [102]	BROWN
SWHCSAAW0450	0.435-0.450 [11.04-11.43]	2/0 (6/1)		15000	36.00 [914]	0.144	10	12	12	36	4.00 [102]	PURPLE
SWHCSAAW0470	0.451-0.470 [11.45-11.94]	101.8 (12/7)	3/0 (7) 3/0 (19)	15000	36.00 [914]	0.144	11	9	9	30	4.00 [102]	GREEN
SWHCSAAW0481	0.471-0.481 [11.96-12.22]	110.8 (12/7)		15000	36.00 [914]	0.144	11	9	9	30	4.00 [102]	BLACK
SWHCSAAW0500	0.482-0.500 [12.24-12.70]			15000	45.00 [1143]	0.144	11	9	9	30	4.00 [102]	BLUE

(1) Right-hand lay standard.

(2) For aluminum conductors types & sizes not listed, select catalog number based on dia. range to accommodate conductor.

# Suspension Clamps — *Helical Cushion*

## Double Shield Wire Helical Cushion Suspension Assembly

ALUMINUM

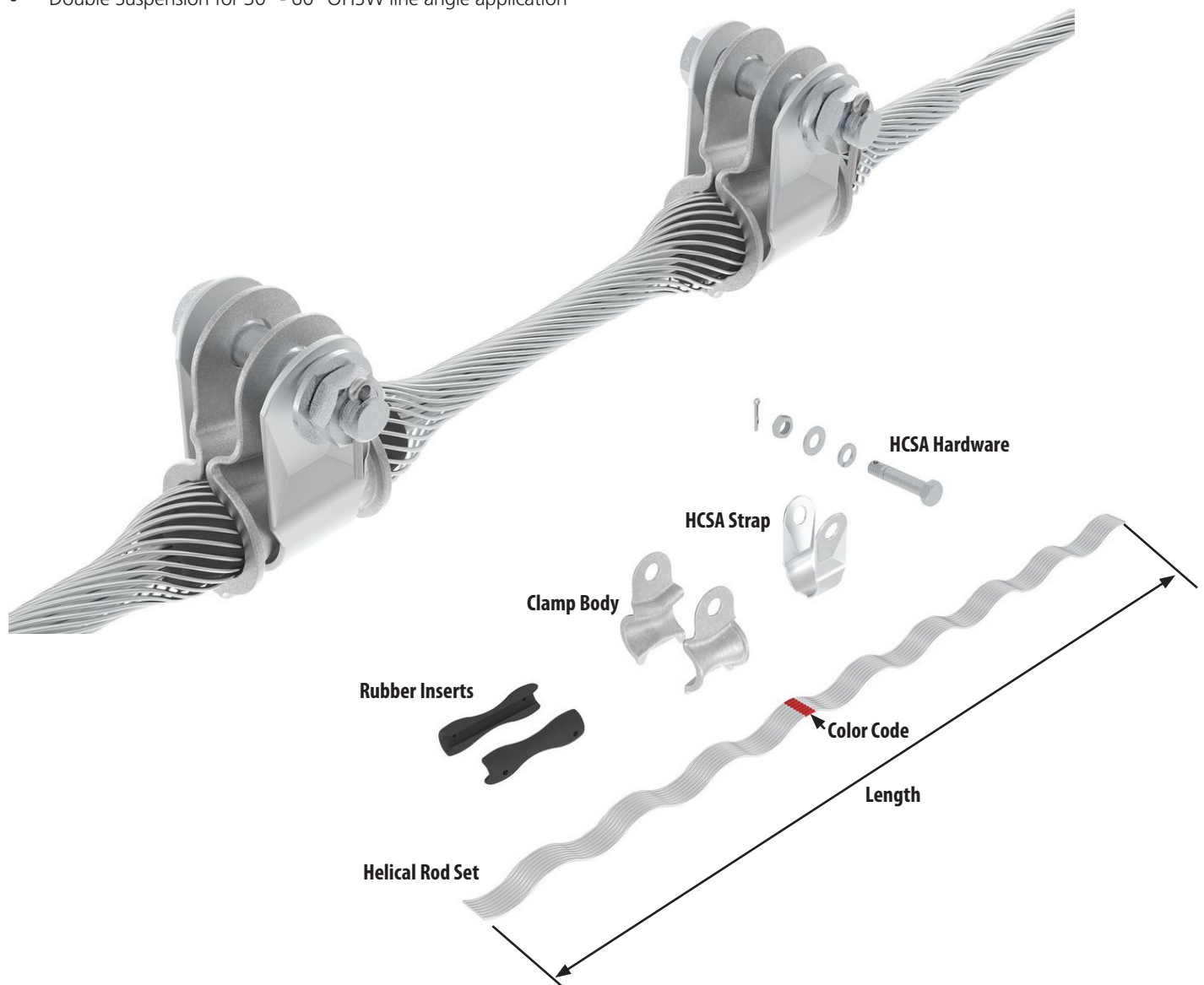
DSWHCSA

The DSWHCSA is a bolted aluminum suspension clamp designed to provide enhanced conductor support and protection.

The DSWHCSA combines a cast aluminum clamp assembly with helical aluminum alloy rod sets and EPDM rubber inserts. The rubber inserts are assembled directly onto the conductor and are held in place with helical rods. The clamp assembly is then bolted around the helical wrapped rubber supporting inserts to complete the install.

### Features and Benefits:

- Helical rod suspension clamp for overhead shield wire
- The DSWHCSA clamps are two SWHCSA clamps with one shared set of helical rods
- SWHCSAGS for EHS overhead shield wire applications
- SWHCSAAW for Allumoweld® overhead shield wire applications
- Clamping Range of 0.272 - 0.500 inches
- Double Suspension for 30° - 60° OHSW line angle application



# Suspension Clamps — Helical Cushion

## Over Head Shield Wire Suspension Doubles

ALUMINUM

DSWHCSA

For Alumoweld® and EHS Galvanized Steel applications.

Maximum Takeoff Angle = 30°-60°

Slip load is 15-20% of respective conductor RBS Application O.D. =

(Helical Rod O.D. x 2) + Conductor O.D.

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### Product Data and Conductor Size

Catalog Number	Conductor Dia. Range Inches [mm]	Nominal Conductor Size (AWG or KCMIL)		ULT. Body Strength (LBS)	Applied Rod Length Inches [mm]	Rod Dia. Inches	Rods Per Set	Std. Pack		Assembly Wt. (LBS)	L Inches [mm]	Helical Rod Color Code
		ACSR/ACSS	AAC/AAAC					Rods	Clamp			
DSWHCSAGS0283	0.272-0.283 [6.91-7.19]			15000	38.00 [965]	0.119	8	9	9	21	3.25 [83]	BLUE
DSWHCSAGS0294	0.284-0.294 [7.21-7.47]		2 (7)	15000	38.00 [965]	0.119	9	9	9	23	3.25 [83]	RED
DSWHCSAGS0303	0.295-0.303 [7.49-7.70]			15000	38.00 [965]	0.119	9	9	9	23	3.25 [83]	BROWN
DSWHCSAGS0315	0.304-0.315 [7.72-8.00]			15000	38.00 [965]	0.119	9	9	9	23	3.25 [83]	BLACK
DSWHCSAGS0327	0.316-0.327 [8.02-8.31]	#2 (6/1) #2 (7/1)		15000	38.00 [965]	0.119	9	9	9	23	3.25 [83]	GREEN
DSWHCSAGS0342	0.328-0.342 [8.33-8.69]		1 (7) 1 (19)	15000	38.00 [965]	0.119	10	9	9	24	3.25 [83]	PURPLE
DSWHCSAGS0355	0.343-0.355 [8.71-9.02]	#1 (6/1)		15000	38.00 [965]	0.119	10	9	9	24	3.25 [83]	BROWN
DSWHCSAGS0374	0.356-0.374 [9.04-9.45]		1/0 (7) 1/0 (19)	15000	38.00 [965]	0.119	10	9	9	24	3.25 [83]	ORANGE
DSWHCSAGS0389	0.375-0.389 [9.47-9.88]			15000	38.00 [965]	0.119	10	9	9	24	3.25 [83]	BLUE
DSWHCSAGS0404	0.390-0.404 [9.90-10.26]	1/0 (6/1)		15000	48.00 [1219]	0.138	10	9	9	34	4.00 [102]	RED
DSWHCSAGS0418	0.405-0.418 [10.28-10.62]		2/0 (7)	15000	48.00 [1219]	0.138	10	9	9	34	4.00 [102]	BROWN
DSWHCSAGS0434	0.419-0.434 [10.64-11.02]		2/0 (19)	15000	48.00 [1219]	0.138	11	9	9	36	4.00 [102]	BLACK
DSWHCSAGS0450	0.435-0.450 [11.04-11.43]	2/0 (6/1)		15000	48.00 [1219]	0.138	11	9	9	36	4.00 [102]	GREEN
DSWHCSAGS0470	0.451-0.470 [11.45-11.94]	101.8 (12/7)	3/0 (7) 3/0 (19)	15000	48.00 [1219]	0.138	11	9	9	36	4.00 [102]	PURPLE
DSWHCSAGS0481	0.471-0.481 [11.96-12.22]	110.8 (12/7)		15000	48.00 [1219]	0.138	11	9	9	36	4.00 [102]	BROWN
DSWHCSAGS0500	0.482-0.500 [12.24-12.70]			15000	57.00 [1448]	0.138	12	9	9	43	4.00 [102]	BLUE

(1) Right-hand lay standard.

(2) For aluminum conductors types & sizes not listed, select catalog number based on dia. range to accommodate conductor.

# Suspension Clamps — Helical Cushion

## Double Suspension

ALUMINUM

DSWHCSA

For Alumoweld® and EHS Galvanized Steel applications.

Maximum Takeoff Angle = 30°-60°

Slip load is 15-20% of respective conductor RBS Application O.D. =

(Helical Rod O.D. x 2) + Conductor O.D.

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### Product Data and Conductor Size

Catalog Number	Conductor Dia. Range Inches [mm]	Nominal Conductor Size (AWG or KCMIL)		ULT. Body Strength (LBS)	Applied Rod Length Inches [mm]	Rod Dia. Inches	Rods Per Set	Std. Pack		Assembly Wt. (LBS)	L Inches [mm]	Helical Rod Color Code
		ACSR/ACSS	AAC/AAAC					Rods	Clamp			
DSWHCSAAW0283	0.272-0.283 [6.91-7.19]			15000	38.00 [965]	0.114	9	9	9	21	3.25 [83]	BLUE
DSWHCSAAW0294	0.284-0.294 [7.21-7.47]		2 (7)	15000	38.00 [965]	0.114	9	9	9	21	3.25 [83]	RED
DSWHCSAAW0303	0.295-0.303 [7.49-7.70]			15000	38.00 [965]	0.114	9	9	9	21	3.25 [83]	BLACK
DSWHCSAAW0315	0.304-0.315 [7.72-8.00]			15000	38.00 [965]	0.114	9	9	9	21	3.25 [83]	BROWN
DSWHCSAAW0327	0.316-0.327 [8.02-8.31]	#2 (6/1) #2 (7/1)		15000	38.00 [965]	0.114	10	9	9	22	3.25 [83]	PURPLE
DSWHCSAAW0342	0.328-0.342 [8.33-8.69]		1 (7) 1 (19)	15000	38.00 [965]	0.114	10	9	9	22	3.25 [83]	GREEN
DSWHCSAAW0355	0.343-0.355 [8.71-9.02]	#1 (6/1)		15000	38.00 [965]	0.114	10	9	9	22	3.25 [83]	BLACK
DSWHCSAAW0374	0.356-0.374 [9.04-9.45]		1/0 (7) 1/0 (19)	15000	38.00 [965]	0.114	10	9	9	22	3.25 [83]	BROWN
DSWHCSAAW0389	0.375-0.389 [9.47-9.88]			15000	38.00 [965]	0.114	11	9	9	23	3.25 [83]	RED
DSWHCSAAW0404	0.390-0.404 [9.90-10.26]	1/0 (6/1)		15000	48.00 [1219]	0.144	10	9	9	32	4.00 [102]	BLUE
DSWHCSAAW0418	0.405-0.418 [10.28-10.62]		2/0 (7)	15000	48.00 [1219]	0.144	10	9	9	32	4.00 [102]	ORANGE
DSWHCSAAW0434	0.419-0.434 [10.64-11.02]		2/0 (19)	15000	48.00 [1219]	0.144	10	9	9	32	4.00 [102]	BROWN
DSWHCSAAW0450	0.435-0.450 [11.04-11.43]	2/0 (6/1)		15000	48.00 [1219]	0.144	10	9	9	32	4.00 [102]	PURPLE
DSWHCSAAW0470	0.451-0.470 [11.45-11.94]	101.8 (12/7)	3/0 (7) 3/0 (19)	15000	48.00 [1219]	0.144	11	9	9	35	4.00 [102]	GREEN
DSWHCSAAW0481	0.471-0.481 [11.96-12.22]	110.8 (12/7)		15000	48.00 [1219]	0.144	11	9	9	35	4.00 [102]	BLACK
DSWHCSAAW0500	0.482-0.500 [12.24-12.70]			15000	57.00 [1448]	0.144	11	9	9	35	4.00 [102]	BLUE

(1) Right-hand lay standard.

(2) For aluminum conductors types & sizes not listed, select catalog number based on dia. range to accommodate conductor.

# Suspension Clamps — *Helical Cushion*

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## Product Cross Reference

Conductor Dia. IN		Standard Voltage		EHV	
Min.	Max.	HPS	PLP	HPS	PLP
0.908	0.92	HCSA0920	AGS-5121	HCSA0920E	AGS-5500
0.921	0.937	HCSA0937	AGS-5122	HCSA0937E	AGS-5501
0.938	0.962	HCSA0962	AGS-5123	HCSA0962E	AGS-5502
0.963	0.986	HCSA0986	AGS-5124	HCSA0986E	AGS-5503
0.987	1.005	HCSA1005	AGS-5125	HCSA1005E	AGS-5504
1.006	1.022	HCSA1022	AGS-5126	HCSA1022E	AGS-5505
1.023	1.04	HCSA1040	AGS-5127	HCSA1040E	AGS-5506
1.041	1.074	HCSA1074	AGS-5128	HCSA1074E	AGS-5507
1.075	1.09	HCSA1090	AGS-5129	HCSA1090E	AGS-5508
1.091	1.118	HCSA1118	AGS-5130	HCSA1118E	AGS-5509
1.119	1.136	HCSA1136	AGS-5131	HCSA1136E	AGS-5510
1.137	1.152	HCSA1152	AGS-5132	HCSA1152E	AGS-5511
1.153	1.175	HCSA1175	AGS-5133	HCSA1175E	AGS-5512
1.176	1.208	HCSA1208	AGS-5134	HCSA1208E	AGS-5513
1.209	1.226	HCSA1226	AGS-5135	HCSA1226E	AGS-5514
1.227	1.259	HCSA1259	AGS-5136	HCSA1259E	AGS-5515
1.26	1.286	HCSA1286	AGS-5137	HCSA1286E	AGS-5516
1.287	1.314	HCSA1314	AGS-5138	HCSA1314E	AGS-5517
1.315	1.355	HCSA1355	AGS-5139	HCSA1355E	AGS-5518
1.356	1.394	HCSA1394	AGS-5140	HCSA1394E	AGS-5519
1.395	1.416	HCSA1416	AGS-5141	HCSA1416E	AGS-5520
1.417	1.442	HCSA1442	AGS-5142	HCSA1442E	AGS-5521
1.443	1.477	HCSA1477	AGS-5143	HCSA1477E	AGS-5522
1.478	1.516	HCSA1516	AGS-5144	HCSA1516E	AGS-5523
1.517	1.557	HCSA1557	AGS-5145	HCSA1557E	AGS-5524

(1) HCSA offerings are rated 250°C Continuous.

(2) One part num,be for both Standard and High Temperature applications.