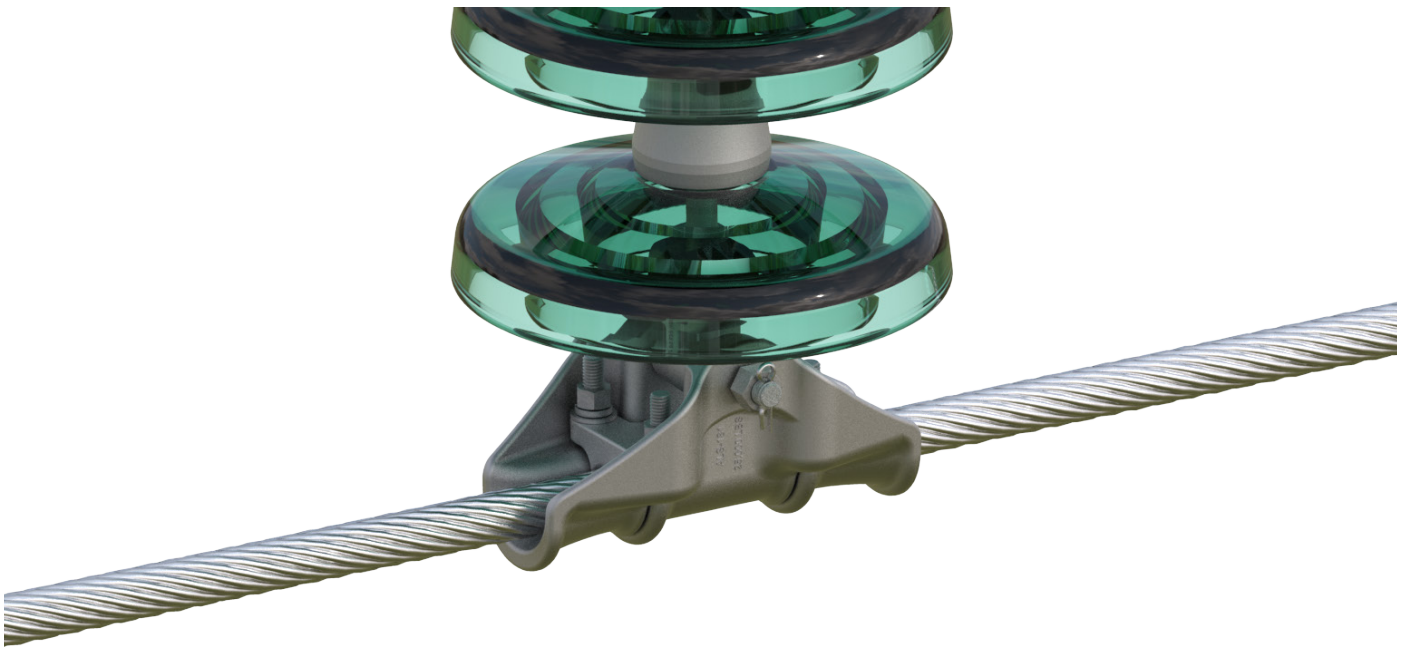




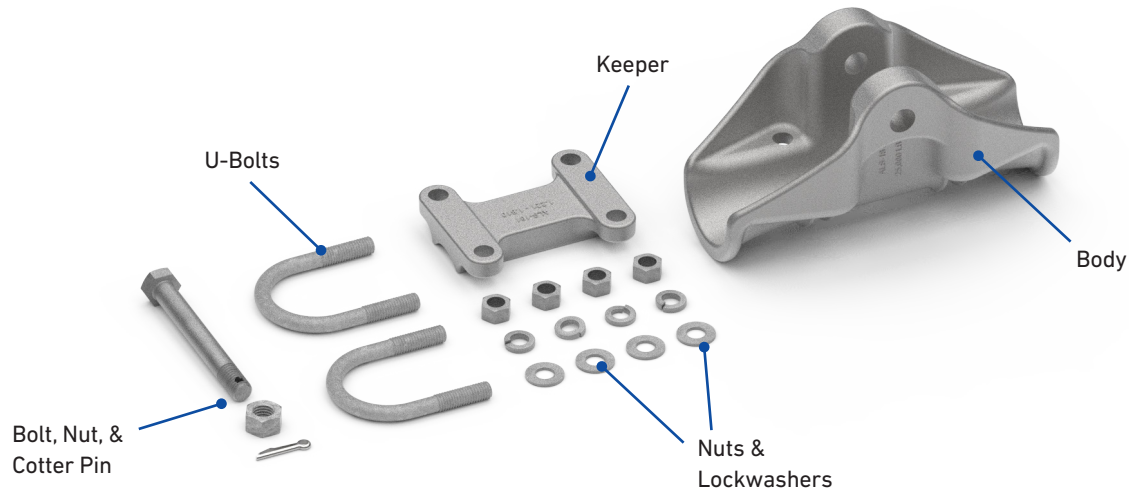
ALUMINUM SUSPENSION CLAMP

Aluminum Suspension (ALS) Clamps are intended for use on all aluminum-based conductors. PLP recommends placing Armor Rods over the conductor at suspension points to minimize the static and dynamic stresses at the ends of the clamp and extend the life of the conductor. The standard ALS Clamps are designed for continuous conductor operating temperatures up to 125°C (150°C for two-hour emergencies) when installed over bare conductor. When installed over Armor Rods, ALS Clamps are rated for continuous conductor operating temperatures of up to 250°C.

FEATURES AND BENEFITS

- Shipped fully assembled with no loose parts to avoid lost hardware
- Aluminum alloy body and keeper
- Galvanized steel hardware
- Compatible with standard attachment hardware
- ALS-122BNK, ALS-181BNK, ALS-238BNK, and ALS-285BNK are designed for EHV operation (contact PLP for more information)
- Bolted clamp-type suspensions and supports on Armor Rods are not recommended for composite core high-temperature, low-sag (HTLS) conductors. Contact PLP for questions about Armor Rods and suspension solutions for HTLS applications.

COMPONENTS



Aluminum Suspension Clamp

Characteristic	Specification
Unbalanced/Slip Load	Minimum of 25% of conductor rated breaking strength
Maximum Vertical Load	Varies per assembly (consult dimensional chart for specific ratings)
Maximum Line Angle	- ALS-47 and ALS-67: 30-degrees as a single suspension and 60-degrees in a double configuration utilizing a yoke plate - ALS-91, ALS-122BNK, ALS-181BNK, ALS-238BNK, and ALS-285BNK: 35-degrees as a single suspension and 70-degrees in a double configuration utilizing a yoke plate



ORDERING INFORMATION

- Select the appropriate catalog number for the Aluminum Suspension (ALS) Clamp from the table below based on the diameter of the conductor
- For Double ALS suspension applications, order two identical suspensions, a yoke plate, an attachment fitting to connect the yoke plate to the structure, and two identical Clevis Eye fittings to connect the suspensions to the yoke plate
- **NOTE:** ALS-122BNK and up are **ONLY** offered with a bolt, nut, and cotter pin (BNK)

Aluminum Suspension (ALS) Clamp Catalog Number

ALS- X X X
(Section 1) (Section 2) (Section 3)

Catalog Number Example: ALS-181BNKSE

Includes (1) ALS Clamp with Bolt, Nut, and Cotter Pin and Socket Eye fitting.

Section 1

Range Number	Conductor Range		Weight	Standard Carton Quantity	Vertical Ultimate Load
	in	mm	lb (kg)		lbf (kN)
47	0.2 - 0.469	5.1 - 11.9	0.9 (0.4)	3 units	5,000 (22)
67	0.47 - 0.669	11.9 - 17	1.5 (0.7)	3 units	10,000 (44)
91	0.67 - 0.909	17 - 23.1	2.35 (1.0)	3 units	15,000 (67)
122BNK	0.91 - 1.22	23.1 - 31	4.65 (2.1)	3 units	25,000 (111)
181BNK	1.221 - 1.81	31 - 46	5.45 (2.5)	3 units	25,000 (111)
238BNK	1.811 - 2.38	46 - 60.5	6.85 (3.1)	3 units	25,000 (111)
285BNK	2.381 - 2.85	60.5 - 72.4	12.85 (5.8)	3 units	30,000 (133)

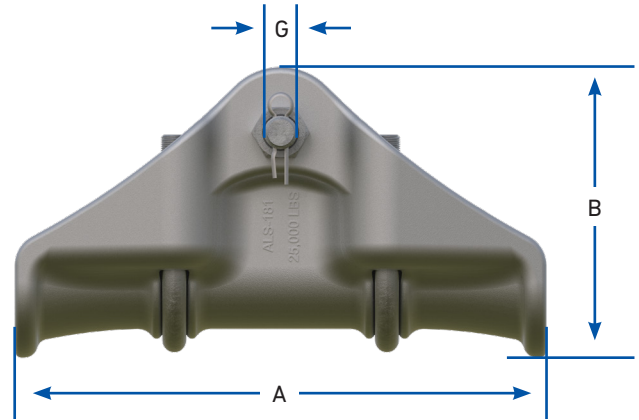
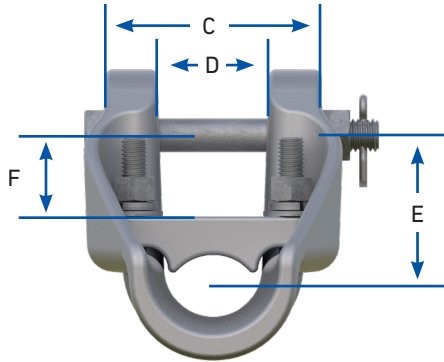
Section 2

Suffix Code	Type
Leave Blank	Standard Clevis Pin and Cotter Pin
BNK	Bolt, Nut, and Cotter Pin

Section 3

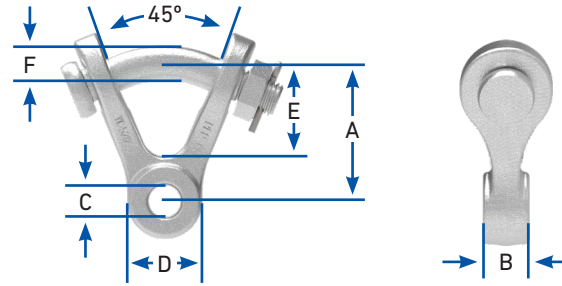
Suffix Code	Type
Leave Blank	No attachment fittings
YC	Includes Y-Clevis Eye
CE	Includes Clevis Eye
SE	Includes Socket Eye

DIMENSIONS



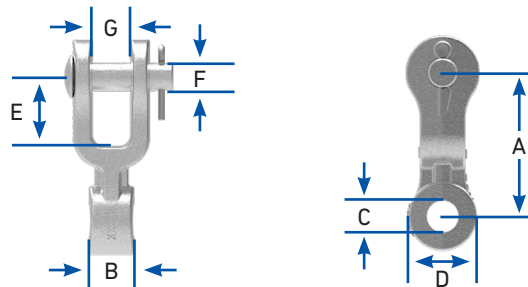
Catalog Number	Dimensions								Vertical Ultimate Load
	in (mm)								lbf (kN)
	A	B	C	D	E	F		G	
						Minimum	Maximum	Pin Diameter	
ALS-47	5.0 (127)	3.1 (78)	1.9 (48.3)	0.75 (19)	1.2 (30.5)	0.94 (23.9)	1.2 (30.5)	5/8 (15.9)	5,000 (22)
ALS-67	6.5 (165)	3.7 (95)	2.4 (61)	0.85 (21.6)	1.9 (48.3)	1.2 (30.5)	1.4 (36.1)	5/8 (15.9)	10,000 (44)
ALS-91	6.5 (165)	4.0 (101)	2.1 (53.3)	1.05 (26.7)	2.3 (58.4)	0.98 (24.9)	1.2 (30.5)	5/8 (15.9)	15,000 (67)
ALS-122BNK	9.0 (228)	5.0 (127)	3.0 (76.2)	1.5 (38.1)	2.5 (63.5)	1.34 (34)	1.65 (41.9)	5/8 (15.9)	25,000 (111)
ALS-181BNK	9.8 (249)	5.4 (136)	3.3 (83.8)	2.0 (50.3)	2.5 (63.5)	0.83 (21)	1.42 (36)	5/8 (15.9)	25,000 (111)
ALS-238BNK	12 (305)	6.2 (157)	4.6 (117)	2.6 (66)	3.0 (76.2)	1.08 (27.5)	1.63 (41.5)	5/8 (15.9)	25,000 (111)
ALS-285BNK	14 (356)	7.2 (183)	5.3 (135)	3.13 (79.5)	3.81 (96.8)	0.96 (24.4)	2.14 (54.4)	3/4 (19.1)	30,000 (133)

HARDWARE FITTINGS



Y-Clevis Eye

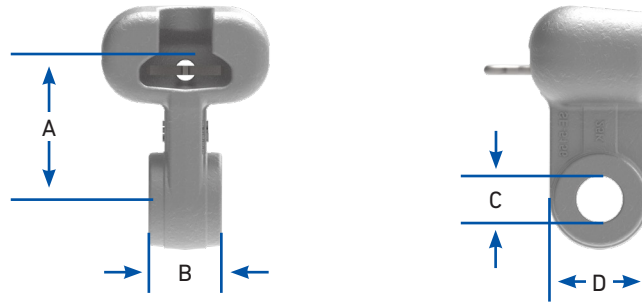
Catalog Number	ALS Clamp	Dimensions						Ultimate Strength	Weight per 100 units
		in (mm)							
		A	B	C	D	E	F	lbf (kN)	lb
YC-9030	ALS-47 ALS-67	2-7/16 (61.9)	5/8 (15.9)	11/16 (17.5)	1-5/8 (41.3)	1-5/8 (41.3)	3/4 (19)	15,000 (67)	120
YC-9031	ALS-91	2-7/16 (61.9)	3/4 (19)	11/16 (17.5)	1-11/16 (42.9)	1-5/8 (41.3)	3/4 (19)	25,000 (111)	130
YC-9032	ALS-122BNK	2-7/16 (61.9)	1-1/4 (32)	11/16 (17.5)	1-11/16 (42.9)	1-5/8 (41.3)	3/4 (19)	25,000 (111)	150
YC-9033	ALS-181BNK	2-7/16 (61.9)	1-3/4 (44.5)	11/16 (17.5)	1-11/16 (42.9)	1-5/8 (41.3)	3/4 (19)	25,000 (111)	170
YC-9034	ALS-238BNK	2-7/16 (61.9)	2-1/4 (57.2)	11/16 (17.5)	2-1/4 (57.2)	1-5/8 (41.3)	3/4 (19)	30,000 (133)	190
YC-6108	ALS-285BNK	2-23/32 (69)	2-3/4 (69.9)	13/16 (20.6)	2-3/4 (69.9)	1-25/32 (45.2)	3/4 (19)	30,000 (133)	261



Clevis Eye

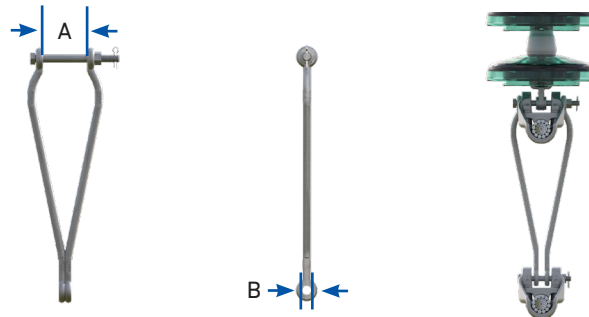
Catalog Number	ALS Clamp	Dimensions							Ultimate Strength	Weight per 100 units
		in (mm)								
		A	B	C	D	E	F	G	lbf (kN)	lb
CE-9109	ALS-47 ALS-67	2-7/8 (73)	5/8 (15.9)	11/16 (17.5)	1-9/16 (39.7)	1-1/4 (32)	5/8 (16)	7/8 (22.2)	15,000 (67)	101
CE-9110	ALS-91	2-7/8 (73)	3/4 (19)	11/16 (17.5)	1-21/32 (42)	1-1/4 (32)	5/8 (16)	7/8 (22.2)	25,000 (111)	106
CE-9111	ALS-122BNK	2-7/8 (73)	1-1/4 (32)	11/16 (17.5)	1-21/32 (42)	1-1/4 (32)	5/8 (16)	7/8 (22.2)	25,000 (111)	127
CE-9112	ALS-181BNK	2-7/8 (73)	1-3/4 (44.5)	11/16 (17.5)	1-21/32 (42)	1-1/4 (32)	5/8 (16)	7/8 (22.2)	25,000 (111)	146
CE-9113	ALS-238BNK	2-7/8 (73)	2-1/4 (57.2)	11/16 (17.5)	1-21/32 (42)	1-1/4 (32)	5/8 (16)	7/8 (22.2)	25,000 (111)	164
CE-6110	ALS-285BNK	2-7/8 (73)	2-3/4 (69.9)	13/16 (20.6)	1-25/32 (45.2)	1-1/4 (32)	5/8 (16)	7/8 (22.2)	30,000 (133)	229

HARDWARE FITTINGS



Socket Eye

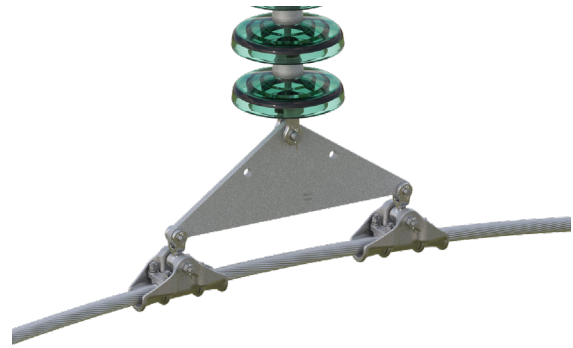
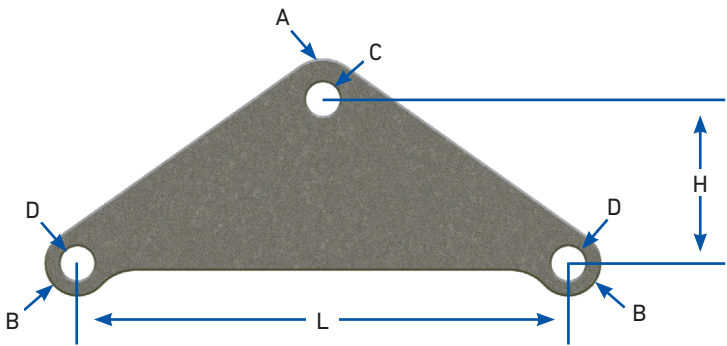
Catalog Number	ALS Clamp	Dimensions				Ultimate Strength	Weight per 100 units	For use with Insulators per ANSI Class Spec C29.2-71
		in (mm)						
		A	B	C	D	lbf (kN)	lb	
SE-9020	ALS-47 ALS-67	1-11/16 (43)	5/8 (15.9)	11/16 (17.5)	1-25/32 (45)	30,000 (133)	145	52-3 & 52-5
SE-9021	ALS-91	1-11/16 (43)	3/4 (19.1)	11/16 (17.5)	1-25/32 (45)	30,000 (133)	151	
SE-9022	ALS-122BNK	1-11/16 (43)	1-1/4 (31.8)	11/16 (17.5)	1-25/32 (45)	30,000 (133)	176	
SE-9023	ALS-181BNK	1-11/16 (43)	1-3/4 (44.5)	11/16 (17.5)	1-25/32 (45)	30,000 (133)	201	
SE-9024	ALS-238BNK	1-11/16 (43)	2-1/4 (57.2)	11/16 (17.5)	1-25/32 (45)	30,000 (133)	224	
SE-6109	ALS-285BNK	2-1/16 (27)	2-3/4 (69.9)	13/16 (20.6)	1-29/32 (48.4)	30,000 (133)	274	



Vertical Bundling Link

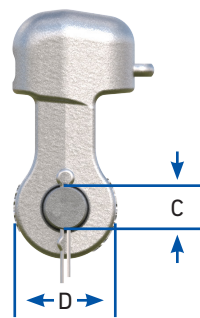
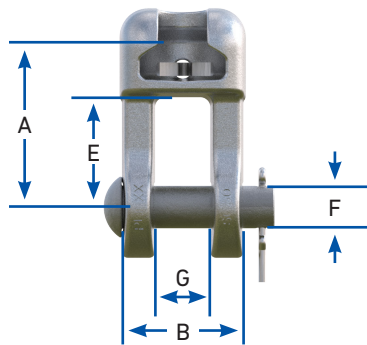
Catalog Number	ALS Clamp	Dimensions					Rated Strength
		in (mm)					lbf (kN)
		Rod Diameter	Bolt Diameter	Center to Center	A	B	
VBL-13	ALS-122BNK	5/8 (15.8)	5/8 (15.8)	18 (457)	3-1/4 (82.6)	11/16 (17.5)	25,000 (111)
VBL-14	ALS-181BNK	5/8 (15.8)	5/8 (15.8)	18 (457)	3-1/2 (88.9)	11/16 (17.5)	25,000 (111)
VBL-15	ALS-238BNK	3/4 (19.1)	5/8 (15.8)	18 (457)	4-5/16 (110)	11/16 (17.5)	30,000 (133)

HARDWARE FITTINGS



Yoke Plate

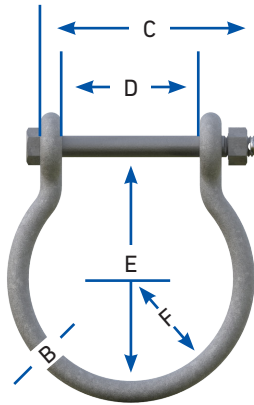
Catalog Number	ALS Clamp	Dimensions						Plate Thickness	Ultimate Strength
		in (mm)							
		A	B	C	D	L	H	in (mm)	lbf (kN)
		Radius	Radius	Diameter	Diameter				
YP-5907	ALS-47	1 (25.4)	13/16 (20.6)	13/16 (20.6)	13/16 (20.6)	12 (305)	4 (101.6)	1/2 (12.7)	30,000 (133)
YP-5908	ALS-67 ALS-91	1-1/4 (31.8)	15/16 (23.8)	1 (25.4)	1 (25.4)	18 (457)	6-1/4 (158.8)	5/8 (15.9)	40,000 (178)
YP-5910	ALS-122BNK ALS-181BNK ALS-238BNK	1-1/4 (31.8)	15/16 (23.8)	1 (25.4)	1 (25.4)	26 (660)	8-1/2 (215.9)	3/4 (19.1)	50,000 (222)
YP-5956	ALS-285BNK	1-1/2 (38.1)	1 (25.4)	1-1/4 (31.8)	1-1/4 (31.8)	42 (1067)	13 (330.2)	1-1/4 (31.8)	72,000 (320)



Socket Clevis

Catalog Number	Dimensions							Ultimate Strength	For use with Insulators per ANSI Class Spec C29.2-71
	in (mm)								
	A	B	C	D	E	F	G	lbf (kN)	
SC-5194	2-5/8 (66.7)	1-9/16 (39.7)	11/16 (17.5)	1-3/4 (44.5)	1-5/8 (41.3)	5/8 (15.9)	13/16 (20.6)	30,000 (133)	ANSI 52-3 & 52-5
SC-50	3-1/4 (82.6)	2-5/8 (66.6)	7/8 (22.2)	2-3/16 (55.6)	2-1/16 (52.4)	7/8 (22.2)	1-1/8 (28.6)	50,000 (222)	ANSI 52-8 & 52-11

HARDWARE FITTINGS



Hold Down Shackles

Catalog Number	Conductor Diameter Range		Hold Down Shackle Part Number	Dimensions						Max Hold Down Weight
	in	mm		in (mm)						lb (kg)
				Bolt Diameter	B	C	D	E	F	
ALS-122BNK	0.910 - 1.220	23.11 - 30.99	HDS-04	5/8 (15.9)	1/2 (15.9)	5-1/2 (128.3)	3-1/8 (76.5)	5-1/2 (128.3)	2-1/2 (52.1)	300 (136.1)
ALS-181BNK	1.221 - 1.810	31.01 - 45.97	HDS-08	5/8 (15.9)	5/8 (15.9)	6-1/2 (153.7)	4-1/8 (101.9)	6-1/2 (153.7)	3 (76.2)	800 (362.9)
ALS-236BNK	1.811 - 2.379	46.00 - 60.43	HDS-11	5/8 (15.9)	5/8 (15.9)	7-1/8 (178.1)	4-3/4 (103.5)	6-7/8 (154.6)	3-1/8 (76.5)	800 (362.9)
ALS-285BNK	2.380 - 2.850	60.45 - 72.39	HDS-12	3/4 (19.0)	5/8 (15.9)	8 (203.2)	5-3/8 (128.0)	7-1/2 (179.1)	3-1/2 (77.5)	800 (362.9)