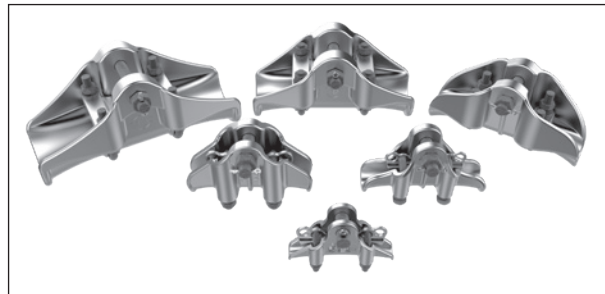
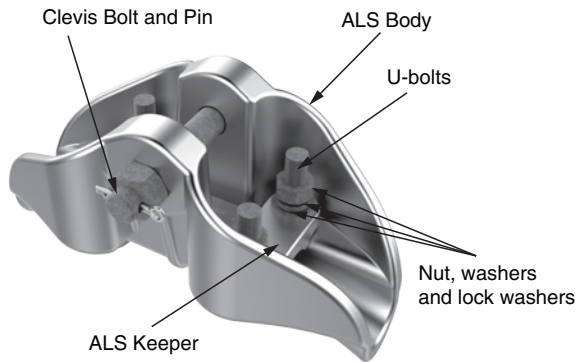




Aluminum Suspension (ALS) Clamp

NOMENCLATURE



Thermal Rating
Bare Clamp (Continuous): 125 C
W/ Armor Rods (Continuous): 250 C

GENERAL RECOMMENDATIONS

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 as well as 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 the bare conductor. When standard ALS Clamps are installed over Armor Rods, they are rated for continuous conductor operating temperatures of up to 250 C.

Vertical Ultimate Strength:

The vertical ultimate strength of each Aluminum Suspension Clamp is listed on the table (next page).

Slip load:

When initially installed, the ALS Clamps have a minimum slip load of 25% of the conductor's rated breaking strength (RBS).

Line angle:

The maximum recommended line angle for the ALS-47 and ALS-67 is 30° as a single suspension and 60° in a double configuration utilizing a yoke plate. The maximum recommended line angle for the ALS-91, ALS-122BNK, ALS-181BNK, ALS-238BNK and ALS-285BNK is 35 degrees as a single suspension and 70 degrees in a double configuration utilizing a yoke plate.

Features and Benefits:

- The ALS Clamp is shipped assembled, with no loose parts. All fasteners are factory-installed to eliminate lost hardware in the field.
- Aluminum alloy body and keeper
- Galvanized steel hardware
- Stainless steel cotter pin
- Compatible with standard attachment hardware
- ALS-122, ALS-181, and ALS-238 are designed for EHV applications. Please contact PLP for additional details.

SAFETY CONSIDERATIONS

1. This product is intended for a single (one-time) use and for the specified application. All components, may be reused if in good condition. **CAUTION: DO NOT MODIFY OR REUSE THE RODS UNDER ANY CIRCUMSTANCES.**
2. This product is intended for use by trained craftspeople only. This product **SHOULD NOT BE USED** by anyone who is not familiar with and trained in the use of it.
3. When working in the area of energized lines with this product, **EXTRA CARE** should be taken to prevent accidental electrical contact.
4. For **PROPER PERFORMANCE AND PERSONAL SAFETY** be sure to select the proper size Aluminum Suspension Clamp before application.
5. To ensure proper performance, this product should be stored in cartons under cover and handled carefully.

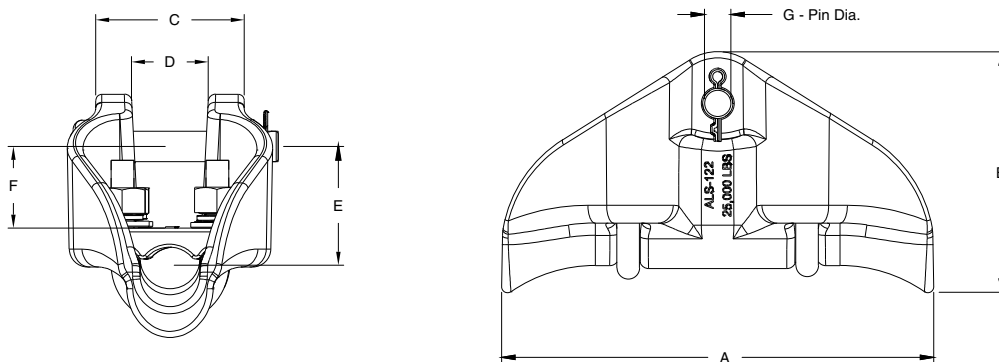
Aluminum Suspension (ALS) Clamp

ORDERING INFORMATION

Catalog Number	Conductor Range in (mm)		Nominal Conductor Size	Weight lb (kg)	Standard Carton Quantity	Vertical Ultimate Load
	Min	Max				
ALS-47	0.2 (5.1)	0.469 (11.9)	#4-2/0	.9 (.4)	3	5,000 lbf
ALS-67	0.47 (11.9)	0.669 (17)	3/0-266.8	1.5 (.7)	3	10,000 lbf
ALS-91	0.67 (17)	0.909 (23.1)	336.4-556.5	2.35 (1)	3	15,000 lbf
ALS-122BNK	0.91 (23.1)	1.22 (31)	556.5-1033.5	4.65 (2.1)	3	25,000 lbf
ALS-181BNK	1.221 (31)	1.81 (46)	1033.5-2312	5.45 (2.5)	3	25,000 lbf
ALS-238BNK	1.811 (46)	2.38 (60.5)	2515	6.85 (3.1)	3	25,000 lbf
ALS-285BNK	2.381 (60.5)	2.85 (72.4)	---	12.85 (5.8)	3	30,000 lbf

NOTE: Can be supplied with bolt/nut/cotter in place of clevis pin and cotter key. The largest four (ALS-122BNK – ALS-285BNK) sizes are only available with BNK hardware.

DIMENSIONAL INFORMATION



Conductor Range in (mm)		Dimensions- in (mm)								Vertical Ultimate Load
Min	Max	A	B	C	D	E	F		G - Pin Dia.	
							Min	Max		
0.2 (5.1)	0.469 (11.9)	5.0 (127)	3.1 (78)	1.9 (48.3)	0.75 (19)	1.2 (30.5)	.94 (23.9)	1.2 (30.5)	5/8 (15.9)	5,000 lbf
0.47 (11.9)	0.669 (17)	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 lbf
0.67 (17)	0.909 (23.1)	6.5 (165)	4 (101)	2.1 (53.3)	1.05 (26.7)	2.3 (58.4)	.98 (24.9)	1.2 (30.5)	5/8 (15.9)	15,000 lbf
0.91 (23.1)	1.22 (31)	9.0 (228)	5.0 (127)	3 (76.2)	1.5 (38.1)	2.5 (63.5)	1.34 (34)	1.65 (41.9)	5/8 (15.9)	25,000 lbf
1.221 (31)	1.81 (46)	9.8 (249)	5.4 (136)	3.3 (83.8)	2.0 (50.3)	2.5 (64.5)	.83 (21)	1.42 (36)	5/8 (15.9)	25,000 lbf
1.811 (46)	2.38 (60.5)	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 lbf
2.381 (60.5)	2.85 (72.4)	14 (356)	7.2 (183)	5.31 (135)	3.13 (79.5)	3.81 (96.8)	0.96 (24.4)	2.14 (54.4)	3/4 (19.1)	30,000 lbf



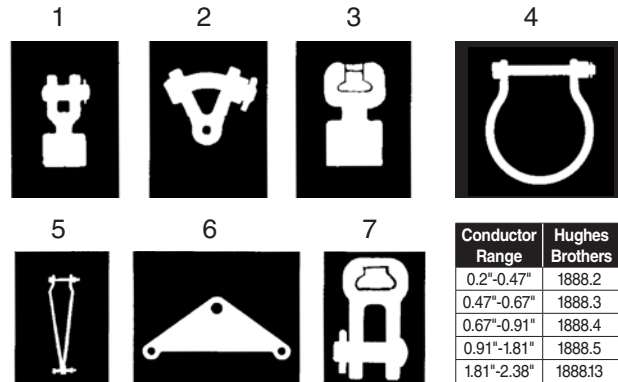
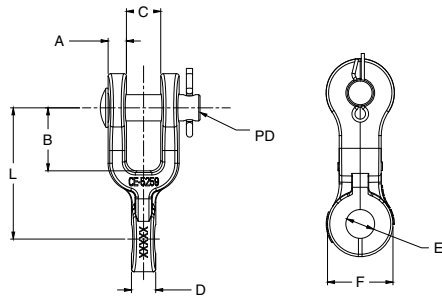
Aluminum Suspension (ALS) Clamp

ALS HARDWARE and FITTINGS

Shown below are the Clevis Eye, Y-Clevis Eye, Socket Eye, Socket Clevis, Yoke Plate, Vertical Bundle Links and Hold-Down Shackles that can be used in conjunction with the Aluminum Suspension Clamps.

NOTE: See Section 8 – Transmission Line String Hardware for detailed dimensions of other string hardware components.

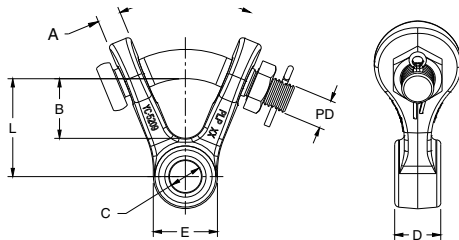
ALS Clevis Eye



Conductor Range	Hughes Brothers
0.2"-0.47"	1888.2
0.47"-0.67"	1888.3
0.67"-0.91"	1888.4
0.91"-1.81"	1888.5
1.81"-2.38"	1888.13

Catalog Number	ALS Clamp	Dimensions- in (mm)								Ultimate Strength (lbf)	Wt. Per 100 Units (lbs)
		A	B	C	D	E	F	L	PD		
CE-9109	ALS-47/ALS-67	7/16 (11.2)	1-1/4 (32)	7/8 (22.2)	5/8 (15.9)	11/16 (17.5)	1-9/16 (39.7)	2-7/8 (73)	5/8 (16)	15,000	101
CE-9110	ALS-91	1/2 (12.7)	1-1/4 (32)	7/8 (22.2)	3/4 (19)	11/16 (17.5)	1-21/32 (42)	2-7/8 (73)	5/8 (16)	25,000	106
CE-9111	ALS-122BNK	1/2 (12.7)	1-1/4 (32)	7/8 (22.2)	1-1/4 (32)	11/16 (17.5)	1-21/32 (42)	2-7/8 (73)	5/8 (16)	25,000	127
CE-9112	ALS-181BNK	1/2 (12.7)	1-1/4 (32)	7/8 (22.2)	1-3/4 (44.5)	11/16 (17.5)	1-21/32 (42)	2-7/8 (73)	5/8 (16)	25,000	146
CE-9113	ALS-238BNK	1/2 (12.7)	1-1/4 (32)	7/8 (22.2)	2-1/4 (57.2)	11/16 (17.5)	1-21/32 (42)	2-7/8 (73)	5/8 (16)	25,000	164
CE-6110	ALS-285BNK	1/2 (12.7)	1-1/4 (32)	7/8 (22.2)	2-3/4 (69.9)	13/16 (20.6)	1-25/32 (45.2)	2-7/8 (73)	5/8 (16)	30,000	229

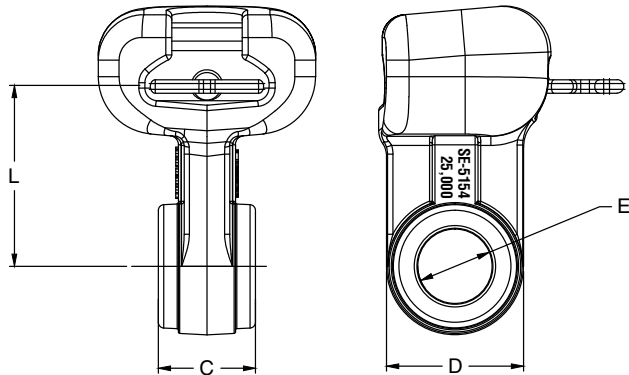
ALS Y-Clevis Eye



Catalog Number	ALS Clamp	Dimensions- in (mm)							Ultimate Strength (lbf)	Wt. Per 100 Units (lbs)
		A	B	C	D	E	L	PD		
YC-9030	ALS-47/ALS-67	19/32 (15)	1-5/8 (41.3)	11/16 (17.5)	5/8 (15.9)	1-7/10 (43.2)	2-7/16 (61.9)	3/4 (19)	15,000	120
YC-9031	ALS-91	19/32 (15)	1-5/8 (41.3)	11/16 (17.5)	3/4 (19)	1-7/10 (43.2)	2-7/16 (61.9)	3/4 (19)	25,000	130
YC-9032	ALS-122BNK	19/32 (15)	1-5/8 (41.3)	11/16 (17.5)	1-1/4 (32)	1-7/10 (43.2)	2-7/16 (61.9)	3/4 (19)	25,000	150
YC-9033	ALS-181BNK	19/32 (15)	1-5/8 (41.3)	11/16 (17.5)	1-3/4 (44.5)	1-7/10 (43.2)	2-7/16 (61.9)	3/4 (19)	25,000	170
YC-9034	ALS-238BNK	19/32 (15)	1-5/8 (41.3)	11/16 (17.5)	2-1/4 (57.2)	1-7/10 (43.2)	2-7/16 (61.9)	3/4 (19)	30,000	190
YC-6108	ALS-285BNK	19/32 (15)	1-25/32 (45.2)	13/16 (20.6)	2-3/4 (69.9)	1-13/16 (46)	2-23/32 (69)	3/4 (19)	30,000	261

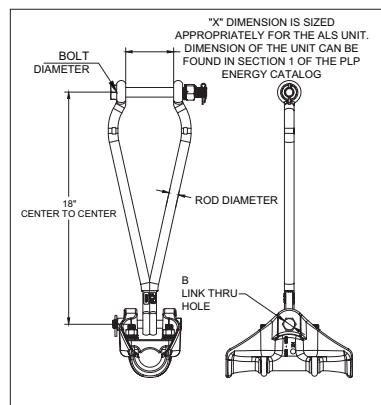
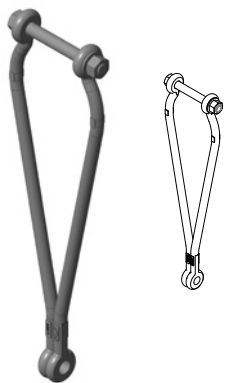
Aluminum Suspension (ALS) Clamp

ALS Socket Eye



Catalog Number	ALS Clamp	Dimensions- in (mm)				Ultimate Strength (lbf)	Wt. Per 100 Units (lbs)	ANSI Class Spec
		C	D	E	L			
SE-9020	ALS-47/ALS-67	5/8 (15.9)	1-25/32 (45)	11/16 (17.5)	1-11/16 (43)	30,000	145	52-3 & 52-5
SE-9021	ALS-91	3/4 (19.1)	1-25/32 (45)	11/16 (17.5)	1-11/16 (43)	30,000	151	
SE-9022	ALS-122BNK	1-1/4 (31.8)	1-25/32 (45)	11/16 (17.5)	1-11/16 (43)	30,000	176	
SE-9023	ALS-181BNK	1-3/4 (44.5)	1-25/32 (45)	11/16 (17.5)	1-11/16 (43)	30,000	201	
SE-9024	ALS-238BNK	2-1/4 (57.2)	1-25/32 (45)	11/16 (17.5)	1-11/16 (43)	30,000	224	
SE-6109	ALS-285BNK	2-3/4 (69.9)	1-29/32 (48.4)	13/16 (20.6)	2-1/16 (27)	30,000	274	

Vertical Bundling Link for ALS



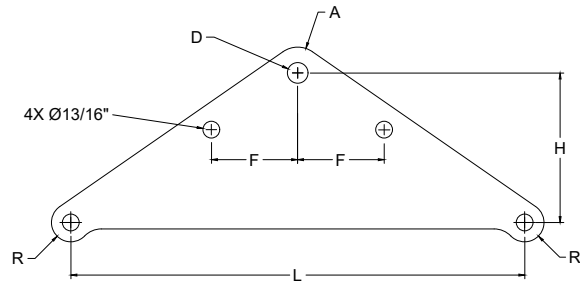
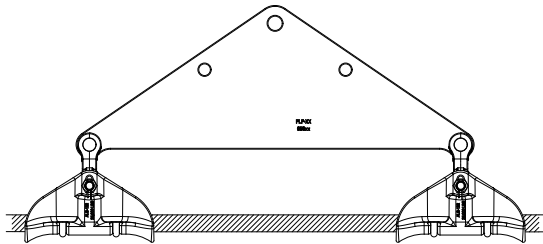
Features	
Body	Forged steel, hot dip galvanized
Hardware	Galvanized Steel
Cotter Pin	Stainless Steel

Catalog Number	ALS Clamp Size	General Dimensions – inches (mm)					Rated Strength lbf (kN)
		Rod Diameter inches (mm)	Bolt Diameter inches (mm)	Center to Center inches (mm)	A inches (mm)	B inches (mm)	
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)



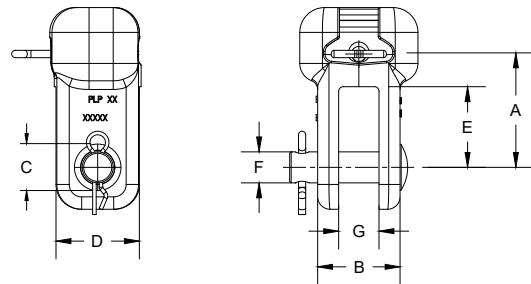
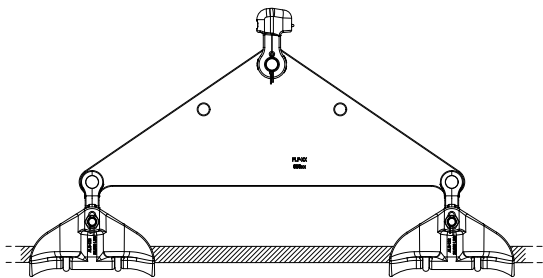
Aluminum Suspension (ALS) Clamp

ALS Yoke Plate



Catalog Number	ALS Clamp	Dimensions- in (mm)						Plate Thickness (in)	Ultimate Strength (lbf)
		L	H	D	R	A	F		
YP-5907	ALS-47	12	4	13/16	13/16	1	NONE	1/2	30000
YP-5908	ALS-67, ALS-91	18	6-1/4	1	15/16	1-1/4	3-1/2	5/8	40,000
YP-5910	ALS-122BNK ALS-181BNK ALS-238BNK	26	8-1/2	1	15/16	1-1/4	4-15/16	3/4	50,000
YP-5956	ALS-285	42	13	1-1/4	1	1-1/2	7-27/32	1-1/4	72,000

ALS Socket Clevis



Catalog Number	Dimensions- in (mm)							Ultimate Strength (lbf)	For Use with Specific Strength Insulators (lbf)
	A	B	C	D	E	F	G		
SC-5194	2-5/8	1-9/16	11/16	1-3/4	1-5/8	5/8	13/16	30,000	15,000-30,000
SC-50	3-1/4	-	-	2-3/16	2-1/16	7/8	1-1/8	50,000	36,000-50,000