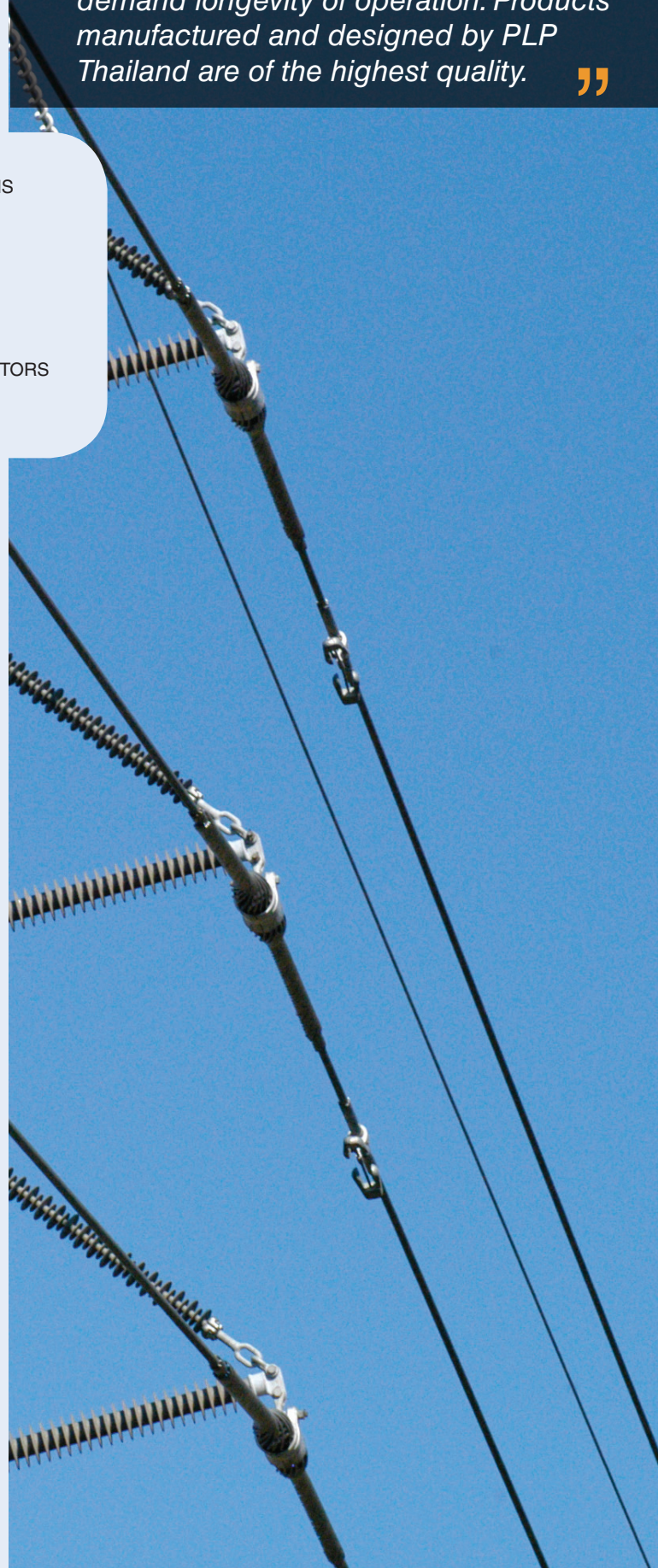


SUSPENSION & SUPPORT

“Transmission network operators demand longevity of operation. Products manufactured and designed by PLP Thailand are of the highest quality.”

SUSPENSION & SUPPORT

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SUSPENSION & SUPPORT



ARMOR-GRIP® SUSPENSION - GENERAL RECOMMENDATIONS



The Preformed ARMOR-GRIP® Suspension unit is intended for use on all material types and conductor constructions. It is designed to reduce the static and dynamic stresses at the support point so that the conductor is protected against the effects of conductor motion. It also protects the conductor in the support area against impulse and power flash-over arcing.

The ARMOR-GRIP® Suspension is superior to bolted alternative combinations for protecting conductors from bending, compression stress and abrasion.

Line Repairs:

Where a conductor has been damaged by a bolted clamp, specially designed ARMOR-GRIP® Suspension can be used in the repair. Please contact PLP for more information.

Line Angle:

The maximum recommended line angle for a single support AGS® is 30°. For angles between 30° and 60°, the ARMOR-GRIP® Suspension Double Assembly is recommended.

SAFETY CONSIDERATIONS

- This product is intended for a single (one-time) use and for the specified application, although it may be re-applied twice for re-tensioning within 90 days from initial installation.
- Do not modify this product in any way.
- This product is intended for use by qualified linesmen only.
- When working in the area of energized line with this product, extra care should be taken to prevent accidental electrical contact.
- For proper performance and personal safety, be sure to select the proper size PREFORMED™ products before application.
- PREFORMED™ products are precision devices. To ensure proper performance, they should be stored in cartons under cover and handled carefully.

SUSPENSION & SUPPORT

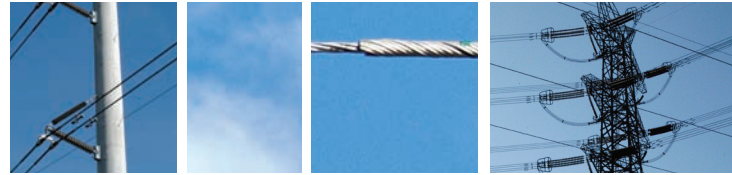


ARMOR-GRIP® SUSPENSION ASSEMBLY - LOW VOLTAGE



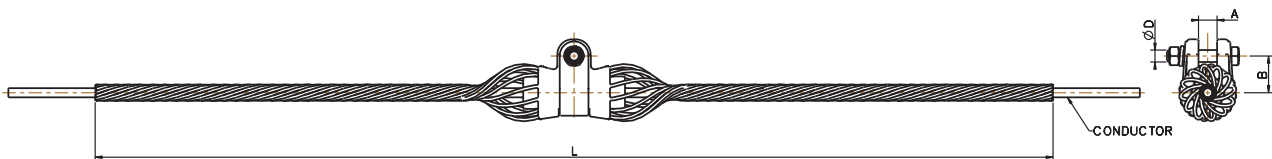
Drawing Number	Description	Diameter Range (Inches)		Diameter Range (mm)		UTS. (KN)	Rod Diameter (inches)	Rods Per Set	Dimension (mm)			
		Min	Max	Min	Max				A	B	D	L
A4DD18254T	PLP-AGS-60202-1380-BE	0.543	0.555	13.79	14.10	45	0.182	10	23	46	16	1117
	PLP-AGS-60202-1410-BE	0.556	0.573	14.12	14.55		0.182	11				1117
	PLP-AGS-60202-1460-BE	0.574	0.594	14.58	15.09		0.182	11				1143
	PLP-AGS-60202-1510-BE	0.595	0.606	15.11	15.39		0.182	11				1168
	PLP-AGS-60202-1540-BE	0.607	0.619	15.42	15.72		0.182	11				1168
	PLP-AGS-60202-1575-BE	0.62	0.645	15.75	16.38		0.182	12				1270
A4DD18255T	PLP-AGS-60203-1640-BE	0.646	0.673	16.41	17.09	69	0.204	11	24	49	16	1371
	PLP-AGS-60203-1710-BE	0.674	0.69	17.12	17.53		0.204	11				1371
	PLP-AGS-60203-1755-BE	0.691	0.71	17.55	18.03		0.204	12				1371
	PLP-AGS-60203-1805-BE	0.711	0.731	18.06	18.57		0.204	12				1397
	PLP-AGS-60203-1860-BE	0.732	0.75	18.59	19.05		0.204	12				1422
A4DD18256T	PLP-AGS-60235-1910-BE	0.751	0.768	19.08	19.51	89	0.25	10	26	52	16	1524
	PLP-AGS-60235-1955-BE	0.769	0.795	19.53	20.19		0.25	11				1524
	PLP-AGS-60235-2020-BE	0.796	0.824	20.22	20.93		0.25	11				1549
	PLP-AGS-60235-2095-BE	0.825	0.845	20.96	21.46		0.25	11				1625
	PLP-AGS-60235-2150-BE	0.846	0.87	21.49	22.10		0.25	11				1625
	PLP-AGS-60235-2210-BE	0.871	0.893	22.12	22.68		0.25	12				1651
	PLP-AGS-60235-2270-BE	0.894	0.907	22.71	23.04		0.25	12				1651
	PLP-AGS-60235-2305-BE	0.908	0.92	23.06	23.37		0.25	12				1676
	PLP-AGS-60235-2340-BE	0.921	0.937	23.39	23.80		0.25	12				1676
PLP-AGS-60235-2385-BE	0.938	0.962	23.83	24.43	0.25	12	1702					
A4DD18257T	PLP-AGS-60206-2555-BE	1.006	1.022	25.55	25.96	111	0.31	11	30	59	16	2032
	PLP-AGS-60206-2600-BE	1.023	1.04	25.98	26.42		0.31	11				2082
	PLP-AGS-60206-2645-BE	1.041	1.074	26.44	27.28		0.31	11				2082
	PLP-AGS-60206-2730-BE	1.075	1.09	27.31	27.69		0.31	12				2082
	PLP-AGS-60206-2770-BE	1.091	1.118	27.71	28.40		0.31	12				2082
	PLP-AGS-60206-2840-BE	1.119	1.136	28.42	28.85		0.31	12				2082
	PLP-AGS-60206-2890-BE	1.137	1.152	28.88	29.26		0.31	12				2082
	PLP-AGS-60206-2930-BE	1.153	1.175	29.29	29.85		0.31	12				2082
PLP-AGS-60206-2985-BE	1.176	1.208	29.87	30.68	0.31	12	2082					
A4DD18258T	PLP-AGS-60207-3070-BE	1.209	1.226	30.71	31.14	111	0.365	11	38	72	19	2235
	PLP-AGS-60207-3115-BE	1.227	1.259	31.17	31.98		0.365	11				2235
	PLP-AGS-60207-3200-BE	1.26	1.286	32.00	32.66		0.365	12				2235
	PLP-AGS-60207-3270-BE	1.287	1.314	32.69	33.38		0.365	12				2235
	PLP-AGS-60207-3340-BE	1.315	1.355	33.40	34.42		0.365	12				2235
A4DD18259T	PLP-AGS-60208-3445-BE	1.356	1.394	34.44	35.41	111	0.365	12	41	71	19	2235
	PLP-AGS-60208-3545-BE	1.395	1.416	35.43	35.97		0.365	13				2235
	PLP-AGS-60208-3600-BE	1.417	1.442	35.99	36.63		0.365	13				2235
	PLP-AGS-60208-3665-BE	1.443	1.477	36.65	37.52		0.365	13				2235
	PLP-AGS-60208-3755-BE	1.478	1.516	37.54	38.51		0.365	13				2235
	PLP-AGS-60208-3855-BE	1.517	1.557	38.53	39.55		0.365	13				2235
A4DD18260T	PLP-AGS-60209-3960-BE	1.558	1.579	39.57	40.11	111	0.365	14	64	76	19	2540
	PLP-AGS-60209-4015-BE	1.58	1.612	40.13	40.94		0.365	14				2540
	PLP-AGS-60209-4100-BE	1.613	1.65	40.97	41.91		0.365	14				2540
	PLP-AGS-60209-4195-BE	1.651	1.688	41.94	42.88		0.365	15				2540
	PLP-AGS-60209-4290-BE	1.689	1.711	42.90	43.46		0.365	15				2540
	PLP-AGS-60209-4350-BE	1.712	1.752	43.48	44.50		0.365	15				2540
	PLP-AGS-60209-4455-BE	1.753	1.79	44.53	45.47		0.365	15				2540
	PLP-AGS-60209-4550-BE	1.791	1.828	45.49	46.43		0.365	15				2540
PLP-AGS-60209-4645-BE	1.829	1.882	46.46	47.80	0.365	16	2540					
A4DD18261T	PLP-AGS-60210-5570-BE	2.193	2.233	55.70	56.72	155	0.365	18	66	82	19	2540

SUSPENSION & SUPPORT

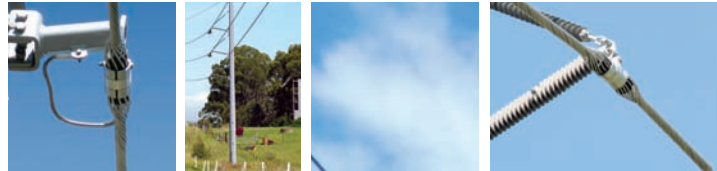


ARMOR-GRIP® SUSPENSION ASSEMBLY - HIGH VOLTAGE

Drawing Number	Description	Diameter Range (Inches)		Diameter Range (mm)		UTS. (kN)	Rod Diameter (inches)	Rods Per Set	Dimension (mm)			
		Min	Max	Min	Max				A	B	D	L
A4DD18206T	PLP-AGS-60202-1380-PB	0.543	0.555	13.79	14.10	45	0.182	10	23	46	16	1117
	PLP-AGS-60202-1410-PB	0.556	0.573	14.12	14.55		0.182	11				1117
	PLP-AGS-60202-1460-PB	0.574	0.594	14.58	15.09		0.182	11				1143
	PLP-AGS-60202-1510-PB	0.595	0.606	15.11	15.39		0.182	11				1168
	PLP-AGS-60202-1540-PB	0.607	0.619	15.42	15.72		0.182	11				1168
	PLP-AGS-60202-1575-PB	0.62	0.645	15.75	16.38		0.182	12				1270
A4DD18207T	PLP-AGS-60203-1640-PB	0.646	0.673	16.41	17.09	69	0.204	11	24	49	16	1371
	PLP-AGS-60203-1710-PB	0.674	0.69	17.12	17.53		0.204	11				1371
	PLP-AGS-60203-1755-PB	0.691	0.71	17.55	18.03		0.204	12				1371
	PLP-AGS-60203-1805-PB	0.711	0.731	18.06	18.57		0.204	12				1397
	PLP-AGS-60203-1860-PB	0.732	0.75	18.59	19.05		0.204	12				1422
A4DD18208T	PLP-AGS-60235-1910-PB	0.751	0.768	19.08	19.51	89	0.25	10	26	52	16	1524
	PLP-AGS-60235-1955-PB	0.769	0.795	19.53	20.19		0.25	11				1524
	PLP-AGS-60235-2020-PB	0.796	0.824	20.22	20.93		0.25	11				1549
	PLP-AGS-60235-2095-PB	0.825	0.845	20.96	21.46		0.25	11				1625
	PLP-AGS-60235-2150-PB	0.846	0.87	21.49	22.10		0.25	11				1625
	PLP-AGS-60235-2210-PB	0.871	0.893	22.12	22.68		0.25	12				1651
	PLP-AGS-60235-2270-PB	0.894	0.907	22.71	23.04		0.25	12				1651
	PLP-AGS-60235-2305-PB	0.908	0.92	23.06	23.37		0.25	12				1676
	PLP-AGS-60235-2340-PB	0.921	0.937	23.39	23.80		0.25	12				1676
	PLP-AGS-60235-2385-PB	0.938	0.962	23.83	24.43		0.25	12				1702
A4DD18209T	PLP-AGS-60206-2555-PB	1.006	1.022	25.55	25.96	111	0.31	11	30	59	16	2032
	PLP-AGS-60206-2600-PB	1.023	1.04	25.98	26.42		0.31	11				2082
	PLP-AGS-60206-2645-PB	1.041	1.074	26.44	27.28		0.31	11				2082
	PLP-AGS-60206-2730-PB	1.075	1.09	27.31	27.69		0.31	12				2082
	PLP-AGS-60206-2770-PB	1.091	1.118	27.71	28.40		0.31	12				2082
	PLP-AGS-60206-2840-PB	1.119	1.136	28.42	28.85		0.31	12				2082
	PLP-AGS-60206-2890-PB	1.137	1.152	28.88	29.26		0.31	12				2082
	PLP-AGS-60206-2930-PB	1.153	1.175	29.29	29.85		0.31	12				2082
	PLP-AGS-60206-2985-PB	1.176	1.208	29.87	30.68		0.31	12				2082
A4DD18210T	PLP-AGS-60207-3070-PB	1.209	1.226	30.71	31.14	111	0.365	11	38	72	19	2235
	PLP-AGS-60207-3115-PB	1.227	1.259	31.17	31.98		0.365	11				2235
	PLP-AGS-60207-3200-PB	1.26	1.286	32.00	32.66		0.365	12				2235
	PLP-AGS-60207-3270-PB	1.287	1.314	32.69	33.38		0.365	12				2235
	PLP-AGS-60207-3340-PB	1.315	1.355	33.40	34.42		0.365	12				2235

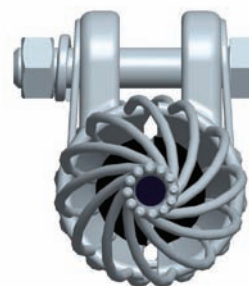


SUSPENSION & SUPPORT



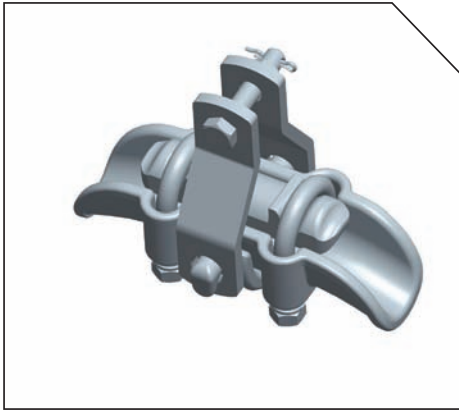
ARMOR-GRIP® SUSPENSION ASSEMBLY - HIGH VOLTAGE (CONT.)

Drawing Number	Description	Diameter Range (Inches)		Diameter Range (mm)		UTS. (kN)	Rod Diameter (inches)	Rods Per Set	Dimension (mm)			
		Min	Max	Min	Max				A	B	D	L
A4DD18211T	PLP-AGS-60208-3445-PB	1.356	1.394	34.44	35.41	111	0.365	12	41	71	19	2235
	PLP-AGS-60208-3545-PB	1.395	1.416	35.43	35.97							
	PLP-AGS-60208-3600-PB	1.417	1.442	35.99	36.63							
	PLP-AGS-60208-3665-PB	1.443	1.477	36.65	37.52							
	PLP-AGS-60208-3755-PB	1.478	1.516	37.54	38.51							
	PLP-AGS-60208-3855-PB	1.517	1.557	38.53	39.55							
A4DD18212T	PLP-AGS-60209-3960-PB	1.558	1.579	39.57	40.11	111	0.365	14	64	76	19	2540
	PLP-AGS-60209-4015-PB	1.58	1.612	40.13	40.94							2540
	PLP-AGS-60209-4100-PB	1.613	1.65	40.97	41.91							2540
	PLP-AGS-60209-4195-PB	1.651	1.688	41.94	42.88							2540
	PLP-AGS-60209-4290-PB	1.689	1.711	42.90	43.46							2540
	PLP-AGS-60209-4350-PB	1.712	1.752	43.48	44.50							2540
	PLP-AGS-60209-4455-PB	1.753	1.79	44.53	45.47							2540
	PLP-AGS-60209-4550-PB	1.791	1.828	45.49	46.43							2540
	PLP-AGS-60209-4645-PB	1.829	1.882	46.46	47.80							2540
A4DD18213T	PLP-AGS-60210-5570-PB	2.193	2.233	55.70	56.72	155	0.365	18	66	82	19	2540



SUSPENSION & SUPPORT

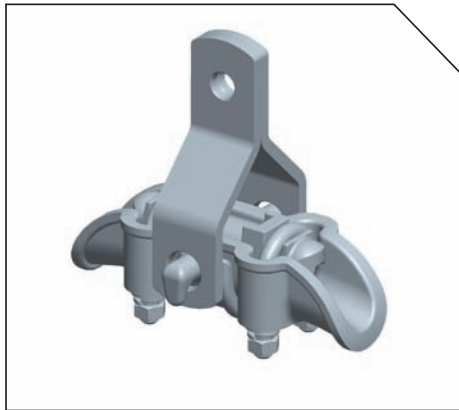
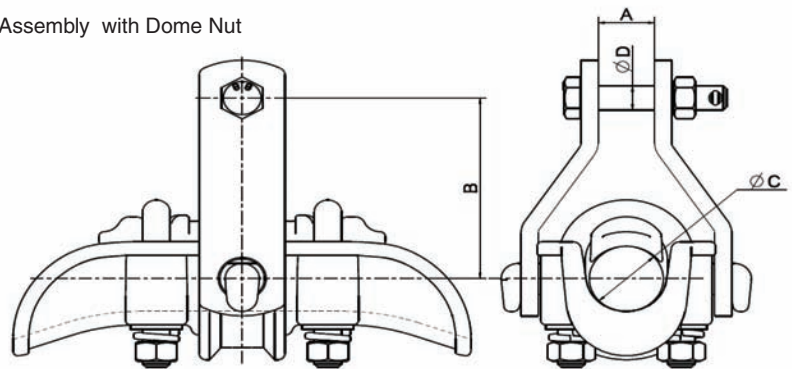
SUSPENSION CLAMP - PIVOT



Material: Aluminium + Galvanized Steel

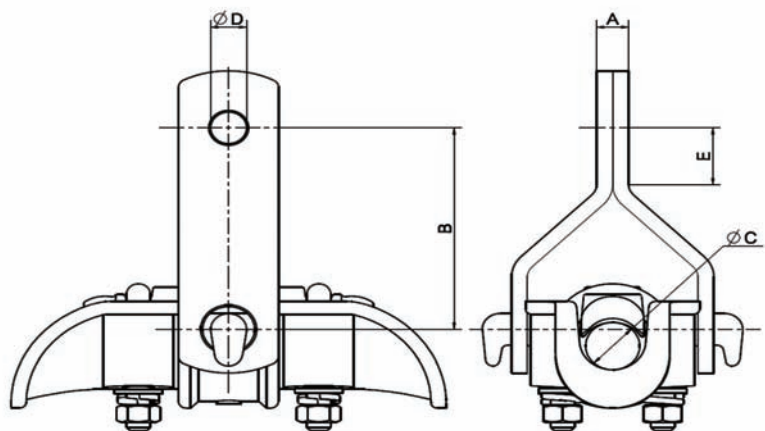
Part Number	Drawing Number	Min. Breaking Strength (kN)	A (mm)	B (mm)	C (mm)	D (mm)
017878-000	A3DD3694T	80	20	90	Ø9.5-19	Ø16
E28799-000	A4DD15074T	120	20	110	Ø18-30	Ø16
830382-000	A3DD1917T	120	33	110	Ø18-30	Ø16
913754-000	A4DD10483T	120	20	100	Ø30-45	Ø16
CE9165-000	A4DD15670T	125	28	120	Ø30-45	Ø16
534758-000	A3DD1918T	120	33	120	Ø30-45	Ø16
P00538-000	A4DD14694T	160	33	120	Ø30-45	Ø16
CJ3048-000	A4DD15366T *	120	47	120	Ø30-45	Ø16
CA5030-000	A3DD3814T	120	47	140	Ø45-65	Ø16

* Assembly with Dome Nut



Material: Aluminium + Galvanized Steel

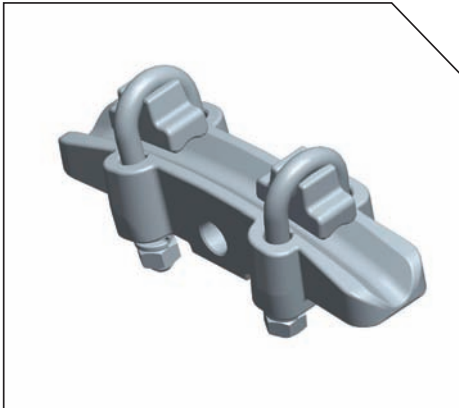
Part Number	Drawing Number	Min. Breaking Strength (kN)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
949258-000	A4DD15294T	80	12 ^{+1.5}	110	Ø9.5-19	Ø18	20
537302-000	A4DD09889T	80	16 ^{+1.5}	115	Ø18-30	Ø18	32



SUSPENSION & SUPPORT

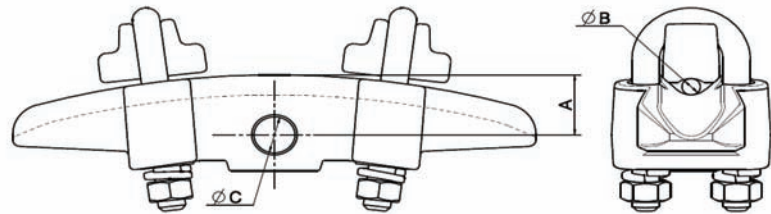


EARTHWIRE SUSPENSION CLAMP

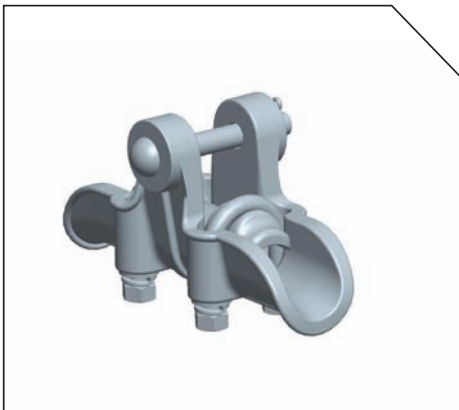


Material: Galvanized Ductile Iron + Galvanized Steel

Part Number	Drawing Number	Min. Breaking Strength (kN)	A (mm)	B (mm)	C (mm)
887548-000	A3DD3469T	80	30	Ø8-18	Ø18
972242-000	A3DD07270T	120	36	Ø8-20	Ø18



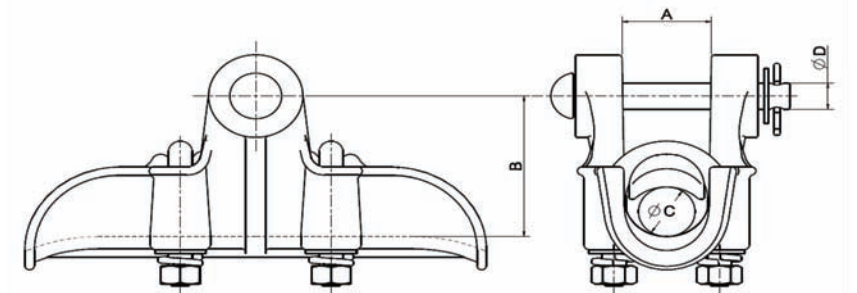
CLEVIS SUSPENSION CLAMP



Material: Aluminium + Galvanized Steel

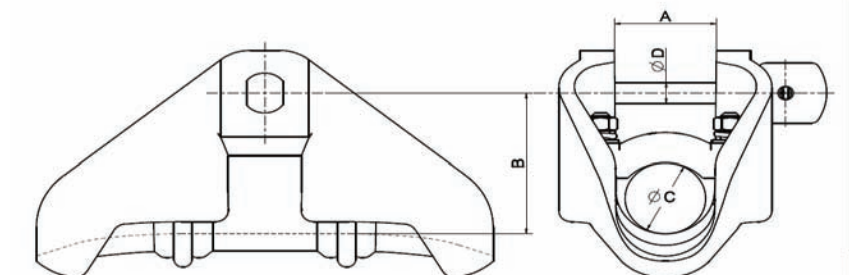
Part Number	Drawing Number	Min. Breaking Strength (kN)	A (mm)	B (mm)	C (mm)	D (mm)
712356-000	A3DD06286T	120	47.5	85	Ø30-42.5	Ø16
768388-000	A4DD16869T*	120	47.5	85	Ø30-42.5	Ø16

* Assembly with Dome Nut



Material: Aluminium + Galvanized Steel

Part Number	Drawing Number	Min. Breaking Strength (kN)	A (mm)	B (mm)	C (mm)	D (mm)
A75585-000	A4DD14507T	120	48	85	Ø30-45	Ø16
193254-000	A4DD07979T	120	67	105	Ø45-65	Ø16



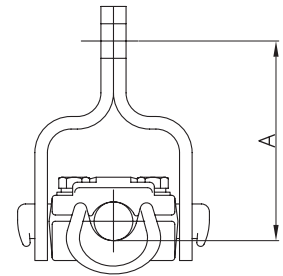
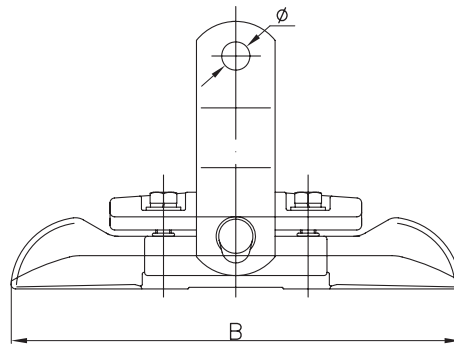
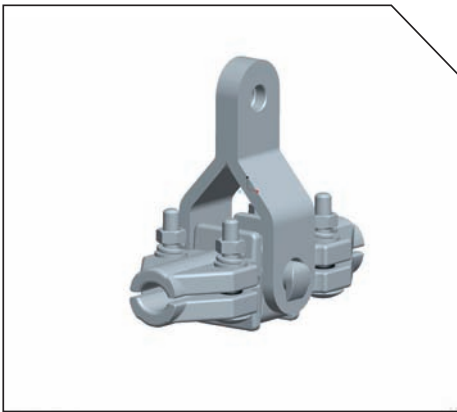
SUSPENSION & SUPPORT



SUSPENSION CLAMP

BRITISH STANDARD (BS)

Part Number	Drawing Number	Conductor	Operating Voltage (kV)	Min. Breaking Strength (kN)	A (mm)	B (mm)	Dia hole (mm)
F03294-000	C-1951307	LYNX	132	80	115	217	Ø18
399372-000	DK85503	KEZIAH	EW	70	127	286	Ø18
F51144-000	C-1895693	UPAS	275	70	127	286	Ø18
111586-000	DK85502	ZEBRA	EW / 275	95	127	286	Ø22
263420-000	DK85501	RUBUS	132 / 275 / 400	95	127	286	Ø22
D33098-000	C-2019517	RUBUS	132	125	120	267	Ø18
CF5550-000	C-1951992	SORBUS	275 / 400	95	127	286	Ø22
034512-000	DK85504	ARAUCARIA	EW / 275 / 400	95	160	286	Ø22
319436-000	DK85500	ARAUCARIA	400	95	130.5	286	Ø22
CL4981-000	C-1984694	REDWOOD	400	95	165	286	Ø22
E87312-000	DK85506	MATTHEW	400	95	127	286	Ø22



Material: Aluminium + Galvanized Steel

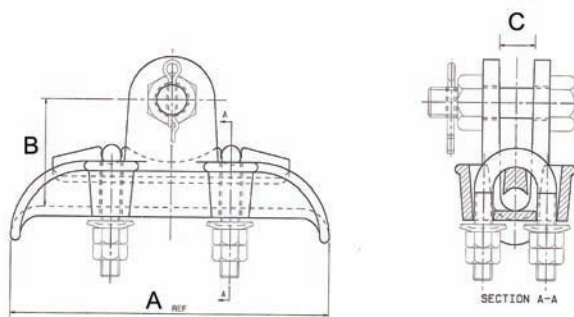
SUSPENSION & SUPPORT

SUSPENSION CLAMP

AUSTRALIAN STANDARD (AS)

For Steel or Copper Conductor

Part Number	Drawing Number	Ref Code	Conductor Range	Min. Breaking Strength (kN)	A (mm)	B (mm)	C (mm)
070706-000	23704	PLP-9321763	Ø10.4-14.7	44	171	80	19
011878-000	41105	PLP-9321763H	Ø10.4-14.7	44	171	80	19
646514-000	40972	PLP-BB615OSQ	Ø6-15	24	152	71	20
763688-000	024-038-PD	PLP-SCIO-227A-2	Ø6-15	24	152	71	20



Material: Aluminium , Galvanized Steel

SUSPENSION & SUPPORT



CUSHION-GRIP® SUPPORT - GENERAL RECOMMENDATIONS



Features:

- Shipped fully assembled with no loose parts. All fasteners are factory installed to eliminate lost hardware in the field
- Installation time is saved due to the simplicity of the product, as it takes approximately a quarter of the time to install compared to a typical ARMOR-GRIP suspension unit.
- Conductor bending and fatigue are reduced at critical points by the elastomer inserts.

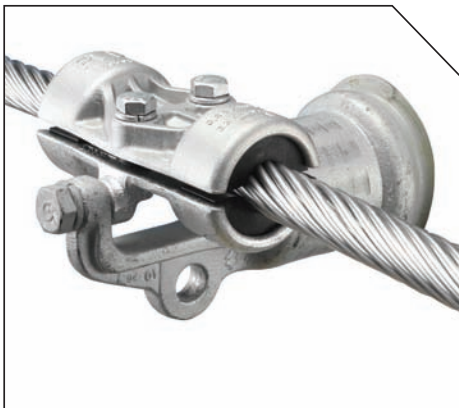
CUSHION-GRIP Support:

- Ultimate vertical load of 22.4kN
- Ultimate slip load of between 10–15% of conductor UTS.
- Normal operating temperature of 125°C

SAFETY CONSIDERATIONS

- The CUSHION-GRIP suspension and support is intended for use on all aluminum based conductors and is designed to reduce the static and dynamic stresses at the support point. The conductor is cushioned by field proven integral elastomer inserts which guard against abrasion, wear and fatigue.
- The level of protection provided by the CUSHION-GRIP range is comparable to a bolted clamp over armor rods. This equates to a reduction in bending strain as high as 50% as compared to a bare conductor in a bolted clamp.
- The standard CUSHION-GRIP suspension and support is designed for up to 125°C continuous conductor operation. A high temperature version is available in the CUSHION-GRIP suspension range which can be used for applications with continuous conductor operating temperatures up to 200°C.

CUSHION-GRIP® SUPPORT FOR ALUMINUM BASED CONDUCTORS



Part Number	Conductor Range (mm)		Standard Pack Quantity
	Min	Max	
CGS-2100	9.5	14.3	3
CGS-2101	14.3	22.4	3
CGS-2102	22.4	30.4	3