

CUSHION-GRIP® SUSPENSION AND SUPPORT

The **CUSHION-GRIP Suspension** and **CUSHION-GRIP Support** are designed for better performance when using clamps and Armor Rods at lower installed cost. The conductor is cushioned by field-proven integral elastomer inserts which guard against abrasion, wear, and fatigue.

FEATURES AND BENEFITS

- No loose parts - all fasteners are captive and factory installed
- Simple labor-saving installation without the need for armor rods
- Internal cushions minimizes conductor bending stresses at critical entry locations
- Compatible with standard attachment hardware
- Easy hot stick application
- Designed for bundled EHV applications up to 345 kV. For applications 500 kV and higher, please contact PLP for details.



CUSHION-GRIP® SUSPENSION AND SUPPORT

Field-Proven Concept

Since 1998, the cushion concept has been field proven with the FIBERLIGN® Cushion Clamp for OPGW and the CUSHION-GRIP Clamp for T-2 conductors. Both of these PLP products have had broad industry usage and acceptance.

Reduced Stress on Conductor Verified in Laboratory

Laboratory vibration testing has shown that the elastomer cushions in the CUSHION-GRIP Suspension and Support products reduce the dynamic strain levels on the conductor by 40% - 50%, when compared to bolted suspension clamps.

The level of protection provided by the CUSHION-GRIP Suspension and Support products is comparable to a bolted clamp over armor rods, but without the material and labor costs associated with the armor rods.

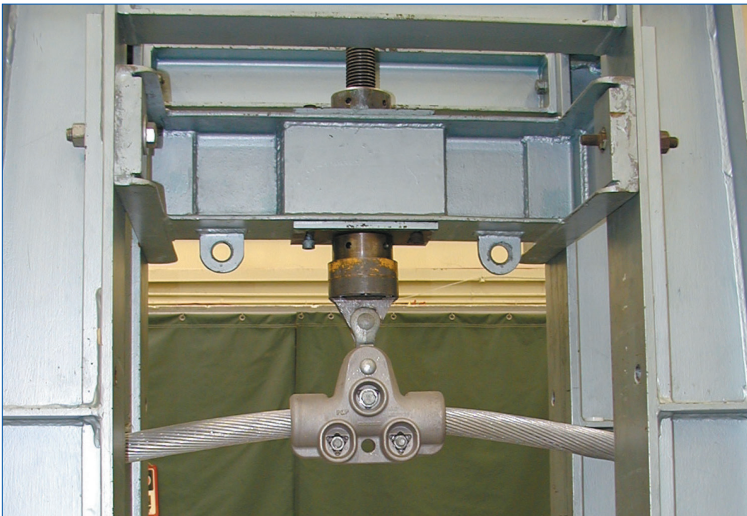
Simple Installation, Even with Hot Sticks

The CUSHION-GRIP Suspension has a unique design which allows the lower captive fasteners to act as a hinge. This feature creates a one-piece unit that is simply spread open and slid over the conductor. There are no loose parts to handle or to drop. The one-piece design makes installation simple, even when using hot sticks or when working from a helicopter platform.

The CUSHION-GRIP Support has a two-piece design with captive fasteners to simplify hot stick or helicopter installation.

Available for high-temperature conductors, the standard CUSHION-GRIP Suspension and Support products have a continuous thermal rating of 125°C (150°C two hour emergency).

The CUSHION-GRIP Suspension is also available in an HT version for continuous conductor operating temperatures up to 200°C (225°C two hour emergency).

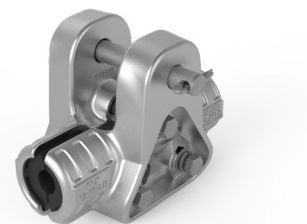


Laboratory Vibration Testing of CUSHION-GRIP Suspension

CUSHION-GRIP® SUSPENSION

Specifications

- Material: Body Halves - High-strength aluminum alloy
- Vertical Load Limit: See chart below
- Slip Load: 10% - 15% of conductor rated breaking strength (RBS)
- Line Angle: 30° in single configuration and 60° in double configuration



Catalog Number	Conductor Range		Normal Conductor Size	Height	Width		Length	Weight	Units per Carton	Vertical Load Limit
	in (mm)				in (mm)					
	Minimum	Maximum		in (mm)	Minimum	Maximum	in (mm)	lb (kg)		lb (kN)
CGS-1095	0.312 (7.9)	0.608 (15.4)	#2 - 4/0	4.85 (123)	0.80 (9)	1.20 (30)	6.5 (165)	2.5 (1.1)	10	15,000 (67)
CGS-1096	0.609 (15.5)	0.883 (22.4)	266.8 - 477	5.30 (135)	3.30 (84)	3.85 (98)	6.85 (169)	4.00 (1.8)	3	25,000 (111)
CGS-1097	0.884 (22.5)	1.196 (30.4)	556.5 - 954	6.00 (152)	3.30 (84)	3.85 (98)	7.55 (192)	5.5 (2.5)	3	
CGS-1098	1.197 (30.4)	1.545 (39.2)	1033.5 - 1590	6.2 (157.5)	3.30 (84)	3.85 (98)	8.60 (218)	6.7 (3.0)	3	
CGS-1120	1.546 (39.2)	1.569 (39.8)		7.60 (183)	3.90 (99.8)	4.40 (111.8)	9.20 (234)	9.5 (4.3)	3	30,000 (136)
CGS-1121	1.570 (39.8)	1.639 (41.6)	1780; 84/19							
CGS-1122	1.640 (41.7)	1.707 (43.3)								
CGS-1123	1.708 (43.4)	1.771 (45.0)	2156; 84/19 & 72/7							
CGS-1124	1.772 (45.0)	1.833 (46.5)	2312; 76/19							
CGS-1125	1.934 (48.1)	1.892 (48.0)								
CGS-1126	1.893 (48.1)	1.948 (49.5)								
CGS-1127	1.949 (49.5)	2.001 (50.8)								

NOTES: For high-temperature (HT) version, add HT to the catalog number (Example - CGS-1096-HT).

Add CE, YC, or SE to catalog number to include Clevis Eye, Y-Clevis Eye or Socket Eye (Examples: CGS1096SE or CGS-1096HTSE).

For bolt, nut and cotter pin in place of pin, add BNK to catalog number (Examples: CGS-1096-BNK, CGS-1096HTBNK).



CUSHION-GRIP® SUPPORT

Specifications

- Material: Keeper is aluminum alloy, trunnion base is galvanized ductile iron
- Vertical Strength: 5,000 lb (22 kN)
- Slip Load: 10% - 15% of conductor rated breaking strength (RBS)
- Line Angle: 30° in single configuration and 60° in double configuration



Catalog Number	Conductor Range		Normal Conductor Size	Weight/Unit	Units per Carton
	in (mm)			lb (kg)	
	Minimum	Maximum			
	in (mm)	lb (kg)			
CGS-2100	.312 (7.9)	.608 (15.4)	#2 TO 4/0	1.45 (0.66)	3
CGS-2101	.609 (15.4)	.883 (22.4)	266 Kcmil to 477 Kcmil	2.40 (1.1)	3
CGS-2102	.884 (22.4)	1.196 (30.4)	556 Kcmil to 954 Kcmil	3.50 (1.6)	3
CGS-2103	1.197 (30.4)	1.504 (38.2)	954 Kcmil to 1590 Kcmil	5.00 (2.3)	3

NOTE: For high-temperature (HT) version add "HT" to the catalog number. **Example:** CGS-2102HT

