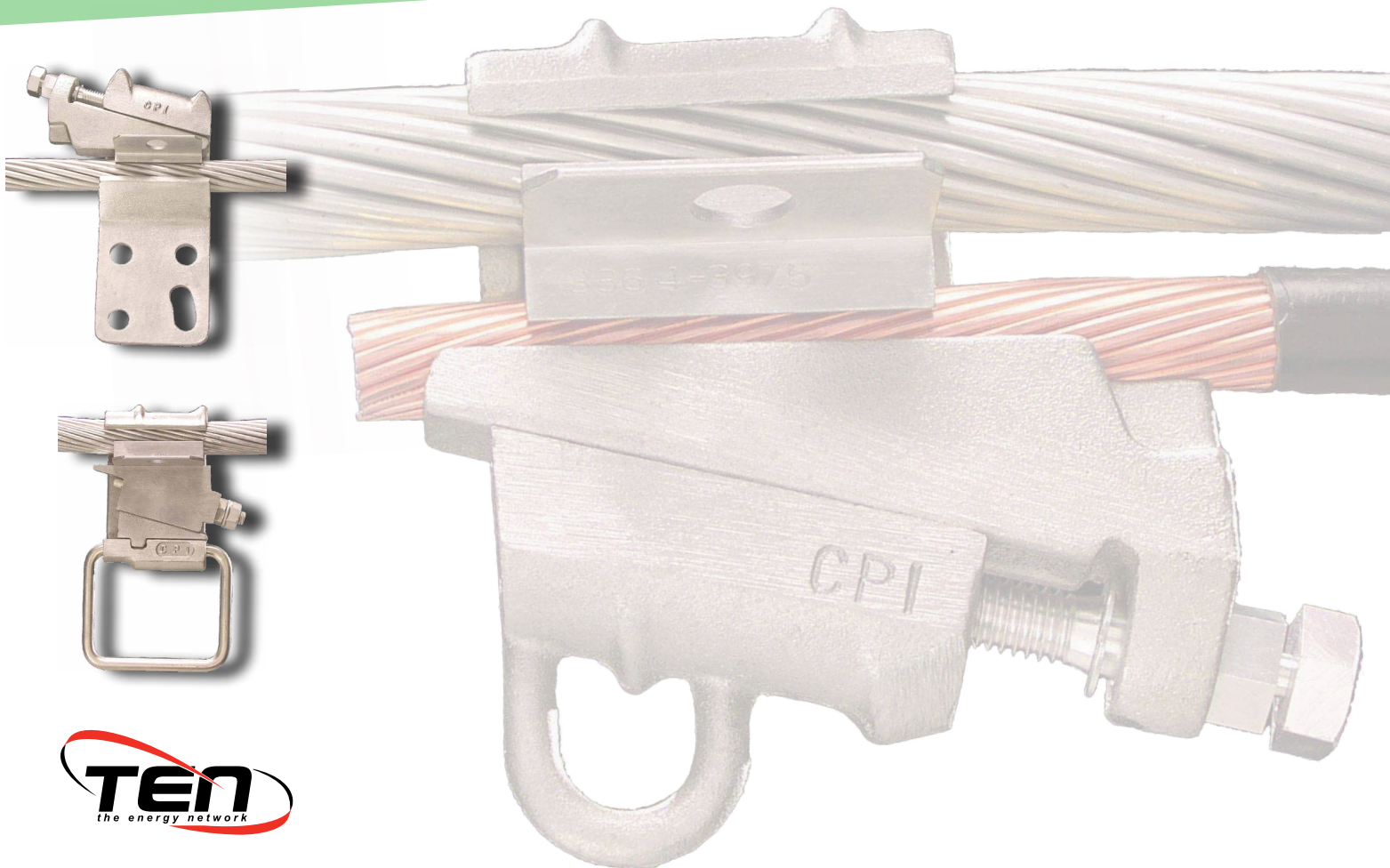
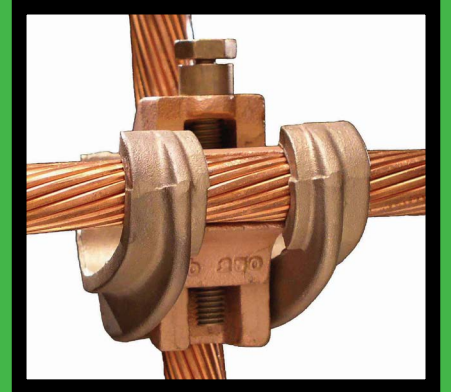
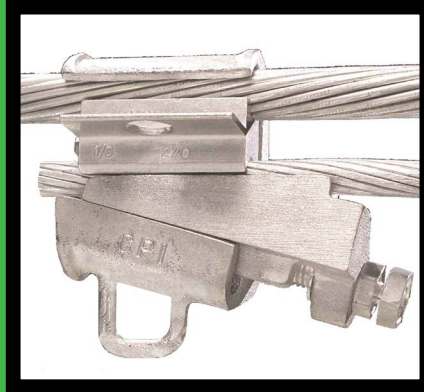


WEDGE CLAMPS



Introduction

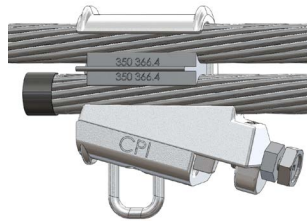
The range of wedge clamps are designed for use on overhead transmission and distribution lines as well as transmission and distribution substation and earthing applications for all voltage classes up to 230kV.

The products use proven technology developed and refined over the past 30 years.

The products are constructed using high strength Aluminium Alloy components and have been extensively type tested using independent laboratories to ensure long life and reliability under the harshest environmental conditions.

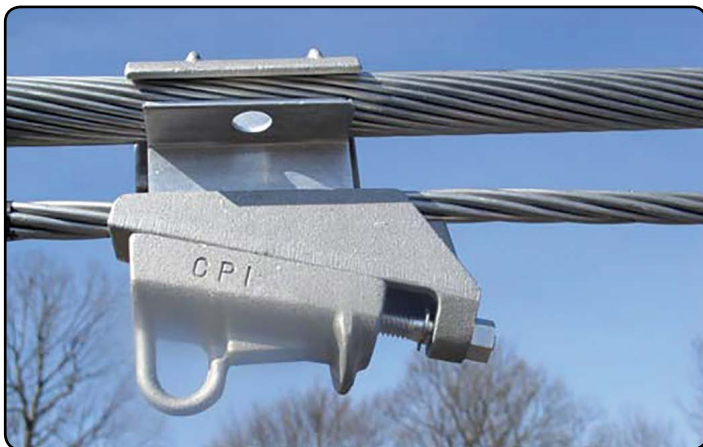
Overview

The Spring Like qualities of the high strength "C" body ensure a permanent robust connection with consistent pressure on the conductors in harsh environmental conditions.



The exclusive high conductivity aluminium – alloy interface offers a low resistance conductive path for as high efficient connection.

The drive wedge creates a connecting force while maintaining the conductors in a locked position. A Hot Stick eye is provided as standard on all applicable wedge types making them suitable for all live line applications.

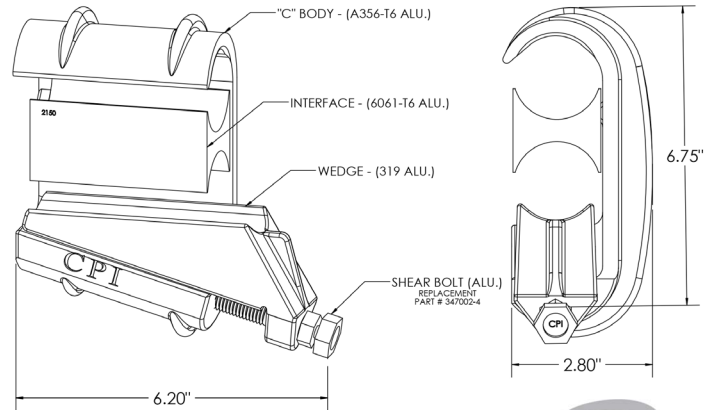


The clamps utilise the industry proven wedge connection principal that is quick and easy to apply with standard tooling such as sockets and impact wrenches. **NO SPECIAL TOOLS ARE REQUIRED.**

The clamps are factory provided with a high conductivity grit inhibitor compound for ease of installation. The connectors can be easily removed and are reusable with replacement sheer bolt components.

Design & Construction

The unique design of the CPI wedge clamp offers the user a number of advantages and value over the life of the product.



"C" Body

The "C" body is available in three sizes to cater for all conductor types and is engineered with "spring like" qualities in a high strength robust "C" frame. This ensures that the conductors have high performance constant appropriate pressure under all rated load and fault conditions in harsh environmental conditions such as wide varying temperatures in high salt laden areas.

Interface

The interface is designed to cater for a wide range of conductors without the requirement to change the body of the clamp in most instances. This reduces the range of different clamps required for network installations and associated inventory stock holdings. The interface is designed to ensure high performance low resistance connections making it ideal for critical load connections and smart grid applications where automated network switching places potential temporary overloads on paralleled circuits.

Wedge with Shear Bolt Application

The wedge is designed with a shear bolt application making installation extremely simple and consistent. During installation and when the correct spring tension is achieved the shear bolt breaks off. This method provides a positive indication for correct connections without the need for special tooling, providing a safe and easy installation that reduces both tooling inventory, maintenance and repair expenses.

The shear bolt is designed to be replaced meaning that the clamps can be reused without the requirement to replace the entire clamp providing economic benefits through the life of the clamps.

The Range

Wedge Clamp (Tap Connector)

- Designed for connecting aluminum to aluminum or aluminum to copper conductors for transmission and distribution systems
- High strength A356 heat treated spring aluminum C-Body ensures constant and consistent mechanical connection
- 6101 EC grade aluminum interface offers a low resistance conductive path for an efficient electrical connection

Substation or Busbar Connector

- A unique connector that offers a removable connection to a variety of two or four hole NEMA standard devices. Some examples of applications are in mounting sectionalising switches or in connecting compression lugs for risers
- High strength A356 heat treated spring aluminum C-Body ensures constant and consistent mechanical connection
- 6101 EC grade aluminum interface offers a low resistance conductive path for an efficient electrical connection

Stirrup Connector

- Designed for use in connecting aluminium or copper conductors for Transmission and Distribution systems
- Large loop Tin Plated Bail allows for multiple position connections as well as eliminating galvanic reaction
- High Strength A356 heat treated spring aluminum C-Body ensures constant and consistent mechanical connection
- 6101 EC grade aluminum interface offers a low resistance conductive path for an efficient electrical connection

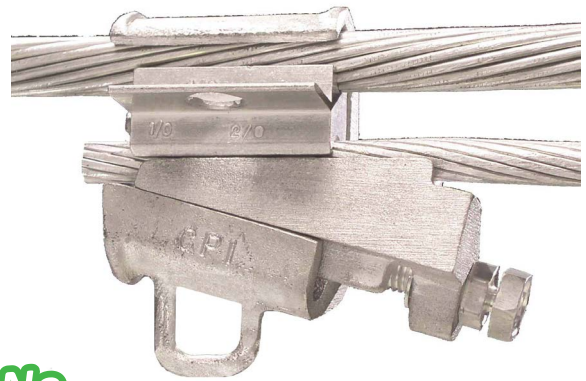
Earth Grid Connector

- Designed for connecting copper wire and rod for a variety of grounding applications in substation and transmission
- Safe, fast dependable method of making permanent wire-to-wire or wire-to-ground connections
- No temperature or weather restrictions, can be installed no matter what environment exists at jobsite
- Aluminum-Bronze construction allows the Ground Grid Connector to be directly buried
- The Ground Grid Connector can be totally installed with a single wrench and does not require the use of Special Molds, Chemicals, Tools, Crimping Dies or Fire-on Charges

HTC Connector

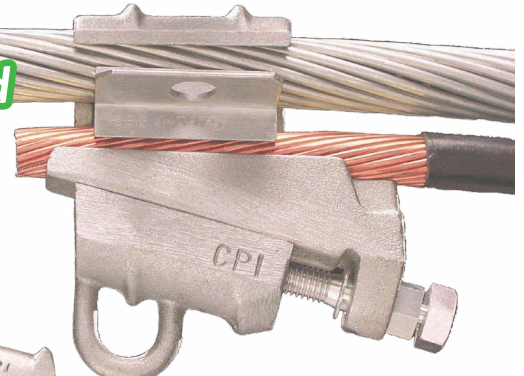
- Full current rated Tap Line Connector
- Designed as a permanent or temporary device tap connector
- Installable directly to the main line. No need for using a bail
- Able to accept a wide range of conductors with only three part numbers
- Self maintaining spring-wedge connection
- Directly compatible with the Connector Products stirrup connector
- Highly conductivity extruded aluminium construction

The CPI **Bolted OPGW Dead End** is designed for dead end applications of Optical Grounding Wire Spans. The patented left and right hand gripper design allows the dead end to hold up to 95% of the cables RTS without damaging the fibres. Available in a range of sizes from 8.98mm - 9.75mm through to 17.9mm-19.0mm (outside diameter cable measurement).

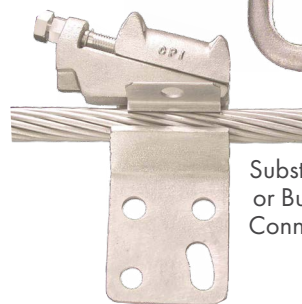


Aluminium to Aluminium Connector

**No
Special
tools
required
for
install**



Bi-metal Connector



Substation
or Busbar
Connector

**Removable
and reusable
with no
damage to
conductor**



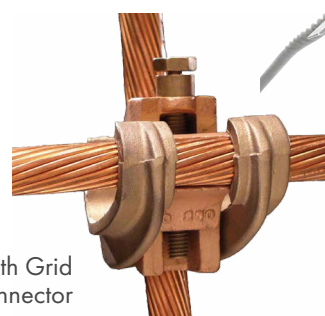
Large Aluminium
with Bail



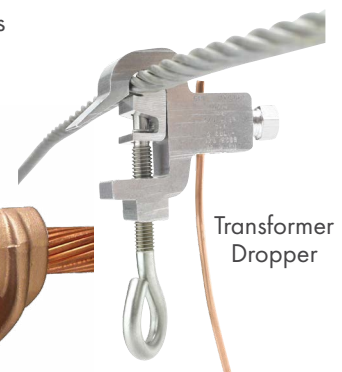
Small Aluminium
with Bail



OPGW 90°
Corner Bends



Earth Grid
Connector



Transformer
Dropper

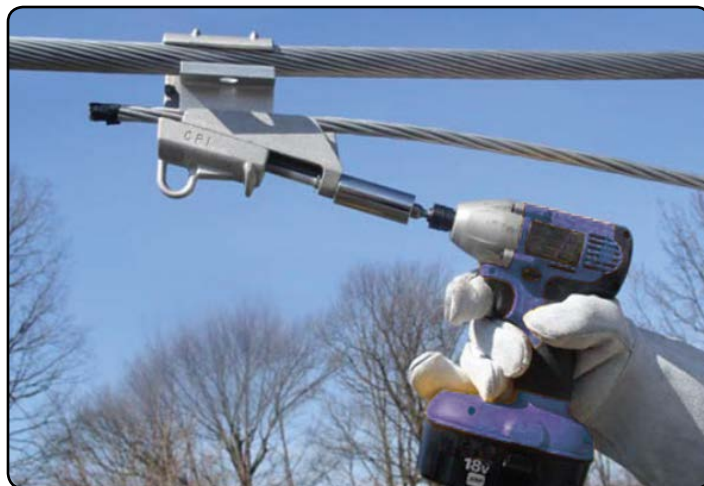
Live Line Installation

The wedge clamps have been designed to fit all standard live line "shotgun" sticks making them safe and easy to install using live line crews.



Non Live Line Installation

The wedge clamps have been designed with minimal tooling for installations as possible. The shear bolt design means that standard existing tooling can be utilised for installation. No specialised tooling is required such as cartridge firing tooling, torque wrenches or similar tools. The wedges are extremely simple and safe to apply correctly and requires little to no training for installation.



Ratings

Rated Maximum Voltage	All Voltage Classes up to 230kV
Rated Continuous Current	Exceeds Applicable Conductor Ratings
Short Circuit Current RMS	10kA for 2s
Short Time Current Withstand	>2s
Humidity	0-100%
Service Life	>30 Years

Type Testing Summary

All CPI wedge clamps are type tested in accordance with AS/NZS 4325.1, IEEE 837 & ANSI C119.4

Class AA (Extra Heavy Duty) Current Cycling Test

In accordance with American National Standards Institute (ANSI) C119.4-2004.

Class 1 – Full Tension Test

In accordance with American National Standards Institute (ANSI) C119.4-2004.

Minimum 5% RBS Tension for equal cable/connector resistance.

In accordance with CPI specifications for minimum design tension of connectors.

Salt Fog Corrosion

In accordance with CPI specifications for qualifying connectors.

Fault Current

In accordance with CPI specifications for qualifying connectors.

Tap Selection Guide

To use chart, find main conductor on left and match with tap conductors being used.

CALL NAME	STRANDING		LIBRA	MARS	GARNET	HELIUM	MOON	IODINE	NEPTUNE	PLUTO	NEON	SATURN	RUBY	NITROGEN	TAURUS	OXYGEN
		TOTAL MM														
			7/3.00	7/3.75	7/3.75	7/3.75	7/4.25	7/4.25	19/3.25	19/3.75	19/3.75	37/3.00	37/3.00	37/3.00	19/4.75	19/4.75
			9.00	11.25	11.30	11.30	14.25	14.30	16.25	18.75	18.80	21.00	21.00	21.00	23.75	23.80
			0.354	0.443	0.445	0.445	0.561	0.563	0.640	0.738	0.740	0.826	0.826	0.826	0.935	0.937
			210105													
LIBRA	7/3.00	9.00	0.354													
MARS	7/3.75	11.25	0.443													
GARNET	7/3.75	11.30	0.445													
HELIUM	7/3.75	11.30	0.445													
MOON	7/4.25	14.25	0.561													
IODINE	7/4.25	14.30	0.563													
NEPTUNE	19/3.25	16.25	0.640													
PLUTO	19/3.75	18.75	0.738													
NEON	19/3.75	18.80	0.740													
SATURN	37/3.00	21.00	0.826													
RUBY	37/3.00	21.00	0.826													
NITROGEN	37/3.00	21.00	0.826													
TAURUS	19/4.75	23.75	0.935													
OXYGEN	19/4.75	23.80	0.937													

Bail Clamp Selection Guide

Conductor Type & Size Aluminum ACSR	Conductor Type & Size Copper	CPI Bail Part Number
	7/.064 (7/1.63)	102011
	7/.080 (7/2.03)	102010
3/2.75 SC/GZ 3/12 SC/GZ (3/2.64)		n/a
3/2.75 SC/AC 3/4/2.5 ACSR/GZ 3/4/2.5 ACSR/AC		n/a
7/2.50 AAC	7/2.75 7/.104 (7/2.64)	102010
7/3.00 AAC 6/1/3.00 ACSR 6/1/.118 ACSR	19/2.00 19/.083 (19/2.11)	102009
7/3.75 AAC 6/1/3.75 ACSR		
7/4.50 AAC 6/.186+7/.062 ACSR	19/2.50 19/.116 (19/2.75)	
	19/2.75 19/.116 (19/2.95)	
19/3.25 AAC 19/.128		336915-1
19/3.75 AAC 19/.149 AAC		556580



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INTERNATIONAL
ENVIRONMENTAL SYSTEM CERTIFIED TO
AS/NZS ISO 14001:2004
REGN. Number 4279

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