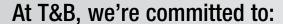




### Blackburn® Grounding Systems

Blackburn® Grounding compression and mechanical connectors and accessories represent one of the most comprehensive product lines in the industry for the creation of a safe, code-compliant and reliable grounding.

- Direct Burial Blackburn® Grounding compression products are compliant with IEEE 837, UL® 467, CSA 22.2 and applicable sections of the National Electrical Code® (NEC®). They can be used in direct-burial or concrete-encased applications.
- Broad Line and No Special Tooling Blackburn® Grounding mechanical
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- Offering a best-of-class warranty and returns policy

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- Nationwide network of stocking electrical distributors
- Outstanding customer service capability
- Supplying you with the right products, convenient packaging, on-time delivery and competitive pricing

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T&B Access® is a global sales tool for our distributor partners, offering:

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- Context-Sensitive Help
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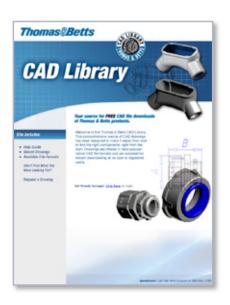
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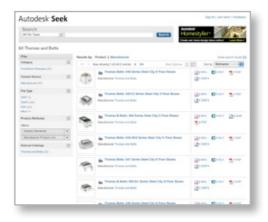
The T&B CAD Library is an on-line source of 2D and 3D CAD models, available FREE to customers who register. Users can download these files to their desktops for import into their working drawings. Drawings are offered in 90 of the most popular native file formats. This is a valuable tool for CAD designers, OEMs and engineering firms, as it will allow them to quickly locate and download T&B drawings into their projects. Over 4,000 drawings of T&B® Fittings, PMA® Cable Protection, Kindorf®, Red•Dot® and Superstrut® products and Steel City® and Carlon® Floor Boxes are currently available, and we're continually adding more products to the library.



### **BIM Library**

Now available to you through Autodesk® Seek (**seek.autodesk.com**), our BIM (Building Information Modeling) objects can easily be imported to your Revit® models. These BIM objects are fully standards compliant, Revit® Certified and completely configurable.

Autodesk and Revit are registered trademarks of Autodesk, Inc.



Fax: 901.252.1354

#### **Overview**

Blackburn® EZGround™ Compression Connectors represent a low cost, code-approved alternative to welded ground grid connections. EZGround™ Connectors can be safely installed in half the time, with fewer components, and in all weather conditions. The range-taking capability of each EZGround™ series connector translates to fewer parts needed to complete the ground grid. EZGround™ Compression Connectors are installed using the "T&B Method," which produces an easily inspectable die embossment on the connector indicating that the proper tool has been used and successful crimp has been made. EZGround™ carries the "T&B Method" mark of approval and represents the connection of choice for faster, simpler and safer ground grid system installations.

### Meets all applicable specifications

Thomas & Betts grid and ground rod connectors satisfy the requirements of NEC® Article 250 for connecting to the Grounding Electrode System. They also meet the requirements of UL® Std. 467, UL® Std. 486, CSA Std. C22.2 No. 41 and CSA Std. C22.2 No. 65 being acceptable as grounding and bonding equipment suitable for direct burial. Thomas & Betts grid and ground rod connectors also satisfy the recommended practice for the selection of grounding connector joints described in the IEEE 837 standard for qualifying permanent connections used in substation grounding.

The connectors conform to the following IEEE Standard 837 requirements:

- 350° C current cycling
- · Freeze-thaw test
- Accelerated aging nitric acid/salt spray
- Mechanical, tensile and electromagnetic force (EMF) criteria

NEC and National Electrical Code are registered trademarks of the National Fire Protection Association, Inc.

### Reliable installations through compression connections

The Thomas & Betts method, utilizing compression tools with matching dies, forms the connector and conductor into a solid, homogeneous mass to provide an optimum electrical bond between connector and conductor. The dies are designed to produce a circumferential, hex-shaped compression rather than a simple indent. The circumferential compression creates a large area of high-pressure contact between cable and connector which, in turn, ensures high conductivity, low resistance and high pull-out values exceeding all industry requirements.







Refore Compression



After Compression

This installation method results in a long-lasting, low-installed cost connection. You can install it and forget it. Before compression, typical cable connector cross section of cable and connector consists of about 75% metal and 25% air. After Thomas & Betts method compression, the cross section shows 100% metal with virtually no air spaces.

#### Mobile Application Vehicle













**United States** 

Tel: 901.252.8000 800.816.7809 Fax: 901.252.1354

**Technical Services** Tel: 888.862.3289



### **Overview**

### **The EZGround**<sup>™</sup> **System**

Thomas & Betts offers its complete line of grid-ground compression connectors. Our EZGround™ connectors are designed for direct burial and offer a safe, efficient alternative to exothermic welding products. Grid-ground installations do not require explosive charges and can be installed in various climate conditions. These range-taking products will reduce the number of connectors and dies needed for your installation.

Thomas & Betts EZGround™ products meet all applicable standards (IEEE 837, UL® 467, CSA 22.2). Connectors are prefilled with oxide inhibitor and sealed.

1 C-Taps

2 Figure 8 Connector

3 Steel Grounding Stud TBG Series

4 Figure 6–8 Connectors

5 Figure 6–6 Connectors

6 GG Connectors

Lug

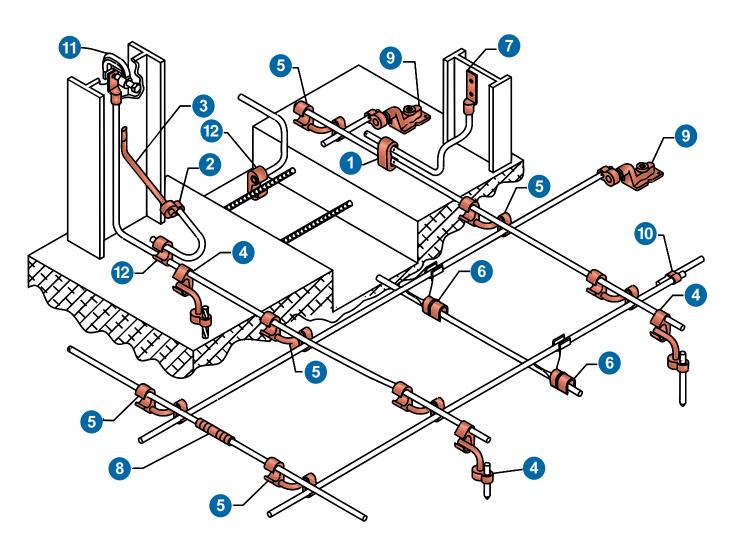
8 Splice/Two-Way Connector

9 Grounding Plate

10 Pigtail Connectors

11 I-Beam Clamp

12 Figure 6 Connector

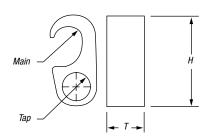




## **EZGround** Compression Grounding Connectors

### **Figure 6 Compression Ground Rod Tap Connector**







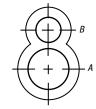
DB (VL) (\$P-**IEEE** 

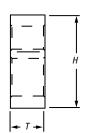
	APPLICATION		CABLE TO REBAR A	APPLICATION		NSIONS N.)	DIES FOR TBM 14M, 13100A
CAT. NO.	MAIN	TAP	A GROUND ROD	B CABLE RANGE	Т	Н	OR TBM15I
54855	1/0 Str.–.250 kcmil or ½"–%" Rod	#4 Sol#2 Str.	#3 Rebar % thru ½ #4 Rebar	#4 Sol#2 Str.	3/4"	1 <sup>15</sup> / <sub>16</sub> "	15G86R
54860	1/0 Str250 kcmil or 1/2"-5/8" Rod	1/0 Str2/0 Str.	#3 Rebar % thru ½ #4 Rebar	1/0 Str2/0 Str.	3/4"	23/16"	15G86R
54865-CK	1/0 Str250 kcmil or 1/2"-5/8" Rod	3/0 Str250 kcmil	#3 Rebar % thru ½ #4 Rebar	3/0 Str250 kcmil	3/4"	23/16"	15G86R
54875	#6 Sol#2 Str.	#6 Sol#2 Str.	_	_	3/4"	29/16"	15501A
54885	250 kcmil–500 kcmil or %"-3/4" Rod	#4 Sol#2 Str.	#5 Rebar % thru ¾ #6 Rebar	#4 Sol#2 Str.	3/4"	<b>1</b> 15/16"	15G126R
54890	250 kcmil-500 kcmil or %"-3/4" Rod	1/0 Str2/0 Str.	#5 Rebar % thru ¾ #6 Rebar	1/0 Str2/0 Str.	3/4"	21/8"	15G126R
54895	250 kcmil–500 kcmil or 1/8"-3/4" Rod	3/0 Str250 kcmil	#5 Rebar % thru ¾ #6 Rebar	3/0 Str250 kcmil	3/4"	23/16"	15G126R
54900	250 kcmil–500 kcmil or $\%$ "– $\%$ " Rod	350 kcmil-500 kcmil	#5 Rebar % thru ¾ #6 Rebar	350 kcmil-500 kcmil	1%"	27/16"	15G121R

<sup>\*</sup> Tin-plated version available for galvanized ground rods. Add suffix -TP.

### **Figure 8 Compression Ground Rod Tap Connector**









DB (ll)





			DIMENSIONS (IN.)		
CAT. NO.	A GROUND ROD	B CABLE RANGE	Т	Н	DIES FOR TBM14M, 13100A OR TBM15I
GR12-202	1/2"	#2 AWG-2/0 AWG	7/8"	1 15/16"	15G121R
GR58-202	5/8"	#2 AWG-2/0 AWG	7/8"	131/32"	15G121R
GR34-202	3/4"	#2 AWG-2/0 AWG	7/8"	23/16"	15G121R
GR1-202	1"	#2 AWG-2/0 AWG	7/8"	29/16"	15G121R
GR12-40250	1/2"	3/0 AWG-250 kcmil	7/8"	115/16"	15G121R
GR58-40250	5/8"	3/0 AWG-250 kcmil	7/8"	21/8"	15G121R
GR34-40250	3/4"	3/0 AWG-250 kcmil	7/8"	23/16"	15G121R
GR1-40250	1"	3/0 AWG-250 kcmil	7/8"	27/16"	15G121R
GR58-300500	5/8"	300-500 kcmil	7/8"	21/8"	15G121R
GR34-300500	3/4"	300-500 kcmil	7/8"	27/16"	15G121R
GR1-300500	1"	300-500 kcmil	7/8"	211/16"	15G121R



**United States** 

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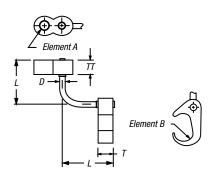
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## **EZGround** Compression Grounding Connectors

### Figure 6 to 8 Compression Ground Rod to Grid Connectors











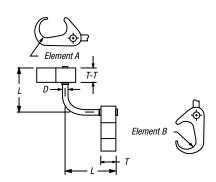
MEETS	
IEEE	
837 REQ	UIREMENT

			DIMENS	DIMENSIONS (IN.)		, 13100A OR TBM15I
CAT. NO.	A GROUND ROD	B CABLE RANGE	D	L	ELEMENT A	ELEMENT B
54855LR12*	1/2"	#2 AWG-250 kcmil	5/16"	2½"	15G86R	15G121R
54885LR12*	1/2"	250 kcmil-500 kcmil	5/ <sub>16</sub> "	21/2"	15G126R	15G121R
54865LR58*	5/8"	#2 AWG-250 kcmil	5/ <sub>16</sub> "	21/2"	15G86R	15G121R
54895LR58*	5/8"	250 kcmil-500 kcmil	5/ <sub>16</sub> "	21/2"	15G126R	15G121R
54875LR34*	3/4"	#2 AWG-250 kcmil	1/2"	25/8"	15G86R	15G121R
54900LR34*	3/4"	250 kcmil-500 kcmil	1/2"	25/8"	15G121R	15G121R
54910LR100	1"	#2 AWG-250 kcmil	1/2"	25/8"	15G86R	15G121R
54920LR100	1"	250 kcmil-500 kcmil	1/2"	25/8"	15G126R	15G121R

<sup>\*</sup> Tin-plated version available for galvanized ground rods. Add suffix -TP.

### **Figure 6 to 6 Compression Ground Grid Connectors**













	CABLE TO CABLE		CABLE TO CABLE ELEMENT B  TO GROUND ELEMENT B TO				S (IN.)		DIE SELECTION FOR TBM14M, 13100A OR TBM15I	
CAT. NO.	ELEMENT A	ELEMENT B	ROD	REBAR	D	T	T-T	Α	В	
54855L	#6 Sol#2 Str.	#6 Sol#2 Str.		_	7/8"	3/4"	3/4"	15501A	15501A	
54865L	#1 Str250 kcmil	#6 Sol#2 Str.	1/2"-5/8"	3%-1/2" #3-#4 Rebar	7/8"	3/4"	3/4"	15G86R	15501A	
54875L	#2 Str250 kcmil	#2 Str250 kcmil	1/2"-5/8"	3/8-1/2" #3-#4 Rebar	7/8"	3/4"	3/4"	15G86R	15G86R	
54885L	250 kcmil-500 kcmil	#6 Sol#2 Str.	5/8"-1/2"	5/8-3/4" #5-#6 Rebar	7/8"	3/4"	3/4"	15G126R	15501A	
54895L	250 kcmil-500 kcmil	#2 Str250 kcmil	5/8"-1/2"	5%-34" #5-#6 Rebar	7/8"	3/4"	3/4"	15G126R	15G86R	
54900L	250 kcmil-500 kcmil	250 kcmil-500 kcmil	5/8"-1/2"	%-34" #5-#6 Rebar	7/8"	11/8"	11/8"	15G121R15	G121R	





### **EZGround** Compression Grounding Connectors

One-piece construction for cable-to-cable, cable-to-rod, "T" and "X" connections.

### **Cable-to-Cable or Cable-to-Rod Connectors**

- Suitable for direct burial or in concrete
- · Replaces exothermic welds
- Made from high-conductivity wrought copper
- · Conforms to IEEE 837 standard
- UL® 467



DB

	CA	BLE TO CABLE RAN	IGE				ROD TO CABLE	
CAT. NO.	MAIN	DIE CODE	BRANCH	DIE CODE	GROUND ROD	DIE CODE	CABLE	DIE CODE
GG21-21	#2 or #1	45	#2 or #1	45	<del>-</del>	_	_	_
GG10-10	1/0	54	1/0	54	_	_	_	_
GG2030-21	2/0 or 3/0	60	#2	45	_	_	_	_
GG2030-10	2/0 or 3/0	60	1/0	54	_	_	_	_
GG2030-2030	2/0 or 3/0	60	2/0 or 3/0	50	_	_	_	_
GG40250-21	4/0 or 250	71	#2 #1	45 50	1/2" 5/8"	71 80H	#2 or #1 #2 or #1	45 50
GG40250-10	4/0 or 250	71	1/0	54	1/2" 5/8"	71 80H	1/0	65
GG40250-2030	4/0 or 250	71	2/0 or 3/0	60	1/2" 5/8"	71 80H	2/0 or 3/0 2/0 or 3/0	60 60
GG40250-40250	4/0 or 250	71	4/0 or 250	71	1/2" 5/8"	71 80H	4/0 or 250 4/0 or 250	71 71
GG350-350	350 kcmil	80H	350	80H	_	_	_	_
GG500-40250	500 kcmil	87	4/0 or 250	71	5/8" 3/4"	80H 87H	500 500	87 87
GG500-500	500 kcmil	87	500	87	3/4"	87	500	87
GG500-350	500 kcmil	87H	350	80	5/8" 3/4"	87H	350	80H
GG500-2030	500 kcmil	87H	2/0 or 3/0	60	5/8" 3/II	87H	2/0 or 3/0	60





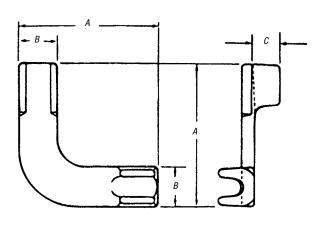
### **EZGround** Compression Grounding Connectors

For copper cable-to-cableground-grid connections.

# Type GRD — Cable-to-Cable Connector

- Cast of high-conductivity bronze alloy
- · Suitable for direct burial





DB (VL



		CONDUCTOR SIZE													
		MAIN			TAP				INSTALLA	ATION INFORMATION		DIMI	DIMENSIONS (IN.)		
CAT. NO.	MAX.	MIN.	MAX. (MM²)	MIN. (MM²)	MAX.	MIN.	MAX. (MM²)	MIN. (MM²)	GROUND ROD	HYD. TOOL	DIE	NO. CRIMPS	A	В	С
GRD2	1	2	42.4	33.6	1	2	42.4	33.6	_	TBM14M	B09CH	1	21/2	11/16	11/16
GRD20	2/0	1/0	67.4	53	2/0	1/0	67.4	53	_	TBM14M	B10CH	1	3	13/16	7/8
GRD420	250 kcmil	4/0	126.6	107	2/0	1/0	67.4	53	5/8	TBM14M	B12CH	2	35/8	11/16	<sup>13</sup> / <sub>16</sub>
GRD40	250 kcmil	4/0	126.6	107	250 kcmil	4/0	126.6	107	5/8	TBM14M	B12CH	2	35/8	11/16	13/16

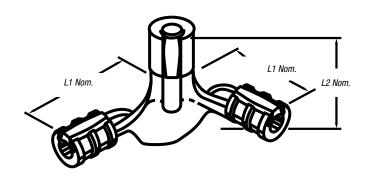
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### **EZGround** Compression Grounding Connectors

For connecting perpendicular runs of stranded copper cable to ground rod.

# Two Cables-to-Ground Rod Connector — Heavy-Duty Cast Copper ††





Two Cables-to-Ground Rod Connector — Heavy-Duty Cast Copper<sup>††</sup>

DB

	CABLE SIZE						
CAT. NO.	MAIN	TAP	GROUND ROD DIA.	TBM15I DIE FOR CABLE CODE	L1	L2	TBM15I DIE FOR GROUND ROD CODE
53065-58GR	250 or 4/0 25	50 or 4/0	5/8" & 1/2"	87H	415/16	31/4	87H
53065-34GR	250 or 4/0 25	50 or 4/0	3/4"	87H	415/16	33/4	106H

Installs with Hydraulic Tools with hex crimp dies.

#### Copperweld® Conductors & Rebar — for Use with Cast Copper Connections

CABLE SIZE	REINFORCING ROD SIZE	COPPERWELD® CONDUCTOR SIZE
#2, #1 AWG	_	(3) #8 or (3) #6
1/0, 2/0 AWG	#3	<sup>3</sup> / <sub>8</sub> — (7) #8 or <sup>7</sup> / <sub>16</sub> — (7) #7
4/0 AWG, 250 kcmil	#4	7/ <sub>16</sub> — (19) #9 or (7) #5
300-350 kcmil	#5	<sup>21</sup> / <sub>32</sub> — (19) #8 or <sup>5</sup> / <sub>8</sub> — (7) #4
500 kcmil	#6	¹³⁄₁ <sub>6</sub> — (19) #6

Copperweld is a registered trademark of Copperweld Corporation.

UL® Listed for use with cast copper connectors.



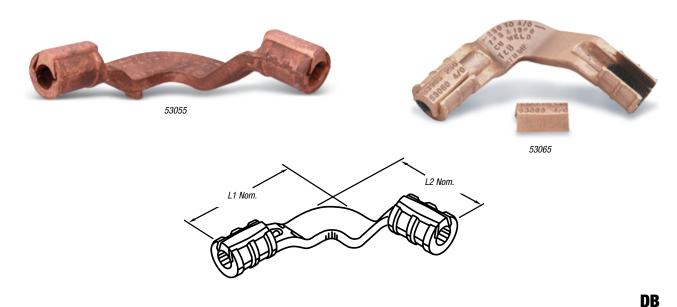
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<sup>&</sup>lt;sup>††</sup> Does not meet IEEE 837.

## **EZGround** Compression Grounding Connectors

# Grounding Grid Connectors — Heavy-Duty Cast Copper<sup>††</sup>



	ROD TO CABLE RANGE CABLE		CABLE TO CA	ABLE RANGE	ROD TO CABLE DIE CODE FO 13100A OF	R TBM14M,		OVERALL DIMENSION (IN.)	
CAT. NO.	ROD SIZE (IN.)	CABLE RANGE	MAIN	BRANCH	ROD BARREL	CABLE Barrel	L1	L2	
53055	_	_	1/0-2/0 AWG	1/0-2/0 AWG	_	66	37//8	37//8	
53059 <sup>†</sup>	1/2-5/8	#2-#1 AWG	4/0 AWG-250 kcmil	#2-#1 AWG	87H	54H	45/32	4%16	
53060 <sup>†</sup>	1/2-5/8	1/0-2/0 AWG	4/0 AWG-250 kcmil	1/0-2/0 AWG	87H	87H	47/16	45/16	
53065 <sup>†</sup>	1/2-5/8	4/0 AWG-250 kcmil	4/0 AWG-250 kcmil	4/0 AWG-250 kcmil	87H	87H	4/16	45/16	
53069 <sup>†</sup>	3/4	1/0-2/0 AWG	300-350 kcmil	1/0-2/0 AWG	106H	66	419/32	419/32	
53071 <sup>†</sup>	3/4	4/0 AWG-250 kcmil	300-350 kcmil	4/0 AWG-250 kcmil	106H	106H	51/4	$4^{25}/_{32}$	
53073 <sup>†</sup>	3/4	1/0-2/0 AWG	500 kcmil	1/0-2/0 AWG	125H*	66	413/16	47/8	
53075 <sup>†</sup>	1	4/0 AWG-250 kcmil	500 kcmil	4/0 AWG-250 kcmil	125H*	87H	6%	5	
53080 <sup>†</sup>	1	500 kcmil	500 kcmil	500 kcmil	125H*	125H*	53/16	53/16	

Cat. No. 15500 adapter is required for all 15500 Series dies, not for 15600 Series.



Fax: 901.252.1354

800.816.7809

 $<sup>^{\</sup>dagger}$  Ground rods 4/0–250 wire barrels suitable for  $^{1}\!/_{2}$ " and  $^{5}\!/_{8}$ " rod.

<sup>500</sup> kcmil wire barrels suitable for 1" rods.

<sup>300-500</sup> kcmil wire barrels suitable for 5/8" rods.

Hydraulic tools only.

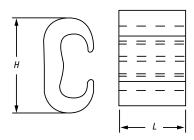
<sup>&</sup>lt;sup>#</sup> Does not meet IEEE 837.

<sup>\* 125</sup>H die for 15-ton tool only.

## **EZGround** Compression Grounding Connectors

### **C-Taps**









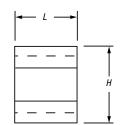
			DIMENSION (IN.)			
CAT. NO.	MAIN	TAP	Н	L	DIES FOR TBM14M 13100A OR TBM15I *	CRIMPS
CTP22	#6 Sol#2 Str.	#6 Sol#2 Str.**	1.16	.75	HBKC	1
CTP202	#1 Str2/0 Str.	#6 Sol#2 Str.**	1.41	.75	15501A	1
CTP2020	#1 Str2/0 Str.	#1 Str2/0 Str.	1.54	.75	15501A	1
CTP25020	3/0 Str250 kcmil	#6 Sol2/0**	1.97	.75	15G86R	1
CTP250250	3/0 Str250 kcmil	3/0 Str250 kcmil	2.06	.88	15G86R	1
CTP50020	300-500 kcmil	#6 Sol2/0**	2.42	.88	15G121R	2
CTP500250	300-500 kcmil	3/0 Str250 kcmil	2.67	.88	15G121R	2
CTP500500	300-500 kcmil	300-500 kcmil	2.91	1.10	15G121R	3

Material: High-Conductivity Copper.

### **Copper C-Crimps**













				_	DIMENS	ION (IN.)
CAT. NO.	RUN	TAP	DIE INDEX	INSTALLING DIE TBM14M 13100A, TBM151	Н	L
BC48	#6 Sol#4 Str.	#8 Sol#8 Str.	BG or %	B58CS	41/64	9/16
BC46-BB	#6 Sol#4 Str.	#6 Sol#6 Str.	BG or 5/8	B58CS	41/64	3/4
BC44	#6 Sol#4 Str.	#4 Sol#4 Str.	BG or %	B58CS	41/64	51/64
BC24	#2 Sol#2 Str.	#8 Sol#4 Str.	С	HBKC	3/4	63/64
BC22	#2 Sol#2 Str.	#2 Sol#2 Str.	С	HBKC	3/4	13/64
BC202	1/0 Sol2/0 Str.	#8 Sol#2 Str.	E or O	HO	<sup>15</sup> / <sub>16</sub>	15/16
BC2020-BB	1/0 Sol2/0 Str.	1/0 Str2/0 Str.	E or O	HO	15/16	111/32
BC402	3/0 Str4/0 Str.	#6 Sol#2 Str.	F or D3	HD	11/16	1%
BC4020	3/0 Str4/0 Str.	1/0 Sol2/0 Str.	F or D3	HD	11/16	15/16
BC4040	3/0 Str4/0 Str.	3/0 Sol4/0 Str.	F or D3	HD	11/16	<b>1</b> 5⁄16

 $<sup>^{\</sup>prime\prime}$  Does not meet IEEE 837. Material: High-Conductivity Copper.

UL® 467 Listed.





<sup>\*</sup> Cat. No. 15500 adapter required if using TBM15I and 155XX series dies.

<sup>\*\* #6</sup> AWG branch must be doubled.

### **EZGround™ Compression Grounding Connectors**

# Perform line tap-offs, dead-ending and grounding on a range of conductors.

### **Copper C-Type Compression Taps**

- Can be held in the dies or jaws of an installation tool, then hooked directly over the line for timesaving installations
- Manufactured from pure electrical-grade copper for a highly conductive, low resistance, reliable connection
- Die references marked on connector for easy identification
- RUS Accepted



CC 4040

#### **Copper C-Type Compression Taps**

	WIRE	RANGE	_	
CAT. NO.	A GROOVE	B GROOVE	INSTALLING DIES	LENGTH (IN.)
CC 48	#6 Sol#4 Str.	#8 Sol#8 Str.		
CC 46	#6 Sol#4 Str.	#6 Sol#6 Str.	TU, BG, ⅓	5/8
CC 44	#6 Sol#4 Str.	#4 Sol#4 Str.		
CC 24*	#2 Sol#2 Str.	#8 Sol#4 Str.	TM or C	3/4
CC 22	#2 Sol#2 Str.	#2 Sol#2 Str.	TIVI OF C	/4
CC 202	1/0 Sol2/0 Str.	#8 Sol#2 Str.	F or O	7/8
CC 2020	1/0 Sol2/0 Str.	1/0 Sol2/0 Str.	LUIU	/8
CC 402	3/0 Sol4/0 Str.	#6 Sol#2 Str.		
CC 4020	3/0 Sol4/0 Str.	1/0 Sol2/0 Str.	F or D3	11/16
CC 4040	3/0 Str4/0 Str.	3/0 Str4/0 Str.		

<sup>\*</sup> When using #1 Str. in the A Groove, the B Groove will accommodate #6 or #8 Str. or #8 Sol. Note: For tin-plating option, add "-TN" suffix to the catalog number.

#### Copperweld-Copper Conductor

8A — Use C-Tap accommodating #6 str. Copper 6A — Use C-Tap accommodating #4 str. Copper 4A — Use C-Tap accommodating #2 str. Copper 2A — Use C-Tap accommodating 1/0–2/0 Copper

Hex compression intimately bonds cable directly to ground rod.

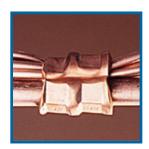
### **Pigtail Connectors**

- · Figure-8 connectors
- · Conforms to IEEE 837 standard
- UL® 467 Listed





CAT. NO.	CABLE RANGE	GROUND ROD	DIE CODE FOR TBM14M, 13100A OR TBM15I
GR12-306	One Cable: 3/0 to #6 AWG Two Cables: #2 to #6 AWG	1/2"	87H
GR58-406	One Cable: 4/0 to #6 AWG Two Cables: #2 to #6 AWG	5/8"	87H
GR34-4010	One Cable: 4/0 to 1/0 AWG	3/4"	99H



When connecting cable to ground rod for direct burial or in concrete, the connector shall be wrought copper with minimum conductivity of 99% I.A.C.S., such as Thomas & Betts series GR12-306. Hex compression with die code embossing shall be used.

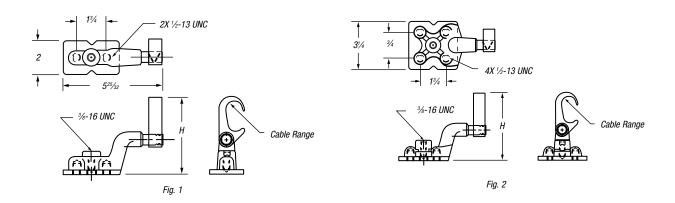




## **EZGround** Compression Grounding Connectors

### **Ground Plates**







CAT. NO.	FIG.	CABLE RANGE	Н	DIES
GP2250-2	1	#2-250 kcmil	35/8"	15G86R
GP2250-4	2	#2-250 kcmil	47/32"	15G86R
GP250500-2	1	250-500 kcmil	35%"	15G126R
GP250500-4	2	250-500 kcmil	4 <sup>7</sup> / <sub>32</sub> "	15G126B

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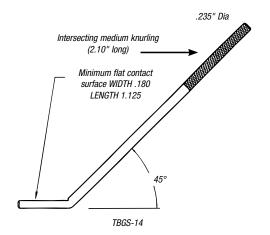
## **EZGround** Compression Grounding Connectors

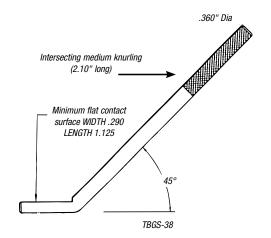
Knurling ensures excellent mechanical pull-out and electrical continuity.

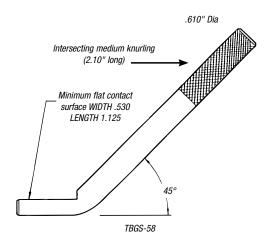
# **Type TBGS — Structural Grounding Studs**

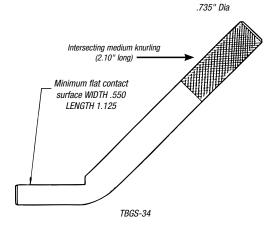
- Easily welded to steel structures with minimal construction welding equipment
- Connect to grounding conductors with appropriate Thomas & Betts grounding connectors
- Knurled portion of stud resists pull-out and provides electrical continuity to ensure the integrity of the grounding circuit
- Constructed of high-strength steel and coated with corrosion-resistant copper cyanide











CAT. NO.	ROD SIZE
TBGS-14	1/4"
TBGS-38	3/8"
TBGS-58	5/8"
TBGS-34	3/4"



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### **EZGround** Compression Grounding Connectors

# Connect ground cable to I-beam or any 1" maximum structural steel member — without welding or drilling.

#### **I-Beam Ground Clamp**

- Breakaway bolt head shears at predetermined torque to ensure tight connection
- Heavy-duty compression lug provides excellent current-carrying capabilities
- Surface of steel must be cleaned in accordance with installation instruction sheet provided with product
- Connector made of high-conductivity cast copper bright dip
- Clamp made of drop-forged high-grade steel, zinc plated





(h) (§	MEETS IEEE 837 REQUIREMENT
	837 REQUIREMEN

CAT. NO.	WIRE RANGE	TBM15I INSTALLING TOOL, DIE CODE
IBG2-10	#2 thru 1/0 AWG	71
IBG20-40	2/0 thru 4/0 AWG	87
IBG350-500	350 thru 500 kcmil	115

Use hydraulic tooling with hex crimp dies.

# Satisfies requirements of NEC® 250.64(C)(1) for connecting to grounding electrode system.

# Cast Copper Two-Way Connector — Heavy-Duty

- Made from high-conductivity cast copper
- Electro-tin-plated finish



CAT. NO.	DIE SIZE	DIE CODE
53504	#8 AWG	29
53505	#6 AWG	29
53506	#4 AWG	29
53507	#2 AWG	45
53508	#1 AWG	45
53509	1/0 AWG	45
53510	2/0 AWG	66
53511	3/0 AWG	66
53512	4/0 AWG	66
53513	250 kcmil	76
53515	350 kcmil	99
53518	500 kcmil	99
53523	750 kcmil	112

Use hydraulic tools with hex dies.

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### EZGround™ Compression Grounding Connectors

# Provides a permanent, reliable connection. **Ground Clamp**

- · Crimps to cable
- · Clamps to ground rod and rebar
- Uses standard Blackburn® featuring the Color-Keyed® System hand and hydraulic tools
- Color coded for easy installation die selection
- Made from high-conductivity wrought copper
- Furnished with stainless steel hardware, ¼" washers, bolts and nuts
- UL® 467 approved for direct burial





DB	(H)	<b>(IP</b> )
DB	(fr)	(B)

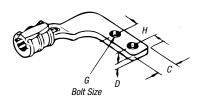
CAT. NO.	WIRE SIZE	GROUND ROD DIAMETER (IN.)	REBAR # (IN.)	BOLT SIZE (IN.)	DIE CODE
CC2C-45R	#2-#3 AWG	½ or %	4/5	1/4	33 BROWN
CC1C-45R	#1 AWG	½ or 5/8	4/5	1/4	37 GREEN
CC10C-56R	1/0 AWG	5/8 or 33/4	5/6	3/8	42 PINK
CC20C-56R	2/0 AWG	5/8 or 33/4	5/6	3/8	45 BLACK
CC40C-56R	4/0 AWG	5/8 or 3/4	5/6	3/8	54 PURPLE

# Terminate or connect continuous runs of copper cable to flat surfaces.

### **Flat-Surface Ground Clamp**

- Captivated "keeper bar" design extends cable range and helps hold cable prior to crimping, facilitating installation
- Saddles marked with conductor size and die code
- Conductor can be assembled to saddle with standard dies and hydraulic tools
- Made from high-conductivity cast copper









		BOLT	DIE CODE	UNIT	STD.	WT. PER		HEX DIE			INCHES		
CAT. NO.	WIRE RANGE	HOLE	NO.*	QUAN.	PKG.	WI. PER 100	CAT. NO.	DIE CODE NO.	L1	L2	D	С	Н
53055FL	1/0-2/0 AWG	3/8"	66	2	10	75	15534*	66	43/32	321/32	9/32	1%	1
53065FL	4/0 AWG- 250 kcmil	3/8"	87H	2	10	112	15506**	87H	4½	43/32	5/16	13/8	1

<sup>\*</sup> TM14M, 13100A, TBM15I with hex crimp dies.

<sup>\*\*</sup> TBM15I with hex crimp dies only.



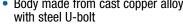


### **EZGround** Compression Grounding Connectors

# Bond copper conductors to steel or aluminum fence post or top rail of round fence posts.

### **Grid-to-Fence Ground Clamp**

- Provides quick, dependable installation at low installed cost
- Uses no incendiary materials
- Body made from cast copper alloy with steel U-bolt







CAT. NO.	GROUND CABLE RANGE	DIE CODE	STEEL & ALUMINUM LINE POST RANGE (IN.)
FG2040R2	2/0-3/0-4/0 Str.	76	2
FG2040R25	2/0-3/0-4/0 Str.	76	21/2
FG2040R3	2/0-3/0-4/0 Str.	76	3
FG210R2	#2-#1-1/0 Sol. or Str.	66	2
FG210R25	#2-#1-1/0 Sol. or Str.	66	21/2
FG210R3	#2-#1-1/0 Sol. or Str.	66	3

Install with hydraulic tooling with hex crimp dies.

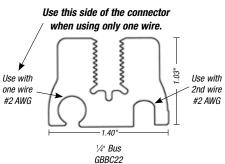


## Cuts installation time in half — with results superior to conventional connectors.

### **Bus Bar Connector**

- Unique design
- Fast and easy installation
- Superior low-resistance, highconductivity connections
- Produces a permanent connection with any combination of copper from #6 to #2 solid or stranded conductor, to 1/4" copper bus bar
- Installs with conventional compression tools
- Made from pure wrought copper and prefilled with oxide inhibitor
- UL® Listed and CSA certified
- Insulated with die HDF



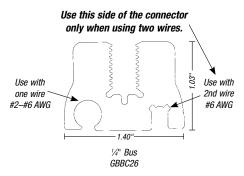






CAT. NO.	BUS BAR THICKNESS (IN.)	CONDUCTOR RANGE	STD. PKG. QTY.
GBBC22	1/4	#2 AWG-#2 AWG	1
GBBC26	1/4	#6 AWG-#2 AWG	1

EZGround™ Bus Bar Connectors install in less than two minutes with one easy crimp! The connector attaches directly to the bus, saving the labor-intensive process of drilling and tapping. The unique jaw interface of the EZGround™ Bus Bar Connector grips the copper bus, resulting in a low-resistance, high-conductivity connection. and others. It provides a continuous ground to the copper bus bar, making it ideal for hut and tower applications. The design enables installation in virtually any position, horizontal or vertical, and is suitable for inside and outside plant use. Installation can be completed using any T&B compression tool that accepts U-shaped die sets and is rated 12-ton or higher.





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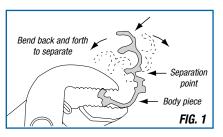
**EZGround™ Compression Grounding Connectors** 

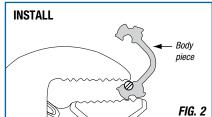
A "snap" to assemble — no special tools required.

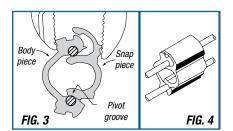
**SnapTap**<sup>™</sup> Connector

- Designed for bonding and grounding applications using copper, steel strand and ground rod
- Easily installed with channel locks or pliers
- Made from high-strength aluminum alloy with tin plating
- Offers excellent electrical and mechanical characteristics
- UL® 467 tested exceeds performance requirements

With the SnapTap™ Connector, you can achieve an electrically superior, pressure-fit connection in seconds without expensive tooling. The connector is also easy to disassemble, requiring only a flat-head screwdriver to release the connected body. A one-piece design keeps parts together, minimizing loss of components prior to assembly. Simply separate the pieces and snap them in place for installation. An audible "snap" indicates that the connection is complete and properly installed.







### **General Usage Instructions**

#### Separate

No special tools required. Use ordinary parallel jaw pliers to separate the connector into two parts. Hold one side of connector with pliers and bend opposite side back and forth until parts separate (see **Fig. 1**).

Caution: Be careful not to pinch fingers or thumb when separating parts. Keep fingers out of bend path when bending part against plier jaws.

#### Installation

- Strip the insulation from each de-energized conductor. Be careful not to nick the conductor. Clean the conductor ends with a wire brush or emery cloth if necessary.
- Place each conductor into the grooves in BODY piece. Press conductors with pliers to align and seat into grooves (see Fig. 2).
- Hold the conductors and BODY piece until it stops. Use parallel jaw pliers and grip the SNAP and BODY pieces as shown (see Fig. 3). Apply pressure until connector "snaps" into place. Visually inspect snap to verify full insertion. The connection is now complete (see Fig. 4).

#### Removal

The connector can be disassembled using a flat-head screwdriver to pry the SNAP piece from BODY piece.

	CONNECTOR DESCRIPTION			AGING	STANDARD
CAT. NO.	MAIN	BRANCH	INNER PACK	OUTER PACK	ORDER QUANTITY
JP62	#2 AWG Sol. Copper	#6 AWG Sol. Copper	20	200	200
JP66	#6 AWG Sol. Copper	#6 AWG Sol. Copper	20	200	200
JP146	1/4" Steel Strand	#6 AWG Sol. Copper	20	200	200
JP5166	5/16" Steel Strand	#6 AWG Sol. Copper	20	200	200
JP386	3/8" Steel Strand	#6 AWG Sol. Copper	20	200	200
JP126	½" Steel Strand	#6 AWG Sol. Copper	20	200	200
JP126G	½" Ground Rod	#6 AWG Sol. Copper	20	200	200
JP2614	1/4" Steel Strand	(2) #6 AWG Sol. Copper	20	200	200
JP26516	5/16" Steel Strand	(2) #6 AWG Sol. Copper	20	200	200
JP2638	3/4" Steel Strand	(2) #6 AWG Sol. Copper	20	200	200
JP2612G*	½" Ground Rod	(2) #6 AWG Sol. Copper	20	200	200

Note: All Toolless Connectors are UL Listed. Only items with (\*) are CSA listed.





## **Cast Copper Connectors for Grounding**

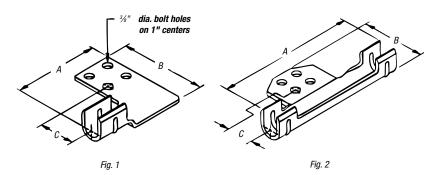
A low-cost method of connecting directly to bus bar, eliminating an interface connection.

# **Riser Cable Flag Connectors for 600V Applications**

- · Made from high-conductivity wrought copper, plain finish
- All bolt holes are 3/8" on 1" centers



Installing tools: T&B Cat. No. TBM15I, TBM15BSCR, 13100A, TBM14M and TBM14BSCR hydraulic tools only.







							DI	MENSIONS (I	N.)
CAT. NO.	FIG. NO.	CABLE SIZE	COLOR KEY	DIE CODE	NO. OF CRIMPS	MATERIAL THK. (IN.)	Α	В	C
GFL2-1	1	#2–#1 AWG 150/24 175/24	PINK	42	1	3/32	35/8	4	25/16
GFL10-20	1	1/0 AWG 2/0 AWG 225/24 275/24	BLACK Orange Black	45 50 45 45	1	⅓32	35/8	4	25/16
GFL40-250	1	4/0–250 kcmil 325/24 450/24 550/24	RED	71	2	<del>5</del> /32	41/4	41/4	27/16
GFL350	1	350 kcmil 650/24 775/24	N/A	80	2	5/32	41/4	4½	23/8
GFL5001	1	500 kcmil 925/24	BROWN	94	2	5/32	51/4	47/8	23/8
GFL7501, 2	2	750 kcmil 1100/24 1325/24 1600/24	BLACK	106	4	5/32	85/8	4¾	25/8

<sup>&</sup>lt;sup>1</sup>TBM15I only.

It is not to be used as a splice.



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<sup>&</sup>lt;sup>2</sup>Both "U" barrels must be crimped to a single, continuous length of conductor.

### Raised Floor Grounding Systems

### Compresses #8 AWG through 4/0 AWG cable.

### **Signal Reference Grid Connector**

- Clamps onto pedestal posts up to 1" diameter square and 11/4" round
- Can be used as an "X" or "T" configuration cable to post
- · High-conductivity wrought-copper construction









	_	INSTALLING TOOLS AND DIE CODES TBM14M AND TBM15I			
CAT. NO.	CONDUCTOR	DIE CAT. NO.	DIE CODE	COLOR CODE	
SRG8-4	#8	15527	29	GRAY	
Snuo-4	#6 to #4	15528	33	BROWN	
SRG2-1	#2 & #1	15508	42	PINK	
SRG10-20	1/0 & 2/0	15530	50	ORANGE	
SRG30-40	3/0 & 4/0	15511	54	PURPLE	

# Secures signal reference grid wire to raised-floor support posts.

### **Signal Reference Grid Clamp**

- Range-taking design accepts #8 to #4 AWG grid wire and fits 1" round and 3/4" square trade size support posts
- · Lay-in feature means no kinks or bends
- Quick, easy installation
- Only one screw to tighten
- Enables grid wire to make direct, low-resistance contact Stamped-steel construction, zinc plated







CAT. NO.	DESCRIPTION	WIRE RANGE
3900	3/4" Square to 1" Round	#8-#4
3900BP (BULK PACK)	3/4" Square to 1" Round	#8-#4

UL® File No. E-3060.

Approved for grounding and bonding per UL® 467.



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### Raised Floor Grounding Systems and Ground Rod Accessories

#### **Ground Electrode Boxes**

		WT./	_ STANDARD				
CAT. NO.	DESCRIPTION	LB.	KG	PACKAGE			
51628	Pregalvanized Steel	1180	536.3	5			
51629	Hot-Dip Galvanized	1200	545.4	5			
14-gauge steel. 10"	14-gauge steel. 10" diameter, 12" depth.						



### Streamlined design reduces driving friction.

#### Type C — Sectional Ground Rod Couplings

- Threaded couplings of high-strength, corrosion-resistant alloy
- Tapped for use on all standard threaded sectional rods





CAT. NO.	SIZE (NOMINAL DIAMETER)	THREAD SIZE
50C	1/2"	½"-13 UNS
50LC*†	½" L	%16"-12 UNS
60C*‡	5%"	%"-11 UNS
70C*	3/4"	3/4"-10 UNS
80C*	1"	1"-8 UNS

<sup>\*</sup> UL® Listed 467 (425H).

### Use with all standard threaded couplings.

#### Type DS — Driving Studs

- · Made of high-strength steel
- Compatible with all standard threaded couplings





CAT. NO.	SIZE (NOMINAL DIAMETER)	THREAD SIZE
50DS	1/2"	½"-13 UNS
50LDS*†	½" L	%16"-12 UNS
60DS* <sup>‡</sup>	5/8"	5%"-11 UNS
70DS*	3/ <sub>4</sub> "	3/4"-10 UNS
80DS*	1"	1"-8 UNS

<sup>\*</sup> UL® Listed 467 (425H).

<sup>‡</sup> REA Accepted.



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<sup>†</sup> CSA lists rods 1/2" and larger, 10' and longer.

<sup>‡</sup> RUS Accepted.

<sup>†</sup> CSA lists rods 1/2" and larger, 10' and longer.

### **Ground Rod Accessories and Ground Plates**

# For joining non-threaded, copper-bonded steel ground rods.

### **Threadless Couplings and Driving Cap**

- · Couplings manufactured of high-strength, corrosion-resistant copper alloy
- High-strength hardened steel driving cap prevents "mushrooming" of ground rod while driving to ensure proper fit of coupling



		DIMENSIONS (IN.)		
CAT. NO.	DESCRIPTION	LENGTH	DIAMETER	
50LCNT*	½" L Threadless Coupling	3.0	.78	
60CNT2*	5/4" Threadless Coupling	2.5	.69	
70CNT*	3/4" Threadless Coupling	3.0	.97	
60DSNT	%" Threadless Driving Cap	4.0	.88	
* III ® Lictor				

<sup>\*</sup> UL® Listed.

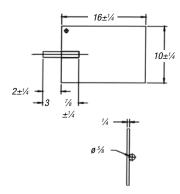
# As efficient as two 10-ft. x % ground rods. Galvanized Ground Plates

- ½" thick, hot-dipped galvanized
- Must be buried at least 600mm (24") below finish grade level, according to CEC Rule 10-702





CAT. NO.	DESCRIPTION	CONDUCTOR RANGE
1016TB	Galvanized Ground Plates	#8 Sol. to 1/0 Str.
1016BTB	Galvanized Ground Plates with JAB58H Connector	#8 Sol. to 1/0 Str.



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### **Ground Plates**

## More efficient than butt-wrapping poles.

# Type GP — Copper Pole Bottom Ground Plates for Multigrounded Neutral Construction

- Made of electrolytic sheet copper
- Built-in high-pressure connector for ground lead, or supplied with #6 AWG copper pigtail pre-attached
- · Plates are grooved for trapping moisture



		PIGTAIL V	VIRE RANGE		DIAMETER	R OF PLATE
CAT. NO.	MIN.	MAX.	MIN. (MM²)	MAX. (MM²)	(IN.)	(MM)
GP100	#14 Str.	#4 Sol.	6.3	25.6	71/2	191
GP110	#14 Str.	#4 Sol.	6.3	25.6	10	254
GP114	#14 Str.	#4 Sol.	6.3	25.6	14	356
GP1003	#6 AWG Solid with 18" C	0	_	_	7½	191
GP1008	#6 AWG Solid with 8-ft. C	· ·	_	_	7½	191
GP1108	#6 AWG Solid with 8-ft, C	0	_	_	10	254

# Installed cost considerably less than butt-wrapped poles.

### **Type PB — Copper Pole Ground Plates**

- Installed on butt end of utility poles to provide an economical, low-resistance neutral ground
- Plate portion fabricated of .025" pure copper
- PBGW connector is eye-bolt type, cast of corrosionresistant aluminum bronze alloy, with silicon bronze nut and lockwasher
- PBH connector features riveted all-copper terminal lug for connecting to grounding conductor



	WIRE RANGE S			
CAT. NO.	MAX.	MIN.	FINISHED SIZE	SQ. IN.
PBGW	2/0 Str.	#10 Sol.	7 x 7%	56
PBH <sup>‡</sup>	#4 Str.	#14 Sol.	7 x 7¾	56
‡ RUS Accepted.				





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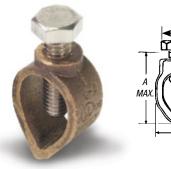


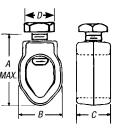
### **Ground Rod Clamps**

### UL® Listed for both copper-clad and galvanized ground rods.

### Type JWR — Wide-Range Ground Rod Clamp

- UL® Listed for direct burial in earth/concrete
- Constructed from bronze alloy and high-performance stainless steel bolt
- Provides wide range of connection sizes
- · More than 300 lbs. torque capacity











	NOMINAL	. ROD DIA.		WIRE RANGE			DIMENSIONS (IN.)						
CAT. NO.	(IN.)	(MM)	MAX.	MIN.	MAX. (MM²)	MIN. (MM²)	A (MAX.) BOLT	В	С	D			
	3/8*	9.5	1/0 Str.	10 Sol.	53.4	5.2	1.535	1.050	.812	.652			
IWD	1/2	12.7	1/0 Str.	10 Sol.	53.4	5.2	1.535	1.050	.812	.652			
JWR	5/8	15.8	1/0 Str.	10 Sol.	53.4	5.2	1.535	1.050	.812	.652			
	3/4	19.0	1/0 Str.	8 Sol.	53.4	8.3	1.535	1.050	.812	.652			

<sup>\* 3/8&</sup>quot; rod not recognized/listed by UL.

## Long bearing surface of clamp on ground wire secures ground connection.

### Type JAB — Ground Rod Clamps

- Cast of high-strength corrosion-resistant copper alloy
- · Both hex head bolts and socket set screws available
- UL<sup>®</sup> Listed for direct burial







TYPE JABH

DB (VL)



CAT.	NO.	NOMIN	AL ROD DIA.	WIRE RANGE			DIMENSIONS (IN.)						
SOCKET SET SCREW	HEX HEAD Bolt	(IN.)	(MM)	MAX.	MIN.	MAX. (MM²)	MIN. (MM²)	A (MAX.) SOCKET SCREW	A (MAX.) HEX BOLT	SCREW THREAD SIZE UNC-2A	В	С	D
JAB12*	JAB12H	1/2	12.7	2 Str.	10 Sol.	33.6	5.2	119/32	23/32	7∕16−14	27/32	7/8	19/32
JAB58	JAB58H	5/8	15.8	1/0 Str.	8 Sol.	53.4	8.3	127/32	213/64	7∕16−14	29/32	1	11/16
JAB34	JAB34H	3/4	19.0	1/0 Str.	8 Sol.	53.4	8.3	2	211/32	7∕16−14	11/16	1	51/64
_	JAB34C	3/4 + 5/8	15.8 to 19.0	4/0 Str.	8 Sol.	95.0	8.3	_	211/32	7∕16−14	11//8	11/32	13/16
JAB1	JAB1H	1	25.0	4/0 Str.	8 Sol.	107.1	8.3	21/4	3	7/16-14	111/32	11/16	1

<sup>\*</sup> Not CSA listed

Add suffix P to Cat. No. for tin-plated clamp.



Fax: 901.252.1354

### **Ground Rod Clamps**

# A dependable ground connection offered at a substantial savings.

### Type G — Budget-Line Ground Clamps

- · Cast of high-strength corrosion-resistant copper alloy
- Furnished with hex head bolts
- Simplified, compact design makes lasting, trouble-free connection
- UL® Listed for direct burial



DB (VL) (SP

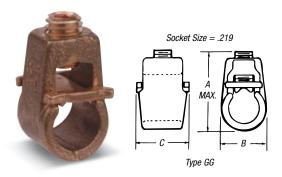
											- 3	•
	NOMINAL	ROD DIA.		W	IRE RANGE			DIMENSIONS (II	N.)			
CAT. No.	(IN.)	(MM)	MAX.	MIN.	MAX. (MM²)	MIN. (MM²)	A (MAX.) BOLT	SCREW THREAD SIZE UNC-2A	В	С	D	E
G3*	3/8	9.5	4 Str.	10 Sol.	21.1	5.2	1%	5√16−18	11/16	1/2	27/64	3/8
G4	1/2	12.7	2 Str.	10 Sol.	33.6	5.2	_	<sup>3</sup> / <sub>8</sub> –16	27/32	3/8	37/64	1/2
G5‡	5/8	15.8	2 Str.	10 Sol.	33.6	5.2	_	<sup>3</sup> / <sub>8</sub> –16	29/32	3/8	43/64	1/2
G6	3/4	19.0	2 Str.	10 Sol.	33.6	5.2	_	<sup>3</sup> %–16	11/16	3/8	13/16	1/2

<sup>\*</sup> Not UL Listed.

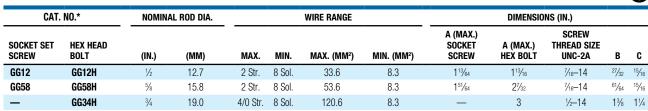
Add suffix P to Cat. No. for tin-plated clamp.

# Axial groove keeps wire and rod in perfect alignment. Types GG and GGH — Heavy-Duty Ground Rod Clamps

- Cast of high-strength corrosion-resistant copper alloy
- Both hex head bolts and socket set screws available
- Floating pressure bar distributes pressure evenly over large area of ground wire







<sup>\*</sup> Add suffix P to Cat. No. for tin-plated clamp. GG34H has no pressure bar or axial groove.





<sup>‡</sup> RUS Accepted.

## **Ground Rod Clamps**

Drive-on design provides easy, tool-free installation, high-reliability compression-fit connection and room for one or two ground leads.

## Type DGC — Drive-On Ground Clamps

- High-strength copper alloy provides increased tensile strength and long-term corrosion resistance for direct-burial applications
- UL® 486A and UL® 467 Listed
- RUS Listed



CAT. NO.	GROUND ROD SIZE	GROUND WIRE SIZE
DGC58-44 <sup>‡</sup>	5% (.555–.565)	(1) or (2) #4 Sol.
DGC58-66 <sup>‡</sup>	5% (.555565)	(1) or (2) #6 Sol.
DGC58-46*	5/8 (.555–.565)	(1) #4 Sol., (1) #6 Sol.

<sup>‡</sup> RUS Listed

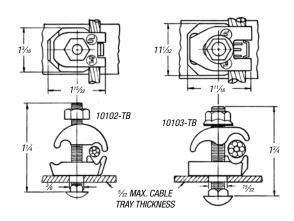
### **Cable Tray Grounding Connector**

- Malleable iron construction
- For use on cable tray up to 5/32" thick





CAT. NO.	GROUND WIRE RANGE (AWG)	CARRIAGE BOLT SIZE
10102-TB	#8 Solid to #2 Stranded	5/16"-18
10103-TR	#4 Stranded to 4/0 Stranded	3/,"-16



<sup>\*</sup> Not UL® Listed

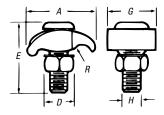
### Structure Grounding

Bolt features square shank to prevent turning and enable clamp to be tightened with a single wrench.

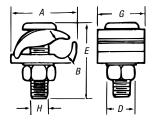
### Type GTC — Tower Ground Clamps

- · Castings of high-strength, corrosion-resistant copper alloy
- GTC23 and GTC24 are two-piece clamps for connecting ground lead cable to flat metal surface ideal for grounding substations on tower footings
- GTC13 and GTC14 are economical one-piece clamps, which perform the same function as two-piece clamps, except under-pad support is omitted and conductor connects directly to tower
- Add suffix L to catalog number for ½" channel thickness





Type GTC 13 and 14



Type GTC 23 and 24



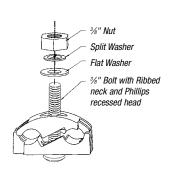
		CONDUCT	OR RANGE					DIM	IENSION	(IN.)		
CAT. No.	MAX.	MIN.	MAX. (MM²)	MIN. (MM²)	CHANNEL THICKNESS		В	D	E	G	Н	R
GTC13	2/0 Str.	#4 Sol.	67.4	21.1	1/4	115/32		9/16	121/32	13/32	3/8	7/32
GTC14	250 kcmil	2/0 Str.	126.6	67.4	1/4	<b>1</b> 15/16	_	3/4	<b>1</b> <sup>15</sup> / <sub>16</sub>	<b>1</b> 13/32	1/2	5/16
GTC23	2/0 Str.	#4 Sol.	67.4	21.1	1/4	1 41/64	7/16	9/16	121/32	13/32	3/8	_
GTC24	250 kcmil	2/0 Str.	126.6	21.1	1/4	161/64	5/8	3/4	115/16	13/8	1/2	_



### For use with aluminum or copper conductors. **CTG250 Wide-Range Tower Ground Clamp**

- May be used in aluminum or galvanized-steel cable trav
- Ribbed neck on the bolt prevents rotation during tightening if .440" dia. hole is used









CAT. NO.	WIDE RANGE (2 SIDES)	HEIGHT	WIDTH	DEPTH	NUT (FLATS)
CTG250	#2 Sol. (.258 Dia.) 250 kcmil (.575 Dia.)	1.95	2.00	1.13	.560

Tin-plate body Galvanized hardware





### Structure Grounding

### **Dual-rated for both** copper and aluminum conductor.

### **Aluminum Lay-in Lug** Connector

- Manufactured from 6061-T6 aluminum alloy for maximum strength and conductivity
- Open-faced design enables installer to quickly lay-in grounding conductor as jumper to multiple conduits with no break in ground conductor

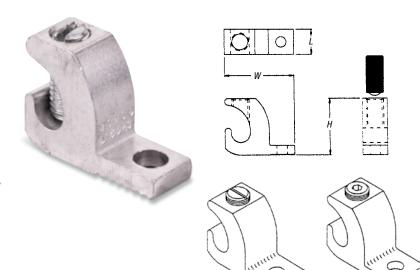


Fig. 1



Fig. 2

							DIMENSIONS				
	FIG.	COND. RA	NGE AWG	STUE	SIZE		Н	,	w		L
CAT. NO.	NO.	IN.	(MM²)	IN.	(MM)	IN.	(MM)	IN.	(MM)	IN.	(MM)
LL414	1	4–14	16–1.5	.22	5.59	.78	19.81	.38	9.65	1.07	27.18
LL1014	1	1/0-14	50-1.5	.27	6.86	1.17	29.72	.60	15.24	1.50	38.10
LL306	2	3/0-6	70-16	.33	8.38	1.56	39.62	.80	20.32	2.00	50.80
LL2506	2	250-6	120-16	.33	8.38	1.79	45.47	.80	20.32	2.20	55.88

90° C Rating (486B Listed)

### UL® Listed for direct burial. **Copper Lay-In Lug Connector**

- Ideal for swimming pool grounding applications
- · Carries "DB" marking for direct burial
- Open-faced design enables installer to quickly lay-in grounding conductor as jumper to multiple conduits with no break in ground conductor







					DIMENSIONS								
	COND. RA	ANGE AWG	STUI	) SIZE		Н	1	N		Ĺ			
CAT. NO.	IN.	(MM²)	IN.	(MM)	IN.	(MM)	IN.	(MM)	IN.	(MM)			
CULL414	4–14	16–1.5	.22	5.59	.78	19.81	.38	9.65	1.07	27.18			
CULL414-TP*	4-14	16-1.5	.22	5.59	.78	19.81	.38	9.65	1.07	27.18			

90° C Rating (486B Listed)

\* Tin plated



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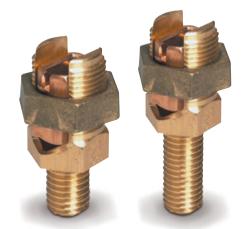
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### Structure Grounding

# Designed for grounding one or two cables to steel structure or transformer.

### **Service Post Connectors**

- For copper-to-copper connections
- · Can also be used to tap one or two cables from bus bar
- Bolts machined from high-conductivity bronze alloy
- Nuts cold-formed from high-strength, corrosion-resistant copper alloy
- Pressure bars copper through 4/0 and copper alloy for 350 kcmil and above
- Bolts and nuts of traditional Blackburn hex design for easy installation
- Available in sizes to accommodate AWG copper conductor ranges of #12–500 kcmil stranded and #12–#2 solid
- Both single- and double-conductor and shortand long-stud versions available
- UL® 486A and UL® 467 Listed



Type SP-S — Service Post Connectors, Short Stud



Type SP-L — Service Post Connectors, Long Stud



CAT. CONDU		CONDUC STRAM		AWG I Sol		DIAMETER	STUD	CAT. NO. Conductor		CONDU Strai		AWG Sol		- Diameter	STUD
DOUBLE	SINGLE	MAX.	MIN.	MAX.	MIN.	RANGE (IN.)	SIZE	DOUBLE	SINGLE	MAX.	MIN.	MAX.	MIN.	RANGE (IN.)	SIZE
SPODS	SPOSS	8 6mm <sup>2</sup>	12 4mm²	8 10mm <sup>2</sup>	12 4mm²	.146–.081	1/4-20 x 1/2	SPODL	SPOSL	8 6mm²	12 4mm²	8 10mm <sup>2</sup>	12 4mm²	.146–.081	½-20 x 1
SP1DS	SP1SS	7 10mm²	10 6mm <sup>2</sup>	6 10mm <sup>2</sup>	10 6mm <sup>2</sup>	.164–.102 —	½-20 x ½	SP1DL	SP1SL	7 10mm²	10 6mm <sup>2</sup>	6 10mm <sup>2</sup>	10 6mm²	.164–.102 —	½-20 x 1
SP2DS	SP2SS	5 16mm²	10 6mm²	4	10 —	.206–.102 —	5⁄16−18 x 5⁄8	SP2DL	SP2SL	5 16mm²	10 6mm²	4	10 —	.206–.102 —	5√16−18 x 1
SP3DS	SP3SS	3 25mm²	10 6mm²	2	10	.26–.102 —	3⁄8−16 x 5⁄8	SP3DL	SP3SL	3 25mm²	10 6mm²	2	10 —	.26–.102 —	%−16 x 1⅓
SP4DS	SP4SS	1 35mm²	8 10mm²	2	8	.332–.129 —	3⁄8−16 x 5⁄8	SP4DL	SP4SL	1 35mm²	8 10mm <sup>2</sup>	2	8	.332–.129 —	%−16 x 1⅓
SP5DS	SP5SS	1/0 50mm²	$\begin{array}{c} 2\\ 35 mm^2 \end{array}$	1/0	2	.373–.258 —	½-13 x ¾	SP5DL	SP5SL	1/0 50mm²	2 35mm²	1/0	2	.373–.258 —	½-13 x 1¼
SP6DS	SP6SS	2/0 50mm <sup>2</sup>	2 35mm²	2/0	2	.419–.258 —	½-13 x ¾	SP6DL	SP6SL	2/0 50mm <sup>2</sup>	2 35mm²	2/0 —	2	.419–.258 —	½-13 x 1¼
SP8DS	SP8SS	4/0 95mm²	$\begin{array}{c} 2\\ 35 \text{mm}^2 \end{array}$	4/0	1	.528–.289 —	%−11 x 1	SP8DL	SP8SL	4/0 95mm²	2 35mm²	4/0	1	.528–.289 —	%−11 x 1½
SP9DS	SP9SS	350 150mm²	1/0 50mm²	_	_	.681–.373 —	%–11 x 1	SP9DL	SP9SL	350 150mm²	1/0 50mm <sup>2</sup>	_	_	.681–.373 —	%−11 x 1½
SP10DS	SP10SS	500 240mm²	3/0 95mm <sup>2</sup>		_	.814–.47 —	3/4-10 x 11/4	SP10DL	SP10SL	500 240mm²	3/0 95mm <sup>2</sup>	_	_	.814–.47 —	3/4-10 x 13/4



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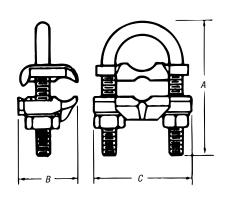
### **Ground Clamps**

**Excellent for connecting** multiple electrodes with a single cable, such as in substation grounding.

# Type GUV — U-Bolt **Ground Clamps**

- For connecting copper or copper-clad steel grounding conductor to ground rod or pipe
- Specially designed spacer provides proper alignment between cable and electrode and affords more positive contact area
- · All components cast or forged from copper alloy
- UL® 467 Listed for direct burial









	CONDUCTO	OR RANGE (CU)	NOMINAL I	ROD SIZE (IN)	IPS PIP	E SIZE	DIMENSIONS (IN.)			
CAT. NO.*	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	Α	В	С	
GUV584	4	8	3/4	5/8	3/8	_	213/16	1%6	21/4	
GUV5821	2/0	4	3/4	5/8	3/8	_	213/16	1%16	21/4	
GUV5825	250	2/0	3/4	5/8	3/8	_	213/16	1%6	21/4	
GUV784	4	8	1	7/8	3/4	1/2	23/4	1%6	25/8	
GUV7821	2/0	4	1	7/8	3/4	1/2	23/4	1%6	25/8	
GUV7825	250	2/0	1	7/8	3/4	1/2	23/4	1%6	25/8	
GUV1184	4	8	11/4	11//8	1	_	35/16	1%6	23/4	
GUV11821	2/0	4	11/4	11//8	1	_	35/16	1%6	23/4	
GUV1384	4	8	1½	1%	11/4	_	37/16	1%6	215/16	
GUV13821	2/0	4	1½	1%	11/4	_	37/16	1%6	215/16	
GUV13825	250	2/0	1½	1%	11/4	_	37/16	19/16	215/16	
GUV1584	4	8	11//8	1%	1½	_	315/16	19/16	33/16	
GUV15821	2/0	4	11//8	1%	1½	_	315/16	19/16	33/16	
GUV15825	250	2/0	11//8	1%	1½	_	315/16	1%6	33/16	
GUV204	4	8	23//8	2	2	_	47/16	1%6	311/16	
GUV2021	2/0	4	23//8	2	2	_	47/16	1%16	311/16	
GUV2025	250	2/0	23//8	2	2	_	47/16	1%16	311/16	
GUV21221	2/0	4	27//8	21/2	21/2	_	415/16	1%16	43/16	
GUV21225	250	2/0	27//8	21/2	2½	_	415/16	1%16	43/16	
GUV3021	2/0	4	3½	3	3	_	5%16	1%16	413/16	
GUV3025	250	2/0	3½	3	3	_	5%16	1%6	413/16	
GUV31221	2/0	4	4	31/2	3½	_	61/16	1%6	51/2	
GUV4021	2/0	4	41/2	4	4	_	65/16	1%16	511/16	
GUV4025	250	2/0	4½	4	4	_	65/16	1%6	511/16	

\* For tin plating, add suffix P to Cat. No. Contact factory for price and availability. UL® does not list tin-plated bronze grounding devices.





## **Ground Clamps**

### **Water Pipe Ground Clamps**



CAT. NO.	GROUND WIRE SIZE	WATER PIPE SIZE
2-TB	#6, #4, #2	½", ¾", 1" or rebar 4-10
3-TB	#6, #4, #2	11/4", 11/2" or 2"
4	#6, #4, #2	2½", 3" or 3½"
5-TB	#6, #4, #2	4", 4½" or 5"
6	#6, #4, #2	6"



#### **Water Pipe Ground Clamps**

Malleable iron. #6 - #2 AWG ground wire.





CAT. NO.	GROUND WIRE SIZE	WATER PIPE SIZE
3902	#4-4/0 AWG	1/2"-1"
3903	#4-4/0 AWG	11/4"-2"
3904	#4-4/0 AWG	21/2"-31/2"
3905-TB	#4-4/0 AWG	4"-5"
3906-TB	#4-4/0 AWG	6"
3907	#4-4/0 AWG	8"
3908	#4-4/0 AWG	10"
3909-TB	#4-4/0 AWG	12"



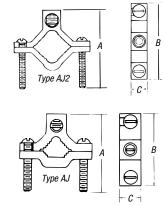
CAT. NO.	GROUND Wire Size	WATER PIPE SIZE
3902BU*	#4-4/0 AWG	½"-1"
3903BU*	#4-4/0 AWG	1¼"-2"
3904BU*	#4-4/0 AWG	2½"-3½"
3905BU*	#4-4/0 AWG	4"-5"
3906BU*	#4-4/0 AWG	6"
3907BU*	#4-4/0 AWG	8"
3908BU*	#4-4/0 AWG	10"
3909BU*	#4-4/0 AWG	12"



# For connecting grounding conductor to either steel or copper pipe, rod or tubing. **Aluminum Water Pipe Clamp**

- · For use with copper or aluminum conductor
- Tin plated for corrosion resistance







		CONDUCTO	OR RANGE	DIMENSIONS (IN.)			_	
CAT. NO.	WATER PIPE SIZE	MAX.	MIN.	Α	В	C	STEEL CLAMP SCREW	ALUMINUM WIRE SCREW
AJ	1/2-1	1/0 Str.	#14 Sol.	21/2	21/4	5/8	1/4-20	7∕16–20 slot
AJ-2	1½-2	250 kcmil	#6	31/8	3¾	7/8	5/16-18	11/16-20 socket
AJ-2124	2½-4	250 kcmil	#6	5%16	65/16	7/8	3% <b>–</b> 16	11/16-20 socket

UL Listed for both copper and aluminum conductors to steel pipe and copper water tubing



## **Ground Clamps**

# Economically priced clamps. **Die-Cast Clamps**

- · Made of die-cast zinc alloy with zinc-plated screws
- · Model BJA for use with armored cable



	WATER	CONDUCTOR RANGE	
CAT. NO.	PIPE SIZE	MAX.	MIN.
BJ-1	1/2"-1"	#2 str.	#10 sol.
BJA*	1/2"-1"	#6 AWG	#8 AWG

<sup>\*</sup> Not UL Listed

# Flexible copper strap makes alignment easy.

### **Cast Bronze Clamps with Copper Strap**

- · For grounding rigid conduit systems
- Same features as "JP" clamp plus flexible copper strap
- Strap helps protect conduit system from water system vibrations
- Furnished with zinc-plated screws

3	3	
	8	
		)

		WATER	CONDUCTOR RANGE			
CAT. NO.			MAX.	MIN.		
JPS-12	1/2"	1/2"-1"	#6 sol.	#10 sol.		
JPS-34	3/4"	1/2"-1"	2/0 str.	#10 sol.		
JPS-1	1"	1/2"-1"	3/0 str.	#10 sol.		

Add suffix C to Cat. No. to specify plating.





### **Ground Clamps**

# Connects copper ground wire to water pipe or copper tubing.

### **Cast Bronze Ground Clamps**

- High-strength, high-conductivity copper alloy (over 80% copper)
- UL® 467 Listed for direct burial

DB	(fi)

CAT. NO.	WATER PIPE SIZE	CONDUCTOR RANGE
JD	1/2"-1"	#2 str#10 str.
J2D	11/4"-2"	#2 str#10 str.



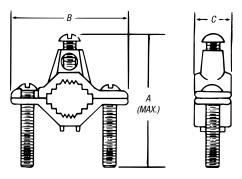
For connecting grounding conductor to water pipe

or copper tube.

Type J — Cast Bronze Ground Clamps

- Cast of high-strength, highly conductive copper alloy
- Screws plated for corrosion resistance
- UL<sup>®</sup> Listed





		CONDUCTOR RANGE				
CAT. NO.	WATER PIPE SIZE	MAX.	MIN.	A (MAX.)	В	С
J	1/2"-1"	#2 str.	#10 sol.	23/4	211/32	23/32
J2BB	11/4"-2"	#2 str.	#10 sol.	3¾	31/2	13/16
J2124	2½"-4"	#4 str.	#10 sol.	6	65/16	1
J6	41/4"-6"	#4 str.	#10 sol.	71/4	81/8	1



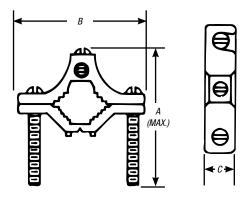
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## **Ground Clamps**

Similar to aluminum water pipe clamp but lighter in construction.

**Budget Price Cast Bronze Clamp** 





		CONDUCT	OR RANGE	DIN	MENSIONS (I	IN.)
CAT. NO.	WATER PIPE SIZE	MAX.	MIN.	Α	В	С
JJR	1/2"-1"	#4 Str.	#10 Sol.	215/32	25/32	17/32

Add suffix C to Cat. No. to specify plating.

## Lay-in feature reduces installation time for difficult bends or continuous loops of ground wire.

### Type JDLI — Direct-Burial Ground Clamp

- UL® Listed for direct burial in earth/concrete
- UL® Listed for connection to ground rod, pipe or rebar up to 1"
- Constructed from bronze alloy and high performance stainless steel bolts
- Designed for easy installation of difficult bends or continuous loops









CAT. NO.	PIPE SIZE	REBAR SIZE	GROUND ROD SIZE	CONDUCTOR RANGE	MECH. CONN./SPLICE (UL LISTED)	
JDLI	1/2"-1"	3/8"-1"	1/4"-1"	#10 Sol#2 Str.	(2) #8 Sol.	

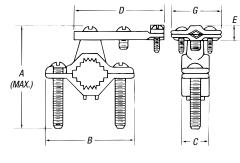
### **Ground Clamps**

# For connecting armored cable to water pipe.

### **Cast Bronze Clamp**

- · Clamping portion similar to standard "J" clamp
- Special pressure bar grips armor or outer cable insulation to reduce chance of grounding conductor being pulled out
- Furnished with zinc-plated screws







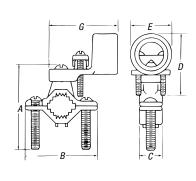
		CONDUC	TOR RANGE		DIMENSIONS (IN.)				
CAT. NO.	WATER PIPE SIZE	MAX.	MIN.	Α	В	С	D	E	G
JA	1/2"-1"	#6 sol.	#10 sol.	23/4	211/32	25/32	29/32	15/32	1%
JA-2	11/4"-2"	#6 sol.	#10 sol.	33/4	31/2	13/16	29/32	15/32	1%
JA-2124	21/2"-4"	#6 sol.	#10 sol.	6	65/16	1	29/32	15/32	1%
Add suffix C to Cat. No. to specify plating.									

# For grounding rigid conduit systems.

### **Cast Bronze Clamps for Conduit**

- · Continuity from rigid conduit system to ground provided by cast bronze threaded conduit hub
- Hub swings 360° for easy alignment
- Heavy brass washer protects clamped grounding conductor
- Furnished with zinc-plated screws
- Cast bronze pipe clamping portion identical to that used in "JA" clamp





		CONDUCT	TOR RANGE			DIMENSIONS (IN.)			
CONDUIT SIZE	WATER PIPE SIZE	MAX.	MIN.	Α	В	С	D	E	G
1/2	1/2"-1"	#6 sol.	#10 sol.	23/4	211/32	23/32	19/64	1	21/2
1/2	11/4"-2"	#6 sol.	#10 sol.	33/4	31/2	13/16	1%4	1	21/2
1/2	21/2"-4"	#6 sol.	#10 sol.	6	65/16	1	19/64	1	21/2
3/4	1/2"-1"	#2/0 str.	#10 sol.	23/4	211/32	23/32	25/16	11/4	23/16
3/4	11/4"-2"	#2/0 str.	#10 sol.	3¾	31/2	<sup>13</sup> / <sub>16</sub>	25/16	11/4	23/16
3/4	21/2"-4"	#2/0 str.	#10 sol.	6	65/16	1	25/16	11/4	23/16
1	1/2"-1"	#3/0 str.	#10 sol.	23/4	211/32	23/32	25/16	11/2	23/8
1	11/4"-2"	#3/0 str.	#10 sol.	3¾	31/2	13/16	25/16	11/2	23/8
1	21/2"-4"	#3/0 str.	#10 sol.	6	65/16	1	25/16	11/2	23/8
	1/2 1/2 1/2 1/2 3/4 3/4	½         ½"-1"           ½         1¼"-2"           ½         2½"-4"           ¾         ½"-1"           ¾         1¼"-2"           ¾         2½"-4"           1         ½"-1"           1         1½"-1"           1         1½"-2"	CONDUIT SIZE         WATER PIPE SIZE         MAX.           ½         ½"-1"         #6 sol.           ½         1¼"-2"         #6 sol.           ½         2½"-4"         #6 sol.           ¾         ½"-1"         #2/0 str.           ¾         1¼"-2"         #2/0 str.           ¾         2½"-4"         #2/0 str.           1         ½"-1"         #3/0 str.           1         1½"-2"         #3/0 str.	½         ½"-1"         #6 sol.         #10 sol.           ½         1¼"-2"         #6 sol.         #10 sol.           ½         2½"-4"         #6 sol.         #10 sol.           ¾         ½"-1"         #2/0 str.         #10 sol.           ¾         1¼"-2"         #2/0 str.         #10 sol.           ¾         2½"-4"         #2/0 str.         #10 sol.           1         ½"-1"         #3/0 str.         #10 sol.           1         1¼"-2"         #3/0 str.         #10 sol.	CONDUIT SIZE         WATER PIPE SIZE         MAX.         MIN.         A           ½         ½"-1"         #6 sol.         #10 sol.         2¾           ½         1¼"-2"         #6 sol.         #10 sol.         6           ¾         ½"-1"         #2/0 str.         #10 sol.         2¾           ¾         ½"-1"         #2/0 str.         #10 sol.         3¾           ¾         1¼"-2"         #2/0 str.         #10 sol.         6           ¾         2½"-4"         #2/0 str.         #10 sol.         6           1         ½"-1"         #3/0 str.         #10 sol.         2¾           1         1½"-1"         #3/0 str.         #10 sol.         3¾	CONDUIT SIZE         WATER PIPE SIZE         MAX.         MIN.         A         B           ½         ½"-1"         #6 sol.         #10 sol.         2¾         2½½         2½½²           ½         1¼"-2"         #6 sol.         #10 sol.         6         6¾6           ¾         ½"-1"         #2/0 str.         #10 sol.         2¾         2½½²           ¾         1¼"-2"         #2/0 str.         #10 sol.         3¾         3½²           ¾         1¼"-2"         #2/0 str.         #10 sol.         6         6¾6           ¾         2½"-4"         #2/0 str.         #10 sol.         6         6¾6           1         ½"-1"         #3/0 str.         #10 sol.         2¾         2½²         2½³2           1         1½"-2"         #3/0 str.         #10 sol.         3¾         3½	CONDUIT SIZE         WATER PIPE SIZE         MAX.         MIN.         A         B         C           ½         ½"-1"         #6 sol.         #10 sol.         2¾         2½½         2½½           ½         1¼"-2"         #6 sol.         #10 sol.         6         6¾6         1           ¾         ½"-1"         #2/0 str.         #10 sol.         2¾         2½½         2½½         2½½           ¾         ½"-1"         #2/0 str.         #10 sol.         3¾         3½         1¾6           ¾         1¼"-2"         #2/0 str.         #10 sol.         6         6¾6         1           ¾         2½"-4"         #2/0 str.         #10 sol.         6         6¾6         1           1         ½"-1"         #3/0 str.         #10 sol.         2¾         2½/32         2½/32           1         1½"-1"         #3/0 str.         #10 sol.         2¾         2½/32         2½/32           1         1½"-2"         #3/0 str.         #10 sol.         3¾         3½         1½/6	CONDUIT SIZE         WATER PIPE SIZE         MAX.         MIN.         A         B         C         D           ½         ½"-1"         #6 sol.         #10 sol.         2¾         2½½         2½½         1½½         2½½         1½½         1½½         1½½         1½½         1½½         1½½         1½½         1½½         1½½         1½½"-4"         #6 sol.         #10 sol.         6         6½6         1         1½½         1½½"-1"         #2/0 str.         #10 sol.         2½         2½½         2½½         2½½         2½½         2½½         2½½         2½½% <td< th=""><th>CONDUIT SIZE         WATER PIPE SIZE         MAX.         MIN.         A         B         C         D         E           ½         ½"-1"         #6 sol.         #10 sol.         2¾         2½½         2½½         1½½         1           ½         1¼"-2"         #6 sol.         #10 sol.         6         6¾6         1         1½6         1           ¾         ½"-1"         #2/0 str.         #10 sol.         2¾         2½½²         2½½²         2½6         1¼           ¾         ½"-1"         #2/0 str.         #10 sol.         3¾         3½         1¾6         2½%6         1¼           ¾         1½"-4"         #2/0 str.         #10 sol.         3¾         3½         1¾6         2½%6         1¼           ¾         1½"-2"         #2/0 str.         #10 sol.         3¾         3½         1¾6         2½%6         1¼           ¾         2½"-4"         #2/0 str.         #10 sol.         6         6%6         1         2½%6         1¼           ¾         2½"-1"         #3/0 str.         #10 sol.         2¾         2½½2         2½%2         2½%6         1½           1         ½"-1"         #3/0 str.         <t< th=""></t<></th></td<>	CONDUIT SIZE         WATER PIPE SIZE         MAX.         MIN.         A         B         C         D         E           ½         ½"-1"         #6 sol.         #10 sol.         2¾         2½½         2½½         1½½         1           ½         1¼"-2"         #6 sol.         #10 sol.         6         6¾6         1         1½6         1           ¾         ½"-1"         #2/0 str.         #10 sol.         2¾         2½½²         2½½²         2½6         1¼           ¾         ½"-1"         #2/0 str.         #10 sol.         3¾         3½         1¾6         2½%6         1¼           ¾         1½"-4"         #2/0 str.         #10 sol.         3¾         3½         1¾6         2½%6         1¼           ¾         1½"-2"         #2/0 str.         #10 sol.         3¾         3½         1¾6         2½%6         1¼           ¾         2½"-4"         #2/0 str.         #10 sol.         6         6%6         1         2½%6         1¼           ¾         2½"-1"         #3/0 str.         #10 sol.         2¾         2½½2         2½%2         2½%6         1½           1         ½"-1"         #3/0 str. <t< th=""></t<>

Add suffix C to Cat. No. to specify plating.



**Technical Services** Tel: 888.862.3289



### **Ground Clamps**

### Hub swings 360° for ease of alignment.

#### Type JPT — Cast Bronze Clamps for Conduit

- · Pipe clamping portion identical to "JA" clamp
- Pressure-bar type conduit hub adjusts to fit ½" or ¾" EMT or 1/2" rigid conduit
- · Brass washer provides positive contact with grounding conductor
- Furnished with zinc-plated screws

			CONDUCTOR RANGE		
CAT. NO.	CONDUIT SIZE	PIPE SIZE	MAX.	MIN.	
JPT	1/II ox 2/II FMT	½" to 1"	#6 Sol.		
JPT2	½" or ¾" EMT ½" Rigid	11/4" to 2"		#10 Sol.	
JPT4	72 Nigiu	2½" to 4"			



#### **Conduit Hubs**

CAT. NO.	GROUND WIRE SIZE AWG	CONDUIT SIZE
3930	#8 to #2	½" Conduit
3940	#8 to #2	3/4" Conduit
3950	#8 to 3/0	1" Conduit
3951	#8 to 4/0	11/4" Conduit

Material: Malleable iron



### Provides positive connection between rigid conduit and water system.

#### Type CH — Bronze Conduit Hubs

- Used in conjunction with "J" clamp
- · Rugged cast-bronze threaded hub

		CONDUCTOR RANGE		
CAT. NO.	CONDUIT SIZE (IN.)	MAX.	MIN.	
CH12	1/2	#6 Sol.	#10 Sol.	
CH34	3/4	2/0 Str.	#10 Sol.	
CH1BB	1	3/0 Str.	#10 Sol.	





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# **Ground Clamps**

#### **Ground Clamp**





CAT. NO.	MATERIAL	WATER PIPE, Copper Tubing Size	GRD. Rod Size
3826 <sup>†</sup>	M.I.	1/2", 3/4"	1/2"-1"
3846 <sup>†</sup>	Bronze	1/2", 3/4"	1/2"-1"
3849•	Brass	½"-1" 0.D.	
3840-TB*	M.I.	½", ¾" or 1"	

<sup>†</sup> For unarmored copper wire #6, #4.

- For copper and aluminum conductors; for 14 thru 2 cu. unarmored copper wire corrosive and outdoor use. UL® approved for direct burial.
- \* #8 thru #4 AWG. Not CSA Certified.



3840-TB

#### Ground Clamps for K&L Grade Copper Tubing Only





		WATER PIPE & Ground Rod Size/				
CAT. NO.	GROUND WIRE RANGE	DESC.				
3844*	#8–#4	1/2"-1"				
3888†	#8–#4	½"-1" also rebar 4-10				
961	#8	3/8" <b>-1</b> "				
962**	#8	3/8"-2"				
963**	#8	3/8"-3"				
CAT. NO.	DESCRIPTION/CABLE S	SIZE				
31215	Strain-Relief Grounding Lug	, #6–#2				
31216	Grounding Clamp, 1" Hook-Ty	Grounding Clamp, 1" Hook-Type, #6-#2				
	O P OF 4 1/11 F T	Grounding Clamp, 1-1/2" Hook-Type, #6-#2				
31253	Grounding Clamp, 1-½" Hook-1	ype, #6–#2				
31253 31217	Grounding Clamp, 1-½" Hook-1 Ground Clamp, 1" Straight-Tyl	31 ·				
	0 17	oe, #6-#2				

<sup>\*</sup> With steel screws.



3844 For armored and unarmored wire



31215 Disconnect static ground clamp and lug, straight-type (cable not supplied), UL not applicable



961
For radio, motor frame and equipment grounding

### **Cable Tray Ground Clamp**

Material: Malleable iron
Standard Finish: Zinc plated





CAT. NO.	DESCRIPTION
10105*	For Single Conductors #4 sol. to 2/0 str.
10109**	For Single Conductors 2/0 sol. to 4/0 str.

<sup>\*</sup> UL® Listed #4 to 2/0 AWG copper.

CSA File No. 2884.





**United States** 

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<sup>\*\*</sup> With bronze screws, not CSA Certified — or UL® Listed.

<sup>†</sup> UL® approved for direct burial. Silicon bronze screws.

<sup>\*\*</sup> UL® Listed 2/0 to 4/0 AWG copper/aluminum.

### **Ground Clamps**

# For aluminum and steel cable trays with regular or reinforced flanges.

### **Tray Clamps**

- Serrations and biting teeth on clamping saddle provide a high-quality bond between conduit and clamp
- Can be clamped to any position in a 90° arc
- Hardened steel screws bite into tray and provide positive bond
- · Malleable iron hub and steel U-bolt accept conduit from any angle





CAT. NO.	CLAMP TYPE	CONDUIT SIZE
6209	Swivel	1/2"-3/4"
6210	Straight	1/2"-3/4"
6211	Swivel	1"-11/4"
6212	Straight	1"-11/4"
6214	Swivel	1½"–2"
6216	Swivel	21/2"-3"
6218	Swivel	3½"–4"



## Efficiently grounds trailer frames, cable trays, CATV and telephone pedestals.

### **Beam Grounding Clamp**

- Connects #6 to #14 solid copper conductor to metal frames where continuity of grounding can be assured
- 7/16" silicon bronze hex-head bolt installs with cam-wrench, socket or crescent wrench
- Tin-plated square-head bolt enables installation with pliers when tighter ground connection is needed
- Ground wire hole access from four directions minimizes need to bend ground wire
- · Designed so ground wire may be installed on clamp prior to mounting clamp on metal frame, reducing installation time
- Beam and ground wire connection can be tightened separately with disconnecting integrity of ground circuit
- High-strength copper alloy (91% nom.) provides greater conductivity, durability and corrosion resistance without the need for plating
- High-strength anchoring bolt penetrates paint or metal oxide





CAT. NO.	DESCRIPTION	CONDUCTOR SIZE (AWG)		
TGC	Square-Head Tin-Plated Steel Bolt	#6 to #14 sol.		
Listed to UL® 467				





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