MORE POWER TO YOU

For over 70 years, Canadian electrical contractors, plant engineers and engineering consultants have placed their trust in Thomas & Betts electrical components. Today, Thomas & Betts offers a complete package of market-driven products and services designed to give you the power to succeed in today's economy.

THE POWER OF T&B ENGINEERED PRODUCTS AND SERVICES

Our products and services continue to set new standards for quality, reliability and innovation.

- Highly-focused sales, product support and customer service team dedicated to serving the industrial MRO and OEM markets.
- Guaranteed competitive pricing.
- The broadest offering of field-proven brand name products available from one manufacturer.
- “One order, one shipment” for thousands of standard products through your Thomas & Betts distributor.
- Reduced lead time on critical products through your Signature Service distributor.
- Technical support via phone, fax on demand and the internet.
- ISO-certified manufacturing – quality engineering and manufacturing.
- Local and national inventory support.
- T&B Tool Lease program – the tools you need today without tomorrow's investment.

Thomas&Betts

THE POWER OF CHOICE

As North America's largest single source for electrical components, Thomas & Betts is powered by the longest and most complete list of reputable brand name products available from one manufacturer in the industry today. With services like "one order, one shipment" available through your Thomas & Betts distributor, the more T&B purchases you make, the more you can save. To request information about any of these products, contact your Regional Sales Office.

***All-Struct*™**	Aluminum and steel structures
***Amerace*®**	Airfield lighting
***Battpac*™**	Battery-powered and compression tools
***Blackburn*®**	Compression connectors
***Blackburn*®**	Grounding products
***Color-Keyed*®**	Compression connectors
***Elastimold*®**	Premolded connectors for underground distribution applications
***Emergi-Lite*®**	Emergency lighting systems
***ExpressTray*®**	Wire-mesh cable management system
***E-Z-Code*®**	Wire marker systems
***E-Z-Ground*®**	Compression connectors
***Furseweld*™**	Exothermic connectors
***Hazlux*®**	Hazardous location lighting
***Iberville*®**	"Roughing-in" products
***Iberville*®**	Steel boxes and covers
***Lumacell*®**	Emergency lighting systems
***Marrette*®**	Wire connectors
***Meyer*®**	Transmission and light duty engineered steel poles
***Microlectric*®**	Meter sockets and pole line hardware
***Mipco*®**	Plugs, receptacles, modules power outlets and connectors
***Nutek*®**	Nonmetallic boxes
***Ocal*™**	Coated products
***Partex*™**	Wire marker systems
***Pos-E-Kon*™**	Industrial connectors
***Power Solutions-Industrial*™**	Power quality
***Ready-Lite*®**	Emergency lighting systems
***Red•Dot*®**	Weatherproof boxes and covers
***Reznor*®**	Heating, ventilation and cooling systems
***Russellstoll*®**	Plugs, receptacles and connectors
***Safe-Ty*™**	Low profile in-line fasteners
***Shield-Kon*®**	Grounding connectors and tools
***Shrink-Kon*™**	Insulation products
***Sta-Kon*®**	Terminals and application tools
***StarTeck*®**	Fittings for teck cable
***Steel City*®**	Floor boxes, access modules and poke-throughs
***Superstrut*®**	Metal framing, channel and accessories
***Sure-Ty*™**	Automated fastening system
***T&B*®**	Cable tray systems
***T&B*®**	Conduit fittings
***Ty-Duct*™**	Wiring duct
***Ty-Fast*®**	One-piece ties and accessories
***Ty-Rap*®**	Cable ties

Every effort is made to ensure the accuracy of the information contained in this catalogue at the time of publication. As part of our ongoing quality control program, we actively encourage customer input. Should you have any comments regarding the content of our catalogues, please forward them via e-mail to mrkt.canada@tnb.com or contact your Thomas & Betts sales representative.

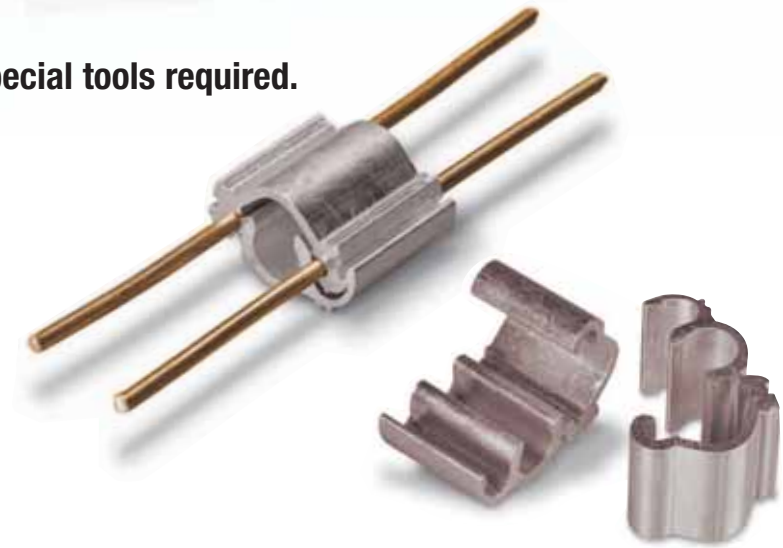
Table of contents

Thomas&Betts

A “Snap” to assemble — no special tools required.

SnapTap® Connectors

- 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.
- Offer excellent electrical and mechanical characteristics.
- UL467 tested – exceed performance requirements.
- CSA Std C22.2 No. 41.



With the SnapTap® Connectors, you can achieve an electrically superior, pressure-fit connection in seconds without expensive tooling. The connectors are 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.

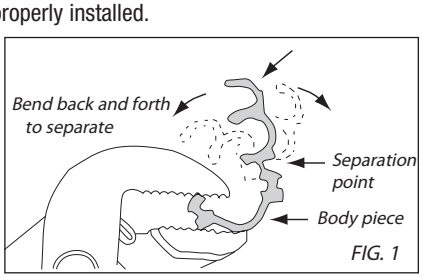


FIG. 1

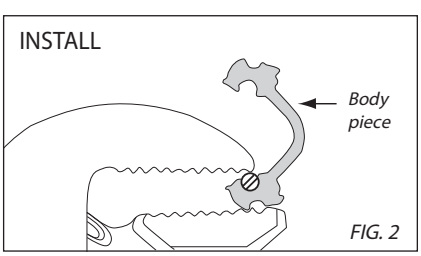


FIG. 2

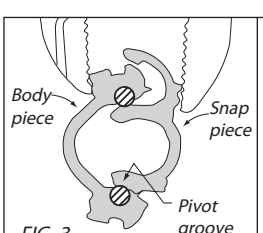


FIG. 3

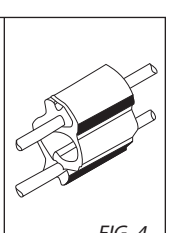


FIG. 4

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 part when bending part against plier jaws.

Installation

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

Removal

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

Cat. No.	Conductor Description		Packaging		Std. Order Qty
	Main	Branch	Inner Pack	Outer Pack	
JP62*	#2 AWG Sol. Copper	#6 AWG Sol. Copper	20	200	200
JP66-TB*	#6 AWG Sol. Copper	#6 AWG Sol. Copper	20	200	200
JP146	1/4” Steel Strand	#6 AWG Sol. Copper	20	200	200
JP5166	5/8” Steel Strand	#6 AWG Sol. Copper	20	200	200
JP386	3/8” Steel Strand	#6 AWG Sol. Copper	20	200	200
JP126	1/2” Steel Strand	#6 AWG Sol. Copper	20	200	200
JP126G	1/2” 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	3/8” Steel Strand	2–#6 AWG Sol. Copper	20	200	200
JP2612G*	1/2” Ground Rod	2–#6 AWG Sol. Copper	20	200	200

*** CSA Certified.**

Compresses #8 AWG through 4/0 AWG cable.

Signal Reference Grid Connectors

- Clamp onto pedestal posts up to 1" diameter square and 1-1/4'' round.
- Can be used as "X" or "T" configuration cable to post.
- High-conductivity wrought-copper construction.

Cat. No.	Conductor Range	Installing Tools and Die Codes TBM14M and TBM15I		
		Die Cat No.	Die Code	Colour Code
SRG8-4	#8	15527	29	Grey
	#6 to #4	15528	33	Brown
SRG2-1	#2 and #1	15508	42	Pink
SRG10-20	1/0 and 2/0	15530	50	Orange
SRG30-40	3/0 and 4/0	15511	54	Purple

Secure signal reference grid wires to raised-floor support posts.

Signal Reference Grid Clamps

- 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.
- Enable grid wire to make direct, low-resistance contact with support posts.
- Stamped-steel construction, zinc plated.

Cat. No.	Description	Wire Range
3900 (Unit)	3/4" square to 1" round	#8–#4
3900BP (Bulk Pack)	3/4" square to 1" round	#8–#4

Waterpipe Ground Clamps

Cat. No.	Ground Wire Size	Water Pipe Size
2-TB	#6, #4, #2 AWG	1/2", 3/4", 1" or rebar 4-10
3-TB	#6, #4, #2 AWG	1-1/4", 1-1/2" or 2"
4	#6, #4, #2 AWG	2-1/2", 3" or 3-1/2"
5-TB	#6, #4, #2 AWG	4", 4-1/2" or 5"
6	#6, #4, #2 AWG	6"

Malleable iron crossbar, steel U-Bolt c/w copper cable clamp with serrations.

Cat. No.	Ground Wire Size	Water Pipe Size
3902	#4–4/0 AWG	1/2"–1"
3903	#4–4/0 AWG	1-1/4"–2"
3904	#4–4/0 AWG	2-1/2"–3-1/2"
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"

Material: Steel U-bolt and nut c/w bronzed aluminum cap and crossbar cadmium plated plus gold chromate finish.

Cat. No.	Ground Wire Size	Water Pipe Size
3902BU*	#4–4/0 AWG	1/2"–1"
3903BU*	#4–4/0 AWG	1-1/4"–2"
3904BU*	#4–4/0 AWG	2-1/2"–3-1/2"
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"

Material: Bronze U-bolt and nut c/w bronzed aluminum cap and crossbar with a brite dip finish.
**UL Listed for Direct Burial.*

3842

3825

3840

3844
For armored and unarmored wires.

Ground Clamps

Cat. No.	Material	Water Pipe, Copper Tubing Size	Ground Rod Size
3826*	Malleable Iron	1/2", 3/4"	1/2"–1"
3846*	Bronze	1/2", 3/4"	1/2"–1"
3849**	Brass	1/2"–1"	–
3840-TB•	Malleable Iron	1/2", 3/4" or 1"	–

** For unarmored copper wires #6, #4 AWG.*
*** For copper and aluminum conductors; for #14 thru #2 AWG unarmored copper wires for corrosive and outdoor use. UL approved for direct burial.*
• #8 thru #4 AWG. Not CSA Certified.

Ground Clamps for K&L Grade Copper Tubing Only

Cat. No.	Ground Wire Size	Water Pipe, Copper Tubing Size
3844*	#8–#4 AWG	1/2"–1"
3888**	#8–#4 AWG	1/2"–1" also rebar 4–10

** With Steel Screws.*
*** UL approved for direct burial. Silicon Bronze Screws.*

Ground Clamp Accessories

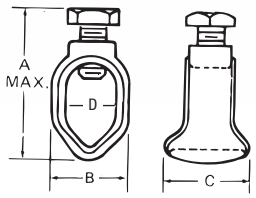
Cat. No.	Description	For use with
10102-TB	1-1/4 to 1-1/2" cables	#8–#2 Ground wire
10103-TB	2 to 4" cables	#4–4/0 Ground wire
MA2GC	Includes Superstrut springless channel nut for easy installation in cable tray rungs.	#4–4/0 Ground wire

Material: Malleable iron, zinc plating.

Cat. No.	For use with
10105	Single conductors #4 solid to 2/0 str.
10109	Single conductors 2/0 solid to 4/0 str.

Type JAB — Ground Rod Clamps

- Cast of high-strength corrosion resistant copper alloy.
- Both hex head and socket set screws available.
- Long bearing surface of clamp on ground wire secures ground connection.
- Listed for direct burial.

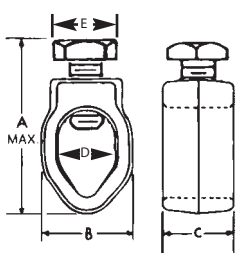


Cat. No.		Nominal Rod Dia.		Wire Range				Dimensions (in.)					
Socket Set Screw	Hex Head Bolt	(in.)	(mm)	max.	min.	max. (mm²)	min. (mm²)	A (max.) Socket Screw	A (max.) Hex Bolt	Screw Thread Size UNC-2A	B	C	D
JAB12*	JAB12H	1/2	12.7	2 str.	10 sol.	33.6	5.2	1-19/32	2-3/32	7/16-14	27/32	7/8	19/32
JAB58	JAB58H	5/8	15.8	1/0 str.	8 sol.	53.4	8.3	1-27/32	2-13/64	7/16-14	29/32	1	11/16
JAB34	JAB34H	3/4	19.0	1/0 str.	8 sol.	53.4	8.3	2	2-11/32	7/16-14	11/16	1	51/64
–	JAB34C	3/4 + 5/8	15.8 to 19.0	3/0 str.	8 sol.	95.0	8.3	–	2-11/32	7/16-14	1-1/8	1-1/32	13/16
JAB1	JAB1H	1	25.0	4/0 str.	8 sol.	107.1	8.3	2-1/4	3	7/16-14	1-11/32	1-1/16	1

** CSA not applicable.*
Add suffix P to Cat. No. for tin-plated clamp.

Type G — Budget Line Ground Clamps

- A dependable ground connection offered at a substantial saving.
- Cast of high-strength corrosion-resistant copper alloy.
- Hex head bolts.
- Simplified compact design will make a lasting, trouble-free connection.
- Listed for direct burial.

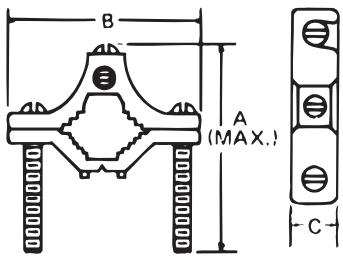


Cat. No.	Nominal Rod Dia.		Wire Range				Dimensions (in.)					
	(in.)	(mm)	max.	min.	max. (mm²)	min. (mm²)	A (max.) Bolt	Screw Thread Size UNC-2A	B	C	D	E
G3*	3/8	9.5	4 str.	10 sol.	21.1	5.2	1-3/8	5/16-18	11/16	1/2	27/64	3/8
G4	1/2	12.7	2 str.	10 sol.	33.6	5.2	–	3/8-16	27/32	3/8	37/64	1/2
G5	5/8	15.8	2 str.	10 sol.	33.6	5.2	–	3/8-16	29/32	3/8	43/64	1/2
G6	3/4	19.0	2 str.	10 sol.	33.6	5.2	–	3/8-16	1-1/16	3/8	13/16	1/2

** Not U.L. Listed and CSA not applicable.*
Add suffix P to Cat. No. for tin-plated clamp.

Similar to aluminum water pipe clamp but lighter in construction.

Budget Price Cast Bronze Clamp



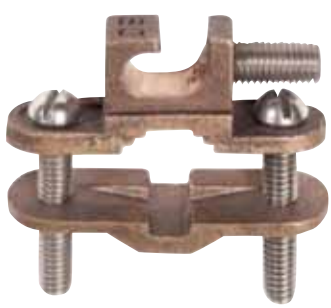
Cat. No.	Water Pipe Size (in.)	Conductor Range		Dimensions (in.)		
		Max.	Min.	A	B	C
JJR	1/2 to 1	1/2	12.7	1-19/32	27/32	7/8

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

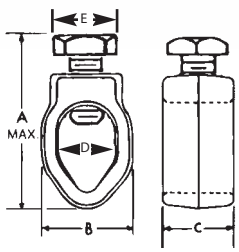
- UL Listed for direct burial in earth/concrete.
- UL Listed for connection to ground rod, pipe or rebar up to 1".
- Constructed from bronze alloy and high-performance stainless steel bolts.
- Designed for easy installation or difficult bends or continuous loops .



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.

Type JWR — Wide-Range Ground Rod Clamp

- 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 lb. torque capacity.

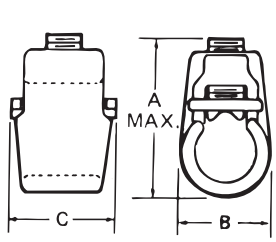


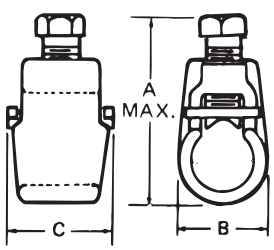
Cat. No.	Nominal Rod Dia.		Wire Range				Dimensions (in.)			
	(in.)	(mm)	max.	min.	max. (mm²)	min. (mm²)	A (max.) Bolt	B	C	D
JWR	3/8*	9.5	1/0 str.	10 sol.	53.4	5.2	1.535	1.050	0.812	0.652
	1/2	12.7	1/0 str.	10 sol.	53.4	5.2	1.535	1.050	0.812	0.652
	5/8	15.8	1/0 str.	10 sol.	53.4	5.2	1.535	1.050	0.812	0.652
	3/4	19.0	1/0 str.	10 sol.	53.4	8.3	1.535	1.050	0.812	0.652

** 3/8" rod CSA not applicable/Listed by UL.*

Types GG and GGH — Heavy Duty Ground Rod Clamps

- Cast of high-strength corrosion-resistant copper alloy; two types of screws available.
- Type GG has a socket set screw.
- Type GGH has a hex head bolt.
- Floating pressure bar distributes pressure evenly over a large area of the ground wire.
- Axial groove keeps wire and rod in perfect alignment.





Cat. No.		Nominal 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	B	C
GG12	GG12H	1/2	12.7	2 str.	8 sol.	33.6	8.3	1-13/64	1-13/16	7/16-14	27/32	15/16
GG58	GG58H	5/8	15.8	2/0 str.	8 sol.	53.6	8.3	1-51/64	2-7/32	7/16-14	61/64	15/16
–	GG34H**	3/4	19.0	4/0 str.	8 sol.	120.6	8.3	–	3	1/2-14	1-3/8	1-1/4

*** CSA not applicable.*
GG34H has no pressure bar or axial groove.
Add suffix P to Cat. No. for tin-plated clamp.

Type swings 360° for ease of alignment.

Budget Price Cast Bronze Clamps

- Pipe clamping portion identical to “JA” clamp.
- Pressure-bar type conduit hub adjusts to fit 1/2" or 3/4" EMT or 1/2" rigid conduit.
- Brass washer provides positive contact with grounding conductor.
- Furnished with zinc-plated screws.

Cat. No.	Conduit Size	Water Pipe Size	Conductor Range	
			Max.	Min.
JPT	1/2" or 3/4" EMT 1/2" Rigid	1/2" to 1"	6 Sol.	10 Sol.
JPT2		1-1/4" to 2"		
JPT4		2-1/2" to 4"		

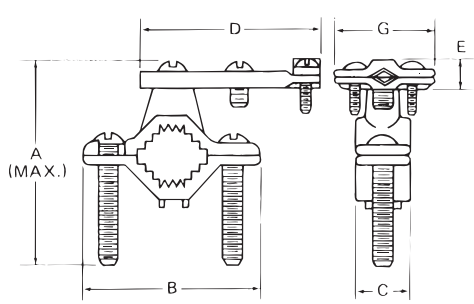
For connecting armored cable to water pipe.

Cast Bronze Clamps

- 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.

Cat. No.	Water Pipe Size (in.)	Conductor Range		Dimensions (in.)					
		Max.	Min.	A	B	C	D	E	G
JA	1/2 to 1	#6 sol.	#10 sol.	2-3/4	2-11/32	25/32	2-9/32	15/32	1-3/8
JA-2	1-1/4 to 2	#6 sol.	#10 sol.	3-3/4	3-1/2	13/16	2-9/32	15/32	1-3/8
JA-2124	2-1/2 to 4	#6 sol.	#10 sol.	6	6-5/16	1	2-9/32	15/32	1-3/8

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.

Cat. No.	Conduit Size (in.)	Water Pipe Size (in.)	Conductor Range		Dimensions (in.)					
			Max.	Min.	A	B	C	D	E	G
JP-12	1/2	1/2 to 1	#6 sol.	#10 sol.	2-3/4	2-11/32	23/32	1-9/64	1	2-1/2
JP-212	1/2	1-1/4 to 2	#6 sol.	#10 sol.	3-3/4	3-1/2	13/16	1-9/64	1	2-1/2
JP-212412	1/2	2-1/2 to 4	#6 sol.	#10 sol.	6	6-5/16	1	1-9/64	1	2-1/2
JP-34	3/4	1/2 to 1	#2/0 str.	#10 sol.	2-3/4	2-11/32	23/32	2-5/16	1-1/4	2-3/16
JP-234	3/4	1-1/4 to 2	#2/0 str.	#10 sol.	3-3/4	3-1/2	13/16	2-5/16	1-1/4	2-3/16
JP-212434	3/4	2-1/2 to 4	#2/0 str.	#10 sol.	6	6-5/16	1	2-5/16	1-1/4	2-3/16
JP-1	1	1/2 to 1	#3/0 str.	#10 sol.	2-3/4	2-11/32	23/32	2-5/16	1-1/2	2-3/8
JP-21	1	1-1/4 to 2	#3/0 str.	#10 sol.	3-3/4	3-1/2	13/16	2-5/16	1-1/2	2-3/8
JP-21241	1	2-1/2 to 4	#3/0 str.	#10 sol.	6	6-5/16	1	2-5/16	1-1/2	2-3/8

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

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.

Cat. No.	Conduit Size (in.)	Water Pipe Size (in.)	Conductor Range	
			Max.	Min.
JPS-12	1/2	1/2 to 1	6 sol.	10 sol.
JPS-34	3/4	1/2 to 1	2/0 str.	10 sol.
JPS-1	1	1/2 to 1	3/0 str.	10 sol.

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

Connect copper ground wire to water pipe, copper tubing or ground rods.

Cast Bronze Ground Clamps

- High-strength, high-conductivity copper alloy (over 80% copper).
- UL467 Listed for direct burial.

Cat. No.	Water Pipe Size (in.)	Conductor Range
JD	1/2 to 1	#2 str.–#10 str.
J2D	1-1/4 to 2	#2 str.–#10 str.

For connecting grounding conductor to water pipe or copper tube.

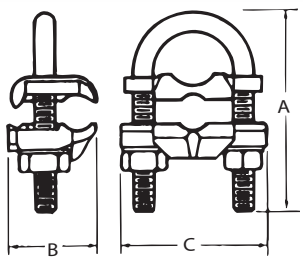
Type J — Cast Bronze Ground Clamps

- Cast of high-strength, highly conductive copper alloy.
- Screws plated for corrosion resistance.
- UL Listed.

Cat. No.	Water Pipe Size (in.)	Conductor Range		Dimensions (in.)		
		Max.	Min.	A	B	C
J	1/2 to 1	2 str.	10 sol.	2-3/4	2-11/32	23/32
J2BB	1-1/4 to 2	2 str.	10 sol.	3-3/4	3-1/2	13/16
J2124	2-1/2 to 4	2 str.	10 sol.	6	6-5/16	1
J6	4-1/4 to 6	2 str.	10 sol.	7-1/4	8-1/8	1

Type GUV — U-Bolt Clamps

- Listed for direct burial.
- For connecting copper or copper clad steel grounding conductor to ground rod or pipe.
- Excellent for connecting multiple electrodes with a single cable as in substation grounding.
- All components are cast or forged from copper alloy.
- Specially designed spacer provides proper alignment between cable and electrode and affords more positive contact area.



Cat. No.	Conductor Range (CU)		Nominal Rod Size (in.)		IPS Pipe Size (in.)		Dimensions (in.)		
	max.	min.	max.	min.	max.	min.	A	B	C
GUV584	4	8	3/4	5/8	3/8	–	2-13/16	1-9/16	2-1/4
GUV5821	2/0	4	3/4	5/8	3/8	–	2-13/16	1-9/16	2-1/4
GUV5825	250	2/0	3/4	5/8	3/8	–	2-13/16	1-9/16	2-1/4
GUV784	4	8	1	7/8	3/4	1/2	2-3/4	1-9/16	2-5/8
GUV7821	2/0	4	1	7/8	3/4	1/2	2-3/4	1-9/16	2-5/8
GUV7825	250	2/0	1	7/8	3/4	1/2	2-3/4	1-9/16	2-5/8
GUV1184	4	8	1-1/4	1-1/8	1	–	3-5/16	1-9/16	2-3/4
GUV11821	2/0	4	1-1/4	1-1/8	1	–	3-5/16	1-9/16	2-3/4
GUV1384	4	8	1-1/2	1-3/8	1-1/4	–	3-7/16	1-9/16	2-15/16
GUV13821	2/0	4	1-1/2	1-3/8	1-1/4	–	3-7/16	1-9/16	2-15/16
GUV13825	250	2/0	1-1/2	1-3/8	1-1/4	–	3-7/16	1-9/16	2-15/16
GUV1584	4	8	1-7/8	1-5/8	1-1/2	–	3-15/16	1-9/16	3-3/16
GUV15821	2/0	4	1-7/8	1-5/8	1-1/2	–	3-15/16	1-9/16	3-3/16
GUV15825	250	2/0	1-7/8	1-5/8	1-1/2	–	3-15/16	1-9/16	3-3/16
GUV204	4	8	2-3/8	2	2	–	4-7/16	1-9/16	3-11/16
GUV2021	2/0	4	2-3/8	2	2	–	4-7/16	1-9/16	3-11/16
GUV2025	250	2/0	2-3/8	2	2	–	4-7/16	1-9/16	3-11/16
GUV21221	2/0	4	2-7/8	2-1/2	2-1/2	–	4-15/16	1-9/16	4-3/16
GUV21225	250	2/0	2-7/8	2-1/2	2-1/2	–	4-15/16	1-9/16	4-3/16
GUV3021	2/0	4	3-1/2	3	3	–	5-9/16	1-9/16	4-13/16
GUV3025	250	2/0	3-1/2	3	3	–	5-9/16	1-9/16	4-13/16
GUV31221	2/0	4	4	3-1/2	3-1/2	–	6-1/16	1-9/16	5-1/2
GUV4021	2/0	4	4-1/2	4	4	–	6-5/16	1-9/16	5-11/16
GUV4025	250	2/0	4-1/2	4	4	–	6-5/16	1-9/16	5-11/16

For tin plating, add suffix TP to Cat. No.

Technical Specifications

CI3106

CI3108

CI3110U

CI3112U

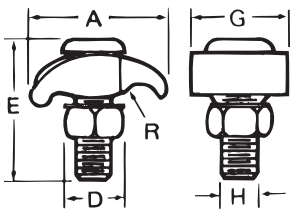
CIGRC58

Cat. No.	Water Pipe Size (in.)	Ground Wire Size (AWG)		Galv. Steel	Copper Clad
		min.	max.		
Ground Clamps (Zinc alloy body / Steel screws)					
CI3106	1/2 to 1	10 sol.	2 str.	5/8 to 1*	N/A
Ground Clamps (Zinc / Steel)					
CI3108	1/2 to 1	10 sol.	2 str.	5/8 to 1*	N/A
For connecting grounding conductor to either galvanized steel rod or water pipe.					
Ground Clamps (Brass body / brass screws)					
CI3110U	1/2 to 1	10 sol.	2 str.	5/8 to 1*	5/8 to 1
For connecting grounding conductor to either galvanized steel rod, copper clad or water pipe. CSA approved for wet locations and for direct burial.					
Ground Clamps (Brass body / brass screws)					
CI3112U	1-1/4 to 2	10 sol.	2 str.	–	–
For connecting grounding conductor to water pipe. CSA approved for wet locations and for direct burial.					
Ground Rod Clamps (Bronze body / brass screws)					
CIGRC58 **CIGRC34**	N/A	10 sol. 8 sol.	2 str. 1/0 str.	5/8 3/4	5/8 3/4
For connecting grounding conductor to either galvanized steel rod or copper clad rod. CSA approved for wet locations and for direct burial.					

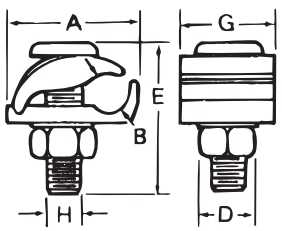
Reversible.

Type GTC — Tower Ground Clamps

- Bolt has square shank to prevent turning and allow clamp to be tightened with one wrench.
- GTC 23 and 24 are two-piece clamps for connecting ground lead cable to flat metal surface; ideal for grounding substations on tower footings.
- Castings are of high-strength, corrosion resistant copper alloy.
- GTC 13 and 14 are economical one-piece clamps which perform the same function as two-piece clamps except the under pad support is omitted and conductor is connected directly to tower.
- Add suffix L to Cat. No. for 1/2" channel thickness.



Type GTC 13 and 14

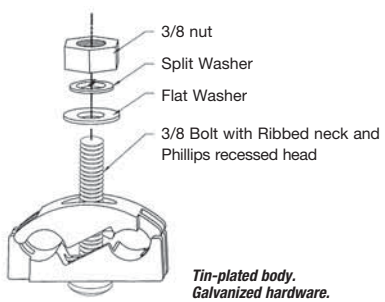


Type GTC 23 and 24

Cat. No.	Conductor Range				Channel Thickness (in.)	Dimensions (in.)						
	max.	min.	max. (mm^2)	min. (mm^2)		A	B	D	E	G	H	R
GTC13	2/0 str.	4 sol.	67.4	21.1	1/4	1-15/32	–	9/16	1-21/32	13/32	3/8	7/32
GTC14	250 kcmil	2/0 str.	126.6	67.4	1/4	1-15/16	–	3/4	1-15/16	1-13/32	1/2	5/16
GTC23	2/0 str.	4 sol.	67.4	21.1	1/4	1-41/64	7/16	9/16	2-21/32	1-3/32	3/8	–
GTC24	250 kcmil	2/0 str.	126.6	21.1	1/4	1-61/64	5/8	3/4	1-15/16	1-3/8	1/2	–

CTG250 — Wide Range Tower Ground Clamp

- For use with aluminum or copper conductors and in aluminum or galvanized steel cable tray.
- Ribbed neck on the bolt prevents rotation during tightening if 0.440 dia. hole is used.



Tin-plated body.
Galvanized hardware.

Cat. No.	Wire Range (2 sides)	Height (in.)	Width (in.)	Depth (in.)	Nut (Flats)
CTG250	#2 sol. (0.258 Dia.), 250 kcmil (0.575 Dia.)	1.95	2.00	1.13	0.560

Type DS — Service Post Connectors, Short Stud

Application

The Blackburn® line of Service Post Connectors is designed for applications including steel structure, fence post or transformer grounding involving one or two cables. Service Posts can also be used to tap one or two cables from bus bar.

Construction & Ratings

Bolts used in the Service Post are machined from high-conductivity bronze alloy while the nuts are cold-formed from high-strength, corrosion resistant copper alloy. Pressure bars are copper through 4/0 size, while copper alloy is used for 350 kcmil size and above. Bolts and nuts are of the traditional Blackburn® hex design for easy installation.

Service Post Connectors are available in sizes accommodating AWG copper conductor ranges of #12 – 500 kcmil stranded (4 mm^2 - 240 mm^2) and #12-#2 solid (4 mm^2 - 35 mm^2).

The line includes both short and long stud versions for single and double conductor connectors.

- For copper to copper connections.
- For grounding of steel structures, fence posts or transformers using one or two cables.
- For tapping one or two cables from bus bar.
- Hex design bolts are machined from high-conductivity bronze alloy.
- Nuts and pressure bars are cold-formed from high-strength copper or copper alloy.

Cat. No.		Conductor Range Stranded (AWG/mm^2)		Conductor Range Solid (AWG/mm^2)		Maximum Diameter Range (in.)	Stud Size (in.)
Double Conductor	Single Conductor	max.	min.	max.	min.		
SP0DS	SP0SS	8 6 mm^2	12 4 mm^2	8 6 mm^2	12 4 mm^2	0.146–0.080	1/4–20 x 1/2
SP1DS	SP1SS	7 10 mm^2	10 6 mm^2	6 10 mm^2	10 6 mm^2	0.170–0.102	1/4–20 x 1/2
SP2DS	SP2SS	5 16 mm^2	10 6 mm^2	4 16 mm^2	10 6 mm^2	0.217–0.102	5/16–18 x 5/8
SP3DS	SP3SS	3 25 mm^2	10 6 mm^2	2 35 mm^2	10 6 mm^2	0.271–0.102	3/8–16 x 5/8
SP4DS	SP4SS	1 35 mm^2	8 6 mm^2	2 35 mm^2	8 10 mm^2	0.332–0.128	3/8–16 x 5/8
SP5DS	SP5SS	1/0 50 mm^2	2 35 mm^2	2 35 mm^2	– –	0.385–0.259	1/2–13 x 3/4
SP6DS	SP6SS	2/0 70 mm^2	2 35 mm^2	2 35 mm^2	– –	0.443–0.258	1/2–13 x 3/4
SP8DS	SP8SS	4/0 95 mm^2	1 35 mm^2	– –	– –	0.570–0.289	5/8–11 x 1
SP9DS	SP9SS	350 150 mm^2	1/0 70 mm^2	– –	– –	0.715–0.373	5/8–11 x 1
SP10DS	SP10SS	500 240 mm^2	3/0 95 mm^2	– –	– –	0.840–0.464	3/4–10 x 1-1/4

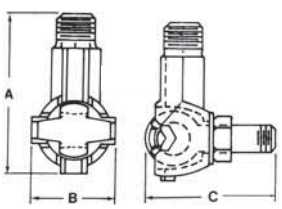
Type SP — Service Post Connectors, Long Stud

- For copper to copper connections.
- For grounding of steel structures, fence posts, transformers using one or two cables.
- For tapping one or two cables from bus bar.
- Hex design bolts are machined from high-conductivity bronze alloy.
- Nuts and pressure bars are cold-formed from high-strength copper or copper alloy.
- Pressure bars are copper through 4/0 size; copper alloy is used for 350 kcmil size and above.
- Available in sizes accommodating AWG copper conductor ranges of #12–500 kcmil stranded (4mm²–240mm²) and #12–#2 solid (4mm²–35mm²).
- Line includes single conductor and double conductor connectors.

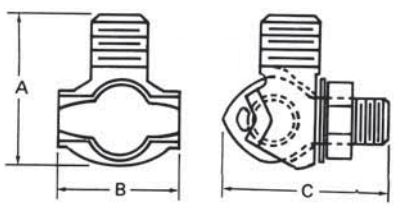
Cat. No.		Conductor Range Stranded (AWG/mm²)		Conductor Range Solid (AWG/mm²)		Maximum Diameter Range (in.)	Stud Size (in.)
Double Conductor	Single Conductor	max.	min.	max.	min.		
SP0DL	SP0SL	8 6 mm²	12 4 mm²	8 6 mm²	12 4 mm²	0.146–0.080	1/4–20 x 1/2
SP1DL	SP1SL	7 10 mm²	10 6 mm²	6 10 mm²	10 6 mm²	0.170–0.102	1/4–20 x 1/2
SP2DL	SP2SL	5 16 mm²	10 6 mm²	4 16 mm²	10 6 mm²	0.217–0.102	5/16–18 x 5/8
SP3DL	SP3SL	3 25 mm²	10 6 mm²	2 35 mm²	10 6 mm²	0.271–0.102	3/8–16 x 5/8
SP4DL	SP4SL	1 35 mm²	8 6 mm²	2 35 mm²	8 10 mm²	0.332–0.128	3/8–16 x 5/8
SP5DL	SP5SL	1/0 50 mm²	2 35 mm²	2 35 mm²	– –	0.385–0.259	1/2–13 x 3/4
SP6DL	SP6SL	2/0 70 mm²	2 35 mm²	2 35 mm²	– –	0.443–0.258	1/2–13 x 3/4
SP8DL	SP8SL	4/0 95 mm²	1 35 mm²	– –	– –	0.570–0.289	5/8–11 x 1
SP9DL	SP9SL	350 150 mm²	1/0 70 mm²	– –	– –	0.715–0.373	5/8–11 x 1
SP10DL	SP10SL	500 240 mm²	3/0 95 mm²	– –	– –	0.840–0.464	3/4–10 x 1-1/4

Type TTC — Transformer Tank Ground Connectors

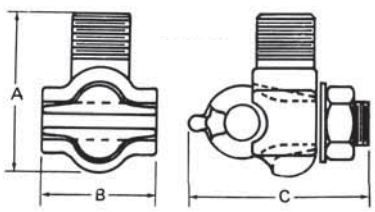
- Transformer Grounding Connectors are cast of high-conductivity bronze; 1/2"–13 stud fits all standard EEI-NEMA distribution transformers.
- Eye bolt on TTC2 rotates to accommodate cable in either vertical or horizontal direction.
- One size connector to handle full range of grounding conductors from #8 through 2/0 str.
- No special tools required.



TTC2



TTC4



TTC3

Cat. No.	Conductor Range				Stud Thread Size UNC-2A	Dimensions (in.)		
	max.	min.	max. (mm²)	min. (mm²)		A	B	C
TTC2	2/0 str.	8 sol.	67.4	8.3	1/2"–13	1-51/64	1-9/64	1-21/32
TTC3	1 str.	10 sol.	42.4	5.2	1/2"–13	1-3/8	1-3/64	1-9/16
TTC4+	1 str.	10 sol.	42.4	5.2	1/2"–13	1-1/4	7/8	1-3/8
TTC2P+	2/0 str.	8 sol.	67.4	8.3	1/2"–13	1-51/64	1-9/64	1-21/32
TTC3P*	1 str.	10 sol.	42.4	5.2	1/2"–13	1-3/8	1-3/64	1-9/16
TTC4P*	1 str.	10 sol.	42.4	5.2	1/2"–13	1-1/4	7/8	1-3/8

** Tin-Plated.*
+ Rus listed.

Conduit Hubs

Cat. No.	Ground Wire Size (AWG)	Conduit/Wire Size
3930	#8 to #2	1/2" Conduit
3940	#8 to #2	3/4" Conduit
3950	#8 to #3/0	1" Conduit
3951	#8 to #4/0	1-1/4" Conduit
3960	#8 to #4	Armored Wire

Material: Malleable iron.

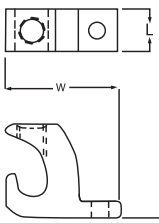
Type CH — Bronze Conduit Hubs

- Rugged cast bronze threaded hub.
- Provide positive connection between rigid conduit and water system in conjunction with "J" clamp.

Cat. No.	Conduit Size (in.)	Conductor Range	
		max.	min.
CH12	1/2	6 sol.	10 sol.
CH34	3/4	2/0 str.	10 sol.
CH1	1	3/0 str.	10 sol.

Copper Lay-In Lug Connectors

- 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.



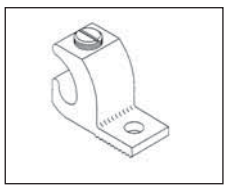


Figure 1

Cat. No.	Conductor Range		Stud Size		Dimensions					
	in.	AWG mm²	in.	mm	H		W		L	
					in.	mm	in.	mm	in.	mm
CULL414	4-14	16-1.5	0.22	5.59	0.78	19.81	0.38	9.65	1.07	27.18
CULL414TP*	4-14	16-1.5	0.22	5.59	0.78	19.81	0.38	9.65	1.07	27.18

** Tin-plated.*
90°C Rating.

Blackburn® Lay-In Lug

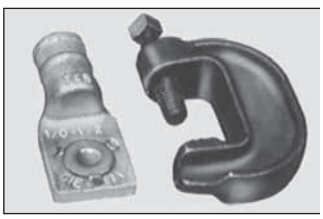
Cat. No.	Conductor Range		Stud Size	
	Min.	Max.	in.	mm²
LL306	#6 sol.	3/0 str.	0.33	8.38
LL2506	#6 str.	250 kcmil	0.33	8.38

These grounding connectors are dual rated for aluminum and copper conductors.
The opened face design allows the installer to quickly lay-in the grounding conductor as a jumper.

Connect ground cable to I-Beam or any 1” maximum structural steel member — without welding or drilling.

I-Beam Ground Clamps

- 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.



MEETS
IEEE
837 REQUIREMENTS

Cat. No.	Wire Range	TBM15I, TBM15 Installing Tool, Die Code	Die Cat. No.	
IBG2-10	2 thru 1/0 AWG	66H	15534	2
IBG20-40	2/0 thru 4/0 AWG	87H	15506	2
IBG350-500	350 kcmil thru 500 kcmil	115H	15504	2

Hydraulic tooling with hex crimp dies.
Use 15500TB adaptor for TBM15-Ton Tool.

[*] *Number of crimps.*

For permanent, reliable connection.

Ground Clamps

- Crimp to cable.
- Clamp to ground rod and rebar.
- Use standard Color-Keyed® hand and hydraulic tools.
- Colour-coded for easy installation die selection.
- Made from high-conductivity wrought copper.
- Furnished with stainless steel hardware, 1/4" washers, bolts and nuts.

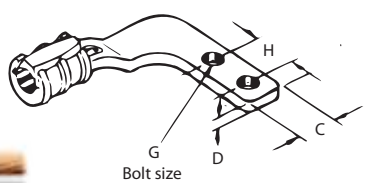
Cat. No.	Wire Size	Ground Rod Diameter (in.)	Rebar (in.)	Bolt Size (in.)	Die Code and Colour
CC2C-45R	#2–#3 AWG	1/2 or 5/8	0.80	0.25	33 Brown
CC1C-45R	#1 AWG	1/2 or 5/8	0.80	0.25	37 Green
CC10C-56R	1/0 AWG	5/8 or 3/4	0.83	0.38	42 Pink
CC20C-56R	2/0 AWG	5/8 or 3/4	0.83	0.38	45 Black
CC40C-56R	4/0 AWG	5/8 or 3/4	0.83	0.38	54 Purple

UL467–Approved for direct burial.

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

Flat-Surface Ground Clamps

- Captive "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.

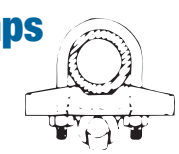


Cat. No.	Wire Range	Bolt Hole (in.)	Die Code No.	Qty	Std. Pkg.	Wt. Per 100	Hex Die		Dimensions in. (mm)				
							Cat. No.	Die Code No.	L1	L2	D	C	H
53055FL	1/0–2/0 AWG	3/8	66	2	10	75	15534*	66	4.09 (103.9)	3.66 (93.0)	0.28 (7.1)	1.38 (35.1)	1.00 (25.4)
53065FL	4/0–250 kcmil	3/8	87H	2	10	112	15506**	87H	4.50 (114.3)	4.09 (103.9)	0.31 (7.9)	1.38 (35.1)	1.00 (25.4)

* TBM14M, 13100A, TBM15I with hex crimp dies.
** TBM15I with hex crimp dies only.

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

Grid-to-Fence Ground Clamps



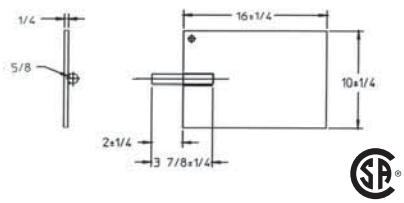
- Provide quick, dependable installation at low installed cost.
- Use no incendiary materials.
- Body made from cast copper alloy with steel U-bolt.

Cat. No.	Ground Cable Range	Die Code	Steel and Aluminum Line Post Range (in)
FG2040R2	2/0–3/0–4/0	76	2.00
FG2040R25	2/0–3/0–4/0	76	2.50
FG2040R3	2/0–3/0–4/0	76	3.00
FG210R2	2–1–1/0	66	2.00
FG210R25	2–1–1/0	66	2.50
FG210F3	2–1–1/0	66	3.00

Install with hydraulic tooling with hex crimp dies.

Galvanized Grounding Plates

- Made of high-quality steel, hot dip galvanized.
- Major time and cost saving vs ground rods.



Cat. No.	Description	Wire Range	Std. Pkg.
1016TB	Galvanized grounding plate	8 sol. to 3/0 str.	1
1016BTB	Galvanized grounding plate complete with JAB34C connector	8 sol. to 3/0 str.	1
1016TB-NG*	Grounding plate (not galvanized)	8 sol. to 3/0 str.	1
1016BTB-NG*	Grounding plate (not galvanized) (complete with JAB34C connector)	8 sol. to 3/0 str.	1

** CSA not applicable.*

Ground Electrode Boxes

Cat. No.	Description
51628	Pregalvanized Steel
51629	Hot dip galvanized steel

14 gauge steel 10 inch diameter, 12 inch depth.

Metallic Gradient Control Mats

- To reduce risk and prevent build up of dangerous potential differences between high voltage equipment or structures and the user standing on the ground surface. CEC Rule 36-308.

Cat. No.	Description	Std. Pkg.	Wt/100	
			lb.	kg
64663	Mat with connectors	1	3000	1363

4 ft x 6 ft hot dip galvanized mat is made from 6" x 6" welded mesh. 1/4" diameter. Silicone bronze connector, bolt, nut and lockwasher.

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

- More efficient than butt wrapping poles.
- 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.

Cat. No.	Pigtail Wire Range				Diameter of Plate	
	min.	max.	min. (mm^2)	max. (mm^2)	(in.)	(mm)
GP100	8	2 sol.	6.3	25.6	7-1/2	191
GP110					10	254
GP114					14	356
GP1003	#6 AWG solid CU Pigtail with 18" conductor		–	–	7-1/2	191
GP1008	#6 AWG solid CU Pigtail with 18" conductor		–	–	7-1/2	191
GP1108	#6 AWG solid CU Pigtail with 18" conductor		–	–	7-1/2	254

Type PB — Copper Pole Ground Plates

- Installed on butt end of utility poles to provide an economical, low resistance neutral ground.
- Installed cost considerably less than butt-wrapped poles. Plate portion fabricated of .025" pure copper.
- PBGW connector is eye-bolt type, cast of corrosion resistant aluminum bronze alloy, with silicon bronze nut and lock washer. Riveted all copper terminal lug is an integral part of the PBH, and provides the means of connection to the grounding conductor.

Cat. No.	Wire Range		Finished Size (in.)	Surface Area (sq. in.)
	max.	min.		
PBGW	2/0 str.	10 sol.	7 x 7-5/8	56
PBH*	4 str.	14 sol.	7 x 7-3/8	56

** RUS Listed.*

Compression Method Grounding Connectors save 50 – 75% in time and labor costs.

- Eliminates exothermic welding.
- Reduces time and labor costs.
- Minimizes possibility of poor connections.

Thomas & Betts introduces a method of compression to replace exothermic welding and its associated disadvantages. This compression method is designed to provide quick, reliable connections for grid grouding at significantly lower installed costs because compression connectors install in less time, in any weather, and are unaffected by moisture, reducing downtime. In addition, our compression connectors for grid grounding require no special training for installation. They are made of high-conductivity wrought and cast copper, and are used for connecting and tapping cross grid, loop lines and ground rods for direct burial or concrete embedded ground grid systems. The Thomas & Betts compression system uses standard electrical connector installation tools.

This installation method results in a long-lasting low installed cost connection. You can install it and forget it.

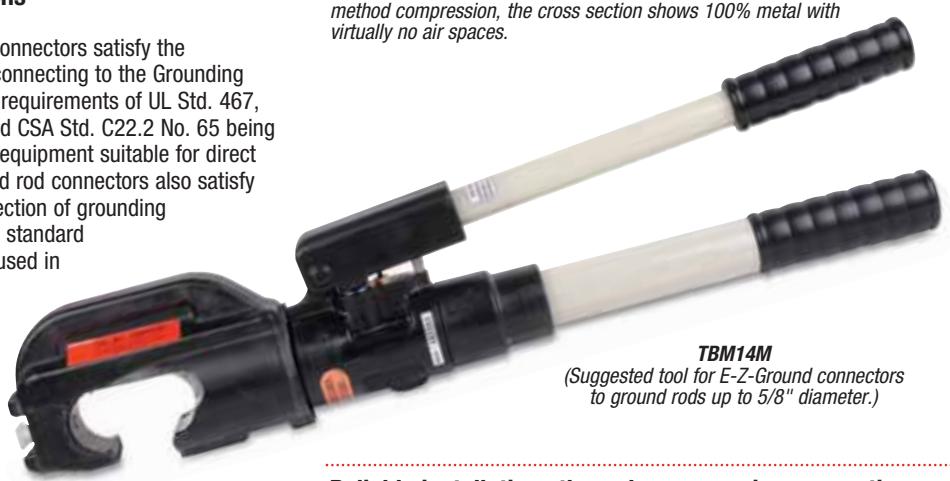
Before compression, typical cable connector cross section of cable and connector consists of about 75% metal and 25% air. After Thomas & Betts method compression, the cross section shows 100% metal with virtually no air spaces.

Meets all applicable specifications

Thomas & Betts grid and ground rod connectors satisfy the requirements of CEC SECTION 10 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 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.
- Install in any weather – cut downtime.
- Enhance safety.
- Easy to install – no special training.



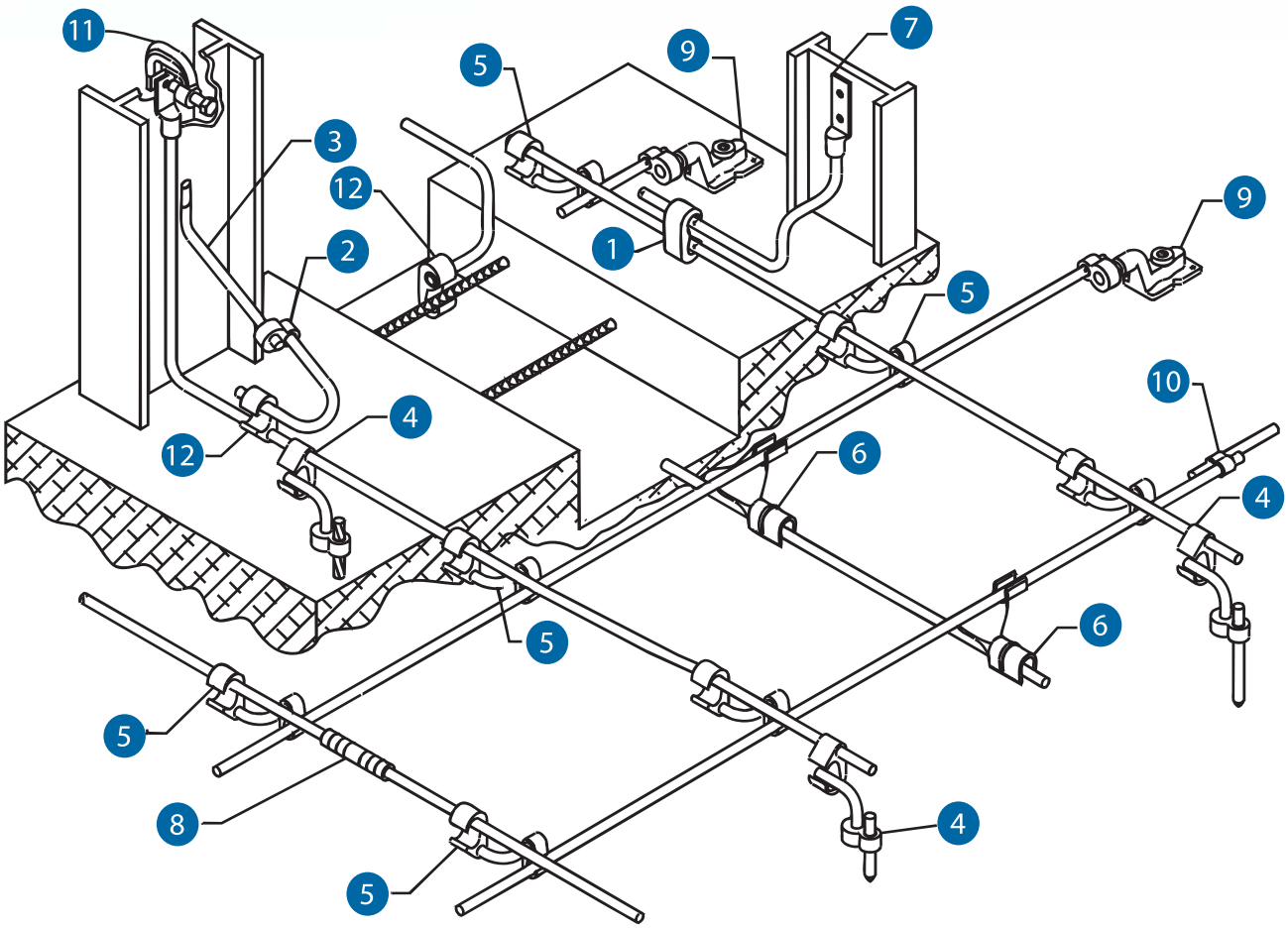
TBM14M
(Suggested tool for E-Z-Ground connectors to ground rods up to 5/8" diameter.)

Reliable installations through compression connections

Dies that are used in Thomas & Betts hand and hydraulic tools contain the “die code” numbers which are engraved on the compression surface of the die. Under compression, this number becomes embossed on the completed connection for inspection purposes.

The inspector compares the die code number embossed on the connector with the die table to ensure that the proper connector was compressed with the correct die for that particular size conductor.

E-Z-Ground®



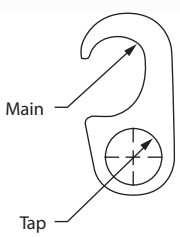
Thomas & Betts offers a complete line of grid-ground compression connectors. Our E-Z-Ground® connectors are designed for direct burial and offer a safe, efficient alternative to exothermic welding products. Grid ground installations do not require explosive charges, and can be installed in various climate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

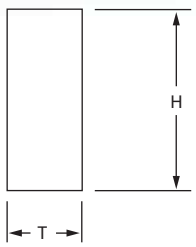
Thomas & Betts E-Z-Ground® products meet all applicable standards (IEEE837, UL467, CSA22.2). Connectors are prefilled with oxide inhibitors and sealed.

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 (Grid to Ground)
7. Lug
8. Splice/Two-Way Connectors
9. Ground Plates
10. Figure 8 Connector
11. I-Beam Clamp
12. Figure 6 Connectors

Figure 6 Compression Ground Tap Connector

- Material: High-conductivity copper.
- Acceptable for direct burial.





MEETS
IEEE
837 REQUIREMENTS

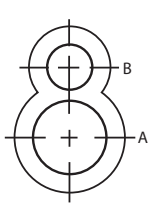
Cat. No.	Application		Cable to rebar application*		Dimensions in. (mm)		Dies for TBM14M, 13100A or TBM15I	
	Main	Tap	Main	Tap	T	H		
54855	1/0 Str.–250 kcmil or 1/2"–5/8" Rod	#4 Sol.–#2 Str.	#3 Rebar 3/8 thru 1/2" #4 Rebar	#4 Sol.–#2 Str.	0.75 (19.1)	1.94 (49.3)	15G86A	[1]
54860	1/0 Str.–250 kcmil or 1/2"–5/8" Rod	1/0 Str.–2/0 Str.	#3 Rebar 3/8 thru 1/2" #4 Rebar	1/0 Str.–2/0 Str.	0.75 (19.1)	2.19 (55.6)	15G86R	[1]
54865-CK	1/0 Str.–250 kcmil or 1/2"–5/8" Rod	3/0 Str.–250 kcmil	#3 Rebar 3/8 thru 1/2" #4 Rebar	3/0 Str.–250 kcmil	0.75 (19.1)	2.19 (55.6)	15G86R	[1]
54875	#6 Sol.–#2 Str.	#6 Sol.–#2 Str.	–	–	0.75 (19.1)	2.56 (65.0)	15501A	[1]
54885	250 kcmil–500 kcmil or 5/8"–3/4" Rod	#4 Sol.–#2 Str.	#5 Rebar 5/8 thru 3/4" #6 Rebar	#4 Sol.–#2 Str.	0.75 (19.1)	1.94 (49.3)	15G126R	[1]
54890	250 kcmil–500 kcmil or 5/8"–3/4" Rod	1/0 Str.–2/0 Str.	#5 Rebar 5/8 thru 3/4" #6 Rebar	1/0 Str.–2/0 Str.	0.75 (19.1)	2.13 (54.1)	15G126R	[1]
54895	250 kcmil–500 kcmil or 5/8"–3/4" Rod	3/0 Str.–250 kcmil	#5 Rebar 5/8 thru 3/4" #6 Rebar	3/0 Str.–250 kcmil	0.75 (19.1)	2.19 (55.6)	15G126R	[1]
54900	250 kcmil–500 kcmil or 5/8"–3/4" Rod	350 kcmil–500 kcmil	#5 Rebar 5/8 thru 3/4" #6 Rebar	350 kcmil–500 kcmil	1.38 (35.1)	2.44 (62.0)	15G121R	[3]

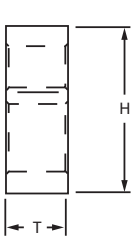
** CSA not applicable.*
Tin-plated version of galvanized ground rods available. Add suffix -TP to Cat. No.
Use 15500TB adaptor for TBM15-Ton Tool.

[*] *Number of crimps.*

Figure 8 Compression Ground Rod Tap Connectors

- Material: High-conductivity copper.
- Acceptable for direct burial.





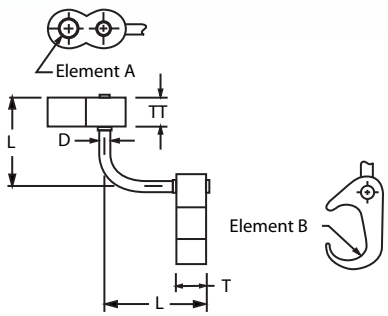
MEETS
IEEE
837 REQUIREMENTS

Cat. No.	A (in.) Ground Rod	B Cable Range	Dimensions in. (mm)		Dies for TBM14M 13100A or TBM15I	
			T	H		
GR12-202*	1/2	2 AWG–2/0 AWG	0.88 (22.4)	1.94 (49.3)	15G121R	[2]
GR58-202*	5/8	2 AWG–2/0 AWG	0.88 (22.4)	1.97 (50.0)	15G121R	[2]
GR34-202*	3/4	2 AWG–2/0 AWG	0.88 (22.4)	2.19 (55.6)	15G121R	[2]
GR1-202	1	2 AWG–2/0 AWG	0.88 (22.4)	2.56 (65.0)	15G121R	[2]
GR12-40250*	1/2	3/0 AWG–250 kcmil	0.88 (22.4)	1.94 (49.3)	15G121R	[2]
GR58-40250*	5/8	3/0 AWG–250 kcmil	0.88 (22.4)	2.13 (54.1)	15G121R	[2]
GR34-40250*	3/4	3/0 AWG–250 kcmil	0.88 (22.4)	2.19 (55.6)	15G121R	[2]
GR1-40250	1	3/0 AWG–250 kcmil	0.88 (22.4)	2.44 (62.0)	15G121R	[2]
GR58-300500*	5/8	300–500 kcmil	0.88 (22.4)	2.13 (54.1)	15G121R	[2]
GR34-300500*	3/4	300–500 kcmil	0.88 (22.4)	2.44 (62.0)	15G121R	[2]
GR1-300500	1	300–500 kcmil	0.88 (22.4)	2.69 (68.3)	15G121R	[2]

**Tin-plated version of galvanized ground rods available. Add suffix -TP to Cat. No.*
Use 15500TB adaptor for TBM15-Ton Tool.
Optional Ground Rod Knurling die for 14-15 ton tool: 15508.
Knurling tool: 240-31565-94.

[*] *Number of crimps.*

Figure 6 to 8 Compression Ground Rod to Grid Connectors

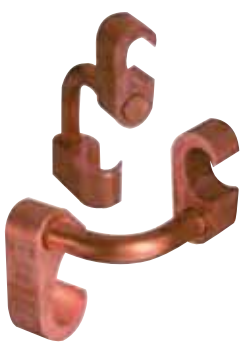


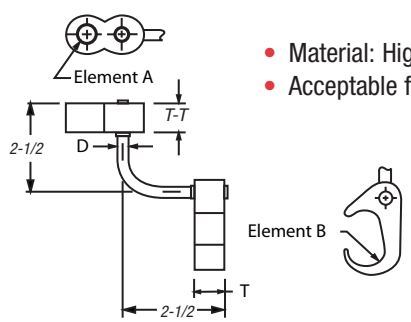
MEETS IEEE 837 REQUIREMENTS

Cat. No.	A in. (mm) Ground Rod	B Cable Range	Dimensions in. (mm)		Dies for TBM14M, 13100A or TBM15I	
			D	L	Element A	Element B
54855LR12*	1/2 (12.7)	2 AWG–250 kcmil	0.31 (7.8)	2.50 (63.5)	15G121R	15G86R
54885LR12*	1/2 (12.7)	250 kcmil–500 kcmil	0.31 (7.8)	2.50 (63.5)	15G121R	15G126R
54865LR58*	5/8 (16.0)	2 AWG–250 kcmil	0.31 (7.8)	2.50 (63.5)	15G121R	15G86R
54895LR58*	5/8 (16.0)	250 kcmil–500 kcmil	0.31 (7.8)	2.50 (63.5)	15G121R	15G126R
54875LR34*	3/4 (19.1)	2 AWG–250 kcmil	0.50 (12.7)	2.63 (66.8)	15G121R	15G86R
54900LR34*	3/4 (19.1)	250 kcmil–500 kcmil	0.50 (12.7)	2.63 (66.8)	15G121R	15G126R
54910LR100	1 (25.4)	2 AWG–250 kcmil	0.50 (12.7)	2.63 (66.8)	15G121R	15G86R
54920LR100	1 (25.4)	250 kcmil–500 kcmil	0.50 (12.7)	2.63 (66.8)	15G121R	15G126R

**Tin-plated version available for galvanized ground rods. Add suffix -TP to Cat. No.*

Figure 6 to 6 Compression Ground Grid Connectors





- Material: High-conductivity copper.
- Acceptable for direct burial.

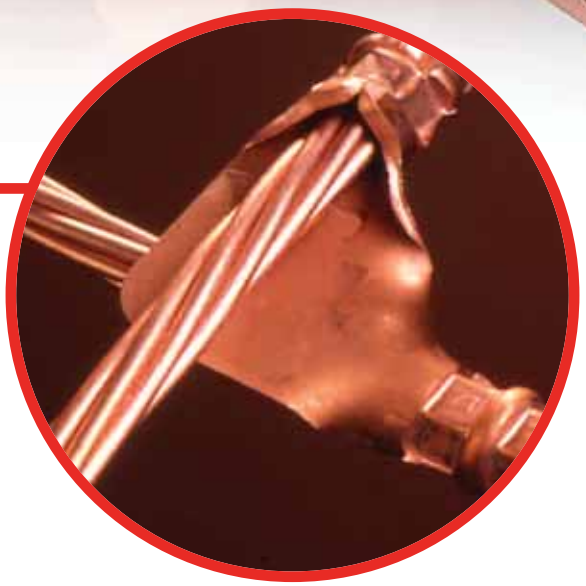
MEETS IEEE 837 REQUIREMENTS

Cat. No.	Element A	Element B	Element A to Ground Rod (in.)	*Element B to Rebar (in.)	Dimensions in. (mm)			Die for TBM14M, 13100A or TBM15I	
	Cable to Cable				D	T	T-T	Element A	Element B
54855L	#6 Sol.–#2 Str.	#6 Sol.–#2 Str.	–	–	0.88 (22.4)	0.75 (19.1)	0.75 (19.1)	15501A [1]	15501A [1]
54865L	#1 Str.–250 kcmil	#6 Sol.–#2 Str.	1/2 – 5/8	3/8 – 1/2 #3–#4 Rebar	0.88 (22.4)	0.75 (19.1)	0.75 (19.1)	15501A [1]	15G86R [1]
54875L	#2 Str.–250 kcmil	#2 Str.–250 kcmil	1/2 – 5/8	3/8 – 1/2 #3–#4 Rebar	0.88 (22.4)	0.75 (19.1)	0.75 (19.1)	15G86R [1]	15G86R [1]
54885L	250 kcmil–500 kcmil	#6 Sol.–#2 Str.	5/8 – 3/4	5/8 – 3/4 #3–#4 Rebar	0.88 (22.4)	0.75 (19.1)	0.75 (19.1)	15501A [1]	15G126R [1]
54895L	250 kcmil–500 kcmil	#2 Str.–250 kcmil	5/8 – 3/4	5/8 – 3/4 #3–#4 Rebar	0.88 (22.4)	0.75 (19.1)	0.75 (19.1)	15G86R [1]	15G126R [1]
54900L	250 kcmil–500 kcmil	250 kcmil–500 kcmil	5/8 – 3/4	5/8 – 3/4 #3–#4 Rebar	0.88 (22.4)	1.13 (28.7)	1.13 (28.7)	15G121R [3]	15G121R [3]

**CSA not applicable.*
Use 15500TB adaptor for 15 ton Tool TBM15I.

[*] *Number of crimps.*

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.

MEETS IEEE 837 REQUIREMENTS

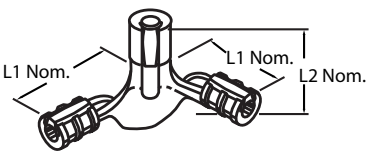
Cat. No.	Cable to Cable Range						Rod to Cable range					
	Main	Die Code	TBM14 and 15 Die Cat. No.	Branch	Die Code	TBM14 and 15 Die Cat. No.	Ground Rod (in.)	Die Code	TBM14 and 15 Die Cat. No.	Cable	Die Code	TBM14 and 15 Die Cat. No.
GG21-21	#2 or #1	45	15526 [2]	#2 or #1	45	15526 [2]	–	–	–	–	–	–
GG10-10	1/0	54	15511 [2]	1/0	54	15511 [2]	–	–	–	–	–	–
GG2030-21	2/0 or 3/0	60	15532 [2]	#2 or #1	50–45	15526 [2] 15530	–	–	–	–	–	–
GG2030-10	2/0 or 3/0	60	15532 [2]	1/0	54H	15511 [2]	–	–	–	–	–	–
GG2030-2030	2/0 or 3/0	60	15532 [2]	2/0–3/0	60	15532 [2]	–	–	–	–	–	–
GG40250-21	4/0 or 250 kcmil	71H	15514-CK [2] [2]	#2	45 50	15526 [2] 15530 [2]	1/2 5/8	71 80H	15514-CK 15517	#2 or #1 #2 or #1	45 50	15526 15530
GG40250-10	4/0 or 250 kcmil	71H	15514-CK [2]	1/0 kcmil	54H	15511 [2]	1/2 5/8	71 80H	15514-CK 15517	1/0	54	15511
GG40250-2030	4/0 or 250 kcmil	71H	15514-CK [2]	2/0 or 3/0	60	15532-CK [2]	1/2 5/8	71 80H	15514-CK 15517	2/0 or 3/0 2/0 or 3/0	60 60	15532 15532
GG40250-40250	4/0 or 250 kcmil	71H	15514-CK [2]	4/0 or 250 kcmil	71H	15514-CK [2]	1/2 5/8	71 80H	15514-CK 15517	4/0 or 250 4/0 or 250	71H 71H	15514-CK 15514-CK
GG500-40250	500 kcmil	87H	15506 [2]	4/0 or 250 kcmil	71H	15514-CK [2]	3/4 5/8	87H	15506	4/0 or 250	71H	15514-CK
GG500-500	500 kcmil	87H	15506 [2]	500 kcmil	87H	15506 [2]	3/4 5/8	87H	15506	500	87H	15506
GG500-350	500 kcmil	87H	15506 [2]	350 kcmil	80H	15606 [2]	3/4 5/8	87H	15506	350	80H	15606
GG500-2030	500 kcmil	87H	15506 [2]	2/0 or 3/0	60	15532-CK [2]	3/4 5/8	87H		2/0 or 3/0	60	15532CK
GG350-350	350 kcmil	80H	15606 [2]	350 kcmil	80H	15606 [2]						

Uses 15500TB adaptor for 15-ton Tools.
Optional ground rod knurling die or TBM14 and 15 tools: 15508.
Optional ground rod knurling tool: 240-31565-94.

[*] *Number of crimps.*

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

Two Cables to Ground Rod



Cat. No.	Cable Size		Ground Rod Dia. (in.)	Cable and Rod Installing Dies for TBM14 and 15				Overall Dimensions in. (mm)	
				Ground Cable		Ground Rod			
	Main	Tap		Die Code	Cat. No.	Die Code	Cat. No.	L1	L2
53065-58GR	250 or 4/0	250 or 4/0	5/8 and 1/2	87H	15506 [2]	87H	15506 [2]	4.94 (125.5)	3.25 (82.6)
53065-34GR	250 or 4/0	250 or 4/0	3/4	87H	15515-CK [2]	106H	15515 [2]	4.94 (125.5)	3.25 (82.6)

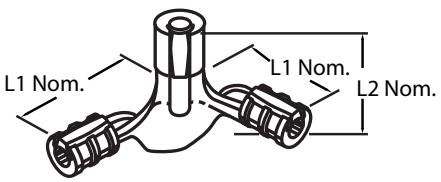
Use T&B hydraulic tools with hex crimp dies.

Optional ground rod knurling die for TBM14 and 15 Tools: 15508.
Optional ground rod knurling Tool: 240-31565-94.
Use 15500TB adaptor for TBM15-Ton Tool.

[*] *Number of crimps.*

Copperweld* Conductors and Rebar For Use with Cast Copper Connectors

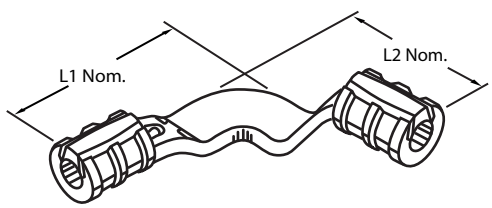
Cable Size	Reinforcing Rod Size	Copperweld Conductor Size
2, 1 AWG	–	3 #8 or 3 #6
1/0, 2/0 AWG	#3	3/8 (7 #8) or 7/16 (7 #7)
4/0, 250 kcmil	#4	7/16 (19 #9) or (7 #5)
300–350	#5	21/32 (19 #8) or 5/8 (7 #4)
500 kcmil	#6	13/16 (19 #6)



**Reg. Trademark Copperweld Corporation.*
UL Listed for use with cast copper connectors.

Grounding Grid Connectors Heavy-duty Cast Copper**

53065



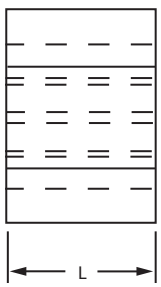
53055

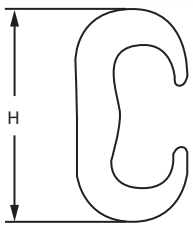
Cat. No.	Rod to Cable Range		Cable to Cable Range Rod		Cable and Rod Installing Dies for TBM14 and 15				Overall Dimensions in. (mm)	
	Rod Size (in.)	Cable Range	Main	Branch	Die Code	Cat. No.	Die Code	Cat. No.	L1	L2
53055	–	–	1/0–2/0 AWG	1/0–2/0 AWG	–	–	66	15534 [1]	3.88 (98.6)	3.88 (98.6)
53059*	1/2–5/8	2–1 AWG	4/0–250 kcmil	2–1 AWG	87H	15506 [2]	54H	15511 [2]	4.16 (105.7)	4.56 (115.8)
53060*	1/2–5/8	1/0–2/0 AWG	4/0–250 kcmil	1/0–2/0 AWG	87H	15506 [2]	87H	15506 [2]	4.44 (112.8)	4.44 (112.8)
53065*	1/2–5/8	4/0–250 kcmil	4/0–250 kcmil	4/0–250 kcmil	87H	15506 [2]	87H	15506 [2]	4.44 (112.8)	4.44 (112.8)
53069*	3/4	1/0–2/0 AWG	300–350 kcmil	1/0–2/0 AWG	106H	15515-CK [2]	66	15534 [1]	4.59 (116.6)	4.59 (116.6)
53071*	3/4	4/0–250 kcmil	300–350 kcmil	4/0–250 kcmil	106H	15515-CK [2]	106H	15515-CK [2]	5.25 (133.4)	4.78 (121.4)
53073*	1	1/0–2/0 AWG	500 kcmil	1/0–2/0 AWG	125H	15603 [3]	66	15534 [1]	4.81 (122.2)	4.88 (124.0)
53075*	1	4/0–250 kcmil	500 kcmil	4/0–250 kcmil	125H	15603 [3]	87H	15506 [2]	6.56 (166.6)	5.00 (127.0)
53080*	1	500 kcmil	500 kcmil	500 kcmil	125H	15603 [3]	125H	15603 [3]	5.19 (131.8)	5.19 (131.8)

** 4/0–250 wire barrels suitable for 1/2" and 5/8" rod, 300–500 kcmil wire barrels suitable for 3/4" rods, 500 kcmil wire barrels suitable for 1" rods.*
*** Do not meet IEEE837.*
Cat. No. 15500TB adaptor is required for all 15500 Series dies, not for 15600 Series, crimp with 15 Ton Tools.
Hydraulic tools only.

[*] *Number of crimps.*

C-Taps



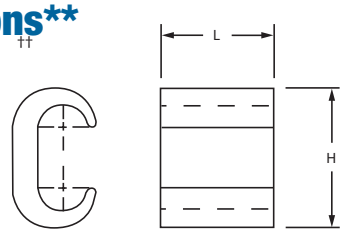


MEETS
IEEE
837 REQUIREMENTS

Cat. No.	Main	Tap	Dimensions in. (mm)		Dies for TBM14M, 13100A or TBM15I*	Crimps
			H	L		
CTP22	#6 Sol.–#2 Str.	#6 Sol.–#2 Str.**	1.16 (29.5)	0.75 (19.1)	HBKC	1
CTP202	#1 Str.–2/0 Str.	#6 Sol.–#2 Str.**	1.41 (35.8)	0.75 (19.1)	15501A	1
CTP2020	#1 Str.–2/0 Str.	#1 Str.–2/0 Str.	1.54 (39.1)	0.75 (19.1)	15501A	1
CTP25020	3/0 Str.–250 kcmil	#6 Sol.–2/0 AWG**	1.97 (50.0)	0.75 (19.1)	15G86R	1
CTP250250	3/0 Str.–250 kcmil	3/0 Str.–250 kcmil	2.06 (52.3)	0.88 (22.4)	15G86R	1
CTP50020	300–500 kcmil	#6 Sol.–2/0 AWG**	2.42 (61.5)	0.88 (22.4)	15G121R	2
CTP500250	300–500 kcmil	3/0 Str.–250 kcmil	2.67 (67.8)	0.88 (22.4)	15G121R	2
CTP500500	300–500 kcmil	300–500 kcmil	2.91 (73.9)	1.10 (27.9)	15G121R	3

** Cat. No. 15500 adaptor required if using TBM15I and 155XX series Dies.*
*** #6 AWG branch must be doubled.*
Material: High-Conductivity Copper.

Copper C-Crimps Wire Combinations**



Cat. No.	Run	Tap	Die Index	Manual Tool OD Series	Installing Die 14 and 15 Ton Tools	Dimensions in. (mm)	
						L	H
BC48	6 Sol.–4 Str.	8 Sol.–8 Str.	BG or 5/8	BY31	B58CR	0.64 (16.3)	0.56 (14.2)
BC46-BB	6 Sol.–4 Str.	6 Sol.–6 Str.	BG or 5/8	BY31	B58CR	0.64 (16.3)	0.75 (19.1)
BC44	6 Sol.–4 Str.	4 Sol.–4 Str.	BG or 5/8	BY31	B58CR	0.64 (16.3)	0.80 (20.3)
BC24	2 Sol.–2 Str.	8 Sol.–4 Str.	C	BY33	HBKC	0.75 (19.1)	0.98 (24.9)
BC22	2 Sol.–2 Str.	2 Sol.–2 Str.	C	BY33	HBKC	0.75 (19.1)	1.05 (26.7)
BC202	1/0 Sol.–2/0 Str.	8 Sol.–2 Str.	E or O	–	HO	0.94 (23.9)	1.31 (33.3)
BC2020-BB	1/0 Sol.–2/0 Str.	1/0 Str.–2/0 Str.	E or O	–	HO	0.94 (23.9)	1.34 (34.0)
BC402	3/0 Str.–4/0 Str.	6 Sol.–2 Str.	F or D3	–	HD	1.06 (26.9)	1.63 (41.4)
BC4020	3/0 Str.–4/0 Str.	1/0 Sol.–2/0 Str.	F or D3	–	HD	1.06 (26.9)	1.63 (41.4)
BC4040	3/0 Str.–4/0 Str.	3/0 Sol.–4/0 Str.	F or D3	–	HD	1.06 (26.9)	1.63 (41.4)

***Do not meet IEEE 837.*

C-Taps — Small Size

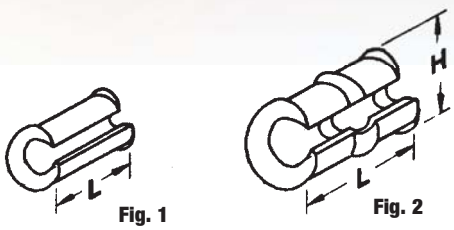


Fig. 1 Fig. 2

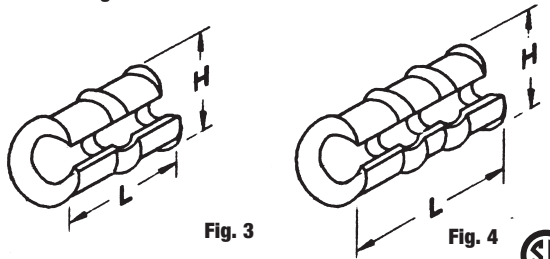


Fig. 3 Fig. 4

Cat. No.	Code Wire Comb. Cir. Area Range		Group 1	TMB62BSCR	Smart Tool	Group 2	Group 3	Insulation Choice		Dimensions in. (mm)		Colour Code
	Main	Branch 1	Die	Die	Die			Adhesive	Shrink Tubing	L	H	
54705	12	14	6TON21	TBM6221	–	Accommodates this range	Accommodates this entire range	AC5X3	HS12-6	0.31 (7.9)	0.31 (7.9)	Red
	14	16										
54710	10	10	6TON24	TBM6224						0.56 (14,2)	0.44 (11.2)	Blue
	8	12										
54715	6	10, 12	6TON29	TBM6229	–					0.56 (14.2)	0.63 (16.0)	Grey
	8	8, 10, 12										
54720	4 or 5	8, 10, 12	6TON33	TBM6233	TBM8-750C20				HS6-1	1.16 (29.5)	0.69 (17.5)	Brown
	6	6, 8										
54725	3	6, 8, 10, 12***	6TON37	TBM6237	TBM8-750C2530					1.16 (29.5)	0.81 (20.6)	Green
	4 or 5	6, 5										
54730	2	6, 8, 10, 12	6TON42	TBM6242	TBM8-750C2530					1.16 (29.5)	0.84 (21.3)	Pink
	3	5										
	4	3										
54735	1	4, 5, 6, 8, 10, 12	6TON45	TBM6245	TBM8-750C3540					0.06 (1.5)	0.88 (22.4)	Black
	2	4,5										
	3	3,4										
54740	1/0	4, 5, 6, 8, 10, 12	6TON50	TBM6250	TBM8-750C3540				HS4-30	1.69 (42,9)	0.97 (24.6)	Orange
	1	3, 4										
	2	2, 3										
54745	2/0	3, 4, 5, 6, 8, 10, 12	6TON54	TBM6254	TBM8-750C4550					1.69 (42,9)	1.06 (26.9)	Purple
	1/0	2, 3										
	1	1, 3										
54750	3/0	2, 3, 4, 5, 6, 8, 10, 12	6TON62	TBM6262	TBM8-750C-4550					1.69 (42.9)	1.19 (30.2)	Yellow
	2/0	1, 2										
	1/0	1/0, 1										

*** *When using 3 AWG on main and 12 AWG on branch with smart tools and dies, 12 AWG wire must be doubled (hair-pinned) and placed on branch for crimping.*
Group 1 = TBM6H, TBM6BSCR
Group 2 = TBM25S, TBM21E (require 2 compressions within each crimp area)
Group 3 = TBM4/4S, TBM5/5S, TBM6/6S, TBM8/8S, TBM6H (require 1 compression within each crimp area)

Hex Compression intimately bonds directly to copper clad ground rod.

Pigtail Connectors

- Figure-8 connectors

When connecting cable to copper clad 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.

MEETS IEEE 837 REQUIREMENTS

Cat. No.	Cable Range	Copper Clad Ground Rod (in.)	Die Code for TBM14M, TBM15, 13100A or TBM15I	Die Cat. No.
GR12-306	One Cable: 3/0 to 6 AWG Two Cables: 2 to 6 AWG	1/2	87H	15506 [2]
GR58-406	One Cable: 4/0 to 6 AWG Two Cables: 2 to 6 AWG	5/8	87H	15506 [2]
GR34-4010	One Cable:4/0 to 1/0 AWG	3/4	99H	15505 [2]

[*] *Number of crimps.*

Ground Plates

MEETS IEEE 837 REQUIREMENTS

Cat. No.	Fig.	Cable Range	H in. (mm)	Die Code for 14 and 15 Ton Tools
GP2250-2	1	2–250 kcmil	3.63 (92.2)	15G86R [1]
GP2250-4	2	2–250 kcmil	4.22 (107.2)	15G86R [1]
GP250500-2	1	250–500 kcmil	3.63 (92.2)	15G126R [2]
GP250500-4	2	250–500 kcmil	4.22 (107.2)	15G126R [2]

[*] *Number of crimps.*

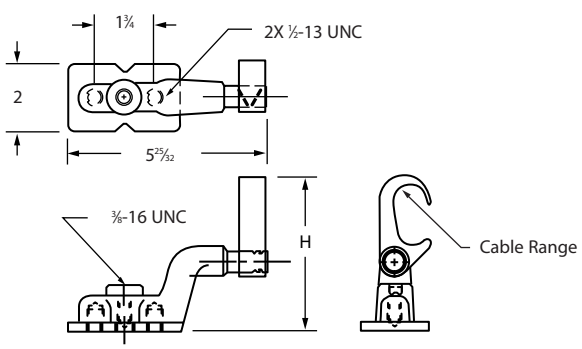


Fig. 1

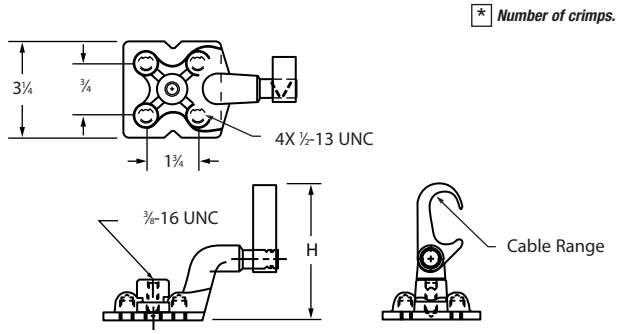


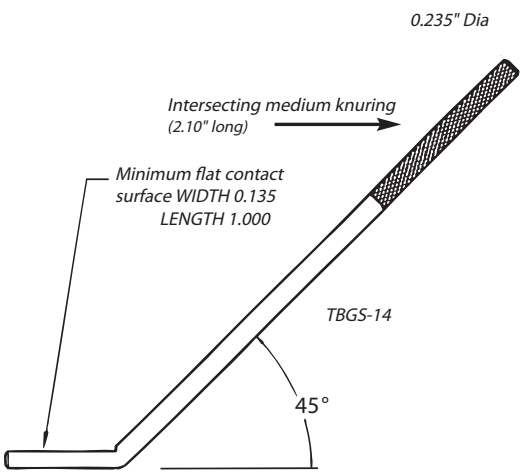
Fig. 2

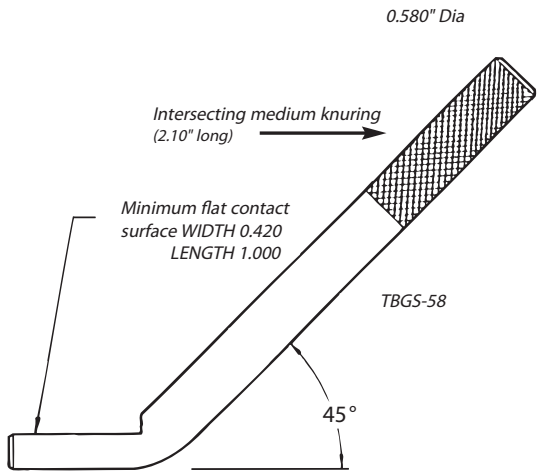
Knurling ensures excellent mechanical pull-out and electrical continuity.

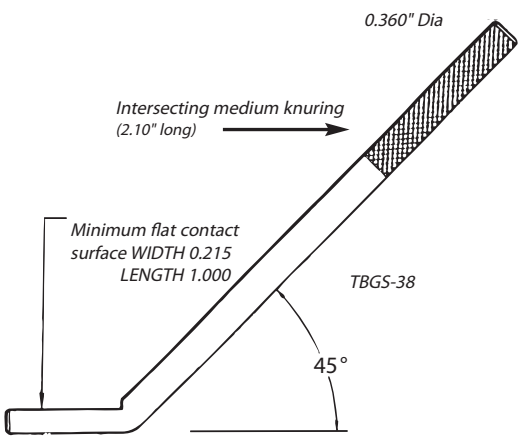
Type TBGS
Structural Grounding Studs

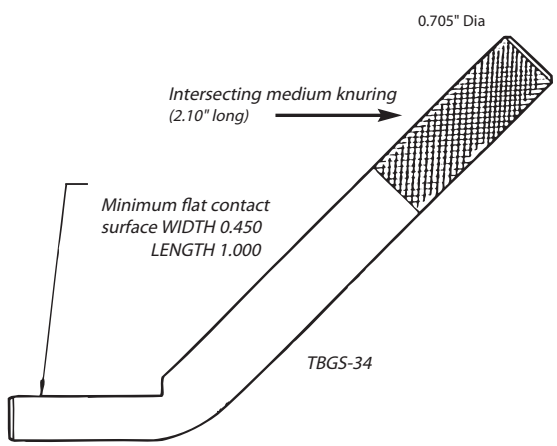
- Easily welded to steel structures with minimal construction welding equipment.
- Connect to grounding conductors with appropriate Thomas & Betts grounding connectors.
- Knurled portion of stud resists pull-out and provides electrical continuity to ensure the integrity of the grounding circuit.
- Constructed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

Cat. No.	Rod Size (in.)
TBGS-14	0.25
TBGS-38	0.38
TBGS-58	0.63
TBGS-34	0.75





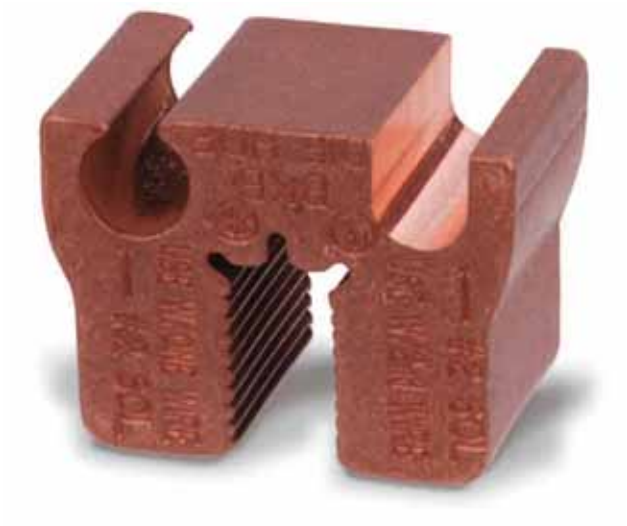




Cuts installation time in half — With results superior to conventional connectors.

E-Z-Ground® Bus Bar Connectors

- Unique.
- Fast and easy installation.
- Superior low-resistance, high-conductivity connections.
- Install with conventional compression tools.
- Produce a permanent connection with any combination of copper from #6 to #2 solid or stranded conductors, to 1/4 in. copper bus bar.
- Made from pure wrought copper and prefilled with oxide inhibitor.
- CSA certified and UL Listed.
- Insulated with die HDF.

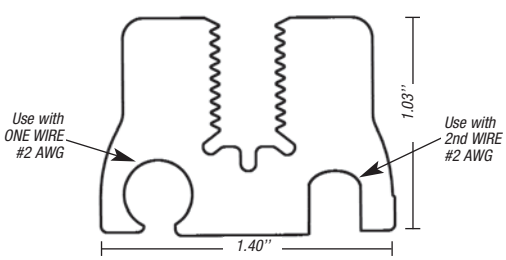


E-Z-Ground® Bus Bar Connectors install in less than 2 minutes with one easy crimp! The connector attaches directly to the bus, saving the labor-intensive process of drilling and tapping. The unique jaw interface of the E-Z-Ground® Bus Bar Connector grips the copper bus, resulting in a low-resistance, high-conductivity connection.

The E-Z-Ground® Bus Bar Connectors can be used in OEM applications or telecom applications – Cellular, PCS and others. They provide a continuous ground to the copper bus bar, making them ideal for 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.

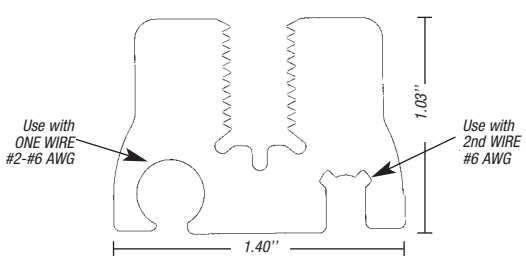
Cat. No.	Ground Bus Bar (in.)	Conductor Range	Std. Pkg. Qty.
GBBC22	1/4	#2 AWG–#2 AWG	1
GBBC26	1/4	#6 AWG–#2 AWG	1

Use this side of the connector when using only one wire.



1/4'' Bus
Cat. No. GBBC22

Use this side of the connector only when using two wires.



1/4'' Bus
Cat. No. GBBC26

Assorted Blackburn® Die Kit

EZ-CK DIEKIT — Die sets Kit

All the Thomas & Betts dies you need to crimp the complete T&B E-Z-Ground® connector offering, presented in a two-sided metal carrying case. The reverse side of this kit allows you to keep all your colour-coded Blackburn® crimping dies in one convenient location. A cable vs die reference chart inside each cover lets you sort and organize all your Blackburn® compression connector dies for either copper or aluminum conductors. Additional compartments for cutting dies and adaptors round off this great package.

Cat. No.: EZ-CK DIEKIT					
	Die Cat. No.	Qty	Die Colour	Copper	Aluminum
BKB	B75CH	1	Brown	2 AWG	n/a
	B05CH	1	Green	1 AWG	4 AWG
	B06CH1	1	Pink	1/0 AWG	2 AWG
	B72CH	1	Black	2/0 AWG	1 AWG (Gold)
	B08CH	1	Orange	3/0 AWG	1/0 AWG (Tan)
	B09CH	1	Purple	4/0 AWG	2/0 AWG (Olive)
	B26CH	1	Yellow	250 kcmil	n/a
	B10CH1	1	White	300 kcmil	4/0 AWG
	B11CH	1	Red	350 kcmil	250 kcmil
	B12CH	1	Brown	500 kcmil	350 kcmil
	B39CH	1	Black	750 kcmil	650 kcmil
	15G121R	1			
	15G86R	1			
	15501A	1			
	15G126	1			
	CTB8	1			
	COLCHA2-E	1			
	GRNDDIESEL-E	1			

13100A — 14-Ton Hydraulic Crimping Head

- Rugged design, made to last in field or on bench.
- C-yoke provides maximum flexibility for crimping.
- Uses standard T&B Color-Keyed® 15500-TB Series dies.
- Operates on 10,000 psi hydraulic pumps.

Creates Hex-style crimp

Specifications

- Installing Range:
  Up to 900 kcmil copper lugs & splices
  Up to 750 kcmil aluminum lugs & splices
  CHT814-10 to CHT2502-6 copper H-taps
  63105 to 63148 aluminum H-taps
  54755 to 54755 C-taps
- Output Force: 14 tons
- Operating Pressure: 10,000 psi nominal
- Dimensions (L x W x H): 11-1/2" x 2-1/2" x 4-1/4"
- Weight: 10 lb.

Cat. No.	Description	Pkg. Qty
13100A	14-Ton Hydraulic Head with Steel Case	1

Creates Hex-style crimp

Specifications

- Installing Range:
  The only tool that can be used with all Thomas & Betts connectors.
- Output Force: 15 tons
- Operating Pressure:
  10,000 psi nominal
- Dimensions (L x W x H):
  15-3/4" x 2-5/8" x 4-3/8"
- Weight: 16.5 lb.

TBM15I — 15-Ton Hydraulic Crimping Head

- Head made of forged steel and insulated with rubber boot.
- Longer, slimmer design enables easier access into tight spaces, such as in cable tray and permanent equipment applications.
- Wider jaw opening eases crimping of larger lugs, C-taps and H-taps.
- Uses 15600 Series dies; can also use 15500 Series dies with 15500-TB adaptor.

Cat. No	Description	Pkg. Qty
TBM15I	Insulated 15-Ton Hydraulic Head with Steel Case	1

15600 Series – Fits directly into tool for larger size connectors, 800 kcmil–1,500 kcmil. 15500 Series – Used in conjunction with 15500-TB Adaptor,#8 AWG–750 kcmil.

BPLT13970P2 — Battpac™ Pump

- Small and lightweight.
- 60 minutes full recharge.
- Highly visible display indicates battery power level.
- Socket for 24 VDC external connection.
- Operation in any position: on its side or upright.
- Separate operation/release buttons protect against accidental operation.
- Energy consumption limited by automatic shut-off.
- Easily accessible oil top-up inlet.

Specifications

- Nominal Pressure: 10,000 psi
- Pumping Capacity: 30 cu.in./min.
- Reservoir Volume: 60 cu.in. (0.26 gal.)
- Dimensions (L x W x H): 13-1/2" x 6-1/2" x 12-3/4"
- Battery: Ni-MH 24V, 3.0 Ah
- Weight with Battery: 20.9 lb.

Battery Performance Guide

In tests, the number of crimps obtained from a fully charged battery, using a remote crimping head, was:

- 102 crimps for Cu connectors on 250 kcmil Cu conductor.
- 98 crimps for C-Tap connectors on #2 AWG Cu conductor.
- 76 crimps for Cu sleeve connectors on 500 kcmil Cu conductor.

Cat. No.	Description	Pkg. Qty
BPLT13970P2	Battpac™ Pump includes canvas accessories carrying bag, carrying strap, remote hand controller, two batteries, battery charger and non-drip couplings	1
BPLT13970RB	Ni-MH 24V Replacement battery	1
BPLT13970RP	Canvas backpack for pump	1
BPLT13970DC	Power connecting cable with clips	1
BPLT13970FS	Remote foot pedal controller	1

Suggested replacement oil T&B Cat. No. 21061 or any light weight hydraulic fluid or automatic transmission fluid is recommended. Do not use silicon based fluids.

TBM14MC — 14-Ton Compact Manual Hydraulic Crimp Tool

- Improved ergonomic design requires less force.
- 180º rotating head for use in tight spaces.
- 1.65" jaw opening accommodates large compression terminals and joints.
- Dual-speed action pump offers fast advancing speed for approach of die to connector; slower and more powerful speed for crimping.
- Built-in safety valve bypasses oil supply at maximum pressure.
- Pressure-release system can be activated at any stage of compression.
- Uses standard T&B Color-Keyed® 15500 Series dies.

Creates Hex-style crimp

Specifications

- Installing Range:
  - Up to 900 kcmil copper lugs & splices
  - Up to 750 kcmil aluminum lugs & splices
- Output Force: 14 tons
- Length: 20-1/2”
- Weight without Dies: 14 lb.
- Complete with carrying case

Cat. No.	Description	Pkg. Qty
TBM14MC	14-Ton Compact Hydraulic Crimp Tool c/w carrying case	1

TBM40HC — Hand-Operated Hydraulic Cutting Tool

- Specifically designed to cut copper, aluminum . and telecommunications cables up to 3.35" O.D.
- Offers dual-speed action: fast advancing speed for rapid approach of blades to cable; slower and more powerful speed for cutting.
- Blades manufactured from high-strength, heat-treated steel to ensure long service life.
- Head easily opens to enable cutting of existing run cables.
- Head rotates 180º, enabling operator to position for easiest use.
- Automatic safety valve bypasses hydraulic system when reaching maximum pressure.
- Pressure release device can also be activated during any point of operation.

Specifications

- Max. Cutting Capacity: 3.35” O.D.
- Weight: 14.55 lb.
- Dimensions (L x W): 25.69" x 6.89"

Cat. No.	Description	Pkg. Qty
TBM40HC	Hand-operated hydraulic cutting tool	1

Contact Tool Service for replacement blades.

BPLT14BSCR / BPLT14BSCRI Battpac™ — 14-Ton Battery-Powered Compression Tools

Creates Hex-style crimp

- Reduced weight and ergonomic design.
- Double-speed feature decreases crimp time by doubling jaw speed until it reaches full cycle.
- Rotating head allows maximum flexibility for crimping.
- Include two Makita 14.4V Ni-MH batteries (3.0 Ah).
- Built-in LED battery power indicator.
- On-tool DC power jack.
- Approx. 70 crimps per battery charge (based on 3/0 AWG cable).
- Use standard T&B Color-Keyed® 15500 Series dies.

Specifications

- Installing Range:
  - Up to 900 kcmil copper lugs & splices
  - Up to 750 kcmil aluminum lugs & splices
  - CHT814-10 to CHT2502-6 copper H-taps
  - 63105 to 63148 aluminum H-taps
    54755 to 54775 C-taps
- Output Force: 14 tons
- Dimensions (L x W x H): 18-1/8" x 3-7/8" x 10"
- Battery: 14.4V 3.0Ah Ni-MH
- Weight with Battery: 18.1 lb.

Cat. No.	Description	Pkg. Qty
BPLT14BSCR	Battpac™ 14-Ton Compression Tool. Includes carrying case, charger, two batteries and carry strap.	1
BPLT14BSCRI	Same as above, but fully insulated	

Suggested replacement oil T&B Cat. No. 21061 or any light weight hydraulic fluid or automatic transmission fluid is recommended. Do not use silicon base fluids.

TBM14BSCR Battpac™ — Hermetically Sealed 14-Ton Battery-Powered Compression Tool

- Weather-resistant, non-ventilated body for maximum protection from the elements.
- Double-speed feature decreases crimp time by doubling jaw speed until it reaches full cycle.
- 180˚ rotating head.
- 75Kv live line rated.
- Insulated crimping head.
- 20-minute rapid battery charger.
- Includes two batteries.
- Uses standard T&B Color-Keyed® 15000 Series dies.
- Approx. 70 crimps per battery charge (based on 3/0 AWG cable).

Creates Hex-style crimp

Specifications

- Installing Range:
  - Up to 900 kcmil copper lugs & splices
  - Up to 750 kcmil aluminum lugs & splices
  - CHT814-10 to CHT2502-6 copper H-taps
  - 63105 to 63148 aluminum H-taps
    54755 to 54775 C-taps
- Output Force: 14 tons
- Dimensions (L x W x H): 19" x 3-1/2" x 10-1/2"
- Battery: 14.4V 3.0Ah Ni-Cd
- Weight without Dies: 20 lb.

Cat. No.	Description	Pkg. Qty
TBM14BSCR	Hermetically sealed unit. Includes carrying case, charger, two batteries and carry strap.	1

Suggested replacement oil T&B Cat. No. 21061 or any light weight hydraulic fluid or automatic transmission fluid is recommended. Do not use silicon base fluids.

TBM15BSCR — Battpac™ Hermetically Sealed 15-Ton Battery-Powered Compression Tool

- Weather-resistant, non-ventilated body for use in the most corrosive environments.
- High-grade forged steel head rotates 180°.
- Rapid jaw-advance feature allows the operator quicker compression cycles.
- 75Kv live line rated.
- 20-minute rapid battery charger.
- Approx. 60 crimps per battery charge (based of 3/0 AWG cable).
- Uses 15600 Series dies; can also use 15500 Series dies with 15500-TB adaptor.

Creates Hex-style crimp

Specifications

- Installing Range: The only tool that can be used with all Thomas & Betts connectors.
- Output Force: 15 tons
- Dimensions (L x W x H): 21" x 3-1/2" x 11"
- Battery: 14.4V 3.0Ah Ni-Cd
- Weight with Battery: 23.75 lb.

Cat. No.	Description	Pkg. Qty
TBM15BSCR	15-Ton Battery-Powered Compression Tool. Includes carrying case, charger, two batteries and carry strap.	1
15500-TB	Die adaptor for 15500 Series dies	

Suggested replacement oil T&B Cat. No. 21061 or any light weight hydraulic fluid or automatic transmission fluid is recommended. Do not use silicon based fluids.

TBM58BSCT — Battpac™ Battery-Powered Cutter

- To operate, simply remove pin latch, place over cable, re-insert pin and cut.
- Built-in bypass pops off if material is beyond cutter's capacity.
- Cuts ACSR, aluminum and copper cables up to 1-1/2", regular guy wires and ground rods up to 5/8".
- Approx. 25 cuts per battery charge.

NOTE: Not recommended for use on hardened steel.

Standard Battpac™ Kit Includes:
1 battery-powered tool
1 carrying strap
1 carrying case
2 CRCTBP batteries
1 CRCTQC 15-minute AC charger

Specifications

- Output: 6 tons
- Max Cutting Capacity: Soft steel bolts: 1-1/16" (17mm)
- Rebar & ground rod: 5/8" (16mm) ACSR : 1-1/2" (40mm)
- CU & AL strands: 1-1/2" (40mm) Standard guy wire: 5/8" (16mm) Wire rope: 3/4" (20mm)
- Dimensions (H x W x D): 17" x 12" x 3"
- Weight with battery: 14 lb.

Cat. No.	Description	Pkg. Qty
TBM58BSCT	Battery-Powered Cutter	1

Contact Tool Service for replacement blades.

TBM54BSCT and TBM54BSCTS — Battpac™ Battery-Powered Cutters

- One-handed control of blade advancement and retraction.
- TBM54BSCTS cuts up to 750 kcmil copper, 2-1/8" O.D. aluminum and 636 kcmil ACSR.
- TMB54BSCT cuts up to 1,500 kcmil copper and 2-1/8" O.D. aluminum (not for use on ACSR).

Specifications

- Battery: 14.4V DC
- Dimensions (L x W x H): 16" x 4" x 4.5"
- Weight with Battery: 7.2 lb.

Cat. No.	Conductor
TBM54BSCTS	750 kcmil Cu; 2-1/8" Al 636 kcmil ACSR
TBM54BSCT	1,000 kcmil Cu 1,500 kcmil Cu; 2-1/8" Al

Guide to Cutting Cycles

This guide indicates the number of cutting cycles that the TBM54BSCT and TBM54BSCTS can be expected to perform when the battery is fully charged. These figures are approximate and will vary according to the charging and other operating conditions, such as temperature, humidity and battery condition.

Battery Unit (CRCTBP):

Battery Type: Sealed Nickel Cadmium
Voltage: 14.4V DC
Rated Current: 1.9Ah
Dimensions (L x W x H): 3.5" x 2.7" x 5.3"
Weight: 1.6 lb.

Approx. Cutting Cycles:

TBM54BSCTS
CRCTBPI and CRCTBP: 35–50
CRCTPBEI: 105–150

TBM54BSCT
CRCTBPI and CRCTBP: 45–430
CRCTPBEI: 135–90

Battery Charger (CRCTQC):

Input Voltage: 120V AC Single Phase
Charging Capacity: 20 V AC
Charging Time: 15 min. CRCTBP and CRCTBPI
Dimensions (L x W x H): 7.5" x 3.7" x 3.5"
Weight: 4 lb.

Optional Accessories:

Battery Cartridge: CRCTBPI or CRCTBP
DC Charger: CRCTDC

Cat. No.	Description	Pkg. Qty
TBM54BSCTS	Battery-powered cutter for up to 750 kcmil Cu, 2-1/8" O.D. Al and 636 kcmil ACSR	1
TBM54BSCT	Battery-powered cutter for up to 1,500 kcmil Cu, 2-1/8" O.D. Al (not for use on ACSR)	

Contact Tool Service for replacement blades.

CRCTBP — Standard Replacement Battery for TBM Series Tools

- 14.4 volt battery with life expectancy of 600 recharges.
- Cycles-per-charge for both batteries varie depending on the type and size of the material being cut or compressed.
- 14.4 volt battery is interchangeable with T&B Battpac™ products except the BPLT series.

Cat. No.	Description	Pkg. Qty
CRCTBP	Standard Replacement Battery	1

CRCTBPI — "Smart™" Replacement Battery for TBM Series Tools

- Same as the standard CRCTBP with the addition of an L.E.D. display that indicates power capacity. User can monitor status of the battery's life and power between charges.
- 14.4 volt battery is interchangeable with T&B Battpac™ products except the BPLT series.

Cat. No.	Description	Pkg. Qty
CRCTBPI	Smart™ Replacement Battery	1

Battery Replacement for BPLT Series Tools

Series BPLT tool use Makita brand batteries,
Catalogue No.: 1442. Not sold through Thomas & Betts.

CRCTQC — Standard 15-Minute Quick Charger

- Charges the CRCTBP and CRCTBPI batteries.
- Charge time is 45 minutes for CRCTBPI.

Cat. No.	Description	Pkg. Qty
CRCTQC	Standard 15-minutes Quick Charger	1

Battery Charger for BPLT Series Tools

Series BPLT tools use a Makita brand battery charger, Catalogue No: DC 1411. Not sold through Thomas & Betts.

Battpac™ Die Information

Connector Size		TBM6BSCR	TBM6H	TBM14BSCR / TBM15BSCR	Die Code Colour
Copper	Aluminum	Die Cat. No.	Die Code No.	Die Code No.	
8 AWG	10 AWG	6TON21	BY15C	B71CH	Red
6 AWG	8 AWG	6TON24	BY17C	B73CH	Blue
4 AWG	6 AWG	6TON29	BY19C	B74CH	Grey
2 AWG	–	6TON33	BY21C	B75CH	Brown
1 AWG	4 AWG	6TON37		B05CH	Green
1/0 AWG	2 AWG	6TON42	BY23C	B06CH1	Pink
2/0 AWG	1 AWG	6TON45	BY24C	B72CH	Black/Gold
3/0 AWG	1/0 AWG	6TON50	BY25C	B08CH	Orange
4/0 AWG	2/0 AWG	6TON54	BY31C	B09CH	Purple/Olive
250 kcmil	–	6TON62	BY27C	B26CH	Yellow
–	1		BY24C	B72CH	Black/Gold
	1/0		BY25C	B08CH	Tan
	2/0		BY31C	B09CH	Purple/Olive
	3/0 AWG	6TON60	BY32C	–	Ruby
300 kcmil	4/0 AWG	6TON66	BY35C	B10CH1	White
350 kcmil	250 kcmil	6TON71	BY37C	B11CH	Red
400 kcmil	300 kcmil	6TON76		–	Blue
925/24	–	6TON80		–	Black
500 kcmil	350 kcmil	6TON87		B12CH	Brown
600 kcmil	400 kcmil			B36CH	Green
700 kcmil	500 kcmil			15505	Pink
750 kcmil	600 kcmil		BY28C	B39CH	Black
				–	Orange
	700 kcmil			–	Purple
	750 kcmil			–	Yellow
1000 kcmil				125H	–
	1000 kcmil			140H	–

Cable Slicing Die Sets

Cat. No.	Maximum Cable Size	Tools
BY55	2/0	TBM6H, BPLT6BSCR and BPLT6500BSCR
40CS	4/0	TBM14M, 13100A and TBM14BSC
156CS	500 kcmil	TBM15I and TBM15BSCR

Galvanized Ground Rods

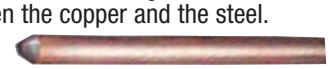
- Made of high-strength quality cold drawn steel, (1035) hot dip galvanized.
- Meets ANSI CI35.30-1979 requirements.
- Stainless steel rods are also available (for more detailed information, contact your T&B regional sales office).

Cat. No.	Trade Size		Rod Size (nominal diameter x length)		Plating Thickness	Standard Packaging	Weight per 100	
	in.	ft.	mm	m			lb.	kg
GR5006	1/2	6	12.7	1.8	4 mils	10	410	186
GR6256	5/8	6	15.8	1.8	4 mils	5	600	272
GR6258	5/8	8	15.8	2.4	4 mils	5	800	363
GR6250 (0.543 – 0.555)	5/8	10	15.8	3.0	4 mils	5	1000	454
GR6260 (0.625 – 0.640)	5/8	10	15.8	3.0	4 mils	5	1000	454
GR6250B* (0.543 – 0.555)	5/8	10	15.8	3.0	4 mils	5	1000	454
GR7506	3/4	6	15.8	1.8	4 mils	5	700	318
GR7508	3/4	8	19.0	2.4	4 mils	5	1200	545
GR7510	3/4	10	19.0	3.0	4 mils	5	1500	681

** B suffix denotes black iron bare steel ground rod (CSA non applicable).*
CSA lists rods 1/2 in. and larger, 10 ft and longer.

Copper Bonded Steel Ground Rods

- All E-Z-Ground® ground rods have a heavy uniform covering of electrolytic copper bonded to a rigid steel core.
- Copper ions are forced electrically to join with the steel core, establishing a corrosion-resistant bond between the copper and the steel.



Cat. No.	Trade Size		Rod Size (nominal diameter x length)		Plating Thickness	Standard Packaging	Weight per 100	
	in.	ft.	mm	m			lb.	kg
5005	1/2	5	12.7	1.8	5 mils	10	305	138
5006	1/2	6	15.8	1.8	5 mils	5	370	168
5008	1/2	8	15.8	2.4	5 mils	5	545	247
5010	1/2	10	15.8	3.0	5 mils	5	611	277
6256	5/8	6	15.8	3.0	5 mils	5	508	230
6258*	5/8	8	15.8	3.0	10 mils	5	678	308
6260*	5/8	10	15.8	1.8	10 mils	5	847	384
7508*	3/4	8	19.0	2.4	10 mils	5	992	450
7510*	3/4	10	19.0	3.0	10 mils	5	1240	462
1010*	1	10	25.4	3.0	10 mils	1	2248	1020

** Ground rods are UL listed (425H), except for regular rods shorter than 8 ft or less than 1/2 inch.*
CSA lists rods 1/2 in. and larger, 10 ft and longer.

Knurling Dies for 14- & 15-ton Tools

Cat. No.	Description
15508	For 5/8" and 3/4" ground rods

Used to knurl ground rods in order to increase the pullout value of the compression connection by as much as 20%.

Hand knurling Tool for all Ground Rods

240-31565-94

Sectional type Ground Rods

- Sectional type ground rods have the same high-quality as regular copper bonded steel ground rods,and are threaded top and bottom.

Cat. No.	Trade Size		Rod Size (nominal diameter x length)		Plating Thickness	Thread Size	Standard Packaging	Weight per 100	
	in.	ft.	mm	m				lb.	kg
5006LS	1/2	6	12.7	1.8	10 mils	9/16–12	5	410	189
5008LS	1/2	6	15.8	1.8	10 mils	9/16–12	5	546	248
5010LS	1/2	8	15.8	2.4	10 mils	9/16–12	5	682	309
6256S	5/8	6	15.8	3.0	5 mils	5/8–11	5	481	230
6258S	5/8	8	15.8	3.0	10 mils	5/8–11	5	670	308
6260S	5/8	10	15.8	3.0	10 mils	5/8–11	5	837	384
7506S	3/4	6	15.8	1.8	5 mils	3/4–10	5	774	160
7508S	3/4	8	19.0	2.4	10 mils	3/4–10	5	992	450
7510S	3/4	10	19.0	3.0	10 mils	3/4–10	5	1040	562
1010S	1	10	25.4	3.0	10 mils	8–1	1	2248	1020

CSA lists rods 1/2 in. and larger, 10 ft and longer.*

Couplings

- Threaded couplings are made of high-strength, corrosion resistant alloy. Streamlined design reduces driving friction. Couplings are tapped for use on all standard threaded sectional rods.

Cat. No.	Rod Size Diameter (in.)	Thread Size	Standard Packaging	Weight Per 100 (lb.)
50LC	1/2	9/16" – 12 UNS	25	17
60C	5/8	5/8" – 11 UNS	25	25
70C	3/4	3/4" – 10 UNS	25	38
80C	1	1" – 8 UNS	10	75

Driving Studs

- Driving Studs of high-strength steel.
- May be used with all standard threaded couplings.

Cat. No.	Rod Size Diameter (in.)	Thread Size	Standard Packaging	Weight Per 100 (lb.)
50LDS*	1/2	9/16" – 12 UNS	10	16
60DS*+	5/8	5/8" – 11 UNS	25	23
70DS*	3/4	3/4" – 10 UNS	5	35
80DS	1	1" – 8 UNS	10	75

** UL Listed.*
+ CSA Listed.

Threadless Couplings and Driving Caps for Standard Copper Bonded Ground Rods

Threadless Couplings

- For joining non-threaded, sectional, copper bonded, steel ground rods.
- Coupling is manufactured of a high-strength, corrosion resistant, silicone bronze.

Threadless Driving Caps

- Prevent “mushrooming” of ground rod while driving to insure proper fit of coupling.
- Driving cap is manufactured of high-strength, hardened steel.

Cat. No.	Size (in.)	Dimensions (in.)		Standard Packaging	Weight Per 100 (lb.)
		Length	Diameter		
Threadless couplings					
50CNT*	1/2	3.0	0.78	25	34
60CNT2*	5/8	2.5	0.69	25	34
70CNT*	3/4	3.0	0.97	25	31
Driving Caps					
60DSNT	5/8	4.0	0.88	10	43

** UL Listed.*

Ground Rod Drivers

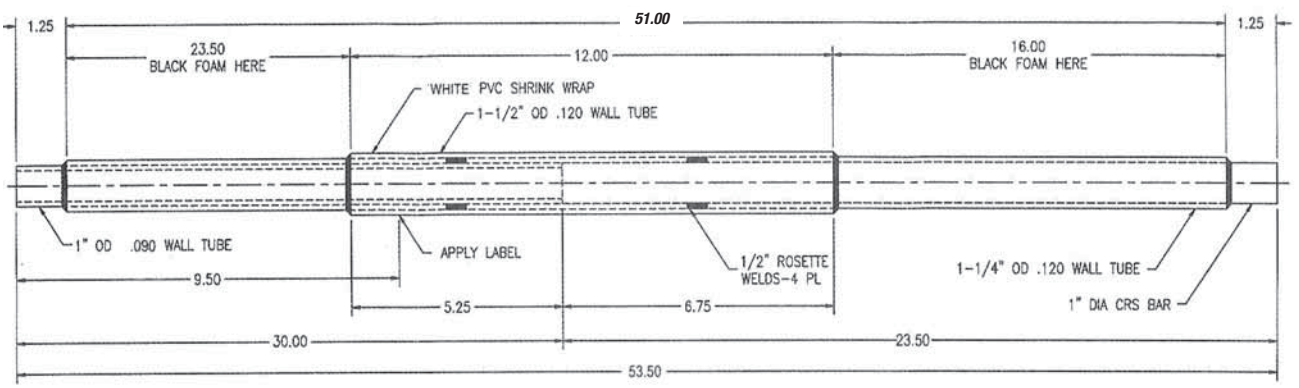
For installing ground rods, there's no safer, simpler or more efffective tool than the Thomas & Betts Ground Rod Driver. It can be used on all types of ground rods including copper-bonded, galvanized and stainless steel.

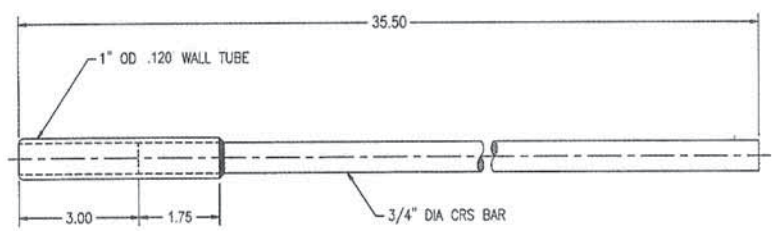
Integral inserts prevent the driver from slipping off the rod near ground level. The inserts are 5/8" and 3/4", and are interchangeable with the standard driver body. The convenient retaining collar holds the insert in the tool when not in use.

Thomas & Betts Ground Rod Drivers have a heavy-duty steel construction that allows maximum force for driving ground rods, while the efficient design ensures that minimal lifting force is required. The ground rod end is designed for high-impact applications to ensure quality connections.

- Unique design allows installation of 10-foot rods from ground level.
- Heavy-duty steel construction.
- Ergonomic grip provides ease and comfort with increased safety.
- Complete with interchangeable parts that are range-taking for different diameter ground rods.
- Two interchangeable inserts allow the same tool to be used with all sizes of rods.
- Completely self-contained and easy to store.

Photo includes ground rod driver and insert.





Cat. No.	Description	Weight (lb.)	Maximum Rod Diameter (in.)	Std. Pkg.
TBRD58	5 ft. Ground Rod Driver with 5/8" insert	25	0.63	1
TBRD34	5 ft. Ground Rod Driver with 3/4" insert	25	0.75	1
TBS58	Replacement 5/8" insert	4	0.63	1
TBS34	Replacement 3/4" insert	4	0.75	1

Flexible Braids for Continuous current, Grounding and Bonding Applications

Standard construction using 30 AWG individual wires are suitable for medium duty applications. If needed, all constructions and/or configurations in this Guide, can be supplied using 36 AWG for extra flexibility.

Rating of the Connectors

It is important to note that the Ampere ratings in this Guide are suggested for use as a reference only. If needed, we can certify ampacity of all connectors in our top of the line automatic heat cycle laboratory using IEC60694 standards. Performance certificate gives you the assurance that our connectors are suitable for your application. Actual values used for a given application will depend on such factors as temperature rise, number of braids, voltage ratings and other conditions of service needs to be verified by application engineers.

Length of the assemblies

All braid lengths are mesured in inches and are measured from end to end. The last digits of the part numbers determine the length of the connector. (i.e.: FBD12, “12” = 12 inches)

Ferrules and Plating

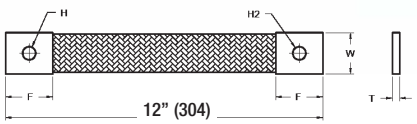
Ferrules are made of high-conductivity seamless 99.9% pure copper that are electro-tin-plated prior to forming on each end of the assembly. This procedure is important to eliminate surface corrosion between the inside of the ferrule and the braids before compression can affect the connector’s performance.

For increased pad conductivity, 30, 50 or 100 micron silver-plated ferrules are available. Nickel plating or bare copper also available upon request.

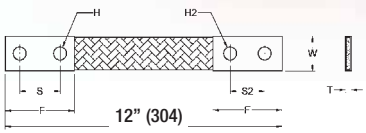
Options

For special requests, provide a copy of your drawing with your specific requirements so we can design and build the flexible connectors to your exact specifications.

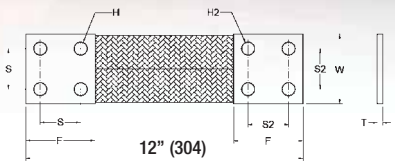
If needed, a wide range of insulation products are available depending on the application, voltage and temperature ratings.



SEE SPECIAL LENGTH INFORMATION



SEE SPECIAL LENGTH INFORMATION



SEE SPECIAL LENGTH INFORMATION

CAT. NO.	Circular Mils	Bolt Hole (H or H2)	No. of Braids in Ferrule	Dimensions in. (mm)			
				(T) Thickness	(W) Width	(F) Ferrule Length	(S or S2) Distance Ctr. to Ctr
FBB12-1*	24000	1/4	1	0.140 (3.6)	0.625 (15.9)	0.750 (19.1)	N/A
FBC12-1*	48000	7/16	1	0.148 (3.8)	1.000 (25.4)	1.300 (33.0)	N/A
FBD12-1*	76800	7/16	1	0.200 (5.1)	1.000 (25.4)	1.300 (33.0)	N/A
FBD12*	76800	7/16	1	0.200 (5.1)	1.000 (25.4)	2.500 (63.5)	1.25 (31.8)
FB2D12-1*	153600	7/16	2	0.250 (6.4)	1.250 (31.8)	1.500 (38.1)	N/A
FB2D12*	153600	7/16	2	0.250 (6.4)	1.250 (31.8)	2.500 (63.5)	1.25 (31.8)
FB3D12-1*	230400	7/16	3	0.350 (8.9)	1.250 (31.8)	1.500 (38.1)	N/A
FB3D12*	230400	7/16	3	0.350 (8.9)	1.250 (31.8)	2.500 (63.5)	1.25 (31.8)
FBXD12-1*	105600	9/16	1	0.250 (6.4)	1.250 (31.8)	1.500 (38.1)	N/A
FBXD12*	105600	9/16	1	0.250 (6.4)	1.250 (31.8)	2.500 (63.5)	1.25 (31.8)
FB2XD12-1*	211200	9/16	2	0.350 (8.9)	1.250 (31.8)	1.500 (38.1)	N/A
FB2XD12*	211200	9/16	2	0.350 (8.9)	1.250 (31.8)	2.500 (63.5)	1.25 (31.8)
FB3XD12-1*	316800	9/16	3	0.400 (10.2)	1.250 (31.8)	1.500 (38.1)	N/A
FB3XD12*	316800	9/16	3	0.400 (10.2)	1.250 (31.8)	2.500 (63.5)	1.25 (31.8)
FBE12-1*	168000	9/16	1	0.500 (12.7)	1.250 (31.8)	2.500 (63.5)	N/A
FBD12*	168000	9/16	1	0.250 (6.4)	1.250 (31.8)	3.500 (88.9)	1.75 (44.5)
FB2E12-1*	336000	9/16	1	0.500 (12.7)	1.250 (31.8)	2.500 (63.5)	N/A
FB2E12*	336000	9/16	2	0.500 (12.7)	1.250 (31.8)	3.500 (88.9)	1.75 (44.5)
FB3E12	504000	9/16	3	0.750 (19.1)	1.250 (31.8)	3.500 (88.9)	1.75 (44.5)
FB4E12	672000	9/16	4	1.000 (25.4)	1.250 (31.8)	3.500 (88.9)	1.75 (44.5)
FBF12	230400	9/16	1	0.300 (7.6)	1.500 (38.1)	3.500 (88.9)	1.75 (44.5)
FB2F12	460800	9/16	2	0.450 (11.4)	1.500 (38.1)	3.500 (88.9)	1.75 (44.5)
FB3F12	691200	9/16	3	0.600 (15.2)	1.625 (41.2)	3.500 (88.9)	1.75 (44.5)
FB4F12	921600	9/16	4	0.750 (19.1)	1.625 (41.2)	3.500 (88.9)	1.75 (44.5)
FBG12	307200	9/16	1	0.380 (9.7)	1.500 (38.1)	3.500 (88.9)	1.75 (44.5)
FB2G12	614400	9/16	2	0.630 (16.0)	1.625 (41.2)	3.500 (88.9)	1.75 (44.5)
FB3G12	921600	9/16	3	0.850 (21.6)	1.625 (41.2)	3.500 (88.9)	1.75 (44.5)
FB4G12	1228800	9/16	4	1.000 (25.4)	1.880 (47.9)	3.500 (88.9)	1.75 (44.5)

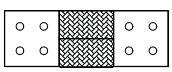
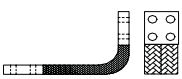
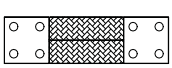
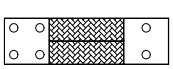
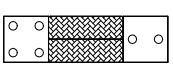
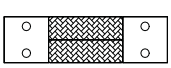
** Listed UL 467 and 486A, certified CSA C22.2 No. 41 as Grounding and Bonding Equipment.*
Special lengths offered in 6, 18, 24, 30 and 36 inches (end to end).
Change the 12 in the above catalogue numbers to the desired length.
(-1) indicates 1 bolt hole per ferrule.
S2 and H2 measurements are used for customized braids only.

Flexible Braids in a roll (10 feet minimum)*

CAT. NO.	Circular Mils	Tickness (in.)	Width (in.)
FBBRL	24000	0.140 (3.6)	0.625 (15.9)
FBCRL	48000	0.148 (3.8)	1.000 (25.4)
FBDRL	76800	0.200 (5.1)	1.000 (25.4)
FBXDRL	105600	0.250 (6.4)	1.250 (31.8)

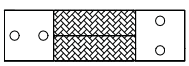
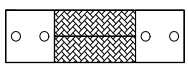
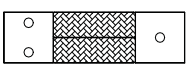
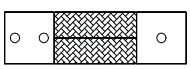
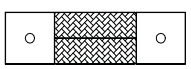
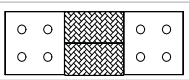
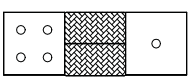
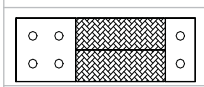
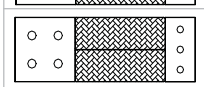
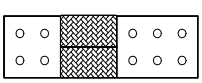
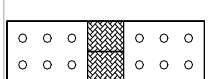
**Ferrules or lugs not included.*
Add suffix for desired length, i.e.: FBCRL "–10" for 10' roll.

Technical Specifications

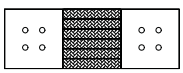
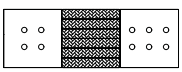
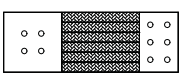
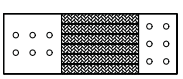
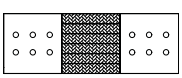
Configuration	Type	Ind. Wire Gauge Size	Width Range (in.)	Rating Range (Amps)	Comments
Extra-flexible Links for Heavy-Duty Application					
	**FBEXA**	36 AWG	1-1/2 – 1-5/8	350 – 1000 A	Extra Flexible 1 hole NEMA Boreal's Top of the line
	**FBEXB**	36 AWG	1-1/2 – 1-5/8	400 – 2000 A	Extra Flexible 2 hole NEMA Boreal's Top of the line
	**FBEXG**	36 AWG	1-3/4 – 2	900 – 1650 A	Extra Flexible Transformer Link
	**FBEXH**	36 AWG	3 – 4	1400 – 4000 A	Extra Flexible 4 hole NEMA Boreal's Top of the line
	**FBEXJ**	36 AWG	3-1/4 – 3-3/4	2300 – 3600 A	Extra Flexible 90º 4 hole NEMA Boreal's Top of the line
Standard flexible Links for Medium-Duty Application					
	**FBB**-1** **FBC**-1** **FBD**-1**	30 AWG	1-1/4 – 1-3/4	350 – 1000 A	NEMA Std. Grounding Connectors
	**FBD**** **FB2D**** **FB3D**** **FBXD**** **FB2XD****	30 AWG	1-1/2 – 1-5/8	400 – 2000 A	Same as FBEXB with 30 AWG wires
		30 AWG	1-1/2 – 2	700 – 1750 A	Standard Transformer Link
	**FBSWB**	30 AWG	1-1/2 – 2	700 – 1750 A	Same construction as SWB with different hole pattern
	**FBSWC**	30 AWG	3	1300 – 2350 A	4 hole pads also available in wider configuration, refer to EXH, SWD and LTL Series
	**FBSWC**	30 AWG	3	1300 – 2350 A	Same construction as SWC Type A with different hole configuration
	**FBSWC**	30 AWG	3	1300 – 2350 A	Same construction as SWC Type A with different hole configuration
	**FBSWC**	30 AWG	3	1300 – 2350 A	Same construction as SWC Type A with different hole configuration

**** Specify desired length.***

Technical Specifications

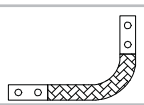
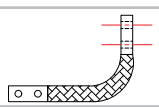
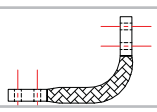
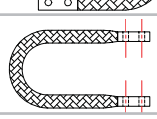
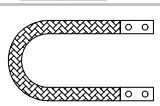
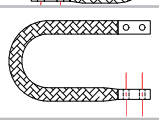
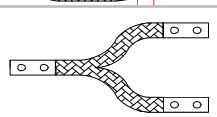
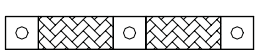
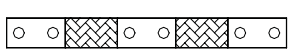
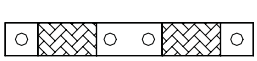
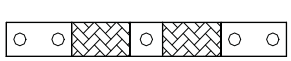
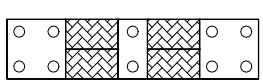
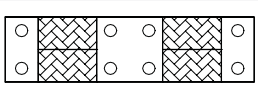
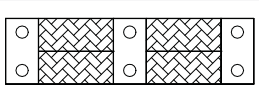
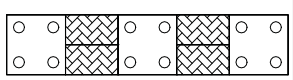
Configuration	Type	Ind. Wire Gauge Size	Width Range (in.)	Rating Range (Amps)	Comments
Standard Flexible Links for Medium-Duty Application					
	**FBSWC**	30 AWG	3	1300 – 2350 A	Same construction as SWC with different hole configuration
	**FBSWC**	30 AWG	3	1300 – 2350 A	Same construction as SWC with different hole configuration
	**FBSWC**	30 AWG	3	1300 – 2350 A	Same construction as SWC with different hole configuration
	**FBSWC**	30 AWG	3	1300 – 2350 A	Same construction as SWC with different hole configuration
	**FBSWC**	30 AWG	2 – 4	600 – 1850 A	Same construction as SWC with different hole configuration
	**FBSWD**	30 AWG	3-3/4 – 4-3/4	1600 – 2100 A	4 hole Transformer Link
	**FBSWC**	30 AWG	3	1300 – 2100 A	1 to 4 hole Transformer Link
	FBSWD	30 AWG	3-3/4 – 4-3/4	1300 – 2100 A	1 to 4 hole Transformer Link
	**FBSWD**	30 AWG	3-3/4 – 4-3/4	1600 – 2100 A	2 to 4 hole Transformer Link
	**FBSWD**	30 AWG	3-3/4 – 4-3/4	1600 – 2100 A	3 to 4 hole ransformer Link
	**FBSWE**	30 AWG	3	1400 – 1600 A	6 to 4 hole Transformer Link
	FBSWF	30 AWG	3-3/4 – 4-3/4	1700 – 2300 A	6 to 4 hole Transformer Link
	**FBSWE**	30 AWG	3	1400 – 1600 A	6 hole Transformer Link
	FBSWF	30 AWG	3-3/4 – 4-3/4	1700 – 2300 A	6 hole Transformer Link

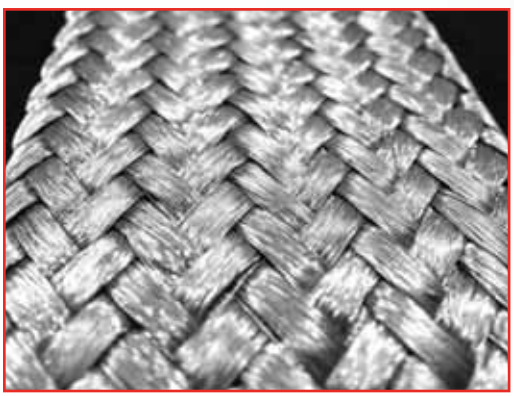
Technical Specifications

Configuration	Type	Ind. Wire Gauge Size	Width Range (in.)	Rating Range (Amps)	Comments
Large Transformer Links					
	**FBLTL**	30 AWG	6 – 6-3/8	2500 – 4000 A	4 hole Transformer Link
	**FBLTL**	30 AWG	6 – 6-3/8	2500 – 4000 A	4 to 6 hole Transformer Link
	**FBLTL**	30 AWG	6 – 6-3/8	2500 – 4000 A	4 to 6 hole Transformer Link
	**FBLTL**	30 AWG	6 – 6-3/8	2500 – 4000 A	6 hole Transformer Link
	**FBLTL**	30 AWG	6 – 6-3/8	2500 – 4000 A	6 hole Transformer Link
	**FBLTL**	30 AWG	6 – 6-3/8	2500 – 4000 A	6 hole Transformer Link

Miscellaneous Configurations and Shapes

The following sketches represent the most popular configurations and shapes. For other non standard flexible links and/or dimensions, send us a copy of your drawing with your specific requirements so that we can design and build the flexible connectors to your exact specification.

	Model FBBI Type A		Model FBBI Type B		Model FBBL Type A
	Model FBBL Type B		Model FBBL Type C		Model FBBU Type A
	Model FBBU Type B		Model FBBU Type C		Model FBBY Type A
	Model FBBY Type B		Model FBBE Type A		Model FBBE Type B
	Model FBBE Type C		Model FBBE Type D		Model FBBE Type E
	Model FBBE Type F		Model FBBE Type G		Model FBBE Type H



Conductors
Strands are soft-drawn bare or tinned copper.

Construction
Strands are woven into a tubular braid and rolled flat.

Application
For bonding, grounding or connecting moving parts.

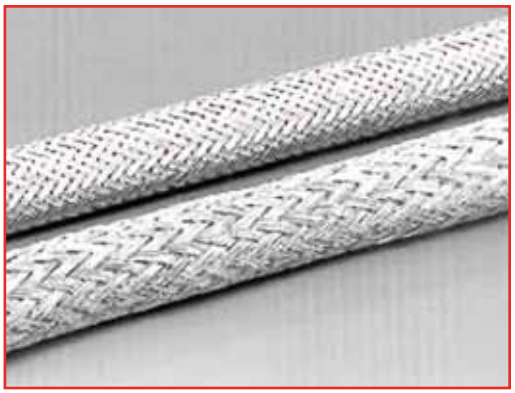
Specification
ASTM-B33

Assemblies
Factory installed molded connectors also available.

The following listing represents the most popular flat braid constructions used in specialized electrical industry applications. For other constructions, contact a T&B sales representative or your regional T&B sales office.

Cat. No.	Size (AWG)	Circular Mils Area	Number and Size of Wires	Construction	Nominal Width (in.)	Nominal Thick. (in.)	Approx Weight (lb. / m)
FB-4243230-1*	300 kcmil	307,200	3,072 / 30	4 x (24 x 32/30)	1-3/8	0.420	1,110
FB-1485230-1	250 kmcil	249,600	2,496 / 30	48 x 52/30	2-1/2	0.190	900
FB-3243230-1	4/0	230,400	2,304 / 30	3 x (24 x 32/30)	1-1/4	0.375	825
FB-2243230-1	3/0	153,600	1,536 / 30	2 x (24 x 32/30)	1-1/8	0.250	560
FBXDRL	1/0	105,600	1,056 / 30	24 x 44/30	1	0.135	365
FB-1482230-1	1/0	105,600	1,056 / 30	48 x 22/30	1-3/8	0.120	365
FB-1488436-1	1/0	100,800	4,032 / 36	48 x 84/36	1-5/8	0.080	360
FBDRL	1	76,800	768 / 30	24 x 32/30	1	0.125	200
FB-12412036-1	2	72,000	2,880 / 36	24 x 120/36	1	0.135	240
FB-1485036-1	2	60,000	2,400 / 36	48 x 50/36	1-1/4	0.090	205
FBCRL	3	48,000	480 / 30	24 x 20/30	3/4	0.110	170
FB-1484036-1	3	48,000	1,920 / 36	48 x 40/36	1	0.090	160
FB-1488640-1	4	41,280	4,128 / 40	48 x 86/40	1	0.060	140
FB-1246736-1	4	40,200	1,608 / 36	24 x 67/36	3/4	0.090	135
FB-1241630-1	4	38,400	384 / 30	24 x 16/30	5/8	0.085	125
FBBRL	6	24,000	210 / 30	24 x 10/30	1/2	0.080	83
FB-1244036-1	6	24,000	960 / 36	24 x 40/36	1/2	0.090	80
FB-14810644-2	7	20,350	5,088 / 44	48 x 106/44	5/8	0.050	68
FB-1480836-1	10	9,600	384 / 36	48 x 8/36	1/2	0.030	39
FB-1241636-1	10	9,600	384 / 36	24 x 16/36	3/8	0.060	39
FB-1480636-1	12	7,200	288 /36	48 x 6/36	3/8	0.030	28
FB-1481036-1	12	6,000	240 / 36	24 x 10/36	1/4	0.030	23

** The suffix "-1" denotes tinned copper braid. For bare copper braid, replace "-1" with "-2".*
NOTE: Dimensions shown are only approximate due to the extreme flexibility of braided cables.



Conductors

Strands are soft-drawn bare or tinned copper.

Construction

Strands are woven into a tubular braid.

Application

For bonding, grounding or connecting moving parts.

Specification

ASTM-B33, QQ-B-375

Shield Coverage

Braid is formed to maintain coverages of 90% shielding over the nominal diameters specified.

The following listing represents the most popular tubular braid constructions used in today's electrical and electronic industries. For other constructions, contact a T&B sales representative or your regional T&B sales office.

Cat. No.	Nominal I.D. when Rounded	Circular Mils Area	AWG Size Equivalent	Number and Size of Wires	Construction	Approx. Weight (lb. / m)
TB - 481630	2-1/4	77,180	1	768 / 30	48 x 16 / 30	260
TB - 481430*	2	67,540	2	672 / 30	48 x 14 / 30	230
TB - 481230*	1-1/2	57,890	3	576 / 30	48 x 12 / 30	200
TB - 481130*	1-3/8	53,060	3	528 / 30	48 x 11 / 30	185
TB - 481030	1-1/4	48,240	3	480 / 30	48 x 10 / 30	168
TB - 480930*	1-1/8	43,420	4	432 / 30	48 x 9 / 30	155
TB - 480830*	1	38,600	4	384 / 30	48 x 8 / 30	140
TB - 480730*	7/8	33,770	5	336 / 30	48 x 7 / 30	123
TB - 481234	13/16	22,896	7	576 / 34	48 x 12 / 34	85
TB - 481836*	25/32	21,600	7	864 / 36	48 x 18 / 36	79
TB - 480734*	1/2	13,356	9	336 / 34	48 x 7 / 34	53
TB - 481136*	1/2	13,200	9	528 / 36	48 x 11 / 36	53
TB - 240730*	3/8	16,880	8	168 / 30	24 x 7 / 30	62
TB - 480836*	3/8	9,600	10	384 / 36	48 x 8 / 36	40
TB - 240834	3/8	7,632	11	192 / 34	24 x 8 / 34	30
TB - 241336*	13/64	7,800	11	312 / 36	24 x 13 / 36	31
TB - 240734	1/4	6,678	12	168 / 34	24 x 7 /34	26
TB - 240536*	1/8	3,000	15	120 / 36	24 x 5 / 36	13
TB - 240436*	7/64	2,400	16	96 / 36	24 x 4 /36	11

**** Denotes QQ-B-575 construction.***
NOTE: Because Tubular Braid is very pliable, the I.D.'s are nominal.

Flexible Braids Selection Guide

Minimum Size Flexible Braid for Continuous Current Applications

Cat. No.	Circular Mils	Amperage Capacity
FBB12-1	24,000	95
FBC12-1	48,000	145
FBD12-1	76,800	190
FBD12	76,800	190
FB2D12-1	153,600	330
FB2D12	153,600	630
FB3D12-1	230,400	470
FB312	230,400	470
FBXD12-1	105,600	235
FBXD12	105,600	235
FB2XD12-1	211,200	400
FB2XD12	211,200	400
FB3XD12-1	316,800	600
FB3XD12	316,800	600

Cat. No.	Circular Mils	Amperage Capacity
FBE12-1	16,800	340
FBE12	16,800	340
FB2E12-1	336,000	530
FB2E12	336,000	530
FB3E12	504,000	700
FB4E12	672,000	805
FBF12	230,400	360
FB2F12	460,800	600
FB3F12	691,200	820
FB4F12	921,600	1,000
FBG12	307,200	415
FB2G12	614,400	700
FB3G12	921,600	760
FB4G12	1,228,800	1,200

Grounding and Bonding Information

Minimum Size Conductors for Bonding Raceways and Equipment

Rating or Setting of overcurrent Device in Circuit Ahead of Equipment, Conduit, etc. Not Exceeding _ Amperes	Copper Wire Circular Mils
200	26,240 (6 AWG)
300	41,740 (4 AWG)
400	52,620 (3 AWG)
500	66,360 (2 AWG)
600	83,690 (1 AWG)
800	105,600 (1/0)
1,000	133,100 (2/0)
1,200	167,800 (3/0)
1,600	211,600 (4/0)
2,000	250,000
2,500	350,000
3,000	400,000
4,000	500,000
5,000	700,000
6,000	800,000

Based on table 16 C.E.C.

Minimum Size of Bare Copper Grounding Conductor

Maximum Available Short Circuit Current Amperes	Maximum Fault Duration with Exothermic Weld, Compression or Bolted Joint	
	0.5 Second Circular Mils	1.0 Second Circular Mils
5,000	26,240	41,740
10,000	52,620	83,690
15,000	83,690	105,600
20,000	105,600	167,800
25,000	133,100	211,600
35,000	211,600	250,000
40,000	211,600	300,000
50,000	250,000	350,000
60,000	30,000	500,000
70,000	350,000	600,000
80,000	400,000	600,000
90,000	500,000	700,000
100,000	500,000	700,000

Based on table 51 C.E.C.
Size calculated in accordance with IEEE No. 80.

Alphanumerical Index

Alphanumerical Index

Alphanumerical Index