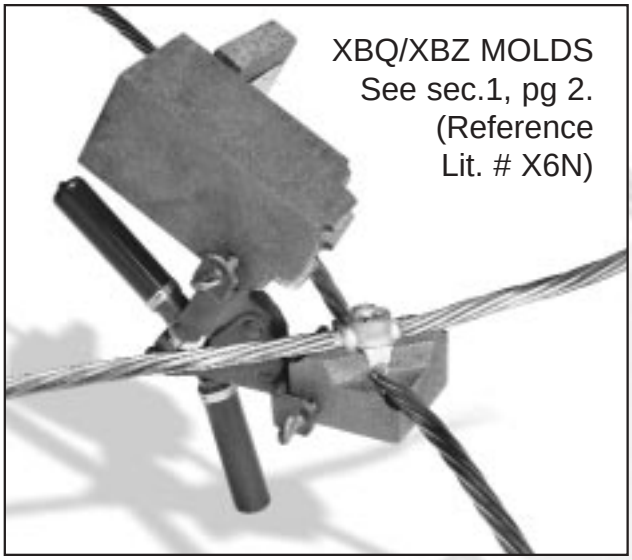
ERITECH®

CADWELD® Welded Electrical Connections

Facility Electrical Protection

ERICO®

NEW PRODUCTS



XBQ/XBZ MOLDS
See sec.1, pg 2.
(Reference Lit. # X6N)

The CADWELD® XB molds are the quickest, most efficient way to make lapped, horizontal X-style connections on solid or concentric stranded cable for a variety of installations.

For cable-to-cable X-style connections at power substations and other commercial and industrial sites, there's never been a faster or easier way to make a reliable CADWELD connection. This two-piece mold lets you make connections in a trench in about half the time it would take with compression connectors or other exothermic products — and at a fraction of the cost.

TELECOM LUGS
(Reference Lit. # E108S)

ERICO® can provide the ideal grounding and bonding products for wireless telecom applications.

- One CADWELD mold for 7 lug sizes - minimizes inventory of molds
- Multiple molds are replaced with ONE versatile mold that utilizes inexpensive conductor sleeves (no sleeve required for #2 concentric cable)
- No multiple tools or dies required as with crimped connections
- Superior lug-to-cable connection quality - welded lug connection will not loosen or corrode
- Ideal for the grounding and bonding requirements of the codes & standards: NEC, CEC, TIA, BICSI

GN CONNECTION KITS for Wire to Ground Rods.
(Reference Lit. # X6M)

Whether you're working in telecommunications, electric distribution or cable television, here's everything you need to make a permanent and reliable wire-to-ground rod connection at the lowest cost and with maximum convenience. The CADWELD GN Connection Kit contains all materials and necessary tools to make sixty CADWELD connections quickly, easily and inexpensively. With replacement mold and weld-metal kits, you can make hundreds more.

The GN mold clamps to the side of ground rods, so "mushroomed" heads are no problem. You can make multiple connections to a single rod.

CADWELD®

WELDED
ELECTRICAL CONNECTIONS

ERICO®

ERICO, Inc., 34600 Solon Road, Solon, Ohio 44139 • PHONE: 800/677-9089 • FAX: 800/677-8131

INDEX

INDEX

ALPHABETICAL LISTING OF MOLDS & GROUNDING ACCESSORIES

HOW TO ORDER CADWELD PRODUCTS

This catalog lists the most popular CADWELD connections using solid or concentric stranded copper conductor, insulated or bare. Look in the index for the connection you need. To save time and money, avoid non-catalog items or specials whenever possible.

If you cannot find the connection you need, contact ERICO or your local distributor or agent. We have designed over 45,000 connections, and “specials” are designed every day.

1. What connection do you want?

Available connections are listed in the pictorial index at the beginning of each section which shows the degree of difficulty in making the connection, and ease of mold cleaning. We strongly recommend that wherever possible you use molds listed in this catalog. After selecting the connection, turn to the appropriate page and select the mold, weld metal and tools you need.

2. Only the most popular CADWELD connections are listed in this catalog.

For CADWELD EXOLON connections, ordering information is shown on page XI.

3. What are the conductor sizes?

This catalog covers connections between solid or concentric stranded copper conductors to each other, to lugs, to ground rods, to rebar, to rail and to special grounding accessories. For sizes not listed, contact your local CADWELD distributor, agent, or ERICO.

Note: Other publications describe connections to conductors of copperclad, high voltage copper, aluminum, busbar, lightning protection cable, steel cable, etc.

4. You must have the following to make a weld:

4.1. Mold to fit your conductors
4.2. Weld metal required by your mold
4.3. Handle clamps or frame
4.4. Flint ignitor (included with handle clamps and frames)
4.5. If using CADWELD EXOLON, you need a Relia-Start™ battery instead of a flint ignitor.
4.6. Lugs, sleeves, packing material listed on the page with the mold.

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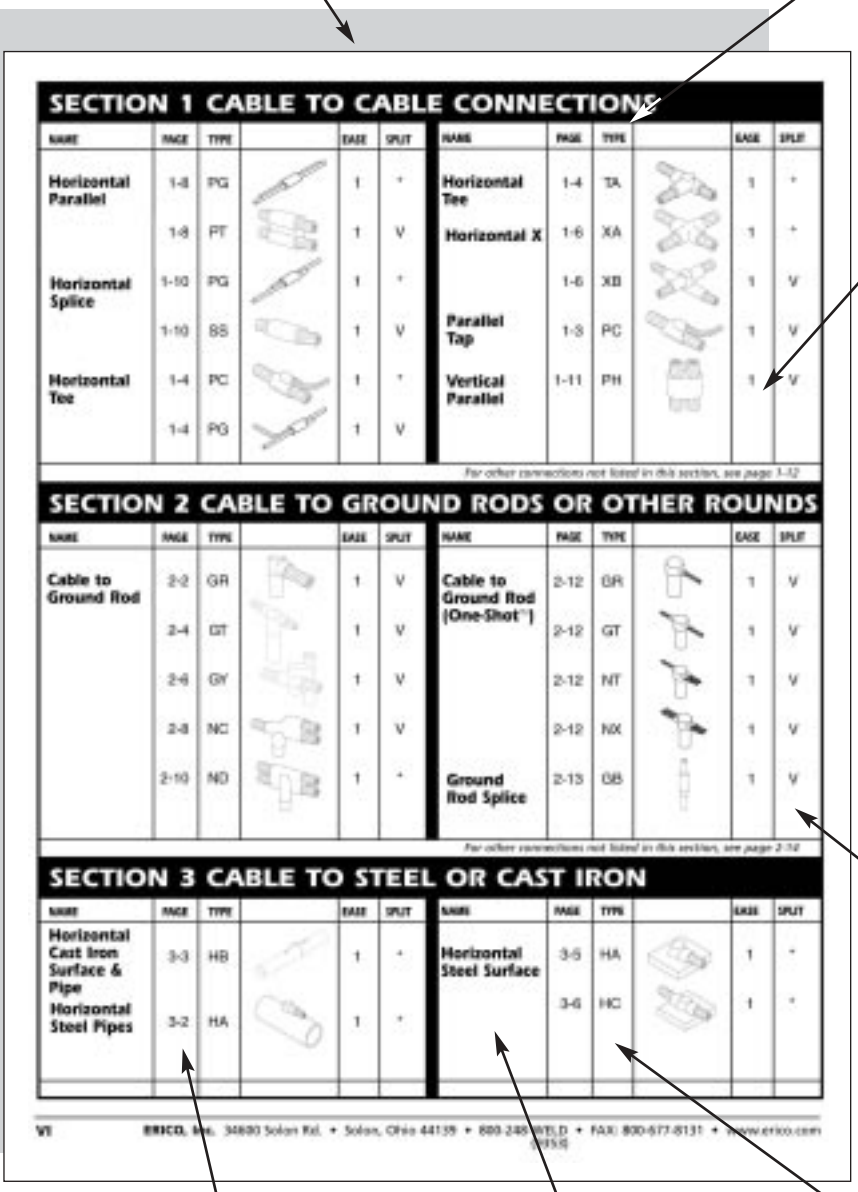
ORDERING INFORMATION & INTRODUCTION

Sample Index Page

Section Headings by Application Type



SECTION 1 CABLE TO CABLE CONNECTIONS

NAME	PAGE	TYPE		EASE	SPLIT
Horizontal Parallel	1-8	PG		1	*
	1-8	PT		1	V
Horizontal Splice	1-10	PG		1	*
	1-10	SS		1	V
Horizontal Tee	1-4	PC		1	*
	1-4	PG		1	V

NAME	PAGE	TYPE		EASE	SPLIT
Horizontal Tee	1-4	TA		1	*
Horizontal X	1-6	XA		1	*
	1-6	XB		1	V
Parallel Tap	1-3	PC		1	V
Vertical Parallel	1-11	PH		1	V

For other connections not listed in this section, see page 1-12

SECTION 2 CABLE TO GROUND RODS OR OTHER ROUNDS

NAME	PAGE	TYPE		EASE	SPLIT
Cable to Ground Rod	2-2	GR		1	V
	2-4	GT		1	V
	2-6	GY		1	V
	2-8	NC		1	V
	2-10	ND		1	*

NAME	PAGE	TYPE		EASE	SPLIT
Cable to Ground Rod (One-Shot™)	2-12	GR		1	V
	2-12	GT		1	V
	2-12	NT		1	V
	2-12	NX		1	V
Ground Rod Splice	2-13	GB		1	V

For other connections not listed in this section, see page 2-14

SECTION 3 CABLE TO STEEL OR CAST IRON

NAME	PAGE	TYPE		EASE	SPLIT
Horizontal Cast Iron Surface & Pipe	3-3	HB		1	*
Horizontal Steel Pipes	3-2	HA		1	*

NAME	PAGE	TYPE		EASE	SPLIT
Horizontal Steel Surface	3-5	HA		1	*
	3-6	HC		1	*

All connections in this index are coded as follows according to their ease of use:

1 Preferred

2 Easily and commonly used

3 More difficult - use code 1 or 2 if possible by bending cables, prefabricating, using two connections, etc.

4 Difficult / more costly / has limitations. Use another type if possible or contact your CADWELD representative for assistance.

Split Codes define the mold as follows:

V Vertically split through crucible.

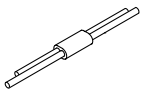
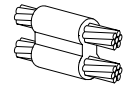
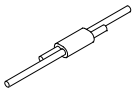
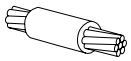
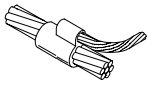
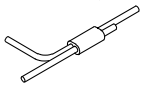
* Not vertically split through crucible, or depends on conductor size

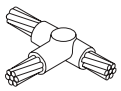
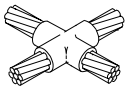
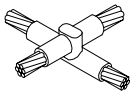
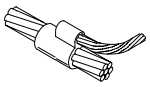
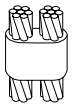
Page reference to location in A1A catalog for details.

Connection

Mold Type

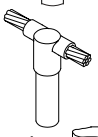
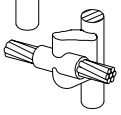
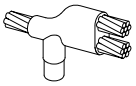
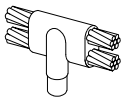
SECTION 1 CABLE TO CABLE CONNECTIONS

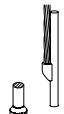
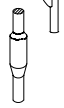
NAME	PAGE	TYPE		EASE	SPLIT
Horizontal Parallel	1-8	PG		1	*
PG Style Now Available as ONE-SHOT Connection	1-8	PT		1	V
Horizontal Splice	1-10	PG		1	*
	1-10	SS		1	V
Horizontal Tee	1-4	PC		1	*
	1-4	PG		1	V

NAME	PAGE	TYPE		EASE	SPLIT
Horizontal Tee	1-4	TA		1	*
Horizontal X	1-6	XA		1	*
	1-6	XB		1	V
Parallel Tap	1-3	PC		1	V
Vertical Parallel	1-11	PH		1	V

For other connections not listed in this section, see page 1-12

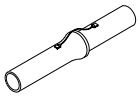
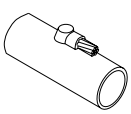
SECTION 2 CABLE TO GROUND RODS OR OTHER ROUNDS

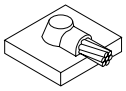
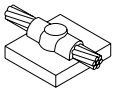
NAME	PAGE	TYPE		EASE	SPLIT
Cable to Ground Rod	2-2	GR		1	V
	2-4	GT		1	V
	2-6	GY		1	V
	2-8	NC		1	V
	2-10	ND		1	*

NAME	PAGE	TYPE		EASE	SPLIT
Cable to Ground Rod (ONE-SHOT)	2-12	GR		1	V
	2-12	GT		1	V
	2-12	NT		1	V
	2-12	NX		1	V
Ground Rod Splice	2-13	GN		1	V
	2-14	GB		1	V

For other connections not listed in this section, see page 2-14

SECTION 3 CABLE TO STEEL OR CAST IRON

NAME	PAGE	TYPE		EASE	SPLIT
Horizontal Cast Iron Surface & Pipe	3-3	HB		1	*
Horizontal Steel Pipes	3-2	HA		1	*

NAME	PAGE	TYPE		EASE	SPLIT
Horizontal Steel Surface	3-5	HA		1	*
	3-6	HC		1	*

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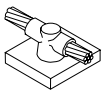
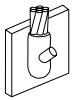
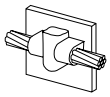
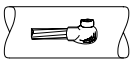
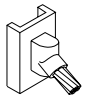
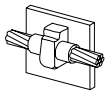
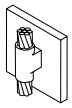
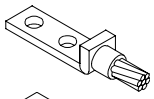
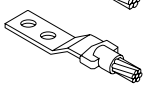
SECTION 3 CABLE TO STEEL OR CAST IRON

NAME	PAGE	TYPE		EASE	SPLIT
Horizontal Steel Surface	3-5	HS		1	V
	3-6	HT		1	V
Vertical Steel Pipes	3-8	VS		1	V
Vertical Steel Surface	3-9	VB		2	V
	3-9	VF		1	V

NAME	PAGE	TYPE		EASE	SPLIT
Vertical Steel Surface	3-10	VG		1	V
	3-4	VN		1	*
	3-7	VS		1	*
	3-10	VT		1	*
	3-11	VV		1	V

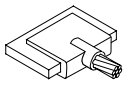
For other connections not listed in this section, see page 3-12

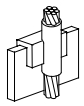
SECTION 4 CABLE TO LUGS AND PREFABRICATED LUG ASSEMBLIES

NAME	PAGE	TYPE		EASE	SPLIT
Cable to Lug	4-3	GL		1	V
	4-2	LA		1	V

NAME	PAGE	TYPE		EASE	SPLIT
NEMA Lugs	4-5				
Prefabricated Lug Assemblies	4-4				

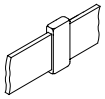
SECTION 5 CABLE TO BUSBAR OR LUG

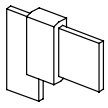
NAME	PAGE	TYPE		EASE	SPLIT
Cable to Busbar	5-3	LJ		1	V

NAME	PAGE	TYPE		EASE	SPLIT
Cable to Busbar	5-2	LQ		2	V

For other connections not listed in this section, see page 5-4

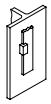
SECTION 6 BUSBAR CONNECTIONS

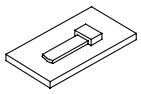
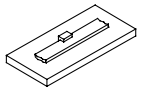
NAME	PAGE	TYPE		EASE	SPLIT
Busbar	6-3	BA		1	V
	6-2	BQ		1	V

NAME	PAGE	TYPE		EASE	SPLIT
Busbar	6-3	EP		1	V

For other connections not listed in this section, see page 6-4

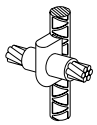
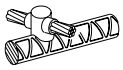
SECTION 7 BUSBAR TO STEEL SURFACE CONNECTIONS

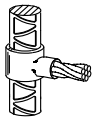
NAME	PAGE	TYPE		EASE	SPLIT
Busbar to Steel Surface	7-2	BW		1	V
	7-3	CC		1	V
	7-2	CF		1	V

NAME	PAGE	TYPE		EASE	SPLIT
Busbar to Steel Surface	7-3	CG		1	V
	7-3	CH		1	V

For other connections not listed in this section, see page 7-4

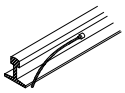
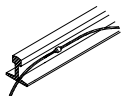
SECTION 8 CABLE TO REBAR CONNECTIONS

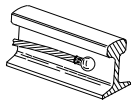
NAME	PAGE	TYPE		EASE	SPLIT
Cable to Rebar	8-8	RC		1	V
				1	V
	8-6	RD		1	V

NAME	PAGE	TYPE		EASE	SPLIT
Cable to Rebar	8-10	RJ		1	V
	8-4	RR		1	V

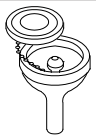
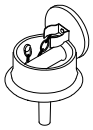
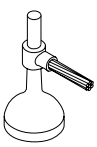
For other connections not listed in this section, see page 8-12

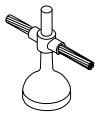
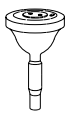
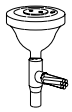
SECTION 9 CABLE TO RAIL OR STRUCTURES

NAME	PAGE	TYPE		EASE	SPLIT
Cable to Rail	9-2	ST		1	V
	9-2	TP		1	V

NAME	PAGE	TYPE		EASE	SPLIT
Cable to Rail or Structure	9-3	Type W		1	V

SECTION 10 GROUND PLATES, AIRCRAFT GROUNDING RECEPTACLES

NAME	PAGE	TYPE		EASE	SPLIT
Aircraft Grounding Receptacles	10-4			1	
	10-4			1	
Aircraft Grounding Receptacle Connections	10-7	RA		1	V

NAME	PAGE	TYPE		EASE	SPLIT
Aircraft Grounding Receptacle Connections	10-7	RB		1	V
Aircraft Grounding Receptacle Connections to Ground Rods	10-6	GB		1	V
	10-6	GB/ GR		1	V

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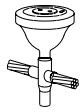
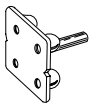
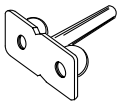
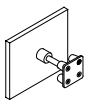
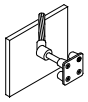
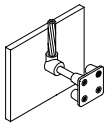
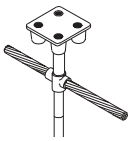
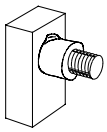
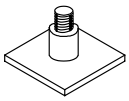
SECTION 10 GROUND PLATES, AIRCRAFT GROUNDING RECEPTACLES

NAME	PAGE	TYPE		EASE	SPLIT
Aircraft Grounding Receptacle Connections to Ground Rods	10-6	GB/ GT		1	V
Cast Ground Plates	10-3			1	
	10-3			1	
Cast Ground Plate Connections	10-2	HV		1	V
	10-2	HV/ VE		1	V

NAME	PAGE	TYPE		EASE	SPLIT
Cast Ground Plate Connections	10-2	HV/ VF		1	V
Cast Ground Plate Assemblies	10-5			1	V
Steel or Copper Studs to Steel Surface	10-8	HV		1	V
	10-8	HX		1	V

THE FOLLOWING INDEX LISTS UNCATALOGED CONNECTIONS AVAILABLE FOR UNUSUAL APPLICATIONS

Developed in 1988, **CADWELD EXOLON** is a significant advance in welded electrical connections. The metallurgy is the same as the standard CADWELD connection approved by over 70% of electric utilities in the USA — but the virtual elimination of visible smoke plus a unique electric starting system makes this improved process easier and more convenient than ever before.

Most connections listed in this catalog can be ordered in the CADWELD EXOLON configuration. Ordering information is shown below.

HOW TO ORDER CADWELD EXOLON

1. To order CADWELD EXOLON products, just specify molds and weld metal from the catalog and add an “XL” prefix.

Example: TAC2Q2Q becomes XLTAC2Q2Q, and 150 becomes XL150.

2. If the weld metal shown in the catalog shows more than one tube required such as 2-#200, you must specify #XL400 to get the correct size filters.

Example: XLTAD-4L3Q: XL400

3. The following molds require a price key change:

- "C" price key molds using 2-#150 weld metals change to XLD price key.
- "E" price key molds using 2-#150 weld metals change to XLJ price key.
- "H" price key molds using 2-#150 weld metals, contact ERICO.
- "M" price key molds using 2-#150 weld metals change to XLV price key.
- "R" price key molds using 2-#150 weld metals change to XLF price key.
- "T" price key molds, ALL change to XLP price key.

Example: TAC3Q3Q using 2-#150 weld metals change to XLTAD3Q3Q using #XL300 weld metal

4. Filters and ignitors are included with the weld metal. XL filters and ignitors are not sold separately.

5. The ignitor can be used only once and then must be discarded. Filters will last as specified in the instructions supplied with each mold.

6. A Relia-Start electric starter, part number XLB971A1 (battery, charger, carrying case and connecting cable), is required for XL weld metal. There is no starting material in the XL weld metal tube. Batteries operate about 200 starts before recharging from 120 VAC is required. The charger, all electrical connections and instructions are included in the battery case.

7. Baffle with cover is required for larger molds. Estimated life of the baffle is 500 welds.

XLB972A1 Baffle is required for molds using XL200 and XL250 weld metals.

XLB973A1 Baffle is required for molds using XL300 to XL750 weld metals.

8. For EZ Change Handles, add XL prefix. (Flint ignitor not included.)

9. Welding Tray, part number XLB974B2, is used under the mold to protect cables and equipment from hot materials.

OTHER INFORMATION

Certain tools may be required for various connections.

If required, these tools are listed on the same page as the connection and in Section A.

- Some tools listed in Section A can save you a lot of time.
- Also refer to A9E, Contractor Tips, to make your job easier, and learn about labor saving ideas.

Prices for standard products are shown in Price List G285P

For other CADWELD literature, videos and software, See Section C.

For all your connection needs — we're only a phone call away.
Phone: 800-677-9089 Fax: 800-677-8131

or call your local CADWELD distributor, agent, or CADWELD Regional Sales Manager

REQUIRED TOOLS SUMMARY:

Required tools are listed with each mold. For your reference, handle clamps and/or frame are summarized below.

MOLD	REQUIRED
A*	Includes frame with handle
C, Q & R	Requires L160
D, F & Z	Requires L159
E*	Includes frame but also requires L160
J*	Includes frame but also requires L159
K*, M* & V*	Includes frame with handles

* To order mold only – without handles or frame – add suffix "M" to mold part number.

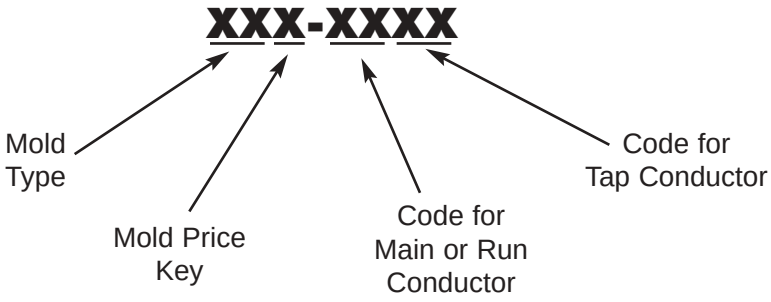
GROUNDING CONNECTION SPECIFICATION

All grounding connections of copper to copper and copper to steel conductors of #8 and larger sized conductors shall be CADWELD exothermic welded connections. Conductors spliced with a CADWELD exothermic welded connection shall be considered as a continuous conductor, as stated in the notes accompanying NEC 250-50, 250-64, 250-68, 250-70 and IEEE Std 80 – 1986.

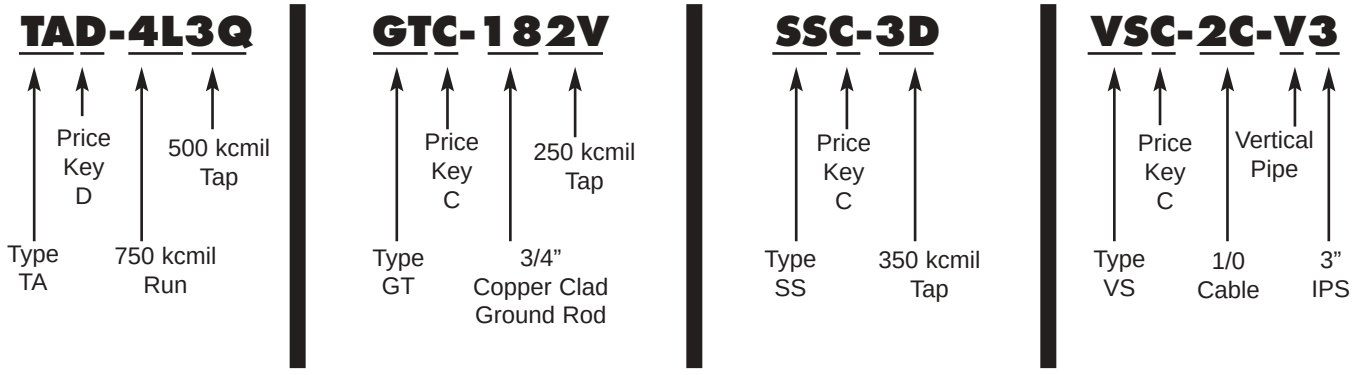
All grounding connections to equipment shall use bolted lugs. When the conductor is #8 and larger, the lug shall be joined to the conductor by the CADWELD process, otherwise use listed compression lugs which meet IEEE Std 837 – 1989.

THE CADWELD MOLD NUMBERING SYSTEM

The CADWELD Mold Part Number gives, in code, the complete information about the mold – Type of connection, mold price key, and conductor size(s)

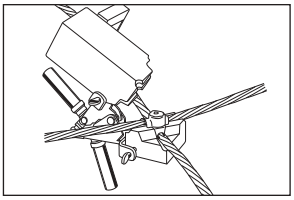


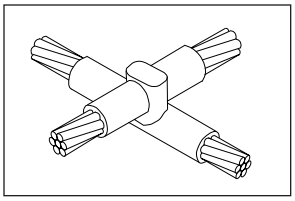
EXAMPLES

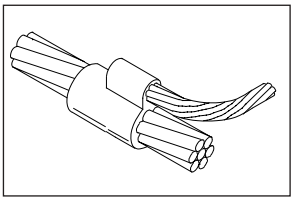


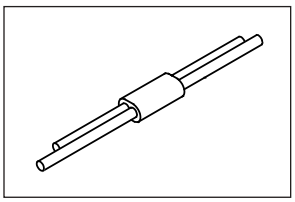
Conductor codes are listed in Section B

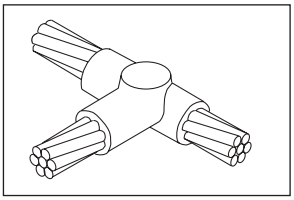
NOTES...

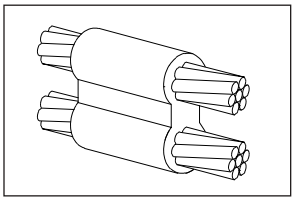


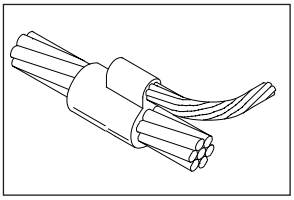


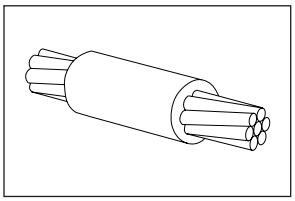


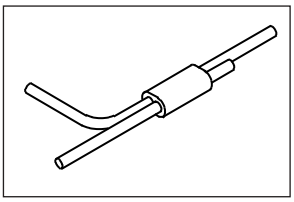


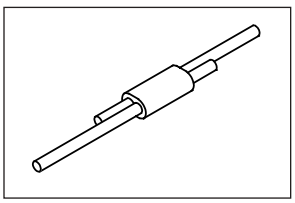


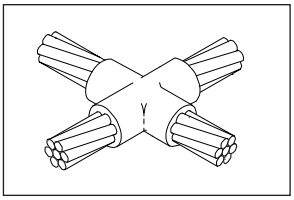


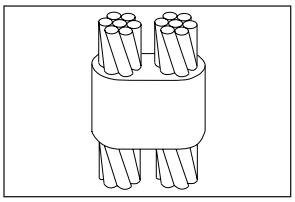




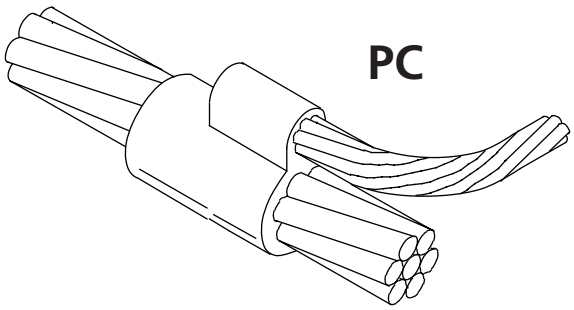








PARALLEL TAP CONNECTIONS PC



PARALLEL TAP CONNECTIONS

- Parallel tap connection of horizontal cables.
- Solid conductor may be either copper or Copperweld®.
- Concentric strand copper cable unless otherwise noted.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps L160 *for **C** Price Key Molds*

Flint Ignitor **T320** *(Included with handle clamp but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Cable Clamp	B265
Torch Head	T111

ACCESSORIES

See Section A

CABLE SIZE Run	CABLE SIZE Tap	MOLD PART NO.	WELD METAL
6 SOL	6 SOL	PC**C**-1G1G	25
6	6	PC**C**-1H1H	25
4	4	PC**C**-1L1L	32
	6	PC**C**-1L1H	32
	6 SOL	PC**C**-1L1G	32
	8 SOL	PC**C**-1L1D	32
2 SOL	6 SOL	PC**C**-1T1G	32
	6	PC**C**-1T1H	32
	2 SOL	PC**C**-1T1T	65
	2	PC**C**-1T1V	65
	1/0	PC**C**-1T2C	65
	2/0	PC**C**-1T2G	65
2	2	PC**C**-1V1V	65
	4	PC**C**-1V1L	45
	6	PC**C**-1V1H	32
	6 SOL	PC**C**-1V1G	32
	8 SOL	PC**C**-1V1D	32
1	2	PC**C**-1Y1V	65
	4	PC**C**-1Y1L	45
	6	PC**C**-1Y1H	45
	6 SOL	PC**C**-1Y1G	45
	8 SOL	PC**C**-1Y1D	45

CABLE SIZE Run	CABLE SIZE Tap	MOLD PART NO.	WELD METAL
1/0	2	PC**C**-2C1V	65
	4	PC**C**-2C1L	65
	6	PC**C**-2C1H	45
	6 SOL	PC**C**-2C1G	45
	8 SOL	PC**C**-2C1D	45
2/0	2	PC**C**-2G1V	90
	4	PC**C**-2G1L	65
	6	PC**C**-2G1H	65
	6 SOL	PC**C**-2G1G	65
	8 SOL	PC**C**-2G1D	65
4/0	1	PC**C**-2Q1Y	115
	2	PC**C**-2Q1V	115
	4	PC**C**-2Q1L	90
	6	PC**C**-2Q1H	90
	6 SOL	PC**C**-2Q1G	90
	8 SOL	PC**C**-2Q1D	90

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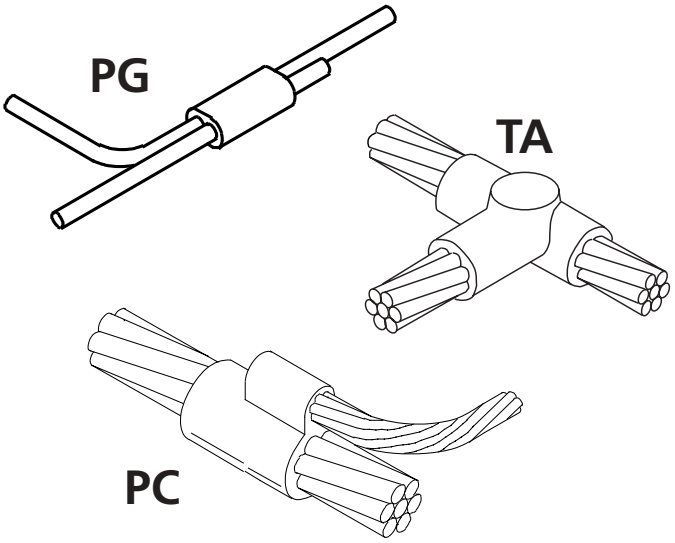

HORIZONTAL TEE CONNECTIONS

- Tee of horizontal run and tap cables.
- PC and PG make parallel style connections which the user can form into a tee.
- Concentric stranded copper cable unless otherwise noted.
- Solid conductor can be either copper or Copperweld.
- Bold letter in mold part number is the price key.

Note: For PC, the tap cable is on top.

REQUIRED TOOLS

Handle Clamps **L160** *for **C** Price Key Molds*
L159 *for **D** Price Key Molds*
*Clamps are included with **T** Price Key Molds*

Flint Ignitor **T320** *(Included with handle clamp or frame but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Cable Clamp	B265
Torch Head	T111

ACCESSORIES

See Section A

CABLE SIZE Run	CABLE SIZE Tap	MOLD PART NO.	WELD METAL
6 SOL	6 SOL	PG**T**-1G1G	25
6	6	PG**T**-1H1H	25
4	4	TA**C**-1L1L	32
	6	PC**T**-1L1H	32
	6 SOL	PC**T**-1L1G	32
	8	PC**T**-1L1E	32
	8 SOL	PC**T**-1L1D	32
2 SOL	2	TA**C**-1T1V	45
	2 SOL	TA**C**-1T1T	45
	4	TA**C**-1T1L	45
	6	PC**T**-1T1H	32
	6 SOL	PC**T**-1T1G	32
	8	PC**T**-1T1E	32
	8 SOL	PC**T**-1T1D	32
2	2	TA**C**-1V1V	45
	2 SOL	TA**C**-1V1T	45
	4	TA**C**-1V1L	45
	6	PC**T**-1V1H	32
	6 SOL	PC**T**-1V1G	32
	8	PC**T**-1V1E	32
	8 SOL	PC**T**-1V1D	32
1	1	TA**C**-1Y1Y	45
	2	TA**C**-1Y1V	45
	2 SOL	TA**C**-1Y1T	45
	4	TA**C**-1Y1L	45
	6	PC**C**-1Y1H	45
	6 SOL	PC**C**-1Y1G	45
	8	PC**C**-1Y1E	45
1/0	8 SOL	PC**C**-1Y1D	45
	1/0	TA**C**-2C2C	90
	1	TA**C**-2C1Y	45
	2	TA**C**-2C1V	45
	2 SOL	TA**C**-2C1T	45
	4	TA**C**-2C1L	45
	6	PC**C**-2C1H	45
	6 SOL	PC**C**-2C1G	45
	8	PC**C**-2C1E	45
	8 SOL	PC**C**-2C1D	45
2/0	2/0	TA**C**-2G2G	90
	1/0	TA**C**-2G2C	90
	1	TA**C**-2G1Y	45
	2	TA**C**-2G1V	45
	2 SOL	TA**C**-2G1T	45
	4	TA**C**-2G1L	45
	6	PC**C**-2G1H	65
	6 SOL	PC**C**-2G1G	65
	8	PC**C**-2G1E	65
	8 SOL	PC**C**-2G1D	65

CABLE SIZE Run	Tap	MOLD PART NO.	WELD METAL
3/0	3/0	TA**C**-2L2L	115
	2/0	TA**C**-2L2G	90
	1/0	TA**C**-2L2C	90
	1	TA**C**-2L1Y	45
	2	TA**C**-2L1V	45
	2 SOL	TA**C**-2L1T	45
	4	TA**C**-2L1L	45
	6	PC**C**-2L1H	90
	6 SOL	PC**C**-2L1G	90
	8	PC**C**-2L1E	90
	8 SOL	PC**C**-2L1D	90
4/0	4/0	TA**C**-2Q2Q	150
	3/0	TA**C**-2Q2L	115
	2/0	TA**C**-2Q2G	90
	1/0	TA**C**-2Q2C	90
	1	TA**C**-2Q1Y	90
	2	TA**C**-2Q1V	90
	2 SOL	TA**C**-2Q1T	90
	4	TA**C**-2Q1L	90
	6	PC**C**-2Q1H	90
	6 SOL	PC**C**-2Q1G	90
	8	PC**C**-2Q1E	90
	8 SOL	PC**C**-2Q1D	90
250	250	TA**C**-2V2V	150
	4/0	TA**C**-2V2Q	150
	3/0	TA**C**-2V2L	150
	2/0	TA**C**-2V2G	90
	1/0	TA**C**-2V2C	90
	1	TA**C**-2V1Y	90
	2	TA**C**-2V1V	90
	2 SOL	TA**C**-2V1T	90
	4	TA**C**-2V1L	90
300	300	TA**C**-3A3A	200
	250	TA**C**-3A2V	150
	4/0	TA**C**-3A2Q	150
	3/0	TA**C**-3A2L	150
	2/0	TA**C**-3A2G	90
	1/0	TA**C**-3A2C	90
	1	TA**C**-3A1Y	90
	2	TA**C**-3A1V	90
	2 SOL	TA**C**-3A1T	90
	4	TA**C**-3A1L	90

CABLE SIZE Run	Tap	MOLD PART NO.	WELD METAL
350	350	TA**C**-3D3D	200
	300	TA**C**-3D3A	200
	250	TA**C**-3D2V	200
	4/0	TA**C**-3D2Q	150
	3/0	TA**C**-3D2L	150
	2/0	TA**C**-3D2G	90
	1/0	TA**C**-3D2C	90
	1	TA**C**-3D1Y	90
	2	TA**C**-3D1V	90
	4	TA**C**-3D1L	90
500	500	TA**C**-3Q3Q	2-150
	350	TA**C**-3Q3D	200
	300	TA**C**-3Q3A	200
	250	TA**C**-3Q2V	200
	4/0	TA**C**-3Q2Q	150
	2/0	TA**C**-3Q2G	90
	1/0	TA**C**-3Q2C	90
	1	TA**C**-3Q1Y	90
	2	TA**C**-3Q1V	90
	4	TA**C**-3Q1L	90
750	750	TA**D**-4L4L	500
	500	TA**D**-4L3Q	2-200
	350	TA**C**-4L3D	250
	300	TA**C**-4L3A	200
	250	TA**C**-4L2V	200
	4/0	TA**C**-4L2Q	150
	2/0	TA**C**-4L2G	150
	1/0	TA**C**-4L2C	150
1000	1000	TA**D**-4Y4Y	500
	750	TA**D**-4Y4L	500
	500	TA**D**-4Y3Q	2-200
	350	TA**C**-4Y3D	250
	300	TA**C**-4Y3A	200
	250	TA**C**-4Y2V	200
	4/0	TA**C**-4Y2Q	150
	2/0	TA**C**-4Y2G	150
	1/0	TA**C**-4Y2C	150

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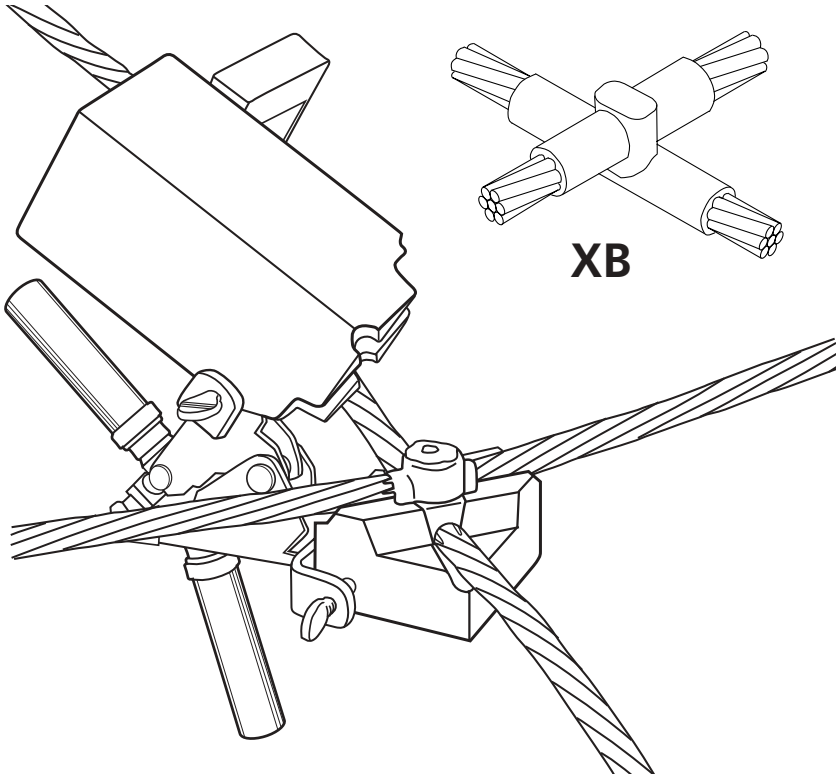


XBQ/XBZ MOLDS

The CADWELD XB molds are the quickest, most efficient way to make lapped, horizontal x-style connections on solid or concentric stranded cable for a variety of installations.

For cable-to-cable X-style connections at power substations and other commercial and industrial sites, there's never been a faster or easier way to make a reliable CADWELD connection. This two-piece mold lets you make connections in a trench in about half the time it would take with compression connectors or other exothermic products — and at a fraction of the cost.

- Ergonomic two-piece molds use standard L160 and L159 handle clamps...the same clamps you use with other CADWELD molds.
- Saves labor costs. X-style connection can be made by one person in about 1 minute. That's 40 to 70% faster than other methods.
- Costs less. Saves you 1/3 over other models, thanks to innovative design techniques and advanced manufacturing technology.
- Simple to use. Operates just like an XA-style mold, but there's no need to cut the cable!
- Easy cable alignment.
- Also available in "smokeless" EXOLON.

NOTES

- Molds not available with wear plates.
- Special cleaning tool supplied with each mold.
- All Q price molds require L160 handle clamp.
- All Z price molds require L159 handle clamp.

COPPER

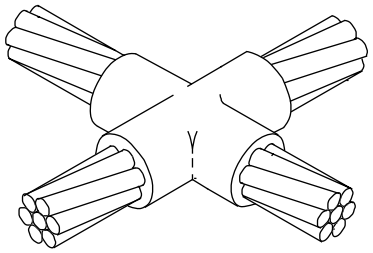
Cable Size*		Mold	Weld
Run	Tap	Part Number	Metal
1/0 SOL	1/0 SOL	XB**Q**2B2B	150
1/0 Conc.	1/0 Conc.	XB**Q**2C2C	150
2/0 SOL	2/0 SOL	XB**Q**2F2F	200
2/0 Conc.	2/0 Conc.	XB**Q**2G2G	200
3/0 SOL	3/0 SOL	XB**Q**2K2K	250
3/0 Conc.	3/0 Conc.	XB**Q**2L2L	250
4/0 SOL	4/0 SOL	XB**Q**2P2P	250
4/0 Conc.	4/0 Conc.	XB**Q**2Q2Q	250
250 SOL	250 SOL	XB**Q**2T2T	2-150
250 Conc.	250 Conc.	XB**Q**2V2V	2-150
300 Conc.	300 Conc.	XB**Z**3A3A	2-200
350 Conc.	350 Conc.	XB**Z**3D3D	500
400 Conc.	400 Conc.	XB**Z**3H3H	3-200
500 Conc.	500 Conc.	XB**Z**3Q3Q	3-250

* Consult ERICO for molds to fit other cable sizes or run/tap combinations.

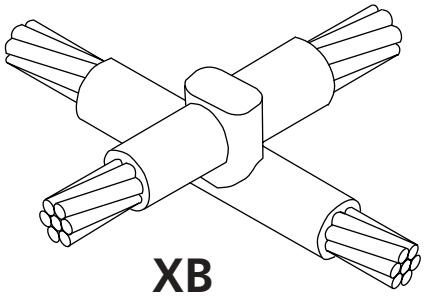
COPPERWELD®

Cable Size*		Mold	Weld
Run	Tap	Part Number	Metal
7/#7	7/#7	XB**Q**9C9C	200
7/#5	7/#5	XB**Q**9E9E	250
19/#9	19/#9	XB**Q**9F9F	2-150
19/#8	19/#8	XB**Z**9G9G	2-200
19/#7	19/#7	XB**Z**9H9H	500
19/#6	19/#6	XB**Z**9J9J	3-250

* Consult ERICO for molds to fit other cable sizes or run/tap combinations.



XA



XB

HORIZONTAL X CONNECTIONS

- XA – Cross of horizontal cables, tap cable cut – cables in same plane.
- XB – Cross of horizontal cables, lapped and not cut.
- Concentric stranded copper cable unless otherwise noted.
- Solid conductor may be either copper or Copperweld®.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps **L160** *for **C** Price Key Molds*
L159 *for **D** Price Key Molds*

*Clamps are included with **M, P** and **V** Price Key Molds*

Flint Ignitor **T320** *(Included with handle clamp or frame but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Cable Clamp	B265
Torch Head	T111

ACCESSORIES

See Section A

CABLE SIZE Run	CABLE SIZE Tap	TYPE XA MOLD PART NO.	TYPE XA WELD METAL	TYPE XB MOLD PART NO.	TYPE XB WELD METAL
6 SOL	6 SOL	USE XB	–	XB**P**-1G1G	32
6	6	USE XB	–	XB**P**-1H1H	45
4	4	XA**C**-1L1L	45	XB**C**-1L1L	65
	2	XA**C**-1V1V	65	XB**C**-1V1V	90
2	4	XA**C**-1V1L	65	XB**C**-1V1L	65
2 SOL	2 SOL	XA**C**-1T1T	65	XB**C**-1T1T	90
	1	XA**C**-1Y1Y	65	XB**C**-1Y1Y	115
1	2	XA**C**-1Y1V	65	XB**C**-1Y1V	90
	4	XA**C**-1Y1L	65	XB**C**-1Y1L	90
	1/0	XA**C**-2C2C	90	XB**M**-2C2C	150
1/0	1	XA**C**-2C1Y	90	XB**M**-2C1Y	150
	2	XA**C**-2C1V	90	XB**M**-2C1V	115
	4	XA**C**-2C1L	90	XB**M**-2C1L	115
	2/0	XA**C**-2G2G	115	XB**M**-2G2G	200
	1/0	XA**C**-2G2C	115	XB**M**-2G2C	200
2/0	1	XA**C**-2G1Y	115	XB**M**-2G1Y	150
	2	XA**C**-2G1V	115	XB**M**-2G1V	150

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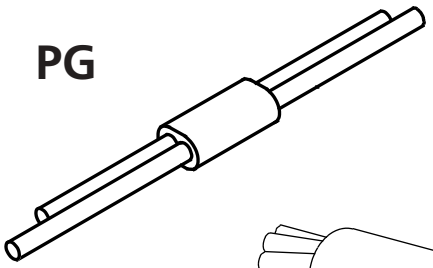
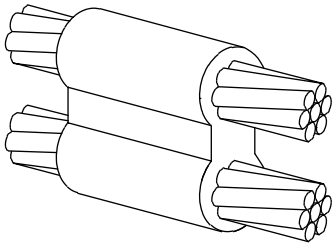
CABLE SIZE Run	CABLE SIZE Tap	TYPE XA MOLD PART NO.	TYPE XA WELD METAL	TYPE XB MOLD PART NO.	TYPE XB WELD METAL
3/0	3/0	XA**C**-2L2L	150	XB**M**-2L2L	250
	2/0	XA**C**-2L2G	150	XB**M**-2L2G	200
	1/0	XA**C**-2L2C	115	XB**M**-2L2C	200
	1	XA**C**-2L1Y	115	XB**M**-2L1Y	150
	2	XA**C**-2L1V	115	XB**M**-2L1V	150
4/0	4/0	XA**C**-2Q2Q	200	XB**M**-2Q2Q	250
	3/0	XA**C**-2Q2L	200	XB**M**-2Q2L	250
	2/0	XA**C**-2Q2G	150	XB**M**-2Q2G	200
	1/0	XA**C**-2Q2C	150	XB**M**-2Q2C	200
	1	XA**C**-2Q1Y	115	XB**M**-2Q1Y	150
	2	XA**C**-2Q1V	115	XB**M**-2Q1V	150
250	250	XA**C**-2V2V	200	XB**M**-2V2V	2-150
	4/0	XA**C**-2V2Q	200	XB**M**-2V2Q	2-150
	3/0	XA**C**-2V2L	200	XB**M**-2V2L	2-150
	2/0	XA**C**-2V2G	150	XB**M**-2V2G	250
	1/0	XA**C**-2V2C	150	XB**M**-2V2C	250
	1	XA**C**-2V1Y	115	XB**M**-2V1Y	200
	2	XA**C**-2V1V	115	XB**M**-2V1V	150
300	300	XA**C**-3A3A	250	XB**V**-3A3A	2-200
	250	XA**C**-3A2V	250	XB**V**-3A2V	2-200
	4/0	XA**C**-3A2Q	200	XB**M**-3A2Q	2-150
	3/0	XA**C**-3A2L	200	XB**M**-3A2L	2-150
	2/0	XA**C**-3A2G	150	XB**M**-3A2G	250
	1/0	XA**C**-3A2C	150	XB**M**-3A2C	250
	1	XA**C**-3A1Y	115	XB**M**-3A1Y	200
	2	XA**C**-3A1V	115	XB**M**-3A1V	150
350	350	XA**C**-3D3D	250	XB**V**-3D3D	500
	300	XA**C**-3D3A	250	XB**V**-3D3A	500
	250	XA**C**-3D2V	250	XB**V**-3D2V	500
	4/0	XA**C**-3D2Q	200	XB**V**-3D2Q	2-200
	3/0	XA**C**-3D2L	200	XB**V**-3D2L	2-200
	2/0	XA**C**-3D2G	200	XB**M**-3D2G	2-150
	1/0	XA**C**-3D2C	200	XB**M**-3D2C	250
	1	XA**C**-3D1Y	150	XB**M**-3D1Y	200
	2	XA**C**-3D1V	150	XB**M**-3D1V	200
500	500	XA**D**-3Q3Q	500	XB**V**-3Q3Q	3-250
	350	XA**D**-3Q3D	2-200	XB**V**-3Q3D	3-200
	300	XA**D**-3Q3A	2-200	XB**V**-3Q3A	3-200
	250	XA**D**-3Q2V	2-150	XB**V**-3Q2V	500
	4/0	XA**D**-3Q2Q	2-150	XB**V**-3Q2Q	500
	3/0	XA**D**-3Q2L	2-150	XB**V**-3Q2L	500
	2/0	XA**C**-3Q2G	250	XB**V**-3Q2G	2-200
	1/0	XA**C**-3Q2C	250	XB**M**-3Q2C	2-150

PG





PT

CABLE SIZE Run	CABLE SIZE Tap	MOLD PART NO.	WELD METAL
6 SOL	6 SOL	PG**T**-1G1G	25
6	6	PG**T**-1H1H	25
4	4	PT**C**-1L1L	32
	6	PT**C**-1L1H	32
	6 SOL	PT**C**-1L1G	32
	8	PT**C**-1L1E	32
	8 SOL	PT**C**-1L1D	32
2 SOL	2	PT**C**-1T1V	65
	2 SOL	PT**C**-1T1T	65
	4	PT**C**-1T1L	65
	6	PT**C**-1T1H	45
	6 SOL	PT**C**-1T1G	45
	8	PT**C**-1T1E	45
	8 SOL	PT**C**-1T1D	45
2	2	PT**C**-1V1V	65
	4	PT**C**-1V1L	65
	6	PT**C**-1V1H	45
	6 SOL	PT**C**-1V1G	45
	8	PT**C**-1V1E	45
	8 SOL	PT**C**-1V1D	45
1 SOL	1	PT**C**-1X1Y	65
	2	PT**C**-1X1V	65
	2 SOL	PT**C**-1X1T	65
	4	PT**C**-1X1L	65
	6	PT**C**-1X1H	65
	6 SOL	PT**C**-1X1G	65
	8	PT**C**-1X1E	45
	8 SOL	PT**C**-1X1D	45

PARALLEL HORIZONTAL CONDUCTORS

- Parallel through connection of horizontal cables.
- Run conductor is on the bottom of Type PT molds.
- Concentric strand copper cable unless otherwise noted.
- Solid conductor may be either copper or Copperweld®.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps L160 for **C** Price Key Molds
*Clamps are included with **T** Price Key Molds*

Flint Ignitor **T320** *(Included with handle clamp or frame but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Cable Clamp	B265
Torch Head	T111

ACCESSORIES

See Section A

CABLE SIZE Run	CABLE SIZE Tap	MOLD PART NO.	WELD METAL
1	1	PT**C**-1Y1Y	65
	1 SOL	PT**C**-1Y1X	65
	2	PT**C**-1Y1V	65
	2 SOL	PT**C**-1Y1T	65
	4	PT**C**-1Y1L	65
	6	PT**C**-1Y1H	65
	6 SOL	PT**C**-1Y1G	65
	8	PT**C**-1Y1E	45
	8 SOL	PT**C**-1Y1D	45
1/0 SOL	1/0	PT**C**-2B2C	90
	1/0 SOL	PT**C**-2B2B	90
	1	PT**C**-2B1Y	65
	1 SOL	PT**C**-2B1X	65
	2	PT**C**-2B1V	65
	2 SOL	PT**C**-2B1T	65
	4	PT**C**-2B1L	65
	6	PT**C**-2B1H	65
	6 SOL	PT**C**-2B1G	65
	8	PT**C**-2B1E	65
	8 SOL	PT**C**-2B1D	65

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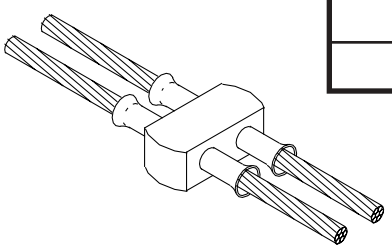
CABLE SIZE Run	CABLE SIZE Tap	MOLD PART NO.	WELD METAL
1/0	1/0	PTC-2C2C	90
	1/0 SOL	PTC-2C2B	90
	1	PTC-2C1Y	65
	1 SOL	PTC-2C1T	65
	2	PTC-2C1V	65
	2 SOL	PTC-2C1T	65
	4	PTC-2C1L	65
	6	PTC-2C1H	65
	6 SOL	PTC-2C1G	65
	8	PTC-2C1E	65
	8 SOL	PTC-2C1D	65
2/0	2/0	PTC-2G2G	115
	1/0	PTC-2G2C	115
	1/0 SOL	PTC-2G2B	115
	2	PTC-2G1V	90
	1	PTC-2G1Y	90
	1 SOL	PTC-2G1X	90
	4	PTC-2G1L	90
	6	PTC-2G1H	90
	6 SOL	PTC-2G1G	90
	8	PTC-2G1E	65
	8 SOL	PTC-2G1D	65
3/0	3/0	PTC-2L2L	150
	2/0	PTC-2L2G	150
	1/0	PTC-2L2C	115
	1/0 SOL	PTC-2L2B	115
	2	PTC-2L1V	115
	2 SOL	PTC-2L1T	115
	1 SOL	PTC-2L1X	115
	1	PTC-2L1Y	115
	4	PTC-2L1L	115
	6	PTC-2L1H	90
	6 SOL	PTC-2L1G	90
	8	PTC-2L1E	90
	8 SOL	PTC-2L1D	90

CABLE SIZE Run	CABLE SIZE Tap	MOLD PART NO.	WELD METAL
4/0 SOL	4/0	PTC-2P2Q	200
	4/0 SOL	PTC-2P2P	200
	3/0	PTC-2P2L	200
	2/0	PTC-2P2G	150
	1/0	PTC-2P2C	150
	1/0 SOL	PTC-2P2B	150
	1	PTC-2P1Y	150
	1 SOL	PTC-2P1X	150
	2	PTC-2P1V	150
	2 SOL	PTC-2P1T	150
	4	PTC-2P1L	150
	6	PTC-2P1H	90
	6 SOL	PTC-2P1G	90
	8	PTC-2P1E	90
	8 SOL	PTC-2P1D	90
4/0	4/0	PTC-2Q2Q	200
	4/0 SOL	PTC-2Q2P	200
	3/0	PTC-2Q2L	200
	2/0	PTC-2Q2G	150
	1/0	PTC-2Q2C	150
	1/0 SOL	PTC-2Q2B	150
	1	PTC-2Q1V	150
	1 SOL	PTC-2Q1X	150
	2	PTC-2Q1V	150
	2 SOL	PTC-2Q1T	150
	4	PTC-2Q1L	150
	6	PTC-2Q1H	90
	6 SOL	PTC-2Q1G	90
	8	PTC-2Q1E	90
	8 SOL	PTC-2Q1D	90



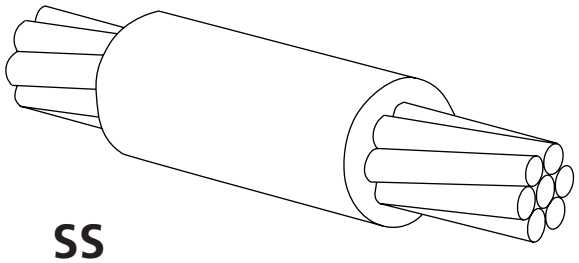
CONDUCTOR SIZE Solid	CONDUCTOR SIZE Stranded	ONE-SHOT Part No. Parallel Tap
3, 4	4, 6	PG11L

The CADWELD ONE-SHOT case is a ceramic disposable body replacing the familiar semi-permanent graphite mold and associated handle clamp. Everything required is included except the flint ignitor.

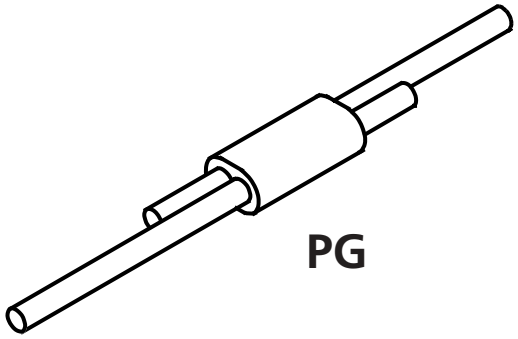
Available in standard packages of 12 each.

NEC Compliant, UL Listed

HORIZONTAL SPLICE SS/PG



SS



PG

HORIZONTAL SPLICE

- Splice of horizontal cables.
- Type PG makes a parallel style connection.
- Concentric stranded copper cable unless otherwise noted.
- Solid conductor may be either copper or Copperweld®.
- Also available are splices of different and mixed cable sizes. For Copperweld DSA cables, contact ERICO.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps **L160** *for **C** Price Key Molds*
L159 *for **D** Price Key Molds*
*Clamps are included with **T** Price Key Molds*

Flint Ignitor **T320** *(Included with handle clamp or frame but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Cable Clamp	B265
Torch Head	T111

ACCESSORIES

See Section A

CABLE SIZE	MOLD PART NO.	WELD METAL
8	PG**T**-1E1E	15
8 SOL	PG**T**-1D1D	15
6	PG**T**-1H1H	25
6 SOL	PG**T**-1G1G	25
4	SS**T**-1L	25
4 SOL	SS**T**-1K	25
3	SS**T**-1Q	32
2	SS**T**-1V	32
2 SOL	SS**T**-1T	32
1	SS**T**-1Y	32
1 SOL	SS**T**-1X	32
1/0	SS**C**-2C	45
1/0 SOL	SS**C**-2B	45
2/0	SS**C**-2G	65

CABLE SIZE	MOLD PART NO.	WELD METAL
3/0	SS**C**-2L	90
4/0	SS**C**-2Q	90
4/0 SOL	SS**C**-2P	90
250	SS**C**-2V	115
300	SS**C**-3A	115
350	SS**C**-3D	150
500	SS**C**-3Q	200
750	SS**D**-4L	2-150
1000	SS**D**-4Y	2-200

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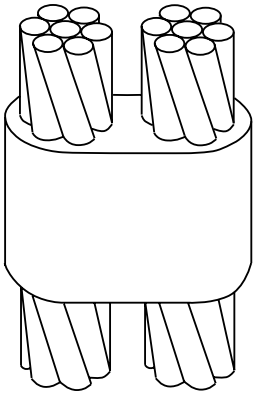


PH

PARALLEL VERTICAL CONDUCTORS

- Parallel through connection of vertical cables.
- Solid conductor may be either copper or Copperweld.
- Concentric stranded copper cable unless otherwise noted.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps **L160** *for **R** Price Key Molds*
L159 *for **J** Price Key Molds*
*Frames are included with **J, K** and **T** Price Key Molds*

Flint Ignitor **T320** *(Included with handle clamp or frame but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Cable Clamp	B265
Torch Head	T111

ACCESSORIES

See Section A

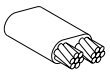
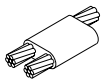
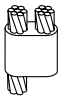
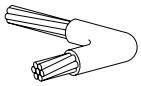
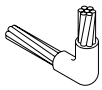
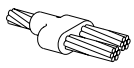
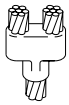
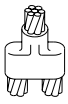
CABLE SIZE Run	CABLE SIZE Tap	MOLD PART NO.	WELD METAL
8 SOL	8 SOL	PH**T**-1D1D	25
8	8	PH**T**-1E1E	25
6 SOL	6 SOL	PH**R**-1G1G	25
6	6	PH**R**-1H1H	25
4	4	PH**R**-1L1L	65
	6	PH**R**-1L1H	90
	6 SOL	PH**R**-1L1G	45
2 SOL	2 SOL	PH**R**-1T1T	115
	4	PH**R**-1T1L	90
2	2	PH**R**-1V1V	115
	2 SOL	PH**R**-1V1T	115
	4	PH**R**-1V1L	90
1	1	PH**R**-1Y1Y	115
	2	PH**R**-1Y1V	90
	2 SOL	PH**R**-1Y1T	90
	4	PH**R**-1Y1L	90
1/0	1/0	PH**R**-2C2C	150
	1	PH**R**-2C1Y	115
	2	PH**R**-2C1V	115
	2 SOL	PH**R**-2C1T	115
	4	PH**R**-2C1L	115

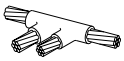
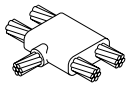
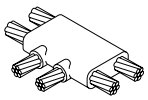
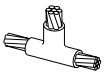
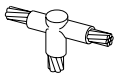
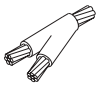
CABLE SIZE Run	CABLE SIZE Tap	MOLD PART NO.	WELD METAL
2/0	2/0	PH**R**-2G2G	150
	1/0	PH**R**-2G2C	150
	1	PH**R**-2G1Y	150
	2	PH**R**-2G1V	150
	2 SOL	PH**R**-2G1T	150
	4	PH**R**-2G1L	115
4/0	4/0	PH**J**-2Q2Q	2-200
	2/0	PH**R**-2Q2G	250
	1/0	PH**R**-2Q2C	250
	1	PH**R**-2Q1Y	250
	2	PH**R**-2Q1V	200
	2 SOL	PH**R**-2Q1T	200
300	300	PH**J**-3A3A	2-200
350	4/0	PH**J**-3D2Q	2-200
500	500	PH**J**-3Q3Q	3-250
750	750	PH**K**-4L4L[(1)]	2-500

[(1)] Requires M562 Crucible. Order separately.

OTHER CABLE TO CABLE CONNECTIONS

The connections shown below are for use only where connections shown in this catalog are not suitable.

NAME	TYPE		EASE	SPLIT
Parallel Dead End	PJ		1	V
	PK		2	*
	PM		3	V
	PN		3	V
Parallel Tap	PA		2	*
	PB		3	V
	PD		3	V
Splice	PP		1	*
	PQ		3	V
	PR		2	V
	SC		1	*
	SD		3	V
	SE		3	V
	SV		3	V

NAME	TYPE		EASE	SPLIT
Tee	TC		3	V
	TD		3	*
	TE		3	*
	TF		3	V
	TL		3	V
	TV		3	V
X - Vertical **Horizontal Cable Uncut**	XD		3	V
X - Vertical **Vertical Cable Uncut**	XC		3	V
X - Vertical **Neither Cable Uncut**	XF		3	*
X	XG		3	*
Y - 45˚ tap	YC		3	V
Y - 45˚ tap	YD		3	V
Y - 45˚ tap	YE		3	V
Y - 45˚ tap	YR		3	H

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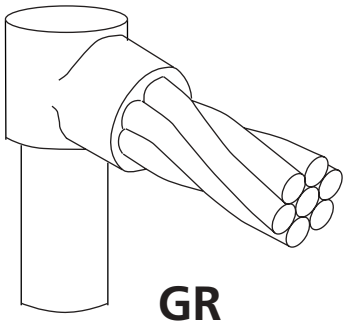
CABLE TO GROUND ROD GR



GR

CABLE TO GROUND ROD

- Single cable to top of ground rod. Concentric strand copper cable unless otherwise noted. For copper clad, galvanized, stainless clad or stainless steel ground rods.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps **L160** *for **C** Price Key Molds*
Clamps are included with T and P Price Key Molds

Flint Ignitor **T320** *(Included with handle clamp or frame but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
File	T329
Cable Clamp	B265
Torch Head	T111

ACCESSORIES

See Section A

GROUND ROD SIZE	CABLE SIZE	MOLD PART NUMBER			WELD METAL
		Steel	Copper Clad Plain (unthreaded)	Copper Clad Sectional (with 9/16" threads)	
1/2"	6	GR**T**-14C1H	GR**T**-14A1H	GR**T**-14B1H	25
	6 SOL	GR**T**-14C1G	GR**T**-14A1G	GR**T**-14B1G	25
	4	GR**T**-14C1L	GR**T**-14A1L	GR**T**-14B1L	25
	4 SOL	GR**T**-14C1K	GR**T**-14A1K	GR**T**-14B1K	25
	2 SOL	GR**T**-14C1T	GR**T**-14A1T	GR**T**-14B1T	32
	2	GR**T**-14C1V	GR**T**-14A1V	GR**T**-14B1V	32

		Steel or Copper Clad Sectional (with 9/16" threads)	Copper Clad Plain (unthreaded)	Copper Clad Sectional (with 1/2" threads)	
1/2"	1	GR**C**-141Y	GR**C**-151Y	GR**C**-131Y	65
	1/0	GR**C**-142C	GR**C**-152C	GR**C**-132C	90
	1/0 SOL	GR**C**-142B	GR**C**-152B	GR**C**-132B	90
	2/0	GR**C**-142G	GR**C**-152G	GR**C**-132G	90
	3/0	GR**C**-142L	GR**C**-152L	GR**C**-132L	90
	4/0	GR**C**-142Q	GR**C**-152Q	GR**C**-132Q	90
	250	GR**C**-142V	GR**C**-152V	GR**C**-132V	90
	300	GR**C**-143A	GR**C**-153A	GR**C**-133A	90

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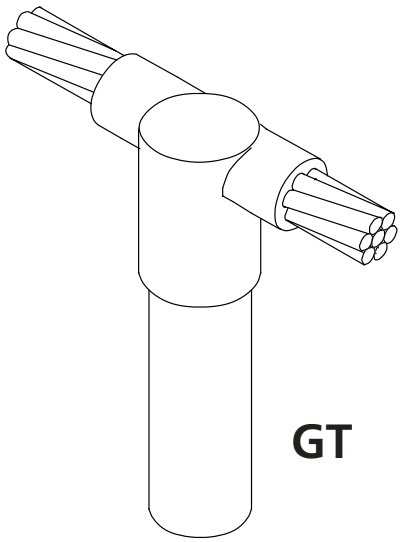
GROUND ROD SIZE	CABLE SIZE	MOLD PART NUMBER		WELD METAL
		Copper Clad Plain (unthreaded)	Steel or Copper Clad Sectional (threaded)	
5/8"	6	GR**T**-161H	GR**T**-311H	32
	6 SOL	GR**T**-161G	GR**T**-311G	32
	4	GR**T**-161L	GR**T**-311L	32
	4 SOL	GR**T**-161K	GR**T**-311K	32

		Copper Clad Sectional (threaded) or Plain	Steel	
5/8"	2 SOL	GR**C**-161T	GR**C**-311T	65
	2	GR**C**-161V	GR**C**-311V	65
	1	GR**C**-161Y	GR**C**-311Y	65
	1/0	GR**C**-162C	GR**C**-312C	90
	1/0 SOL	GR**C**-162B	GR**C**-312B	90
	2/0	GR**C**-162G	GR**C**-312G	90
	3/0	GR**C**-162L	GR**C**-312L	90
	4/0	GR**C**-162Q	GR**C**-312Q	90
	250	GR**C**-162V	GR**C**-312V	90
	300	GR**C**-163A	GR**C**-313A	115
	350	GR**C**-163D	GR**C**-313D	115
	500	GR**C**-163Q	GR**C**-313Q	150

		Copper Clad Plain (unthreaded)	Steel or Copper Clad Sectional (threaded)	
3/4"	6	GR**T**-181H	GR**T**-331H	32
	6SOL	GR**T**-181G	GR**T**-331G	32
	4	GR**P**-181L	GR**P**-331L	45
	4 SOL	GR**P**-181K	GR**P**-331K	45

		Copper Clad Sectional (threaded) or Plain	Steel	
3/4"	2 SOL	GR**C**-181T	GR**C**-331T	90
	2	GR**C**-181V	GR**C**-331V	90
	1	GR**C**-181Y	GR**C**-331Y	90
	1/0	GR**C**-182C	GR**C**-332C	90
	1/0 SOL	GR**C**-182B	GR**C**-332B	90
	2/0	GR**C**-182G	GR**C**-332G	90
	3/0	GR**C**-182L	GR**C**-332L	90
	4/0	GR**C**-182Q	GR**C**-332Q	90
	250	GR**C**-182V	GR**C**-332V	90
	300	GR**C**-183A	GR**C**-333A	115
	350	GR**C**-183D	GR**C**-333D	115
	500	GR**C**-183Q	GR**C**-333Q	150
1"		CONTACT ERICO FOR ORDERING INFORMATION		

CABLE TO GROUND ROD GT



THROUGH CABLE TO GROUND ROD

- Through cable to top of ground rod. Connections are for concentric strand copper cable unless otherwise noted. For copper clad, galvanized, stainless clad or stainless steel ground rods.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps L160 *for **C** Price Key Molds*

*Clamps are included with **T** or **P** Price Key Molds*

Flint Ignitor **T320** *(Included with handle clamp or frame but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
File	T329
Torch Head	T111

ACCESSORIES

See Section A

GROUND ROD SIZE	CABLE SIZE	MOLD PART NUMBER			WELD METAL
		Steel	Copper Clad Plain (unthreaded)	Copper Clad Sectional (with 9/16" threads)	
1/2"	6	GT**T**-14C1H	GT**T**-14A1H	GT**T**-14B1H	32
	6 SOL	GT**T**-14C1G	GT**T**-14A1G	GT**T**-14B1G	32
	4	GT**T**-14C1L	GT**T**-14A1L	GT**T**-14B1L	32
	4 SOL	GT**T**-14C1K	GT**T**-14A1K	GT**T**-14B1K	32

		Steel or Copper Clad Sectional (with 9/16" threads)	Copper Clad Plain (unthreaded)	Copper Clad Sectional (with 1/2" threads)	
1/2"	2 SOL	GT**C**-141T	GT**C**-151T	GT**C**-131T	90
	2	GT**C**-141V	GT**C**-151V	GT**C**-131V	90
	1	GT**C**-141Y	GT**C**-151Y	GT**C**-131Y	90
	1/0	GT**C**-142C	GT**C**-152C	GT**C**-132C	90
	1/0 SOL	GT**C**-142B	GT**C**-152B	GT**C**-132B	90
	2/0	GT**C**-142G	GT**C**-152G	GT**C**-132G	90
	3/0	GT**C**-142L	GT**C**-152L	GT**C**-132L	115
	4/0	GT**C**-142Q	GT**C**-152Q	GT**C**-132Q	115
	250	GT**C**-142V	GT**C**-152V	GT**C**-132V	150
	300	GT**C**-143A	GT**C**-153A	GT**C**-133A	200

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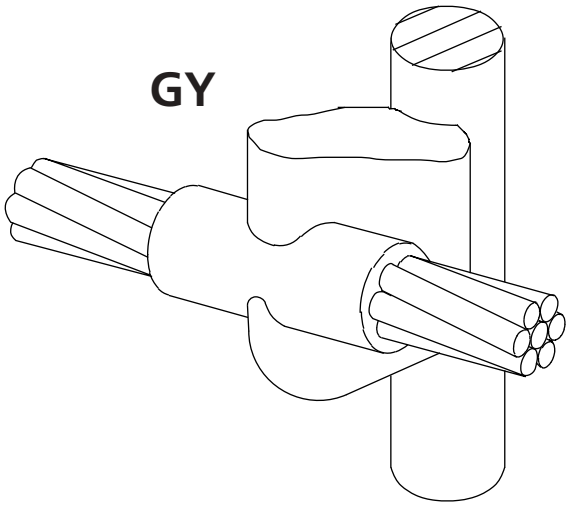
GROUND ROD SIZE	CABLE SIZE	MOLD PART NUMBER		WELD METAL
		Copper Clad Plain (unthreaded)	Steel or Copper Clad Sectional (threaded)	
5/8"	6	GT**T**-161H	GT**T**-311H	32
	6 SOL	GT**T**-161G	GT**T**-311G	32
	4	GT**T**-161L	GT**T**-311L	32
	4 SOL	GT**T**-161K	GT**T**-311K	32

		Copper Clad Sectional (threaded) or Plain	Steel	
5/8"	2 SOL	GT**C**-161T	GT**C**-311T	90
	2	GT**C**-161V	GT**C**-311V	90
	1	GT**C**-161Y	GT**C**-311Y	90
	1/0	GT**C**-162C	GT**C**-312C	90
	1/0 SOL	GT**C**-162B	GT**C**-312B	115
	2/0	GT**C**-162G	GT**C**-312G	115
	3/0	GT**C**-162L	GT**C**-312L	115
	4/0	GT**C**-162Q	GT**C**-312Q	115
	250	GT**C**-162V	GT**C**-312V	150
	300	GT**C**-163A	GT**C**-313A	200
	350	GT**C**-163D	GT**C**-313D	200
	500	GT**C**-163Q	GT**C**-313Q	250

		Copper Clad Plain (unthreaded)	Steel or Copper Clad Sectional (threaded)	
3/4"	6	GT**P**-181H	GT**P**-331H	45
	6 SOL	GT**P**-181G	GT**P**-331G	45
	4	GT**P**-181L	GT**P**-331L	65
	4 SOL	GT**P**-181K	GT**P**-331K	65

		Copper Clad Sectional (threaded) or Plain	Steel	
3/4"	2 SOL	GT**C**-181T	GT**C**-33IT	90
	2	GT**C**-181V	GT**C**-33IV	90
	1	GT**C**-181Y	GT**C**-331Y	90
	1/0	GT**C**-182C	GT**C**-332C	115
	1/0 SOL	GT**C**-182B	GT**C**-332B	115
	2/0	GT**C**-182G	GT**C**-332G	115
	3/0	GT**C**-182L	GT**C**-332L	115
	4/0	GT**C**-182Q	GT**C**-332Q	115
	250	GT**C**-182V	GT**C**-332V	150
	300	GT**C**-183A	GT**C**-333A	200
	350	GT**C**-183D	GT**C**-333D	200
	500	GT**C**-183Q	GT**C**-333Q	250
1"	CONTACT ERICO FOR ORDERING INFORMATION			

CABLE TO GROUND ROD GY



NOTE:
All "P" priced GY molds require B399ES frame. (Sold separately.)

CABLE TO GROUND ROD

- Through cable to side of ground rod.
- Concentric strand copper cable unless otherwise noted.
- Ground rods can be copper clad, galvanized, stainless clad or stainless steel.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps **L160** *for **E** Price Key Molds*
L159 *for **J** Price Key Molds*

*Frames included with **E** and **J** Price Key Molds.*
***B399ES** Frame required with **P** Price Key Molds*

Flint Ignitor **T320** *(Included with handle clamp or frame but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
File	T329
Cable Clamp	B265
Torch Head	T111

ACCESSORIES

See Section A

GROUND ROD SIZE	CABLE SIZE	MOLD PART NUMBER			WELD METAL
		Steel or Copper Clad Sectional (with 9/16" threads)	Copper Clad Plain (unthreaded)	Copper Clad Sectional (with 1/2" threads)	
1/2"	4 Str or Sol	GY**P**-14001M	GY**P**-15001M	GY**P**-13001M	65
	2 Str or Sol	GY**P**-14002M	GY**P**-15002M	GY**P**-13002M	65
	1 Str or Sol	GY**P**-14003M	GY**P**-15003M	GY**P**-13003M	65
	1/0	GY**E**-142C	GY**E**-152C	GY**E**-132C	115
	1/0 SOL	GY**E**-142B	GY**E**-152B	GY**E**-132B	115
	2/0	GY**E**-142G	GY**E**-152G	GY**E**-132G	115
	3/0	GY**E**-142L	GY**E**-152L	GY**E**-132L	150
	4/0	GY**E**-142Q	GY**E**-152Q	GY**E**-132Q	150
	250	GY**E**-142V	GY**E**-152V	GY**E**-132V	150
	300	GY**E**-143A	GY**E**-153A	GY**E**-133A	200

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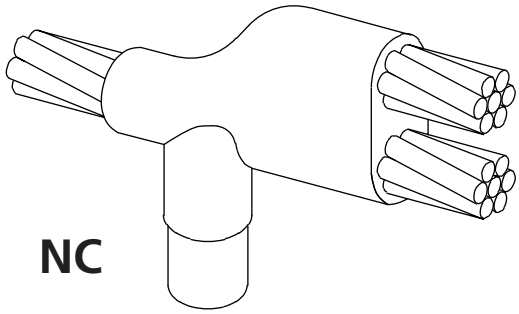
CABLE TO GROUND ROD GY

NOTE:
All "P" priced GY molds require B399ES frame. (Sold separately.)

GROUND ROD SIZE	CABLE SIZE	MOLD PART NUMBER		WELD METAL
		Copper Clad Sectional (threaded)	Steel	
5/8"	4 Str or Sol	GY**P**-16005M	GY**P**-31004M	65
	2 Str or Sol	GY**P**-16006M	GY**P**-31003M	65
	1 Str or Sol	GY**P**-16007M	GY**P**-31001M	65
	1/0	GY**E**-162C	GY**E**-312C	115
	1/0 SOL	GY**E**-162B	GY**E**-321B	115
	2/0	GY**E**-162G	GY**E**-312G	115
	3/0	GY**E**-162L	GY**E**-312L	150
	4/0	GY**E**-162Q	GY**E**-312Q	150
	250	GY**E**-162V	GY**E**-312V	150
	300	GY**E**-163A	GY**E**-313A	200
	350	GY**E**-163D	GY**E**-313D	250
	500	GY**J**-163Q	GY**J**-313Q	2-200
3/4"	4 Str or Sol	GY**P**-18010M	GY**P**-33011M	65
	2 Str or Sol	GY**P**-18009M	GY**P**-33010M	65
	1 Str or Sol	GY**P**-18007M	GY**P**-33008M	65
	1/0	GY**E**-182C	GY**E**-332C	115
	1/0 SOL	GY**E**-182B	GY**E**-332B	115
	2/0	GY**E**-182G	GY**E**-332G	115
	3/0	GY**E**-182L	GY**E**-332L	150
	4/0	GY**E**-182Q	GY**E**-332Q	150
	250	GY**E**-182V	GY**E**-332V	200
	300	GY**E**-183A	GY**E**-333A	250
	350	GY**J**-183D	GY**J**-333D	2-150
	500	GY**J**-183Q	GY**J**-333Q	500
1"	CONTACT ERICO FOR ORDERING INFORMATION			

CABLE TO GROUND ROD NC



TWO CABLES TO GROUND ROD

- Through cable plus tap cable to top of ground rod.
- Concentric stranded copper cables.
- For copper clad, galvanized, stainless clad, or stainless steel ground rods.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps **L160** *for **R** Price Key Molds*
L159 *for **F** Price Key Molds*

Flint Ignitor **T320** *(Included with Handle Clamp but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136B
Mold Cleaning Brush	T394
File	T329
Torch Head	T111

ACCESSORIES

See Section A

GROUND ROD SIZE	CABLE SIZE	MOLD PART NUMBER			WELD METAL
		Steel or Copper Clad Sectional (with 9/16" threads)	Copper Clad Plain (unthreaded)	Copper Clad Sectional (with 1/2" threads)	
1/2"	4	NC**R**-141L	NC**R**-151L	NC**R**-131L	90
	2	NC**R**-141V	NC**R**-151V	NC**R**-131V	90
	1	NC**R**-141Y	NC**R**-151Y	NC**R**-131Y	90
	1/0	NC**R**-142C	NC**R**-152C	NC**R**-132	115
	2/0	NC**R**-142G	NC**R**-152G	NC**R**-132G	150
	3/0	NC**R**-142L	NC**R**-152L	NC**R**-132L	200
	4/0	NC**R**-142Q	NC**R**-152Q	NC**R**-132Q	200

Ph: 1-800-677-9089
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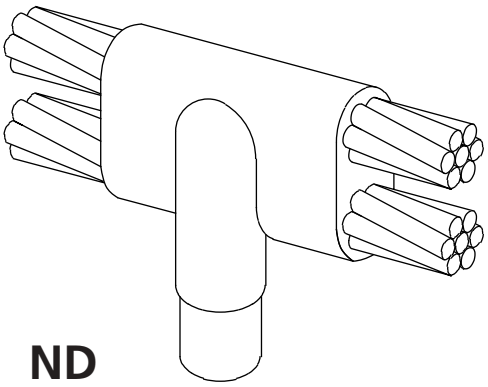
GROUND ROD SIZE	CABLE SIZE	MOLD PART NUMBER		WELD METAL
		Copper Clad Sectional (threaded) or Plain	Steel	
5/8"	4	NC**R**-161L	NC**R**-311L	90
	2	NC**R**-161V	NC**R**-311V	115
	1	NC**R**-161Y	NC**R**-311Y	115
	1/0	NC**R**-162C	NC**R**-312C	150
	2/0	NC**R**-162G	NC**R**-312G	200
	3/0	NC**R**-162L	NC**R**-312L	250
	4/0	NC**R**-162Q	NC**R**-312Q	250
	250	NC**F**-162V	NC**F**-312V	2-150
3/4"	4	NC**R**-181L	NC**R**-331L	90
	2	NC**R**-181V	NC**R**-331V	115
	1	NC**R**-181Y	NC**R**-331Y	115
	1/0	NC**R**-182C	NC**R**-332C	150
	2/0	NC**R**-182G	NC**R**-332G	200
	3/0	NC**R**-182L	NC**R**-332L	250
	4/0	NC**R**-182Q	NC**R**-332Q	250
	250	NC**F**-182V	NC**F**-332V	2-150
	300	NC**F**-183A	NC**F**-333A	2-200
	350	NC**F**-183D	NC**F**-333D	2-200
	500	NC**F**-183Q	NC**F**-333Q	3-200
1"	4	NC**R**-221L	NC**R**-371L	115
	2	NC**R**-221V	NC**R**-371V	150
	1	NC**R**-221Y	NC**R**-371Y	150
	1/0	NC**R**-222C	NC**R**-372C	200
	2/0	NC**R**-222G	NC**R**-372G	250
	3/0	NC**F**-222L	NC**F**-372L	2-150
	4/0	NC**F**-222Q	NC**F**-372Q	2-150
	250	NC**F**-222V	NC**F**-372V	2-200
	300	NC**F**-223A	NC**F**-373A	500
	350	NC**F**-223D	NC**F**-373D	500
	350	NC**F**-223Q	NC**F**-373D	3-250

CABLE TO GROUND ROD ND



ND

PARALLEL CABLES TO TOP OF GROUND ROD

- Two through cables to top of ground rod. Cables can be bent to form a “T” or “X”.
- Concentric strand copper cables listed.
- For copper clad, galvanized, stainless clad or stainless steel ground rods.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps **L160** *for **R** Price Key Molds*
L159 *for **F** Price Key Molds*

Flint Ignitor **T320** *(Included with handle clamp but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
File	T329
Torch Head	T111

ACCESSORIES

See Section A

GROUND ROD SIZE	CABLE SIZE	MOLD PART NUMBER			WELD METAL
		Steel or Copper Clad Sectional (with 9/16'' threads)	Copper Clad Plain (unthreaded)	Copper Clad Sectional (with 1/2'' threads)	
1/2"	4	ND**R**-141L	ND**R**-151L	ND**R**-131L	115
	2	ND**R**-141V	ND**R**-151V	ND**R**-131V	115
	1	ND**R**-141Y	ND**R**-151Y	ND**R**-131Y	115
	1/0	ND**R**-142C	ND**R**-152C	ND**R**-132C	150
	2/0	ND**R**-142G	ND**R**-152G	ND**R**-132G	200
	3/0	ND**R**-142L	ND**R**-152L	ND**R**-132L	250
	4/0	ND**R**-142Q	ND**R**-152Q	ND**R**-132Q	250

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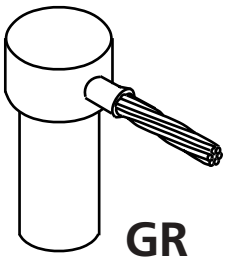
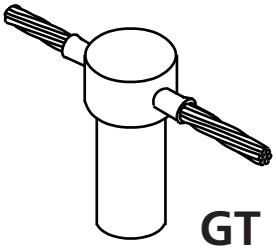
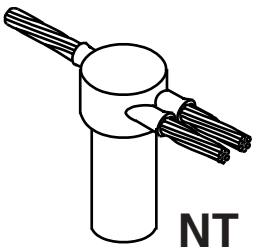
GROUND ROD SIZE	CABLE SIZE	MOLD PART NUMBER		WELD METAL
		Copper Clad Sectional (threaded) or Plain	Steel	
5/8"	4	ND**R**-161L	ND**R**-311L	115
	2	ND**R**-161V	ND**R**-311V	150
	1	ND**R**-161Y	ND**R**-311Y	150
	1/0	ND**R**-162C	ND**R**-312C	200
	2/0	ND**R**-162G	ND**R**-312G	250
	3/0	ND**F**-162L	ND**F**-312L	2-150
	4/0	ND**F**-162Q	ND**F**-312Q	2-150
	250	ND**F**-162V	ND**F**-312V	2-200
	300	ND**F**-163A	ND**F**-313A	500
	350	ND**F**-163D	ND**F**-313D	500
	500	ND**F**-163Q	ND**F**-313Q	3-250
3/4"	4	ND**R**-181L	ND**R**-331L	115
	2	ND**R**-181V	ND**R**-331V	150
	1	ND**R**-181Y	ND**R**-331Y	150
	1/0	ND**R**-182C	ND**R**-332C	200
	2/0	ND**R**-182G	ND**R**-332G	250
	3/0	ND**F**-182L	ND**F**-332L	2-150
	4/0	ND**F**-182Q	ND**F**-332Q	2-150
	250	ND**F**-182V	ND**F**-332V	2-200
	300	ND**F**-183A	ND**F**-333A	500
	350	ND**F**-183D	ND**F**-333D	500
	500	ND**F**-183Q	ND**F**-333Q	3-250
1"	4	ND**R**-221L	ND**R**-371L	150
	2	ND**R**-221V	ND**R**-371V	200
	1	ND**R**-221Y	ND**R**-371Y	200
	1/0	ND**R**-222C	ND**R**-372C	250
	2/0	ND**F**-222G	ND**F**-372G	2-150
	3/0	ND**F**-222L	ND**F**-372L	2-200
	4/0	ND**F**-222Q	ND**F**-372Q	2-200
	250	ND**F**-222V	ND**F**-372V	500
	300	ND**F**-223A	ND**F**-373A	3-200
	350	ND**F**-223D	ND**F**-373D	3-200

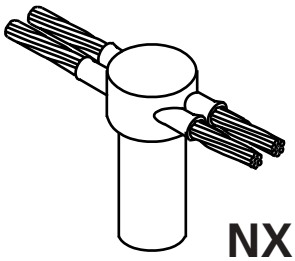
ONE-SHOT CABLE TO GROUND ROD

GR/GT/NT/NX









ONE-SHOT connections are available in standard packages of 12 each.

CABLE TO GROUND ROD USING CADWELD ONE-SHOT CONNECTIONS

For plain or threaded copper clad and galvanized steel or stainless steel rods. The CADWELD ONE-SHOT case is a ceramic disposable body replacing the familiar semi-permanent graphite mold and associated Handle Clamp. Everything required is included except the flint ignitor.

R.E.A. Accepted

NEC Approved

REQUIRED TOOLS

Flint Ignitor	**T320**

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
File	T329
Torch Head	T111

ACCESSORIES

See Section A

ONE-SHOT now available for cable to cable see page 1-9

GROUND ROD SIZE	CONDUCTOR Solid	CONDUCTOR Stranded	CONNECTOR PART NUMBER TYPE GR	TYPE GT	TYPE NT	TYPE NX
1/2"	6,8	8	GR1-141G	GT1-141G	NT1-141G	NX1-141G
	3,4	4,6	GR1-141L	GT1-141L	NT1-141L	NX1-141L
	1,2	2,3	GR1-141V	GT1-141V	NT1-141V	—
5/8"	6,8	8	GR1-161G	GT1-161G	NT1-161G	NX1-161G
	3,4	4,6	GR1-161L	GT1-161L	NT1-161L	NX1-161L
	1,2	2,3	GR1-161V	GT1-161V	NT1-161V	NX1-161V
	2/0, 1/0	1/0, 1	GR1-162C	GT1-162C	—	—
		2/0	GR1-162G	GT1-162G	—	—
		4/0	GR1-162Q	—	—	—
3/4"	6,8	8	GR1-181G	GT1-181G	NT1-181G	NX1-181G
	3,4	4,6	GR1-181L	GT1-181L	NT1-181L	NX1-181L
	1,2	2,3	GR1-181V	GT1-181V	NT1-181V	NX1-181V
	2/0, 1/0	1/0, 1	GR1-182C	GT1-182C	—	—
		2/0	GR1-182G	GT1-182G	—	—
		4/0	GR1-182Q	—	—	—

Ph: 1-800-677-9089
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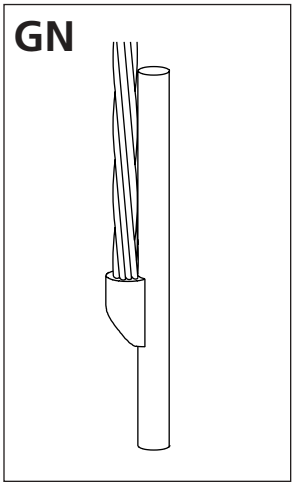
The Unbeatable CADWELD Connection Alternative To "Acorn" Mechanical Connections

Whether you're working in telecommunications, electric distribution or cable television, here's everything you need to make a permanent and reliable wire-to-ground rod connection at the lowest cost and with maximum convenience. The **CADWELD GN** Connection Kit contains all materials and necessary tools to make sixty CADWELD connections quickly, easily and inexpensively. With replacement mold and weld-metal kits, you can make hundreds more.

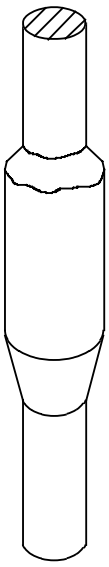
GN Connection Kit #	Application	Description
K220	#6 SOL to 1/2" copper-bonded ground rod	**Starter** kit *
K220R	#6 SOL to 1/2" copper-bonded ground rod	**Replacement** kit with Mold (GNT141G001M) and sixty #25 weld metal
K217	#6 SOL to 5/8" copper-bonded ground rod	**Starter** kit *
K217R	#6 SOL to 5/8" copper-bonded ground rod	**Replacement** kit with Mold (GNT161G001M) and sixty #25 weld metal
K222	#6 SOL to 3/4" copper-bonded ground rod	**Starter** kit *
K222R	#6 SOL to 3/4" copper-bonded ground rod	**Replacement** kit with Mold (GNT181G001M) and sixty #25 weld metal
K221	#4 SOL to 1/2" copper-bonded ground rod	**Starter** kit *
K221R	#4 SOL to 1/2" copper-bonded ground rod	**Replacement** kit with Mold (GNT141K001M) and sixty #25 weld metal
K218	#4 SOL to 5/8" copper-bonded ground rod	**Starter** kit *
K218R	#4 SOL to 5/8" copper-bonded ground rod	**Replacement** kit with Mold (GNT161K001M) and sixty #25 weld metal
K223	#4 SOL to 3/4" copper-bonded ground rod	**Starter** kit *
K223R	#4 SOL to 3/4" copper-bonded ground rod	**Replacement** kit with Mold (GNT181K001M) and sixty #25 weld metal



The **GN Connection Kit** can be specified for connecting #6 or #4 solid copper ground wire to 1/2", 5/8" or 3/4" ground rods.

*The **Starter Kit** includes mold, handle clamp, weld metal, flint ignitor and cleaning supplies in a carrying case.

GROUND ROD SPLICE GB



GB

GROUND ROD SPLICE

- CADWELD ground rod splices are very strong and use the proven corrosion resistant CADWELD connection.
- CADWELD ground rod splices are available for copper clad, galvanized, stainless or stainless clad ground rods.
- **Bold** letter in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps	**L160** for **C** Price Key Molds **L159** for **D** and **F** Price Key Molds.
Flint Ignitor	**T320** *(Included with handle clamp but also available separately)*
Ground Rod Splice Clamp	**B120**

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
File	T329
Torch Head	T111

ACCESSORIES

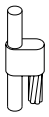
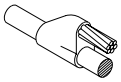
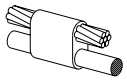
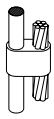
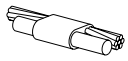
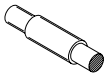
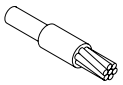
See Section A

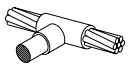
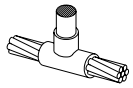
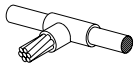
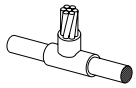
GROUND ROD SIZE	GROUND ROD TYPE	MOLD PART NO.	WELD METAL
1/2"	Steel or Copper clad sectional (9/16" threads)	HDGB**C**-14	250
	Copper clad plain (unthreaded)	HDGB**C**-15	250
	Copper clad sectional (with 1/2" threads)	HDGB**C**-13	250
5/8"	Copper clad; 0.563" diameter Fits both plain and sectional (threaded) rods	HDGB**D**-16	2-150
	0.625" diameter Stainless, stainless clad, galvanized, etc.	HDGB**D**-31	2-150
3/4"	Copper clad; 0.682" diameter Fits both plain and sectional (threaded) rods	HDGB**D**-18	2-200
	0.750" diameter Stainless, stainless clad, galvanized, etc.	HDGB**D**-33	2-200
1"	Copper clad; 0.914" diameter Fits both plain and sectional (threaded) rods	HDGB**F**-22	3-250
	1.000" diameter Stainless, stainless clad, galvanized, etc.	HDGB**F**-37	3-250

Ph: 1-800-677-9089
www.erico.com

OTHER CABLE TO GROUND ROD CONNECTIONS

The connections shown below are for use only where connections shown in this catalog are not suitable.

NAME	TYPE		EASE	SPLIT
Parallel Tap	GQ		3	V
	GS		1	V
Parallel Thru	DQ		1	V
	GP		3	V
	GW		1	V
Splice	GD		3	V
	GE		1	V
	GF		1	V
	GV		1	V

NAME	TYPE		EASE	SPLIT
Tee	GG		1	*
	GH		3	V
	GJ		1	*
	GK		3	V
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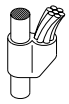
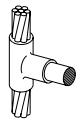
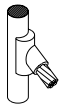
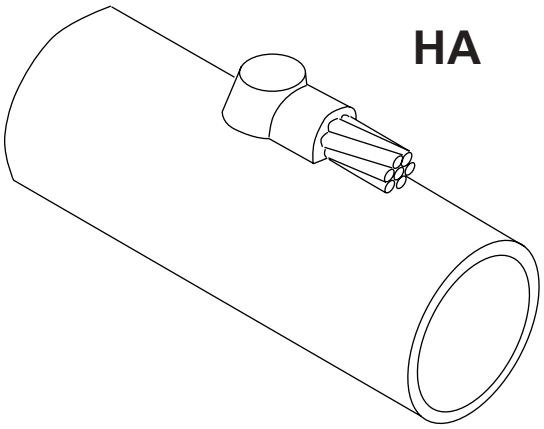
	GN		2	V
	GX		3	V
Y - 45° Tap	VW		2	V

NOTES...

RANGE OF HORIZONTAL STEEL PIPES HA



HA - Cable to Horizontal Steel Pipe

RANGE OF HORIZONTAL STEEL PIPES

- Horizontal copper conductor to top of horizontal steel pipe.
- CADWELD also has a complete product line for cathodic protection connections. See Bulletin CA1A.
- **A test weld should be made to check the possibility of burn through on thin sections or thin wall pipe.**
- When only one pipe size is involved, see Cable to Steel Pipe table on previous page.
- Concentric stranded copper cable listed.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handles	*Handle is included with **A** and **H** Price Key Molds*
Flint Ignitor	**T320** *(Included with handle clamp but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Rasp	T321
Torch Head	T111

ACCESSORIES

See Section A

CABLE SIZE	Nominal Pipe Size	MOLD PART NO.	WELD METAL
4	1 1/4" to 2" Pipe 3" to 4" Pipe 6" to 8" Pipe 10" to 12" Pipe 14" Pipe or Larger	HA**A**-1L-162C HA**A**-1L-350C HA**A**-1L-7C HA**A**-1L-11C (1)	45 45 45 45
2	1 1/4" to 2" Pipe 3" to 4" Pipe 6" to 8" Pipe 10" to 12" Pipe 14" Pipe or Larger	HA**A**-1V-162C HA**A**-1V-350C HA**A**-1V-7C HA**A**-1V-11C (1)	45 45 45 45
2 SOL	1 1/4" to 2" Pipe 3" to 4" Pipe 6" to 8" Pipe 10" to 12" Pipe 14" Pipe or Larger	HA**A**-1T-162C HA**A**-1T-350C HA**A**-1T-7C HA**A**-1T-11C (1)	45 45 45 45
1	2 1/2" to 4" Pipe 6" to 8" Pipe 10" to 12" Pipe 14" Pipe or Larger	HA**A**-1Y-325C HA**A**-1Y-7C HA**A**-1Y-11C (1)	65 65 65

(1) Use flat surface mold part number. See page 3-5.

CABLE SIZE	Nominal Pipe Size	MOLD PART NO.	WELD METAL
1/0	3" to 4" Pipe 6" to 10" Pipe 12" to 28" Pipe 30" Pipe or Larger	HA**H**-2C-350C HA**H**-2C-8C HA**H**-2C-20C (1)	90 90 90
2/0	3" to 4" Pipe 6" to 10" Pipe 12" to 28" Pipe 30" Pipe or Larger	HA**H**-2G-350C HA**H**-2G-8C HA**H**-2G-20C (1)	90 90 90
3/0	3" to 4" Pipe 6" to 10" Pipe 12" to 28" Pipe 30" Pipe or Larger	HA**H**-2L-350C HA**H**-2L-8C HA**H**-2L-20C (1)	115 115 115
4/0	3" to 4" Pipe 6" to 10" Pipe 12" to 28" Pipe 30" Pipe or Larger	HA**H**-2Q-350C HA**H**-2Q-8C HA**H**-2Q-20C (1)	115 115 115

(1) Use flat surface mold part number. See page 3-5.

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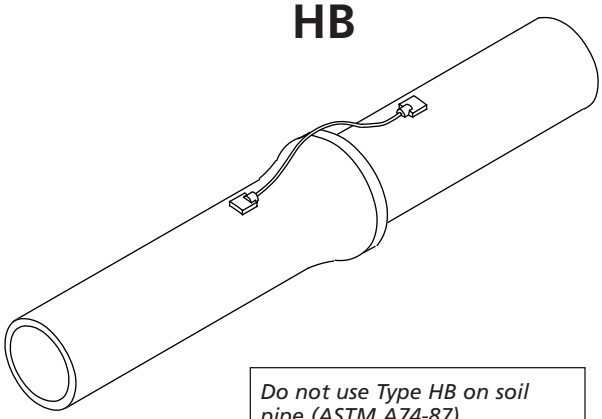
HB



Do not use Type HB on soil pipe (ASTM A74-87)

Note: DUCTILE IRON

Tests by ERICO indicate that connections to most ductile iron pipe can be made using the CADWELD molds and weld metal designated to be used on steel pipe.

However, some reports from the field suggest that all ductile iron is not the same. In such cases, the molds and weld material for cast iron do work.

We therefore suggest:

1. Whenever possible, make tests on the ductile iron pipe being used to determine if the material for steel can be used.

– OR –

2. Use the molds and weld metal designed for cast iron. It will make satisfactory connections on all ductile iron.

HORIZONTAL CAST IRON SURFACE

- **NOT FOR USE ON STEEL PIPE**
- CADWELD cable connections to horizontal flat cast iron surface; cable to top of horiziontal cast iron pipe.
- **A test weld should be made on a section of the pipe being used to determine possibility of detrimental metallurgical effects.**
- Concentric stranded copper cable unless otherwise noted.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handles	*Handle is included with **A** Price Key Molds*
Flint Ignitor	**T320** *(Included with handle clamp but also available separately)*

SUGGESTED TOOLS

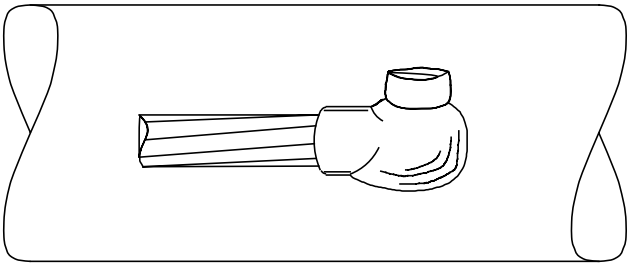
Cable Cleaning Brush	T313 or T314
Rasp	T321
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Torch Head	T111

ACCESSORIES

See Section A

CONDUCTOR SIZE	SURFACE	Mold Part No.	WELD METAL
8 Solid or Stranded, 6 Solid	Flat 4" to 24" Pipe	HB**A**-1G HB**A**-1G-P.S.*	25XF-19 25XF-19
6 Stranded	Flat 4" to 24" Pipe	HB**A**-1H HB**A**-1H-P.S.*	25XF-19 25XF-19
4 Solid	Flat 4" to 24" Pipe	HB**A**-1K HB**A**-1K-P.S.*	45XF-19 45XF-19
4 Stranded	Flat 4" to 24" Pipe	HB**A**-1L HB**A**-1L-P.S.*	45XF-19 45XF-19
2 Solid	Flat 4" to 24" Pipe	HB**A**-1T HB**A**-1T-P.S.*	45XF-19 45XF-19
2 Stranded	Flat 4" to 24" Pipe	HB**A**-1V HB**A**-1V-P.S.*	45XF-19 45XF-19
1 Stranded	Flat 4" to 24" Pipe	HB**A**-1Y HB**A**-1Y-P.S.*	65XF-19 65XF-19

*Specify nominal pipe size, i.e., HBA1G-6 for 6" pipe.
Use flat surface mold part number for pipes larger than 24 inches.



VN
Rignt hand shown - RH

VERTICAL STEEL SURFACE

- Conductor to vertical flat steel surface or cable to the side of horizontal steel pipe.
- Concentric stranded copper cable is listed.
- **A test weld should be made to check the possibility of burn through on thin sections or thin wall pipe.**
- Cable to vertical side of horizontal steel pipe. Add right or left hand and nominal pipe size to flat surface mold part number.

  Example: VNC-2G-LH-4 - weld on left end of conductor, 4" pipe, 2/0 stranded conductor.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps **L160** *for **C** Price Key Molds*

Flint Ignitor **T320** *(Included with handle clamp but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Rasp	T321
Torch Head	T111

ACCESSORIES

See Section A

TYPE VN

CABLE SIZE	MOLD PART NO.	WELD METAL
6*	VN**C**-1H	45
4	VN**C**-1L	45
2 SOL	VN**C**-1T	65
2	VN**C**-1V	45
1	VN**C**-1Y	65
1/0	VN**C**-2C	90
2/0	VN**C**-2G	90
3/0	VN**C**-2L	115
4/0	VN**C**-2Q	115
250	VN**C**-2V	115
300	VN**C**-3A	150
350	VN**C**-3D	200
500	VN**C**-3Q	200

*Requires B112 sleeve (1 per weld)

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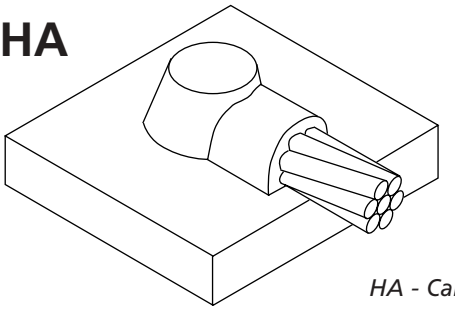
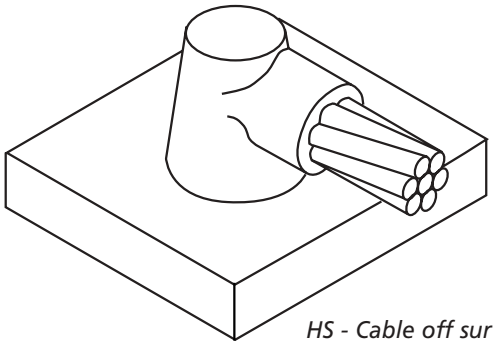
HA



HA - Cable on surface

HS



HS - Cable off surface

HORIZONTAL STEEL SURFACE

- Horizontal concentric copper conductor to flat steel surface or top of horizontal pipe
- CADWELD also has a complete product line for cathodic protection connections. See Bulletin CA1A.
- **A test weld should be made to check the possibility of burn through on thin sections or thin wall pipe.**
- Concentric stranded copper cable listed.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps	**L160** *for **C** Price Key Molds* **L159** *for **D** Price Key Molds* *Handles are included with **A** Price Key Molds*
Flint Ignitor	**T320** *(Included with handle clamp or frame but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Cable Clamp	B265
Torch Head	T111

ACCESSORIES

See Section A

TYPE HA

CABLE SIZE	MOLD PART NO.	WELD METAL
6*	HA**A**-1H	45
4	HA**A**-1L	45
2 SOL	HA**A**-1T	45
2	HA**A**-1V	45
1	HA**A**-1Y	65

TYPE HS

CABLE SIZE	MOLD PART NO.	WELD METAL
1/0	HS**C**-2C	90
2/0	HS**C**-2G	90
3/0	HS**C**-2L	115
4/0	HS**C**-2Q	115
250	HS**C**-2V	115
300	HS**C**-3A	150
350	HS**C**-3D	200
500	HS**C**-3Q	200
750	HS**D**-4L	2-150
1000	HS**D**-4Y	2-200

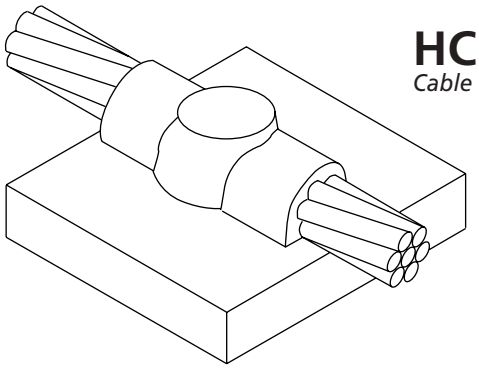
*Requires B112 sleeve (1 per weld)

Cable to Steel Pipe (Types **HA** and **HS**) –
Use flat surface mold part number with suffix.

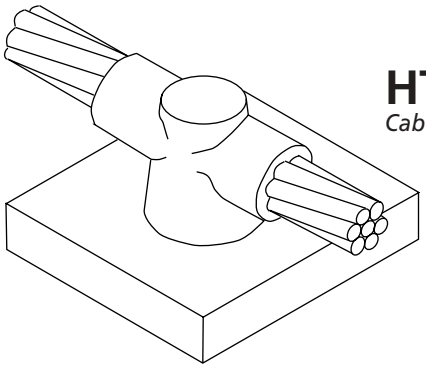
Cable	Nominal Pipe Size	Suffix
#1 and Smaller	12" and smaller	Nominal Pipe Size
	14" and larger	None
1/0 thru 250	28" and smaller	Nominal Pipe Size
	30" and larger	None

Example: #1 cable to 3-1/2" pipe, HA**A**-1Y-3.50

For welds to copper surface, see section 5



HC
Cable on surface



HT
Cable off surface

HORIZONTAL STEEL SURFACE

- Cable to horizontal flat steel surface or cable to top of horizontal steel pipe.
- CADWELD also has a complete product line for cathodic protection connections. See Bulletin CA1A.
- Concentric stranded copper cable listed.
- **A test weld should be made to check the possibility of burn through on thin sections or thin wall pipe.**
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps	**L160** *for **C** Price Key Molds* **L159** *for **D** Price Key Molds* *Handles are included with **A** Price Key Molds*
Flint Ignitor	**T320** *(Included with handle clamp or frame but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Rasp	T321
Torch Head	T111

ACCESSORIES

See Section A

TYPE HC

CABLE SIZE	MOLD PART NO.	WELD METAL
6*	HC**A**-1H	45
4	HC**A**-1L	45
2 SOL	HC**A**-1T	45
2	HC**A**-1V	45
1	HC**A**-1Y	65

TYPE HT

CABLE SIZE	MOLD PART NO.	WELD METAL
1/0	HT**C**-2C	90
2/0	HT**C**-2G	115
3/0	HT**C**-2L	115
4/0	HT**C**-2Q	150
250	HT**C**-2V	150
300	HT**C**-3A	200
350	HT**C**-3D	250
500	HT**D**-3Q	2-150

*Requires B112 sleeve (2 per weld)

Cable to Horizontal Steel Pipe (Types **HC** and **HT**) –
Use flat surface mold part number with suffix.

Cable	Nominal Pipe Size	Suffix
#1 and Smaller	12" and smaller	Nominal Pipe Size
	14" and larger	None
1/0 thru 250	28" and smaller	Nominal Pipe Size
	30" and larger	None

Example: #1 cable to 6" pipe, HC**A**-1Y-6

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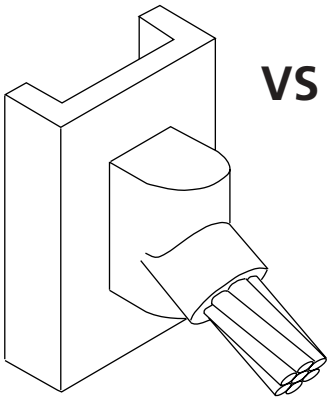
VERTICAL STEEL SURFACE VS



VERTICAL STEEL SURFACE

- Cable down at 45° to vertical steel surface including pipe.
- Cable to vertical flat steel surface; cable to side of vertical or horizontal steel pipe.
- CADWELD also has a complete product line for cathodic protection connections. See Bulletin CA1A.
- Concentric stranded copper cable listed.
- **A test weld should be made to check the possibility of burn through on thin sections or thin wall pipe.**
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps	**L160** *for **C** Price Key Molds* **L159** *for **D** Price Key Molds*
Flint Ignitor	**T320** *(Included with handle clamp but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Rasp	T321
Torch Head	T111

ACCESSORIES

See Section A

TYPE VS

CABLE SIZE	MOLD PART NO.	WELD METAL
6*	VS**C**-1H	45
4	VS**C**-1L	45
2 SOL	VS**C**-1T	45
2	VS**C**-1V	45
1	VS**C**-1Y	65
1/0	VS**C**-2C	90
2/0	VS**C**-2G	90
3/0	VS**C**-2L	115
4/0	VS**C**-2Q	115
250	VS**C**-2V	115
300	VS**C**-3A	150
350	VS**C**-3D	200
500	VS**C**-3Q	200
750	VS**D**-4L	2-150
1000	VS**D**-4Y	2-200

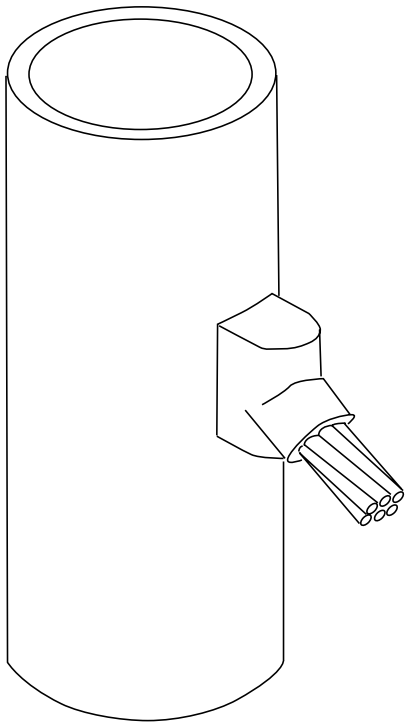
*Requires B112 sleeve (1 per weld)

Cable to Vertical Steel Pipe –
Use flat surface mold part number; add **V** and suffix.

Cable	Nominal Pipe Size	Suffix
#6 thru 250	30" and smaller	Nominal Pipe Size
	32" and larger	None

Example: 4/0 to 4" pipe, VS**C**-2Q-V4

Cable to horizontal steel pipe –
Add **H** and nominal pipe size to flat surface mold number.
Example: 2/0 to 8" pipe, VS**C**-2G-H8



VS

RANGE OF VERTICAL PIPES

- Cable down at 45° to range of vertical steel pipes.
- CADWELD also has a complete product line for cathodic protection connections. See Bulletin CA1A.
- **A test weld should be made to check the possibility of burn through on thin sections or thin wall pipe.**
- When only one pipe size rather than a range of sizes is involved, see Cable to Steel Pipe Table on previous page.
- Concentric stranded copper cable is listed.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps **L160** *or* **B160V** *(chain support handle clamp) for* ***C*** *Price Key Mold*

Flint Ignitor **T320** *(Included with handle clamp but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Rasp	T321
Torch Head	T111

ACCESSORIES

See Section A

CABLE SIZE	Nominal Pipe Size	MOLD PART NO.	WELD METAL
4	1 1/2" to 4" Pipe	VS**C**-1L-V3C	45
	4" to 6" Pipe	VS**C**-1L-V5C	45
	6" to 10" Pipe	VS**C**-1L-V8C	45
	12" to 30" Pipe	VS**C**-1L-V21C	45
	32" Pipe or Larger	(1)	
2 SOL	1 1/2" to 4" Pipe	VS**C**-1T-V3C	45
	4" to 6" Pipe	VS**C**-1T-V5C	45
	6" to 10" Pipe	VS**C**-1T-V8C	45
	12" to 30" Pipe	VS**C**-1T-V21C	45
	32" Pipe or Larger	(1)	
	1 1/2" to 4" Pipe (cable **up** at 45°)	VF**C**-1T-002V3C	45
2	1 1/2" to 4" Pipe	VS**C**-1V-V3C	45
	4" to 6" Pipe	VS**C**-1V-V5C	45
	6" to 10" Pipe	VS**C**-1V-V8C	45
	12" to 30" Pipe	VS**C**-1V-V21C	45
	32" Pipe or Larger	(1)	
1	2" to 4" Pipe	VS**C**-1Y-V3C	65
	4" to 6" Pipe	VS**C**-1Y-V5C	65
	6" to 10" Pipe	VS**C**-1Y-V8C	65
	12" to 30" Pipe	VS**C**-1Y-V21C	65
	32" Pipe or Larger	(1)	

(1) Use flat surface mold part number. See page 3-7.

CABLE SIZE	Nominal Pipe Size	MOLD PART NO.	WELD METAL
1/0	2" to 4" Pipe	VS**C**-2C-V3C	90
	4" to 6" Pipe	VS**C**-2C-V5C	90
	6" to 10" Pipe	VS**C**-2C-V8C	90
	12" to 30" Pipe	VS**C**-2C-V21C	90
	32" Pipe or Larger	(1)	
2/0	2" to 4" Pipe	VS**C**-2G-V3C	90
	4" to 6" Pipe	VS**C**-2G-V5C	90
	6" to 10" Pipe	VS**C**-2G-V8C	90
	12" to 30" Pipe	VS**C**-2G-V21C	90
	32" Pipe or Larger	(1)	
3/0	2" to 4" Pipe	VS**C**-2L-V3C	115
	4" to 6" Pipe	VS**C**-2L-V5C	115
	6" to 10" Pipe	VS**C**-2L-V8C	115
	12" to 30" Pipe	VS**C**-2L-V21C	115
	32" Pipe or Larger	(1)	
4/0	2" to 4" Pipe	VS**C**-2Q-V3C	115
	4" to 6" Pipe	VS**C**-2Q-V5C	115
	6" to 10" Pipe	VS**C**-2Q-V8C	115
	12" to 30" Pipe	VS**C**-2Q-V21C	115
	32" Pipe or Larger	(1)	

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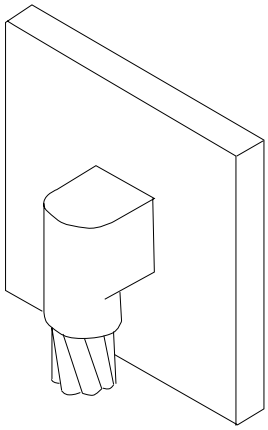
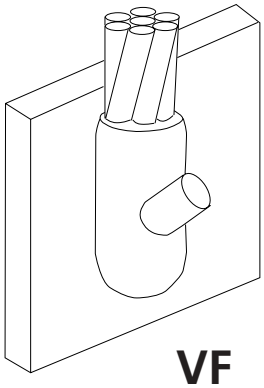


VB
Cable down to vertical steel surface



VF
Cable up to vertical steel surface

VERTICAL STEEL SURFACE

- Connection of vertical cable to vertical flat steel surface or to side of vertical or horizontal steel pipe.
- **A test weld should be made to check the possibility of burn through on thin sections or thin wall pipe.**
- Concentric stranded copper cable listed.
- Cable to steel pipe. Add pipe orientation and nominal pipe size to flat surface mold part number. Examples: VFC-2G-V6, 2/0 conductor to vertical 6" pipe.
  VFC-1Y-H4, #1 conductor to horizontal 4" pipe
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps	**L160** *for **C** and **R** Price Key Molds* **L159** *for **F** Price Key Molds*
Flint Ignitor	**T320** *(Included with handle clamp but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Rasp	T321
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Torch Head	T111

ACCESSORIES

See Section A

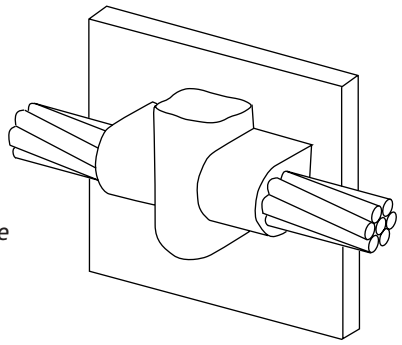
TYPE VB

CABLE SIZE	MOLD PART NO.	WELD METAL
4	VB**C**-1L	65
2 SOL	VB**C**-1T	65
2	VB**C**-1V	65
1	VB**C**-1Y	90
1/0	VB**C**-2C	115
2/0	VB**C**-2G	115
3/0	VB**C**-2L	150
4/0	VB**C**-2Q	150
250	VB**C**-2V	200
300	VB**C**-3A	200
350	VB**C**-3D	250
500	VB**R**-3Q	2-150

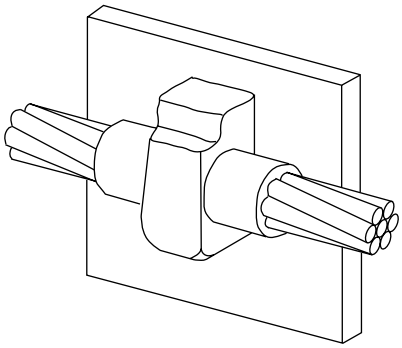
TYPE VF*

CABLE SIZE	MOLD PART NO.	WELD METAL
4	VF**C**-1L	65
2 SOL	VF**C**-1T	65
2	VF**C**-1V	65
1	VF**C**-1Y	90
1/0	VF**C**-2C	150
2/0	VF**C**-2G	150
3/0	VF**R**-2L	200
4/0	VF**R**-2Q	200
250	VF**R**-2V	200
300	VF**R**-3A	250
350	VF**F**-3D	2-150
500	VF**F**-3Q	2-200

*See VF connection to pipe on page 3-8



VG
Cable on surface



VT
Cable off surface

VERTICAL STEEL SURFACE

- CADWELD through connections to vertical flat steel surface; cable to vertical side of horizontal pipe (Type VG only); cable to vertical steel pipe (Type VT only).
- **A test weld should be made to check the possibility of burn through on thin sections or thin wall pipe.**
- Concentric stranded copper cable is listed.
- Cable to steel pipe. Add nominal pipe size to flat surface mold part number. Examples: Horizontal Pipe, Use Type VG, add nominal pipe size suffix, for 2/0 to 6 in. pipe, VGC-2G-6, for Vertical Pipe, Use Type VT, add nominal pipe size suffix, Example for 1/0 to 4 in. pipe, VTC-2C-4
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps L160 *for **C** Price Key Molds*

Flint Ignitor **T320** *(Included with handle clamp but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Rasp	T321
Torch Head	T111

ACCESSORIES

See Section A

TYPE VG

CABLE SIZE	MOLD PART NO.	WELD METAL
6*	VG**C**-1H	45
4	VG**C**-1L	45
2 SOL	VG**C**-1T	45
2	VG**C**-1V	45
1	VG**C**-1Y	65
1/0	VG**C**-2C	115
2/0	VG**C**-2G	115
3/0	VG**C**-2L	150
4/0	VG**C**-2Q	150
250	VG**C**-2V	150

*Requires B112 sleeve (2 per weld)

TYPE VT

CABLE SIZE	MOLD PART NO.	WELD METAL
6*	VT**C**-1H	65
4	VT**C**-1L	65
2 SOL	VT**C**-1T	65
2	VT**C**-1V	65
1	VT**C**-1Y	90
1/0	VT**C**-2C	115
2/0	VT**C**-2G	115
3/0	VT**C**-2L	150
4/0	VT**C**-2Q	150
250	VT**C**-2V	150

*Requires B112 sleeve (2 per weld)

Ph: 1-800-677-9089
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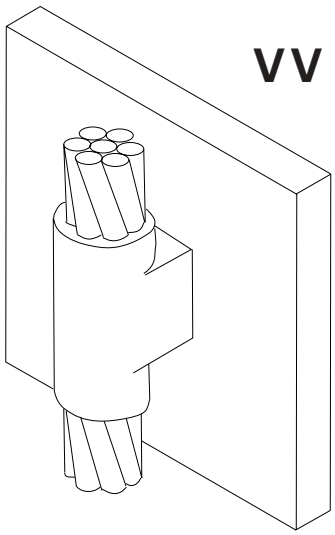


VERTICAL STEEL SURFACE

- Through connections to vertical flat surface or to side of vertical or horizontal steel pipe.
- **A test weld should be made to check the possibility of burn through on thin sections or thin wall pipe.**
- Concentric stranded copper cable is listed.
- Cable to steel pipe. Add pipe orientation and nominal pipe size to flat surface mold part number. Examples: VVR-2G-V6, 2/0 conductor to vertical 6" pipe;
  VVR-1V-H6, #2 to horizontal 6" pipe
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps **L160** *for **C** and **R** Price Key Molds*

Flint Ignitor **T320** *(Included with handle clamp but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Rasp	T321
Slag Removal Spade	B136B
Mold Cleaning Brush	T394
Torch Head	T111

ACCESSORIES

See Section A

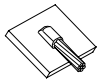
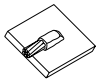
TYPE VV

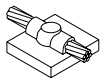
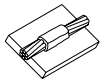
CABLE SIZE	MOLD PART NO.	WELD METAL
6*	VV**C**-1H	90
4	VV**C**-1L	90
2 SOL	VV**C**-1T	115
2	VV**C**-1V	115
1	VV**C**-1Y	115
1/0	VV**R**-2C	200
2/0	VV**R**-2G	200
3/0	VV**R**-2L	250
4/0	VV**R**-2Q	250
250	VV**R**-2V	250

*Requires B112 sleeve (2 per weld)

OTHER CABLE TO STEEL OR CAST IRON

The connections shown below are for use only where connections shown in this catalog are not suitable.

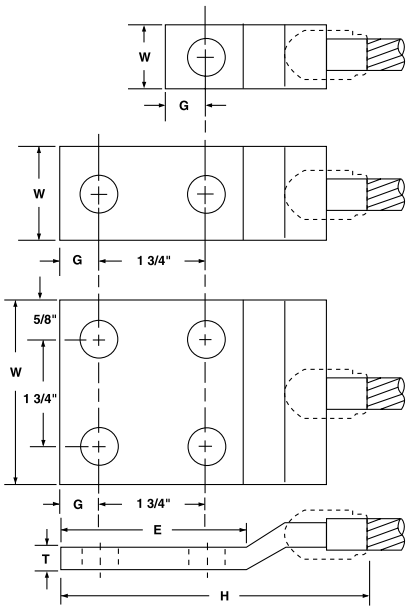
NAME	TYPE		EASE	SPLIT
Tap Cast Iron	VH		1	V
	VJ		1	V
	VK		1	V
	VL		1	V
	VR		1	V
Tap Steel	HF		1	*
	HG		2	*

NAME	TYPE		EASE	SPLIT
Tap Steel	VA		1	V
	VC		1	V
	VE		2	V
Thru Cast Iron	HE		1	*
Thru Steel	HH		2	*
	HJ		2	*
	HK		1	V
	VX		2	V

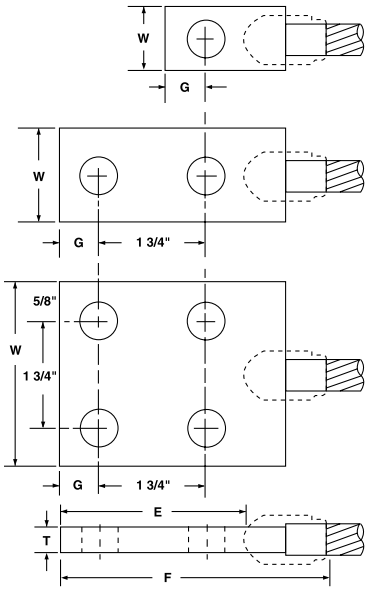
Ph: 1-800-677-9089
www.erico.com

CABLE TO LUGS AND PREFABRICATED LUG ASSEMBLIES

SECTION 4



LA *Offset Lug*



LA *Straight Lug*

LUGS FOR TYPE LA LUG CONNECTIONS

NEMA lugs for Type LA connections are made from electrolytic grade copper bar stock to provide an efficient bolting surface for grounding and power applications. All listed lugs are tin plated. Telephone type lugs also available. Contact ERICO.

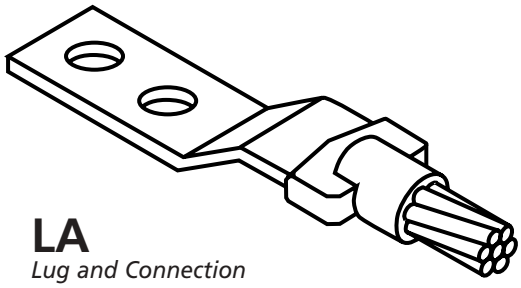
For sizes not listed or for 45° or 90° lugs, contact ERICO.

Lug Size	No. of Holes	Bolt Size	LA Lug Part No. Straight	LA Lug Part No. Offset	Dimensions in Inches T	W	G	E	F*	H*	Size in Kcmil
1/8 x 1	1	3/8	B-101-CE	B-101-CE-OL	1/8	1	1/2	7/8	2-3/8	3-1/8	159
	2	1/2	B-102-CE	B-102-CE-OL	1/8	1	5/8	3	4-1/2	5-1/4	159
3/16 x 1	1	1/2	B-101-DE	B-101-DE-OL	3/16	1	9/16	1-1/8	2-7/8	3-5/8	239
	2	1/2	B-102-DE	B-102-DE-OL	3/16	1	5/8	3	4-3/4	5-1/2	239
	2**	3/8		B-103-DE-OL	3/16	1	7/16	1-7/8		4-3/8	239
1/4 x 1	1	1/2	B-101-EE	B-101-EE-OL	1/4	1	5/8	1-1/8	3	3-5/8	318
	2	1/2	B-102-EE	B-102-EE-OL	1/4	1	5/8	3	4-7/8	5-5/8	318
1/4 x 1-1/2	1	5/8	B-101-EG	B-101-EG-OL	1/4	1-1/2	3/4	1-1/2	3	4-1/8	478
	2	1/2	B-102-EG	B-102-EG-OL	1/4	1-1/2	5/8	3	4-7/8	5-5/8	478
1/4 x 2	2	1/2	B-102-EH	B-102-EH-OL	1/4	2	5/8	3	5-1/4	6	637
3/8 X 1-1/2	1	5/8	B-101-GG	B-101-GG-OL	3/8	1-1/2	3/4	1-1/2	3-3/4	4-3/4	716
	2	1/2	B-102-GG	B-102-GG-OL	3/8	1-1/2	5/8	3	5-3/4	7	716
3/8 X 2	1	5/8	B-101-GH	B-101-GH-OL	3/8	2	1	2-1/8	4-3/8	5-5/8	955
	2	1/2	B-102-GH	B-102-GH-OL	3/8	2	5/8	3	5-3/4	7	955
1/2 X 2	2	1/2	B-102-JH	B-102-JH-OL	1/2	2	5/8	3	5-3/4	7	1374
1/4 x 3	4	1/2	B-104-EK	B-104-EK-OL	1/4	3	5/8	3	5-1/2	6-1/4	955
3/8 X 3	4	1/2	B-104-GK	B-104-GK-OL	3/8	3	5/8	3	6	7	1432
1/2 X 3	4	1/2	B-104-JK	B-104-JK-OL	1/2	3	5/8	3	6-1/4	7-1/4	1910

* Approximate

** Non-NEMA drillings. Two holes for 3/8" screws on 1" centers. For use with B-161-2Q CADWELD Ground Plate.

Ph: 1-800-677-9089
www.erico.com



LA
Lug and Connection

COPPER LUGS

- Cable to lug or busbar connections. Can be either field fabricated from copper busbar or factory-made lugs. Ideal for power applications. Connection must be made with cable and lug horizontal.
- Concentric stranded copper cable is listed.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps **L160** *for **C** Price Key Molds*
L159 *for **D** Price Key Molds*

Flint Ignitor **T320** *(Included with handle clamp but also available separately)*

SUGGESTED TOOLS

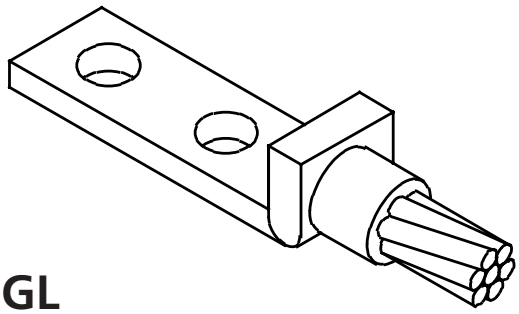
Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Torch Head	T111

ACCESSORIES

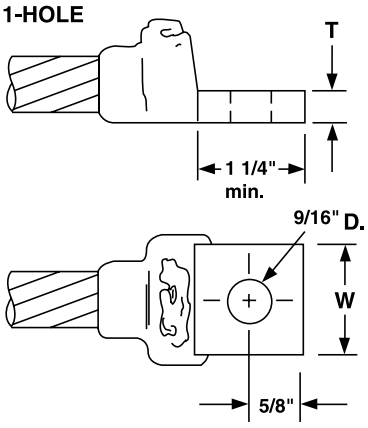
See Section A

CABLE SIZE	BUS OR LUG SIZE	MOLD PART NUMBER	WELD METAL
4	1/8 x 1	LA**C-**1LCE	45
2 SOL	1/8 x 1	LA**C**-1TCE	45
2	1/8 x 1	LA**C**-1VCE	45
1	1/8 x 1	LA**C**-1YCE	45
1/0	1/8 x 1	LA**C**-2CCE	45
	3/16 x 1	LA**C**-2CDE	65
	1/4 x 1	LA**C**-2CEE	65
2/0	1/8 x 1	LA**C**-2GCE	65
	3/16 x 1	LA**C**-2GDE	65
	1/4 x 1	LA**C**-2GEE	65
3/0	1/8 x 1	LA**C**-2LCE	65
	3/16 x 1	LA**C**-2LDE	90
	1/4 x 1	LA**C**-2LEE	90
4/0	3/16 x 1	LA**C**-2QDE	90
	1/4 x 1	LA**C**-2QEE	90
	1/4 x 1 1/2	LA**C**-2QEG	90
	1/4 x 2	LA**C**-2QEH	90
	1/4 x 3	LA**C**-2QEK	90
250	3/16 x 1	LA**C**-2VDE	90
	1/4 x 1	LA**C**-2VEE	90
	1/4 x 1 1/2	LA**C**-2VEG	90
	1/4 x 2	LA**C**-2VEH	90
	1/4 x 3	LA**C**-2VEK	90
300	1/4 x 1	LA**C**-3AEE	90
	1/4 x 1 1/2	LA**C**-3AEG	90
	1/4 x 2	LA**C**-3AEH	90
	1/4 x 3	LA**C**-3AEK	90
350	1/4 x 1	LA**C**-3DEE	115
	1/4 x 1 1/2	LA**C**-3DEG	115
	1/4 x 2	LA**C**-3DEH	115
	1/4 x 3	LA**C**-3DEK	115
500	1/4 x 1 1/2	LA**C**-3QEG	200
	1/4 x 2	LA**C**-3QEH	200
	1/4 x 3	LA**C**-3QEK	200
	3/8 x 1 1/2	LA**C**-3QGG	200
750	1/4 x 2	LA**D**-4LEH	2-150
	1/4 x 3	LA**D**-4LEK	2-150
	3/8 x 1 1/2	LA**D**-4LGG	2-150
	3/8 x 2	LA**D**-4LGH	2-150
	3/8 x 3	LA**D**-4LGK	2-150
1000	1/4 x 3	LA**D**-4YEK	2-200
	3/8 x 2	LA**D**-4YGH	2-200
	3/8 x 3	LA**D**-4YGK	2-200
	1/2 x 2	LA**D**-4YJH	500
	1/2 x 3	LA**D**-4YJK	500

See Pg 4-2 for Lugs.



GL
Lug and Connection



NEMA Drilled Lugs-B-121 Series

All lugs are tin-plated copper.
Pat. No. 4,196,960

COPPER LUGS

- Lugs and connections for equipment and structures. Ideal for power applications.
- Concentric stranded copper cable is listed.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps **L160** *for **C** Price Key Molds*

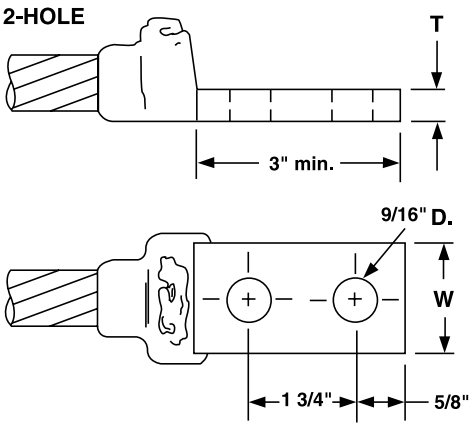
Flint Ignitor **T320** *(Included with handle clamp but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Torch Head	T111

ACCESSORIES

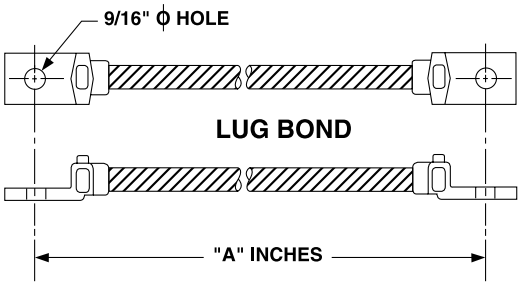
See Section A



NEMA Drilled Lugs-B-122 Series

CABLE SIZE	MOLD NUMBER	WELD METAL	LUG SIZE T X W	GL LUG NUMBER 1 HOLE	2 HOLES
4	GL**C**-CE1L	32	1/8 x 1	B-121-CE	B-122-CE
2 SOL	GL**C**-CE1T	32	1/8 x 1	B-121-CE	B-122-CE
2	GL**C**-CE1V	32	1/8 x 1	B-121-CE	B-122-CE
1	GL**C**-CE1Y	32	1/8 x 1	B-121-CE	B-122-CE
1/0	GL**C**-CE2C	45	1/8 x 1	B-121-CE	B-122-CE
2/0	GL**C**-CE2G	45	1/8 x 1	B-121-CE	B-122-CE
3/0	GL**C**-CE2L	65	1/8 x 1	B-121-CE	B-122-CE
4/0	GL**C**-DE2Q	65	3/16 x 1	B-121-DE	B-122-DE
250	GL**C**-DE2V	65	3/16 x 1	B-121-DE	B-122-DE
300	GL**C**-EE3A	90	1/4 x 1	B-121-EE	B-122-EE
350	GL**C**-EE3D	90	1/4 x 1	B-121-EE	B-122-EE
500	GL**C**-EG3Q	150	1/4 x 1 1/2	B-121-EG	B-122-EG

Ph: 1-800-677-9089
www.erico.com



PREFABRICATED LUG BONDS

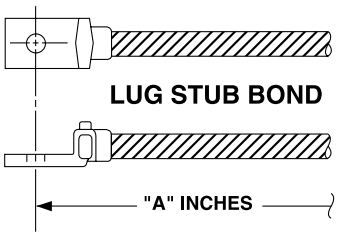
Prefabricated lug bonds are custom made to your specifications. Common usage includes cable tray bonding and grounding, structure bonds, surge arrester leads and power jumpers.

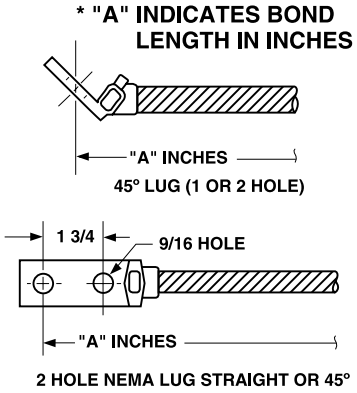
Specifications:

Prefabricated Lug Bonds (lug stub bonds) shall be made using bare annealed copper cable conforming to ASTM B8, Class A with a tinned pure copper lug conforming to ASTM B-187 on both ends (or one end only), welded to the cable with CADWELD Type GL connections.

Note:

Also available for other sizes or stranding or for insulated cable.





CABLE Size	Str.	LUG SIZE	LUG BOND CAT. NO.* One Hole	Two Hole	One Hole 45°	Two Hole 45°
4	7	1/8 x 1	B-212-1L-A	B-213-1L-A	B-214-1L-A	B-215-1L-A
2	7	1/8 x 1	B-212-1V-A	B-213-1V-A	B-214-1V-A	B-215-1V-A
1	7	1/8 x 1	B-212-1Y-A	B-213-1Y-A	B-214-1Y-A	B-215-1Y-A
1/0	7	1/8 x 1	B-212-2C-A	B-213-2C-A	B-214-2C-A	B-215-2C-A
2/0	7	1/8 x 1	B-212-2G-A	B-213-2G-A	B-214-2G-A	B-215-2G-A
4/0	7	3/16 x 1	B-212-2Q-A	B-213-2Q-A	B-214-2Q-A	B-215-2Q-A
250	19	3/16 x 1	B-212-2V-A	B-213-2V-A	B-214-2V-A	B-215-2V-A

CABLE Size	Str.	LUG SIZE	LUG STUB BOND CAT. NO.* One Hole	Two Hole	One Hole 45°	Two Hole 45°
4	7	1/8 x 1	B-216-1L-A	B-217-1L-A	B-218-1L-A	B-219-1L-A
2	7	1/8 x 1	B-216-1V-A	B-217-1V-A	B-218-1V-A	B-219-1V-A
1	7	1/8 x 1	B-216-1Y-A	B-217-1Y-A	B-218-1Y-A	B-219-1Y-A
1/0	7	1/8 x 1	B-216-2C-A	B-217-2C-A	B-218-2C-A	B-219-2C-A
2/0	7	1/8 x 1	B-216-2G-A	B-217-2G-A	B-218-2G-A	B-219-2G-A
4/0	7	3/16 x 1	B-216-2Q-A	B-217-2Q-A	B-218-2Q-A	B-219-2Q-A
250	19	3/16 x 1	B-216-2V-A	B-217-2V-A	B-218-2V-A	B-219-2V-A

* “A” indicates bond length in inches.

TELECOM LUGS

ORDERING INFORMATION

CADWELD Telecom Mold Part No. is **GLPCC001TC** and includes B399B Mini EZ change handle clamp and T320 flint ignitor. CADWELD weld metal size **#25** works for all 7 lug sizes.

ONE HOLE UPTURN LUG						
Part Number	Thickness A	Width B	Length C	Centers D	E	Bolt Size F
B921CC14	.125	.63	.875	N/A	.375	1/4"
B921CC38	.125	.63	.875	N/A	.375	3/8"

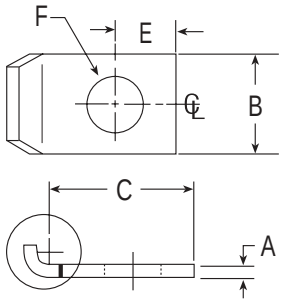
Note: All CADWELD lugs are electrotin plated copper alloy.

TWO HOLE UPTURN LUG						
Part Number	Thickness A	Width B	Length C	Centers D	E	Bolt Size F
B922CC14A	.125	.63	1.88	.625	.375	1/4"
B922CC14B	.125	.63	1.88	.75	.375	1/4"
B922CC14C	.125	.63	1.88	1	.375	1/4"
B922CC38B	.125	.63	1.88	.75	.375	3/8"
B922CC38C	.125	.63	1.88	1	.375	3/8"

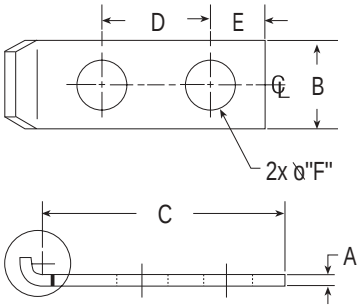
Note: All CADWELD lugs are electrotin plated copper alloy.

SLEEVE REQUIREMENTS			
Conductor Size(s)		Sleeve No.	Qty per Package
Concentric	Solid		
#6	#5	B112	25
#4 & #5	#3 & #4	B1331V	25
N/A	#2	S429F1N12	25
#2	N/A	No Sleeve Required	N/A

One Hole Lug



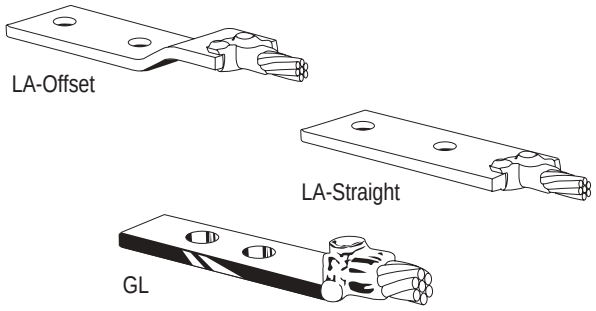
Two Hole Lug

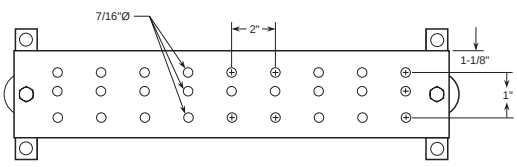


OTHER RELATED PRODUCTS

TELEPHONE LUGS (Two Holes for 3/8" Bolts on 1" Centers)				
Lug Size	Type GL	Type LA		Maximum Conductor
		Straight	Offset	
1/8"x 1"	B123CE03	B103CEOL003	B103CEOL003	3/0 AWG
3/16"	B123DE03	B123DE001	B103DEOL	250 kcmil
1/4" x 1"	B123EE03	B103EE002	B103EEOL003	350 kcmil
1/4" x 1 1/2"	B123EG03	B103EG002	B103EGOL001	500 kcmil
3/8" x 2"	N/A	B103GH003	B103GHOL004	1000 kcmil

For Type GL lugs, use Type GL molds as listed in Catalog A1A.
For Type LA lugs, use Type LA molds as listed in Catalog A1A.





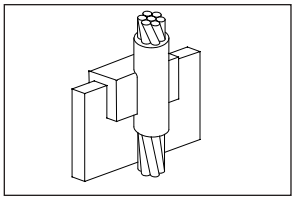
Ground Bar P/N EGBA14420CC (1/4 x 4 x 20")

GROUND BARS for Single Point Grounding
Many ground bar sizes are in stock and available. Contact ERICO for stock sizes or custom requirements. Shown at left is a typical bar size.

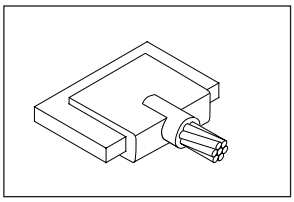
Notes:
1. All assemblies include insulators and mounting brackets.
2. Insulators are 2700 volts indoor rating.
3. Also available without insulators.
4. Also available with cable pigtails welded to bar. Specify cable size, length and insulation type.
5. Other bar sizes, hole sizes, spacing, etc. available on special order.

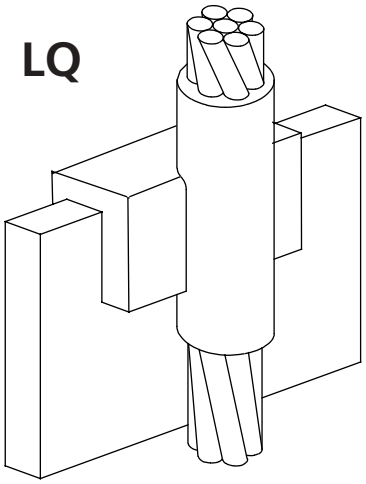
Ph: 1-800-677-9089
www.erico.com

LQ
Page 2



LJ
Page 3





CABLE TO BUSBAR

- Through vertical conductor to top of horizontal busbar with face in vertical plane.
- Concentric stranded copper cable is listed.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps **L160** *for **E** Price Key Molds*
L159 *for **J** Price Key Molds*

Flint Ignitor **T320** *(Included with handle clamp but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136B
Mold Cleaning Brush	T394
Torch Head	T111
Mold Support Bracket	B854A1

ACCESSORIES

See Section A

BUS SIZE	CABLE SIZE	MOLD PART NO.	WELD METAL
1/4" X 2" & Wider	2	LQ**E**-EH1V	250
	2 SOL	LQ**E**-EH1T	250
	1	LQ**J**-EH1Y	2-150
	1/0	LQ**J**-EH2C	2-200
	2/0	LQ**J**-EH2G	2-200
	4/0	LQ**J**-EH2Q	500
	250	LQ**J**-EH2V	500
	500	LQ**J**-EH3Q	500
	750	LQ**J**-EH4L	3-200
3/8" X 2" & Wider	2	LQ**E**-GH1V	250
	2 SOL	LQ**E**-GH1T	250
	1	LQ**J**-GH1Y	2-150
	1/0	LQ**J**-GH2C	2-200
	2/0	LQ**J**-GH2G	2-200
	4/0	LQ**J**-GH2Q	500
	250	LQ**J**-GH2V	500
	500	LQ**J**-GH3Q	500
	750	LQ**J**-GH4L	3-200

BUS SIZE	CABLE SIZE	MOLD PART NO.	WELD METAL
1/2" X 2" & Wider	2	LQ**J**-JH1V	2-150
	2 SOL	LQ**J**-JH1T	2-150
	1	LQ**J**-JH1Y	2-200
	1/0	LQ**J**-JH2C	500
	2/0	LQ**J**-JH2G	500
	4/0	LQ**J**-JH2Q	3-200
	250	LQ**J**-JH2V	3-200
	500	LQ**J**-JH3Q	3-200
	750	LQ**J**-JH4L	3-250

Also available for other bus sizes and other cable sizes.

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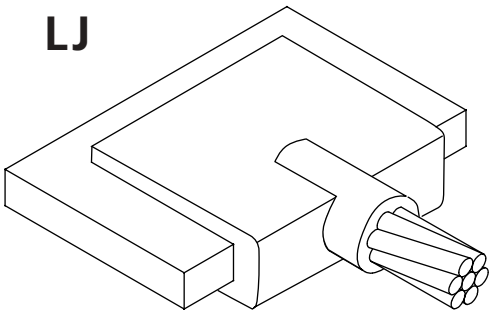
www.erico.com

LJ



CABLE TO BUSBAR

- Tap of horizontal cable to edge of horizontal, flat busbar.
- Concentric stranded copper cable is listed.
- The minimum distance between centers of adjacent welds is indicated as “C” dimension.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps **L160** *for **C** Price Key Molds*
L159 *for **D** Price Key Molds*

Flint Ignitor **T320** *(Included with handle clamp but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136B
Mold Cleaning Brush	T394
Torch Head	T111

ACCESSORIES

See Section A

CONDUCTOR SIZE BUSBAR	CABLE	MOLD PART NO.	WELD METAL	Min. "C" Dimension
1/4" x 1-1/2" & Wider	2 SOL	LJ**C**-EG1T	65	1-3/4"
	2	LJ**C**-EG1V	65	1-3/4"
	1/0	LJ**C**-EG2C	90	1-3/4"
	2/0	LJ**C**-EG2G	90	1-3/4"
	3/0	LJ**C**-EG2L	90	1-3/4"
	4/0	LJ**C**-EG2Q	90	1-3/4"
	250	LJ**C**-EG2V	115	2"
	300	LJ**C**-EG3A	115	2"
	350	LJ**C**-EG3D	150	2"
	500	LJ**C**-EG3Q	200	2"
3/8" x 1-1/2" & Wider	2 SOL	LJ**C**-GG1T	65	1-3/4"
	2	LJ**C**-GG1V	65	1-3/4"
	1/0	LJ**C**-GG2C	90	1-3/4"
	2/0	LJ**C**-GG2G	90	1-3/4"
	3/0	LJ**C**-GG2L	115	1-3/4"
	4/0	LJ**C**-GG2Q	115	1-3/4"
	250	LJ**C**-GG2V	150	1-3/4"
	300	LJ**C**-GG3A	150	2"
	350	LJ**C**-GG3D	200	2"
	500	LJ**C**-GG3Q	250	2-1/4"
	750	LJ**D**-GG4L	2-150	2-1/2"
	1000	LJ**D**-GG4Y	2-200	2-5/8"

CONDUCTOR SIZE BUSBAR	CABLE	MOLD PART NO.	WELD METAL	Min. "C" Dimension
1/2" x 1-1/2" & Wider	2 SOL	LJ**C**-JG1T	90	1-3/4"
	2	LJ**C**-JG1V	90	1-3/4"
	1/0	LJ**C**-JG2C	115	1-3/4"
	2/0	LJ**C**-JG2G	115	1-3/4"
	3/0	LJ**C**-JG2L	150	1-3/4"
	4/0	LJ**C**-JG2Q	150	1-3/4"
	250	LJ**C**-JG2V	200	1-3/4"
	300	LJ**C**-JG3A	200	1-3/4"
	350	LJ**C**-JG3D	250	2-1/8"
	500	LJ**D**-JG3Q	2-150	2-1/2"
	750	LJ**D**-JG4L	2-200	2-1/2"
	1000	LJ**D**-JG4Y	500	2-9/16"

OTHER CABLE TO BUSBAR OR LUG

The connections shown below are for use only where connections shown in this catalog are not suitable.

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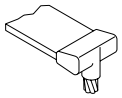
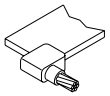
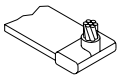
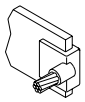
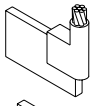
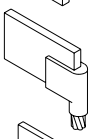
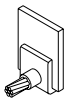
Ell		DN		2	V
		LX		2	*
		LY		3	*
		MA		2	*
		MB		3	*
		MC		3	*
		MD		3	*
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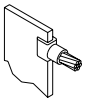
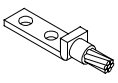
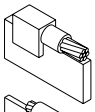
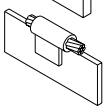
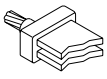
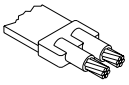
		MG		2	V
Lug		PL		1	V
Parallel tap		LV		1	V
Parallel thru		LW		1	V
Splice		DM		2	*
		DS		2	*

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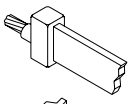
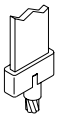
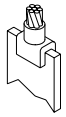
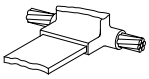
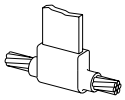
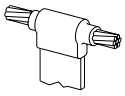
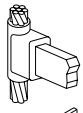
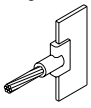
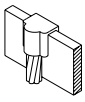
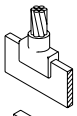
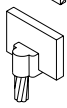
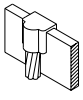
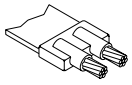
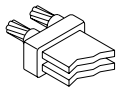
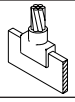
Splice		LB		1	V
		LC		3	V
		LD		3	V
		LE		1	*
		LF		3	*
		LG		3	V
		LH		3	*
		LK		2	V
		LL		1	V
		LM		1	V
		LN		4	*
		LP		2	*
		LS		2	*
		LT		2	*
Tee		LR		2	*

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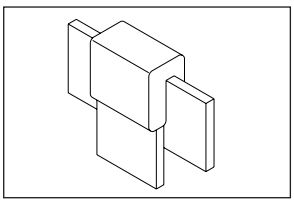

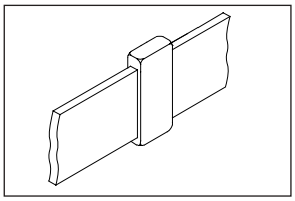

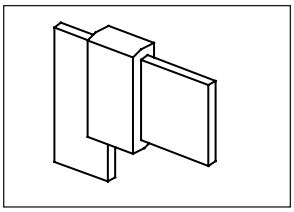

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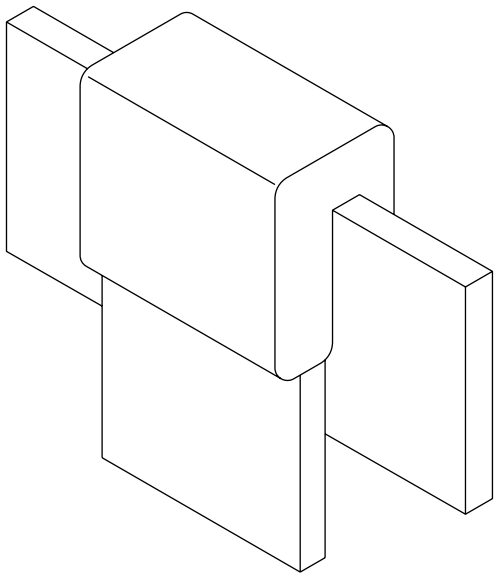

BUSBAR

- Tee tap down - horizontal, on edge, busbars
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps **L160** *for **C** Price Key Molds*

L159 *for **D** and **F** Price Key Molds*
Handles are included with K price key molds

Flint Ignitor **T320** *(Included with handle clamp or frame but also available separately)*

SUGGESTED TOOLS

Slag Removal Spade	B136B
Mold Cleaning Brush	T394
Torch Head	T111

ACCESSORIES

See Section A

BUSBAR SIZE Run	Tap	MOLD PART NO.	WELD METAL
1/8 x 1	1/8 x 1	BQ**C**-CECE	90
1/8 x 2 & Wider	1/8 x 2	BQ**C**-CHCH	200
3/16 x 1	3/16 x 1	BQ**C**-DEDE	115
3/16 x 2 & Wider	3/16 x 2	BQ**C**-DHDH	200
1/4 x 1	1/4 x 1	BQ**C**-EEEE	150
1/4 x 1 1/4	1/4 x 1 1/4	BQ**C**-EFEF	200
1/4 x 1 1/2	1/4 x 1 1/2	BQ**C**-EGEG	250
1/4 x 2 & Wider	1/4 x 2	BQ**D**-EHEH	2-200
1/4 x 3 & Wider	1/4 x 3	BQ**F**-EKEK	2-200
1/4 x 4 & Wider	1/4 x 4	BQ**K**-EMEM*	3-250
3/8 x 1	3/8 x 1	BQ**C**-GEGE	250
3/8 x 1 1/2	3/8 x 1 1/2	BQ**D**-GGGG	2-200
3/8 x 2 & Wider	3/8 x 2	BQ**D**-GHGH	500
3/8 x 3 & Wider	3/8 x 3	BQ**F**-GKGK	3-250
3/8 x 4 & Wider	3/8 x 4	BQ**K**-GMGM*	2-500
1/2 x 1	1/2 x 1	BQ**D**-JEJE	2-150
1/2 x 2 & Wider	1/2 x 2	BQ**D**-JHJH	3-250

*Requires M783 Crucible. Order Separately.

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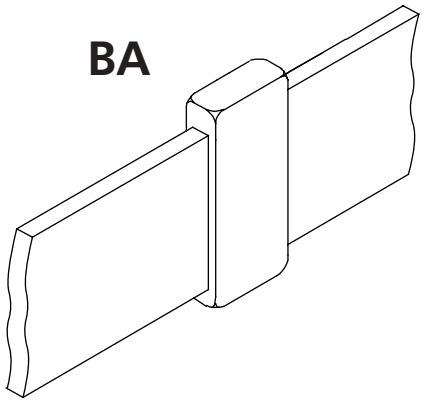
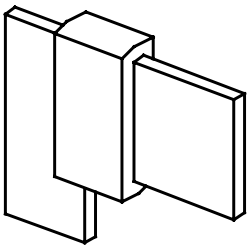
BA



EP



BUSBAR

- Type BA - Horizontal, on edge, busbars
- Type EP - Ell, tap down - Horizontal, on edge, busbars
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps	**L160**	*for **C** Price Key Molds*
	L159	*for **D** Price Key Molds*
Flint Ignitor	**T320**	*(Included with handle clamp but also available separately).*

SUGGESTED TOOLS

Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Torch Head	T111

ACCESSORIES

See Section A

TYPE BA CONNECTIONS

BUSBAR SIZE		MOLD PART NO.	WELD METAL
	x 1	BA**C**-CE	45
	x 1-1/2	BA**C**-CG	65
1/8	x 2	BA**C**-CH	90
	x 3	BA**C**-CK	200
	x 4	BA**D**-CM	250
3/16	x 1	BA**C**-DE	65
	x 2	BA**C**-DH	115
	x 1	BA**C**-EE	90
	x 1-1/4	BA**C**-EF	115
	x 1-1/2	BA**C**-EG	150
1/4	x 2	BA**C**-EH	200
	x 2-1/2	BA**C**-EJ	250
	x 3	BA**D**-EK	2-200
	x 4	BA**D**-EM	500
	x 1	BA**C**-GE	150
	x 1-1/2	BA**C**-GG	250
3/8	x 2	BA**D**-GH	2-150
	x 3	BA**D**-GK	500
	x 4	BA**D**-GM	3-200
1/2	x 1	BA**C**-JE	200
	x 2	BA**D**-JH	2-200

TYPE EP CONNECTIONS

BUSBAR SIZE		MOLD PART NO.	WELD METAL
	x 1	EP**C**-CE	45
	x 1-1/2	EP**C**-CG	65
1/8	x 2	EP**C**-CH	90
	x 3	EP**C**-CK	200
	x 4	EP**D**-CM	250
3/16	x 1	EP**C**-DE	65
	x 2	EP**C**-DH	115
	x 1	EP**C**-EE	90
	x 1-1/4	EP**C**-EF	115
	x 1-1/2	EP**C**-EG	150
1/4	x 2	EP**C**-EH	200
	x 2-1/2	EP**C**-EJ	250
	x 3	EP**D**-EK	2-200
	x 4	EP**D**-EM	500
	x 1	EP**C**-GE	150
	x 1-1/2	EP**C**-GG	250
3/8	x 2	EP**D**-GH	2-150
	x 3	EP**D**-GK	500
	x 4	EP**D**-GM	3-200
1/2	x 1	EP**C**-JE	200
	x 2	EP**D**-JH	2-200

OTHER BUSBAR CONNECTIONS

The connections shown below are for use only where connections shown in this catalog are not suitable.

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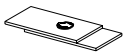
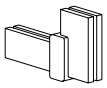
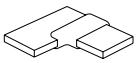
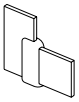
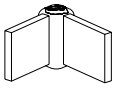
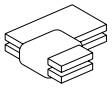
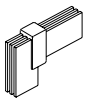
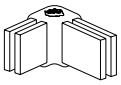
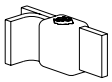
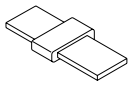
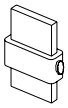
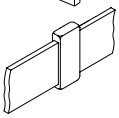
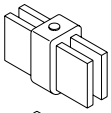
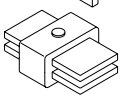
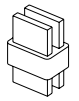
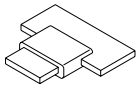
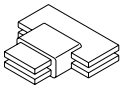
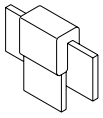
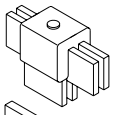
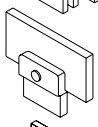
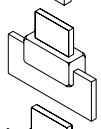
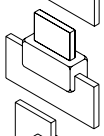
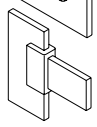
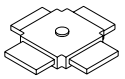
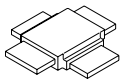
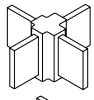
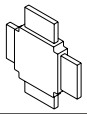
Button-weld	TW		1	*
	TX		1	V
Ell	DJ		4	V
	EN		2	*
	EQ		4	V
	ER		2	*
	ES		3	*
	ET		2	V
	EV		3	*
Parallel tap	BJ		2	V
Splice	BB		2	*
	BC		3	V
	BD		3	*
	BF		2	*
	BG		2	*

NAME	TYPE		EASE	SPLIT
Splice	BH		4	V
Tee	BK		2	*
	BL		3	*
	BM		2	*
	BN		3	*
	BR		2	V
	BS		2	V
	BT		4	*
	BV		3	*
	DE		3	V
	EE		3	V
X	EA		4	V
	EB		4	*
	EC		4	*
	ED		4	V

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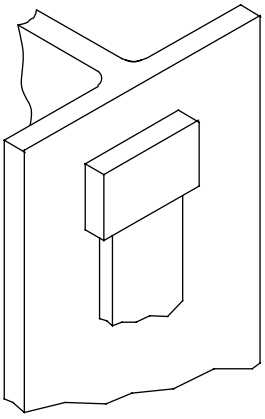
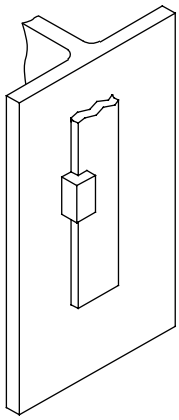


BW *Tap down of busbar to vertical steel*



CF *Vertical bus runs to vertical steel surface*

BUSBAR TO STEEL SURFACE

- **A test weld should be made to check the possibility of burn through when intended for use on thin sections or thin wall pipe.**
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps **L160** *for **C** Price Key Molds*
L159 *for **D** Price Key Molds*

Flint Ignitor **T320** *(Included with handle clamp but also available separately).*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136B
Mold Cleaning Brush	T394
Rasp	T321
Torch Head	T111

ACCESSORIES

See Section A

BUSBAR SIZE		MOLD PART NO. BW	MOLD PART NO. CF	WELD METAL
1/8	x 1	BW**C**-CE	CF**C**-CE	115
	x 1-1/2	BW**C**-CG	CF**C**-CG	150
	x 2	BW**C**-CH	—	200
	x 2 & Wider	—	CF**C**-CH	200
3/16	x 1	BW**C**-DE	CF**C**-DE	150
	x 1-1/2	BW**C**-DG	CF**C**-DG	200
	x 2	BW**C**-DH	—	250
	x 2 & Wider	—	CF**C**-DH	250
1/4	x 1	BW**C**-EE	CF**C**-EE	150
	x 1-1/4	BW**C**-EF	CF**C**-EF	200
	x 1-1/2	BW**C**-EG	CF**C**-EG	250
	x 2	BW**D**-EH	—	2-150
	x 2 & Wider	—	CF**D**-EH	2-150
3/8	x 1	BW**C**-GE	CF**C**-GE	200
	x 1-1/2	BW**C**-GG	CF**C**-GG	250
	x 2	BW**D**-GH	—	2-200
	x 2 & Wider	—	CF**D**-GH	2-200
1/2	x 1	BW**C**-JE	CF**C**-JE	250
	x 1-1/2	BW**D**-JG	CF**D**-JG	2-200
	x 2	BW**D**-JH	—	500
	x 2 & Wider	—	CF**D**-JH	500

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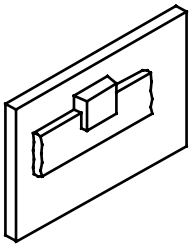
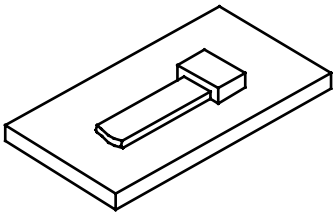
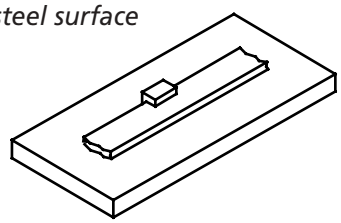
CC *Horizontal on-edge bus run to vertical steel surface*



CG *Horizontal bus tap to horizontal steel surface*



CH *Horizontal bus run to horizontal steel surface*



BUSBAR TO STEEL SURFACE

- **A test weld should be made to check the possibility of burn through when intended for use on thin sections or thin wall pipe.**
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps **L160** *for **C** Price Key Molds*
L159 *for **D** Price Key Molds*

Flint Ignitor **T320** *(Included with handle clamp but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136B
Mold Cleaning Brush	T394
Rasp	T321
Torch Head	T111

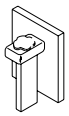
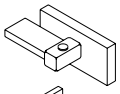
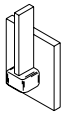
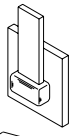
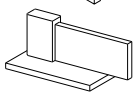
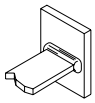
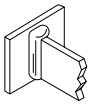
ACCESSORIES

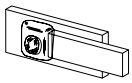
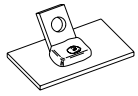
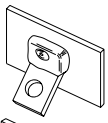
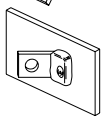
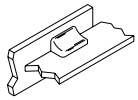
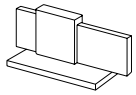
See Section A

BUSBAR SIZE		MOLD PART NO. CC	CG	CH	WELD METAL
	x 1	CC**C**-CE	CG**C**-CE	CH**C**-CE	115
	x 1-1/2	CC**C**-CG	CG**C**-CG	—	150
1/8	x 1-1/2 & Wider	—	—	CH**C**-CG	150
	x 2	—	CG**C**-CH	—	200
	x 2 & Wider	CC**C**-CH	—	—	200
	x 1	CC**C**-DE	CG**C**-DE	CH**C**-DE	150
	x 1-1/2	CC**C**-DG	CG**C**-DG	—	200
3/16	x 1-1/2 & Wider	—	—	CH**C**-DG	200
	x 2	—	CG**C**-DH	—	250
	x 2 & Wider	CC**C**-DH	—	—	250
	x 1	CC**C**-EE	CG**C**-EE	CH**C**-EE	150
	x 1-1/4	CC**C**-EF	CG**C**-EF	CH**C**-EF	200
	x 1-1/2	CC**C**-EG	CG**C**-EG	—	250
1/4	x 1-1/2 & Wider	—	—	CH**C**-EG	250
	x 2	—	CG**D**-EH	—	2-150
	x 2 & Wider	CC**D**-EH	—	—	2-150
	x 1	CC**C**-GE	CG**C**-GE	CH**C**-GE	200
	x 1-1/2	CC**C**-GG	CG**C**-GG	—	250
3/8	x 1-1/2 & Wider	—	—	CH**C**-GG	250
	x 2	—	CG**D**-GH	—	2-200
	x 2 & Wider	CC**D**-GH	—	—	2-200
	x 1	CC**C**-JE	CG**C**-JE	CH**C**-JE	250
	x 1-1/2	CC**D**-JG	CG**D**-JG	—	2-200
1/2	x 1-1/2 & Wider	—	—	CH**D**-JG	2-200
	x 2	—	CG**D**-JH	—	500
	x 2 & Wider	CC**D**-JH	—	—	500

OTHER BUSBAR TO STEEL SURFACE CONNECTIONS

The connections shown below are for use only where connections shown in this catalog are not suitable.

NAME	TYPE		EASE	SPLIT
Tap	BX		3	V
	BY		3	V
	CA		3	V
	CB		2	V
	CJ		2	V
	DC		3	*
	DD		3	V

NAME	TYPE		EASE	SPLIT
Tap	DF		2	V
	HL		1	V
	HM		1	V
	HN		1	*
Thru	CD		3	V
	CK		2	V

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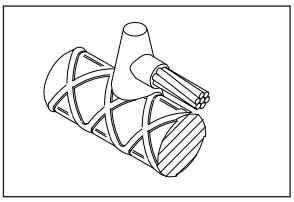

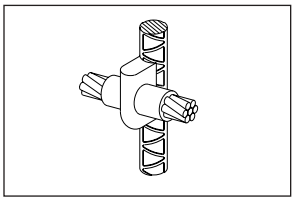

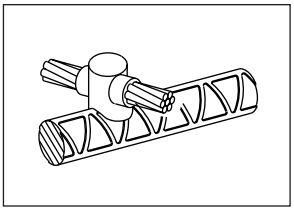

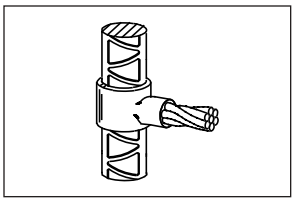

NOTES...

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CADWELD® Connections Used for Grounding Reinforcing Bars

CADWELD provides efficient and permanent connections for both grounding and attaching lightning protection conductors to rebar. When making CADWELD connections to rebar, the normal materials required are: mold, handle and weld metal. In addition, packing material is also required. These materials act as a seal between the mold and rebar to prevent leaks. One unit of packing material must be ordered for each weld.

CADWELD Connections to Structural Reinforcing Bar and Anchor Bolts

Welding of ground conductors to reinforcing bars (rebar) by the CADWELD process should not be harmful if stresses in the rebar are below yield. As design stresses are normally only about 50% to 60% of the nominal yield strength of the rebar, welding by the CADWELD process should not be detrimental under design stresses.

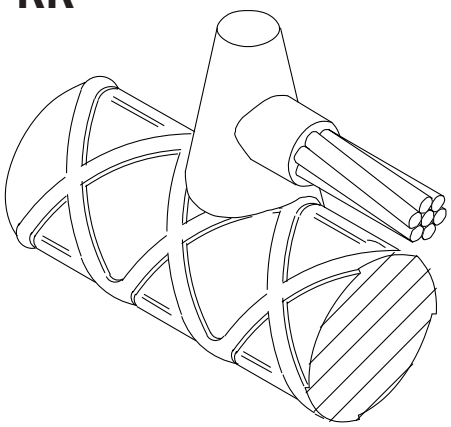
As the ACI Building Code (ACI318-89 commentary, 12.15) advises, “splices should, if possible, be located away from points of maximum tensile stress.” The same advice should apply to locations of CADWELD connections of a ground conductor to rebar. Where possible, locate the weld area away from areas of maximum tensile stress, e.g., near the free end of the bar in a lap splice, on the hook extension for a hooked bar, etc. The same considerations apply to CADWELD connections to anchor bolts.

NOTE:

For lightning protection applications where the main lightning protection conductor is connected to the rebar, ERICO recommends a 2/0 AWG copper conductor for structures over 75 feet in height and a #2 AWG copper conductor for structures under 75 feet. For a bonding conductor, a #6 AWG copper may be used. These sizes meet NFPA78 Code requirement. Anchor bolts are connected in the same way.

All welds to rebar requiring larger than a #150 weld metal will be sold only after review by ERICO.

RR



CABLE TO REBAR

- Horizontal cable tap to horizontal rebar.
- Rebar material characteristics and location of weld must be considered when selecting connections to rebar.
- Concentric stranded copper cable is listed.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps	**L160** *for C Price Key Molds* *Mold frame included with **A** and **H** Price Key Molds*
Flint Ignitor	**T320** *(Included with handle clamp or frame but also available separately)*
Packing	*One required for each connection - see tables which follow*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
File	T329
Torch Head	T111

ACCESSORIES

See Section A

REBAR SIZE	CABLE SIZE	MOLD PART NO.	WELD METAL	PACKING PART NO.
3	6	RR**C**-511H	25	None
	4	RR**C**-511L	32	None
	2 SOL	RR**C**-511T	45	None
	2	RR**C**-511V	45	None
	1	RR**C**-511Y	65	None
	1/0	RR**C**-512C	90	None
	2/0	RR**C**-512G	90	None
	3/0	RR**C**-512L	115	None
	4/0	RR**C**-512Q	115	None
4	6*	RR**A**-521H	25	B-143A
	4	RR**A**-521L	32	B-143A
	2 SOL	RR**A**-521T	45	B-143A
	2	RR**A**-521V	45	B-143A
	1	RR**A**-521Y	65	B-143A
	1/0	RR**C**-522C	90	B-141A
	2/0	RR**C**-522G	90	B-141A
	3/0	RR**C**-522L	115	B-141A
	4/0	RR**C**-522Q	115	B-141A

*Requires B112 sleeve (1 per connection)

REBAR SIZE	CABLE SIZE	MOLD PART NO.	WELD METAL	PACKING PART NO.
5	6*	RR**A**-531H	25	B-143A
	4	RR**A**-531L	32	B-143A
	2 SOL	RR**A**-531T	45	B-143A
	2	RR**A**-531V	45	B-143A
	1	RR**A**-531Y	65	B-143A
	1/0	RR**C**-532C	90	B-141A
	2/0	RR**C**-532G	90	B-141A
	3/0	RR**C**-532L	115	B-141A
	4/0	RR**C**-532Q	115	B-141A
6	6*	RR**A**-541H	25	B-143B
	4	RR**A**-541L	32	B-143B
	2 SOL	RR**A**-541T	45	B-143B
	2	RR**A**-541V	45	B-143B
	1	RR**A**-541Y	65	B-143B
	1/0	RR**H**-542C	90	B-144C
	2/0	RR**H**-542G	90	B-144C
	3/0	RR**H**-542L	115	B-144C
	4/0	RR**H**-542Q	115	B-144C

*Requires B112 sleeve (1 per connection)

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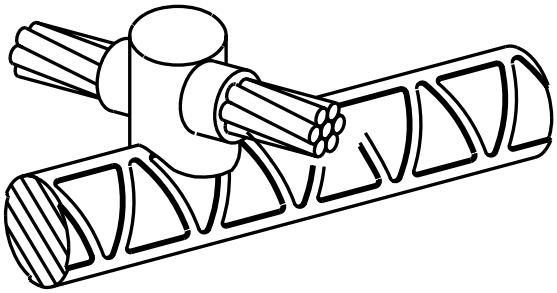
REBAR SIZE	CABLE SIZE	MOLD PART NO.	WELD METAL	PACKING PART NO.
7	4	RR**A**-551L	32	B-143B
	2	RR**A**-551V	45	B-143B
	2 SOL	RR**A**-551T	45	B-143B
	1	RR**A**-551Y	65	B-143B
	1/0	RR**H**-552C	90	B-144C
	2/0	RR**H**-552G	90	B-144C
	3/0	RR**H**-552L	115	B-144A
	4/0	RR**H**-552Q	115	B-144A
8	2 SOL	RR**A**-561T	45	B-143B
	2	RR**A**-561V	45	B-143B
	1	RR**A**-561Y	65	B-143B
	1/0	RR**H**-562C	90	B-144C
	2/0	RR**H**-562G	90	B-144C
	3/0	RR**H**-562L	115	B-144A
	4/0	RR**H**-562Q	115	B-144A
9	2 SOL	RR**A**-571T	45	B-143B
	2	RR**A**-571V	45	B-143B
	1	RR**A**-571Y	65	B-143B
	1/0	RR**H**-572C	90	B-144C
	2/0	RR**H**-572G	90	B-144C
	3/0	RR**H**-572L	115	B-144A
	4/0	RR**H**-572Q	115	B-144A

REBAR SIZE	CABLE SIZE	MOLD PART NO.	WELD METAL	PACKING PART NO.
10	2 SOL	RR**A**-581T	45	B-143B
	2	RR**A**-581V	45	B-143B
	1	RR**A**-581Y	65	B-143B
	1/0	RR**H**-582C	90	B-144C
	2/0	RR**H**-582G	90	B-144C
	3/0	RR**H**-582L	115	B-144A
	4/0	RR**H**-582Q	115	B-144A
11	2 SOL	RR**A**-591T	45	B-143B
	2	RR**A**-591V	45	B-143B
	1	RR**A**-591Y	65	B-143B
	1/0	RR**H**-592C	90	B-144C
	2/0	RR**H**-592G	90	B-144C
	3/0	RR**H**-592L	115	B-144A
	4/0	RR**H**-592Q	115	B-144A
14	1/0	RR**H**-602C	90	B-144C
	2/0	RR**H**-602G	90	B-144C
	3/0	RR**H**-602L	115	B-144A
	4/0	RR**H**-602Q	115	B-144A
18	1/0	RR**H**-612C	90	B-144C
	2/0	RR**H**-612G	90	B-144C
	3/0	RR**H**-612L	115	B-144A
	4/0	RR**H**-612Q	115	B-144A

RD



CABLE TO REBAR

- X connection horizontal cable to horizontal rebar.
- Rebar material characteristics and location of weld must be considered when selecting connections to rebar.
- Concentric stranded copper cable is listed.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps	**L160** *for **C** Price Key Molds* *Mold frame included with **M** and **H** Price Key Molds*
Flint Ignitor	**T320** *(Included with handle clamp and frames but also available separately)*
Packing	*One required for each connection - see tables which follow*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
File	T329
Torch Head	T111

ACCESSORIES

See Section A

REBAR SIZE	CABLE SIZE	MOLD PART NO.	WELD METAL	PACKING PART NO.
3	6*	RD**C**-511H	65	B-141A
	4	RD**C**-511L	65	B-141A
	2 SOL	RD**C**-511T	90	B-141A
	2	RD**C**-511V	90	B-141A
	1	RD**C**-511Y	90	B-141A
	1/0	RD**M**-512C	115	B-141A
	2/0	RD**M**-512G	115	B-141A
	3/0	RD**M**-512L	150	B-141A
	4/0	RD**M**-512Q	150	B-141A
4	6*	RD**C**-521H	65	B-141A
	4	RD**C**-521L	65	B-141A
	2 SOL	RD**C**-521T	90	B-141A
	2	RD**C**-521V	90	B-141A
	1	RD**M**-521Y	90	B-141A
	1/0	RD**M**-522C	115	B-141A
	2/0	RD**M**-522G	115	B-141A
	3/0	RD**M**-522L	150	B-141A
	4/0	RD**M**-522Q	150	B-141A

*Requires B112 sleeve (2 per connection)

REBAR SIZE	CABLE SIZE	MOLD PART NO.	WELD METAL	PACKING PART NO.
5	6*	RD**C**-531H	65	B-141A
	4	RD**C**-531L	65	B-141A
	2 SOL	RD**C**-531T	90	B-141A
	2	RD**C**-531V	90	B-141A
	1	RD**M**-531Y	90	B-141A
	1/0	RD**M**-532C	115	B-141A
	2/0	RD**M**-532G	115	B-141A
	3/0	RD**M**-532L	150	B-141A
	4/0	RD**M**-532Q	150	B-141A
6	6*	RD**H**-541H	65	B-144C
	4	RD**H**-541L	65	B-144C
	2 SOL	RD**H**-541T	90	B-141C
	2	RD**H**-541V	90	B-144C
	1	RD**H**-541Y	90	B-144C
	1/0	RD**H**-542C	115	B-144C
	2/0	RD**H**-542G	115	B-144C
	3/0	RD**H**-542L	150	B-144A
	4/0	RD**H**-542Q	150	B-144A

*Requires B112 sleeve (2 per connection)

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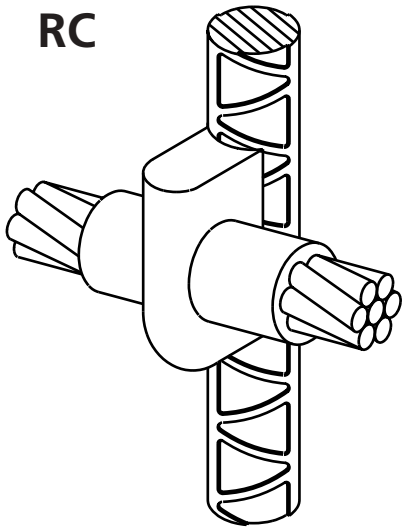
REBAR SIZE	CABLE SIZE	MOLD PART NO.	WELD METAL	PACKING PART NO.
7	4	RD**H**-551L	65	B-144C
	2 SOL	RD**H**-551T	90	B-144C
	2	RD**H**-551V	90	B-144C
	1	RD**H**-551Y	90	B-144C
	1/0	RD**H**-552C	115	B-144C
	2/0	RD**H**-552G	115	B-144C
	3/0	RD**H**-552L	150	B-144A
	4/0	RD**H**-552Q	150	B-144A
8	2 SOL	RD**H**-561T	90	B-144C
	2	RD**H**-561V	90	B-144C
	1	RD**H**-561Y	90	B-144C
	1/0	RD**H**-562C	115	B-144C
	2/0	RD**H**-562G	115	B-144C
	3/0	RD**H**-562L	150	B-144A
	4/0	RD**H**-562Q	150	B-144A
9	2 SOL	RD**H**-571T	90	B-144C
	2	RD**H**-571V	90	B-144C
	1	RD**H**-571Y	90	B-144C
	1/0	RD**H**-572C	115	B-144C
	2/0	RD**H**-572G	115	B-144C
	3/0	RD**H**-572L	150	B-144A
	4/0	RD**H**-572Q	150	B-144A

REBAR SIZE	CABLE SIZE	MOLD PART NO.	WELD METAL	PACKING PART NO.
10	2 SOL	RD**H**-581T	90	B-144C
	2	RD**H**-581V	90	B-144C
	1	RD**H**-581Y	90	B-144C
	1/0	RD**H**-582C	115	B-144C
	2/0	RD**H**-582G	115	B-144C
	3/0	RD**H**-582L	150	B-144A
	4/0	RD**H**-582Q	150	B-144A
11	2 SOL	RD**H**-591T	90	B-144C
	2	RD**H**-591V	90	B-144C
	1	RD**H**-591Y	90	B-144C
	1/0	RD**H**-592C	115	B-144C
	2/0	RD**H**-592G	115	B-144C
	3/0	RD**H**-592L	150	B-144A
	4/0	RD**H**-592Q	150	B-144A
14	1/0	RD**H**-602C	115	B-144C
	2/0	RD**H**-602G	115	B-144C
	3/0	RD**H**-602L	150	B-144A
	4/0	RD**H**-602Q	150	B-144A
18	1/0	RD**H**-612C	115	B-144C
	2/0	RD**H**-612G	115	B-144C
	3/0	RD**H**-612L	150	B-144A
	4/0	RD**H**-612Q	150	B-144A

RC



CABLE TO REBAR

- Through connection horizontal cable to vertical rebar.
- Rebar material characteristics and location of weld must be considered when selecting connections to rebar.
- Concentric stranded copper cable is listed.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps	**L160** *for **E** Price Key Molds* *Frame included with **E** Price Key Molds*
Flint Ignitor	**T320** *(Included with handle clamp and frame but also available separately)*
Packing	*One required for each connection - see tables which follow*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
File	T329
Torch Head	T111

ACCESSORIES

See Section A

REBAR SIZE	CABLE SIZE	MOLD PART NO.	WELD METAL	PACKING PART NO.
3	6*	RC**E**-511H	90	B-140A
	4	RC**E**-511L	90	B-140A
	2 SOL	RC**E**-511T	90	B-140A
	2	RC**E**-511V	90	B-140A
	1	RC**E**-511Y	115	B-140A
	1/0	RC**E**-512C	115	B-140A
	2/0	RC**E**-512G	115	B-140A
	3/0	RC**E**-512L	150	B-140A
	4/0	RC**E**-512Q	150	B-140A
4	6*	RC**E**-521H	90	B-140A
	4	RC**E**-521L	90	B-140A
	2 SOL	RC**E**-521T	90	B-140A
	2	RC**E**-521V	90	B-140A
	1	RC**E**-521Y	115	B-140A
	1/0	RC**E**-522C	115	B-140A
	2/0	RC**E**-522G	115	B-140A
	3/0	RC**E**-522L	150	B-140A
	4/0	RC**E**-522Q	150	B-140A

*Requires B112 sleeve (2 per connection)

REBAR SIZE	CABLE SIZE	MOLD PART NO.	WELD METAL	PACKING PART NO.
5	6*	RC**E**-531H	90	B-140A
	4	RC**E**-531L	90	B-140A
	2 SOL	RC**E**-531T	90	B-140A
	2	RC**E**-531V	90	B-140A
	1	RC**E**-531Y	115	B-140A
	1/0	RC**E**-532C	115	B-140A
	2/0	RC**E**-532G	115	B-140A
	3/0	RC**E**-532L	150	B-140A
	4/0	RC**E**-532Q	150	B-140A
6	6*	RC**E**-541H	90	B-144B
	4	RC**E**-541L	90	B-144B
	2 SOL	RC**E**-541T	90	B-140B
	2	RC**E**-541V	90	B-144B
	1	RC**E**-541Y	115	B-144B
	1/0	RC**E**-542C	115	B-144B
	2/0	RC**E**-542G	115	B-144B
	3/0	RC**E**-542L	150	B-144B
	4/0	RC**E**-542Q	150	B-144B

*Requires B112 sleeve (2 per connection)

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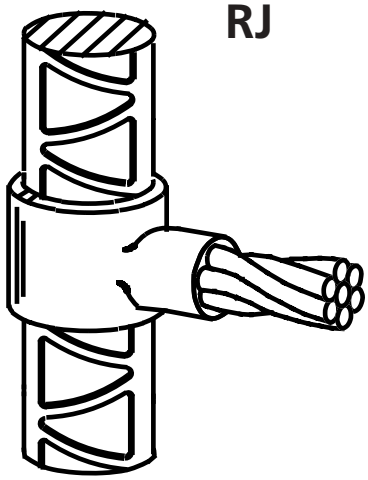
REBAR SIZE	CABLE SIZE	MOLD PART NO.	WELD METAL	PACKING PART NO.
7	4	RC**E**-551L	90	B-144B
	2 SOL	RC**E**-551T	90	B-144B
	2	RC**E**-551V	90	B-144B
	1	RC**E**-551Y	115	B-144B
	1/0	RC**E**-552C	115	B-144B
	2/0	RC**E**-552G	115	B-144B
	3/0	RC**E**-552L	150	B-144B
	4/0	RC**E**-552Q	150	B-144B
8	2 SOL	RC**E**-561T	90	B-144B
	2	RC**E**-561V	90	B-144B
	1	RC**E**-561Y	115	B-144B
	1/0	RC**E**-562C	115	B-144B
	2/0	RC**E**-562G	115	B-144B
	3/0	RC**E**-562L	150	B-144B
	4/0	RC**E**-562Q	150	B-144B
9	2 SOL	RC**E**-571T	90	B-144B
	2	RC**E**-571V	90	B-144B
	1	RC**E**-571Y	115	B-144B
	1/0	RC**E**-572C	115	B-144B
	2/0	RC**E**-572G	115	B-144B
	3/0	RC**E**-572L	150	B-144B
	4/0	RC**E**-572Q	150	B-144B

REBAR SIZE	CABLE SIZE	MOLD PART NO.	WELD METAL	PACKING PART NO.
10	2 SOL	RC**E**-581T	90	B-144B
	2	RC**E**-581V	90	B-144B
	1	RC**E**-581Y	115	B-144B
	1/0	RC**E**-582C	115	B-144B
	2/0	RC**E**-582G	115	B-144B
	3/0	RC**E**-582L	150	B-144B
	4/0	RC**E**-582Q	150	B-144B
11	2 SOL	RC**E**-591T	90	B-144B
	2	RC**E**-591V	90	B-144B
	1	RC**E**-591Y	115	B-144B
	1/0	RC**E**-592C	115	B-144B
	2/0	RC**E**-592G	115	B-144B
	3/0	RC**E**-592L	150	B-144B
	4/0	RC**E**-592Q	150	B-144B
14	1/0	RC**E**-602C	115	B-144B
	2/0	RC**E**-602G	115	B-144B
	3/0	RC**E**-602L	150	B-144B
	4/0	RC**E**-602Q	150	B-144B
18	1/0	RC**E**-612C	115	B-144B
	2/0	RC**E**-612G	115	B-144B
	3/0	RC**E**-612L	150	B-144B
	4/0	RC**E**-612Q	150	B-144B



CABLE TO REBAR

- Tee connection horizontal cable tap to vertical rebar.
- Rebar material characteristics and location of weld must be considered when selecting connections to rebar.
- Concentric stranded copper cable is listed.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps	**L160** *for **C** and **E** Price Key Molds* *Frame included with **E** Price Key Molds*
Flint Ignitor	**T320** *(Included with handle clamp and frames but also available separately)*
Packing	*One required for each connection - see tables which follow*

SUGGESTED TOOLS

Cable Cleaning Brush	T313 or T314
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
File	T329
Torch Head	T111

ACCESSORIES

See Section A

REBAR SIZE	CABLE SIZE	MOLD PART NO.	WELD METAL	PACKING PART NO.
3	6*	RJ**C**-511H	45	B-140A
	4	RJ**C**-511L	65	B-140A
	2 SOL	RJ**C**-511T	65	B-140A
	2	RJ**C**-511V	65	B-140A
	1	RJ**C**-511Y	90	B-140A
	1/0	RJ**C**-512C	115	B-140A
	2/0	RJ**C**-512G	115	B-140A
	3/0	RJ**C**-512L	150	B-140A
	4/0	RJ**C**-512Q	150	B-140A
4	6*	RJ**C**-521H	45	B-140A
	4	RJ**C**-521L	65	B-140A
	2 SOL	RJ**C**-521T	65	B-140A
	2	RJ**C**-521V	65	B-140A
	1	RJ**C**-521Y	90	B-140A
	1/0	RJ**C**-522C	115	B-140A
	2/0	RJ**C**-522G	115	B-140A
	3/0	RJ**C**-522L	150	B-140A
	4/0	RJ**C**-522Q	150	B-140A

*Requires B112 sleeve (2 per connection)

REBAR SIZE	CABLE SIZE	MOLD PART NO.	WELD METAL	PACKING PART NO.
5	6*	RJ**C**-531H	45	B-140A
	4	RJ**C**-531L	65	B-140A
	2 SOL	RJ**C**-531T	65	B-140A
	2	RJ**C**-531V	65	B-140A
	1	RJ**C**-531Y	90	B-140A
	1/0	RJ**C**-532C	115	B-140A
	2/0	RJ**C**-532G	115	B-140A
	3/0	RJ**C**-532L	150	B-140A
	4/0	RJ**C**-532Q	150	B-140A
6	6*	RJ**C**-541H	45	B-140A
	4	RJ**C**-541L	65	B-140A
	2 SOL	RJ**C**-541T	65	B-140A
	2	RJ**C**-541V	65	B-140A
	1	RJ**C**-541Y	90	B-140B
	1/0	RJ**C**-542C	115	B-140B
	2/0	RJ**C**-542G	115	B-140B
	3/0	RJ**C**-542L	150	B-140B
	4/0	RJ**C**-542Q	150	B-140B

*Requires B112 sleeve (2 per connection)

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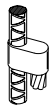
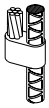
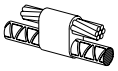
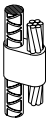
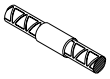
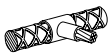
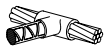
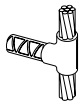
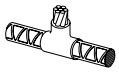
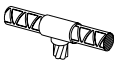
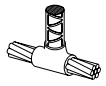
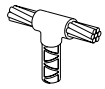
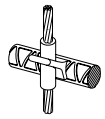
REBAR SIZE	CABLE SIZE	MOLD PART NO.	WELD METAL	PACKING PART NO.
7	4	RJ**E**-551L	65	B-144A
	2 SOL	RJ**E**-551T	65	B-144A
	2	RJ**E**-551V	65	B-144A
	1	RJ**E**-551Y	90	B-144A
	1/0	RJ**E**-552C	115	B-144B
	2/0	RJ**E**-552G	115	B-144B
	3/0	RJ**E**-552L	150	B-144B
	4/0	RJ**E**-552Q	150	B-144B
8	2 SOL	RJ**E**-561T	65	B-144A
	2	RJ**E**-561V	65	B-144A
	1	RJ**E**-561Y	90	B-144A
	1/0	RJ**E**-562C	115	B-144B
	2/0	RJ**E**-562G	115	B-144B
	3/0	RJ**E**-562L	150	B-144B
	4/0	RJ**E**-562Q	150	B-144B
9	2 SOL	RJ**E**-571T	65	B-144A
	2	RJ**E**-571V	65	B-144A
	1	RJ**E**-571Y	90	B-144A
	1/0	RJ**E**-572C	115	B-144B
	2/0	RJ**E**-572G	115	B-144B
	3/0	RJ**E**-572L	150	B-144B
	4/0	RJ**E**-572Q	150	B-144B

REBAR SIZE	CABLE SIZE	MOLD PART NO.	WELD METAL	PACKING PART NO.
10	2 SOL	RJ**E**-581T	65	B-144A
	2	RJ**E**-581V	65	B-144A
	1	RJ**E**-581Y	90	B-144A
	1/0	RJ**E**-582C	115	B-144B
	2/0	RJ**E**-582G	115	B-144B
	3/0	RJ**E**-582L	150	B-144E
	4/0	RJ**E**-582Q	150	B-144E
11	2 SOL	RJ**E**-591T	65	B-144A
	2	RJ**E**-591V	65	B-144A
	1	RJ**E**-591Y	90	B-144A
	1/0	RJ**E**-592C	115	B-144B
	2/0	RJ**E**-592G	115	B-144B
	3/0	RJ**E**-592L	150	B-144E
	4/0	RJ**E**-592Q	150	B-144E
14	1/0	RJ**E**-602C	115	B-144B
	2/0	RJ**E**-602G	115	B-144B
	3/0	RJ**E**-602L	150	B-144E
	4/0	RJ**E**-602Q	150	B-144E
18	1/0	RJ**E**-612C	115	B-144B
	2/0	RJ**E**-612G	115	B-144B
	3/0	RJ**E**-612L	150	B-144E
	4/0	RJ**E**-612Q	150	B-144E

OTHER CABLE TO REBAR CONNECTIONS

The connections shown below are for use only where connections shown in this catalog are not suitable.

NAME	TYPE		EASE	SPLIT
Ell	DT		2	V
Parallel tap	DR		2	V
	RV		2	V
Parallel thru	RT		2	V
	RW		2	V
Splice	RE		2	V
	RF		2	V
	RG		1	V
	SF		2	V
	SR		1	V

NAME	TYPE		EASE	SPLIT
Tee	RH		1	*
	RK		1	*
	RL		2	V
	RM		2	V
	RN		2	V
	RP		2	V
	RQ		2	V
X	XJ		1	*

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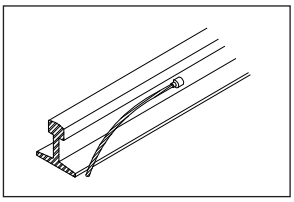
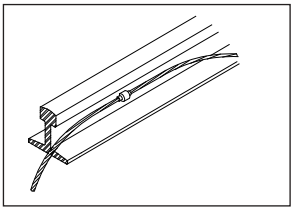
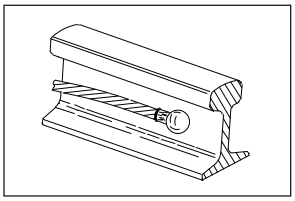
ST
Page 2

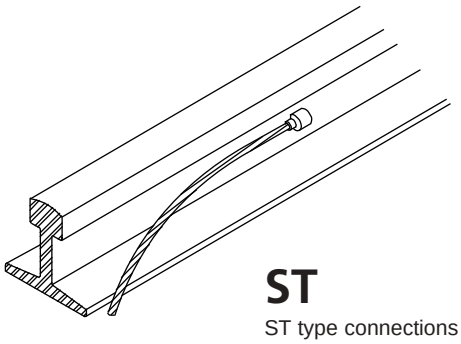


TP
Page 2



W
Page 3

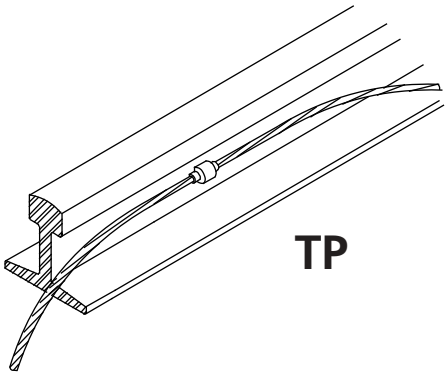




ST

ST type connections - specify RH (right hand) or LH (left hand). RH supplied if not specified.

RH shown.



TP

CABLE TO RAIL

- Connections for grounding cable to the rail web of 85 lb. to 140 lb. standard rails
- Concentric stranded copper cable is listed.
- Contact ERICO for crane or girder rail applications.
- Note: Rail materials characteristics, use and locations of weld should be considered when selecting connections to a rail.
- For cable sizes not listed, multiple connections using smaller cables are suggested.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

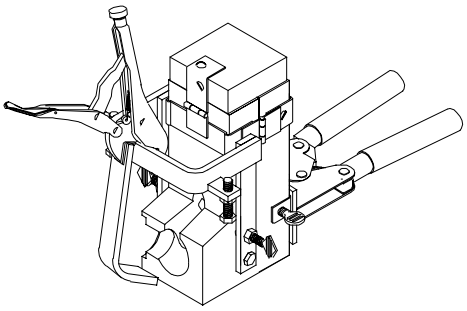
Handle Clamps	**L160** *for **R** Price Key Molds*
Rail Clamp	**C120J** *(requires L160 handle clamp)*
Flint Ignitor	**T320** *(Included with handle clamp and Rail Clamp but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Rasp	T321
Torch Head	T111

ACCESSORIES

See Section A



TYPE ST		
CABLE SIZE	**MOLD PART NO.**	**WELD METAL**
4	ST**R**-1L	65F80
2	ST**R**-1V	65F80
1	ST**R**-1Y	65F80
1/0	ST**R**-2C	90F80
2/0	ST**R**-2G	90F80
4/0	ST**R**-2Q	115F80

TYPE TP		
CABLE SIZE	**MOLD PART NO.**	**WELD METAL**
4	TP**R**-1L	90F80
2	TP**R**-1V	90F80
1	TP**R**-1Y	90F80
1/0	TP**R**-2C	115F80
2/0	TP**R**-2G	115F80
4/0	TP**R**-2Q	150F80

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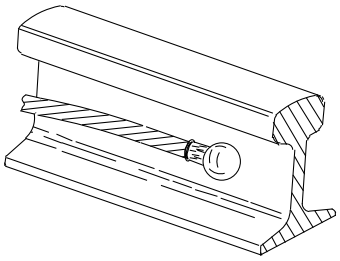
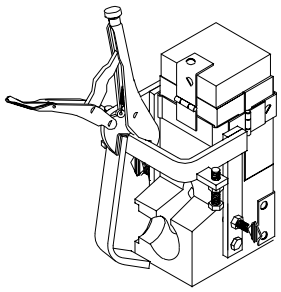
W

Type W - RH Shown





WEB WELDER

CABLE TO RAIL AND STRUCTURES

- Type W Bonds are for bonding and grounding of standard rails. These bonds are welded to the web of rail sections 85 lb. to 140 lb.
- Mold frame includes adjusting screw to position bond at neutral axis of rail where stresses are minimal.
- Contact ERICO for crane and girder rails.
- Concentric stranded copper cable is listed.
- NOTE: Rail materials characteristics, use and location of weld should be considered when selecting connections to a rail.

REQUIRED TOOLS

Flint Ignitor	**T320** *(Included with welder but also available separately)*

SUGGESTED TOOLS

Cable Cleaning Brush	T313
Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Rasp	T321
Torch Head	T111

ACCESSORIES

See Section A

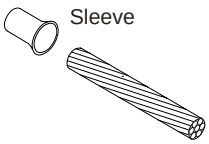
HOW TO ORDER FACTORY MADE BONDS

1. Order bond giving bond length in inches.
   a. Joint bonds must be at least 10 inches longer than rail angle bar.
   b. Stub-End bonds must be 9 inches minimum. **Specify right hand (RH) or left hand (LH).**
2. Order welder (mold with frame and rail clamp) by right hand and/or left hand. Includes flint ignitor.
3. Replacement molds and weld metal are furnished with bonds as follows:
   Joint bonds: Two weld metals per bond, plus one each right and left hand mold for every 80 bonds.
   Stub-End bonds: One weld metal per bond, plus one mold only for every 80 bonds.

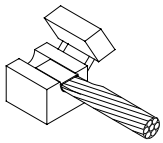
FACTORY MADE					
CABLE SIZE	JOINT BOND	STUB END BOND	WEB WELDER PART NUMBER	MOLD ONLY PART NUMBER	WELD METAL
1/0	W12C-(length)	W32C-(length)	WRS-2C-RH (-LH)	WRS-2C-RHM (-LHM)	65F80
2/0	W12G-(length)	W32G-(length)	WRS-2G-RH (-LH)	WRS-2G-RHM (-LHM)	90F80
4/0	W12Q-(length)	W32Q-(length)	WRS-2Q-RH (-LH)	WRS-2Q-RHM (-LHM)	90F80

HOW TO ORDER FIELD MADE BONDS

1. One sleeve per cable end to be welded to rail.
2. One or more hammer die per job.
3. One welder for each welding crew. Right hand and/or left hand.
4. One mold for every 50 to 80 bonds after first 50. Right hand and/or left hand.
5. One weld metal per cable end to be welded.



Sleeve



Hammer Die

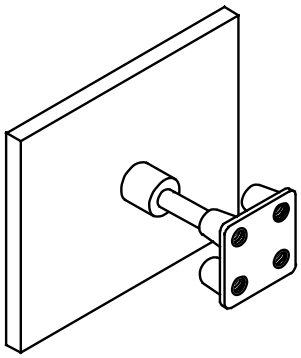
FIELD MADE					
CABLE SIZE	WEB WELDER PART NUMBER	MOLD ONLY PART NUMBER	SLEEVE	HAMMER DIE	WELD METAL
1/0	WRS-05-RH (-LH)	WRS-05-RHM (-LHM)	S05F	WD80	65F80
2/0	WRS-03-RH (-LH)	WRS-03-RHM (-LHM)	S03F	WD84	90F80
4/0	WRS-01-RH (-LH)	WRS-01-RHM (-LHM)	S01F	WD82	90F80

NOTES...

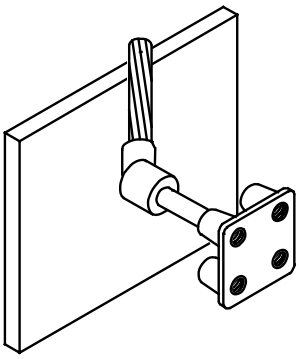
CAST GROUND PLATES, AIRCRAFT GROUNDING RECEPTACLES

SECTION 10

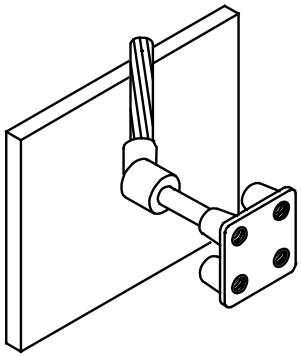
CAST GROUND PLATE CONNECTIONS B161/162/164



HV



HV/VF



HV/VE

CAST GROUND PLATE CONNECTIONS TO STRUCTURES

- CADWELD cast ground plates used in concrete structures offer convenient ground system connection points. These ground points are used for equipment, machinery and structure grounding after completion of the concrete work.
- For structural reasons, cast ground plates should always be encased in concrete.
- For B-161-2Q, B-162-2Q or B-164-2Q Cast Ground Plates Only.
- Concentric stranded copper cable is listed.
- Contact ERICO for other Ground Plates.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps	**L160** *for **C** and **R** Price Key Molds* **L159** *for **F** Price Key Molds*
Flint Ignitor	**T320** *(Included with handle clamp or Frame but also available separately)*

SUGGESTED TOOLS

Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Rasp	T321
Torch Head	T111

ACCESSORIES

See Section A

TYPE HV		
GROUND PLATE	**MOLD PART NO.**	**WELD METAL**
B-161-2Q B-162-2Q B-164-2Q	HV**C**-2Q-001	150
B-161-3Q B-164-3Q	HV**C**-3Q-002	200

CABLE SIZE	TYPE HV-VF		TYPE HV-VE	
	MOLD PART NO.	**WELD METAL**	**MOLD PART NO.**	**WELD METAL**
1/0	HV**R**-2Q-004	200	HV**R**-2Q-008	200
2/0	HV**R**-2Q-003	200	HV**R**-2Q-013	200
3/0	HV**R**-2Q-005	250	HV**R**-2Q-014	250
4/0	HV**R**-2Q-002	250	HV**R**-2Q-009	250
250	HV**R**-2Q-010	250	HV**R**-2Q-015	250
300	HV**R**-2Q-011	2-150	HV**R**-2Q-016	2-150
350	HV**F**-2Q-012	2-200	HV**R**-2Q-017	2-150
500	HV**F**-2Q-007	500	HV**F**-2Q-006	2-200

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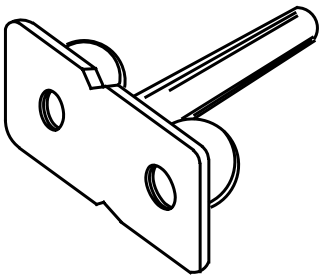
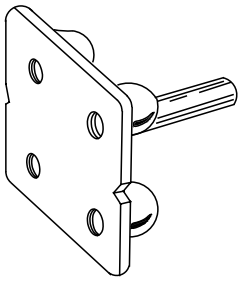
CADWELD CAST GROUND PLATES

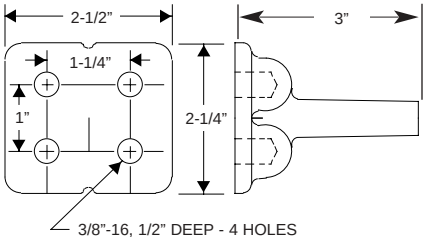




CADWELD CAST GROUND PLATES

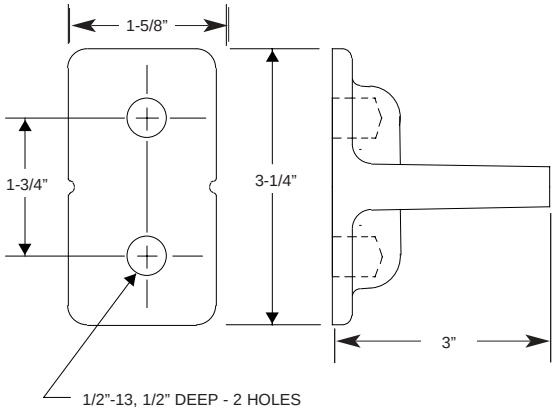
CADWELD ground plates used in concrete structures offer convenient ground system connection points. These ground points are used for equipment, machinery and structure grounding after completion of the concrete work.

The castings are made from a copper alloy. CADWELD ground plate connections result in current carrying capacity equal to that of the conductor or stud and cannot loosen or corrode.

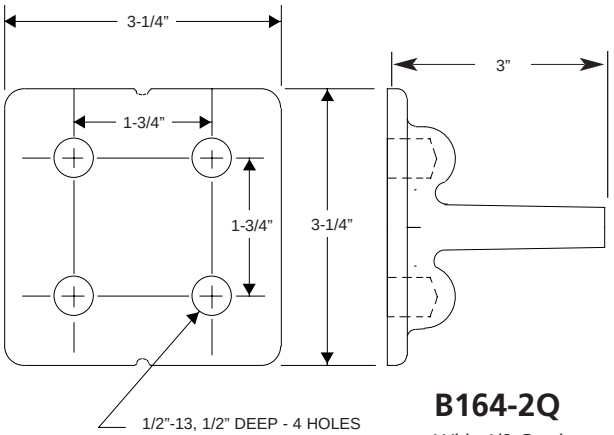


B161-2Q
With 4/0 Stud

B161-3Q
With 500 kcmil Stud



B162-2Q With 4/0 Stud



B164-2Q
With 4/0 Stud

B164-3Q
With 500 kcmil Stud

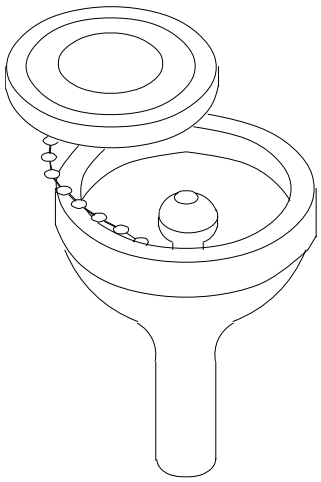
CAUTION: Use only CADWELD cast ground plates. Other similar plates may be available which do not meet the strength requirements necessary. They may crack or break during installation.

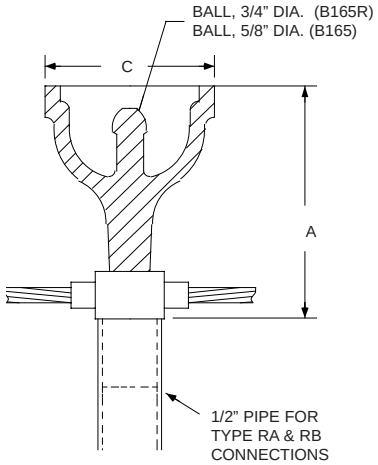
Use a CADWELD Type TA or Type SS mold when connecting the CADWELD cast ground plate to the ground conductor. The cast ground plate stud size noted above fits the mold opening for a cable of the same size.

Example: Tee connection of 250 cable to B164-2Q (4/0 stud size), use mold TA**C**-2V2Q.

Splice connection of 250 cable to B164-2Q, use mold SS**C**-2Q2V.

AIRCRAFT GROUNDING RECEPTACLES





B165/B165R

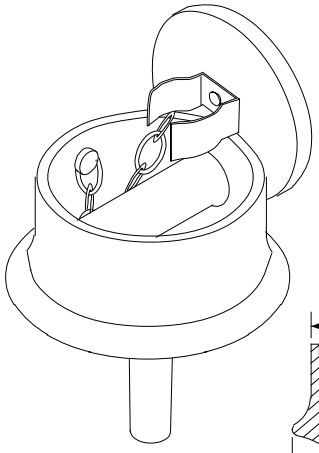
B165 and B165R

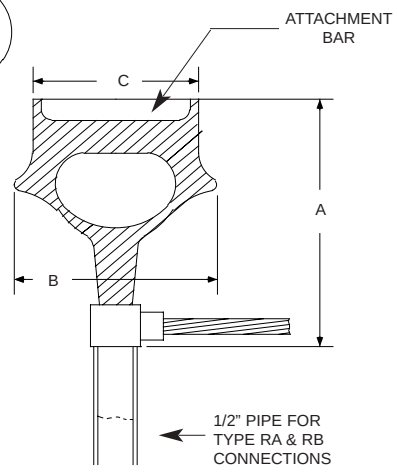
The B165 and B165R Grounding Receptacles are copper alloy castings intended for use in static grounding systems of aircraft refueling areas. They are easily connected to the grounding system conductor and/or ground rods with CADWELD connections. Designed for simple installation flush with the paved surface. The attachment point (3/4" ball) is an integral part of the casting on the B165 and is removable on the B165R.

RECEPTACLE	B165 and B165R
Depth A, Grade Level to Support	4-1/2
Diameter C, at Grade Level	2-3/4

SPECIAL NOTE

ERICO Aircraft Static Grounding Clamp B2617A can be used to connect to the B165, B165R and B166.





B166/B167

B166 and B167

The B166 and B167 Combination Tie-down and Static Grounding Receptacles are copper alloy castings. They are easily connected to the grounding system conductor with CADWELD connections. Designed for simple installation flush with the paved surface. The attachment bar (3/4" diameter on the B166 and 1-1/2" on the B167) is an integral part of the casting.

RECEPTACLE	B166	B167
Depth A, Grade Level to Support	6-1/4	7-1/4
Diameter B, Maximum Ring Size	4-3/4	6-1/2
Diameter C, at Grade Level	3-7/8	4-3/4

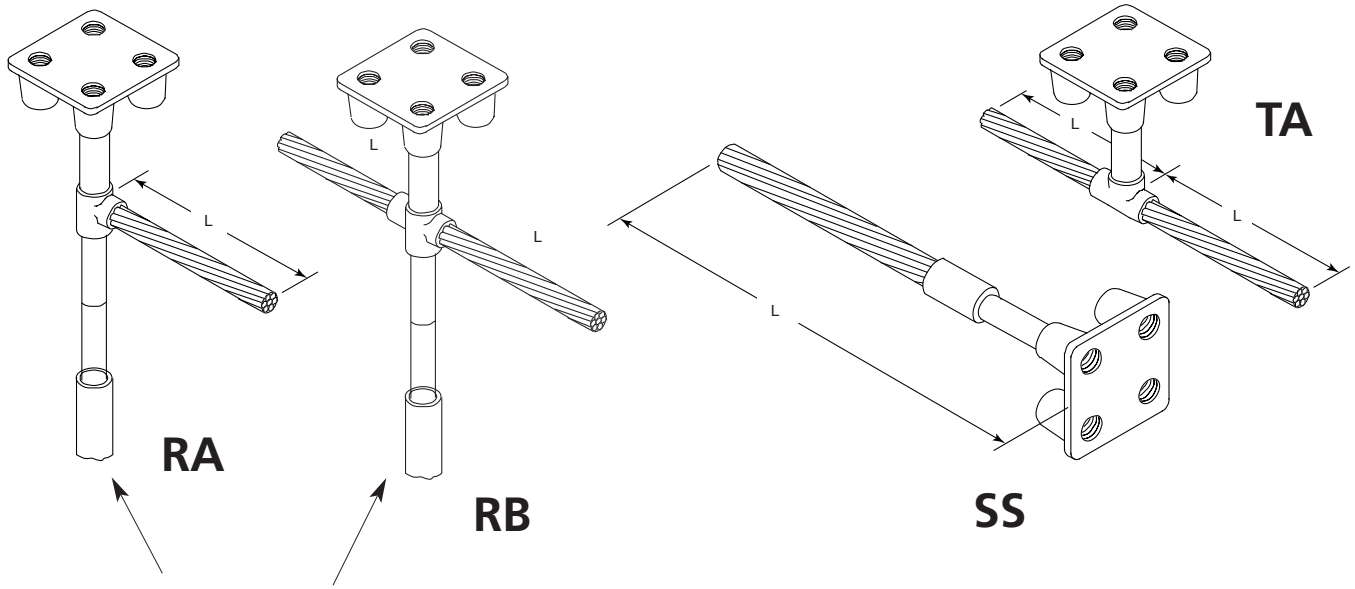
For assemblies using B166 and B167, contact ERICO.

SPECIAL NOTE

See pages 10-6 and 10-7 for CADWELD connections to aircraft grounding receptacles

Ph: 1-800-677-9089
www.erico.com

ORDERING INFORMATION



1/2” pipe can be used to support and position cast ground plate

GROUND PLATE	STYLE RA	STYLE RB	STYLE SS	STYLE TA
B1612Q	B530A"XL"	B531A"XL"	B532A"XL"	B533A"XL"
B1613Q	B530B"XL"	B531B"XL"	B532B"XL"	B533B"XL"
B1622Q	B530C"XL"	B531C"XL"	B532C"XL"	B533C"XL"
B1642Q	B530D"XL"	B531D"XL"	B532D"XL"	B533D"XL"
B1643Q	B530E"XL"	B531E"XL"	B532E"XL"	B533E"XL"

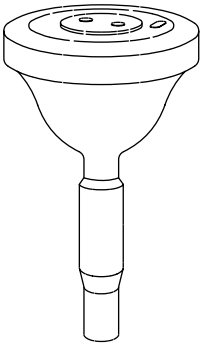
NOTE:	X (CONDUCTOR CODE)		EXAMPLE:
Add appropriate suffix:	#4 = 1L	4/0 = 2Q	B164-2Q Ground Plate
For "XL":	#2 = 1V	250 = 2V	4/0 Pigtail 4 feet long
X = Conductor Code	1/0 = 2C	350 = 3D	RA Style B530D2Q48
L = Length in inches	2/0 = 2G	500 = 3Q	

Conductor codes are for concentric strand copper cable.

AIRCRAFT GROUNDING RECEPTACLES

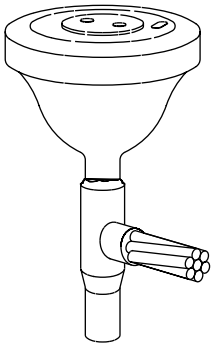
GB

Connection of grounding receptacle on ground rod.



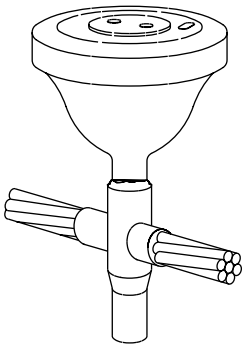
GB/GR

Connection of grounding receptacle, installed rod and cable tap.



GB/GT

Connection of grounding receptacle, installed rod and through cable.



GROUNDING RECEPTACLES

- CADWELD splices for Grounding Receptacles B165 and B165R to the top of ground rods with or without cable connection for most sizes and types of ground rods, including copperclad and stainless, stainless clad or galvanized steel.
- Concentric stranded copper cable is listed.
- **Bold letter** in mold part number is the price key.
- For B166 and B167, contact ERICO.

REQUIRED TOOLS

Handle Clamps **L160** *for **R** Price Key Molds*
L159 *for **F** and **J** Price Key Molds*

Flint Ignitor **T320** *(Included with handle clamp or frame but also available separately)*

SUGGESTED TOOLS

Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Cable Clamp	B265
Torch Head	T111

ACCESSORIES

See Section A

GROUND ROD SIZE	MOLD PART NO. TYPE GB		WELD METAL
	Copper Clad Rod Plain or Sectional	Steel Rod SS SS clad, Galv.	
5/8"	GB**R**-16R1	GB**R**-31R1	2-150
3/4"	GB**R**-18R1	GB**R**-33R1	2-150
1"	GB**F**-22R1	GB**F**-37R1	2-200

GROUND ROD SIZE	CABLE SIZE	MOLD PART NO. TYPE GB-GR		WELD METAL
		Copper Clad Rod Plain or Sectional	Steel Rod SS SS Clad, Galv.	
5/8"	1/0	GB**J**-GR162CR1	GB**J**-GR312CR1	2-200
	2/0	GB**J**-GR162GR1	GB**J**-GR312GR1	2-200
	3/0	GB**J**-GR162LR1	GB**J**-GR312LR1	2-200
	4/0	GB**J**-GR162QR1	GB**J**-GR312QR1	2-200
3/4"	1/0	GB**J**-GR182CR1	GB**J**-GR332CR1	2-200
	2/0	GB**J**-GR182GR1	GB**J**-GR332GR1	2-200
	3/0	GB**J**-GR182LR1	GB**J**-GR332LR1	2-200
	4/0	GBJ-GR182QR1	GB**J**-GR332QR1	2-200
1"	1/0	GB**J**-GR222CR1	GB**J**-GR372CR1	500
	2/0	GB**J**-GR222GR1	GB**J**-GR372GR1	500
	3/0	GB**J**-GR222LR1	GB**J**-GR372LR1	500
	4/0	GB**J**-GR222QR1	GB**J**-GR372QR1	500

GROUND ROD SIZE	CABLE SIZE	MOLD PART NO. TYPE GB-GT		WELD METAL
		Copper Clad Rod Plain or Sectional	Steel Rod SS SS Clad, Galv.	
5/8"	1/0	GB**J**-GT162CR1	GB**J**-GT312CR1	2-200
	2/0	GB**J**-GT162GR1	GB**J**-GT312GR1	2-200
	3/0	GB**J**-GT162LR1	GB**J**-GT312LR1	2-200
	4/0	GB**J**-GT162QR1	GB**J**-GT312QR1	2-200
3/4"	1/0	GB**J**-GT182CR1	GB**J**-GT332CR1	2-200
	2/0	GB**J**-GT182GR1	GB**J**-GT332GR1	2-200
	3/0	GB**J**-GT182LR1	GB**J**-GT332LR1	2-200
	4/0	GB**J**-GT182QR1	GB**J**-GT332QR1	2-200
1"	1/0	GB**J**-GT222CR1	GB**J**-GT372CR1	500
	2/0	GB**J**-GT222GR1	GB**J**-GT372GR1	500
	3/0	GB**J**-GT222LR1	GB**J**-GT372LR1	500
	4/0	GB**J**-GT222QR1	GB**J**-GT372QR1	500

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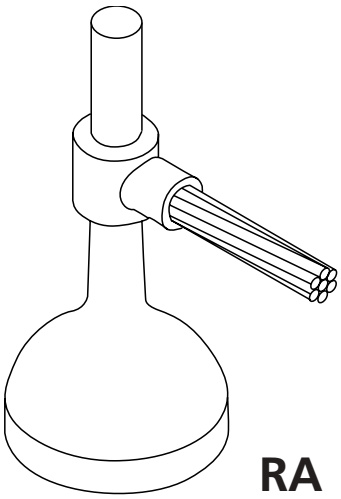
www.erico.com

AIRCRAFT GROUNDING RECEPTACLES



RA
Cable Tap

RA AND RB TYPES FOR AIRCRAFT GROUNDING

- CADWELD connection is made with the receptacle in the inverted position. The resulting riser fits inside a 1/2" pipe for proper elevation locating – see page 10-5.
- Concentric stranded copper cable is listed.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps **L160** *for **C** Price Key Molds*

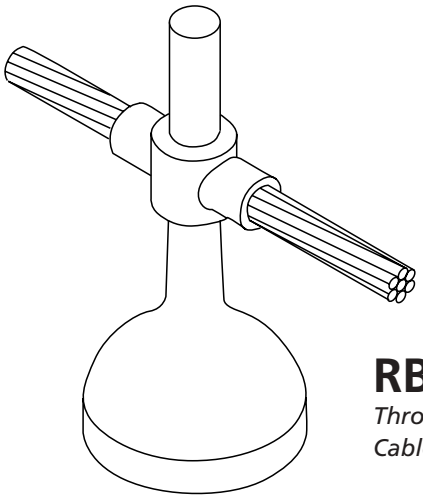
Flint Ignitor **T320** *(Included with handle clamp or frame but also available separately)*

SUGGESTED TOOLS

Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
File	T329
Torch Head	T111

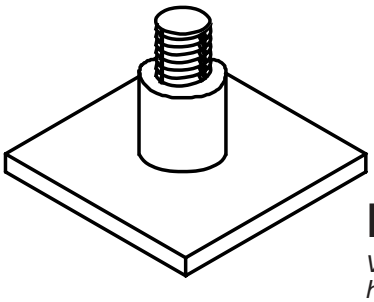
ACCESSORIES

See Section A



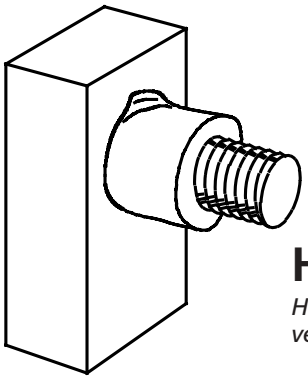
RB
Through Cable

TYPE RA Connections			TYPE RB Connections	
MOLD PART NO.	WELD METAL	CABLE SIZE	MOLD PART NO.	WELD METAL
RA**C**-1V	115	2	RB**C**-1V	115
RA**C**-1Y	115	1	RB**C**-1Y	115
RA**C**-2C	150	1/0	RB**C**-2C	150
RA**C**-2G	150	2/0	RB**C**-2G	150
RA**C**-2L	150	3/0	RB**C**-2L	200
RA**C**-2Q	150	4/0	RB**C**-2Q	200



HX

Vertical stud to horizontal steel surface



HV

Horizontal stud to vertical steel surface

COPPER AND STEEL STUDS

- Connections of copper or steel studs to steel surfaces. Copper studs on grounded structures provide a convenient point for attachment of temporary protective ground clamps.
- **Bold letter** in mold part number is the price key.

REQUIRED TOOLS

Handle Clamps **L160** *for **C** Price Key Molds*
L159 *for **D** Price Key Molds*

Flint Ignitor **T320** *(Included with handle clamp or frame but also available separately)*

SUGGESTED TOOLS

Slag Removal Spade	B136A or B136B
Mold Cleaning Brush	T394
Rasp	T321
Torch Head	T111

ACCESSORIES

See Section A

TYPE HX CONNECTIONS FOR STEEL SURFACES ONLY

STEEL STUDS ONLY

STUD SIZE	MOLD PART NO.	TYPE HX WELD DIMENSIONS A (thickness)	B (diameter)	WELD METAL
1/4"	HX**C**-10	3/8"	3/4"	25
5/16"	HX**C**-11	3/8"	3/4"	25
3/8"	HX**C**-12	9/16"	7/8"	45
1/2"	HX**C**-14	5/8"	1-1/16"	65
3/4"	HX**C**-18	5/8"	1-1/2"	150
1"	HX**C**-22	15/16"	1-5/8"	2-150

TYPE HV CONNECTIONS FOR STEEL SURFACES ONLY

STEEL STUDS ONLY

STUD SIZE	MOLD PART NO.	TYPE HX WELD DIMENSIONS A (thickness)	B (diameter)	WELD METAL
1/4"	HV**C**-10	3/8"	3/4"	25
5/16"	HV**C**-11	3/8"	3/4"	25
3/8"	HV**C**-12	9/16"	7/8"	45
1/2"	HV**C**-14	5/8"	1-1/16"	65
3/4"	HV**C**-18	5/8"	1-1/2"	150
1"	HV**C**-22	15/16"	1-5/8"	250

TYPE HV CONNECTIONS FOR STEEL SURFACES ONLY

COPPER* STUDS ONLY

STUD SIZE	MOLD PART NO.	WELD METAL
1/2"	HV**C**-14CU	115
5/8"	HV**C**-31CU	150
3/4"	HV**C**-33CU	250
7/8"	HV**D**-35CU	2-150
1"	HV**D**-37CU	2-200

*or silicon bronze

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ABOUT HEAVY DUTY ELECTRICAL CONNECTIONS

for stranded concentric copper conductors.

Heavy Duty connections were developed to be used on reclaimed cable. Heavy Duty connections use a larger size connection cavity in the mold and a larger size weld metal than the equivalent standard connections.

The larger size weld metal supplies extra BTU's (but not a higher temperature) to melt the heavy oxide coating on the conductor and to overcome severe field conditions.

Heavy Duty connections offer the following advantages:

- Eliminates cutting the run conductor on certain types of connections.
- Reduces cable cleaning requirements for old or reclaimed cable.
- Increases reliability under adverse field conditions.

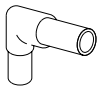
NOTE: The increased size of weld metal raises costs compared to connections shown in sections 1 through 10.

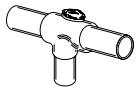
NOTES...

OTHER CONNECTIONS

COPPER TUBE TO GROUND RODS

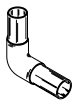
The connections shown below are for use only where connections shown in this catalog are not suitable.

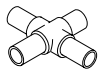
NAME	TYPE		EASE	SPLIT
Ell	FT		1	V

NAME	TYPE		EASE	SPLIT
Tee	FV		1	V

COPPER TUBE TO COPPER TUBE

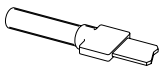
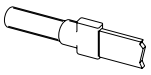
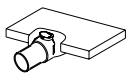
The connections shown below are for use only where connections shown in this catalog are not suitable.

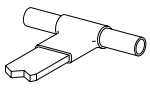
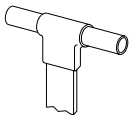
NAME	TYPE		EASE	SPLIT
Ell	FK		1	*
	FL		3	V
	FM		2	V
Splice	FD		1	V
	FE		3	V

NAME	TYPE		EASE	SPLIT
Tee	FF		1	*
	FG		2	V
	FH		3	V
	FJ		3	V
X	XT		4	*

COPPER TUBE TO BUSBARS OR LUGS

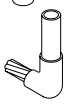
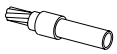
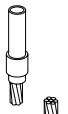
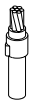
The connections shown below are for use only where connections shown in this catalog are not suitable.

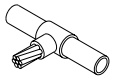
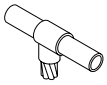
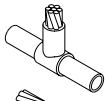
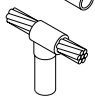
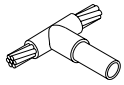
NAME	TYPE		EASE	SPLIT
Splice	FN		1	*
	FP		1	V
Tee	EW		2	V

NAME	TYPE		EASE	SPLIT
Tee	FR		2	*
	FS		1	V

CABLE TO COPPER TUBE

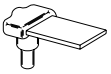
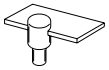
The connections shown below are for use only where connections shown in this catalog are not suitable.

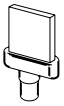
NAME	TYPE		EASE	SPLIT
Ell	DP		1	*
	MV		2	V
	MW		3	V
	MX		2	V
	MY		3	V
Splice	MH		1	V
	MJ		3	V
	MK		3	V

NAME	TYPE		EASE	SPLIT
Tee	ML		1	*
	MM		3	*
	MP		3	*
	MQ		3	*
	MR		3	*
	MS		3	*
	MT		3	*
	NA		1	*

BUSBAR TO GROUND RODS

The connections shown below are for use only where connections shown in this catalog are not suitable.

NAME	TYPE		EASE	SPLIT
Ell	CL		1	V
Tee	CN		1	V
	CM		3	V
	CP		2	V

NAME	TYPE		EASE	SPLIT
Splice	CS		3	V
Tee	CQ		3	V
	CR		1	V

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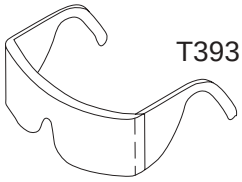
PAGE A -

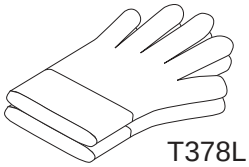
SAFETY FIRST

ERICO recommends SAFETY FIRST when making CADWELD Connections as you should consider with all tasks. We offer the following safety equipment. We recommend gloves and glasses as shown.


T393

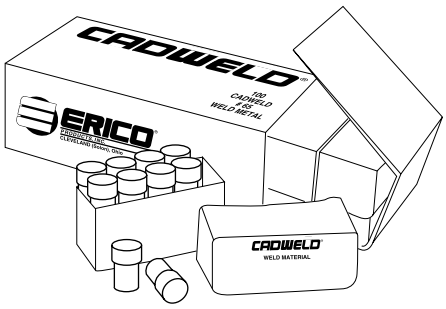
Safety Glasses
These glasses may be worn separately or over prescription glasses.

Gloves
Heavy canvas gloves with leather palms.


T378L

CADWELD WELD METAL

CADWELD Weld Metal is a mixture of copper oxide and aluminum, packaged by size in plastic tubes. Each tube contains the starting material at the bottom of the plastic tube, with the Weld Metal on top. These materials are not explosive and not subject to spontaneous ignition. These containers are packaged in boxes along with metal disks. Each weld uses one disk.



Five types of CADWELD Weld Metal are used for grounding connections:

1. F20 or standard Weld Metal is used for all grounding connections with the exception of those to cast iron or to load bearing rail. The Standard Weld Metal containers have clear (or natural) caps. Standard Weld Metal is also used with most FX molds.

2. XL Weld Metal is used with EXOLON molds. EXOLON Weld Metal containers have white caps.

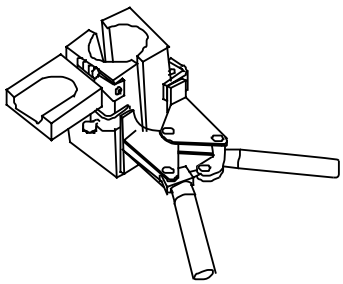
3. XF-19 Alloy Weld Metal is used for all connections to cast iron such as Type HB and others. XF-19 Weld Metal containers have orange caps.

For DUCTILE IRON, see Section 3, Cast Iron Connections

4. CADWELD F80 Alloy Weld Metal is used for all connections to load bearing rail such as Type W Bonds. F80 Weld Metal containers have yellow caps.

5. Cathodic connections require different weld metal and molds. Contact ERICO for cathodic connection applications.

CADWELD MOLDS



A semi-permanent graphite mold is used for making most CADWELD Connections. The mold controls the direction and speed of the molten CADWELD weld metal flow and its final shape. The graphite used in a CADWELD mold is a high temperature type that lasts for an average of 50 or more CADWELD connections under normal usage.

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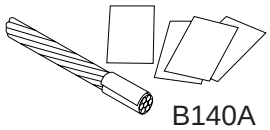
ADAPTING MOLDS TO FIT CONDUCTORS

Cables smaller than indicated on mold tag can be welded by using either Wrap Sleeve or Adapter Sleeves.



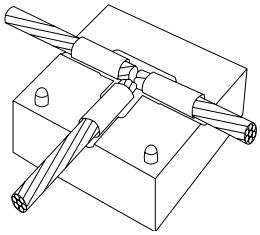
B140A

CADWELD Wrap Sleeve B140A

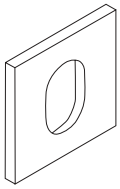
CADWELD Wrap Sleeve is wrapped around the cable until the diameter is about the same as the cable opening in the mold.

CADWELD Adapter Sleeves

CADWELD Adapter Sleeves are used to adapt a limited range of smaller size cables to a larger size CADWELD Mold.



CABLE SIZE			
Concentric Strand	Solid	Adapter Sleeve Part No.	Use in Mold for Stranded
#12,14	#10,12,14	B-133-1H	#6
#7,8,10	#6,8	B-133-1L	#4
#6	#5	B-112	#2
#4,5	#3,4	B-133-1V	#2
#3,4	#2	B-133-1Y	#1
#2	#1	B-133-2C	1/0
#1	1/0	B-133-2G	2/0
1/0,1	2/0	B-133-2L	3/0
2/0,1/0	3/0	B-133-2Q	4/0



Packing

Packing consists of either preformed ceramic packing or sometimes B140A or B141A copper wrap shim. Packing is required on all rebar connections.

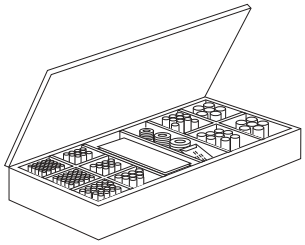
T403

CADWELD Mold Sealer

T403 CADWELD Mold Sealer is ideal for sealing hot or cold molds to retard leakage from large stranded conductors. It is required on certain molds such as Types HA, HB, HC, VG and VN. It prolongs useful mold life when the cable opening becomes worn.

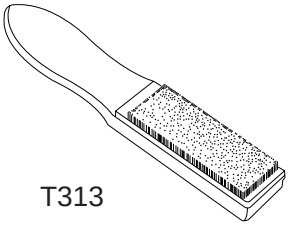
It is available in a convenient 2 pound package.

CADWELD Sleeve Kit



T427 Includes: Product #	Quantity	Product #	Quantity
B1331H	25	B1332L	8
B1331L	25	B1332Q	12
B112	18	B140A	10
B1331V	10	B117A	20
B1331Y	10	B117B	10
B1332C	9	B117C	10
B1332G	10	T320A	10

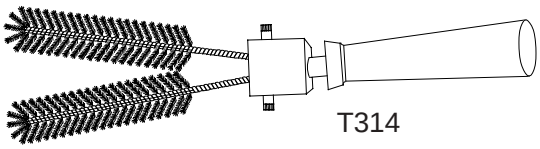
CABLE AND WORK SURFACE PREPARATION



T313

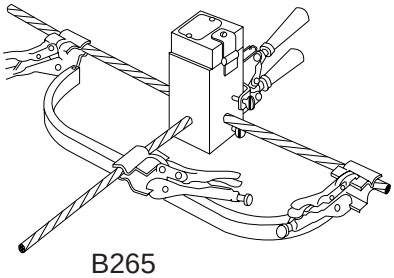
Cable Cleaning Brushes

Two types of brushes are available to aid in removing oxides from copper surfaces. T313 Card Cloth Brush with short stiff bristles is generally preferred for cleaning concentric conductors and busbars, which are not heavily oxidized.



T314

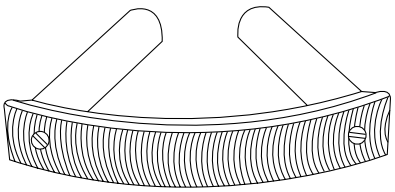
T314 Cable Cleaning Brush cleans any conductor and is especially useful for coarse or very dirty conductors. The brushes can be rotated to provide new cleaning bristles and are replaceable.



B265

Cable Clamp B265

The B265 Cable clamp should be used with hard drawn copper cable, Copperweld DSA® conductor or any cable under tension. Use of the clamp aids in preventing cable movement and prolongs mold life.



T321

Rasp

T321 rasp is used to remove rust from any steel surface or galvanizing from hot dipped galvanized steel to expose the bare steel for welding. The curved blade makes it an efficient tool for flat surfaces. T321A Replacement blades are also available.

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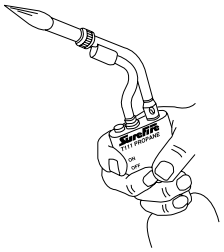
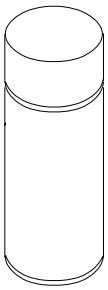


T111

Surefire™ Torch Head

T111 Self igniting propane torch head. Squeeze the control knob for an instant flame. Release and it's out. No flame adjusting. The burn tip remains cool during normal use. Operates on its side or upside down. Can withstand 60MPH winds without flare-out. Fits all standard 14 and 16 oz. propane cylinders.

SUREFIRE™ is a trademark of IPI



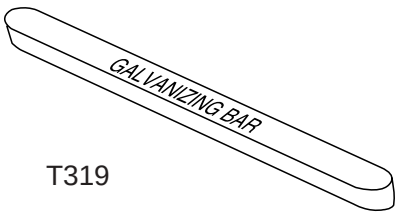
T372A

Galvanizing Touch-Up

Easy to use galvanizing paint in a spray can is used to touch up heat affected areas on galvanized steel surfaces after welding. The damage to the galvanizing is often minimal so the repair is often cosmetic. T372A galvanizing compound available in 12 ounce aerosol can.

T358

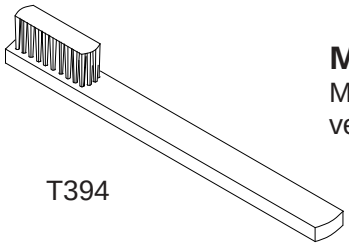
T358 Regalv is a 97% zinc rich organic coating which also can be used to repair galvanized surfaces. The brush is attached to the cap.



T319

T319 Galvanizing Bar is used to repair a galvanized surface that has been damaged by welding or drilling. This is a low temperature, self-fluxing material. Often there is sufficient heat after making the CAD-WELD Connection to melt the bar or a small torch may be used.

MOLD CARE AND USE



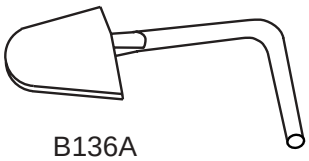
T394

Mold Cleaning Brush

Mold cleaning brush T394 is very useful for removing slag from molds – especially vertical split molds.

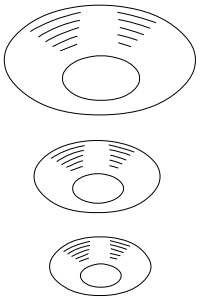
Slag Removal Spades

Slag Removal Spades are useful for removing the slag after making a CADWELD Connection – especially useful with horizontally split molds.



B136A
B136B

Slag Spade Part No.	Use With Mold Price	Using Weld Metal Size
B-136-A	A,C, & R	#65 & Smaller
B-136-B	C,D,F & R	#90 & Larger

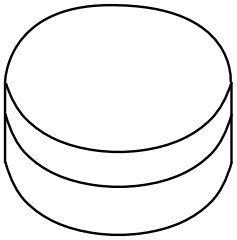


Disks

Each time a weld is made, a new disk is required. The disk sits on the bottom of the crucible. Its purpose is to hold the powdered weld metal until the reaction takes place. The slag produced by the reaction rises to the surface and the molten copper settles to the bottom of the crucible where it melts the disk and flows over the conductors to produce a permanent molecular bond.

Disks are available in three sizes:

B117A used in molds using #15 thru #32 weld metal (3/4" diameter).
B117B used in molds using #45 thru #115 weld metal (1" diameter).
B117C used in molds using #150 thru #500 weld metal (1-1/2" diameter).
Disks are included with the Weld Metal.



T328D

Disk Kit

A disk container (T328) which includes 20 of each of the three sizes of steel disks is available for your convenience. Kit P/N T328D.

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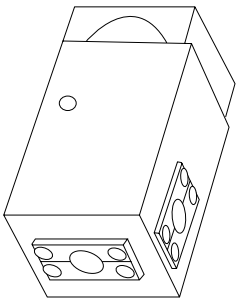


Wear Plates

Wear Plates reduce mechanical abrasion of molds at cable entry points and help prevent leakage of molten metal (particularly on larger 7 strand conductor). These features prolong mold life.

Most CADWELD Molds are available with factory mounted Wear Plates for the following sizes:

Copper Cable: 1/0 AWG thru 500 Kcmil
DSA Copperweld®: 7/#10 thru 19/#6
Ground Rods: 1/2" thru 1"

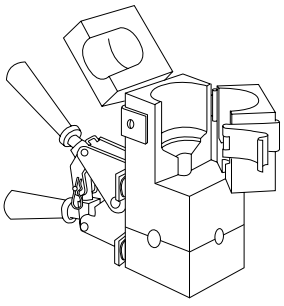
To order WEAR PLATES, specify: Mold Part No. followed by the suffix "-W" i.e., TAC-2Q2Q-W.

Not available with types HA, HB, HC, LJ, certain PTs & PCs, RR, VB, VF, VG, VN, XA, XBQ or XBZ.

Following are the number of Wear Plates (W.P.) used on the various types listed in this catalog.

TYPE	W.P.	TYPE	W.P.	TYPE	W.P.
GB	1	HT	2	RC	2
GB-GR	2	LA	1	RD	2
GB-GT	3	LE	2	SS	2
GL	1	LL	1*	TA	3
GR	2	PC	3**	VS	1
GT	3	PT	4**	VT	2
GY	3	RA	1	VV	1
HS	1	RB	2	XB	4

* Available only on molds for 2" and narrower bus size.
** Available only on mold for 1/0 (or 7/#10) and larger run and tap.



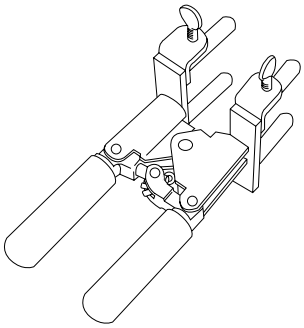
Split Crucible Molds

Molds made with a horizontal opening and solid crucible section may be specified as a SPLIT CRUCIBLE TYPE. The advantage of the SPLIT CRUCIBLE MOLD is easier cleaning, but lead times are longer.

To order a SPLIT CRUCIBLE TYPE specify: Mold Part No. followed by the suffix "-L" i.e., TAC2Q2QL.

Available in Type TA, XA, XB (C & D mold price only), LE and LJ connections.

MOLD FASTENING AND MOUNTING

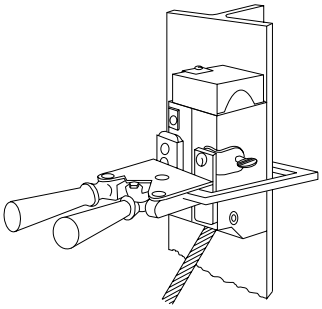


CADWELD Handle Clamps

Handle Clamps such as the one shown are required for most molds. Specialized frames with handles are used on some molds. Flint ignitors are included with all Handle Clamps. The following Handle Clamps are most widely used.

1. L160 for all molds having a "C", "E", "Q", or "R" mold price listing. (3" wide molds)

2. L159 for all molds having a "D", "F", "J" or "Z" mold price listing (4" wide molds)



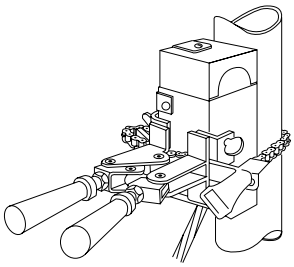
Vertical Surface Mold Support

The CADWELD Mold can be securely held to a vertical "H" column or angle by using the Vertical Surface Mold Support. It is easily attached to an existing L159 or L160 Handle Clamp. For use with Types VB, VG, VN, and VS molds, fits steel up to 1" thick, for Type VF mold, 3/4" thick.

B134: For use with L160 E-Z CHANGE Handle Clamp
B135: For use with L159 E-Z CHANGE Handle Clamp

Chain Support Handle Clamps

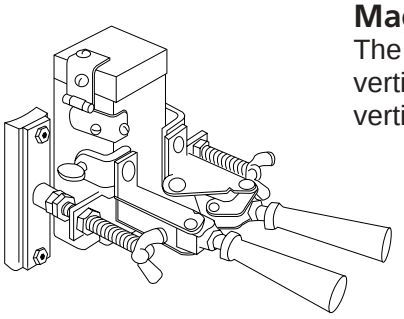
The CADWELD mold can be securely held to a pipe using the clamp assembly consisting of a modified L159 or L160 Handle Clamp with built-in Pipe Attachment.



Clamp Part No.	Fits Mold Price	For Following Connection Types	Pipe
B159V	D & F	VS,VF,VB, & VV	Vertical
B160V	C & R	VS,VF,VB, & VV	Vertical
B159VT	D & F	VT	Vertical
B160VT	C & R	VT	Vertical
B159H	D & F	HA,HS,HC, & HT	Horizontal
B160H	C & R	HA,HS,HC, & HT	Horizontal

The above clamps are equipped with 20" length of chain which will fit up to 4" pipes. Extra 20" length of chain, B158, is available to fit up to 10" pipes.

Ph: 1-800-677-9089
www.erico.com

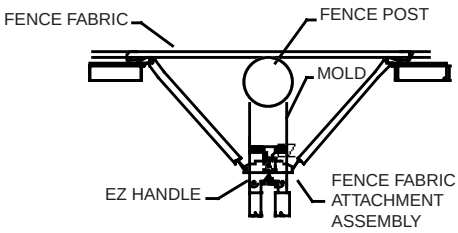


Magnetic Handle Clamps

The CADWELD mold can be securely held to a large flat or slightly curved vertical surface using the Handle Clamp with Magnetic Support. Used on vertically split molds.

Clamp Part No.	Fits Mold Price Key	Minimum Width Required*
B396	C & R Price Key	8”
B159M	D & F Price Key	10-1/2”
B399AM	T Price Key	6”
B399BM	P & N Price Key	7”

*Width will vary slightly depending upon the type of connection being made.



Fence Fabric Attachment Assembly

An easy to use, labor saving, Fence Fabric Attachment Assembly fastens to your existing L159 or L160 Handle Clamp to firmly hold your mold to the fence post after the fence fabric has been attached. Ideal for retrofit jobs.

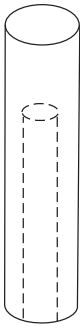
Fence Fabric Attachment Part No.	Fits Handles
B827A	L160, L159

GROUND ROD SPECIALTY TOOLS

ERITECH® Ground Rod Drivers

Product #	Description
EGRD58	5' Driver body with insert for up to 5/8" ground rods
EGRD58I*	Replacement insert for 5/8" ground rods
EGRD34	5' Driver body with insert for up to 3/4" ground rods
EGRD34I*	Replacement insert for 3/4" ground rods

*Both 5/8" and 3/4" inserts fit standard body of EGRD58 or EGRD34.

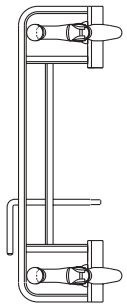


Ground Rod Driving Sleeves**

Use a CADWELD ground rod driving sleeve to prevent mushrooming top of ground rod.

Ground Rod Size	Part No.
1/2” Copper Bonded or Steel Rod	B137-14
5/8” Copper Bonded (.563” diameter)	B137-16
5/8” Steel (.625” diameter)	B137-31
3/4” Copper Bonded (.682” diameter)	B137-18
3/4” Steel (.750” diameter)	B137-33
1” Copper Bonded (.914” diameter)	B137-22
1” Steel (1.00” diameter)	B137-37

** For plain (unthreaded) ground rods only.

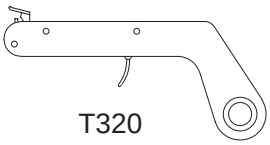


B120

Ground Rod Splice Clamp

The B120 Ground Rod Splice Clamp must be used to support the upper rod and provide a method of correctly positioning the rods and mold while splicing the rods. (Type HDGB and GB Connection).

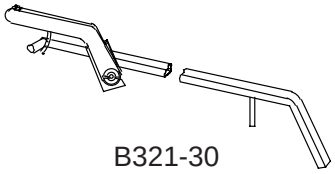
OTHER TOOLS



T320

Flint Ignitors

T320 CADWELD Flint Ignitors are used to ignite the starting material when making a CADWELD Connection. An ignitor is included with each Handle Clamp or frame. T320A Replacement Flints are also available.

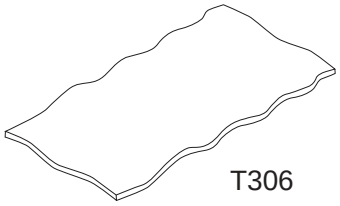


B321-30

Flint Ignitor Extension

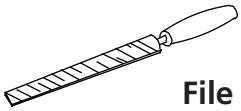
B321-30 Flint Ignitor Extension attaches to the T320 Flint Ignitor and allows the installer to be about 30” from the mold. Ideal for such operations where the mold is in a narrow trench and the installer is at ground level.

Ph: 1-800-677-9089
www.erico.com

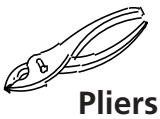


T306

Ceramic Blanket
The woven Ceramic Blanket (Part T306) can be used to hold a hot mold or keep the work surface free of slag when cleaning the mold.

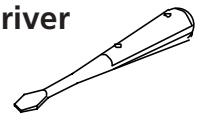


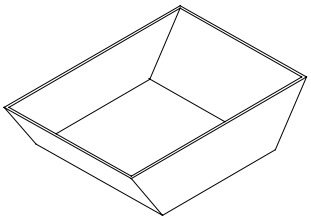
File
T329



Pliers
T304

Screwdriver
T305



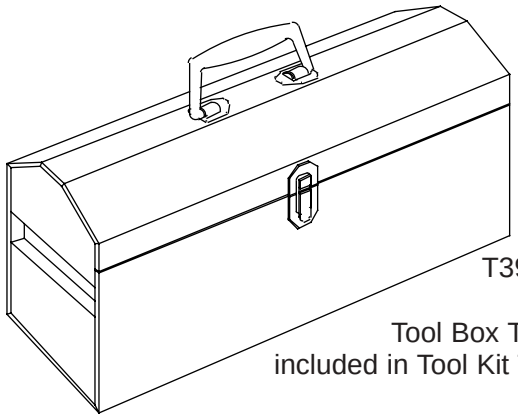


XLB974-B2

Welding Tray
The Welding Tray (Part XLB974-B2) can contain a spill of molten weld metal. It is for personnel safety. Recommended when working overhead or over expensive equipment.

TOOL KITS

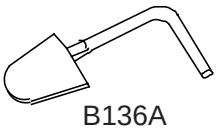
Tool Box T396
A tool box is highly recommended to carry tools, molds, weld metal and a propane torch.



T396

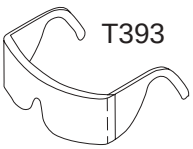
Tool Box T396 is included in Tool Kit T315A

Tool Kit T315A
Other Tool Kits can be made for your particular requirements.

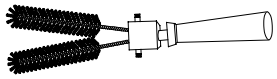


B136A

T320

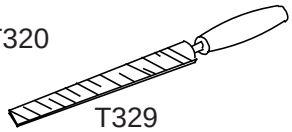


T393

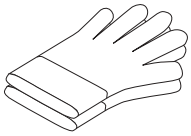


T314

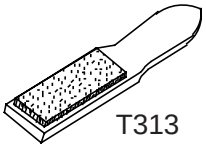
T328D



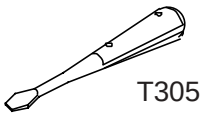
T329



T378L

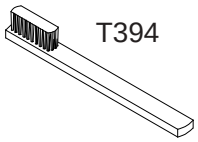


T313



T305

T304

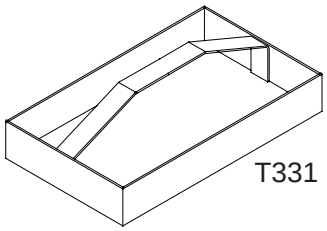


T394

T321

TOOL TRAY

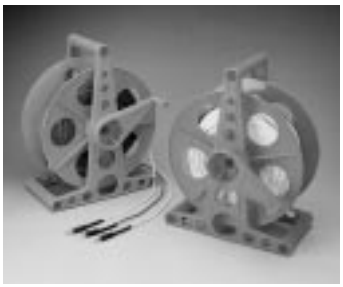
Tool Tray Only: T331
Ideal for carrying one or two molds, weld metal, propane torch and tools.



T331

Tool Tray T331 is not included in Tool Kit T315A

Ground System Testers



EST Reel Kit 500

EST Series

Product #	Description
EST 101	2 pole resistance, 3 pole ground to earth resistance measurement @128Hz
EST 201	2 pole AC resistance, 3 pole ground to earth resistance measurement, 4 pole soil resistivity measurement
EST 301	2 pole AC resistance, 2 & 3 pole ground to earth resistance measurement, 4 pole soil resistivity, and clamp-on stakeless and selective adapters
ESTREELKIT500	EST Reel Kit 500 feet long (includes two reels)

EST101

EST201

EST301

Reference Material

Product #	Description
G157LT99	Practical Guide to Electrical Grounding

Ph: 1-800-677-9089
www.erico.com

GROUNDING SYSTEM – CONDUCTORS AND CONNECTORS

The grounding conductor size is based on the maximum magnitude and duration of available fault current, and on the type of connections being used in the grounding system.

IEEE Std. 80-2000, Guide for Safety in Substation Grounding, the accepted industry standard, uses a fusing formula as the basis for selecting minimum conductor size to avoid fusing (melting) under fault conditions.

This formula can be simplified to the following:

$$A = K \cdot I\sqrt{S}$$

Where: A = Conductor size in circular mils
K = Constant from the following table
I = RMS fault current in amperes
S = Fault time in seconds

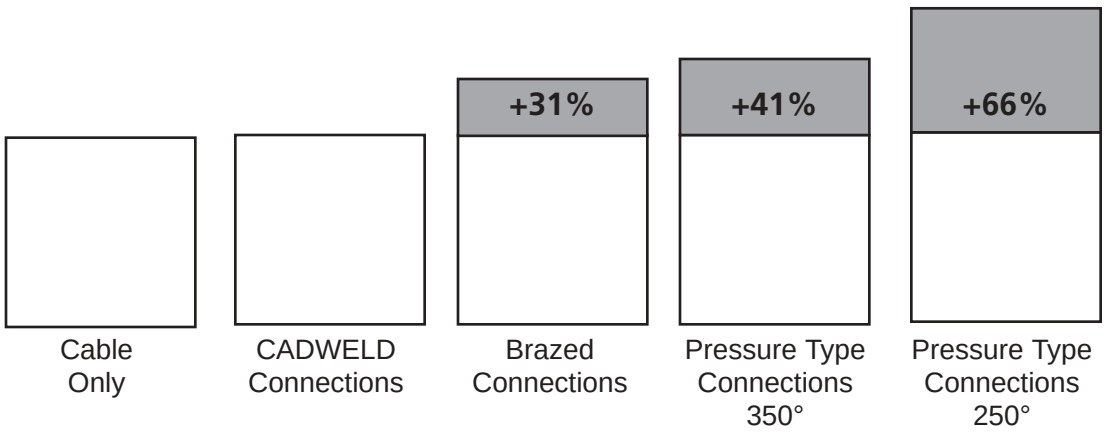
Based on the standard ambient temperature of 40°C.

MAX TEMP	CONSTANT K FOR ABOVE FORMULA		
	COPPER S.D.	COPPERWELD DSA 40%	COPPERWELD DSA 30%
1083 C	7.01	10.46	12.04
450 C	9.18	13.74	15.87
350 C	10.10	15.13	17.46
250 C	11.65	17.47	20.17

The temperatures listed above for each material are specified in IEEE Std. 80-2000 to be used for different types of connecting means;

Pressure type connectors	250° to 350°C*
Brazed connections	450°C
Exothermic welded connections	1083°C

*except those which have been tested to and passed the requirements of IEEE Std. 837-1989.



EXAMPLE – 25,000 Ampere, 2 second fault:

CONNECTION TYPE	CONDUCTOR SIZE
CADWELD	.246 kcmil – use 250 kcmil
Brazed	.322 kcmil – use 350 kcmil
Pressure Type (at 350 C)	.357 kcmil – use 350 kcmil
Pressure Type (at 250 C)	.408 kcmil – use 400 kcmil

BARE CLASS A, B, AND C CONCENTRIC STRANDED CONDUCTOR

Based on A.S.T.M. Standard Specifications.

Size in Circular mils	Size A.W.G.	Conductor Dia. In.	NUMBER OF WIRES 7	19	37	61	91	CADWELD Cable code
1,000,000		1.152			.1644*	.1280	.1048	4Y
800,000		1.031			.1470*	.1145	.0938	4Q
750,000		.998			.1424*	.1109	.0908	4L
700,000		.964			.1375*	.1071	.0877	4G
600,000		.893			.1273	.0992	.0812	3X
500,000		.813		.1622*	.1162	.0905		3Q
400,000		.728		.1451	.1040	.0810		3H
350,000		.681		.1357	.0973	.0757		3D
300,000		.630		.1257	.0900	.0701		3A
250,000		.575		.1147	.0822	.0640		2V
211,600	4/0	.528	.1739	.1055	.0756			2Q
167,800	3/0	.470	.1548	.0940	.0673			2L
133,100	2/0	.419	.1379	.0837	.0600			2G
105,500	1/0	.373	.1228	.0745	.0534			2C
83,690	1	.332	.1093	.0664	.0476			1Y
66,370	2	.292	.0974	.0591				1V
52,630	3	.260	.0867	.0526				1Q
41,740	4	.232	.0772	.0469				1L
26,240	6	.184	.0612	.0372				1H
16,510	8	.146	.0486	.0295				1E
10,380	10	.116	.0385	.0234				1B
6,530	12	.0915	.0305	.0185				
4,110	14	.0726	.0242	.0147				

*Class AA

Ph: 1-800-677-9089
www.erico.com

BARE SOLID COPPER WIRE

Based on A.S.T.M. Standard Specifications

Size A.W.G.	Cross Sectional Area Circular Mils	Wire Dia. In.	CADWELD Cable code
4/0	211,600	.4600	2P
3/0	167,800	.4096	2K
2/0	133,100	.3648	2F
1/0	105,500	.3249	2B
1	83,690	.2893	1X
2	66,370	.2576	1T
3	52,630	.2294	1P
4	41,740	.2043	1K
6	26,250	.1620	1G
8	16,510	.1285	1D
10	10,380	.1019	1A
12	6,530	.0808	
14	4,110	.0064	

DSA COPPERWELD CONDUCTOR

Cable Stranding	Nominal Diameter	kcmil	Equivalent Copper Size*	CADWELD Cable code
7/#10	.306	72.7	3AWG	9A
7/#8	.385	115.6	1	9B
7/#7	.433	145.7	1/0	9C
7/#6	.486	183.8	2/0	9D
7/#5	.546	231.7	3/0	9E
19/#9	.572	248.8	3/0	9F
7/#4	.613	292.2	4/0	9L
19/#8	.642	313.7	4/0	9G
19/#7	.721	395.5	250 Kcmil	9H
37/#9	.801	484.4	300	7W
19/#6	.810	498.8	350	9J
37/#8	.899	610.9	400	7V
19/#5	.910	628.9	450	9K
37/#7	1.01	770.3	500	9M

*Approximate based on Fusing Current calculations and tests by Copperweld Co.

GROUND RODS

Nominal Size	Material	Type	Thread Size	Body Dia.	CADWELD Ground Rod Code
1/2"	Copperclad	Sectional	9/16"	.505	14
	Steel*	Plain		.500	14
	Copperclad	Plain		.475	15
	Copperclad	Sectional	1/2"	.447	13
5/8"	Copperclad	Sectional	5/8"	.563	16
	Steel*	Plain		.625	31
	Copperclad	Plain		.563	16
3/4"	Copperclad	Sectional	3/4"	.682	18
	Steel*	Plain		.750	33
	Copperclad	Plain		.682	18
1"	Copperclad	Sectional	1"	.914	22
	Steel*	Plain		1.00	37
	Copperclad	Plain		.914	22

* Plain steel, stainless steel, stainless clad rods or galvanized steel.

RECTANGULAR COPPER BUSBAR

Thickness Inches	Width Inches	Circular Mil Size	Weight Lbs. per Foot	CADWELD Bus Bar Code
1/8	1	159,200	.484	CE
	1-1/2	238,700	.726	CG
	2	318,300	.969	CH
3/16	1	238,700	.727	DE
	2	477,500	1.45	DH
1/4	1	318,300	.969	EE
	1-1/2	477,500	1.45	EG
	2	636,600	1.94	EH
	3	954,900	2.91	EK
	4	1,273,000	3.88	EM
3/8	1	477,500	1.45	GE
	1-1/2	716,200	2.18	GG
	2	954,900	2.91	GH
	3	1,432,000	4.36	GK
	4	1,910,000	5.81	GM
1/2	2	1,273,000	3.88	JH
	3	1,910,000	5.81	JK
	4	2,546,000	7.75	JM

USEFUL CONVERSIONS

Area

Square Inches x 1273 = kcmil
Square Millimeters x 1.974 = kcmil
kcmil x 0.5067 = Square Millimeters

Density

Copper: 0.323lb/in^3
Steel: 0.283lb/in^3

REINFORCING BARS

Rebar Sizes	NOMINAL DIMENSIONS Dia. Inches	Cross-Sectional Area - Sq. Inches	Equivalent Copper Sizes*	CADWELD Rebar Code
3	.375	.11	9AWG	51
4	.500	.20	7	52
5	.625	.31	5	53
6	.750	.44	3	54
7	.875	.60	2	55
8	1.000	.79	1	56
9	1.128	1.00	1/0	57
10	1.270	1.27	2/0	58
11	1.410	1.56	3/0	59
14	1.693	2.25	250 kcmil	60
18	2.257	4.00	450	61

* Based on 8% IACS, rounded to the next higher commercial copper size.

Ph: 1-800-677-9089
www.erico.com

STANDARD STEEL WIRE GAGE

(WASHBURN MOEN GAGE) SOLID

Gage No.	Dia. Inches	Gage No.	Dia. Inches
7/0	.490	6	.1920
6/0	.4615	7	.1770
5/0	.4305	8	.1620
4/0	.3938	9	.1483
3/0	.3625	10	.1350
2/0	.3310	11	.1205
1/0	.3065	12	.1055
1	.2830	13	.0915
2	.2625	14	.0800
3	.2437	15	.0720
4	.2253	16	.0625
5	.2070	17	.0540

STEEL PIPE SIZES

STANDARD WEIGHT (SCHEDULE 40) ASTM A53-90-B ANSI/ASME B36.10M-1985

Nominal Size In	O.D. Inches	Wall Thickness Inches	CADWELD Mold Code
1	1.315	.133	1
1-1/4	1.660	.140	1.25
1-1/2	1.900	.145	1.50
2	2.375	.154	2
2-1/2	2.875	.203	2.50
3	3.500	.216	3
3-1/2	4.000	.226	3.50
4	4.500	.237	4
5	5.563	.258	5
6	6.625	.280	6
8	8.625	.322	8
10	10.750	.365	10

CAST IRON PIPE – CLASS A THRU D

AWWA Specification 1908, ASA A21.2 Class 100-250.

Nominal Size (Inches)	Actual O.D. (Inches)
4	4.80 to 5.00
6	6.90 to 7.10
8	9.05 to 9.30
10	11.10 to 11.40
12	13.20 to 13.50
14	15.30 to 15.70
16	17.40 to 17.80
18	19.50 to 19.90
20	21.60 to 22.1
24	25.80 to 26.30
30	31.70 to 32.70
36	38.00 to 39.20
42	44.20 to 45.60
48	50.50 to 52.00
54	56.70 to 58.40
60	62.80 to 64.80
72	75.30 to 76.90
84	87.50 to 88.50

Other standard sections used for fence posts

Section	CADWELD Mold Code
1-1/2" square	PS15
2" square	PS20
2-1/2" square	PS25
3" square	PS30*
1.875 x 1.625 x .133 “H”	PH1
2.25 x 1.95 x .143 “H”	PH2

* For D or F mold price only

OTHER SPECIALIZED APPLICATION CATALOGS, APPLICATIONS, BULLETINS AND TECHNICAL INFORMATION

A1L STATIC GROUNDING CONNECTIONS

A4G SUBSTATION GROUNDING
Numerous applications and guidelines for grounding electrical supply station (substations).

A4P COMPUTER ROOM GROUNDING
Widely accepted system of grounding and signal reference grids to protect vital computer data and reduce downtime.

A7D INSTALLERS AND INSPECTORS GUIDE
A guide for installation and inspection of CADWELD exothermically welded connections.

A7J GEM BROCHURE
Brochure describing GEM Ground Enhancement Material used to lower resistance to earth.

A9E CONTRACTOR TIPS
Ideal for contractors – How to save time and make the installation easy.

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TRAINING VIDEOS

CWTAPEA	How To Make a CADWELD Connection
CWTAPEB	Basic Grounding, Includes Testing
CWTAPEC	Basic Grounding
CWTAPED	CADWELD ONE-SHOT
CWTAPEE	EXOLON
CWTAPEF	How to Make a Heavy Duty Ground Rod Splice
CWTAPEG	Reducing Transient Threats with SRGs
CWTAPEH	Signal Reference Grid Installation
CWTAPEJ	CADWELD in the Rain
CWTAPEK	GRIDMAKER vs. BURNDY®

SOFTWARE

CADWELD has specialized design software packages:

SRG Disk (Demonstration)	Computer room design – in AutoCAD® drawings or DXF style
CAD CLUB CD	Various connections and applications – AutoCAD drawings.
A5U (ASCII) Disk	Grounding specifications – ASCII format so it can be read by any word processing software. (ref. publication A5U)
S219D	Facility Electrical Protection Six Point Plan CD.

For copies of any of the above catalogs, application bulletins, software or to schedule training, contact your local CADWELD representative or ERICO at:

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EXOLON – Low Emission
ONE-SHOT – Disposable Molds Lugs, Tools & Accessories

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Personnel Safety Mats
Split Bolts
SRG – Signal Reference Grids
Static Bonding Products
Switch Handle Bonds
TIA/EIA Ground Bars
Water-Pipe Clamps

Miscellaneous Grounding Products
GEM Ground Enhancement Material
Ground Inspection Wells
Ground Test Instruments
Grounding Conductor

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