

# ESTWELD® - Technical Advantages

## THE ESTWELD® WELD

- Has a current-carrying capacity equal to that of the conductor.
- Creates a permanent bond that withstands repeated fault currents and will not loosen, deteriorate or increase in resistance.

## RELIABILITY

As the molecular bond eliminates the concept of surface contact, an electrolyte cannot penetrate between the conductors and cause oxidation and deterioration in the course of time.

## ABILITY TO WITHSTAND HIGH CURRENT

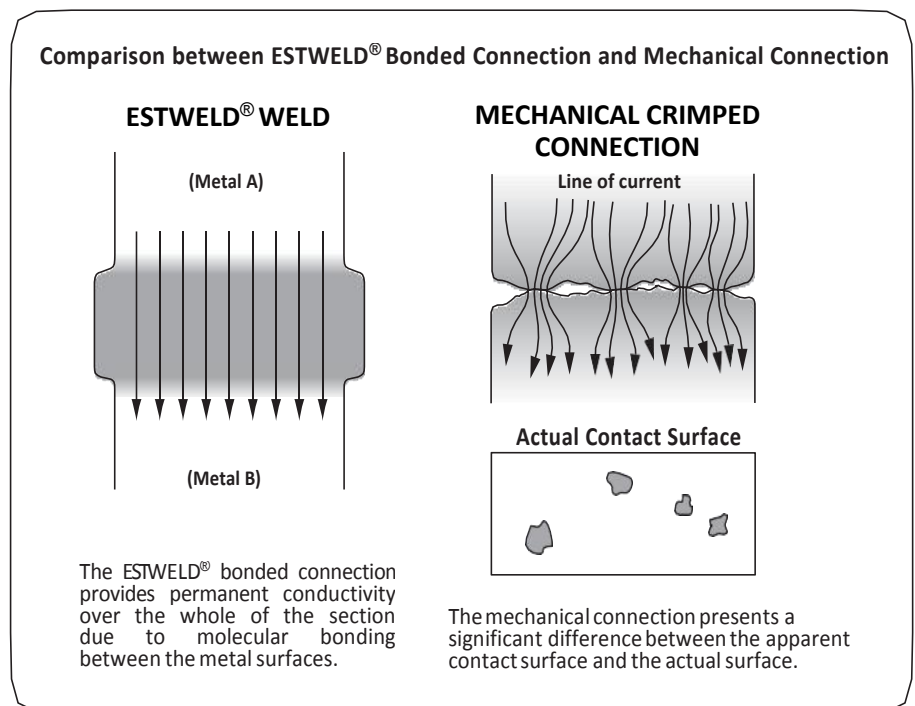
The melting temperature of ESTWELD® connection is higher than the melting temperature of copper (1082 °C). For this reason, in the event of abnormal heating due to a high fault current, the conductor is destroyed before the connection.

## CORROSIVE ENVIRONMENTS

This reliability is of particular interest for humid or chemical environments or for bonds directly buried in the ground.

## CONDUCTIVITY

The ESTWELD® connections form a solid bond around the conductors assuring continuity. The cross sectional area of the weld has greater current carrying capacity than the conductors.



# ESTWELD® Electrical Connections

## ESTWELD® – The Molecular Bond

The ESTWELD® process provides a way to produce copper to copper, copper to steel molecular bonds with no external energy or heat source.

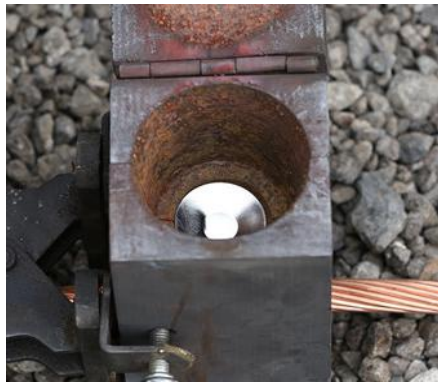
The principle consists of bringing together a welding materials and ignition agent in a suitable graphite mould. The reduction of copper oxide by aluminium produces molten copper and aluminium oxide slag at extremely high temperatures.

The shape of the mould, its dimensions, and the size of the welding material, are all dependent on the items to be welded.

## Installation Is Easy



1. Position cleaned conductors in mold after making sure mold is dry, by pre-heating or making a test joint.



2. Place metal disc in bottom of mold crucible.



3. Dump weld powder into crucible.



4. Sprinkle the starting powder over the weld powder and onto the lip of the mold. Close the cover.



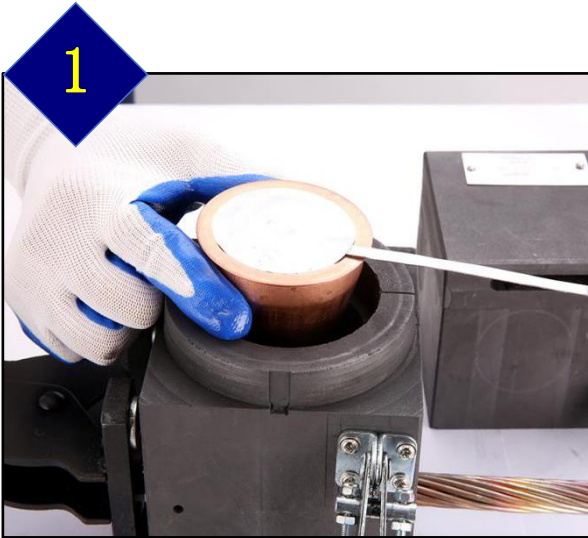
5. Ignite the starting powder with the Flint Ignitor.



6. Remove weld and clean mold before making next connection.

## Installation Is Easy!

4 Simple Steps For Permanently Welded Electrical Connections



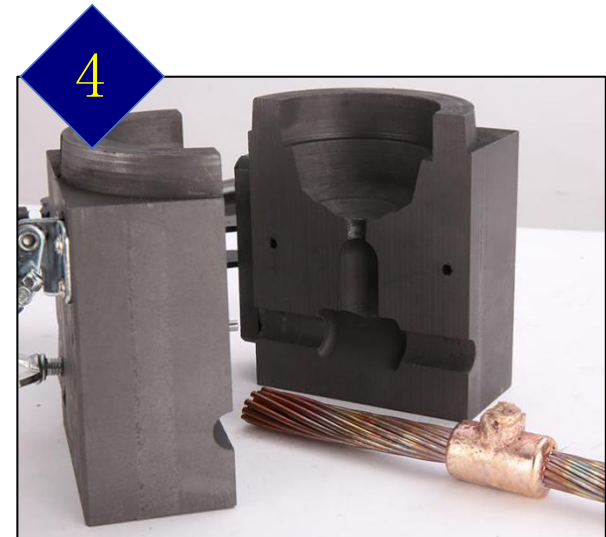
Insert ESTWELD® SAFE package into mold.



Attach control unit termination clip to ignition strip.



Press and hold Electronic Ignition Unit and wait for the ignition.



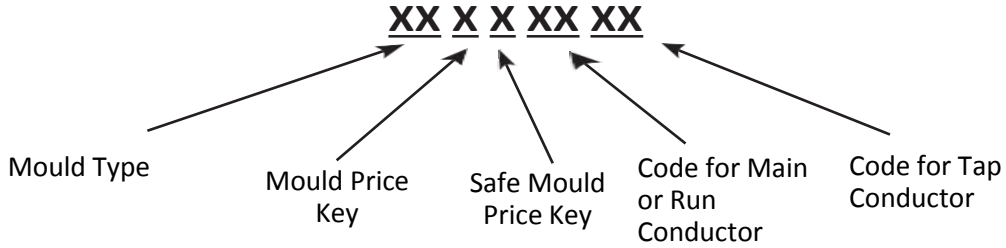
Open the mold and remove the finished connections.

# Metric to Imperial Conversion Chart

Cross sectional Area(mm <sup>2</sup> )	Diameter		AWG/MCM Size	Diameter	
	mm	Inch		Inch	mm
2.0 Concentric	1.8	0.071	#14 Concentric	0.0726	1.84
3.5 Concentric	2.4	0.095	#12 Concentric	0.0915	2.3
4 Solid	2.5	0.0984	#10 Solid	0.102	2.6
6 Solid	3.1	0.122	#8 Solid	0.128	3.25
5.5 Concentric	3.0	0.118	#10 Concentric	0.116	2.95
8.0 Concentric	3.6	0.142	#8 Concentric	0.146	3.7
10 Solid	3.8	0.150	#6 Solid	0.162	4.1
10 Concentric	4.2	0.162	#7 Concentric	0.164	4.2
14 Concentric	4.8	0.189	#6 Concentric	0.184	4.7
16 Solid	4.5	0.177	#4 Solid	0.204	5.2
16 Concentric	5.2	0.204	#5 Concentric	0.205	5.2
22 Concentric	6.0	0.236	#4 Concentric	0.232	5.9
25 Solid	5.6	0.220	#3 Solid	0.229	5.8
25 Concentric	6.4	0.260	#3 Concentric	0.260	6.6
30 Concentric	6.9	0.276	#2 Concentric	0.292	7.4
35 Solid	6.7	0.264	#2 Solid	0.258	6.6
35 Concentric	7.7	0.305	#2 Concentric	0.292	7.4
38 Concentric	7.8	0.315	#2 Concentric	0.292	7.4
40 Concentric	8.4	0.331	#1 Concentric	0.332	8.4
50 Solid	8.0	0.315	1/0 Solid	0.325	8.3
50 Concentric	9.0	0.354	1/0 Concentric	0.373	9.5
55 Concentric	9.6	0.378	1/0 Concentric	0.373	9.5
60 Concentric	10.0	0.394	2/0 Concentric	0.419	10.6
70 Solid	10.0	0.394	3/0 Solid	0.410	10.4
70 Concentric	10.9	0.430	2/0 Concentric	0.419	10.6
80 Concentric	11.5	0.453	3/0 Concentric	0.470	12.0
95 Concentric	12.6	0.505	4/0 Concentric	0.528	13.4
100 Concentric	13.0	0.512	4/0 Concentric	0.528	13.4
120 Concentric	14.2	0.567	250MCM	0.575	14.6
125 Concentric	14.5	0.571	250MCM	0.575	14.6
150 Concentric	16.1	0.634	300MCM	0.630	16.0
185 Concentric	17.7	0.700	350MCM	0.681	17.3
200 Concentric	18.2	0.717	400MCM	0.728	18.5
240 Concentric	20.3	0.801	500MCM	0.813	20.7
250 Concentric	20.7	0.815	500MCM	0.813	20.7
300 Concentric	22.5	0.891	600MCM	0.893	22.7
325 Concentric	23.4	0.922	700MCM	0.964	24.5
400 Concentric	26.2	1.03	800MCM	1.031	26.2
500 Concentric	28.8	1.13	1000MCM	1.152	29.3
600 Concentric	31.9	1.26	1200MCM	1.263	32.1
625 Concentric	32.8	1.29	1250MCM	1.289	32.7
725 Concentric	35.2	1.39	1400MCM	1.364	34.6
800 Concentric	36.8	1.45	1600MCM	1.459	37.1
850 Concentric	37.6	1.48	1700MCM	1.506	38.2
1000 Concentric	41.6	1.64	2000MCM	1.632	41.5

# The ESTWELD® Mold Numbering System

The ESTWELD® Mold Part Number gives, in code, the complete information of the mould – type of connection, mould price key, and conductor size(s).



## EXAMPLES

**TA S 16 16**

↑      ↑      ↑      ↑

Type      Price Key S      16mm<sup>2</sup> Tap

TA      16mm<sup>2</sup> Run

**GT S 143 25**

↑      ↑      ↑      ↑

Type      Price Key S      14.2mm Copper Clad Ground Rod      25mm<sup>2</sup> Tap

GT

**SS S 25**

↑      ↑      ↑

Type      Price Key S      25mm<sup>2</sup> Tap

SS

**VS S 25**

↑      ↑      ↑

Type      Price Key S      Cable 25mm<sup>2</sup>

VS

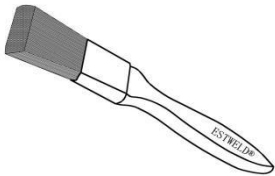
# Material, Tools and Accessories

## Cable Cleaning Brushes



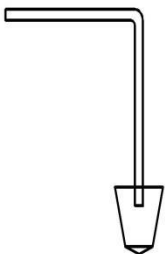
Two types of brushes are available to aid in removing oxides and cleaning copper surfaces. This brush with short stiff bristles is generally preferred for cleaning concentric conductors and busbars, which are not heavily oxidized.

## Mold Cleaning Brush



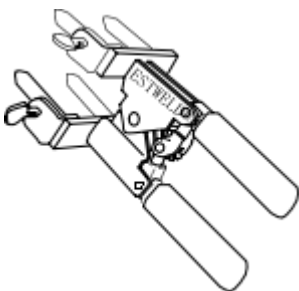
Mold cleaning brush is very useful for removing slag from molds – especially vertically split moulds.

## Mold Slag Remover



The mold slag remover can clean welding slag after exothermic welding.

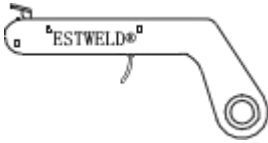
## ESTWELD® Handle Clamps



Handle Clamps such as the one shown are required for most moulds. Specialized frames with handles are used on some moulds. The following Handle Clamps are most widely used.

1. Handle Clamp M for all moulds having a “S” or “M” mould price key.
2. Handle Clamp L for all moulds having a “L” or “H” mould price key.

# Material, Tools and Accessories



## Flint Ignitors

ESTWELD® Flint Ignitors are used to ignite the starting material when making a ESTWELD® Connection.

## ESTWELD® WELD METAL

ESTWELD® weld powder is a mixture of copper oxide and aluminium, packaged by size in individual plastic tubes.

Each tube contains the starting material in the lid, with the weld metal in the tube.

These containers are packaged in plastic boxes with the corresponding metal disks. Each weld uses one disk.



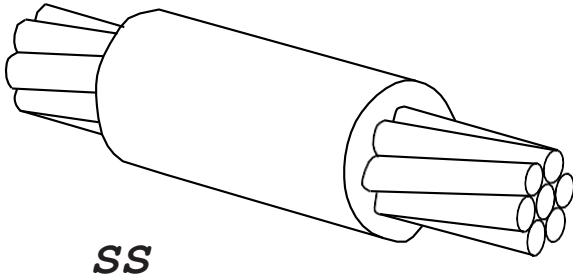
Reference Code	Quantity	Unit Weight(kg)
15E20A	20	0.015
25E20A	20	0.025
32E20A	20	0.032
45E20A	20	0.045
65E20A	20	0.065
90E20A	20	0.090
115E20A	20	0.115
150E20A	10	0.150
200E20A	10	0.200
250E20A	10	0.250

# ESTWELD® SAFE

ESTWELD SAFE	Quantity	Unit Weight(kg)
S90E20	10	0.090
S115E20	10	0.115
S150E20	10	0.150
S200E20	10	0.200
S250E20	10	0.250
S300E20	10	0.300
S350E20	10	0.350
S400E20	10 </td <td>0.400</td>	0.400
S450E20	10	0.450
S500E20	10	0.500





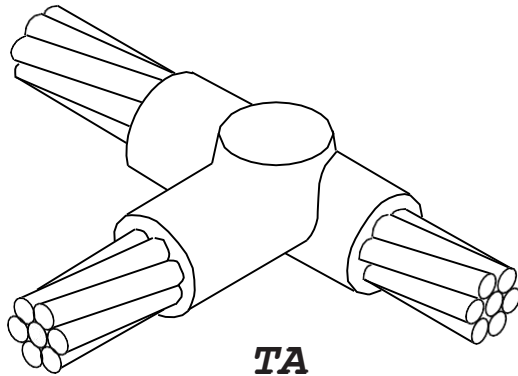


CABLE SIZE (sq mm)	MOULD PART NO.	WELD METAL
16	SSS16	25
25	SSS25	32
35	SSS35	32
50	SSS50	45
70	SSS70	65
95	SSS95	90
120	SSS120	115
150	SSS150	150
185	SSS185	150
240	SSS240	200
300	SSM300	2 x 150
Ø8 mm	SSS8	45
Ø10 mm	SSS10	65

For sizes not listed, contact ESTWELD®.  
 If you need ESTWELD® SAFE Molds,  
 please add "P" behind mold price key.  
 For examples, SSSP16

# Horizontal Tee

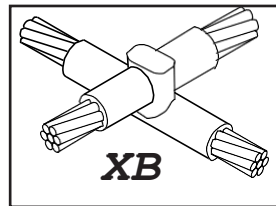
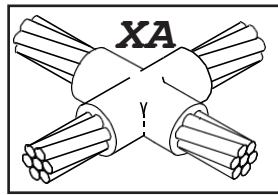
TA



CABLE SIZE (sq mm)		MOULD PART NO.	WELD METAL
run	tap		
16	16	TAS1616	32
25	25	TAS2525	45
25	16	TAS2516	32
35	35	TAS3535	45
35	25	TAS3525	45
35	16	TAS3516	45
50	50	TAS5050	90
50	35	TAS5035	65
50	25	TAS5025	65
50	16	TAS5016	45
70	70	TAS7070	90
70	50	TAS7050	90
70	35	TAS7035	65
70	25	TAS7025	65
70	16	TAS7016	65
95	95	TAS9595	115
95	70	TAS9570	115
95	50	TAS9550	90
95	35	TAS9535	90
95	25	TAS9525	90
95	16	TAS9516	90

CABLE SIZE (sq mm)		MOULD PART NO.	WELD METAL
run	tap		
120	120	TAS120120	150
120	95	TAS12095	150
120	70	TAS12070	150
120	50	TAS12050	115
120	35	TAS12035	115
150	150	TAS150150	200
150	120	TAS150120	200
150	95	TAS15095	150
150	70	TAS15070	150
185	185	TAS185185	200
185	150	TAS185150	200
185	120	TAS185120	200
240	240	TAM240240	2 x 150
240	185	TAS240185	250
240	150	TAS240150	250
240	120	TAS240120	250
Ø8mm	Ø8mm	TAS88	90
Ø10mm	Ø8mm	TAS108	90
Ø10mm	Ø10mm	TAS1010	90

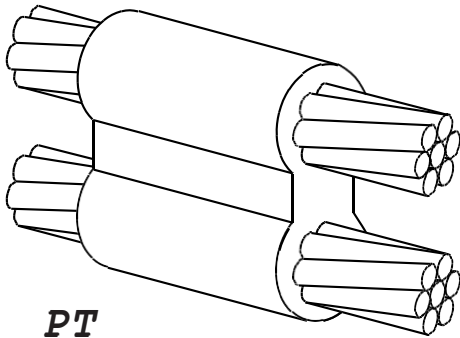
For sizes not listed, contact ESTWELD®.  
If you need ESTWELD® SAFE Molds,  
please add "P" behind mold price key.  
For examples, TASP1616



CABLE SIZE (sq mm)		MOULD PART NO.	WELD METAL
run	tap		
25	25	XAS2525	65
35	35	XAS3535	65
35	25	XAS3525	65
50	50	XAS5050	115
50	35	XAS5035	90
70	70	XAS7070	115
70	50	XAS7050	115
95	95	XAS9595	200
95	70	XAS9570	150
95	50	XAS9550	150
120	120	XAS120120	200
120	95	XAS12095	200
120	70	XAS12070	200
150	150	XAS150150	250
150	120	XAS150120	250
150	95	XAS15095	200
150	70	XAS15070	200
185	185	XAM185185	300
185	150	XAM185150	250
185	120	XAM185120	250
240	240	XAL240240	2 x 250
240	185	XAM240185	2 x 200
240	150	XAM240150	2 x 200
240	120	XAM240120	2 x 150

CABLE SIZE (sq mm)		MOULD PART NO.	WELD METAL
run	tap		
25	25	XBS2525	65
35	35	XBS3535	90
50	50	XBL5050	150
70	70	XBL7070	200
95	95	XBL9595	250
120	120	XBL120120	2 x 150
150	150	XBL150150	2 x 200
185	185	XBL185185	2 x 250
240	240	XBL240240	3 x 250

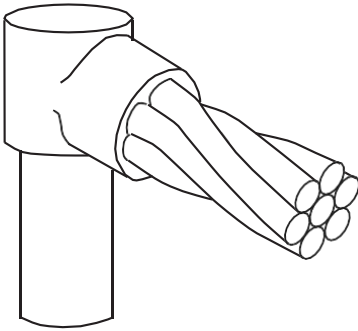
For sizes not listed, contact ESTWELD®.  
 If you need ESTWELD® SAFE Molds,  
 please add "P" behind mold price key.  
 For examples, XASP2525



**PT**

CABLE SIZE (sq mm)		MOULD PART NO.	WELD METAL
run	tap		
25	25	PTS2525	45
35	35	PTS3535	65
35	25	PTS3525	65
50	50	PTS5050	90
50	35	PTS5035	90
70	70	PTS7070	115
70	50	PTS7050	115
95	95	PTS9595	200
95	70	PTS9570	150
95	50	PTS9550	150
120	120	PTM120120	250
120	95	PTS12095	200
120	70	PTS12070	150
150	150	PTM150150	2 x 150
150	120	PTM150120	250
150	95	PTM15095	200
150	70	PTM15070	150
185	185	PTM185185	2 x 150
185	150	PTM185150	2 x 150
185	120	PTM185120	250
240	240	PTM240240	2 x 200
240	185	PTM240185	2 x 150
240	150	PTM240150	2 x 150
240	120	PTM240120	250

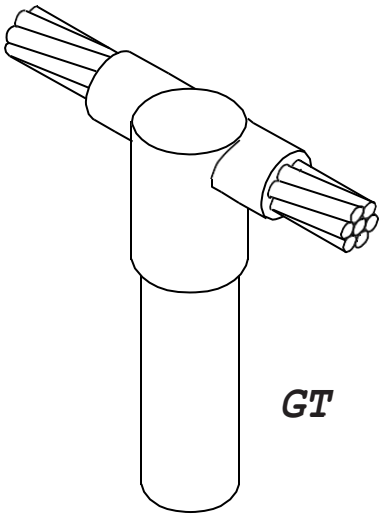
For sizes not listed, contact ESTWELD®.  
 If you need ESTWELD® SAFE Molds,  
 please add "P" behind mold price key.  
 For examples, PTSP2525



## GR

GROUND ROD SIZE	CABLE SIZE (sq mm)	MOULD PART NO.	WELD METAL
12.7	25	GRS12725	65
	35	GRS12735	65
	50	GRS12750	65
	70	GRS12770	90
	95	GRS12795	90
	120	GRS127120	90
	150	GRS127150	115
	185	GRS127185	115
14.2	25	GRS14225	90
	35	GRS14235	90
	50	GRS14250	115
	70	GRS14270	115
	95	GRS14295	115
	120	GRS142120	115
	150	GRS142150	150
	185	GRS142185	150
17.2	25	GRS17225	90
	35	GRS17235	90
	50	GRS17250	90
	70	GRS17270	115
	95	GRS17295	115
	120	GRS172120	115
	150	GRS172150	150
	185	GRS172185	200
240	GRS172240	250	

For sizes not listed, contact ESTWELD®.  
 If you need ESTWELD® SAFE Molds, please add "P" behind mold price key.  
 For examples, GRSP12825

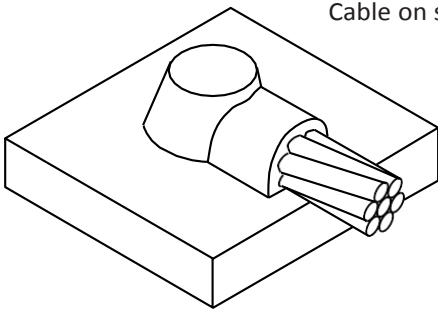


GROUND ROD SIZE Dia. (mm)	CABLE SIZE (sq mm)	MOULD PART NO.	WELD METAL
12.7	25	GTS12725	90
	35	GTS12735	90
	50	GTS12750	90
	70	GTS12770	90
	95	GTS12795	115
	120	GTS127120	150
	150	GTS127150	150
	185	GTS127185	200
14.2	25	GTS14225	90
	35	GTS14235	90
	50	GTS14250	90
	70	GTS14270	115
	95	GTS14295	150
	120	GTS142120	150
	150	GTS142150	200
	185	GTS142185	200
17.2	25	GTS17225	90
	35	GTS17235	90
	50	GTS17250	115
	70	GTS17270	115
	95	GTS17295	150
	120	GTS172120	150
	150	GTS172150	200
	185	GTS172185	200
240	GTS172240	250	

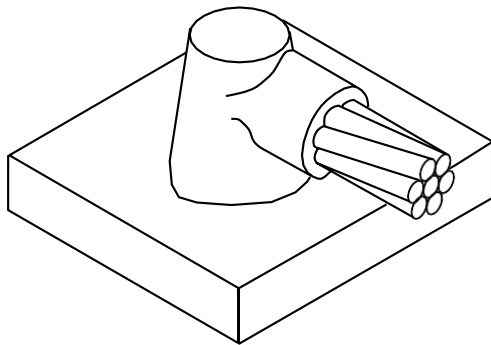
For sizes not listed, contact ESTWELD®.  
 If you need ESTWELD® SAFE Molds,  
 please add "P" behind mold price key.  
 For examples, GTSP12825

## HA

Cable on surface



CABLE SIZE (sq mm)	MOULD PART NO.	WELD METAL
25	HAS25	45
35	HAS35	45
50	HAS50	65
70	HAS70	90

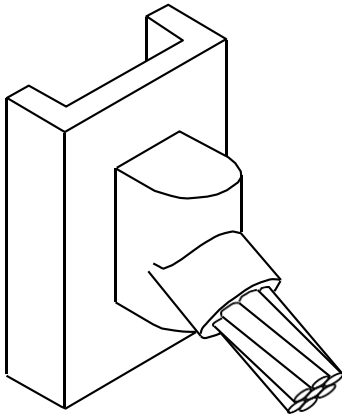


## HS

Cable off surface

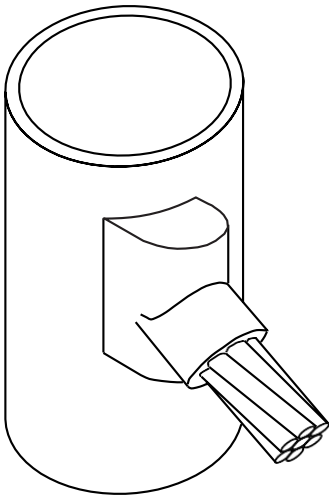
CABLE SIZE (sq mm)	MOULD PART NO.	WELD METAL
95	HSS95	115
120	HSS120	115
150	HSS150	150
185	HSS185	200
240	HSS240	200

For sizes not listed, contact ESTWELD®.  
 If you need ESTWELD® SAFE Molds,  
 please add "P" behind mold price key.  
 For examples, HASP25



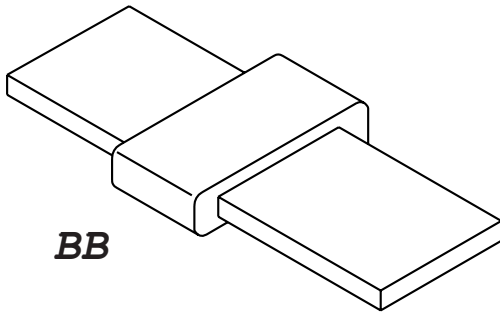
CABLE SIZE (sq mm)	MOULD PART NO.	WELD METAL
25	VSS25	45
35	VSS35	45
50	VSS50	90
70	VSS70	90
95	VSS95	115
120	VSS120	115
150	VSS150	150
185	VSS185	200
240	VSS240	200

**VS**

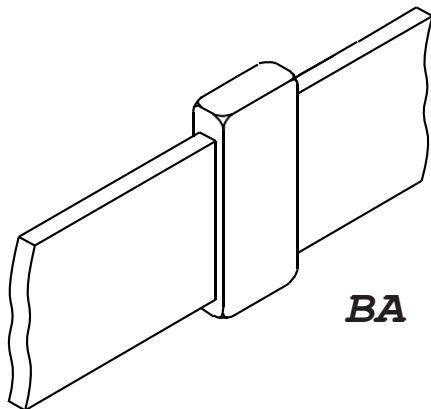


For sizes not listed, contact ESTWELD®.  
 If you need ESTWELD® SAFE Molds,  
 please add "P" behind mold price key.  
 For examples, VSSP25



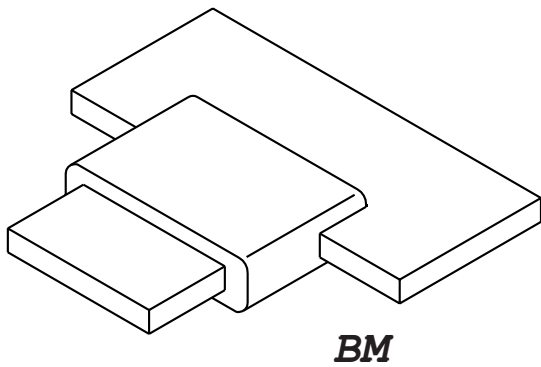


BUSBAR SIZE (mm)	MOULD PART NO.	WELD METAL
3X25 3X50	BBS325 BBM350	90 200
4X40 4X50	BBS440 BBM450	150 200
5X40 5X50	BBS540 BBM550	200 250
6X25 6X50	BBS625 BBM650	150 250

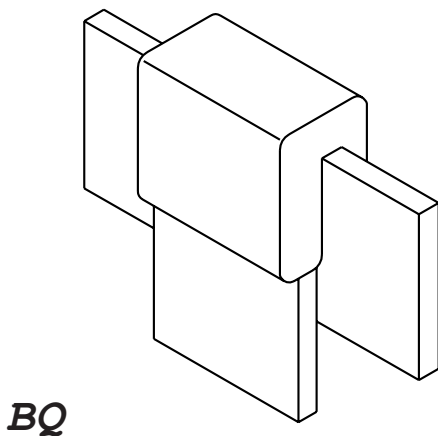


BUSBAR SIZE (mm)	MOULD PART NO.	WELD METAL
3X25 3X50	BAS325 BAM350	90 200
4X40 4X50	BAS440 BAM450	150 200
5X40 5X50	BAS540 BAM550	200 250
6X25 6X50	BAS625 BAM650	150 250

For sizes not listed, contact ESTWELD®.  
 If you need ESTWELD® SAFE Molds, please add "P" behind mold price key.  
 For examples, BBSP325



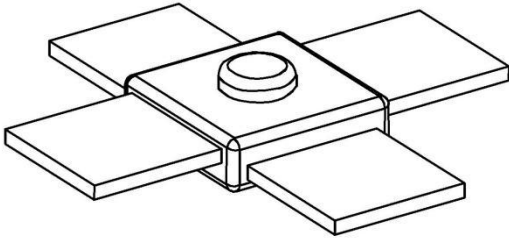
BUSBAR SIZE (mm)	MOULD PART NO.	WELD METAL
3X25	BMS325	90
3X50	BMM350	200
4X40	BMS440	150
4X50	BMM450	200
5X40	BMS540	200
5X50	BMM550	250
6X25	BMS625	150
6X50	BMM650	250



BUSBAR SIZE (mm)	MOULD PART NO.	WELD METAL
3X25	BQS325	90
3X50	BQM350	200
4X40	BQS440	150
4X50	BQM450	200
5X40	BQS540	200
5X50	BQM550	250
6X25	BQS625	150
6X50	BQM650	2 x 150

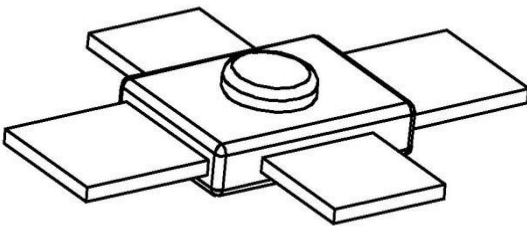
For sizes not listed, contact ESTWELD®.  
 If you need ESTWELD® SAFE Molds,  
 please add "P" behind mold price key.  
 For examples, BMSP325

## EB



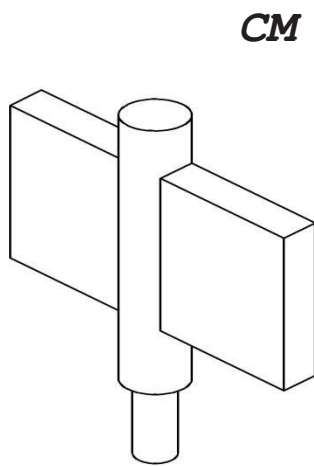
BUSBAR SIZE (mm)	MOULD PART NO.	WELD METAL
3X25 3X30 3X50	EBS325 EBS330 EBL350	150 200 400
4X40 4X50	EBL440 EBL450	400 600
5X40 5X50	EBL540 EBL550	400 600
6X25 6X50	EBS625 EBH650	250 750

## EA



BUSBAR SIZE (mm)	MOULD PART NO.	WELD METAL
3X25 3X30 3X50	EAL325 EAL330 EAH350	250 350 650
4X40 4X50	EAH440 EAH450	550 750
5X40 5X50	EAH540 EAH550	550 750
6X25 6X50	EAH625 EAH650	350 900

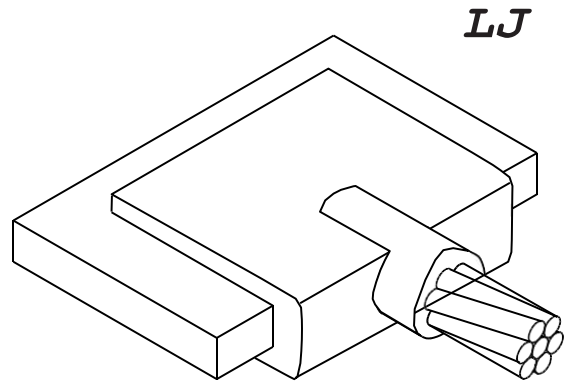
For sizes not listed, contact ESTWELD®.  
If you need ESTWELD® SAFE Molds,  
please add "P" behind mold price key.  
For examples, EBSP325



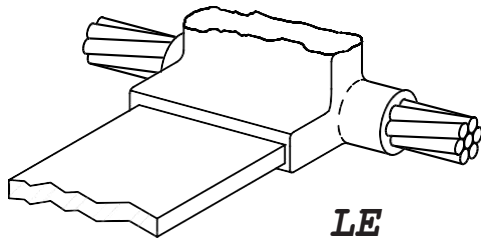
GROUND ROD SIZE Dia. (mm)	BUSBAR (mm)	MOULD PART NO.	WELD METAL
12.7	3 x 25	CMM127325	115
	3 x 50	CMM127350	200
	4 x 40	CMM127440	200
	4 x 50	CMM127450	250
	5 x 40	CMM127540	250
	5 x 50	CMM127550	2 x 150
	6 x 25	CMM127625	200
14.2	6 x 50	CMM127650	2 x 150
	3 x 25	CMM142325	115
	3 x 50	CMM142350	200
	4 x 40	CMM142440	200
	4 x 50	CMM142450	250
	5 x 40	CMM142540	250
	5 x 50	CMM142550	2 x 150
17.2	6 x 25	CMM142625	200
	6 x 50	CMM142650	2 x 150
	3 x 25	CMM172325	150
	3 x 50	CMM172350	2 x 150
	4 x 40	CMM172440	250
	4 x 50	CMM172450	2 x 150
	5 x 40	CMM172540	2 x 150
5 x 50	CMM172550	2 x 150	
6 x 25	CMM172625	250	
6 x 50	CMM172650	2 x 150	

For sizes not listed, contact ESTWELD®.  
 If you need ESTWELD® SAFE Molds,  
 please add "P" behind mold price key.  
 For examples, CMSP128325

BUSBAR (mm)	CABLE SIZE (sq mm)	MOULD PART NO.	WELD METAL
3 x 25	35	LJS32535	45
	50	LJS32550	90
	70	LJS44070	90
4 x 40 & WIDER	35	LJS44035	45
	50	LJS44050	90
	70	LJS44070	90
	95	LJS44095	90
	120	LJS440120	90
	150	LJS440150	115
	185	LJS440185	150
	240	LJS440240	150
5 x 40 & WIDER	35	LJS54035	65
	50	LJS54050	90
	70	LJS54070	90
	95	LJS54095	90
	120	LJS540120	115
	150	LJS540150	115
	185	LJS540185	150
	240	LJS540240	200
6 x 40 & WIDER	35	LJS64035	65
	50	LJS64050	90
	70	LJS64070	90
	95	LJS64095	115
	120	LJS640120	115
	150	LJS640150	115
	185	LJS640185	150
	240	LJS640240	200

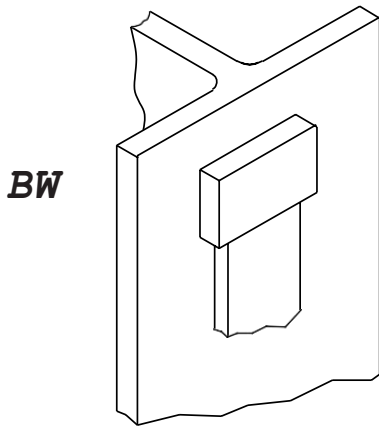


For sizes not listed, contact ESTWELD®.  
 If you need ESTWELD® SAFE Molds,  
 please add "P" behind mold price key.  
 For examples, LJS32535

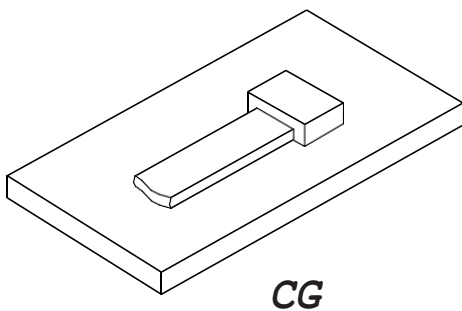


CABLE SIZE (sq mm)	BUSBAR (mm)	MOULD PART NO.	WELD METAL
16	2x20	LES16220	65
	2x25	LES16225	65
	3x20	LES16320	65
	3x25	LES16325	65
25	2x20	LES25220	65
	2x25	LES25225	65
	3x20	LES25320	65
	3x25	LES25325	65
	4x25	LES25425	65
35	2x25	LES35225	65
	3x20	LES35320	65
	3x25	LES35325	65
	4x25	LES35425	65
50	2x25	LES50225	65
	3x20	LES50320	65
	3x25	LES50325	90
	4x25	LES50425	90
70	3x25	LES70325	90
	3x30	LES70330	115
	4x25	LES70425	115
	4x30	LES70430	115
	5x30	LES70530	150
95	3x25	LES95325	115
	3x30	LES95330	115
	4x25	LES95425	150
	4x30	LES95430	150
	5x30	LES95530	150
	6x40	LES95640	200
120	3x25	LES120325	150
	3x30	LES120330	150
	4x25	LES120425	150
	4x30	LES120430	150
	5x30	LES120530	200
	6x40	LES120640	200

For sizes not listed, contact ESTWELD®.  
 If you need ESTWELD® SAFE Molds,  
 please add "P" behind mold price key.  
 For examples, LES**P**16220



BUSBAR SIZE (mm)	MOULD PART NO.	WELD METAL
3X25	BWS325	90
3X50	BWS350	150
4X40	BWS440	200
4X50	BWS450	250
5X40	BWS540	200
5X50	BWM550	250
6X25	BWS625	150
6X50	BWM650	2 x 150

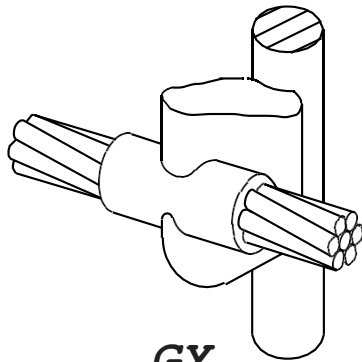


BUSBAR SIZE (mm)	MOULD PART NO.	WELD METAL
3X25	CGS325	115
3X50	CGS350	200
4X25	CGS425	200
4X50	CGS450	250
5X40	CGS540	200
5X50	CGS550	250
6X25	CGS625	150
6X50	CGS650	2x150

For sizes not listed, contact ESTWELD®. If you need ESTWELD® SAFE Molds, please add "P" behind mold price key. For examples, BWSP325

# Cable/Tape to Ground Rod

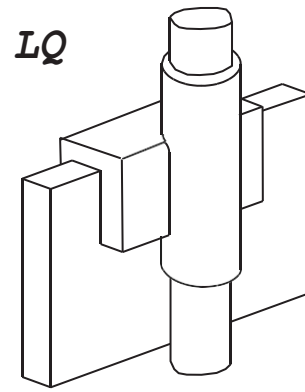
# GY/LQ



**GY**

GROUND ROD SIZE Dia. (mm)	BUSBAR SIZE (mm)	MOULD PART NO.	WELD METAL
12.7	3 x 25	LQH127325	150
14.2	3 x 25	LQH142325	200
17.2	3 x 25	LQH172325	250

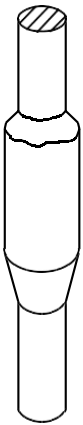
GROUND ROD SIZE Dia. (mm)	CABLE SIZE (sq mm)	MOULD PART NO.	WELD METAL
12.7	25	GYH12725	90
	35	GYH12735	90
	50	GYH12750	115
	70	GYH12770	115
	95	GYH12795	150
	120	GYH127120	150
	150	GYH127150	200
	185	GYH127185	200
14.2	25	GYH14225	90
	35	GYH14235	90
	50	GYH14250	115
	70	GYH14270	115
	95	GYH14295	150
	120	GYH142120	150
	150	GYH142150	200
	185	GYH142185	250
17.2	25	GYH17225	90
	35	GYH17235	90
	50	GYH17250	115
	70	GYH17270	150
	95	GYH17295	150
	120	GYH172120	250
	150	GYH172150	250
	185	GYH172185	2 x 200
240	GYH172240	2 x 200	



**LQ**

For sizes not listed, contact ESTWELD®. If you need ESTWELD® SAFE Molds, please add "P" behind mold price key. For examples, GYHP12825

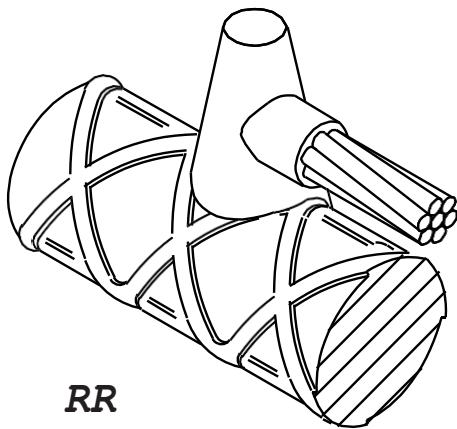




**GB**

GROUND ROD SIZE Dia. (mm)	MOULD PART NO.	WELD METAL
12.7	GBH127	250
14.2	GBH142	2 x 150
17.2	GBH172	2 x 200

For sizes not listed, contact ESTWELD®.  
 If you need ESTWELD® SAFE Molds,  
 please add "P" behind mold price key.  
 For examples, GBHP128

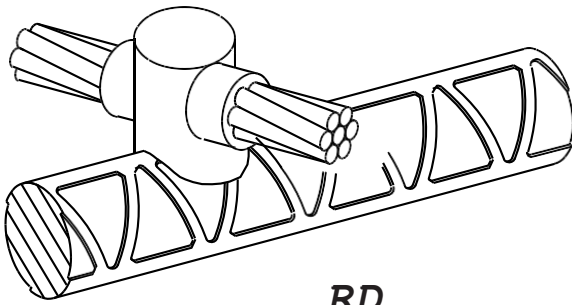


**RR**

REBAR SIZE Diam (mm)	CABLE SIZE (sq mm)	MOULD PART NO.	WELD METAL
12	25	RRS1225	45
	35	RRS1235	45
	50	RRS1250	90
	70	RRS1270	90
	95	RRS1295	115
16	25	RRS1625	45
	35	RRS1635	45
	50	RRS1650	90
	70	RRS1670	90
	95	RRS1695	115

REBAR SIZE Diam (mm)	CABLE SIZE (sq mm)	MOULD PART NO.	WELD METAL
22	35	RRS2235	45
	50	RRL2250	90
	70	RRL2270	90
	95	RRL2295	115
25	35	RRS2535	45
	50	RRL2550	90
	70	RRL2570	90
	95	RRL2595	115
32	50	RRL3250	90
	70	RRL3270	90
	95	RRL3295	115

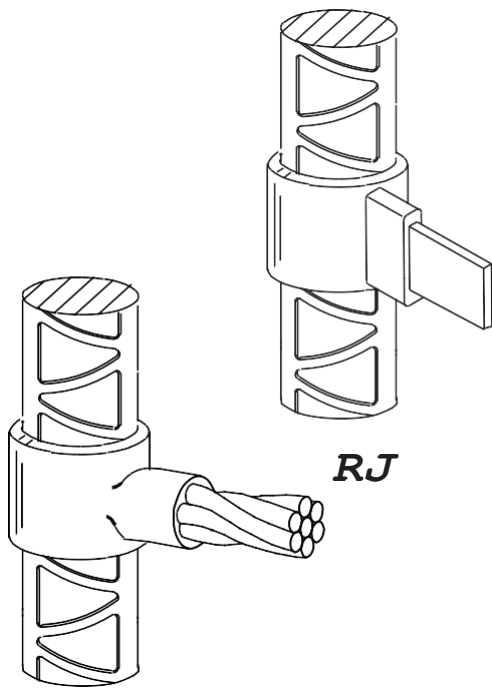
For sizes not listed, contact ESTWELD®. If you need ESTWELD® SAFE Molds, please add "P" behind mold price key. For examples, RRSP1225



REBAR SIZE Diam (mm)	CABLE SIZE (sq mm)	MOULD PART NO.	WELD METAL
22	35	RDH2235	90
	50	RDH2250	115
	70	RDH2270	115
	95	RDH2295	150
25	35	RDH2535	90
	50	RDH2550	115
	70	RDH2570	115
	95	RDH2595	150
32	50	RDH3250	115
	70	RDH3270	115
	95	RDH3295	150

REBAR SIZE Diam (mm)	CABLE SIZE (sq mm)	MOULD PART NO.	WELD METAL
12	25	RDH1225	65
	35	RDH1235	90
	50	RDH1250	115
	70	RDH1270	115
	95	RDH1295	150
16	25	RDH1625	65
	35	RDH1635	90
	50	RDH1650	115
	70	RDH1670	115
	95	RDH1695	150
18	25	RDH1825	65
	35	RDH1835	90
	50	RDH1850	115
	70	RDH1870	115
	95	RDH1895	150

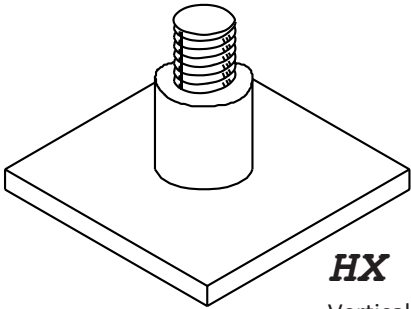
For sizes not listed, contact ESTWELD®.  
 If you need ESTWELD® SAFE Molds,  
 please add "P" behind mold price key.  
 For examples, RDLP2235



REBAR SIZE Diam (mm)	CABLE SIZE (sq mm)	MOULD PART NO.	WELD METAL
12	25	RJH1225	65
	35	RJH1235	65
	50	RJH1250	115
	70	RJH1270	115
	95	RJH1295	150
16	25	RJH1625	65
	35	RJH1635	65
	50	RJH1650	115
	70	RJH1670	115
	95	RJH1695	150
22	35	RJH2235	65
	50	RJH2250	115
	70	RJH2270	115
	95	RJH2295	150
25	35	RJH2535	65
	50	RJH2550	115
	70	RJH2570	115
	95	RJH2595	150
32	50	RJH3250	115
	70	RJH3270	115
	95	RJH3295	150

REBAR SIZE Diam (mm)	BUSBAR (mm)	MOULD PART NO.	WELD METAL
12	3 x 25	RJH12325	200
16		RJH16325	200
22		RJH22325	250
25		RJH25325	250
32		RJH32325	250

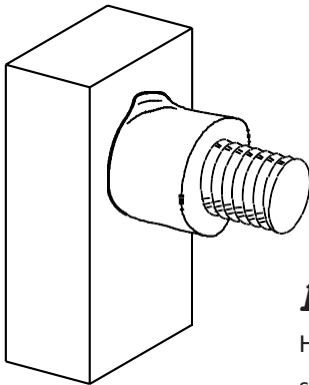
For sizes not listed, contact ESTWELD®.  
If you need ESTWELD® SAFE Molds,  
please add "P" behind mold price key.  
For examples, RJHP1225



**HX**

Vertical stud to horizontal steel surface

THREAD DESCRIPTION	MOULD PART NO.	WELD METAL
M6	HXH6	25
M8	HXH8	32
M10	HXH10	45
M12	HXH12	65
M16	HXH16	115



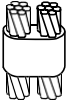

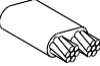


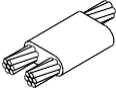

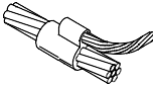

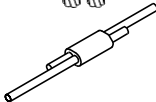
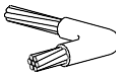
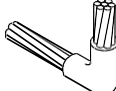
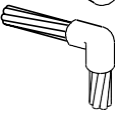
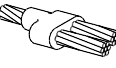



**HV**

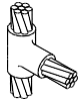

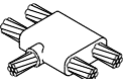
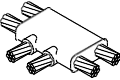
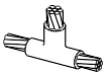

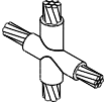
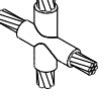
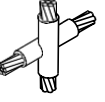
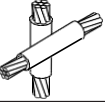


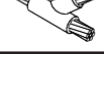
Horizontal stud to horizontal steel surface

THREAD DESCRIPTION	MOULD PART NO.	WELD METAL
M6	HVS6	25
M8	HVS8	32
M10	HVS10	45
M12	HVS12	65
M16	HVS16	115


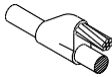
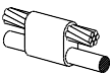

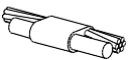




For sizes not listed, contact ESTWELD®.  
 If you need ESTWELD® SAFE Molds, please add "P" behind mold price key.  
 For examples, HXSP6

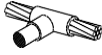
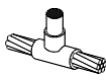
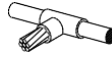
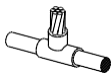



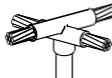
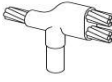
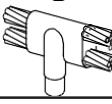
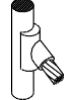
# Other Cable to Cable Connections

NAME	TYPE	
Parallel dead end	PH	
	PJ	
	PK	
	PM	
	PN	
Parallel Tap	PA	
	PB	
	PC	
	PD	
	PG	
Splice	PP	
	PQ	
	PR	
	SC	
	SD	
	SE	
	SV	

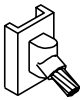

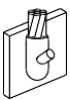



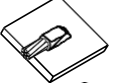


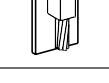
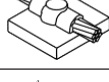
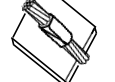


NAME	TYPE	
Tee	TC	
	TD	
	TE	
	TF	
	TL	
TV		
X vertical (horizontal cable uncut)	XC	
X vertical (vertical cable uncut)	XD	
X vertical (neither cable cut)	XF	
X vertical (neither cable cut)	XG	
X - 45° tap	YC	
	YD	
	YE	

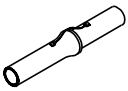
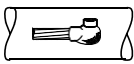
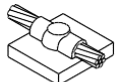
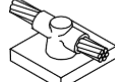


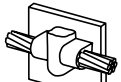
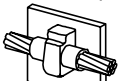

# Other Cable to Ground Rods or Other Connections

NAME	TYPE	
Parallel tap	GQ	
	GS	
Parallel thru	DQ	
	GP	
	GW	
Splice	GD	
	GE	
	GF	
	GV	

NAME	TYPE		
Tee	GG		
	GH		
	GJ		
	GK		
	GM		
	GN		
	GX		
	NB		
	NC		
	ND		
	Y - 45° tap	VW	

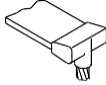
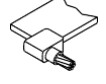
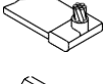

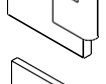
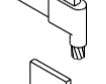
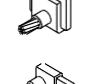
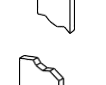
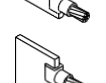
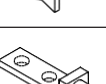
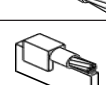
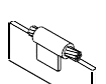

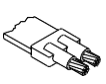
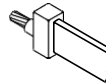
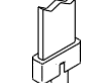

# Other Cable to Steel or Cast Iron Connections

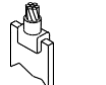
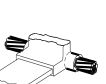

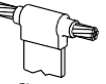
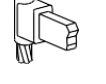
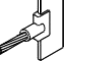
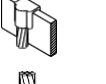
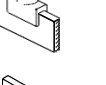

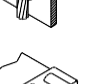
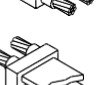
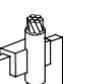


NAME	TYPE	
Tap cast iron	VH	
	VJ	
	VK	
	VL	
	VR	
Tap steel	HF	
	HG	
	VA	
	VC	
Thru cast iron	HE	
Thru steel	HH	
	HJ	
	HK	
	VX	

NAME	TYPE	
Pipe	HB	
	VN	
Other connectionsto steel	HC	
	HT	
	VF	
	VB	
	VG	
	VT	
VV		



# Other Cable to Busbar or Lug Connections

NAME	TYPE	
<b>EII</b>	DN	
	LX	
	LY	
	MA	
	MB	
	MC	
	MD	
	ME	
	MF	
	MG	
<b>Lug</b>	PL	
<b>Parallel tap</b>	LV	
<b>Parallel thru</b>	LW	
<b>Splice</b>	DM	
	DS	
	LB	
	LC	

NAME	TYPE		
<b>Splice</b>	LD		
	LE		
	LF		
	LG		
	LH		
	LK		
	LL		
	LM		
	LN		
	LP		
	LS		
	LT		
	LQ		
	<b>Tee</b>	LR	

# Other Busbar to Busbar Connections

NAME	TYPE	
<b>Button-weld</b>	TW	
	TX	
<b>EII</b>	DJ	
	EN	
	EQ	
	ER	
	ES	
	ET	
	EV	
	EP	
<b>Parallel tap</b>	BJ	
<b>Splice</b>	BC	
	BD	
	BF	
	BG	
	BH	

NAME	TYPE	
<b>Tee</b>	BK	
	BL	
	BN	
	BR	
	BS	
	BT	
	BV	
	DE	
	EE	
	<b>X</b>	EA
EC		
ED		


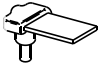
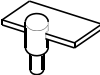
## Other Busbar Connections



NAME	TYPE	
Tap	BX	
	BY	
	CA	
	CB	
	CJ	
	DC	
	DD	
	DF	
	HL	
	HM	
	HN	
Thru	CD	
	CK	
	CF	
	CC	
	CH	
	CG	

## Other Rebar Connections

NAME	TYPE	
EII	DT	
	DR	
Parallel tap	RV	
	RT	
Parallel thru	RW	
	RE	
Splice	RF	
	RG	
	SF	
	SR	
	RH	
Tee	RK	
	RL	
	RM	
	RN	
	RP	
	RQ	
X	XJ	
	RC	

# Busbar to Ground Rods Connections

NAME	TYPE	
EII	CL	
Tee	CN	
	CP	

NAME	TYPE	
Splice	CS	
Tee	CQ	
	CR	