

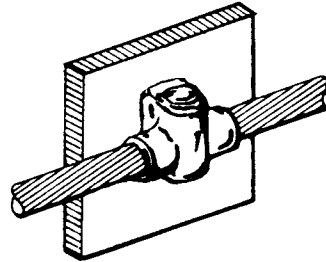
J - WELD

Cable to Steel Surface

TYPE CS6

Horizontal Thru Cable to Vertical Steel Surface

To connect a horizontal thru copper cable-off the steel surface-to a vertical steel surface or pipe, mold Type CS 6 is recommended. The J - Weld joint fuses to the steel surface and makes a permanent and vibration proof connection. Accommodates concentric stranded, rope lay, and solid copper conductor range from 16 to 120 mm².



CABLE (a) mm ²	STANDARD MOLD			FOR VERTICAL PIPE
	MOLD N°	PRICE KEY	CART.(b) N°	
16	CS6- 16	4	65	Add nominal pipe size to catalog N°. For 50 mm ² to flat steel, catalog N° is CS6-50. For 4" pipe, CS6-50-4.
35	CS6- 35	4	65	
50	CS6- 50	4	115	
70	CS6- 70	4	115	
95	CS6- 95	4	150	
120	CS6-120	4	150	

(a) For solid-to-solid connections, add suffix "S" to Mold N°.

(b) Order one size larger cartridge when welding solid conductors 50 mm² and larger.

FOR WELDING TO PIPE AND CURVED SURFACES, REFER TO INSTRUCTIONS ON PAGE 36 ENTITLED, "WELDING TO STEEL PIPE".

ORDER J - WELD CLAMPS SEPARATELY

J - WELD

Cable to Steel Surface

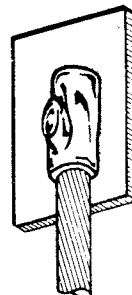
TYPE CS7

Overhead Vertical Tap to Vertical Steel Surface

The mold Type CS 7 is recommended for making an overhead vertical copper cable drop tap to a vertical steel surface, or a horizontal or vertical pipe. When surface is curved, direction and radius of curvature must be specified. Refer to instructions below entitled, "Welding to Steel Pipe". Solid, rope lay, or concentric stranded copper conductor, range from 16 to 500 mm². Resurface galvanized steel with Galvanizing bar: Catalog number A-331.

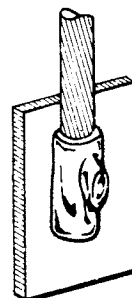
CS7-D

Down
exit



CS7-S

Up exit



CABLE (a) mm ²	STANDARD MOLD			FOR WELDS TO STEEL PIPE
	MOLD N°	PRICE KEY	CART. (b) N°	
16	CS7- 16	7	65	Add direction and nominal pipe size to catalog N°. For 50mm ² to flat steel, the N° is CS7-50. For vertical 4" pipe: CS7-50V4. For horizontal 4" pipe: CS7-50H4.
25	CS7- 25	7	65	
35	CS7- 35	7	65	
50	CS7- 50	7	150	
70	CS7- 70	7	150	
95	CS7- 95	7	200	
120	CS7-120	7	200	
150	CS7-150	7	250	
185	CS7-185	8	2-150	
240	CS7-240	8	2-150	
400	CS7-400	8	2-250	
500	CS7-500	8	3-200	

(a) For solid-to-solid connections, add suffix "S" to Mold N°.

(b) Order one size larger cartridge when welding solid conductors 50 mm² and larger.

INSTRUCTION FOR WELDING TO STEEL PIPE

When welding to steel pipe, information such as, nominal pipe size and/or direction of pipe - vertical or horizontal - must be added to mold catalog numbers. On mold types CS1, CS2, and CS6, add pipe size only. On mold types CS3, CS4 and CS7 add pipe size and pipe direction.

For example: When welding a 95 mm² cable to a horizontal 8" pipe, with type CS3, specify CS3-95H8. For a vertical pipe, specify: CS3-95V8. For a horizontal heavy duty to an 8" pipe, specify: CS3-95-H-V8. When welding a cable to a horizontal 8" pipe with mold type CS1, specify CS1-95-8, for heavy duty CS1-95-H-8. Use a standard flat surface mold when welding a 35 mm² cable, or smaller, to pipes 14" and over. For 50 mm² cable and larger, use a standard flat surface mold on pipes 30" and over.

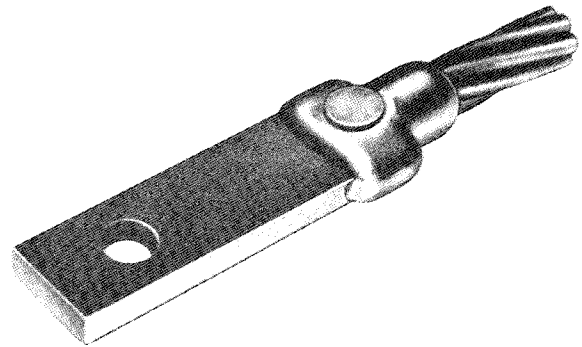
ORDER J - WELD CLAMPS SEPARATELY

J - WELD

Cable to Lug or Bus

TYPE **CB1** Horizontal 1 and Hole

Mold Type CB 1 is recommended for welding a copper conductor to copper formed lug or bar stock. The J - Weld joint has a higher current carrying capacity than the lug size recommended for the conductor. Mold Type CB 1 can be used on solid, rope lay, or concentric stranded copper conductors from 16 to 500 mm². Refer to page 43 for lug sizes and dimensions.



CONCENTRIC STRANDED CONDUCTORS

CABLE (a) mm ²	DIMENSIONS (T x C)	STANDARD MOLD			HEAVY DUTY MOLD (ADD H TO MOLD No.)	
		LUG (mm)	MOLD N°	PRICE KEY	CART.(b) N°	PRICE KEY
16	3 x 25		CB1- 161	4	25	
25	3 x 25		CB1- 251	4	25	
35	3 x 25		CB1- 351	4	32	
50	3 x 25		CB1- 501	4	45	4
50	6 x 25		CB1- 502	4	90	
70	3 x 25		CB1- 701	4	65	4
70	6 x 25		CB1- 702	4	90	
95	6 x 25		CB1- 951	4	90	
95	6 x 30		CB1- 952	4	115	
95	6 x 40		CB1- 953	4	115	
120	6 x 25		CB1-1201	4	90	4
120	6 x 30		CB1-1202	4	115	
120	6 x 40		CB1-1203	4	150	
150	6 x 25		CB1-1501	4	90	4
150	6 x 30		CB1-1502	4	115	

CONCENTRIC STRANDED CONDUCTORS

CABLE (a) mm ²	DIMENSIONS (T x C)	STANDARD MOLD			HEAVY DUTY MOLD (ADD H TO MOLD No.)	
		LUG (mm)	MOLD N°	PRICE KEY	CART.(b) N°	PRICE KEY
150	6 x 40		CB1-1503	4	150	
185	6 x 25		CB1-1851	4	115	
185	6 x 30		CB1-1852	4	115	4
185	6 x 40		CB1-1853	4	150	
240	6 x 40		CB1-2401	4	200	4
240	6 x 50		CB1-2402	4	250	
240	10 x 25		CB1-2403	4	200	
240	10 x 40		CB1-2404	4	250	
240	10 x 50		CB1-2405	5	2-150	
400	6 x 50		CB1-4001	5	2-150	
400	10 x 40		CB1-4002	5	2-150	5
400	10 x 50		CB1-4003	5	2-150	
500	10 x 50		CB1-5001	5	2-200	5
500	12 x 50		CB1-5002	5	2-200	
500	12 x 60		CB1-5003	5	2-250	

(a) For solid-to-solid connections, add suffix "S" to Mold N°

(b) Order one size larger cartridge when welding solid conductors 50 mm² and larger.

ORDER J - WELD CLAMPS SEPARATELY

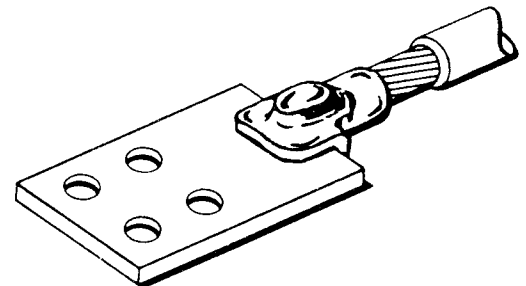
J - WELD

Cable to Lug or Bus

TYPE CB1

Horizontal 4-Hole NEMA

To weld a copper conductor to a 4-hole NEMA copper tongue, mold type CB1 is recommended. The Mold joint is a permanent, moisture-proof connection. Type CB1 mold will make 4-hole NEMA terminals on solid, rope lay, or concentric stranded copper conductors from 95 to 500 mm². For offset and 45° 4-hole NEMA tongues, refer to page 46.

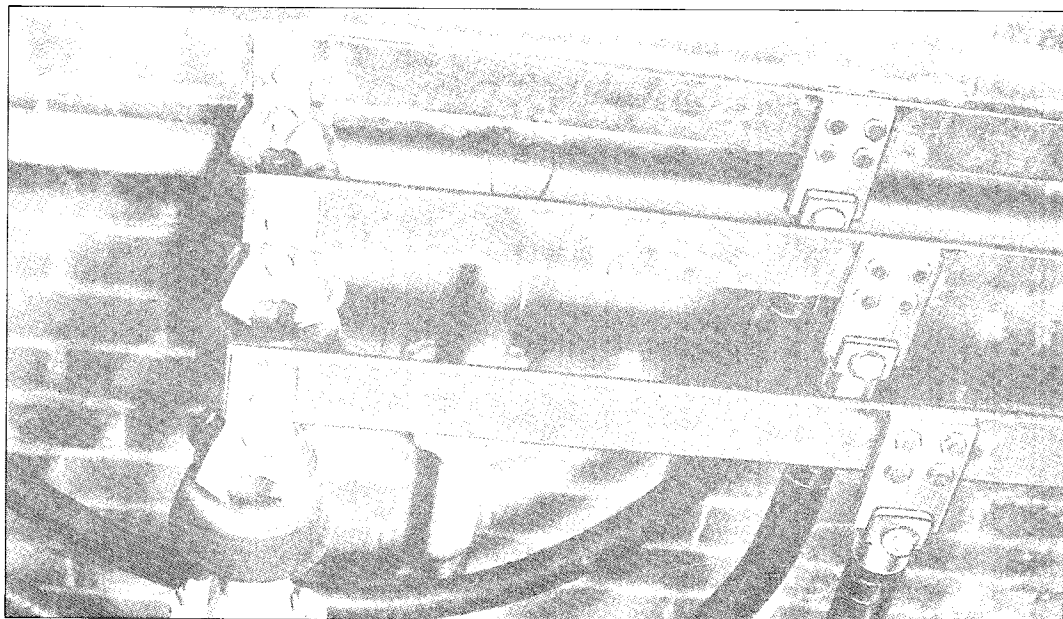


CONCENTRIC STRANDED CONDUCTORS

CABLE (a) mm ²	DIMENSIONS	STANDARD MOLD		
	LUG Tx C mm	N°	PRICE KEY	CART.(b) N°
95	6 X 80	CB1- 495	5	115
120	6 X 80	CB1-4120	5	150
150	6 x 80	CB1-4150	5	150
185	6 x 80	CB1-4185	5	200
240	6 x 80	CB1-4240	5	250
400	10 x 80	CB1-4400	5	2-200
500	12 x 80	CB1-4500	5	2-250

(a) For solid conductor connections, add suffix "S" to Mold N°

(b) Order one size larger cartridge when welding solid conductors 50 mm² and larger.



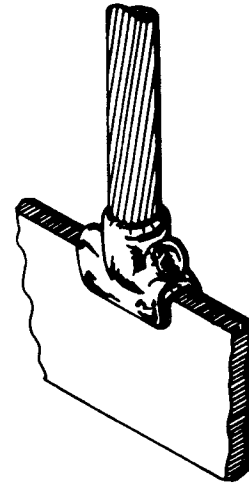
Type CB1 mold for welding cable to copper bars

ORDER J - WELD CLAMPS SEPARATELY

TYPE CB2-CB6

Vertical Overhead Tap to Horizontal Bus

The Mold Type CB2 is recommended for making a vertical overhead copper tap cable to a horizontal copper bus bar connection (flat side vertical) where there are no space restrictions. Type CB6 is recommended for use where the run bus is from 3/4" to 5" from a wall or other surface. Solid, rope lay, or concentric stranded copper conductor range from 50 to 500 mm². Copper bus bar from 1/8" x 1" thru 1/2" x 1 1/2" and wider.



CONCENTRIC STRANDED CONDUCTORS

BAR	CABLE (a) mm ²	TYPE CB2		TYPE CB6		CART.(b) N°
		MOLD N°	PRICE KEY	MOLD N°	PRICE KEY	
1/8" x 1" (0)	50	CB2- 500	4	CB6- 500	7	115
	70	CB2- 700	4	CB6- 700	7	115
	95	CB2- 950	4	CB6- 950	7	115
1/8" x 1 1/2" & MAIOR & WIDER (1)	50	CB2- 501	4	CB6- 501	7	115
	70	CB2- 701	4	CB6- 701	7	115
	95	CB2- 951	4	CB6- 951	7	115
	120	CB2-1201	4	CB6-1201	7	115
	150	CB2-1501	4	CB6-1501	7	150
1/4" x 1" (2)	185	CB2-1851	4	CB6-1851	7	150
	50	CB2- 502	4	CB6- 502	7	150
	70	CB2- 702	4	CB6- 702	7	150
	95	CB2- 952	4	CB6- 952	7	150
	120	CB2-1202	4	CB6-1202	7	150
	150	CB2-1502	4	CB6-1502	7	200
1/4" x 1 1/2" & MAIOR & WIDER (3)	185	CB2-1852	4	CB6-1852	7	200
	240	CB2-2402	4	CB6-2402	7	250
	50	CB2- 503	4	CB6- 503	7	150
	70	CB2- 703	4	CB6- 703	7	150
	95	CB2- 953	4	CB6- 953	7	150
	120	CB2-1203	4	CB6-1203	7	150
	150	CB2-1503	4	CB6-1503	7	200
3/8" x 1" (4)	185	CB2-1853	4	CB6-1853	7	200
	240	CB2-2403	4	CB6-2403	7	250
	400	CB2-4003	5	CB6-4003	8	2-200
	500	CB2-5003	5	CB6-5003	8	2-250
	50	CB2- 504	4	CB6- 504	7	150
3/8" x 1 1/2" (4)	70	CB2- 704	4	CB6- 704	7	150
	95	CB2- 954	4	CB6- 954	7	150
	120	CB2-1204	4	CB6-1204	7	150
	150	CB2-1504	4	CB6-1504	7	200

CONCENTRIC STRANDED CONDUCTORS

	CABLE (a) mm ²			TYPE CB6		CART.(b) N°
		MOLD N°	PRICE KEY	MOLD N°	PRICE KEY	
3/8" x 1" (4)	185	CB2-1854	4	CB6-1854	7	200
	240	CB2-2404	4	CB6-2404	7	250
	400	CB2-4004	5	CB6-4004	8	2-200
	500	CB2-5004	5	CB6-5004	8	2-250
3/8" x 1 1/2" & MAIOR & WIDER (5)	50	CB2- 505	4	CB6- 505	7	150
	70	CB2- 705	4	CB6- 705	7	150
	95	CB2- 955	4	CB6- 955	7	150
	120	CB2-1205	4	CB6-1205	7	150
	150	CB2-1505	4	CB6-1505	7	200
	185	CB2-1855	4	CB6-1855	7	200
	240	CB2-2405	4	CB6-2405	7	250
	400	CB2-4005	5	CB6-4005	8	2-200
1/2" x 1" (6)	500	CB2-5005	5	CB6-5005	8	2-250
	50	CB2- 506	4	CB6- 506	7	200
	70	CB2- 706	4	CB6- 706	7	200
	95	CB2- 956	4	CB6- 956	7	200
	120	CB2-1206	4	CB6-1206	7	200
	150	CB2-1506	4	CB6-1506	7	250
	185	CB2-1856	4	CB6-1856	7	250
	240	CB2-2406	5	CB6-2406	8	2-150
1/2" x 1 1/2" & MAIOR & WIDER (7)	400	CB2-4006	5	CB6-4006	8	2-250
	500	CB2-5006	5	CB6-5006	8	3-200
	50	CB2- 507	4	CB6- 507	7	200
	70	CB2- 707	4	CB6- 707	7	200
	95	CB2- 957	4	CB6- 957	7	200
	120	CB2-1207	4	CB6-1207	7	200
	150	CB2-1507	4	CB6-1507	7	250
	185	CB2-1857	4	CB6-1857	7	250
	240	CB2-2407	5	CB6-2407	8	2-150
	400	CB2-4007	5	CB6-4007	8	2-250
	500	CB2-5007	5	CB6-5007	8	3-200

(a) For solid conductors connections, add suffix "S" to Mold N°

(b) Order one size larger cartridge when welding solid conductors 50 mm² and larger.

ORDER J - WELD CLAMPS SEPARATELY

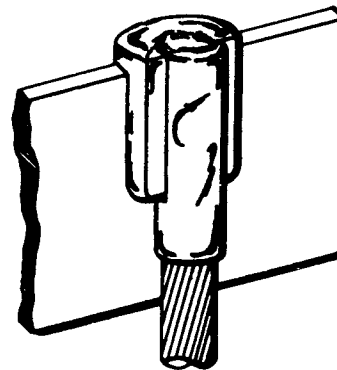
J - WELD

Cable to Lug or Bus

TYPE CB3-CB7

Vertical Drop Tap for Bus

To make a vertical copper cable drop tap from a horizontal copper bus bar (flat side vertical), mold type CB3 is recommended where there are no space restrictions. The mold type CB7 should be used when bus bar run is from 19 to 127mm from a wall or other surface. Solid, rope lay, or concentric stranded conductor range: from 50 to 500 mm². Bus bar range 1/8" x 1" thru 1/2" x 3" and wider.



CONCENTRIC STRANDED CONDUCTORS

BAR	CABLE (a) mm ²	TYPE CB3		TYPE CB7		CART. (b) N°
		MOLD N°	PRICE KEY	MOLD N°	PRICE KEY	
1/8" x 1" (0)	50	CB3- 500	4	CB7- 500	7	90
	70	CB3- 700	4	CB7- 700	7	90
	95	CB3- 950	4	CB7- 950	7	115
1/8" x 2" (1)	50	CB3- 501	4	CB7- 501	7	90
	70	CB3- 701	4	CB7- 701	7	90
	95	CB3- 951	4	CB7- 951	7	115
	120	CB3-1201	4	CB7-1201	7	115
	150	CB3-1501	4	CB7-1501	7	150
	185	CB3-1851	4	CB7-1851	7	150
1/4" x 1" (2)	50	CB3- 502	4	CB7- 502	7	115
	70	CB3- 702	4	CB7- 702	7	115
	95	CB3- 952	4	CB7- 952	7	150
	120	CB3-1202	4	CB7-1202	7	150
	150	CB3-1502	4	CB7-1502	7	200
	185	CB3-1852	4	CB7-1852	7	200
1/4" x 1 1/2" (3)	50	CB3- 503	4	CB7- 503	7	115
	70	CB3- 703	4	CB7- 703	7	115
	95	CB3- 953	4	CB7- 953	7	150
	120	CB3-1203	4	CB7-1203	7	150
	150	CB3-1503	4	CB7-1503	7	200
	185	CB3-1853	4	CB7-1853	7	200
1/4" x 2" (3A)	240	CB3-2403	4	CB7-2403	7	250
	400	CB3-4003	5	CB7-4003	8	2-200
	50	CB3- 504	4	CB7- 504	7	115
	70	CB3- 704	4	CB7- 704	7	115
	95	CB3- 954	4	CB7- 954	7	150
	120	CB3-1204	4	CB7-1204	7	150
1/4" x 3" & MAIOR & WIDER (5)	150	CB3-1504	4	CB7-1504	7	200
	185	CB3-1854	4	CB7-1854	7	200
	240	CB3-2404	4	CB7-2404	7	250
	400	CB3-4004	5	CB7-4004	8	2-200
	500	CB3-5004	5	CB7-5004	8	2-250
	50	CB3- 505	4	CB7- 505	7	115
1/4" x 3" & MAIOR & WIDER (5)	70	CB3- 705	4	CB7- 705	7	115
	95	CB3- 955	4	CB7- 955	7	150
	120	CB3-1205	4	CB7-1205	7	150
	150	CB3-1505	4	CB7-1505	7	200
	185	CB3-1855	4	CB7-1855	7	200

CONCENTRIC STRANDED CONDUCTORS

BAR	CABLE (a) mm ²	TYPE CB3		TYPE CB7		CART.(b) N°
		MOLD N°	PRICE KEY	MOLD N°	PRICE KEY	
1/4" x 3" (5)	240	CB3-2405	4	CB7-2405	7	250
	400	CB3-4005	5	CB7-4005	8	2-200
	500	CB3-5005	5	CB7-5005	8	2-250
3/8" x 2" (5A)	50	CB3- 506	4	CB7- 506	7	115
	70	CB3- 706	4	CB7- 706	7	115
	95	CB3- 956	4	CB7- 956	7	150
	120	CB3-1206	4	CB7-1206	7	150
	150	CB3-1506	4	CB7-1506	7	200
	185	CB3-1856	4	CB7-1856	7	200
3/8" x 3" & MAIOR & WIDER (7)	240	CB3-2406	4	CB7-2406	7	250
	400	CB3-4006	5	CB7-4006	8	2-200
	500	CB3-5006	5	CB7-5006	8	2-250
	50	CB3- 507	4	CB7- 507	7	115
	70	CB3- 707	4	CB7- 707	7	115
	95	CB3- 957	4	CB7- 957	7	150
1/2" x 2" (8)	120	CB3-1207	4	CB7-1207	7	150
	150	CB3-1507	4	CB7-1507	7	200
	185	CB3-1857	4	CB7-1857	7	200
	240	CB3-2407	4	CB7-2407	7	250
	400	CB3-4007	5	CB7-4007	8	2-200
	500	CB3-5007	5	CB7-5007	8	2-250
1/2" x 3" & MAIOR & WIDER (9)	50	CB3- 508	4	CB7- 508	7	150
	70	CB3- 708	4	CB7- 708	7	150
	95	CB3- 958	4	CB7- 958	7	200
	120	CB3-1208	4	CB7-1208	7	200
	150	CB3-1508	4	CB7-1508	7	250
	185	CB3-1858	4	CB7-1858	7	250
1/2" x 3" & MAIOR & WIDER (9)	240	CB3-2408	5	CB7-2408	8	2-150
	400	CB3-4008	5	CB7-4008	8	2-250
	500	CB3-5008	5	CB7-5008	8	3-200
	50	CB3- 509	4	CB7- 509	7	150
	70	CB3- 709	4	CB7- 709	7	150
	95	CB3- 959	4	CB7- 959	7	200
1/2" x 3" & MAIOR & WIDER (9)	120	CB3-1209	4	CB7-1209	7	200
	150	CB3-1509	4	CB7-1509	7	250
	185	CB3-1859	4	CB7-1859	7	250
	240	CB3-2409	5	CB7-2409	8	2-150
	400	CB3-4009	5	CB7-4009	8	2-250
	500	CB3-5009	5	CB7-5009	8	3-200

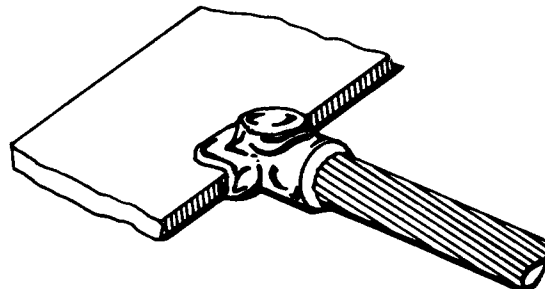
(a) For solid conductor connections, add suffix "S" to Mold N°

(b) Order one size larger cartridge when welding solid conductors 50 mm² and larger.

TYPE CB4

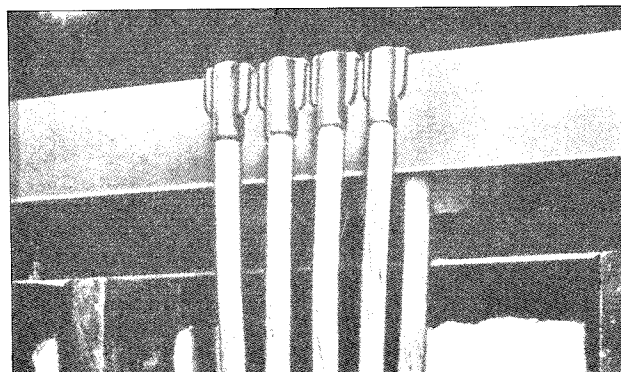
Horizontal Cable Tap to Horizontal Bus

The mold Type CB4 is recommended for making a horizontal copper cable tap to a horizontal copper bus bar connection (flat side horizontal). The high conductivity connection is impervious to moisture and is vibration proof. Solid, rope lay, or concentric stranded copper conductor, range from 50 to 500 mm². Copper bus bar range 1/4" x 1 1/2" thru 1/2" x 1 1/2" and wider.



CONCENTRIC STRANDED CONDUCTORS

BAR	CABLE (a) mm ²	STANDARD MOLD		
RUN	TAP	MOLD N°	PRICE KEY	CART.(b) N°
1/4" x 1 1/2" & MAIOR & WIDER (3)	50	CB4- 503	4	90
	70	CB4- 703	4	90
	95	CB4- 953	4	90
	120	CB4-1203	4	115
	150	CB4-1503	4	115
	185	CB4-1853	4	150
	240	CB4-2403	4	200
3/8" x 1 1/2" & MAIOR & WIDER (5)	50	CB4- 505	4	90
	70	CB4- 705	4	90
	95	CB4- 955	4	115
	120	CB4-1205	4	150
	150	CB4-1505	4	150
	185	CB4-1855	4	200
	240	CB4-2405	4	250
	400	CB4-4005	5	2-150
	500	CB4-5005	5	2-200
1/2" x 1 1/2" & MAIOR & WIDER (7)	50	CB4- 507	4	115
	70	CB4- 707	4	115
	95	CB4- 957	4	150
	120	CB4-1207	4	200
	150	CB4-1507	4	200
	185	CB4-1857	4	250
	240	CB4-2407	5	2-150
	400	CB4-4007	5	2-200
	500	CB4-5007	5	2-250



Type CB3 or CB7 BURNDYWELD is used extensively for taps off copper bus.

(a) For solid conductor connections, add suffix "S" to Mold N°

(b) Order one size larger cartridge when welding solid conductors 50 mm² and larger.

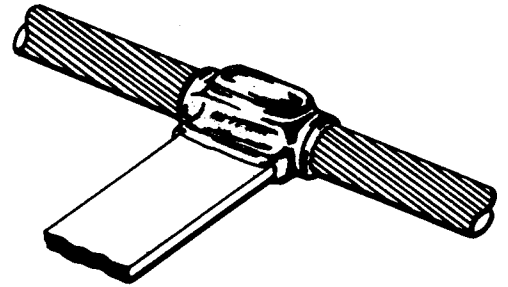
J - WELD

Cable to Lug or Bus

TYPE CB5

Horizontal Bus Tap to horizontal Cable Run

To connect a horizontal copper bus bar (flat surface horizontal) to a horizontal copper cable run, mold Type CB5 is recommended. The J - Weld connection is a permanent, maintenance-free joint that will function perfectly for the life of the conductors. Solid, rope lay, or concentric stranded copper conductor, range from 50 to 500 mm² Copper bus bar range 1/8" x 1" thru 3/8" x 2"



CONCENTRIC STRANDED CONDUCTORS

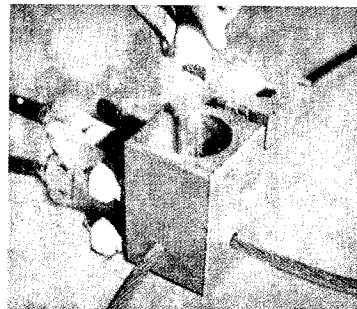
BAR	CABLE (a)	STANDARD MOLD		
mm ²				
RUN	TAP	MOLD	PRICE KEY	CART.(b)
(INCH)		N°		N°
1/8" x 1"	50	CB5- 500	4	65
1/4" x 1"	50	CB5- 502	4	90
1/8" x 1"	70	CB5- 700	4	90
1/4" x 1"	70	CB5- 702	4	115
3/8" x 1"	95	CB5- 954	4	150
1/4" x 1"	95	CB5- 952	4	150
1/4" x 1 1/2"	95	CB5- 953	4	200
1/4" x 2"	95	CB5- 953A	4	250
1/4" x 1"	120	CB5-1202	4	150
1/4" x 1 1/2"	120	CB5-1203	4	200
1/4" x 2"	120	CB5-1203A	4	250
1/4" x 1"	150	CB5-1502	4	200
1/4" x 1 1/2"	150	CB5-1503	4	250
1/4" x 2"	150	CB5-1503A	5	2-150
1/4" x 1"	185	CB5-1852	4	200

CONCENTRIC STRANDED CONDUCTORS

BAR	CABLE (a)	STANDARD MOLD		
mm ²				
RUN	TAP	MOLD	PRICE KEY	CART.(b)
(INCH)		N°		N°
1/4" x 1 1/4"	185	CB5-1852A	4	200
1/4" x 1 1/2"	185	CB5-1853	4	250
1/4" x 2"	185	CB5-1853A	5	2-150
1/4" x 1"	240	CB5-2402	4	250
1/4" x 1 1/2"	240	CB5-2403	5	2-150
1/4" x 2"	240	CB5-2403A	5	2-200
1/4" x 1 1/2"	400	CB5-4003	4	2-200
1/4" x 2"	400	CB5-4003A	4	2-250
3/8" x 1 1/2"	400	CB5-4005	4	2-250
3/8" x 2"	400	CB5-4005A	4	3-200
1/4" x 1 1/2"	500	CB5-5003	5	2-250
1/4" x 2"	500	CB5-5003A	5	3-200
3/8" x 1 1/2"	500	CB5-5005	5	3-200
3/8" x 2"	500	CB5-5005A	5	3-250

(a) For solid conductor connections, add suffix "S" to Mold N°

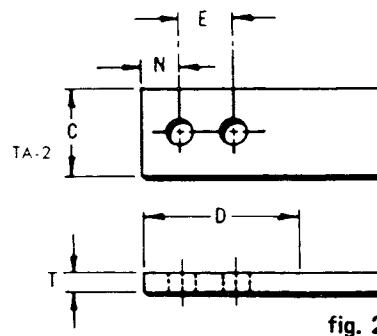
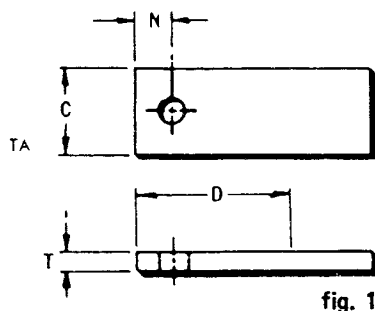
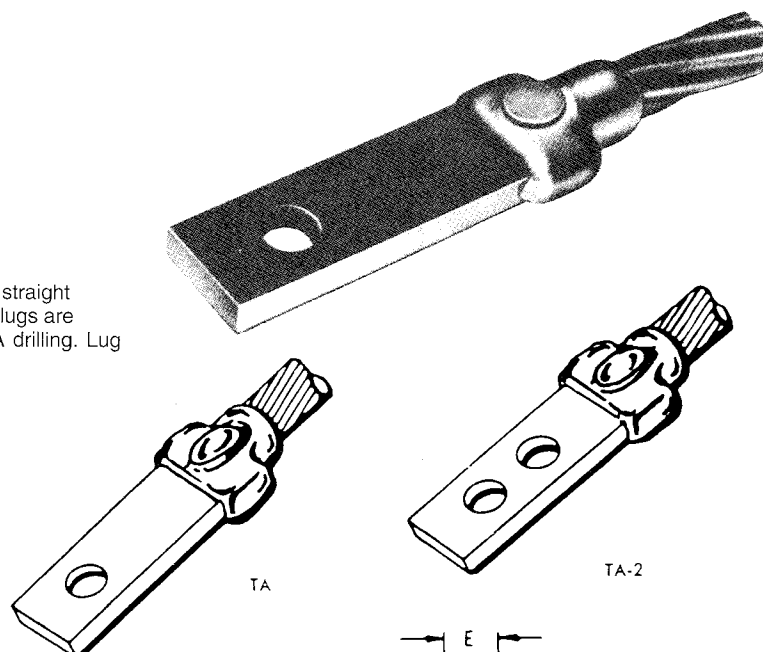
(b) Order one size larger cartridge when welding solid conductors 50 mm² and larger.



ORDER J - WELD CLAMPS SEPARATELY

TYPE TA Straight Bar Lugs

Jiwoong straight copper lugs type TA are designed for making straight terminal lugs with the mold Type CB1 shown on page 37. The lugs are available with one and two screw holes, and two hole NEMA drilling. Lug range 1/16" x 1/2" thru 7/16" x 2". Screw size 3/16" thru 5/8".



LUG	CAT No.	N°	SCREW SIZE	DIMENSIONS (mm)				
				T	C	D	E	N
3 x 25	TA- 325	1	M-10	3	25	22	-	16
	TA- 325-2	2	M-12	3	25	76	45	16
6 x 25	TA- 625	1	M12	6	25	28	-	16
	TA- 625-2	2	M12	6	25	76	45	16
6 x 30	TA- 630	1	M-12	6	30	28	-	16
	TA- 630-2	2	M-12	6	30	76	45	16
6 x 40	TA- 640	1	M16	6	40	38	-	19
	TA- 640-2	2	M12	6	40	76	45	16
6 x 50	TA- 650	1	M-12	6	50	38	-	19
	TA- 650-2	2	M-12	6	50	76	45	16

LUG	CAT No.	N°	SCREW SIZE	DIMENSIONS (mm)				
				T	C	D	E	N
10 x 25	TA-1025	1	M10	10	25	38	-	19
	TA-1025-2	2	M10	10	25	76	45	16
10 x 40	TA-1040	1	M-16	10	40	38	-	19
	TA-1040-2	2	M-12	10	40	76	45	16
10 x 50	TA-1050	1	M16	10	50	54	-	25
	TA-1050-2	2	M12	10	50	76	45	16
12 x 50	TA-1250	1	M-12	12	50	54	-	25
	TA-1250-2	2	M-16	12	50	76	45	16
12 x 60	TA-1260	1	M16	12	60	54	-	25
	TA-1260-2	2	M16	12	60	76	45	16

— NEMA Standard 2 Hole Lugs. A standard set by the National Electric Manufacturers Association.

ORDER J - WELD CLAMPS SEPARATELY

J - WELD

Offset Bar Lugs

TYPE TOA Offset Bar Lugs

Offset copper lugs Type TOA are designed for use with mold Type CB1 listed on page 37.

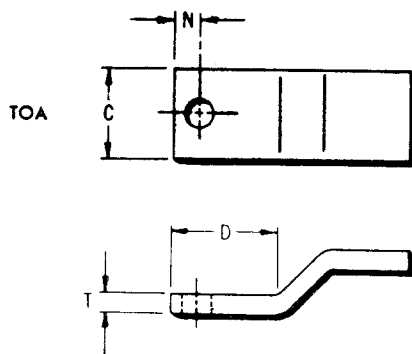
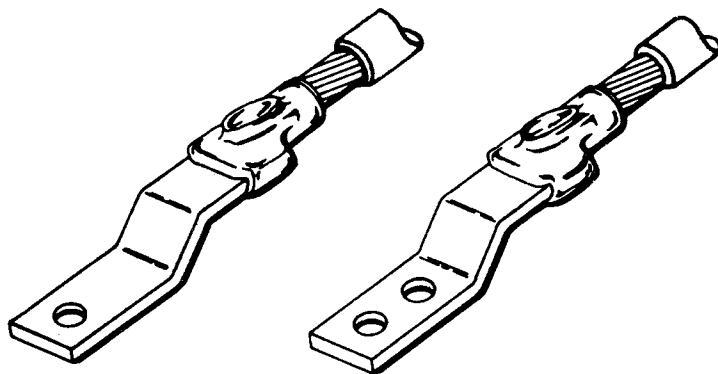


Fig. 1

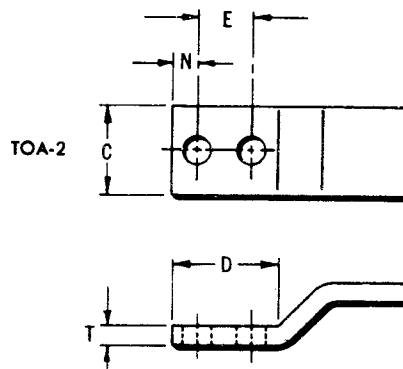


Fig. 2

LUG	CAT No.	Fig. N°	SCREW SIZE	DIMENSIONS (mm)				
				T	C	D	E	N
3 x 25	TOA- 325	1	M10	3	25	22	-	16
	TOA- 325-2	2	M12	3	25	76	45	16
6 x 25	TOA- 625	1	M12	6	25	28	-	16
	TOA- 625-2	2	M12	6	25	76	45	16
6 x 30	TOA- 630	1	M12	6	30	28	-	16
	TOA- 630-2	2	M12	6	30	76	45	16
6 x 40	TOA- 640	1	M16	6	40	38	-	19
	TOA- 640-2	2	M12	6	40	76	45	16
6 x 50	TOA- 650	1	M16	6	50	38	-	19
	TOA- 650-2	2	M12	6	50	76	45	16

LUG	CAT No.	Fig. N°	SCREW SIZE	DIMENSIONS (mm)				
				T	C	D	E	N
10 x 25	TOA-1025	1	M10	10	25	38	-	19
	TOA-1025-2	2	M10	10	25	76	45	16
10 x 40	TOA-1040	1	M16	10	40	38	-	19
	TOA-1040-2	2	M12	10	40	76	45	16
10 x 50	TOA-1050	1	M16	10	50	54	-	25
	TOA-1050-2	2	M12	10	50	76	45	16
12 x 50	TOA-1250	1	M16	12	50	54	-	25
	TOA-1250-2	2	M12	12	50	76	45	16
12 x 60	TOA-1260	1	M16	12	60	54	-	25
	TOA-1260-2	2	M16	12	60	76	45	16

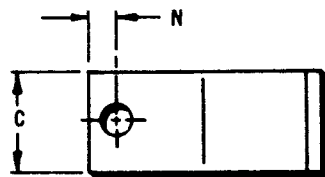
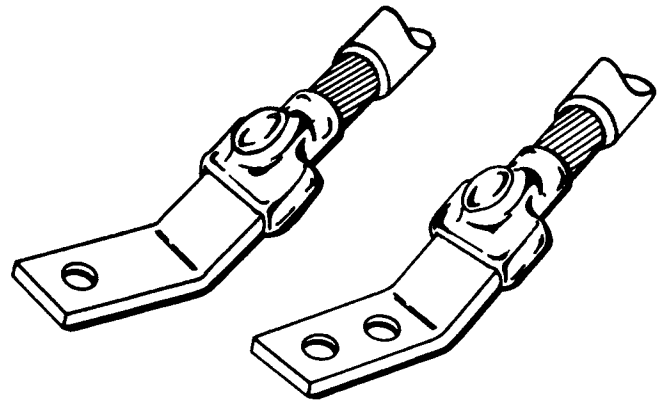
— NEMA standard 2 Hole Lugs. A standard set by the National Electric Manufacturers Association.

ORDER J - WELD CLAMPS SEPARATELY

TYPE TA-45

45° Bar Lugs

ing TA-45 copper lugs are designed to make a 45° angle terminal mold Type CB1 shown on page 37. The mold joint is a permanent maintenance-free connection.



TA-45

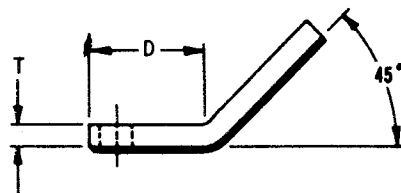
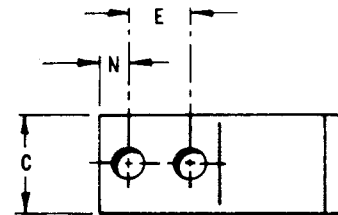


Fig. 1



TA-2-45

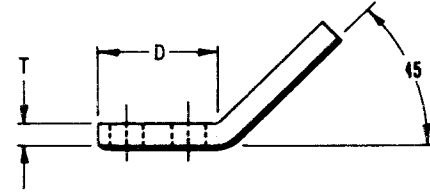


Fig. 2

LUG	CAT No.	Fig. N°	SCREW SIZE	DIMENSIONS (mm)				
				T	C	D	E	N
3 x 25	TA- 325 -45	1	M-10	3	25	22	-	16
	TA- 325-2-45	2	M-10	3	25	76	45	16
6 x 25	TA- 625 -45	1	M12	6	25	28	-	16
	TA- 625-2-45	2	M12	6	25	76	45	16
6 x 30	TA- 630 -45	1	M-12	6	30	28	-	16
	TA- 630-2-45	2	M-12	6	30	76	45	16
6 x 40	TA- 640 -45	1	M16	6	40	38	-	19
	TA- 640-2-45	2	M12	6	40	76	45	16
6 x 50	TA- 650 -45	1	M-16	6	50	38	-	19
	TA- 650-2-45	2	M-12	6	50	76	45	16

LUG	CAT No.	Fig. N°	SCREW SIZE	DIMENSIONS (mm)				
				T	C	D	E	N
10 x 25	TA-1025 -45	1	M10	10	25	38	-	19
	TA-1025-2-45	2	M10	10	25	76	45	16
10 x 40	TA-1040 -45	1	M-16	10	40	38	-	19
	TA-1040-2-45	2	M-12	10	40	76	45	16
10 x 50	TA-1050 -45	1	M16	10	50	54	-	25
	TA-1050-2-45	2	M12	10	50	76	45	16
12 x 50	TA-1250 -45	1	M-16	12	50	54	-	25
	TA-1250-2-45	2	M-12	12	50	76	45	16
12 x 60	TA-1260 -45	1	M16	12	60	54	-	25
	TA-1260-2-45	2	M16	12	60	76	45	16

— NEMA standard 2 Hole Lugs. A standard set by the National Electric Manufacturers Association.

J - WELD

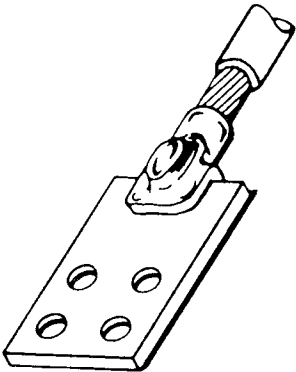
Lug

TYPE TA-4N

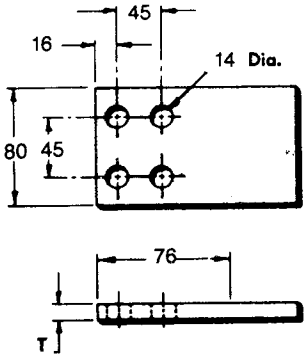
Straight 4 Hole NEMA *

Type TA-4N 4 hole NEMA copper lugs are designed for use with the mold Type CB1 shown on page 38.

LUG	CAT No.	DIMENSIONS (mm)
		T
6 x 80	TA 680-4N	6
10 x 80	TA1080-4N	10
12 x 80	TA1280-4N	12



DIMENSIONS (mm)

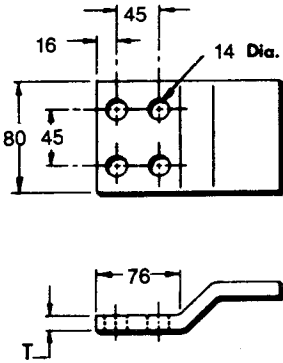
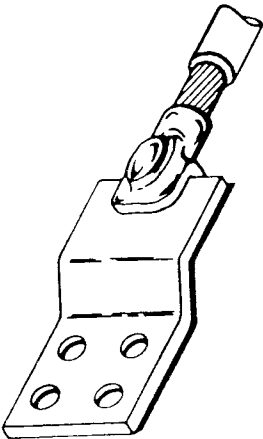


TYPE TOA-4N

Offset 4 Hole NEMA *

Offset Type TOA-4N 4 hole NEMA copper lugs are designed for use with the mold type CB1 shown on page 38.

LUG	CAT No.	DIMENSIONS (mm)
		T
6 x 80	TOA 680-4N	6
10 x 80	TOA1080-4N	10
12 x 80	TOA1280-4N	12



* A standard set by the National Electrical Manufacturers Association.

ORDER J - WELD CLAMPS SEPARATELY

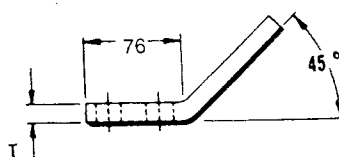
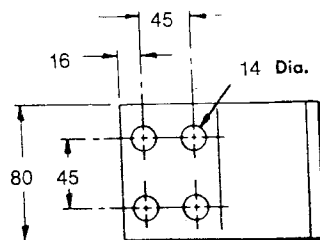
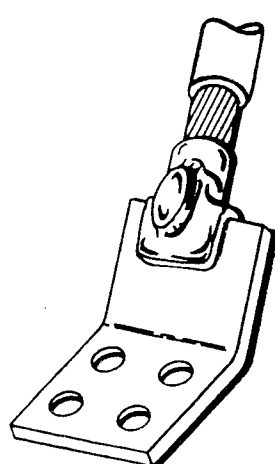
TYPE TA-4N-45

45° Bar Lugs NEMA *

Type TA-4N-45, 45°, 4 hole NEMA copper lugs are designed for use with the mold type CB1 shown on page 38.

LUG	CAT No.	DIMENSIONS (mm)
		T
6 x 80	TA- 680-4N-45	6
10 x 80	TA-1080-4N-45	10
12 x 80	TA-1280-4N-45	12

* A standard set by the National Electrical Manufacturers Association.



ORDER J - WELD CLAMPS SEPARATELY

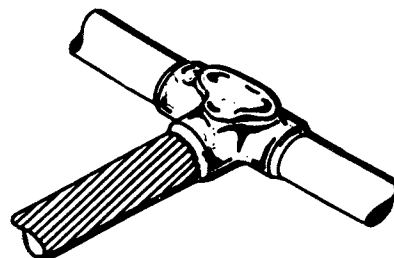
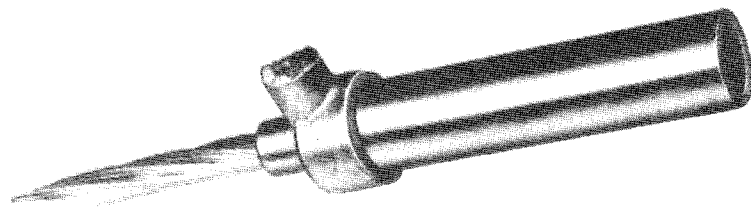
J - WELD

Cable to Tube

TYPE CT1

Horizontal Cable Tap to Horizontal Run Tube

For connecting horizontal solid, rope lay, or concentric stranded conductor tap to horizontal copper tube run the mold Type CT1 is recommended. A conductor range of from 50 to 500 mm² cable can be connected to 1/2" to 2" standard IPS.



CONCENTRIC STRANDED CONDUCTORS

STD. IPS TUBE SIZE	CABLE (a)	STANDARD MOLD			STD. IPS TUBE PLUG CAT.No. (d)
		MOLD N°	PRICE KEY	CART.(b) N°	
1/2"	185	CT1-18513	4	200	CT1-2201
	150	CT1-15013	4	200	CT1-2201
	120	CT1-12013	4	200	CT1-2201
	95	CT1- 9513	4	150	CT1-2201
	70	CT1- 7013	4	150	CT1-2201
3/4"	50	CT1- 5013	4	150	CT1-2201
	240	CT1-24014	5	2-150	CT1-2202
	185	CT1-18514	5	2-150	CT1-2202
	150	CT1-15014	5	2-150	CT1-2202
	120	CT1-12014	5	2-150	CT1-2202
1"	95	CT1- 9514	4	250	CT1-2202
	70	CT1- 7014	4	250	CT1-2202
	50	CT1- 5014	4	250	CT1-2202
	400	CT1-40015	5	3-250	CT1-2203
	240	CT1-24015	5	500	CT1-2203
1 1/4"	185	CT1-18515	5	500	CT1-2203
	150	CT1-15015	5	500	CT1-2203
	120	CT1-12015	5	2-200	CT1-2203
	95	CT1- 9515	5	2-200	CT1-2203
	70	CT1- 7015	5	2-200	CT1-2203
1 1/2"	50	CT1- 5015	5	2-200	CT1-2203
	500	CT1-50016	5	3-250	CT1-2204
	400	CT1-40016	5	3-250	CT1-2204
2"	240	CT1-24016	5	3-200	CT1-2204

CONCENTRIC STRANDED CONDUCTORS

STD. IPS TUBE SIZE	CABLE (a)	STANDARD MOLD			STD. IPS TUBE PLUG CAT.No. (d)
		MOLD N°	PRICE KEY	CART.(b) N°	
1 1/4"	185	CT1-18516	5	3-200	CT1-2204
	150	CT1-15016	5	3-200	CT1-2204
	120	CT1-12016	5	2-250	CT1-2204
	95	CT1- 9516	5	2-250	CT1-2204
	70	CT1- 7016	5	2-250	CT1-2204
1 1/2"	50	CT1- 5016	5	2-250	CT1-2204
	500	CT1-50017	10 (c)	5-250	CT1-2205
	400	CT1-40017	10 (c)	5-250	CT1-2205
	240	CT1-24017	10 (c)	4-250	CT1-2205
	185	CT1-18517	10 (c)	4-250	CT1-2205
2"	150	CT1-15017	10 (c)	4-250	CT1-2205
	120	CT1-12017	10 (c)	4-250	CT1-2205
	95	CT1- 9517	10 (c)	4-250	CT1-2205
	70	CT1- 7017	10 (c)	4-250	CT1-2205
	50	CT1- 5017	10 (c)	4-250	CT1-2205
2"	500	CT1-50018	10 (c)	6-250	CT1-2206
	400	CT1-40018	10 (c)	6-250	CT1-2206
	240	CT1-24018	10 (c)	5-250	CT1-2206
	185	CT1-18518	10 (c)	5-250	CT1-2206
	150	CT1-15018	10 (c)	5-250	CT1-2206
2"	120	CT1-12018	10 (c)	5-250	CT1-2206
	95	CT1- 9518	10 (c)	5-250	CT1-2206
	70	CT1- 7018	10 (c)	5-250	CT1-2206
2"	50	CT1- 5018	10 (c)	5-250	CT1-2206

(a) For solid-to-solid connections, add suffix "S" to Mold N°

(b) Order one size larger cartridge when welding solid conductors 50 mm² and larger.

(c) Sold complete with frame. If graphite part only is required, add suffix, "G" to Catalog N°

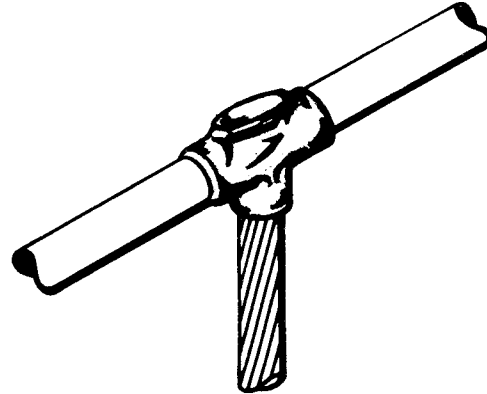
(d) One graphite plug is required for each weld. No retainer rings required.

ORDER J - WELD CLAMPS SEPARATELY

TYPE CT2

Vertical Drop Cable Tap from Horizontal Run Tube

The mold type CT2 is recommended for making a vertical drop cable tap from a horizontal run tube. Cable range for solid, rope lay, or concentric copper stranded conductor is from 50 to 500 mm² for tube 1/2" thru 2" IPS standard.



CONCENTRIC STRANDED CONDUCTORS

STD.IPS TUBE SIZE	CABLE (a)	STANDARD MOLD			STD.IPS TUBE PLUG CAT.No. (d)
		MOLD	PRICE KEY	CART.(b)	
		N°		N°	
1/2"	185	CT2-18513	4	200	CT2-2201
	150	CT2-15013	4	200	CT2-2201
	120	CT2-12013	4	200	CT2-2201
	95	CT2- 9513	4	150	CT2-2201
	70	CT2- 7013	4	150	CT2-2201
	50	CT2- 5013	4	150	CT2-2201
3/4"	240	CT2-24014	5	2-150	CT2-2202
	185	CT2-18514	5	2-150	CT2-2202
	150	CT2-15014	5	2-150	CT2-2202
	120	CT2-12014	5	2-150	CT2-2202
	95	CT2- 9514	4	250	CT2-2202
	70	CT2- 7014	4	250	CT2-2202
1"	50	CT2- 5014	4	250	CT2-2202
	400	CT2-40015	5	3-250	CT2-2203
	240	CT2-24015	5	3-200	CT2-2203
	185	CT2-18515	5	2-250	CT2-2203
	150	CT2-15015	5	2-250	CT2-2203
	120	CT2-12015	5	2-250	CT2-2203
1 1/4"	95	CT2- 9515	5	2-200	CT2-2203
	70	CT2- 7015	5	2-200	CT2-2203
	50	CT2- 5015	5	2-200	CT2-2203
	500	CT2-50016	6	4-250	CT2-2204
	400	CT2-40016	6	4-250	CT2-2204
	240	CT2-24016	5	3-250	CT2-2204

CONCENTRIC STRANDED CONDUCTORS

STD.IPS TUBE SIZE	CABLE (a)				STD.IPS TUBE PLUG CAT.No. (d)
		MOLD	PRICE KEY	CART.(b)	
		N°		N°	
1 1/4"	185	CT2-18516	5	3-250	CT2-2204
	150	CT2-15016	5	3-250	CT2-2204
	120	CT2-12016	5	3-200	CT2-2204
	95	CT2- 9516	5	3-200	CT2-2204
	70	CT2- 7016	5	2-250	CT2-2204
	50	CT2- 5016	5	2-250	CT2-2204
1 1/2"	500	CT2-50017	10 * (c)	5-250	CT2-2205
	400	CT2-40017	10 * (c)	5-250	CT2-2205
	240	CT2-24017	6	5-250	CT2-2205
	185	CT2-18517	6	4-250	CT2-2205
	150	CT2-15017	6	4-250	CT2-2205
	120	CT2-12017	6	4-250	CT2-2205
2"	95	CT2- 9517	5	3-250	CT2-2205
	70	CT2- 7017	5	3-250	CT2-2205
	50	CT2- 5017	5	3-250	CT2-2205
	500	CT2-50018	10 * (c)	6-250	CT2-2206
	400	CT2-40018	10 * (c)	6-250	CT2-2206
	240	CT2-24018	10 * (c)	5-250	CT2-2206
2"	185	CT2-18518	10 * (c)	5-250	CT2-2206
	150	CT2-15018	10 * (c)	5-250	CT2-2206
	120	CT2-12018	10 * (c)	5-250	CT2-2206
	95	CT2- 9518	6	4-250	CT2-2206
	70	CT2- 7018	6	4-250	CT2-2206
	50	CT2- 5018	6	4-250	CT2-2206

(a) For solid-to-solid connections, add suffix "S" to Mold N°

(b) Order one size larger cartridge when welding solid conductors 50 mm² and larger.

(c) Sold complete with frame. If graphite part only is required, add suffix, "G" to Catalog N°

* Requires additional mold M-182.

(d) One graphite plug required for each weld. No retainer rings required.

ORDER J - WELD CLAMPS SEPARATELY

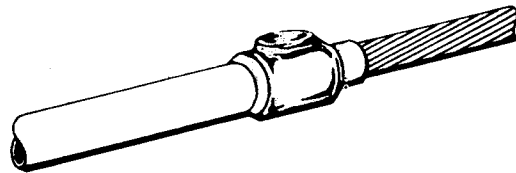
J - WELD

Cable to Tube

TYPE CT3

Horizontal Cable to Tube End to End

Type CT3 mold is recommended for solid, rope lay, and concentric stranded copper conductor splices from 50 a 500 mm² to tubes 1/2" thru 2" standard IPS. The J - Weld joint is a solid mass of copper that is vibration proof and impervious to corrosion.



CONCENTRIC STRANDED CONDUCTORS

STD.IPS TUBE SIZE	CABLE (a)	STANDARD MOLD			STD.IPS TUBE PLUG CAT.No. (c)
		MOLD N°	PRICE KEY	CART.(b) N°	
1/2"	185	CT3-18513	4	150	CT3-2207
	150	CT3-15013	4	115	CT3-2207
	120	CT3-12013	4	115	CT3-2207
	95	CT3- 9513	4	115	CT3-2207
	70	CT3- 7013	4	90	CT3-2207
	50	CT3- 5013	4	90	CT3-2207
3/4"	240	CT3-24014	4	200	CT3-2208
	185	CT3-18514	4	200	CT3-2208
	150	CT3-15014	4	150	CT3-2208
	120	CT3-12014	4	150	CT3-2208
	95	CT3- 9514	4	150	CT3-2208
	70	CT3- 7014	4	115	CT3-2208
	50	CT3- 5014	4	115	CT3-2208
1"	400	CT3-40015	5	2-150	CT3-2209
	240	CT3-24015	4	250	CT3-2209
	185	CT3-18515	4	250	CT3-2209
	150	CT3-15015	4	250	CT3-2209
	120	CT3-12015	4	200	CT3-2209
	95	CT3- 9515	4	200	CT3-2209
	70	CT3- 7015	4	150	CT3-2209
	50	CT3- 5015	4	150	CT3-2209
1 1/4"	500	CT3-50016	5	2-250	CT3-2210
	400	CT3-40016	5	2-250	CT3-2210
	240	CT3-24016	5	2-200	CT3-2210

CONCENTRIC STRANDED CONDUCTORS

STD.IPS TUBE SIZE	CABLE (a)	STANDARD MOLD			STD.IPS TUBE PLUG CAT.No. (c)
		MOLD N°	PRICE KEY	CART.(b) N°	
1 1/4"	185	CT3-18516	5	2-150	CT3-2210
	150	CT3-15016	5	2-150	CT3-2210
	120	CT3-12016	5	2-150	CT3-2210
	95	CT3- 9516	5	250	CT3-2210
	70	CT3- 7016	5	250	CT3-2210
	50	CT3- 5016	5	250	CT3-2210
1 1/2"	500	CT3-50017	5	3-250	CT3-2211
	400	CT3-40017	5	3-200	CT3-2211
	240	CT3-24017	5	2-250	CT3-2211
	185	CT3-18517	5	2-250	CT3-2211
	150	CT3-15017	5	2-250	CT3-2211
	120	CT3-12017	5	2-200	CT3-2211
	95	CT3- 9517	5	2-200	CT3-2211
	70	CT3- 7017	5	2-200	CT3-2211
	50	CT3- 5017	5	2-200	CT3-2211
2"	500	CT3-50018	5	4-250	CT3-2212
	400	CT3-40018	5	3-250	CT3-2212
	240	CT3-24018	5	3-250	CT3-2212
	185	CT3-18518	5	3-200	CT3-2212
	150	CT3-15018	5	2-250	CT3-2212
	120	CT3-12018	5	2-250	CT3-2212
	95	CT3- 9518	5	2-250	CT3-2212
	70	CT3- 7018	5	2-250	CT3-2212
	50	CT3- 5018	5	2-250	CT3-2212

(a) For solid-to-solid connections, add suffix "S" to Mold N°

(b) Order one size larger cartridge when welding solid conductors 50mm² and larger.

(c) One graphite plug is required for each weld. No retainer rings required.

ORDER J - WELD CLAMPS SEPARATELY

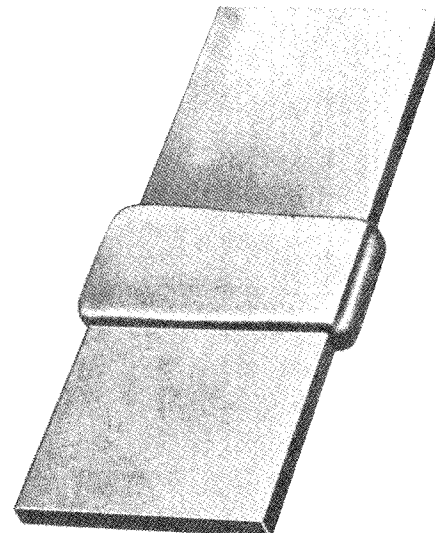
J - WELD

Bus Bar to Bus Bar

TYPE BB1

Horizontal End to End

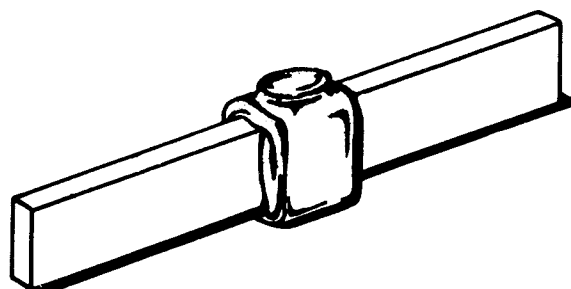
The mold Type BB1 is recommended for joining horizontal copper bus bar end to end (flat surfaces vertical). J - Weld makes a copper fusion weld connection that runs cooler than the bus bars joined. Copper bus bar range 1/8" x 1" thru 1/2" x 4".



BUS BAR	STANDARD MOLD		
	MOLD N°	PRICE KEY	CART. N°
1/8" x 1"	BB1-1118	4	45
1/8" x 2"	BB1-1119	14	90
3/16" x 1"	BB1-1120	4	65
3/16" x 2"	BB1-1121	14	115
1/4" x 1"	BB1-1122	4	90
1/4" x 1 1/4"	BB1-1123	4	90
1/4" x 1 1/2"	BB1-1124	4	115
1/4" x 2"	BB1-1125	14	150
1/4" x 3"	BB1-1126	15	2-200
1/4" x 4"	BB1-1127	15	2-250
1/4" x 5"	BB1-1128	10* (a)	3-250
1/4" x 6"	BB1-1129	10* (a)	4-250
3/8" x 1"	BB1-1130	4	115
3/8" x 1 1/2"	BB1-1131	4	200
3/8" x 2"	BB1-1132	14	250
3/8" x 3"	BB1-1133	15	2-250
3/8" x 4"	BB1-1134	15	3-200
1/2" x 1"	BB1-1135	15	150
1/2" x 2"	BB1-1136	15	2-200
1/2" x 3"	BB1-1137	5	3-200
1/2" x 4"	BB1-1138	6	4-250

* Requires additional mold M-181.

a) Sold complete with frame. If graphite portion only is required, add suffix "G" to Catalog N°



ORDER J - WELD CLAMPS SEPARATELY

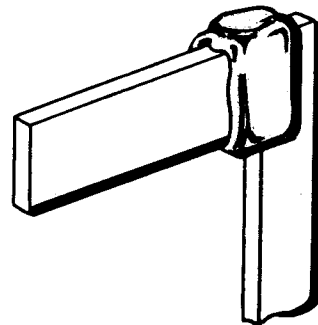
J - WELD

Bus Bar to Bus Bar

TYPE BB2

Horizontal to Vertical at Right Angle

To connect a horizontal copper bus bar to the side of a vertical copper bus bar (flat sides in vertical plane) at right angle, the mold Type BB2 is recommended. J - Weld connection is vibration proof and higher in current carrying capacity than bus joined. Range 1/8" x thru 1/2" x 4".



BUS BAR	STANDARD MOLD		
RUN AND TAP	MOLD N°	PRICE KEY	CART. N°
1/8" x 1"	BB2-1230	4	45
1/8" x 2"	BB2-1231	4	90
3/16" x 1"	BB2-1232	4	65
3/16" x 2"	BB2-1233	4	115
1/4" x 1"	BB2-1234	4	90
1/4" x 1 1/4"	BB2-1235	4	90
1/4" x 1 1/2"	BB2-1236	4	115
1/4" x 2"	BB2-1237	4	150
1/4" x 3"	BB2-1238	15	2-200
1/4" x 4"	BB2-1239	15	2-250
1/4" x 5"	BB2-1240	10*(a)	3-250
1/4" x 6"	BB2-1241	10*(a)	4-250
3/8" x 1"	BB2-1242	4	115
3/8" x 1 1/2"	BB2-1243	4	200
3/8" x 2"	BB2-1244	4	250
3/8" x 3"	BB2-1245	15	2-250
3/8" x 4"	BB2-1246	15	3-200
1/2" x 1"	BB2-1247	4	150
1/2" x 2"	BB2-1248	4	2-200
1/2" x 3"	BB2-1249	15	3-200
1/2" x 4"	BB2-1250	6	4-250

* Requires additional mold M-181.

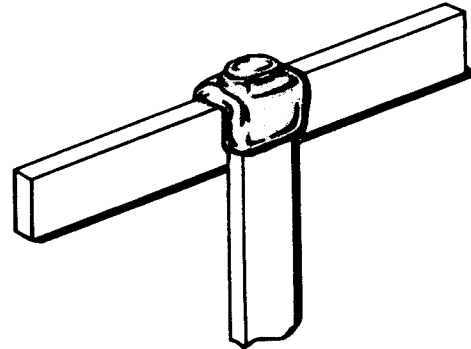
a) Sold complete with frame. If graphite portion only is required, add suffix "G" to Catalog N°.

ORDER J - WELD CLAMPS SEPARATELY

TYPE BB3

Vertical Drop Tap to Horizontal Run

To make a vertical drop copper bus bar tap from a horizontal copper bus bar (flat planes vertical), the mold Type BB3 is recommended. J - Weld provides a permanent, maintenance-free connection that will function perfectly for the life of the bus bars. Copper bus bar range: 1/8" x 1" thru 1/2" x 4".



BUS BAR		STANDARD MOLD		
RUN	TAP	MOLD N°	PRICE KEY	CART. N°
1/8" x 1"	1/8" x 1"	BB3-1098	4	90
1/8" x 2" & MAIOR/WIDER	1/8" x 2"	BB3-1099	4	200
3/16" x 1"	3/16" x 1"	BB3-1100	4	115
3/16" x 2" & MAIOR/WIDER	3/16" x 2"	BB3-1101	4	150
1/4" x 1"	1/4" x 1"	BB3-1102	4	150
1/4" x 1 1/4"	1/4" x 1 1/4"	BB3-1103	4	200
1/4" x 1 1/2"	1/4" x 1 1/2"	BB3-1104	4	250
1/4" x 2" & MAIOR/WIDER	1/4" x 2"	BB3-1105	5	2-200
1/4" x 3" & MAIOR/WIDER	1/4" x 3"	BB3-1106	5	500
1/4" x 4" & MAIOR/WIDER	1/4" x 4"	BB3-1107	10* (a)	3-250
3/8" x 1"	3/8" x 1"	BB3-1108	4	250
3/8" x 1 1/2"	3/8" x 1 1/2"	BB3-1109	5	2-200
3/8" x 2" & MAIOR/WIDER	3/8" x 2"	BB3-1110	5	500
3/8" x 3" & MAIOR/WIDER	3/8" x 3"	BB3-1111	5	3-250
3/8" x 4" & MAIOR/WIDER	3/8" x 4"	BB3-1112	10* (a)	2-500
1/2" x 1"	1/2" x 1"	BB3-1113	5	2-150
1/2" x 2" & MAIOR/WIDER	1/2" x 2"	BB3-1114	5	3-250
1/2" x 3" & MAIOR/WIDER	1/2" x 3"	BB3-1115	10* (a)	4-250
1/2" x 4" & MAIOR/WIDER	1/2" x 4"	BB3-1116	10* (a)	5-250

* Requires additional mold M-185.

a) Sold complete with frame. If graphite portion only is required, add suffix "G" to Catalog N°

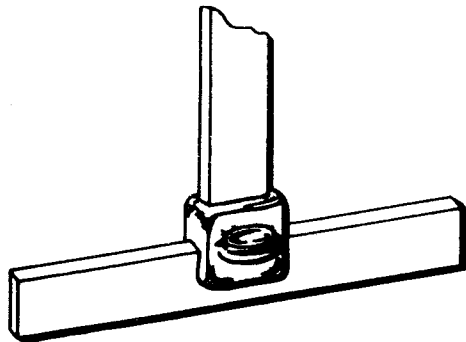
J - WELD

Bus Bar to Bus Bar

TYPE BB4

Vertical Overhead Tap to Horizontal Run

The mold Type BB4 is recommended for vertical overhead copper bus bar tap to horizontal copper bus bar connections with flat surfaces vertical. The high copper content joint has a higher current carrying capacity than the bus bars joined and is impervious to vibration and moisture. Range 1/8" x 1" thru 1/2" x 2"

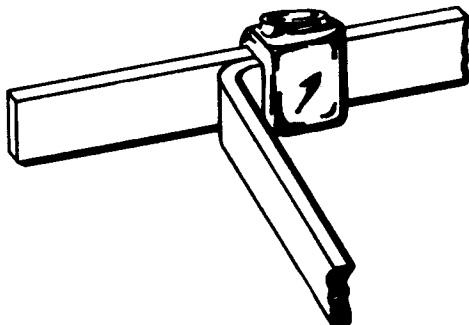


BUS BAR SIZE		STANDARD MOLD		
RUN	TAP	MOLD N°	PRICE KEY	CART. N°
1/8" x 1"	1/8" x 1"	BB4-1033	4	150
1/4" x 1"	1/4" x 1"	BB4-1034	7	250
1/4" x 2" & WIDER	1/4" x 2"	BB4-1035	8	2-250
1/4" x 3" & WIDER	1/4" x 3"	BB4-1035	8	2-250
1/4" x 4" & WIDER	1/4" x 4"	BB4-1037	8	6-250
3/8" x 1"	3/8" x 1"	BB4-1038	5	2-150
3/8" x 2" & WIDER	3/8" x 2"	BB4-1039	8	4-200
1/2" x 1"	1/2" x 1"	BB4-1040	5	2-250
1/2" x 2" & WIDER	1/2" x 2"	BB4-1041	8	6-200

TYPE BB5

Horizontal Parallel Tap to Horizontal Thru Run.

A horizontal copper bus bar parallel tap can be connected to a horizontal thru run copper bus bar (flat surfaces in vertical plane) with mold type BB5. The J - Weld connection is a high copper content weld that is permanent and of greater current carrying capacity than the bus bar connected. Copper bus bar range 1/8" x 1" 1/2" x 4".



BUS BAR	STANDARD MOLD		
RUN AND TAP	MOLD N°	PRICE KEY	CART. N°
1/8" x 1"	BB5-1013	4	90
1/8" x 2"	BB5-1014	4	200
3/16" x 1"	BB5-1015	4	150
3/16" x 2"	BB5-1016	4	250
1/4" x 1"	BB5-1017	4	150
1/4" x 1 1/4"	BB5-1018	4	200
1/4" x 1 1/2"	BB5-1019	4	250
1/4" x 2"	BB5-1020	15	2-200
1/4" x 3"	BB5-1021	15	3-250
1/4" x 4"	BB5-1022	15	4-250
3/8" x 1"	BB5-1023	4	250
3/8" x 1 1/2"	BB5-1024	15	2-200
3/8" x 2"	BB5-1025	15	2-250
3/8" x 3"	BB5-1026	15	4-250
3/8" x 4"	BB5-1027	10* (a)	5-250
1/2" x 1"	BB5-1028	5	2-150
1/2" x 2"	BB5-1029	5	3-250
1/2" x 3"	BB5-1030	10* (a)	5-250
1/2" x 4"	BB5-1031	10* (a)	8-250

* Requires additional mold M-182.

(a) Sold complete with frame. If graphite part only is required, add suffix "G" to Catalog N°.

ORDER J - WELD CLAMPS SEPARATELY

J - WELD

Bar to Steel Surface

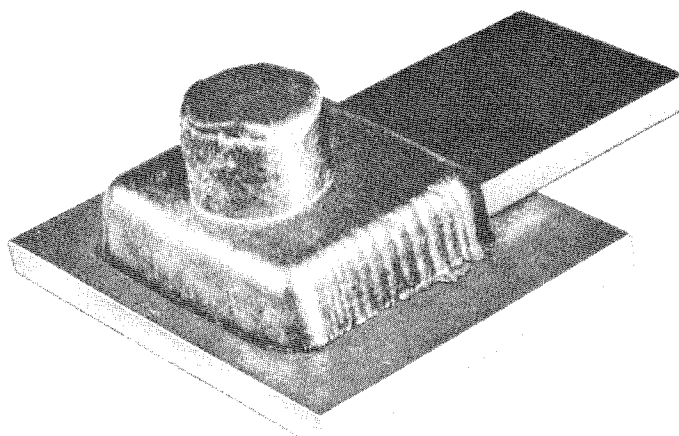
TYPE BS1

Vertical Tap to Vertical Steel Surface

Vertical copper bar taps can be made from vertical steel surfaces with Type BS1 mold. The J - Weld connection is a permanent, vibration proof connection. Range 1/8" x 1" thru 1/2" x 2" bus bar 4" and wider. When welding to galvanized steel, resurface with Galvanizing Bar:Catalog number A-331 (Page 67).



BUS BAR POL. INCH	STANDARD MOLD		
	MOLD Nº	PRICE KEY	CART. Nº
1/8" x 1"	BB3-1043	4	115
1/8" x 2"	BB3-1044	4	200
1/4" x 1"	BB3-1045	4	150
1/4" x 1 1/4"	BB3-1046	4	200
1/4" x 1 1/2"	BB3-1047	4	250
1/4" x 2"	BB3-1048	5	2-150
3/8" x 1"	BB3-1049	4	200
3/8" x 2"	BB3-1050	5	2-200
1/2" x 1"	BB3-1051	4	250
1/2" x 2"	BB3-1052	5	2-250



ORDER J - WELD CLAMPS SEPARATELY

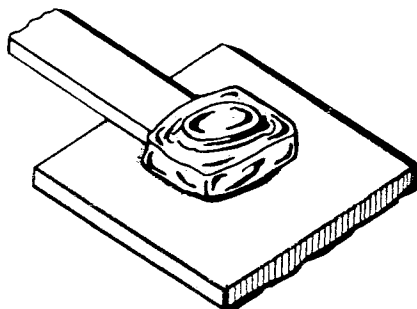
J - WELD

Bar to Steel Surface

TYPE BS 2

Horizontal Tap to Horizontal Steel Surface

The molde type BS2 is recommended for connecting a horizontal copper bar tap to a horizontal steel surface. The J -Weld connection forms a solid mass of copper that is moisture and vibration proof. Range 1/8" x 1" thru 1/2" x 2". When welding to galvanized steel, resurface with Galvanizing Bar: Catalog number A-331. (Page 67)

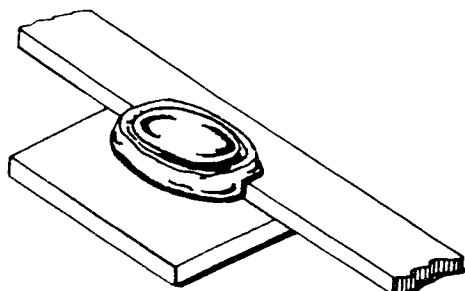


BUS BAR	STANDARD MOLD		
	MOLD N°	PRICE KEY	CART. N°
1/8" x 1"	BS2-1072	4	115
1/8" x 1 1/2"	BS2-1073	4	150
1/8" x 2"	BS2-1074	4	200
3/16" x 1"	BS2-1075	4	150
3/16" x 2"	BS2-1076	4	250
1/4" x 1"	BS2-1077	4	150
1/4" x 1 1/4"	BS2-1078	4	150
1/4" x 1 1/2"	BS2-1079	4	250
1/4" x 2"	BS2-1080	5	2-150
3/8" x 1"	BS2-1081	4	200
3/8" x 1 1/2"	BS2-1082	4	250
3/8" x 2"	BS2-1083	5	2-200
1/2" x 1"	BS2-1084	4	250
1/2" x 1 1/2"	BS2-1085	5	2-200
1/2" x 2"	BS2-1086	5	2-250

TYPE BS 3

Horizontal Thru Bar to Horizontal Steel Surface

For connecting horizontal thru copper bar to a horizontal steel surface (flat surfaces in horizontal plane), the mold Type BS3 is recommended. The J - Weld connection is vibration proof and impervious to moisture. Range 1/8" x 1" thru 1/2" x 1.1/2" and wider. When welding to galvanized steel, resurface with Galvanizing Bar:Catalog number A-331 (Page 67).



BUS BAR	STANDARD MOLD		
	MOLD N°	PRICE KEY	CART N°
1/8" x 1"	BS3-1088	4	115
1/8" x 1 1/2" & MAIOR/WIDER	BS3-1089	4	150
1/4" x 1"	BS3-1090	4	150
1/4" x 1 1/4"	BS3-1091	4	200
1/4" X 1 1/2" & MAIOR/WIDER	BS3-1092	4	250
3/8" x 1"	BS3-1093	4	200
3/8" x 1 1/2" & MAIOR/WIDER	BS3-1094	4	250
1/2" x 1"	BS3-1095	4	250
1/2" x 1 1/2" & MAIOR/WIDER	BS3-1096	5	2-200

ORDER J - WELD CLAMPS SEPARATELY

J - WELD

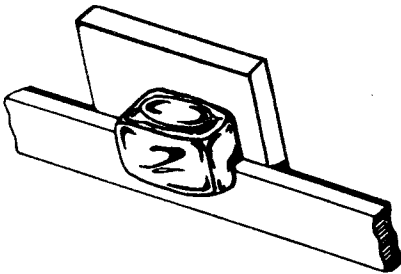
Bar to Steel Surface

TYPE BS 4

Horizontal Thru Bus to Vertical Steel Surface

A horizontal thru copper bar can be joined to a vertical steel surface (surfaces in vertical plane) with the mold type BS4. J-Weld makes a permanent, trouble-free, high copper content solid mass connection. Range 1/8" x 1" thru 1/2" x 2" and wider. When welding to galvanized steel, resurface with Galvanizing Bar: Catalog number A-331. (Page 67)

BUS BAR	STANDARD MOLD		
	MOLD N°	PRICE KEY	CART. N°
1/8" x 1"	BS4-1054	4	115
1/8" x 2" & MAIOR/WIDER	BS4-1055	4	200
1/4" x 1"	BS4-1056	4	150
1/4" x 2" & MAIOR/WIDER	BS4-1057	5	2-150
3/8" x 1"	BS4-1058	4	200
3/8" x 2" & MAIOR/WIDER	BS4-1059	5	2-200
1/2" x 1"	BS4-1060	4	250
1/2" x 2" & MAIOR/WIDER	BS4-1061	5	2-250

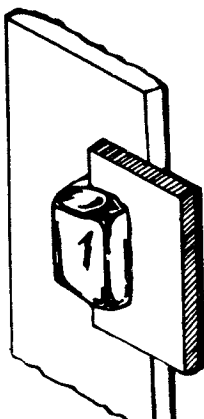


TYPE BS 5

Vertical Thru Bus to Vertical Steel Surface

The mold Type BS5 is recommended to connect a vertical thru copper bar to a vertical steel surface (flat surfaces in vertical plane). The high copper content solid mass connection is impervious to moisture and is vibration proof. Bus bar range 1/8" x 1" thru 1/2" x 2" and wider. When welding to galvanized steel, resurface with Galvanizing Bar: Catalog number A-331 (Page 67).

BUS BAR INCH	STANDARD MOLD		
	MOLD N°	PRICE KEY	CART. N°
1/8" x 1"	BS5-1063	4	115
1/8" x 2" & MAIOR/WIDER	BS5-1064	4	200
1/4" x 1"	BS5-1065	4	150
1/4" x 2" & MAIOR/WIDER	BS5-1066	5	2-150
3/8" x 1"	BS5-1067	4	200
3/8" x 2" & MAIOR/WIDER	BS5-1068	5	2-200
1/2" x 1"	BS5-1069	4	250
1/2" x 2" & MAIOR/WIDER	BS5-1070	5	2-250



ORDER J - WELD CLAMPS SEPARATELY

J - WELD

Tube to Tube

TYPE TT1

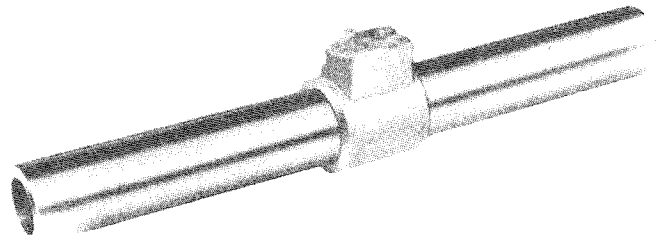
Horizontal End to End

To connect copper tube, end to end, the mold type TT1 is recommended. The J - Weld connection is a solid high copper content joint that has a greater current carrying capacity than the tubes connected. Tube range 1/2" thru 2" standard IPS. The molds are also available for extra strong, and double extra strong IPS tube bus.



STANDARD I.P.S. TUBULAR BUS				
STD. IPS TUBE SIZE	STANDARD MOLD			STD. IPS (a) TUBE PLUG CAT. No.
	MOLD N°	PRICE KEY	CART. N°	
1/2"	TT1-1313	4	115	TT1-2201
3/4"	TT1-1414	4	200	TT1-2202
1"	TT1-1515	5	2-150	TT1-2203
1 1/4"	TT1-1616	15	2-250	TT1-2204
1 1/2"	TT1-1717	15	3-250	TT1-2205
2"	TT1-1818	15	4-250	TT1-2206

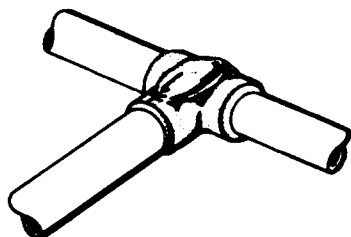
(a) One graphite tube plug is required for each weld. No Retainer ring necessary.



TYPE TT2

Horizontal Tee

J - Weld Type TT2 is recommended for horizontal copper tube to copper tube tap connections. The J - Weld connection has a higher current carrying capacity than the tubes connected. tube range 1/2" thru 2" standard IPS. For extra strong and double extra strong IPS tube bus.



STANDARD I.P.S. TUBULAR BUS						
STD IPS TUBE SIZE		STANDARD MOLD			STD. IPS TUBE (a) PLUG CAT.No.	
		MOLD N°	PRICE KEY	CART. N°		
RUN	TAP				RUN	TAP
1/2"	1/2"	TT2-1313	4	200	TT2-2201	TT2-2207
3/4"	3/4"	TT2-1414	5	2-150	TT2-2202	TT2-2208
3/4"	1/2"	TT2-1413	4	250	TT2-2202	TT2-2207
1"	1"	TT2-1515	5	2-250	TT2-2003	TT2-2209
	3/4"	TT2-1514	5	2-200	TT2-2203	TT2-2208
	1/2"	TT2-1513	5	2-200	TT2-2203	TT2-2207
1 1/4"	1 1/4"	TT2-1616	5	3-250	TT2-2204	TT2-2210
	1"	TT2-1615	5	3-250	TT2-2204	TT2-2209
	3/4"	TT2-1614	5	3-200	TT2-2204	TT2-2208
	1/2"	TT2-1613	5	2-250	TT2-2204	TT2-2207
1 1/2"	1 1/2"	TT2-1717	10 (b)	4-250	TT2-2205	TT2-2211
	1 1/4"	TT2-1716	10 (b)	4-250	TT2-2205	TT2-2210
	1"	TT2-1715	10 (b)	4-250	TT2-2205	TT2-2209
	3/4"	TT2-1714	10 (b)	3-250	TT2-2205	TT2-2208
	1/2"	TT2-1713	10 (b)	3-250	TT2-2205	TT2-2207
2"	2"	TT2-1818	10 (b)	6-250	TT2-2206	TT2-2212
	1 1/2"	TT2-1817	10 (b)	6-250	TT2-2206	TT2-2211
	1 1/4"	TT2-1816	10 (b)	6-250	TT2-2206	TT2-2210
	1"	TT2-1815	10 (b)	5-250	TT2-2206	TT2-2209
	3/4"	TT2-1814	10 (b)	5-250	TT2-2206	TT2-2208
	1/2"	TT2-1813	10 (b)	5-250	TT2-2206	TT2-2207

(a) Two graphite plugs are required: one for run and one for tap. No retainer rings necessary.

(b) Sold complete with frame. If graphite part only is required, add suffix "G" to Catalog Number.

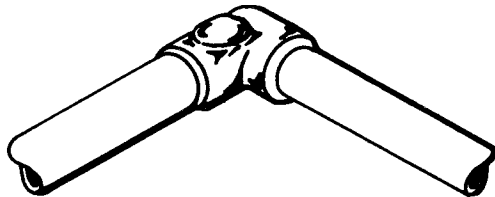
ORDER J - WELD CLAMPS SEPARATELY

J - WELD

Tube to Tube

TYPE TT3 Horizontal Right Angle

For connecting horizontal copper tube ends at a right angle, the mold Type TT3 is recommended. The J - Weld connection is vibration proof and has a higher current carrying capacity than the tubes joined. Tube range 1/2" thru 2" standard IPS.



STD. IPS TUBE SIZE	STANDARD I.P.S. TUBULAR BUS				
	STANDARD MOLD			STD. IPS (a) TUBE PLUG CAT.No.	
	MOLD N°	PRICE KEY	CART. N°	RUN	TAP
1/2"	TT3-1313	4	200	TT3-2207	TT3-2207
3/4"	TT3-1414	5	2-150	TT3-2208	TT3-2208
1"	TT3-1515	5	2-250	TT3-2209	TT3-2209
1 1/4"	TT3-1616	5	3-250	TT3-2210	TT3-2210
1 1/2"	TT3-1717	10* (b)	4-250	TT3-2211	TT3-2211
2"	TT3-1818	10** (b)	6-250	TT3-2212	TT3-2212

(a) Two graphite plugs are required: one for run and one for tap. No retainer rings necessary.

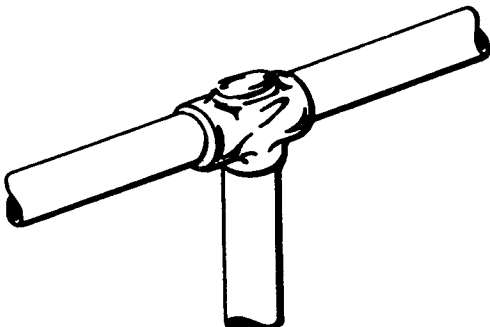
* Requires additional mold M181.

** Requires additional mold M182.

(b) Sold complete with frame. If graphite part only is required, add suffix "G" to Cat. N°.

TYPE TT4 Vertical Tee

The mold Type TT3 is recommended for making a vertical Tee-horizontal from copper tube to vertical copper drop tap. The J - Weld joint is a low resistance connection that never corrodes or loosens. Tube range 1/2" thru 2" standard IPS.



STANDARD I.P.S. TUBULAR BUS						
STD IPS TUBE SIZE		STANDARD MOLD			STD. IPS TUBE (a) PLUG CAT.No.	
		MOLD N°	PRICE KEY	CART. N°		
RUN	TAP				RUN	TAP
1/2"	1/2"	TT4-1313	4	200	TT4-2201	TT4-2207
3/4"	3/4"	TT4-1414	5	2-150	TT4-2201	TT4-2208
3/4"	1/2"	TT4-1413	4	250	TT4-2201	TT4-2208
1"	1"	TT4-1515	5	3-200	TT4-2203	TT4-2209
	3/4"	TT4-1514	5	2-250	TT4-2203	TT4-2208
	1/2"	TT4-1513	5	2-200	TT4-2203	TT4-2207
1 1/4"	1 1/4"	TT4-1616	5	3-250	TT4-2204	TT4-2210
	1"	TT4-1615	5	3-250	TT4-2204	TT4-2209
	3/4"	TT4-1614	5	3-200	TT4-2204	TT4-2208
	1/2"	TT4-1613	5	2-250	TT4-2204	TT4-2207
1 1/2"	1 1/2"	TT4-1717	10* (b)	5-250	TT4-2205	TT4-2211
	1 1/4"	TT4-1716	10* (b)	5-250	TT4-2205	TT4-2210
	1"	TT4-1715	10* (b)	5-250	TT4-2205	TT4-2209
	3/4"	TT4-1714	6	4-250	TT4-2205	TT4-2208
	1/2"	TT4-1713	6	4-250	TT4-2205	TT4-2207
2"	2"	TT4-1818	10* (b)	6-250	TT4-2206	TT4-2212
	1 1/2"	TT4-1817	10* (b)	6-250	TT4-2206	TT4-2211
	1 1/4"	TT4-1816	10* (b)	6-250	TT4-2206	TT4-2210
	1"	TT4-1815	10* (b)	6-250	TT4-2206	TT4-2209
	3/4"	TT4-1814	10* (b)	5-250	TT4-2206	TT4-2208
	1/2"	TT4-1813	10* (b)	5-250	TT4-2206	TT4-2207

(a) Two graphite plugs are required: one for the run and one for the tap. No retainer rings required.

* Requires additional mold M182.

(b) Sold complete with frame. If graphite part only is required, add suffix "G" to Cat. N°.

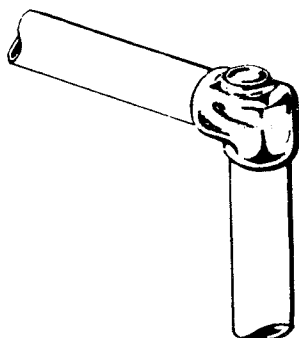
ORDER J - WELD CLAMPS SEPARATELY

J - WELD

Tube to Tube

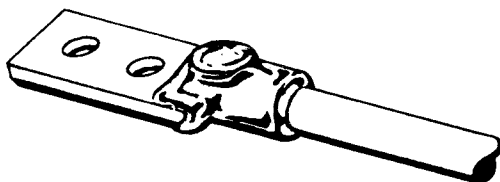
TYPE TT5 VERTICAL RIGHT ANGLE

To connect a horizontal copper tube to the end of a vertical copper tube at a right angle, the mold Type TT5 is recommended. The J - Weld connection is completely moisture proof, will not corrode or loosen, and will last the life of the conductors. Tube range 1/2" thru 2" standar IPS.



TYPE TB1 Tube to NEMA ** Lug-Horizontal

To fit a horizontal copper tube to a copper bar stock terminal, the mold Type TB1 is recommended. The J - Weld connection is a copper fusion weld that assures a cool running, high conductivity joint. Copper tube range 1/2" thru 2" standard IPS. Lugs sizes 6 x 40mm thru 10 x 80mm. Refer to page 43 for other shanpes and sizes.



STD. IPS TUBE SIZE	STANDARD I.P.S. TUBULAR BUS				
	STANDARD MOLD			STD.IPS (a) TUBE PLUG CAT.No.	
	MOLD N°	PRICE KEY	CART. N°	CAT.No.	
				RUN	TAP*
1/2"	TT5-1313	4	200	TT5-2207	TT5-2207
3/4"	TT5-1414	5	2-150	TT5-2208	TT5-2208
1"	TT5-1515	5	2-250	TT5-2209	TT5-2209
1 1/4"	TT5-1616	5	3-250	TT5-2210	TT5-2210
1 1/2"	TT5-1717	6	4-250	TT5-2211	TT5-2211
2"	TT5-1818	10* (b)	6-250	TT5-2212	TT5-2212

(a) Two graphite plugs are required: one for run and one for tap. No retainer rings necessary.

* Requires additional mold M182.

(b) Sold complete with frame. If graphite part only is required, add suffix "G" to Cat. N°

STANDARD I.P.S. TUBELAR BUS							
STD. IPS TUBE SIZE	LUG SIZE	N° HOLES	LUG + CAT. N°	STANDARD MOLD			STD.IPS TUBE PLUG CAT.No.
				MOLD N°	PRICE KEY	CART. N°	
1/2"	6 x 40	2	TA- 640-2	TB1- 13640	4	200	TB1-2207
3/4"	6 x 40	2	TA- 640-2	TB1- 14640	4	250	TB1-2208
1"	10 x 40	2	TA-1040-2	TB1-151040	5	2-150	TB1-2209
	6 x 80	4	TA- 680-4N	TB1- 15680	5	2-200	TB1-2209
1 1/4"	10 x 50	2	TA-1050-2	TB1-161050	5	2-250	TB1-2210
	6 x 80	4	TA-680-4N	TB1- 16680	5	2-250	TB1-2210
1 1/2"	10 x 80	2	TA-1080-2	TB1-171080	6	3-250	TB1-2211
	10 x 80	4	TA-1080-4N	TB1-171080	6	3-250	TB1-2211
2"	10 x 80	2	TA-1080-2	TB1-181080	6	4-250	TB1-2212
	10 x 80	4	TA-1080-4N	TB1-181080	6	4-250	TB1-2212

(a) One graphite plug is required for each weld. No retainer rings are necessary.

* Table lists straight lugs. For other lug styles (45° & offset) see pages 44-46.

** A standard set by the National Electrical Manufacturers Association.

ORDER J - WELD CLAMPS SEPARATELY

TYPE R1, R2 & R3

Horizontal Cable Termination and Thru Cable to Rail

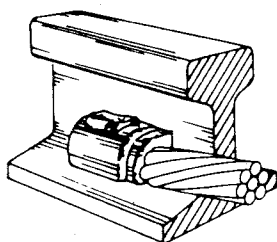
To terminate a horizontal cable to the foot of a rail, Jiwoong mold Type R1 is recommended. The mold Type R2 is recommended for connecting a horizontal thru cable to the foot of a rail. Cable range 50 to 500 mm² to rail sizes 2 lbs. and larger. Jiwoong Thermoweld connectors can be made to normal or inverted rail. In all cases the use of sealing compound is required to eliminate metal leakage.

To order: Specify Catalog number, rail size, type or section number and position, if inverted.

TYPE R1

CABLES (a) mm ²	STANDARD MOLD		
	MOLD	PRICE KEY	CART. (b) N°
50	R1- 50	7	115
70	R1- 70	7	115
90	R1- 90	7	150
120	R1-120	7	200
150	R1-150	7	250
185	R1-185	7	250
240	R1-240	6	2-150
400	R1-400	6	2-200
500	R1-500	6	2-200

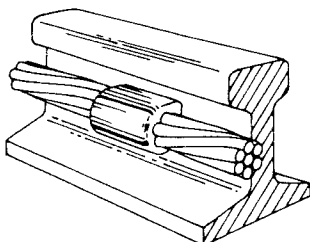
R1



TYPE R2

CABLES (a) mm ²	STANDARD MOLD		
	MOLD	PRICE KEY	CART. (b) N°
50	R2- 50	4	150
70	R2- 70	4	150
90	R2- 90	4	200
120	R2-120	4	250
150	R2-150	5	2-150
185	R2-185	5	2-150
240	R2-240	5	2-200
400	R2-400	5	2-250
500	R2-500	5	2-250

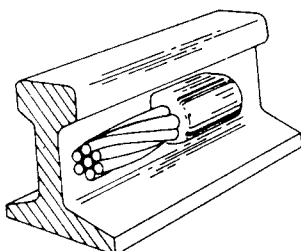
R2



TYPE R3

CABLES (a) mm ²	STANDARD MOLD		
	MOLD	PRICE KEY	CART. (b) N°
50	R3- 50	4	150
70	R3- 70	4	150
90	R3- 90	4	200
120	R3- 120	4	250
150	R3- 150	5	2-150
185	R3- 185	5	2-150
240	R3- 240	5	2-200
400	R3- 400	5	2-250
500	R3- 500	5	2-250

R3

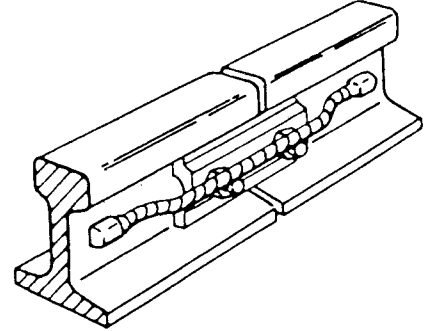


J - WELD

Rail Connections

TYPE R-LX FOOT OF RAIL

Burndy Type R-LX copper cable rail bonds are recommended for rail sections of 60 pounds and lighter where double flanged wheels are used. Bond catalog number includes a jumper complete with formed terminals on each end, and also the necessary cartridges.



CONCENTRIC STRANDED CONDUCTORS

CABLE mm ²	BOND	STANDARD MOLD		SLEEVE	HAMMER	PRICE
	CAT.	MOLD WITH	CART.	CAT.	DIE-CAT	KEY
	N°	FRAME-CAT	N°			
70	R- 70LX	RLX- 70	45	A206	A312	3(a)
95	R- 95LX	RLX- 90	65	A241	A313	3(a)
120	R-120LX	RLX-120	65	A244	A357	3(a)
150	R-150LX	RLX-150	90	A243	A358	4(a)
240	R-240LX	RLX-240	150	A245	A360	4(a)

a) Sold complete with frame.
If graphite portion only is required, add
suffix "G" to Catalog N°

FACTORY MADE BONDS—HOW TO ORDER

1. **Bonds** — Specify catalog number and length. Replace letter "X" in Bond Catalog Number by required jumper length in inches. Length must be 6" longer than rail splice bar. Two cartridges are included with each bond.
2. **Molds** — Specify mold with frame catalog number. Supplied in pairs right and left hand.
3. **Extra Molds** — Specify mold with frame catalog number and add suffix "G" to catalog number. Extra molds supplied in pairs right and left hand.

MAKING YOUR OWN BONDS—HOW TO ORDER

1. **Molds, Sleeves and Hammer Die** — Specify mold with frame, sleeves and hammer die by catalog number. Molds with frames sold in pairs, right and left hand.
2. **Cartridges** — Specify cartridge catalog number by size required.
3. **Extra Molds** — Specify mold with frame catalog number and add suffix "G" to catalog number. Extra molds supplied in pairs, right and left hand.

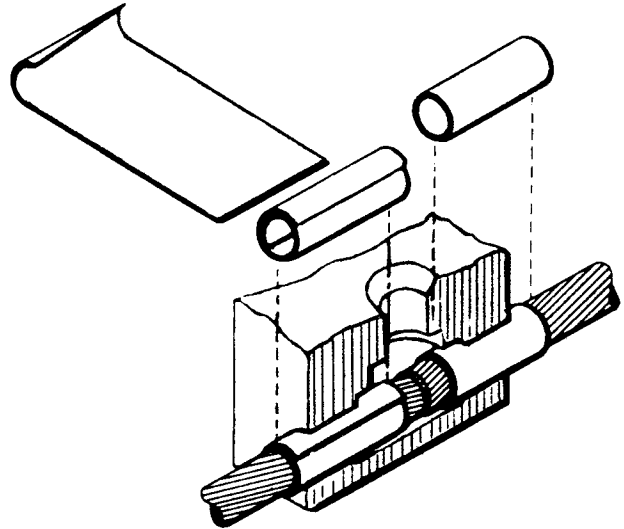
ORDER J - WELD CLAMPS SEPARATELY

J - WELD

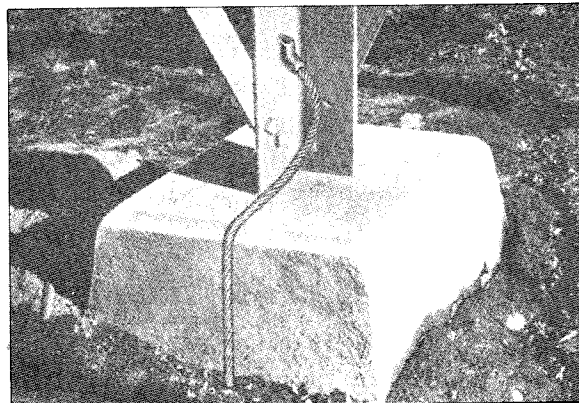
Reducing Adapters

TYPE **A 329** (SHIM-STOCK) Adaptor Sleeve

To use a larger mold with a smaller cable. It must be wrapped around the cable to increase its diameter up to the mold size.



CS3 mold is used for welding vertical cables to steel, either flat or pipe.



ORDER J - WELD CLAMPS SEPARATELY

J - WELD

GENERAL INSTRUCTIONS

By carefully these J - Weld instructions, a perfect weld can be made on any copper conductor or steel structure.

MOLD SELECTION

After the application is determined; cable to cable, cable to ground rod, etc., the correct mold type for the application and specific cable sizes is selected.

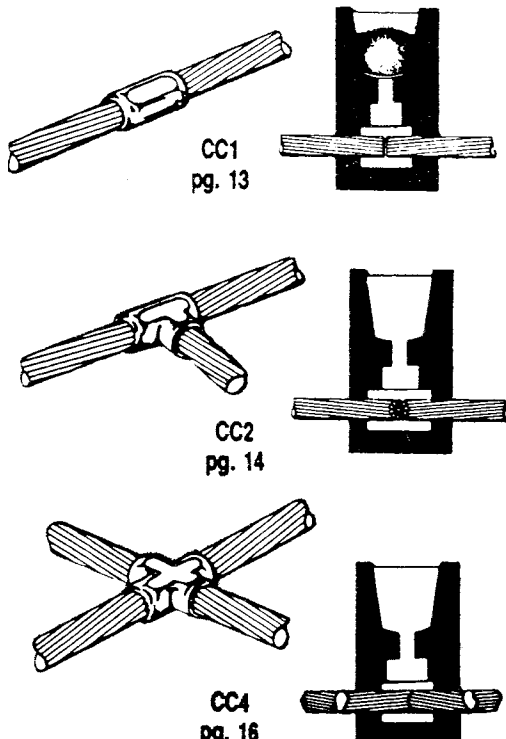
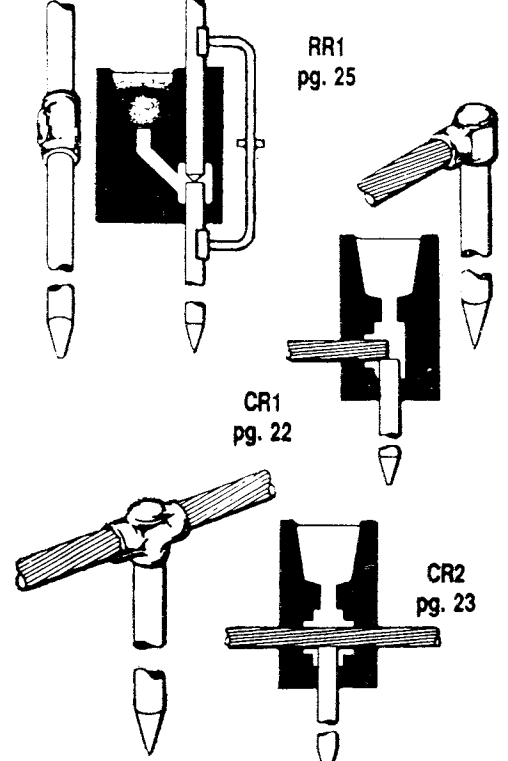
PREPARATIONS OF CABLE

It is vitally important to clean and dry cable and cable ends before making a weld. Corroded cable must be carefully wire brushed. Clean greasy or oil filled cables with a quick drying solvent. Wet cables can be dried with a hand operated Butane torch. Straighten bent or out of round cable for they will prevent closing of mold and cause poor welds.

For preparation of ground rod, steel surface and bus refer to "specific instructions".

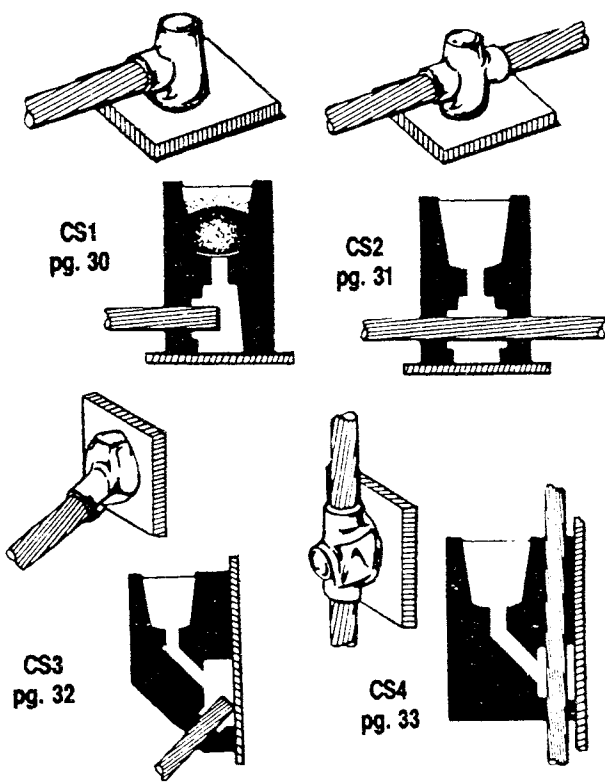
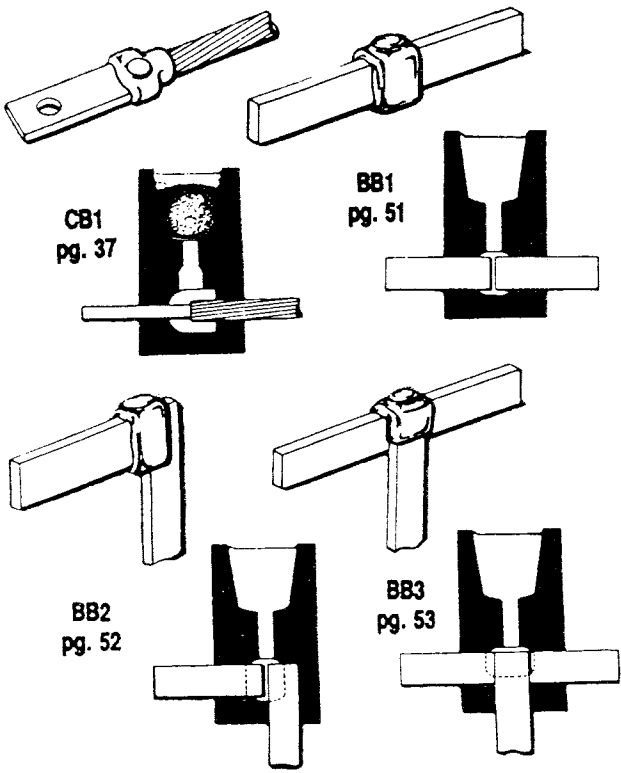
WELDING PROCEDURE

Insert the four prongs of the J - Weld clamp into the four holes in the mold. Insert the clamp spring pins into the corresponding two holes on the side of the mold. Open mold by spreading J - Weld clamp apart.

Applications	Cable to Cable	Cable to Ground Rod
Typical J - Weld Connections	 CC1 pg. 13 CC2 pg. 14 CC4 pg. 16	 RR1 pg. 25 CR1 pg. 22 CR2 pg. 23
Specific Instructions	Butt cables together under center of tap hole. On CC2 Welds, cable run 240mm². and over must be cut if tap cable has 50% or more current carrying capacity than run cable.	On standard pointed ground rod, drilled, tapped or "mushroomed" rods must have tops cut off and filed smooth. Support mold with "C" clamp, or locking pliers on rod under mold. When splicing 1" rod with mold RR1, cut top rod at 45° angle. Place in welder with angle side of rod toward tap hole.

How to use:

1. Use dedicated B-106 or B-107 clamp to fix and hold the mold.
2. Dry and clean mold and cables before placing them.
3. Check to see if cables are correctly centered in the weld chamber.
4. Place one metal disk at the bottom of the reaction chamber. Cut the envelope corner and pour the welding powder slowly over the disk.
5. Remove from the envelope the ignition powder cartridge and pour its contents over the welding powder spreading it uniformly and leaking some portion at the mold border.
6. Close the mold lid, hold it by the clamp and place the lighter laterally to the lid opening and pull the trigger.
7. The reaction will start and after a few seconds the connection is ready. Open the mold, clean out the slag.

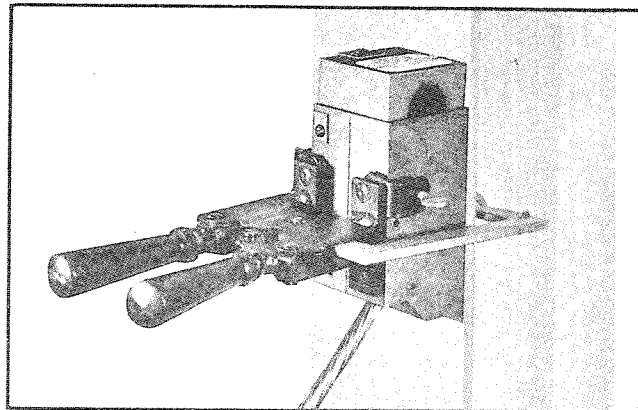
Cable to Steel Surface	Cable to Lugs-Bar-Tube
 CS1 pg. 30 CS2 pg. 31 CS3 pg. 32 CS4 pg. 33	 CB1 pg. 37 BB1 pg. 51 BB2 pg. 52 BB3 pg. 53
Remove all paint, scale, rust, etc. Clean galvanized steel with Emery Cloth — do not grind or file. On CS1 weld, insert cable to center of tap hole when welding to pipe up to 2 1/2". On larger pipes, cable should be flush with far side of tap hole.	Butt cable against lug under center of tap hole. Place bus under center of tap hole with 1/8" gap for 1/8" bus, and 3/4" gap for 3/16" and larger buses. Note: Use "C" clamp on base of mold when using three or more 250 cartridges.

J - WELD

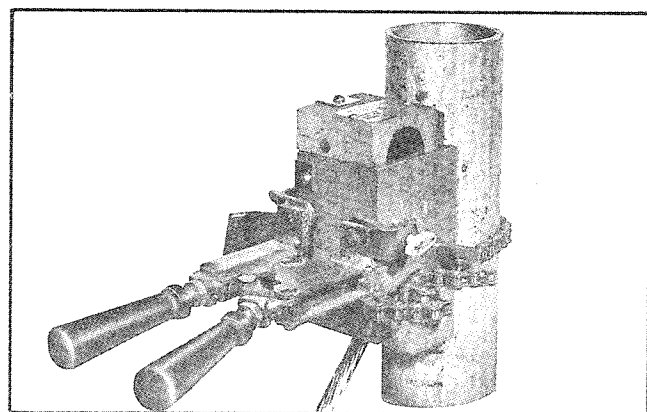
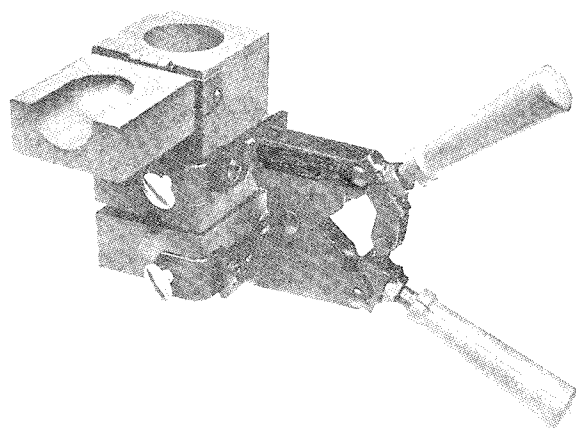
Materials and Tools

J - WELD MOLDS & HANDLE CLAMPS

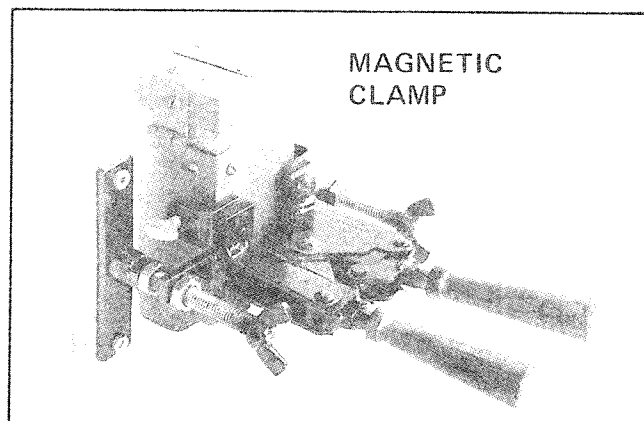
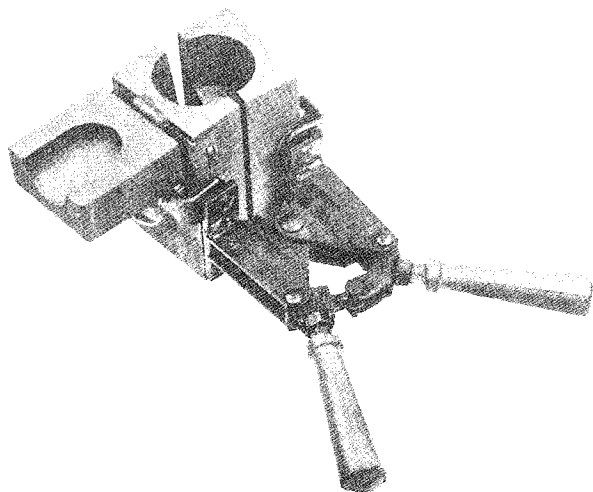
When making a Connection, an accurate control of the Process is accomplished by using a semi-permanent graphite mold. Control is exercised over the direction and speed of the molten weld metal flow and final shape. The graphite used in a J - Weld mold is a high temperature type that lasts for an average of 50 or more J - Weld connections under normal usage.



Vertical Surface Mold Support Clamp

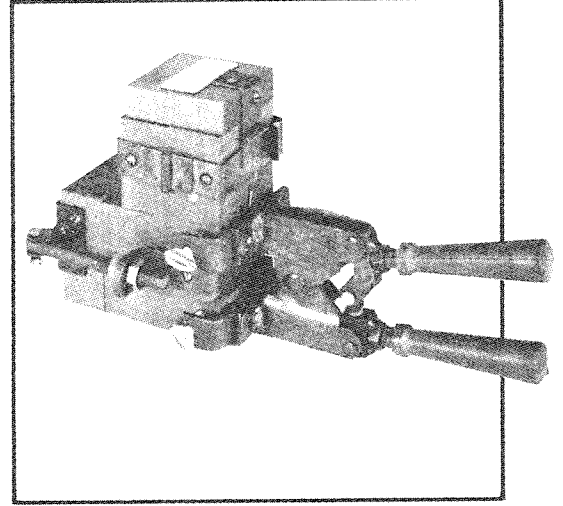
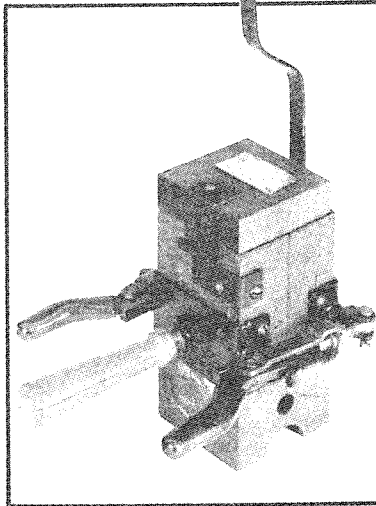
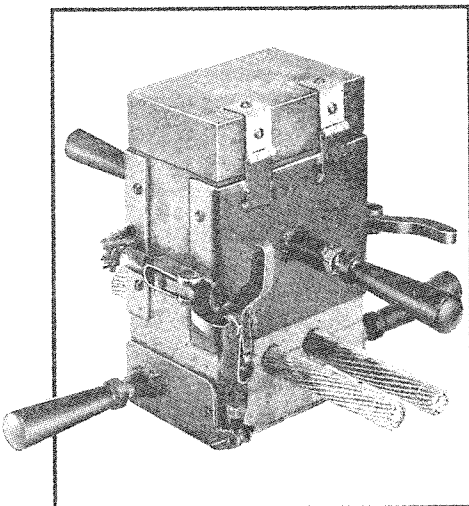
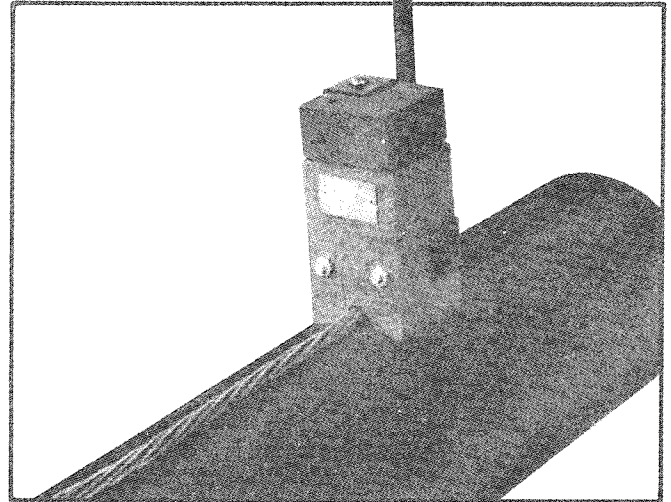
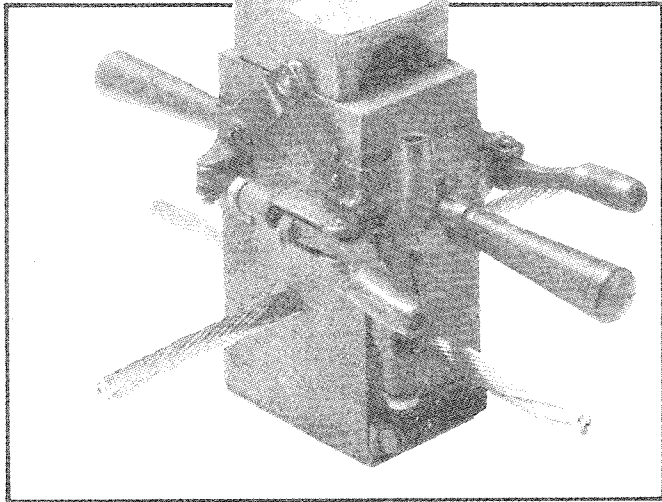
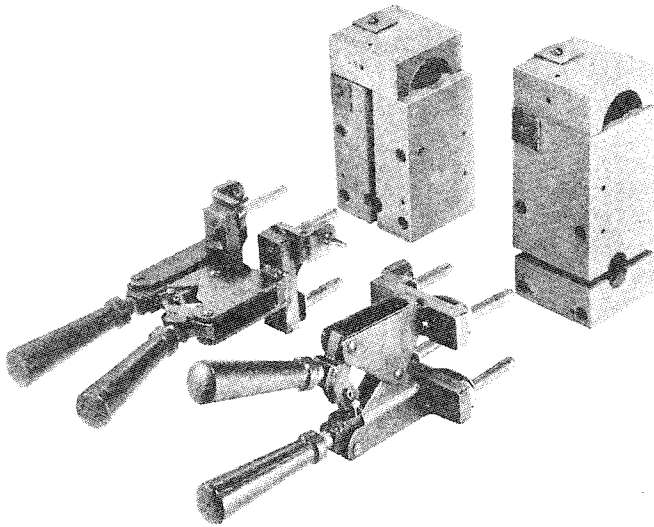


Combination E-Z CHANGE Handle Clamp and Pipe Clamp



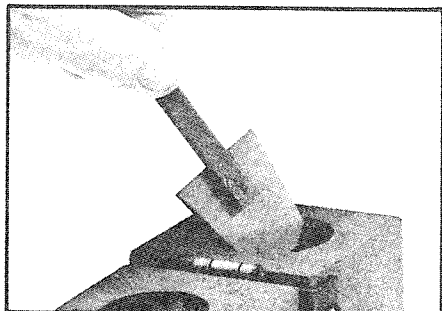
J - WELD

Molds & Handle Clamps

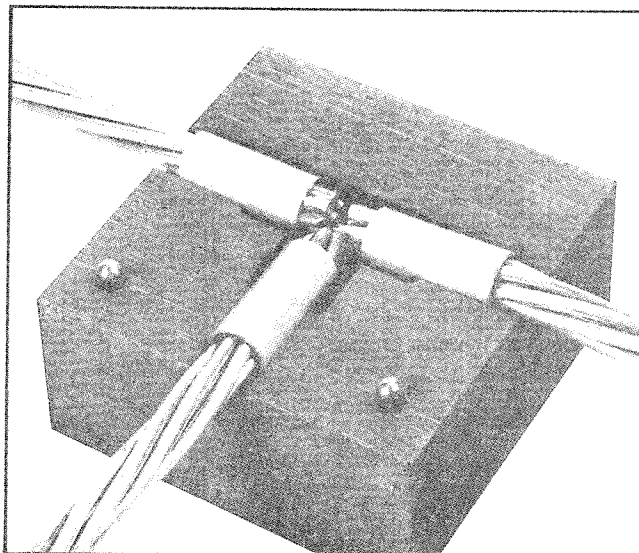


J - WELD

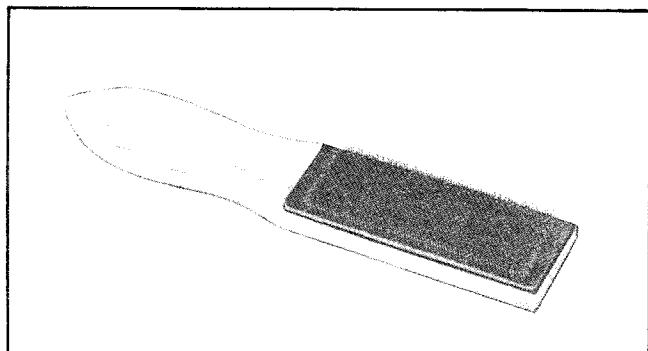
Materials and Tools



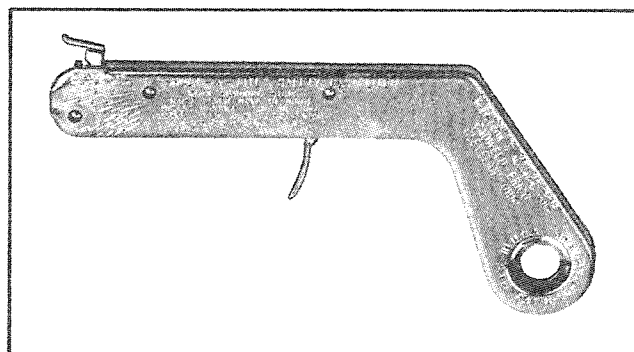
MOLD CLEANER



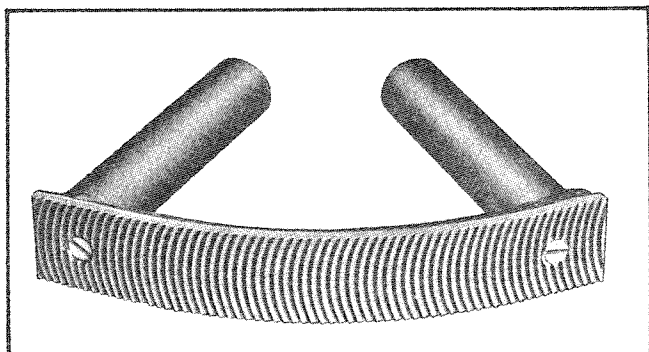
ADAPTER SLEEVE



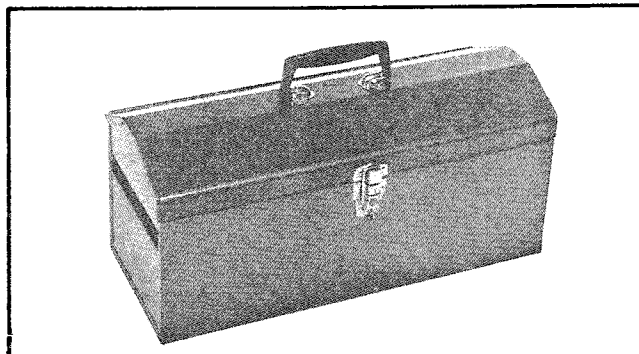
BRUSH



FLINT IGNITER



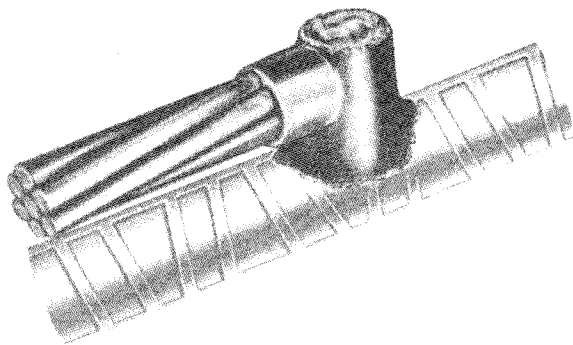
FILE



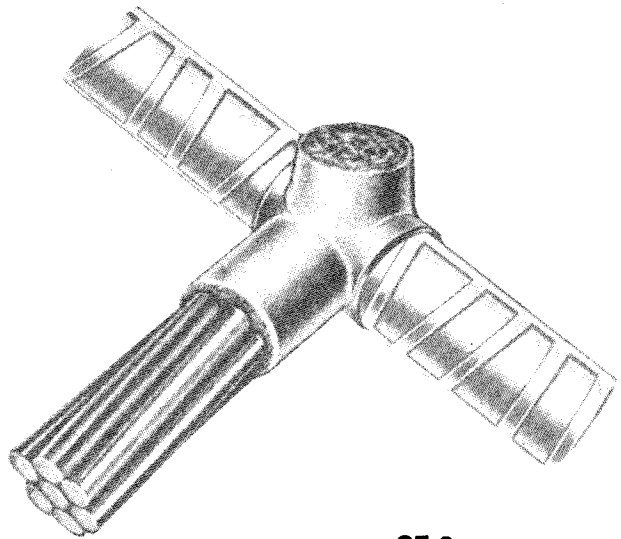
TOOL BOX

J - WELD

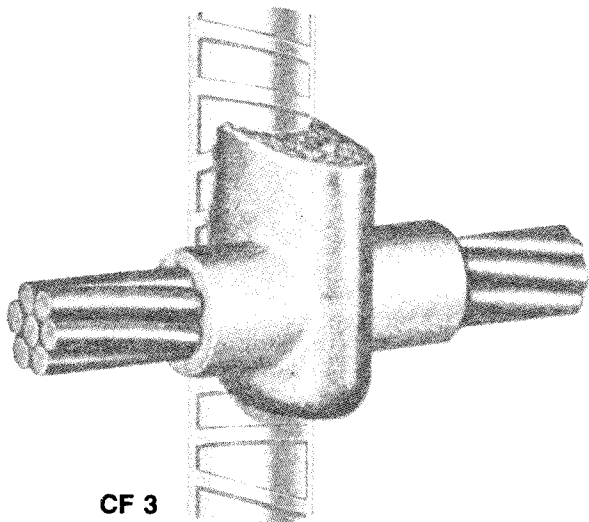
Cable to Reinforcing Rods



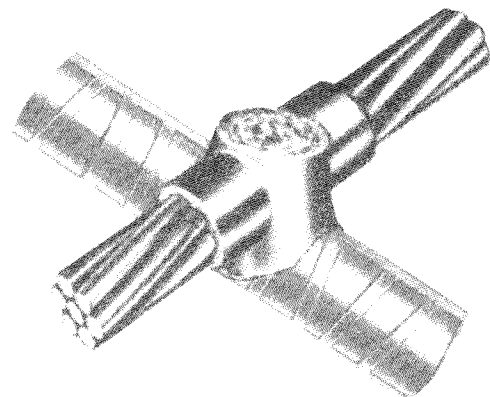
CF 1



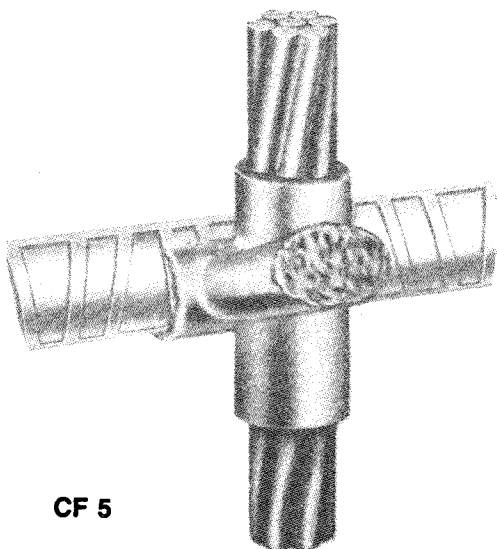
CF 2



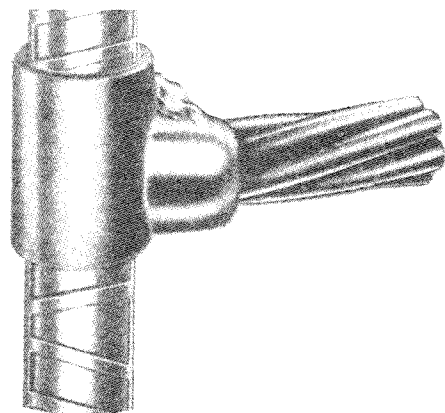
CF 3



CF 4



CF 5

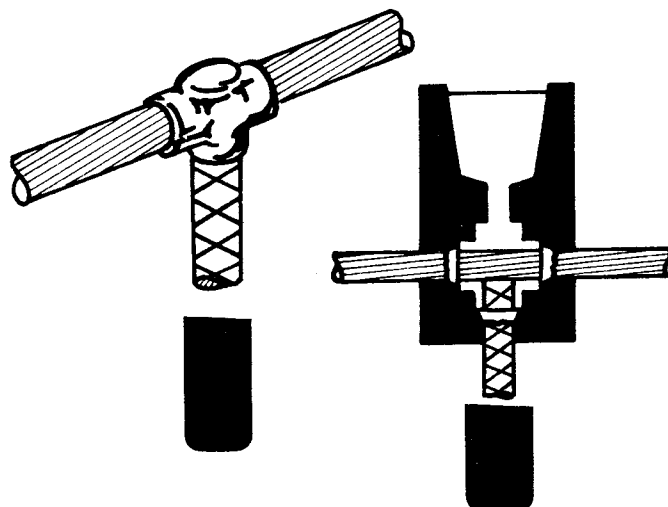
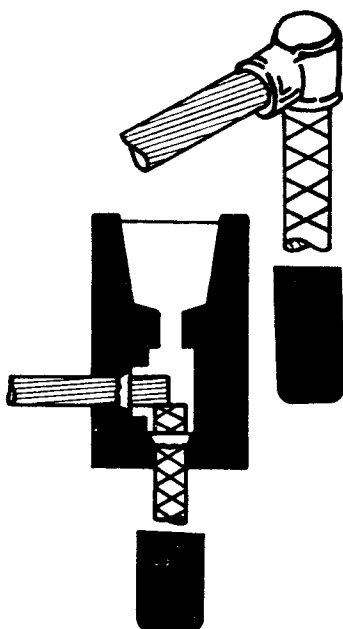
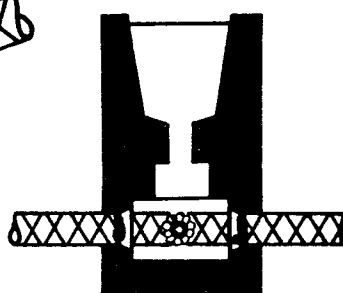
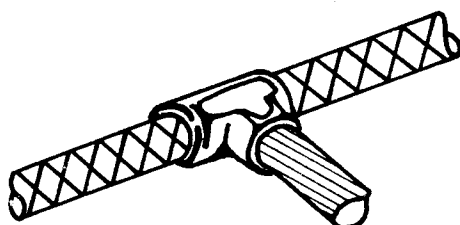


CF 6

J - WELD

Cable to Reinforcing Rods

The "CF" type connection is used to connect a grounding cable to a reinforcing rod at the building structure. Due to the rod irregular surface, there is need to use the sealing compound "Duxseal" at the welding chamber ends, to prevent hot metal leakage. (See fig.)



Duxseal® is a trademark of Johns-Manville.

ORDER J - WELD CLAMPS SEPARATELY

J - WELD

Cable to Reinforcing Rods

TYPE CF1

REBAR SIZE FERRO	CABLE SIZE mm ²	STANDARD MOLD		
		MOLD N°	PRICE KEY	CARTRIDGE N°
• 3 3/8"	16	CF1- 316	4	25
	25	CF1- 325	4	32
	35	CF1- 335	4	45
	50	CF1- 350	4	65
	70	CF1- 370	4	90
	95	CF1- 395	4	90
• 4 1/2"	16	CF1- 416	4	25
	25	CF1- 425	4	32
	35	CF1- 435	4	45
	50	CF1- 450	4	90
	70	CF1- 470	4	90
	95	CF1- 495	4	115
• 5 5/8"	16	CF1- 516	4	25
	25	CF1- 525	4	32
	35	CF1- 535	4	45
	50	CF1- 550	4	90
	70	CF1- 570	4	90
	95	CF1- 595	4	115
• 6 3/4"	16	CF1- 616	4	25
	25	CF1- 625	4	32
	35	CF1- 635	4	45
	50	CF1- 650	4	90
	70	CF1- 670	4	90
	95	CF1- 695	4	115
• 7 7/8"	25	CF1- 725	4	32
	35	CF1- 735	4	45
	50	CF1- 750	7	90
	70	CF1- 770	7	90
	95	CF1- 795	7	115
• 8 1"	35	CF1- 835	4	45
	50	CF1- 850	7	90
	70	CF1- 870	7	90
	95	CF1- 895	7	115
• 9 1 1/8"	35	CF1- 935	4	45
	50	CF1- 950	7	90
	70	CF1- 970	7	90
	95	CF1- 995	7	115
• 10 1 1/4"	35	CF1-1035	4	45
	50	CF1-1050	7	90
	70	CF1-1070	7	90
	95	CF1-1095	7	115
• 11 1 3/8"	35	CF1-1135	4	45
	50	CF1-1150	7	90
	70	CF1-1170	7	90
	95	CF1-1195	7	115
• 14 1 3/4"	50	CF1-1450	7	90
	70	CF1-1470	7	90
	95	CF1-1495	7	115
• 18 2 1/4"	50	CF1-1850	7	90
	70	CF1-1870	7	90
	95	CF1-1895	7	115

TYPE CF2

REBAR SIZE FERRO	CABLE SIZE mm ²	STANDARD MOLD		
		MOLD N°	PRICE KEY	CARTRIDGE N°
• 3 3/8"	16	CF2- 316	4	45
	25	CF2- 325	4	45
	35	CF2- 335	4	65
	50	CF2- 350	4	90
	70	CF2- 370	4	90
	95	CF2- 395	4	115
• 4 1/2"	16	CF2- 416	4	45
	25	CF2- 425	4	45
	35	CF2- 435	4	65
	50	CF2- 450	4	90
	70	CF2- 470	4	90
	95	CF2- 470	4	115
• 5 5/8"	16	CF2- 516	4	90
	25	CF2- 525	4	90
	35	CF2- 535	4	90
	50	CF2- 550	4	115
	70	CF2- 570	4	115
	95	CF2- 595	4	150
• 6 3/4"	16	CF2- 616	4	90
	25	CF2- 625	4	90
	35	CF2- 635	4	90
	50	CF2- 650	4	115
	70	CF2- 670	4	115
	95	CF2- 695	4	150

ORDER J - WELD CLAMPS SEPARATELY

J - WELD

Cable to Reinforcing Rods

TYPE CF3

REBAR SIZE FERRO	CABLE SIZE mm ²	STANDARD MOLD		
		MOLD N°	PRICE KEY	CARTRIDGE N°
• 3 3/8"	16	CF3- 316	7	90
	25	CF3- 325	7	90
	35	CF3- 335	7	90
	50	CF3- 350	7	115
	70	CF3- 370	7	115
	95	CF3- 395	7	150
• 4 1/2"	16	CF3- 416	7	90
	25	CF3- 425	7	90
	35	CF3- 435	7	90
	50	CF3- 450	7	115
	70	CF3- 470	7	115
	95	CF3- 495	7	150
• 5 5/8"	16	CF3- 516	7	90
	25	CF3- 525	7	90
	35	CF3- 535	7	90
	50	CF3- 550	7	115
	70	CF3- 570	7	115
	95	CF3- 595	7	150
• 6 3/4"	16	CF3- 616	7	90
	25	CF3- 625	7	90
	35	CF3- 635	7	90
	50	CF3- 650	7	115
	70	CF3- 670	7	115
	95	CF3- 695	7	150
• 7 7/8"	25	CF3- 725	7	90
	35	CF3- 735	7	90
	50	CF3- 750	7	115
	70	CF3- 770	7	115
	95	CF3- 795	7	150
• 8 1"	35	CF3- 835	8	90
	50	CF3- 850	8	115
	70	CF3- 870	8	115
	95	CF3- 895	8	150
• 9 1 1/8"	35	CF3- 935	8	90
	50	CF3- 950	8	115
	70	CF3- 970	8	115
	95	CF3- 995	8	150
• 10 1 1/4"	35	CF3-1035	8	90
	50	CF3-1050	8	115
	70	CF3-1070	8	115
	95	CF3-1095	8	150
• 11 1 3/8"	35	CF3-1135	8	90
	50	CF3-1150	8	115
	70	CF3-1170	8	115
	95	CF3-1195	8	150
• 14 1 3/4"	50	CF3-1450	8	115
	70	CF3-1470	8	115
	95	CF3-1495	8	150
• 18 2 1/4"	50	CF3-1850	8	115
	70	CF3-1870	8	115
	95	CF3-1895	8	150

TYPE CF4

REBAR SIZE FERRO	CABLE SIZE mm ²	STANDARD MOLD		
		MOLD N°	PRICE KEY	CARTRIDGE N°
• 3 3/8"	16	CF4- 316	4	65
	25	CF4- 325	4	65
	35	CF4- 335	4	90
	50	CF4- 350	7	115
	70	CF4- 370	7	115
	95	CF4- 395	7	150
• 4 1/2"	16	CF4- 416	4	65
	25	CF4- 425	4	65
	35	CF4- 435	4	90
	50	CF4- 450	7	115
	70	CF4- 470	7	115
	95	CF4- 495	7	150
• 5 5/8"	16	CF4- 516	4	65
	25	CF4- 525	4	65
	35	CF4- 535	4	90
	50	CF4- 550	7	115
	70	CF4- 570	7	115
	95	CF4- 595	7	150
• 6 3/4"	16	CF4- 616	7	65
	25	CF4- 625	7	65
	35	CF4- 635	7	90
	50	CF4- 650	7	115
	70	CF4- 670	7	115
	95	CF4- 695	7	150
• 7 7/8"	25	CF4- 725	7	65
	35	CF4- 735	7	90
	50	CF4- 750	7	115
	70	CF4- 770	7	115
	95	CF4- 795	7	150
• 8 1"	35	CF4- 835	7	90
	50	CF4- 850	7	115
	70	CF4- 870	7	115
	95	CF4- 895	7	150
• 9 1 1/8"	35	CF4- 935	7	90
	50	CF4- 950	7	115
	70	CF4- 970	7	115
	95	CF4- 995	7	150
• 10 1 1/4"	35	CF4-1035	7	90
	50	CF4-1050	7	115
	70	CF4-1070	7	115
	95	CF4-1095	7	150
• 11 1 3/8"	35	CF4-1135	7	90
	50	CF4-1150	7	115
	70	CF4-1170	7	115
	95	CF4-1195	7	150
• 14 1 3/4"	50	CF4-1450	7	115
	70	CF4-1470	7	115
	95	CF4-1495	7	150
• 18 2 1/4"	50	CF4-1850	7	115
	70	CF4-1870	7	115
	95	CF4-1895	7	150

ORDER J - WELD CLAMPS SEPARATELY

J - WELD

Cable to Reinforcing Rods

TYPE CF5

REBAR SIZE FERRO	CABLE SIZE mm ²	STANDARD MOLD		
		MOLD N°	PRICE KEY	CARTRIDGE N°
• 3 3/8"	16	CF5- 316	7	90
	25	CF5- 325	7	90
	35	CF5- 335	7	115
	50	CF5- 350	7	200
	70	CF5- 370	7	200
	95	CF5- 395	7	250
• 4 1/2"	16	CF5- 416	7	90
	25	CF5- 425	7	90
	35	CF5- 435	7	115
	50	CF5- 450	7	200
	70	CF5- 470	7	200
• 5 5/8"	16	CF5- 516	7	90
	25	CF5- 525	7	90
	35	CF5- 535	7	115
	50	CF5- 550	7	200
	70	CF5- 570	7	200
• 6 3/4"	95	CF5- 595	7	250
	25	CF5- 625	7	90
	35	CF5- 635	7	90
	50	CF5- 650	7	115
	70	CF5- 670	7	200
• 7 7/8"	95	CF5- 695	7	250
	25	CF5- 725	7	90
	35	CF5- 735	7	115
	50	CF5- 750	7	200
	70	CF5- 770	7	200
• 8 1"	95	CF5- 795	7	250
	35	CF5- 835	7	115
	50	CF5- 850	7	200
	70	CF5- 870	7	200
	95	CF5- 895	7	250
• 9 1 1/8"	35	CF5- 935	7	115
	50	CF5- 950	7	200
	70	CF5- 970	7	200
	95	CF5- 995	7	250
• 10 1 1/4"	35	CF5-1035	8	115
	50	CF5-1050	8	200
	70	CF5-1070	8	200
	95	CF5-1095	8	250
• 11 1 3/8"	35	CF5-1135	8	115
	50	CF5-1150	8	200
	70	CF5-1170	8	200
	95	CF5-1195	8	250
• 14 1 3/4"	50	CF5-1450	8	200
	70	CF5-1470	8	200
	95	CF5-1495	8	250
• 18 2 1/4"	50	CF5-1850	8	200
	70	CF5-1870	8	200
	95	CF5-1895	8	250

TYPE CF6

REBAR SIZE FERRO	CABLE SIZE mm ²	STANDARD MOLD		
		MOLD N°	PRICE KEY	CARTRIDGE N°
• 3 3/8"	16	CF6- 316	4	45
	25	CF6- 325	4	65
	35	CF6- 335	4	65
	50	CF6- 350	4	115
	70	CF6- 370	4	115
	95	CF6- 395	4	150
• 4 1/2"	16	CF6- 416	4	45
	25	CF6- 425	4	65
	35	CF6- 435	4	65
	50	CF6- 450	4	115
	70	CF6- 470	4	115
• 5 5/8"	95	CF6- 495	4	150
	16	CF6- 516	4	45
	25	CF6- 525	4	65
	35	CF6- 535	4	65
	50	CF6- 550	4	115
• 6 3/4"	70	CF6- 570	4	115
	95	CF6- 595	4	150
	16	CF6- 616	4	45
	25	CF6- 625	4	65
	35	CF6- 635	4	65
• 7 7/8"	50	CF6- 650	4	115
	70	CF6- 670	4	115
	95	CF6- 695	4	150
	25	CF6- 725	4	65
	35	CF6- 735	4	65
• 8 1"	50	CF6- 750	4	115
	70	CF6- 770	4	115
	95	CF6- 795	4	150
	35	CF6- 835	4	65
	50	CF6- 850	4	115
• 9 1 1/8"	70	CF6- 870	4	115
	95	CF6- 895	4	150
	35	CF6- 935	5	65
	50	CF6- 950	5	115
• 10 1 1/4"	70	CF6- 970	5	115
	95	CF6- 995	5	150
	35	CF6-1035	5	65
	50	CF6-1050	5	115
• 11 1 3/8"	70	CF6-1070	5	115
	95	CF6-1095	5	150
	35	CF6-1135	5	65
	50	CF6-1150	5	115
• 14 1 3/4"	70	CF6-1170	5	115
	95	CF6-1195	5	150
	50	CF6-1450	6	115
	70	CF6-1470	6	115
• 18 2 1/4"	95	CF6-1495	6	150
	50	CF6-1850	6	115
	70	CF6-1870	6	115
	95	CF6-1895	6	150

ORDER J - WELD CLAMPS SEPARATELY

Physical Properties of Hard Drawn COPPER Tube

TUBE SIZE IPS	TUBE DIAMETER mm		WALL THICKNESS mm	SECTION		WEIGHT Kg	MICROHMS RESISTANCE
	OUTSIDE	INSIDE		MCM	mm ²		
1/2"	21,33	15,87	2,73	315	159,44	1,423	110,24
3/4"	26,67	20,88	2,89	426,8	215,75	1,934	81,33
1"	33,40	26,97	3,21	601,4	304,25	2,723	57,74
1 1/4"	42,16	34,75	3,71	884,2	447,98	3,988	39,27
1 1/2"	48,26	40,64	3,81	1.050	531,77	4,747	33,07
2"	60,32	52,37	3,97	1.389	702,38	6,264	25,00
2 1/2"	73,02	63,50	4,76	2.016	1020,24	9,106	17,22
3"	88,90	77,77	5,56	2.874	1454,90	12,975	12,08
3 1/2"	101,60	88,90	6,35	3.750	1899,19	16,933	9,26
4"	114,30	101,60	6,35	4.250	2152,41	19,200	8,17
4 1/2"	127,00	114,30	6,35	4.750	2405,64	21,457	7,31
5"	141,30	128,60	6,35	5.313	2690,77	24,120	6,54
6"	168,27	155,57	6,35	6.375	3228,52	28,793	5,45

TUBE SIZE IPS	MOMENT OF INERTIA I (cm) 4	RESISTANCE MOMENT S (cm) 3	RADIUS OF INERTIA R mm	* * ELASTIC LIMIT (PER TUBE) Kg	* * * BREAKING STRENGTH (PER TUBE) Kg	PERMISSIBLE VARIATION + AND - mm
1/2"	0,7044	0,660	6,65	1.795	4.488	0,0762
3/4"	1,5497	1,162	8,47	2.433	6.083	0,0889
1"	3,5099	2,102	10,73	3.428	8.569	0,1016
1 1/4"	8,3464	3,959	13,66	5.039	12.601	0,1143
1 1/2"	13,2300	5,483	15,77	5.982	14.964	0,1270
2"	28,0478	9,300	19,97	7.915	19.790	0,1473
2 1/2"	59,7107	16,355	24,19	11.490	28.723	0,1701
3"	126,9754	28,565	29,54	16.384	40.955	0,2209
3 1/2"	216,3400	42,586	33,76	21.374	53.434	0,2540
4"	314,6165	55,051	38,23	24.227	60.556	0,2540
4 1/2"	438,9315	69,123	42,72	27.075	67.677	0,3175
5"	613,8928	86,892	47,78	30.287	75.706	0,3556
6"	1060,2868	126,000	57,30	36.338	90.856	0,4064

* Conductivity of 98% I. A. C. S. at 20° C or 68° F.

** Elastic limit of 11,260 kg/mm²

*** Tensile Strength of 28,140 kg/mm²

ORDER J - WELD CLAMPS SEPARATELY

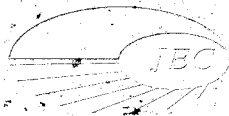
J - WELD

Physical Properties of Solid Wires and Copper Cables

COPPER CONDUCTORS-HARD DRAWN AND MEDIUM HARD

CLASS 1A-SOLID CONDUCTOR				CLASS 2A					CLASS 3A				
SECTION	NOMINAL	MAXIMUM ELECTRICAL		STRANDING		DIAMETER	MAXIMUM ELECTRICAL		STRANDING			MAXIMUM ELECTRICAL	
	DIAMETER	RESISTANCE AT 20° C		STRANDS	DIAMETER		RESISTANCE AT 20° C		STRANDS	DIAMETER		RESISTANCE AT 20° C	
		(Ω/km)					(Ω/km)					(Ω/km)	
		MEDIUM	HARD			MEDIUM	HARD	MEDIUM			HARD		
	(mm)	HARD	DRAWN	N°	mm	mm	HARD	DRAWN	N°	mm	mm	HARD	DRAWN
4	2,24	4,62	4,62	—	—	—	—	—	—	—	—	—	—
6	2,80	2,95	2,97	—	—	—	—	—	—	—	—	—	—
10	3,55	1,84	1,85	7	1,36	4,08	1,82	1,83	—	—	—	—	—
16	4,50	1,14	1,15	7	1,70	5,10	1,17	1,18	—	—	—	—	—
25	5,60(A)	0,739	0,742	7	2,06	6,18	0,795	0,799	—	—	—	—	—
35	6,70(A)	0,516	0,519	7	2,50	7,50	0,538	0,541	—	—	—	—	—
50	8,00(A)	0,362	0,364	7	3,00	9,00	0,375	0,377	—	—	—	—	—
70	9,50(A)	0,254	0,255	7	3,45	10,35	0,283	0,284	19	2,12	10,60	0,276	0,278
95	10,9 (A)	0,193	0,194	7	4,12	12,36	0,199	0,200	19	2,50	12,50	0,198	0,199
120	—	—	—	19	2,90	14,50	0,148	0,149	37	2,06	14,42	0,150	0,151
150	—	—	—	19	3,25	16,25	0,118	0,118	37	2,24	15,68	0,127	0,128
185	—	—	—	19	3,55	17,75	0,0990	0,0995	37	2,50	17,50	0,102	0,102
240	—	—	—	19	4,00	20,00	0,0777	0,0782	37	2,90	20,30	0,0760	0,0764
300	—	—	—	19	4,50	22,50	0,0613	0,0616	37	3,25	22,75	0,0604	0,0607
400	—	—	—	37	3,75	26,25	0,0455	0,0457	61	2,90	26,10	0,0461	0,0463
500	—	—	—	37	4,12	28,84	0,0376	0,0378	61	3,25	29,25	0,0366	0,0368

ORDER J - WELD CLAMPS SEPARATELY



JIWOONG

Electric Co., Ltd.

HEAD OFFICE

2nd FLOOR, OSUNG BUILDING, 255-71,
YONGDU-DONG, DONGDAEMUN-KU,
SEOUL, KOREA
TEL: 822-9210224
FAX: 822-9210229, 9210223
E-mail: uz934@shinbiro.com

FACTORY

86-12, GOJAN-DONG, NAMDONG-KU,
INCHON, KOREA
TEL: 8232-4466443
FAX: 8232-4466446