ASIWELD

QUATEST 3
TCVN/JIS/ASTM

QUATEST 3
XX - YY

EXOTHERMIC WELDING
CATALOGUE

Head Office: 49 Pasteur, Dist. 1, HCMC, Vietnam — Tel: (84-28) 3829 4274 — Fax: (84-28) 3829 3012 — Website: www.quatest3.com.vn
Testing: No. 7, road No. 1, Bien Hoa 1 IZ, Dong Nai, Vietnam — Tel: (84-251) 383 6212 — Fax: (84-251) 383 6298 — E-mail: dh.cn@quatest3.com.vn
C5 lot, K1 road, Cat Lai IZ, Dist. 2, HCMC, Vietnam — Tel: (84-28) 3742 3160 — Fax: (84-28) 3829 3012 — E-mail: dh.cn@quatest3.com.vn

KT3-02103ADK0

PHIẾU KẾT QUẢ THỬ NGHIỆM
TEST REPORT

16/09/2020

1. Tên mẫu / *Name of sample*: **THUỐC HÀN HÓA NHIỆT #115g (VIET ASIA)**
2. Mô tả mẫu / *Description*: Mẫu thử nghiệm do khách hàng lấy mẫu, tên mẫu và thông tin về mẫu do khách hàng cung cấp.
Testing sample was sampled by customer, sample name and sample information were supplied by customer.
- Số lượng: 01 hũ nhựa 100 mL/ mẫu;
Quantity: 01 plastic jar 100 mL/ sample;
- Lượng mẫu: khoảng 100 g;
Sample size: approx. 100 g;
3. Số lượng mẫu / *Quantity*: 01
4. Ngày nhận mẫu / *Date of receiving*: 05/09/2020
5. Thời gian thử nghiệm / *Testing duration*: 05/09/2020 – 16/09/2020
6. Nơi gửi mẫu / *Customer*: **CÔNG TY TNHH KỸ THUẬT VIET ASIA**
Phòng 5, tầng 24, Khu Văn phòng, tòa nhà Pearl Plaza, số 561A Điện Biên Phủ, phường 25, quận Bình Thạnh, thành phố Hồ Chí Minh
7. Kết quả thử nghiệm / *Testing results*: Xem trang tiếp theo / *See next page*

TL. PHỤ TRÁCH PHÒNG PTN DẦU KHÍ
PP. HEAD OF PETROLEUM TESTING LAB

Nguyễn Thị Thu Hương

TL. GIÁM ĐỐC/ *PP.DIRECTOR*
TRƯỞNG PHÒNG THỬ NGHIỆM
HEAD OF TESTING LAB

Phan Thành Trung

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KT3-02103ADK0

PHIẾU KẾT QUẢ THỬ NGHIỆM
TEST REPORT

16/09/2020

STT *No.*	Tên chỉ tiêu *Characteristic*	Đơn vị tính *Unit*	Phương pháp thử *Test method*	Kết quả thử nghiệm *Test result*
7.1	Hàm lượng đồng ôxit (CuO) (quy ra từ Cu) *Copper oxide content (calculated from Cu)*	% (m/m)	Tham khảo/ Ref. ISO 11535 :2006 (ICP-OES)	84,0
7.2	Hàm lượng nhôm (Al) *Aluminium content*	% (m/m)	Tham khảo ISO 11535 : 2006 (ICP-OES)	11,8
7.3	Hàm lượng canxi florua (CaF_2) *Calcium fluoride content*	% (m/m)	-	(+)

Ghi chú/ *Notice:*
(+) Không thử nghiệm được do không có phương pháp thử phù hợp/ *Not being able to test as we have not got the suitable method yet.*

INTRODUCE

ASIWELD is a new welding powder brand developed by Viet Asia Technology Co., Ltd that has experiences in more than ten years in importing, distributing goods for Lightning & Earthing System, Power Station and Lines fields.

ASIWELD exothermic welding is a simple, efficient, high quality metal connection method exothermic welding by alumino-thermic reaction generated by high temperature to make metal molten completely, to achieve high quality welding effect. This reaction is conducted in the graphite mould of high temperature resistance; normally a graphite mould could be used for more than 80 points. Exothermic reaction process takes a few seconds only.

Reaction Formula: **3CuO + 2Al -> 3Cu + 2Al2O3 + Q**

The reaction temperatures can exceed 40000 F (2200oC) producing molten metal in excess of 2500o F (1370oC).

Ingredients/Identify Information:

Components	Chemical Symbol	EU Risk Phrases
Copper Oxide	(Cu2O) / CuO)	Not Applicable
Aluminum (Al)	(Al)	Not Applicable
Calcium Fluoride	(CaF2)	Not Applicable

ASIWELD exothermic welding product was tested by **QUATEST 3**

WELD METAL

Product code	Weight (Gram)	Tube/Box
#45	45	20
#65	65	20
#90	90	10
#115	115	10
#150	150	10
#200	200	10
#250	250	10

HAND CLAMP

Product code	Type
HC-S	Small
HC-L	Large

FLINT GUN

Product code	FG

BRUSH

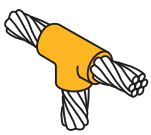
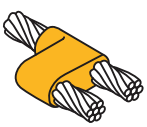
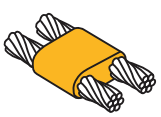
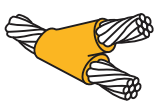
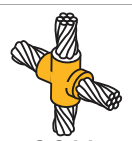
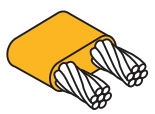
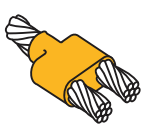
Product code	Type
SB	Steel Brush
PV	Plastic Brush

OTHER ACCESSORIES

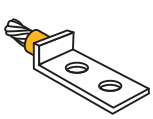
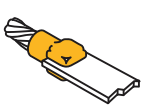
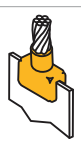
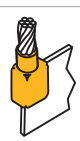
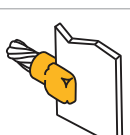
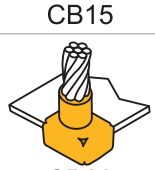
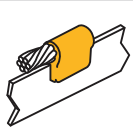
Product code	Type
SB	Steel Dish
SP	Starting Powder
SC	Sealing Compound

Selection Chart

Cable to Cable

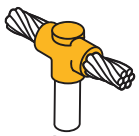
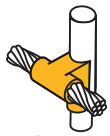
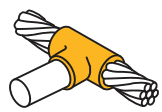
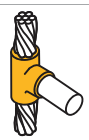
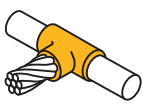
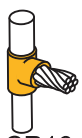
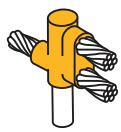
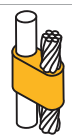
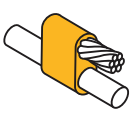
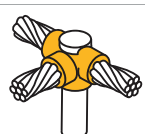
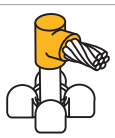
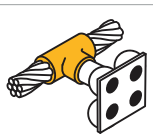
 CC1	 CC2	 CC3	 CC4	 CC5	 CC6	 CC7	 CC8
 CC11	 CC13	 CC14	 CC17	 CC18	 CC19	 CC20	 CC22
 CC23	 CC-24	 CC25	 CC26	 CC27	 CC28	 CC29	 CC30
 CC31	 CC33	 CC34	 CC35	 CC36	 CC37	 CC38	 CC39

Cable to Bus Bar

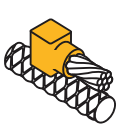
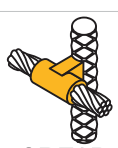
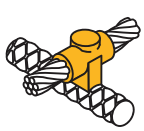
 (Lug) CB1	 CB1	 CB2	 CB3	 CB4	 CB5	 CB6	 CB7
 CB8	 CB9	 CB11	 CB12	 CB15	 CB16	 CB17	 CB18
 CB19	 CB20	 CB21	 CB22	 CB23	 CB24	 CB25	 CB26
 CB27	 CB28	 CB29	 CB30	 CB31	 CB32	 CB34	 CB38

Selection Chart

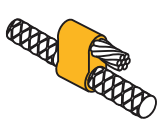
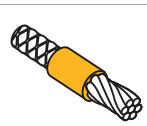
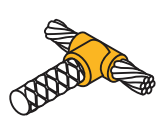
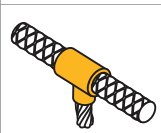
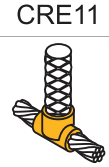
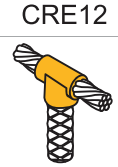
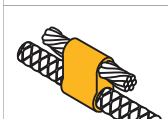
Cable to Ground Rod

 CR1	 CR2	 CR3	 CR5	 CR-6	 CR7	 CR8	 CR9
 CR12	 CR13	 CR14	 CR15	 CR16	 CR17	 CR18	 CR19
 CR20	 CR21	 CR22	 CR23	 CR24	 CR25	 CR26	 CR27
 CR29	 CR30	 CR31	 CR32	 CR33			

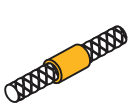
Cable to Rebar (Partially Wrapped)

 CRE1P	 CRE3P	 CRE4P
 CRE5P	 CRE6P	 CRE17P
 CRE18P	 CRE19P	 CRE20P

Cable to Rebar (Fully Wrapped)

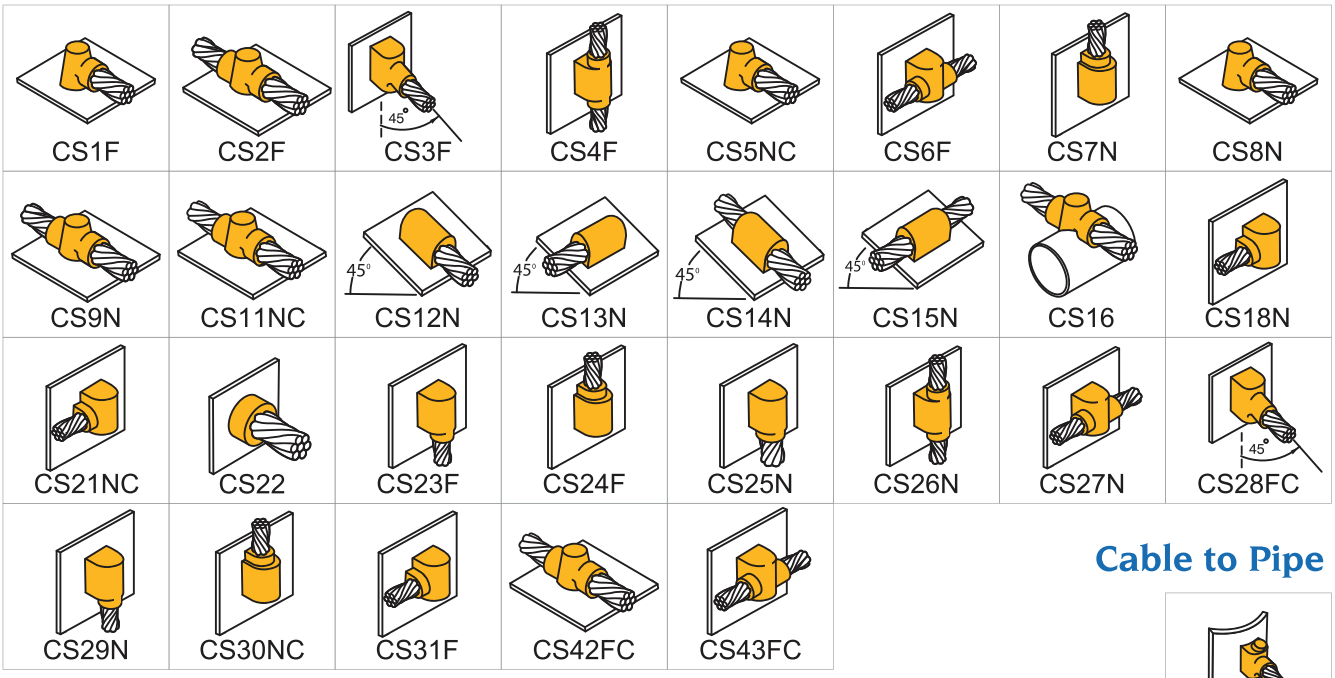
 CRE1	 CRE2	 CRE6	 CRE7
 CRE8	 CRE9	 CRE11	 CRE12
 CRE13	 CRE14	 CRE15	 CRE16
 CRE17	 CRE18	 CRE19	 CRE20

Rebar to Rebar

 RE1	 RE2

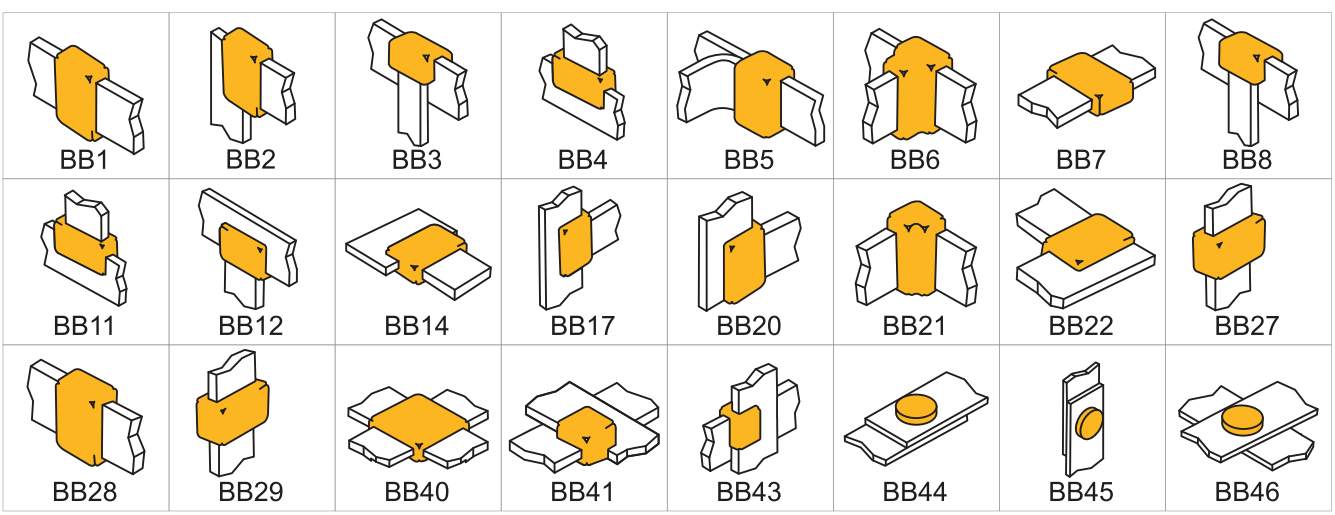
Selection Chart

Cable to Steel

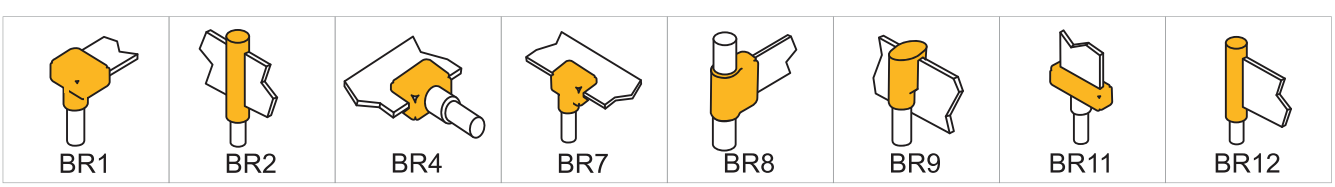


Cable to Pipe

Bus Bar to Bus Bar

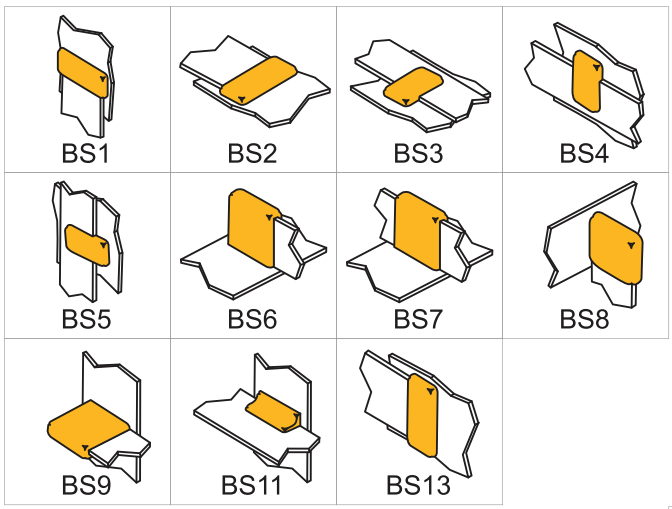


Bus Bar to Ground Rod

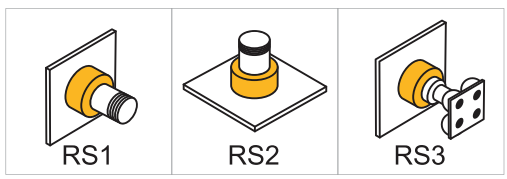


Selection Chart

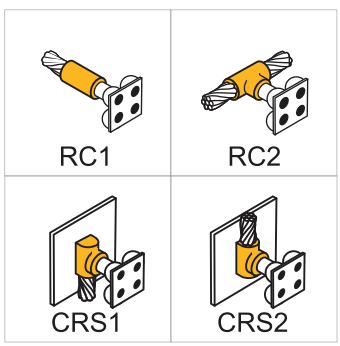
Bus Bar to Steel



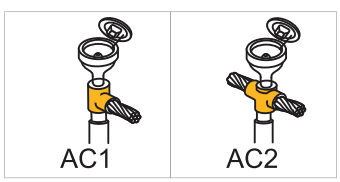
Copper or Steel Stud to Steel



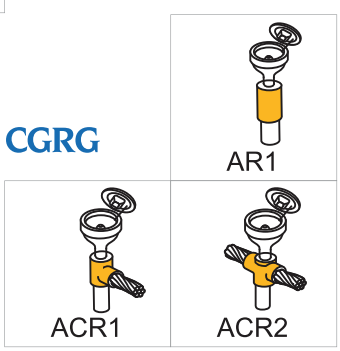
Ground Plates to Cable & Steel



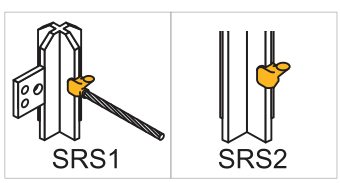
CGR



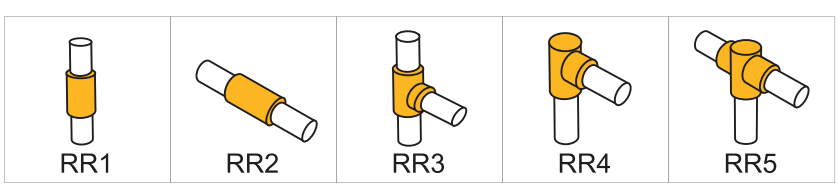
CGRG



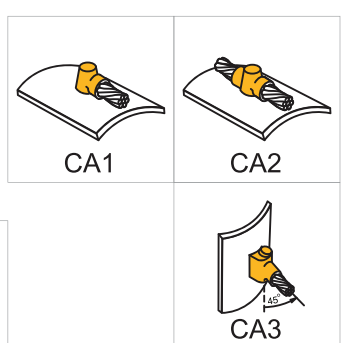
Steel Cable to Steel Rod



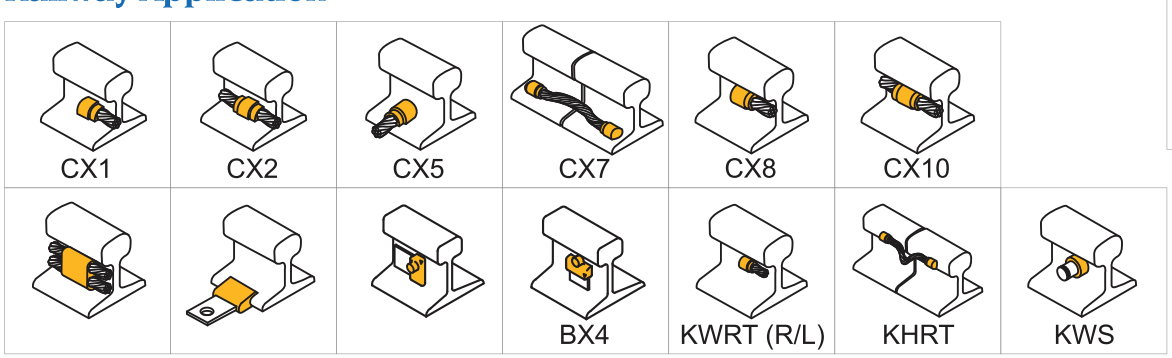
Ground Rod to Ground Rod



Cathodic Protection



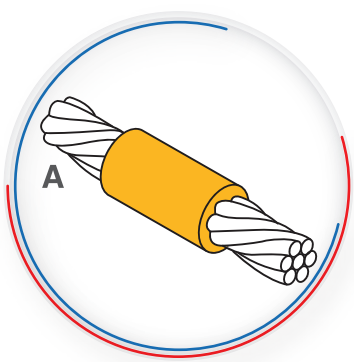
Railway Application



Conductore size		Metal Powder	Mold Type	Hand Clamp Type
A mm2	B mm2			
16	16	25	CC1-1616	HC
25	25	32	CC1-2525	HC
35	35	32	CC1-3535	HC
	25	32	CC1-3525	HC
50	50	65	CC1-5035	HC
	35	65	CC1-5035	HC
	25	45	CC1-5025	HC
70	70	90	CC1-7070	HC
	50	90	CC1-7050	HC
	35	65	CC1-7035	HC
	25	65	CC1-7025	HC
	16	45	CC1-7016	HC
95	95	90	CC1-9595	HC
	70	90	CC1-9570	HC
	50	90	CC1-9550	HC
120	120	115	CC1-120120	HC
	95	115	CC1-12090	HC
	70	115	CC1-12070	HC
150	150	115	CC1-150150	HCC
	120	115	CC1-150120	HCC
	95	115	CC1-15095	HCC
	70	90	CC1-15070	HCC
185	185	150	CC1-185185	HCC
	150	150	CC1-185150	HCC
	120	150	CC1-180120	HCC
240	240	200	CC1-240240	HCC
	185	200	CC1-240185	HCC

CABLE TO CABLE

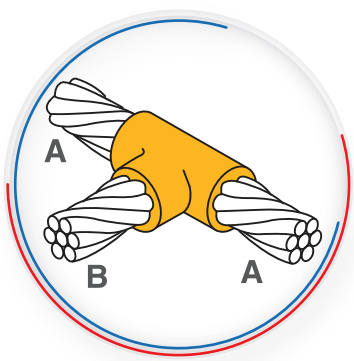
CC1 TYPE



Conductore size		Metal Powder	Mold Type	Hand Clamp Type
A mm2	B mm2			
16	16	32	CC2-1616	HC
25	25	45	CC2-2525	HC
35	35	32	CC2-3535	HC
	25	45	CC2-3525	HC
50	50	90	CC2-5050	HC
	35	45	CC2-5035	HC
	25	45	CC2-5025	HC
70	70	90	CC2-7070	HC
	50	90	CC2-7050	HC
	35	45	CC2-7035	HC
	25	45	CC2-7025	HC
95	95	115	CC2-9595	HC
	70	90	CC2-9570	HC
	50	90	CC2-9550	HC
120	120	150	CC2-120120	HCC
	95	150	CC2-12090	HCC
	70	90	CC2-12070	HCC
150	150	200	CC2-150150	HCC
	120	150	CC2-150120	HCC
	95	150	CC2-15095	HCC
	70	90	CC2-15070	HCC
185	185	200	CC2-185185	HCC
	150	200	CC2-185150	HCC
	120	200	CC2-185120	HCC
240	240	2x150	CC2-240240	HCC
	185	200	CC2-240185	HCC
	150	200	CC2-240150	HCC
	120	200	CC2-240120	HCC

CABLE TO CABLE

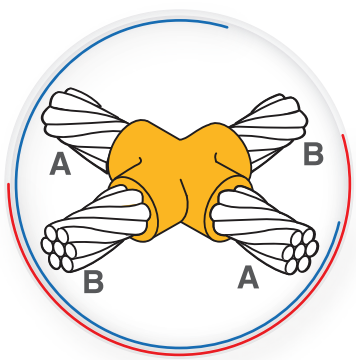
CC2 TYPE



Conductore size		Metal Powder	Mold Type	Hand Clamp Type
A mm2	B mm2			
16	16	45	CC4-1616	HC
25	25	45	CC4-2525	HC
35	35	65	CC4-3535	HC
	25	65	CC4-3525	HC
50	50	90	CC4-5050	HC
	35	90	CC4-5035	HC
	25	90	CC4-5025	HC
70	70	115	CC4-7070	HC
	50	115	CC4-7050	HC
	35	115	CC4-7035	HC
	25	115	CC4-7025	HC
95	95	150	CC4-9595	HC
	70	150	CC4-9570	HC
	50	115	CC4-9550	HC
120	120	200	CC4-120120	HCC
	95	200	CC4-12090	HCC
	70	150	CC4-12070	HCC
150	150	250	CC4-150150	HCC
	120	250	CC4-150120	HCC
	95	200	CC4-15095	HCC
	70	150	CC4-15070	HCC
185	185	2x150	CC4-185185	HCC
	150	250	CC4-185150	HCC
	120	250	CC4-185120	HCC
240	240	2x250	CC4-240240	HCC
	185	2x200	CC4-240185	HCC
	150	2x200	CC4-240150	HCC
	120	2x200	CC4-240120	HCC

CABLE TO CABLE

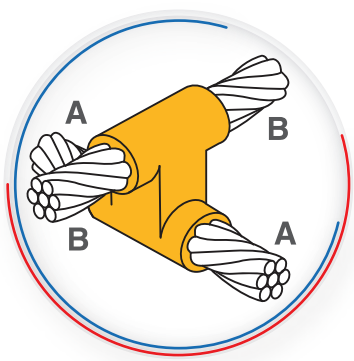
CC4 TYPE



Conductore size		Metal Powder	Mold Type	Hand Clamp Type
A mm2	B mm2			
25	25	65	CC11-2525	HC
35	35	90	CC11-3535	HC
	25	90	CC11-3525	HC
50	50	150	CC11-5050	HC
	35	115	CC11-5035	HC
	25	115	CC11-5025	HC
70	70	200	CC11-7070	HC
	50	200	CC11-7050	HC
	35	150	CC11-7035	HC
	25	150	CC11-7025	HC
95	95	250	CC11-9595	HC
	70	200	CC11-9570	HC
	50	200	CC11-9550	HC
120	120	2x150	CC11-120120	HCC
	95	2x150	CC11-12090	HCC
	70	250	CC11-12070	HCC
150	150	2x200	CC11-150150	HCC
	120	2x200	CC11-150120	HCC
	95	2x150	CC11-15095	HCC
	70	250	CC11-15070	HCC
185	185	2x250	CC11-185185	HCC
	150	2x250	CC11-185150	HCC
	120	2x200	CC11-185120	HCC
240	240	3x200	CC11-240240	HCC
	185	3x200	CC11-240185	HCC
	150	3x200	CC11-240150	HCC
	120	3x200	CC11-240120	HCC

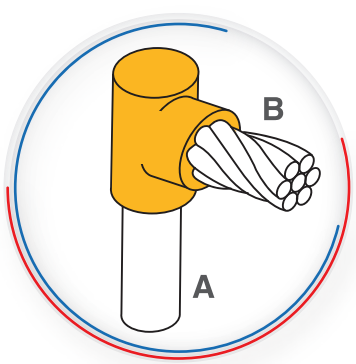
CABLE TO CABLE

CC11 TYPE



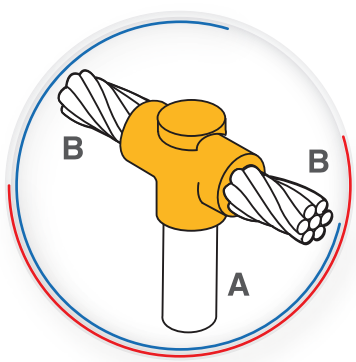
Conductore size		Metal Powder	Mold Type	Hand Clamp Type
Rod Dia (inch/mm)	Cable mm2			
5/8”/16	16	65	CR1-1616	HC
	25	65	CR1-1625	HC
	35	90	CR1-1635	HC
	50	90	CR1-1650	HC
	70	90	CR1-1670	HC
	95	90	CR1-1695	HC
	120	115	CR1-16120	HC
	150	115	CR1-16150	HC
	185	150	CR1-16185	HCC
	240	150	CR1-16240	HCC
	300	200	CR1-16300	HCC
¾”/20	16	65	CR1-2016	HC
	25	65	CR1-2025	HC
	35	90	CR1-2035	HC
	50	90	CR1-2050	HC
	70	90	CR1-2070	HC
	95	115	CR1-2095	HC
	120	115	CR1-20120	HC
	150	115	CR1-20150	HC
	185	150	CR1-20185	HCC
	240	150	CR1-20240	HCC
	300	200	CR1-20300	HCC

ROD TO CABLE
CR1 TYPE



Conductore size		Metal Powder	Mold Type	Hand Clamp Type
Rod Dia (inch/mm)	Cable mm2			
5/8”/16	16	65	CR2-1616	HC
	25	90	CR2-1625	HC
	35	90	CR2-1635	HC
	50	90	CR2-1650	HC
	70	115	CR2-1670	HC
	95	115	CR2-1695	HC
	120	150	CR2-16120	HC
	150	200	CR2-16150	HC
	185	200	CR2-16185	HCC
	240	250	CR2-16240	HCC
	300	2x150	CR2-16300	HCC
¾”/20	16	65	CR2-2016	HC
	25	90	CR2-2025	HC
	35	90	CR2-2035	HC
	50	115	CR2-2050	HC
	70	115	CR2-2070	HC
	95	150	CR2-2095	HC
	120	150	CR2-20120	HC
	150	150	CR2-20150	HC
	185	200	CR2-20185	HCC
	240	250	CR2-20240	HCC
	300	2x150	CR2-20300	HCC

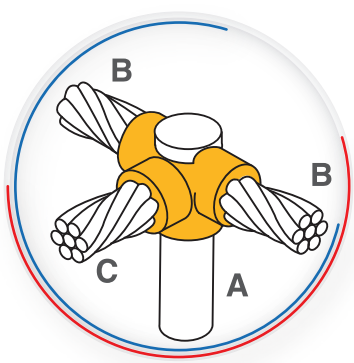
ROD TO CABLE
CR2 TYPE



Conductore size		Metal Powder	Mold Type	Hand Clamp Type
Rod Dia (inch/mm)	Cable mm2			
5/8”/16	16	90	CR25-1616	HC
	25	90	CR25-1625	HC
	35	115	CR25-1635	HC
	50	115	CR25-1650	HC
	70	150	CR25-1670	HC
	95	150	CR25-1695	HC
	120	200	CR25-16120	HC
	150	200	CR25-16150	HC
	185	250	CR25-16185	HCC
	240	2x150	CR25-16240	HCC
¾’’/20	16	90	CR25-2016	HC
	25	115	CR25-2025	HC
	35	115	CR25-2035	HC
	50	150	CR25-2050	HC
	70	150	CR25-2070	HC
	95	200	CR25-2095	HC
	120	250	CR25-20120	HC
	150	250	CR25-20150	HC
	185	2x150	CR25-20185	HCC
	240	2x150	CR25-20240	HCC

ROD TO CABLE

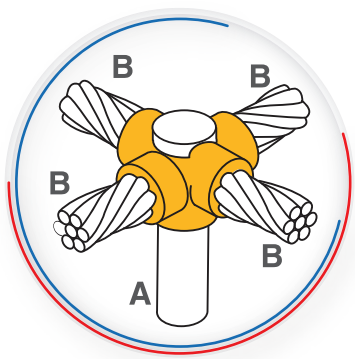
CR25 TYPE



Conductore size		Metal Powder	Mold Type	Hand Clamp Type
Rod Dia (inch/mm)	Cable mm2			
5/8”/16	16	90	CR33-1616	HC
	25	90	CR33-1625	HC
	35	115	CR33-1635	HC
	50	115	CR33-1650	HC
	70	150	CR33-1670	HC
	95	150	CR33-1695	HC
	120	200	CR33-16120	HC
	150	250	CR33-16150	HC
	185	2x150	CR33-16185	HCC
	240	2x200	CR33-16240	HCC
¾”/20	16	90	CR33-2016	HC
	25	115	CR33-2025	HC
	35	115	CR33-2035	HC
	50	150	CR33-2050	HC
	70	150	CR33-2070	HC
	95	200	CR33-2095	HC
	120	250	CR33-20120	HC
	150	2x150	CR33-20150	HC
	185	2x150	CR33-20185	HCC
	240	2x200	CR33-20240	HCC

ROD TO CABLE

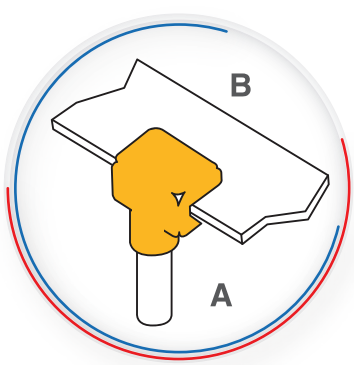
CR33 TYPE



Rod Size	Conductore Size	Metal Powder	Mold Type	Hand Clamp Type
inch/mm	mmxmm			
5/8”/16	20x3	90	BR7-C-16203	HC
	20x4	115	BR7-C-16204	HC
	25x3	90	BR7-C-16253	HC
	25x4	115	BR7-C-16254	HC
	25x5	150	BR7-C-16255	HC
	25x6	150	BR7-C-16256	HC
	30x2	90	BR7-C-16302	HC
	30x3	90	BR7-C-16303	HC
	30x5	150	BR7-C-16305	HC
	30x6	150	BR7-C-16306	HC
	40x3	90	BR7-C-16403	HC
	40x5	150	BR7-C-16405	HC
	40x6	150	BR7-C-16406	HC
	50x3	90	BR7-C-16503	HC
	50x5	150	BR7-C-16505	HC
	50x6	150	BR7-C-16506	HC
¾”/20	20x3	115	BR7-C-20203	HC
	20x4	115	BR7-C-20204	HC
	25x3	115	BR7-C-20253	HC
	25x4	150	BR7-C-20254	HC
	25x6	200	BR7-C-20256	HC
	30x2	115	BR7-C-20302	HC
	30x3	115	BR7-C-20303	HC
	30x5	200	BR7-C-20305	HC
	30x6	200	BR7-C-20306	HC
	40x3	150	BR7-C-20403	HC
	40x5	200	BR7-C-20405	HC
	40x6	200	BR7-C-20406	HC
	50x3	115	BR7-C-20503	HC
	50x5	200	BR7-C-20505	HC
	50x6	200	BR7-C-20506	HC

BUS BAR TO GROUND ROD

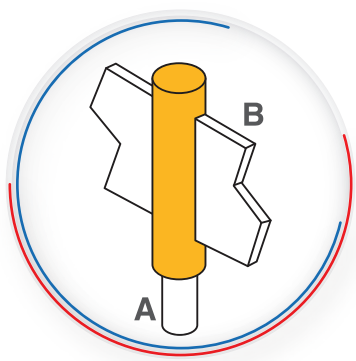
BR7 TYPE



Rod Size	Conductore Size	Metal Powder	Mold Type	Hand Clamp Type
inch/mm	mmxmm			
5/8”/16	20x3	90	BR7-C-16203	HC
	20x4	90	BR7-C-16204	HC
	25x3	90	BR7-C-16253	HC
	25x4	115	BR7-C-16254	HC
	25x5	115	BR7-C-16255	HC
	25x6	150	BR7-C-16256	HC
	30x2	90	BR7-C-16302	HC
	30x3	115	BR7-C-16303	HC
	30x5	150	BR7-C-16305	HC
	30x6	150	BR7-C-16306	HC
	40x3	150	BR7-C-16403	HC
	40x5	150	BR7-C-16405	HC
	40x6	200	BR7-C-16406	HC
	50x3	200	BR7-C-16503	HC
	50x5	200	BR7-C-16505	HC
	50x6	150	BR7-C-16506	HC
¾”/20	20x3	150	BR7-C-20203	HC
	20x4	150	BR7-C-20204	HC
	25x3	150	BR7-C-20253	HC
	25x4	200	BR7-C-20254	HC
	25x6	200	BR7-C-20256	HC
	30x2	150	BR7-C-20302	HC
	30x3	150	BR7-C-20303	HC
	30x5	200	BR7-C-20305	HC
	30x6	250	BR7-C-20306	HC
	40x3	200	BR7-C-20403	HC
	40x5	200	BR7-C-20405	HC
	40x6	250	BR7-C-20406	HC
	50x3	2x150	BR7-C-20503	HCC
	50x5	2x150	BR7-C-20505	HCC
	50x6	2x150	BR7-C-20506	HCC

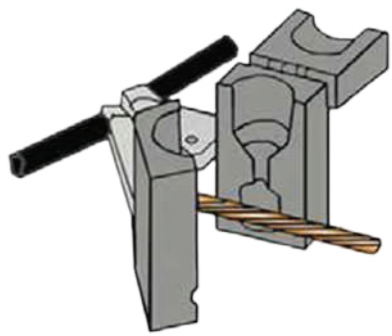
BUS BAR TO GROUND ROD

BR2 TYPE

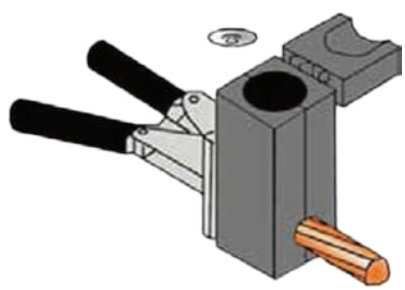


EXOTHERMIC WELDING METHOD

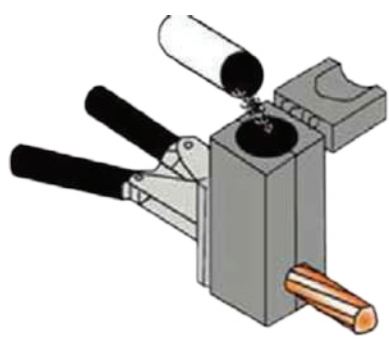
STEP 1
Clean the conductors to be welded. Place the cables into position in the mold.



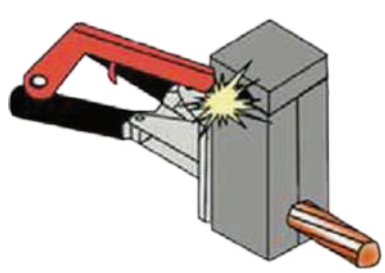
STEP 2
Close the handle clamp to lock the mold. Place the disk into position in the mold.



STEP 3
Place the weld metal into the mold. Sprinkle the starting powder over the weld metal and on the lip of the mold.



STEP 4
Close the cover and ignite using flint ignitor. Open the mold after the metal solidifies. Remove the slag from the mold before making the next connection.



PROJECTS

- SESAN SOLAR FARM
- TRUNG SON SOLAR FARM
- DONG HAI WIND POWER
- BINH DAI WIND POWER
- THAI HOA WIND POWER
- AQUA CITY NOVALAND