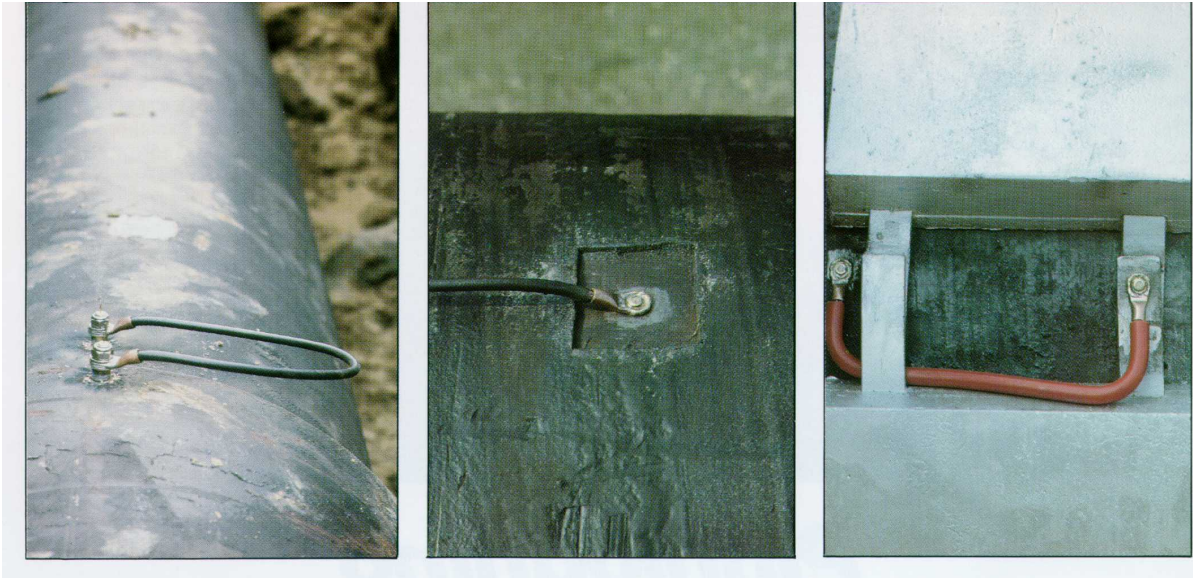


PIN BRAZING**5.0****Product Data Sheets**

***The modern, economical technique for
electrical bonding***

5.0

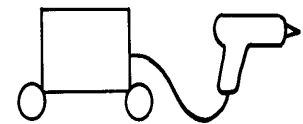


Pin Brazed bonding

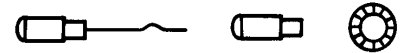
- ▶ fast
- ▶ safe
- ▶ economical
- ▶ high quality

Index

5.1 Pin Brazing Units
and Accessories –
Pages 4-10



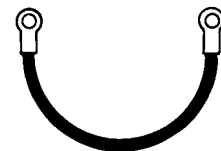
5.2 Brazing Pins & Ferrules –
Pages 11-12



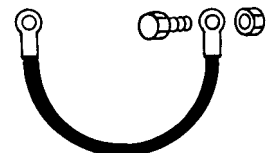
5.3 Cable lugs & crimping tools –
Pages 13-14



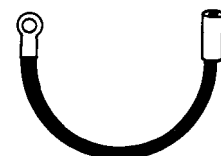
5.4 Bonding cables –
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5.5 Connecting cables –
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5.6 Extension cables – Page 19-20



EASYBOND PIN BRAZING UNIT**5.1.1**

The **Easybond** unit is suitable for all types of minor installation and maintenance work. It is primarily for the occasional user who needs a simple, rugged and low cost machine. The unit is portable and easy to transport. The brazing process is controlled by means of the fuse wire on the brazing pin. The capacity is approx. 15 brazes with the smallest type of brazing pin, and it can easily be increased by a battery charger mounted in a vehicle, the batteries being charged up during transportation between workplaces. When alternating between charging and brazing it is possible to increase the capacity up to 5 times during a working day. The batteries are sealed to prevent acid spill.

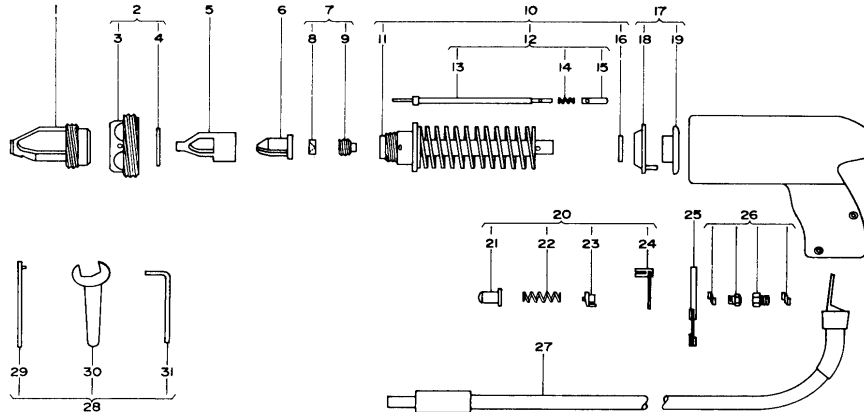
Description and Part No. Easybond		Weights:	
Easybond unit complete	273 199 0811	Easybond unit complete	26.00 kg
Pin brazing unit*	273 199 0810	Pin brazing unit	3.2 kg
Standard gun*	273 199 0780	Standard gun	4.0 kg
Earth Device*	273 199 1360	Earth Device	1.1 kg
Battery charger*	273 199 5020	Battery charger	3.0 kg
Battery HP, 3 Required per set*	273 900 1870	Battery HP, 3 Required per set	4.9 kg
Battery Charger for vehicle	273 199 5040	Battery Charger for vehicle	1.5 kg
Welding generator gun	273 199 0240	Welding generator gun	4.0 kg
Case, attaché	273 190 4680	Case, attaché	3,3 kg
Grinder 42V, model small	273 199 0680	Grinder 42V, model small	2,3 kg
Grinding burr	273 190 1370	Grinding burr	0.04 kg

HP = High performance, * = included when purchasing part number 273 199 0811

EASYBOND SPARES

5.1.1

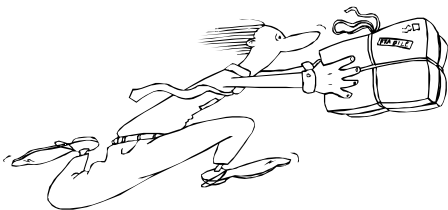
A full set of spare parts for pin brazing equipment is available off the shelf for immediate despatch.



Brazing Gun spare parts list.

Item No	Part No	Description
1	270 074 8150	Ferrule Holder for 8mm direct brazing pins
	273 100 0560	Ferrule Holder for M8 threaded brazing pins
	273 100 1240	Ferrule Holder for M10/M12 threaded brazing pins
2	273 190 0560	Front Piece complete with locking ring
4	2700748160	Locking Ring
5	270 071 5600	Pin Holder for 8mm direct brazing pins
	273 100 0550	Pin Holder for M8 threaded brazing pins
	273 100 3870	Pin Holder for M10 threaded brazing pins
	273 100 1230	Pin Holder for M12 threaded brazing pins
6	270 071 5610	Spark Shield

Item No	Part No	Description
7	273 190 0570	Contact Nipple c/w washer (pack of 5)
10	273 190 1190	Centre Piece Complete
12	273 190 0580	Ejector Rod Complete
16	270 071 5340	Remanence Washer
17	273 190 0590	Conductor Ring and Insulating Ring
20	273 190 600	Trigger Assembly
25	270 071 5700	Contact Arm
26	273 190 0110	Contact Set Complete
27	273 190 1310	Cable 35mm sq 1.7m long
28	273 190 0610	Tool Kit



We offer a fast and efficient equipment refurbishment / repair service using genuine spare parts fitted by expert technicians. Most repairs can be completed within a few days keeping expensive downtime to a minimum.

BB2 (PFBG-02) PIN BRAZING EQUIPMENT 5.1.2



PFBG-02 is a machine suitable for larger maintenance or installations. One person can easily carry the equipment and The PFBG-02 pin brazing process is electronic, therefore no fuse wire is required. It is however possible to use brazing pins with a fuse wire. PFBG-02 is programmed for the adjustments F, B and G, This adjustment prefix is stated on the package label of the brazing pin, and is controlled manually via a switch on the control panel of the unit. The capacity is approx. 50 brazes with the smallest type of brazing pin, and it can easily be increased by a battery charger mounted in a vehicle, the batteries being charged up during transportation between workplaces. When alternating between charging and brazing it is possible to increase the capacity up to 5 times during a working day. The batteries are sealed to prevent acid spill.

Description and Part No. PFBG-02 (BB2)

Pin brazing unit	273 199 0760
Case, attaché	273 190 4680
Battery HP, 3 pcs per set	273 900 1810
Standard gun	273 199 0570
Earth device	273 199 1360
Extension gun	273 199 0640
Angle gun	273 199 0670
Grinder 42V, model small	273 199 0680
Grinding burr	273 190 1370
Battery charger	273 199 5020
Battery Charger for vehicle	273 199 5040

HP = High performance

Weights:

PFBG-02 with batteries	23,8 kg
PFBG-02 without batteries	9,7 kg
Case, attaché	3,3 kg
Battery HP, 3 pcs per set	4,9 kg
Standard gun	4,0 kg
Earth device	1,1 kg
Extension gun	4,5 kg
Angle gun	5,2 kg
Grinder 42V, model small	2,3 kg
Grinding burr	0,04 kg
Battery charger	3,0 kg
Battery Charger for vehicle	1,5 kg

BB2 (PFBGO2) SPARES

5.1.2

A full set of spare parts for pinbrazing equipment is available off the shelf for immediate despatch.

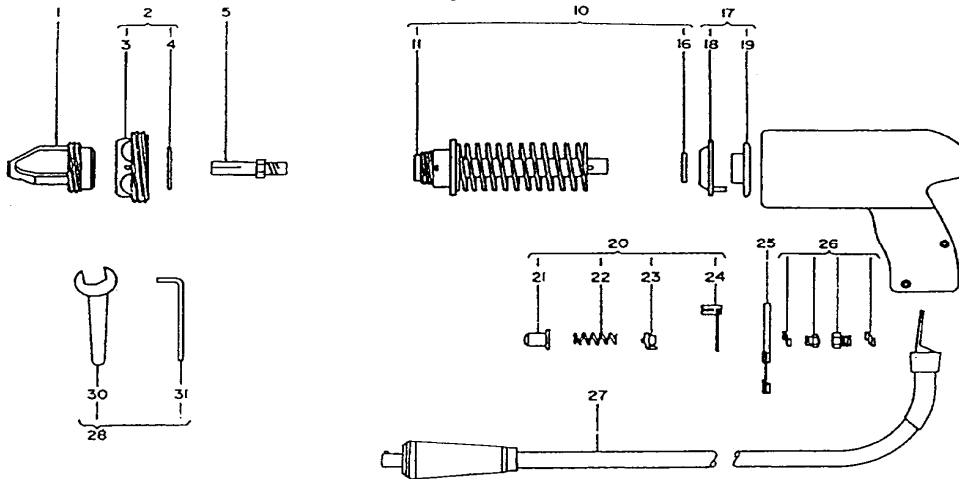
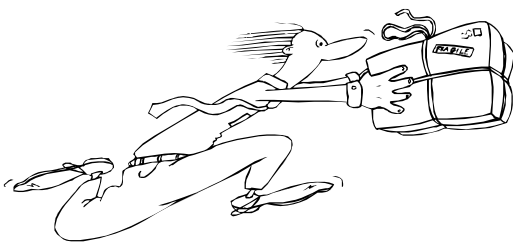


Fig 5

Item No	Part No	Description
	273 199 0570	Standard Electronic Brazing Gun
1	270 074 8150	Ferrule Holder for 8mm direct brazing pins
	273 100 0560	Ferrule Holder for M8 threaded brazing pins
	273 100 1240	Ferrule Holder for M10/M12 threaded brazing pins
2	273 190 0560	Front Piece complete with locking ring
4	270 074 8160	Locking Ring
5	273 190 0490	Pin Holder for 8mm direct brazing pins
	273 190 1400	Pin Holder for M8 threaded brazing pins
	273 190 1410	Pin Holder for M10 threaded brazing pins

Item No	Part No	Description
	273 190 1420	Pin Holder for M12 threaded brazing pins
10	273 190 1430	Centre Piece Complete
16	270 071 5340	Remanence Washer
17	273 190 0590	Conductor Ring and Insulating Ring
20	273 190 0600	Trigger Assembly
25	270 071 5700	Contact Arm
26	273 190 0110	Contact Set Complete
27	273 190 1310	Cable 35mm sq 1.7m long
28	273 190 1440	Tool Kit



We offer a fast and efficient equipment refurbishment / repair service using genuine spare parts fitted by expert technicians. Most repairs can be completed within a few days keeping expensive downtime to a minimum.

EASYBOND Reach System (EBRS) PIN BRAZING EQUIPMENT

5.1.3

**A technique of making sound retrofit electrical connections to buried pipelines,
without the need for major Excavation.**



▶ Fast ▶ Safe ▶ Economical ▶ High Quality

Specially designed to be compatible with the BAC Easybond pin brazing units, the Easybond Reach system (EBRS) comprises a special pin brazing gun with a purpose designed brazing tool that attaches to a fully adjustable (1.6m to 2.5m) hollow extension tube constructed of aluminium. To reach the buried pipe all that is required is a core-drilled hole (as little as 200mm diameter) down to the pipe where the connection pin needs to be brazed. The system also includes a device for local pipe coating removal and cleaning in the area to be bonded to ensure a good braze. Triggering of the device is controlled via a special manually controlled switch mounted onto the battery unit.

EASYBOND Reach System (EBRS) Components

5.1.3



Part Number	Description	Part Number	Other Items required
273 199 5100	EBRS inclusive of:	273 199 0810	Easybond Battery Box*
273 199 5060	Gun & Lance	273 900 1870	Battery (3 required)*
273 199 5070	Trigger Device	273 199 5020	Battery Charger 110V/230 AC*
273 199 5080	Earth Device	273 199 0680	42V DC Grinder*
273 199 5090	Grinder Conversion Kit	273 199 5040	In Car Battery Charger 12VDC**

* **Common to Items used with EasyBond System**

** **Optional Extra**

PIN BRAZING BATTERY CHARGERS**5.1.4****Multistage In Car Charging System
(Vepac)****Microprocessor Controlled
Automatic Battery Charger
(ELITE)***Vepac 273 199 5040**Elite 273 199 5020*

BAC Microprocessor controlled battery chargers are designed to provide fast, automatic charging and ensure peak performance from your batteries.

- SHORT CIRCUIT SHUTDOWN without blown fuses
- REVERSE POLARITY PROTECTION
- 3-STAGE CHARGE CI-CV-FLOAT
- FAST CONSTANT CURRENT BULK CHARGE
- CONSTANT VOLTAGE PROPORTIONAL TIMING for minimal gas emission
- CONSTANT VOLTAGE FLOAT/STANDBY
- INDEPENDENT OVERRUN (FAULT) TIMER - DIGITAL ELECTRONICS for stability & reliability

Description**Part No.****Weights:**

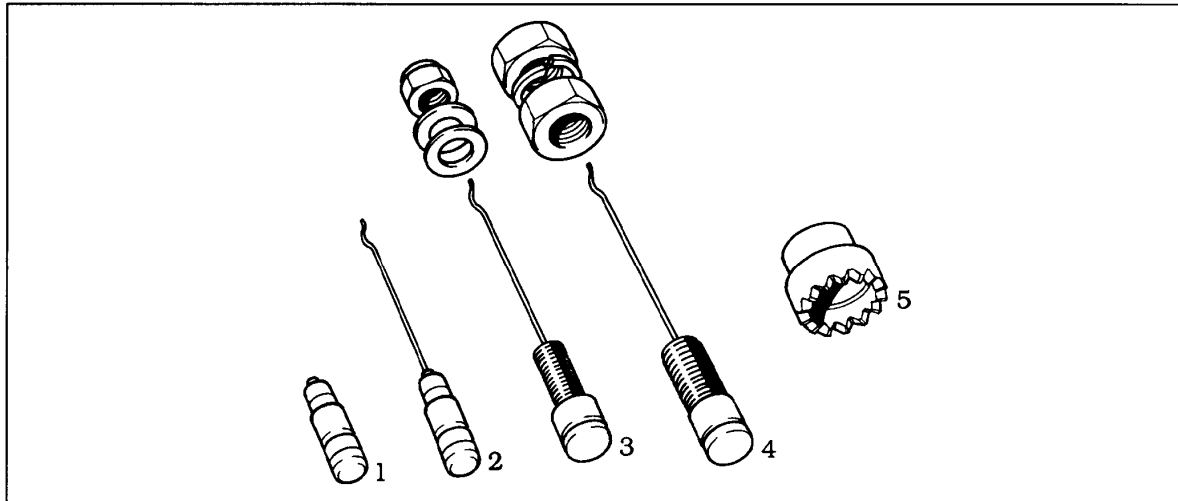
Battery charger 240/110v AC
Battery charger for vehicle 12v DC

273 199 5020
273 199 5040

3,0 kg
1.5 kg



BRAZING PINS & FERRULES

5.2.1





The working temperature of the brazing solder in the brazing pins is 650°C, in line with the classification of the operation as hard soldering. A new ferrule must always be employed in pin brazing (the ferrule must be changed after each brazing operation). The purpose of the ferrule is to prevent spattering of the molten solder, to prevent oxidation of the molten solder, and to protect the operator against radiation from the arc.

The ferrule must be stored dry.

Fig.	#	Description			Remarks
2	270 075 1210	Brazing pin, standard F	Ø 8 mm	100	With fuse wire
2	270 083 3520	Brazing pin, extra solder B	Ø 8 mm	100	With fuse wire
2	278 190 3250	Brazing Pin 610° C.P.	Ø 8 mm	100	With fuse wire
1	278 190 4320	Brazing pin, standard F	Ø 8 mm	100	Without fuse wire
1	278 190 4360	Brazing pin, extra solder B	Ø 8 mm	100	Without fuse wire
5	270 065 7230	Ferrule	Ø 8 mm	200	
2	270 075 1630	Brazing pin G	Ø 9,5 mm	100	With fuse wire
1	278 190 4350	Brazing pin G	Ø 9,5 mm	100	Without fuse wire
5	270 065 7240	Ferrule	Ø 9,5 mm	150	

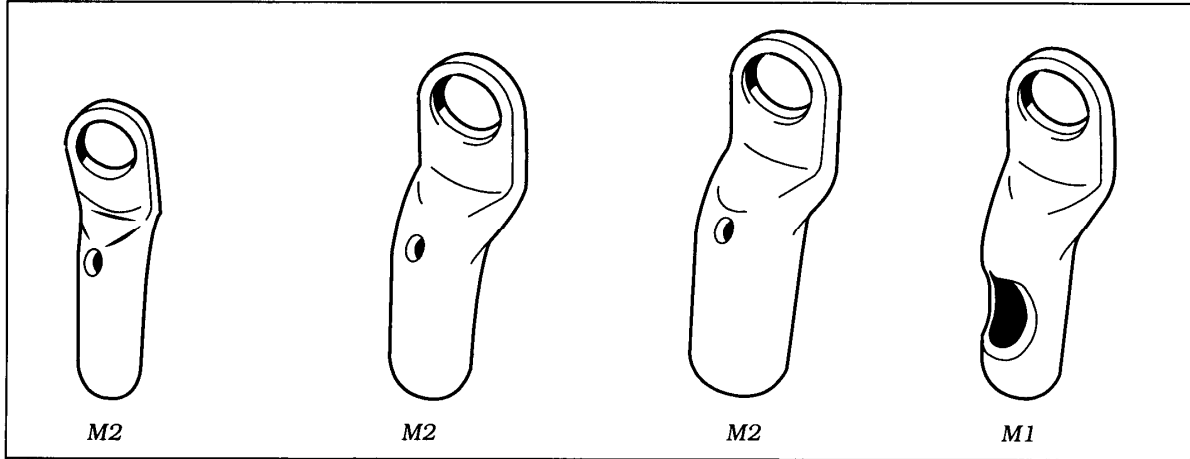
BRAZING PINS & FERRULES.....Continued 5.2.1

Fig.	#	Description			Remarks
3	278 190 0430	Threaded brazing pin F	M8/12 x 30 mm	50	With fuse wire
	278 190 4920	Threaded brazing pin F	M8/12 x 30 mm	50	Without fuse wire
	278 190 3450	Threaded brazing pin F	M10 x 34 mm	40	With fuse wire
	278 190 4980	Threaded brazing pin F	M10 x 34 mm	50	Without fuse wire
4	278 190 2560	Threaded brazing pin F	M12 x 34 mm	25	With fuse wire
	278 190 4930	Threaded brazing pin F	M12 x 34 mm	25	Without fuse wire
5	270 077 3680	Ferrule	Ø 12 mm	100	

F = 278 190 3250; 270 075 1210; 278 190 4320; 278 190 0430; 278 190 4920; 278 190 1880; 278 190 4930
 B = 270 083 3520 alt. 278 190 4360
 G = 270 075 1630 alt. 278 190 4350

CABLE LUGS

5.3.1





BAC & BRIGHT-BOND cable lugs are specially manufactured in the intended material for pin brazing. Consult the table of recommendations on the choice of a suitable cable lug. The lugs are made in two different types. M1 is pin brazed to the cable. M2 is crimped to the cable.

Always use **BAC & BRIGHT-BOND** crimping tools to ensure adequate contact.

See the separate table of recommendations on "Crimping tools".

Table of recommendations.


Fig.	#		Cross-section		Brazing pin	Remarks
M2	278 100 7520	6,1 x 9 mm	10 mm ²	50		For screw
M2	278 100 7360	9 x 6, mm	10 mm ²	100	F	
M2	278 100 9000	9 x 12 mm	16 mm ²	100	F	
M2	278 100 3650	6,5 x 12 mm	Ø 6 mm	50	B	
M2	270 088 7800	8x 12 mm	25 mm ²	50	B	
M2	278 100 7810	9 x 13 mm	35 mm ²	50	B	
M2	270 088 7790	11 x 14 mm	50 mm ²	40	B	
M2	278 100 5910	8,5 x 12 mm	Ø 8 mm	50	B	

B = 270 083 3520 alt. 278 190 4360

F = 270 075 1210 alt. 278 190 4320

Sleeves

5.3.2

#	Cross-section		Recommended cable lug
278 100 5890	2,5 mm ²	100	278 100 7360
278 100 8750	4,0 mm ²	100	278 100 7360
278 100 9270	6,0 mm ²	100	278 100 7360

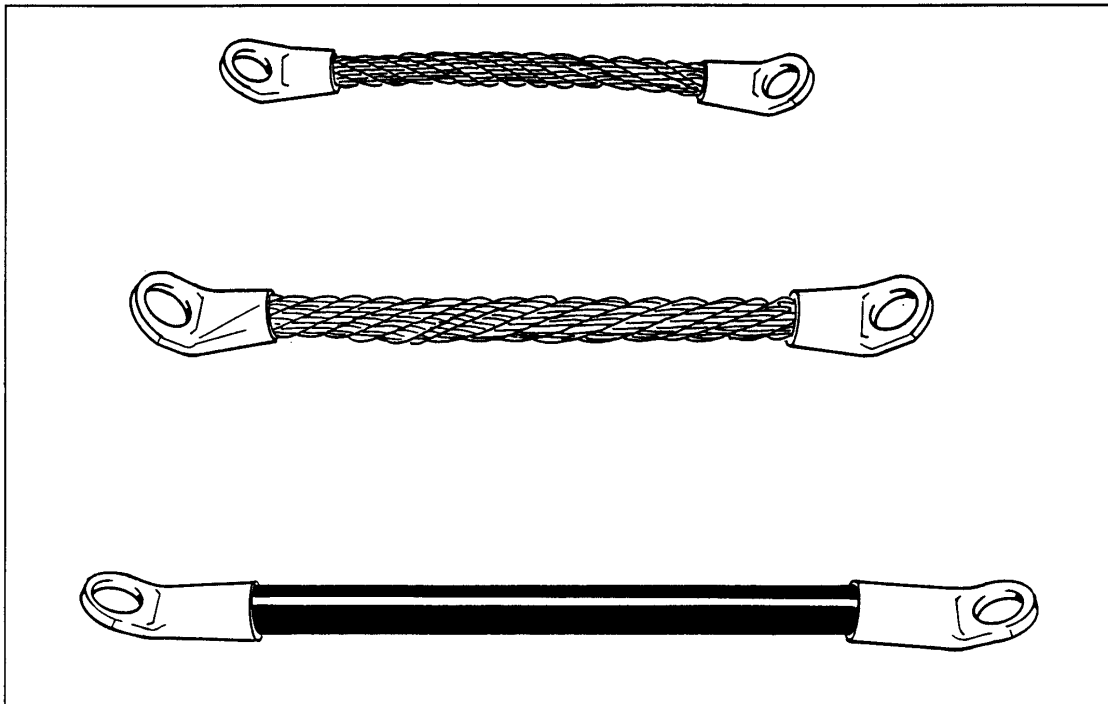
Crimping tools

#	Designed for	Remarks
278 900 0810	10- 95 mm ²	
020 007 0470	6 - 50 mm ²	
278 900 1850	10 - 95 mm ²	
020 007 6333	6 - 50 mm ²	
278 900 1090	10 - 300 mm ²	

BONDING CABLES

5.4.1

All Bonding, Connecting and Extension cables can be specially manufactured to suit the specific needs of the user.



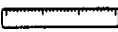



To minimise time taken to fit bonds, prefabricated bonds are the most economical choice. Bonds are made to a predetermined length and are supplied ready for use from the factory. If a more flexible alternative is wanted for field installation, see the chapter of extension cables, connection cables and lugs for crimping and pin brazing.

BAC & BRIGHT-BOND pin brazed connectors have low transition resistance which does not change with time, and they can handle amperages above the capacity of the cable.

BONDING CABLES.....Continued

5.4.1

Standard Sizes

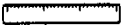



#			Material 		Brazing Pin Type	Remarks
278 190 4310	10 mm ² x 100 mm	10°	Cu		F	
278 190 3930	10 mm ² x 200 mm	10°	Cu		F	
278 190 4070	10 mm ² x 250 mm	10°	Cu		F	
278 190 4080	10 mm ² x 300 mm	10°	Cu		F	
278 190 4090	10 mm ² x 400 mm	10°	Cu		F	
278 190 4130	10 mm ² x 500 mm	10°	Cu		F	
278 190 4420	10 mm ² x 600 mm	10°	Cu		F	
278 190 4410	10 mm ² x 750 mm	10°	Cu		F	
278 190 4250	10 mm ² x 850 mm	10°	Cu		F	
278 190 4140	10 mm ² x 1000 mm	10°	Cu		F	
278 190 4150	10 mm ² x 1100 mm	10°	Cu		F	
278 190 4160	10 mm ² x 1200 mm	10°	Cu		F	
278 190 4170	10 mm ² x 1300 mm	10°	Cu		F	
278 190 4190	16 mm ² x 200 mm	10°	Cu		F	
278 190 4650	16 mm ² x 300 mm	10°	Cu		F	
278 190 4200	16 mm ² x 500 mm	10°	Cu		F	
278 190 4710	16 mm ² x 600 mm	10°	Cu		F	
278 190 4210	16 mm ² x 700 mm	10°	Cu		F	
278 190 4220	16 mm ² x 800 mm	10°	Cu		F	
278 190 4230	16 mm ² x 1000 mm	10°	Cu		F	
278 190 4280	16 mm ² x 1100 mm	10°	Cu		F	
278 190 4240	16 mm ² x 1200 mm	10°	Cu		F	
278 190 4290	16 mm ² x 1300 mm	10°	Cu		F	
278 190 4940	16 mm ² x 2000 mm	10°	Cu		F	
278 190 2720	20 mm ² x 1000 mm	10°	FeZn	20	F	
278 190 2750	20 mm ² x 1500 mm	10°	FeZn	10	F	
278 190 0780	25 mm ² x 400 mm	10°	Cu	10	B	
278 190 3460	25 mm ² x 500 mm	10°	Cu	10	B	
278 190 0710	25 mm ² x 950 mm	10°	Cu	20	B	
278 190 0720	25 mm ² x 1050 mm	10°	Cu	20	B	

BONDING CABLES.....

Continued

5.4.1

Standard Sizes

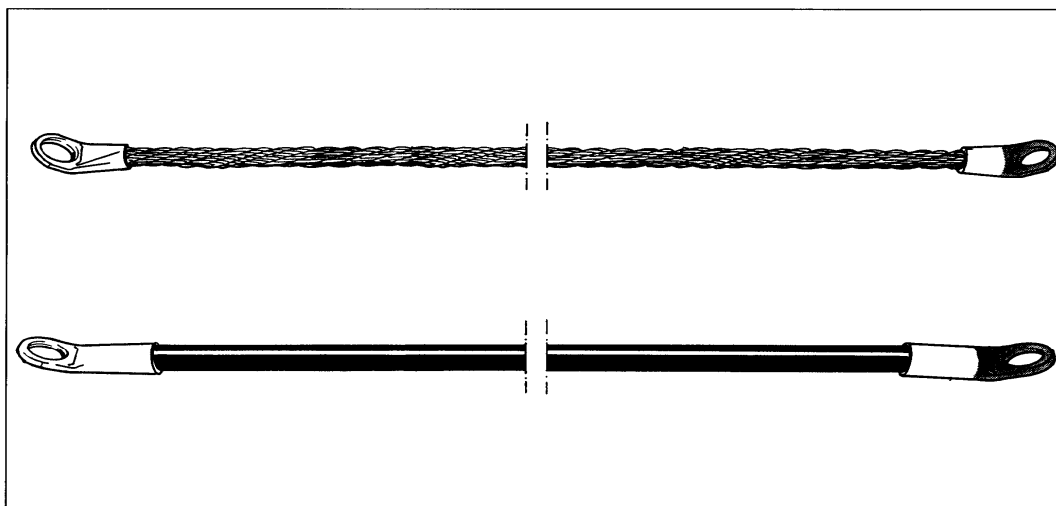
#			Material 		Brazing Pin Type	Remarks
278 190 0730	25 mm ² x 1200 mm	10°	Cu	20	B	
278 190 0740	25 mm ² x 1360 mm	10°	Cu	20	B	
278 190 1140	25 mm ² x 1400 mm	10°	Cu	20	B	
278 190 1150	25 mm ² x 1500 mm	10°	Cu	20	B	
278 190 0790	25 mm ² x 2200 mm	10°	Cu	20	B	
278 190 1580	25 mm ² x 2600 mm	10°	Cu	20	B	
278 190 1160	25 mm ² x 2700 mm	10°	Cu	20	B	
278 190 1170	25 mm ² x 4000 mm	10°	Cu	20	B	
278 190 1240	35 mm ² x 1050 mm	10°	Cu	20	G	
278 190 1250	35 mm ² x 1200 mm	10°	Cu	20	G	
278 190 1440	50mm ² x 950 mm	10°	Cu	10	G	
278 190 0630	50 mm ² x 2000 mm	10°	Cu	10	G	
278 190 1220	50 mm ² x 2700 mm	10°	Cu	10	F	

- F = 270 075 1210 alt. 278 190 4320
- B = 270 083 3520 alt. 278 190 4360
- G = 270 075 1630 alt. 278 190 4350

CONNECTING CABLES

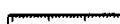



















5.5.1

All Bonding, Connecting and Extension cables can be specially manufactured to suit the specific needs of the user.



Connecting cables - type C

A connecting cable is pin brazed at one end, while the other, which is tinned, is connected by means of a screw fastening. Consult the table on the choice of a suitable alternative.

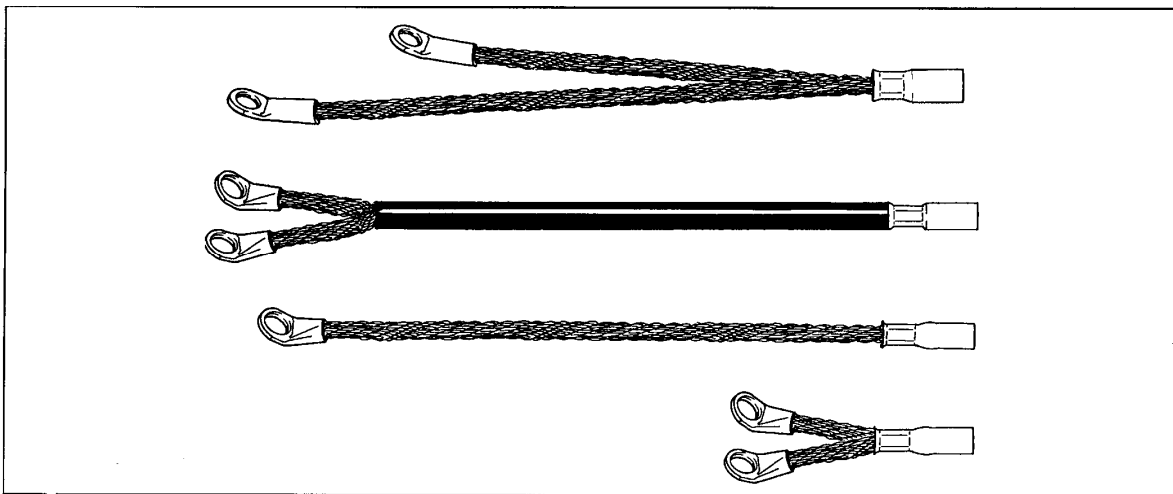
#			Connection screw-hole	Material		Brazing pin	Remarks
278 190 0960	20 x 350mm	10°	Ø 7,5mm	FeZn 	20	F	
278 190 2800	20 x 500mm	10°	Ø 7,5mm	FeZn 	20	F	
278 190 2050	20 x 880mm	10°	Ø 7,5mm	FeZn 	20	F	
278 190 2460	20 x 1450mm	10°	Ø 7,5mm	FeZn 	20	F	
278 190 0970	20 x 2450mm	10°	Ø 7,5mm	FeZn 	5	F	
278 190 2060	20 x 2650mm	10°	Ø 7,5mm	FeZn 	5	F	
278 190 2480	20 x 3200mm	10°	Ø 7,5mm	FeZn 	5	F	
278 190 0160	25 x 350mm	10°	Ø 10,5mm	Cu 	50	F	
278 190 1200	25 x 910mm	10°	Ø 7,5mm	Cu 	20	F	
278 190 1050	25 x 1100mm	10°	Ø 7,5mm	Cu 	20	G	
278 190 0470	25 x 1450mm	10°	Ø 9mm	Cu 	20	B	
278 190 0170	25 x 2000mm	10°	Ø 10,5mm	Cu 	20	F	
278 190 1060	25 x 2600mm	10°	Ø 7,5mm	Cu 	20	G	
278 190 0480	25 x 3200mm	10°	Ø 9mm	Cu 	20	B	
278 190 0390	25 x 4500mm	10°	Ø 7,5mm	Cu 	10	B	
278 190 0400	25 x 5500mm	10°	Ø 7,5mm	Cu 	10	B	
278 190 0410	25 x 6500mm	10°	Ø 7,5mm	Cu 	10	B	

F=2700751210 or 2781904320 B=2700833520 or 2781904360 G=2700751630 or 2781904350

EXTENSION CABLES

5.6.1

All Bonding, Connecting and Extension cables can be specially manufactured to suit the specific needs of the user.

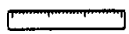






















EXTENSION CABLES.....Continued **5.6.1**

Type J2

Type **J2** is pin brazed with one or, for enhanced safety, two brazes at one end, while the other end is intended for crimping.

Always use **BAC & BRIGHT-BOND** crimping tools to ensure adequate contact (consult the data sheet "Cable lugs").

#			ID x OD	Material		Brazing pin	To suit cable
278 190 1530	10 x 500mm	10°	5 x 8mm	Cu 	20	F	10mm ²
278 190 1000	25 x 310mm	10°	6,5 x 12mm	Cu 	50	F	Ø 6/16mm ²
278 190 4880	25 x 330mm	10°	8 x 11mm	Cu 	50	F	25 mm ²
278 190 1260	25 x 350mm	10°	8,5 x 12mm	Cu 	50	F	Ø 8 mm
278 190 1380	25 x 500mm	10°	8 x 12mm	Cu 	25	B	25 mm ²
278 190 2820	25 x 800mm	10°	6,5 x 12mm	Cu 	25	F	Ø 6/16mm ²
278 190 1010	50 x 310mm	10°	8,5 x 12mm	Cu 	50	B	Ø 8mm
278 190 1370	50 x 350mm	10°	11 x 14mm	Cu 	25	G	50mm ²
278 190 4330	50 x 310mm	10°	11x 14,5mm	Cu 	25	B	50mm ²
278 190 3680	2 x 25 x 72mm	40°	8,5 x 12mm	Cu 	50	F x 2	25mm ²
278 190 1320	25 x 500mm	10°	8 x 12mm	Cu 	25	F x 2	25mm ²
278 190 1810	25 x 500mm	10°	8 x 11mm	Cu 	25	G x 2	25mm ²
278 190 5020	2 x 25 x 72mm	40°	9 x 13mm	Cu 	50	F x 2	35mm ²
278 500 0210	35 x 350mm	10°	9 x 13mm	Cu 	25	F x 2	35mm ²
278 190 1230	50 x 350mm	10°	11 x 14mm	Cu 	25	F x 2	50mm ²
278 190 2880	2 x 25 x 72mm	40°	11 x 14,5mm	Cu 	50	F x 2	50mm ²
278 190 4400	2 x 35 x 400mm	10°	13 x 17mm	Cu 	25	B x 2	70mm ²
278 190 4340	70 x 310mm	10°	13 x 17mm	Cu 	25	B x 2	70mm ²

- F = 270 075 1210 or 278 190 4320
- B = 270 083 3520 or 278 190 4360
- G = 270 075 1630 or 278 190 4350
- ° = Standard product

We reserve the right to make technical changes without prior notice