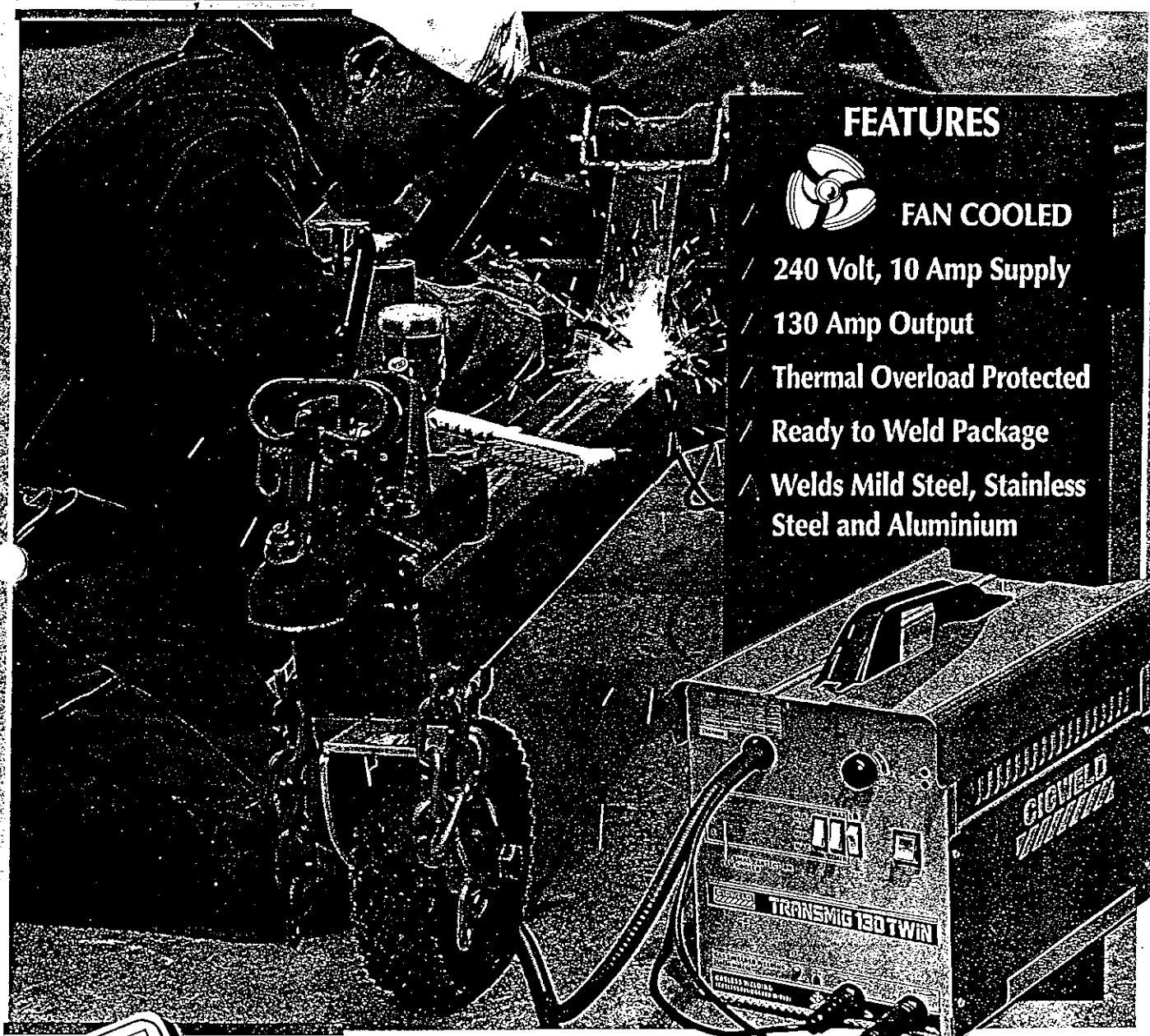


CIGWELD

▲ A R C ▲
EQUIPMENT

TRANSMIG 130 TWIN

GASLESS OR GAS SHIELDED MIG WELDER



FEATURES



FAN COOLED

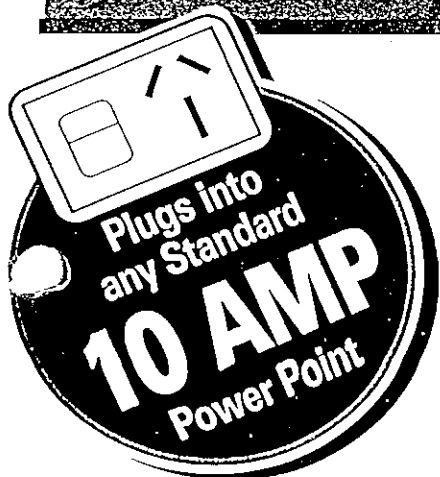
240 Volt, 10 Amp Supply

130 Amp Output

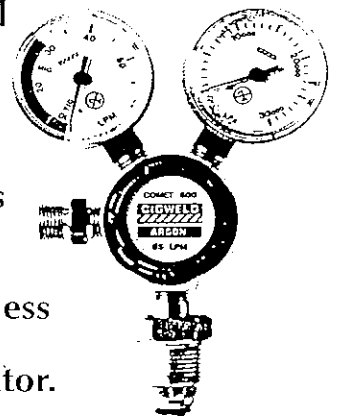
Thermal Overload Protected

Ready to Weld Package

Welds Mild Steel, Stainless Steel and Aluminium



With the Transmig 130 Twin, sheetmetal welding down to light gauge is easy. For outside applications, versatile gasless wire can be used on mild steel. With its twin process capacity, the Transmig 130 Twin can also perform gas shielded MIG, stainless steel and aluminium welding with ease. The Transmig 130 Twin comes ready for gasless welding and is complete with a quality Australian made* CIGWELD Gas Regulator.



Transmig 130 Twin Plant Part No. 704 777

* Pressure Gauges on Gas Regulator - Imported

INSTRUCTION MANUAL FOR PORTABLE WIRE WELDER

GENERALITIES

The aim of this booklet is to describe the correct use of the welding machine and to inform you about some elements of welding technique. THEREFORE WE RECOMMEND TO FOLLOW THE ADVICES HERE BELOW LISTED. The welding machine you bought has been so simplified in order to be functional, easy to use, light and transportable with one hand. It allows the welding of MILD STEEL, of STAINLESS STEEL and of ALUMINIUM. The welding machine is supplied prearranged for the welding of mild steel without needing gas.

FEATURES AND USE DEFECTS ITEM 888

UTILIZABLE WIRES

\varnothing 0,9 mm. flux cored wire \varnothing 1,2 mm. flux cored wire \varnothing 0,6 copperplated steel
 \varnothing 0,6 mm. stainless steel \varnothing 0,8 mm. aluminium \varnothing 0,8 copperplated steel
 other wires with bigger or smaller diameters cannot be used for the following reasons:

- 1 - the wire feed roller is not available
- 2 - the machine is not suitable
- 3 - the current nozzles are not available

WELDABLE THICKNESSES

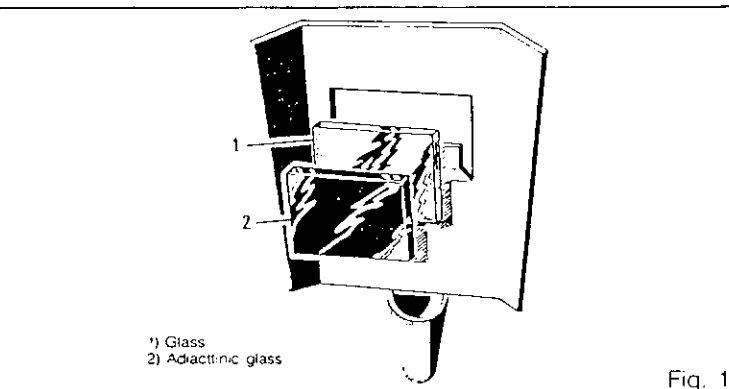
With flux cored wire	\varnothing 1,2	\neq 1,5 ÷ 5 mm.
With flux cored wire	\varnothing 0,9	\neq 0,8 ÷ 5 mm.
With aluminium wire	\varnothing 0,8	\neq 1 ÷ 3 mm.
With copperplated steelwire (AR CO ₂)	0,6	\neq 0,6 ÷ 5 mm.
With copperplated steel wire (CO ₂)	0,6	\neq 0,8 ÷ 5 mm. min. in Pos. 1/max
With copperplate steel wire	\varnothing 0,8	\neq 1 ÷ 5 mm.
With stainless steel wire	\varnothing 0,6 inox	\neq 1 ÷ 3 mm.

WELDABLE MATERIALS

With flux cored wire	IRON
With copperplated steel wire	IRON
With stainless steel wire (304 L)	STAINLESS STEELS with same composition (18 Cr 8 Ni) which represents 90% of the steels which are used.
With 0,8 Al wire (Mg. 5)	all materials with 3,5 ÷ 5% magnesium.

SETTING OF MILD STEEL WELDING WITHOUT GAS.

Remove the movable cover (1)
 Take the belts (20) supplied as equipment away from the coil area and insert them in the special seats.
 Prepare the mask as shown in Fig. 1.



1) Glass
2) Adiactric glass

Fig. 1

Draw out the wire stump present in the torch which served for the machine test.

Remove the wire sheathing.

Take the wire away from the coil outlet and cut a necessary length in order to have its end straight, insert the wire in the inlet (R) and let it pass over the driving shaft (S) and insert it in the sheath (T) for at least 50/60 cm.

Lower the wire holder group (U) taking care that the wire is remained inside the spline (groove) of the shaft. (Fig. 2)

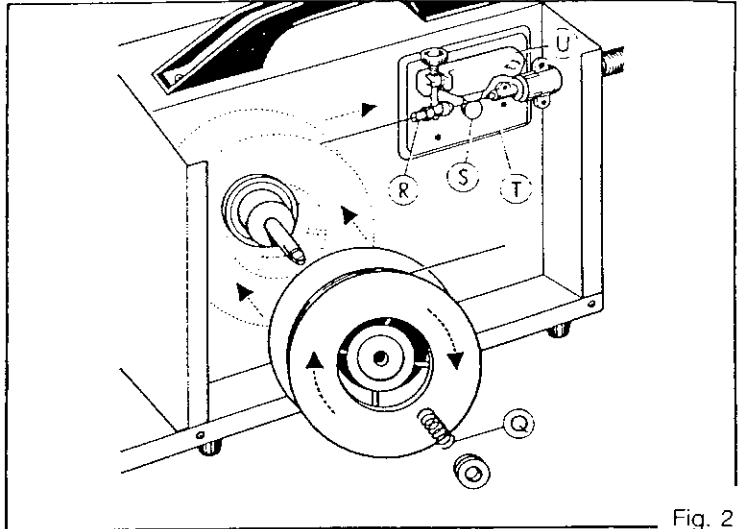


Fig. 2

Verify that the line voltage corresponds to the one indicated on the data plate of the welding machine, and then connect the supply wire to the socket (PROVIDED WITH AN EFFICIENT EARTH PLATE).

Remove the nozzle (41), unscrew the current nozzle (42).

Position switches (35) on 1 MIN.

Position the switch (33) on ON.

VERIFY THAT MOVABLE TORCH AND EARTH PLUGS (43) ARE POSITIONED ACCORDING TO THE SYMBOLS ON THE WELDING MACHINE.



Keep the torch sheath tight and without bendings.

Press the torch pushbutton till the wire is gone out for some cm of the lance.

Screw the current nozzle (42).

Insert the nozzle (41).

Be sure that the pieces are well cleaned and near.

THE MACHINE IS READY FOR WELDING

Select the welding position through switches (35), according to the thickness to be welded and following the indications shown on the panel. Bring the torch near to the welding point. Wear the mask (prepared as in Fig. 1) to shield your eyes.

Insert the welding arc by pressing completely the lever (39) of the torch. For a greater arc stability, keep the torch as nearest as possible to the piece to be welded and adjust the right wire speed through the knob (34) till the arc noise becomes continuous, regular and constant. With a too high speed the wire tends to beat on the piece with energy by making the torch rebound, with a too slow speed the wire fuses and moves away from the piece to be welded, or the arc does not remain lit.

AT THE END OF EACH WELDING, REMOVE THE SLAG.
 For a perfect welding you must position as shown in Fig. 3

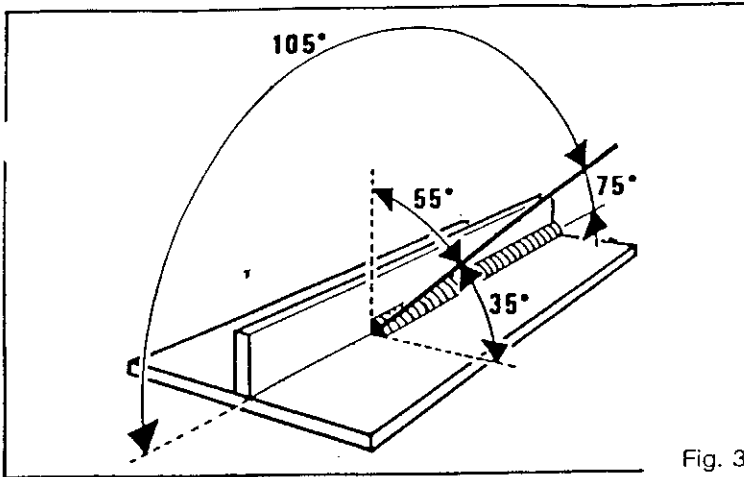


Fig. 3

For small thicknesses act as shown in Fig. 4 and for greater thicknesses follow indications of Fig. 5.

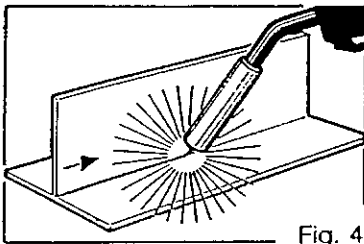


Fig. 4

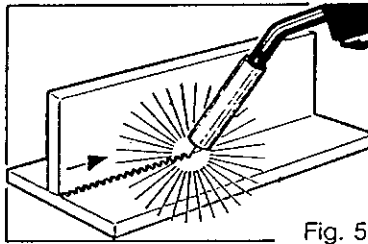


Fig. 5

N.B. WELDING WITH CORED WIRE DOES NOT NEED GAS SHIELD. WITH THIS SPECIAL WIRE YOU CAN WELD ONLY MILD STEEL. FOR ALUMINIUM AND STAINLESS STEEL SEE PARAGRAPH: WELDING WITH GAS.

MILD STEEL WELDING WITH GAS

POSITION MOVABLE TORCH AND EARTH PLUGS ACCORDING TO SYMBOLS.



WITH THE SPECIAL SET SCREW WRENCH REMOVE THE SECURITY DOWEL BLOCKING THE WIRE TOWING ROLL ON THE DRIVING SHAFT. POSITION IT IN SUCH A WAY THAT THE NOT KNURLED GROOVE IS IN CORRESPONDENCE WITH THE WIRE GUIDE SHEATH. RE-BLOCK THE ROLL ON SHAFT THROUGH SECURITY DOWEL. (Fig. 6)

Assemble the pressure reducer to the cylinder following the instructions shown in paragraph «Instructions for use for different types of cylinders». Insert a \varnothing 0.6 or 0.8 steel wire reel in the coil support for gas welding. POSITION THE SELECTION SWITCH ON (\uparrow) and then act as refer in paragraph mild steel welding without gas.

N.B. IT IS NECESSARY FOR THIS WELDING TO ASSEMBLE A CURRENT NOZZLE (42) WITH THE SAME DIAMETER OF THE USED WIRE THAT IS \varnothing 0.6 OR \varnothing 0.8, AND \varnothing 1 FOR ALUMINIUM WELDING. To weld mild steel you can use a mixture with Argon (75%) + CO₂ (25%) or CO₂ (100%).

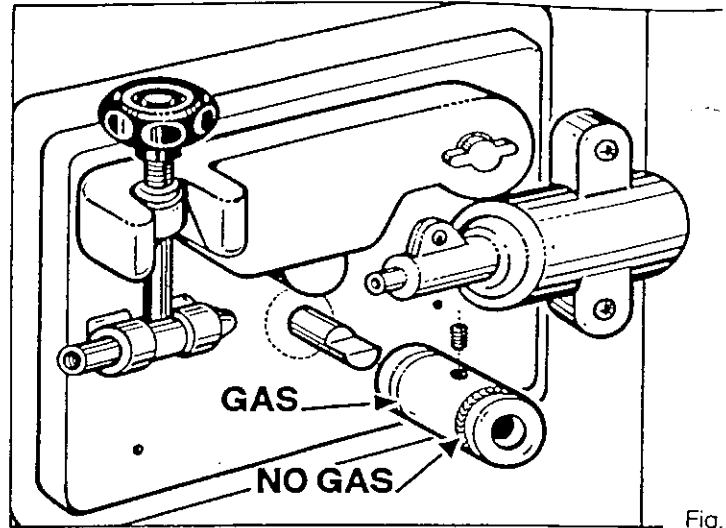


Fig. 6

STAINLESS STEEL WELDING

The welding must be prepared as described in paragraph «mild steel welding with gas» using the following equipment:

- Cylinder containing mixture of Argon (75%) + CO₂ (25%).
- Stainless steel wire coil

The torch inclination and the welding direction advised are shown in Fig. 3.

ALUMINIUM WELDING

The welding machine must be prepared as described in paragraph «mild steel welding with gas» using the following equipment:

- Cylinder containing Argon (100%)
- \varnothing 0.8 aluminium wire coil
- Current nozzle \varnothing 1 mm

The torch inclination and the advancing direction must follow advice of Fig. 3.

RIVET WELDING

In repair shops dents which are not accessible from the rear, are often straightened through spot-welding of some rivets.

The welding machine you bought carries out rivet spot-welding, through a special optional nozzle.

Prepare the machine for «mild steel welding with gas» and replace the nozzle with a gas nozzle for rivets, and then act as follows:

- insert the rivet in the special tube having regard that the wire do not touch the rivet.
- select the welding position through switches (24) according to the sheet thickness.
- press the torch lever as long as it is necessary for spot-welding

N.B. Before starting the work and assembling the rivet nozzle, we advise you to carry out a short bead in order to rightly adjust the wire speed.

INSTRUCTIONS FOR THE REPLACEMENT OF WIRE COIL

Switch the welding machine off: switch (22) in OFF position.

Remove the movable cover (1)

Cut with a well sharpened tool the end of the wire coming out from the current nozzle.

Release the wire holder group (H)

Wind the wire by rotating the coil in anti-clockwise direction.

Lock the wire side end of coil reel

Remove the coil by squashing the ends of the coil holder; F.

Replace of the coil

Insert the clutch spring (Q) and lock with the washer (H) and then act as shown in Fig. 2.

N.B. When you use a \varnothing 200 (kg. 5) coil, assemble the reel outside support (9) given as equipment before the clutch (Q) spring.

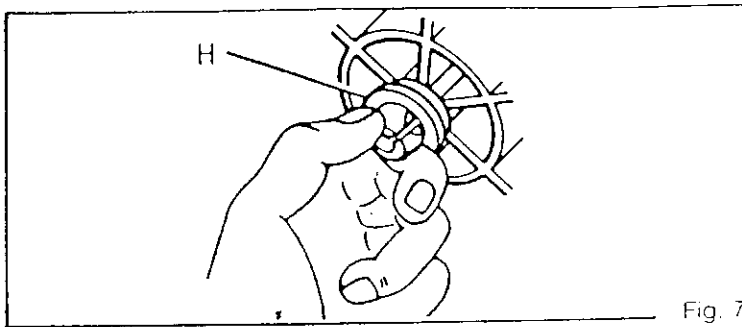


Fig. 7

INSTRUCTIONS FOR USE OF DIFFERENT TYPES OF CYLINDERS
NON REFILLABLE CYLINDERS see Fig. 8

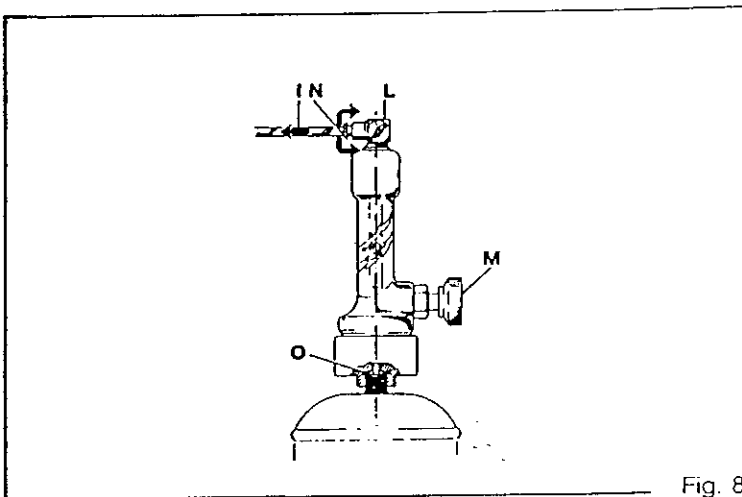


Fig. 8

Screw the cylinder to the pressure reducer and clasp only with the hands. Insert completely the gas hose (I) in the junction (L) of the pressure reducer.
 Press the torch lever and adjust through grip (M) the gas flow to 2 liters/min (in ventilated areas it is better to increase up to 3/4 liters/min.) for the cylinder replacement: compress the ring (N) according to the arrow direction and remove the gas hose (I) from the fast junction (L), unscrew the cylinder from the pressure reducer and replace.

N.B. Check periodically the wear conditions of the gasket (O) and if necessary, replace it with that one given in equipment.
ATTENTION!!! One-time cylinders cannot be filled again.

REFILLABLE CYLINDERS see Fig. 9

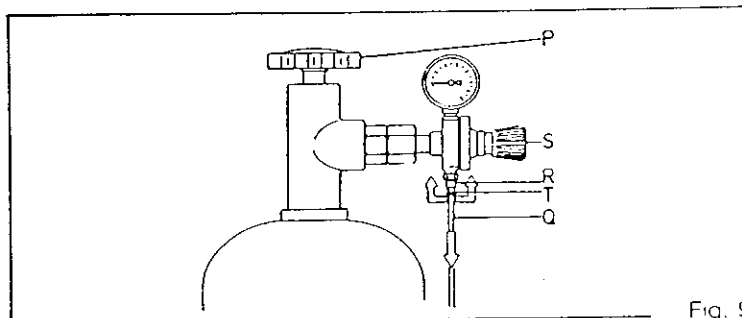


Fig. 9

Screw the pressure reducer to the cylinder and tighten with a special wrench to avoid possible gas leaks.
 Open the cylinder valve (P) (any).
 Insert completely the gas hose (Q) in the quick coupling (R). If the gas hose given in equipment is not sufficiently long, ask for the extension kit.
 Press the torch lever and adjust the rate of flow to 2 liters/min. through the pressure reducer handle (S).

N.B. It is normal that when you release the torch lever, the gauge index increases.
 The gas rate must be adjusted when the gas comes out from the torch, i.e. when the same lever is pressed.
 In order to avoid unuseful strains to the gauge, it is important to turn off the gas supply by unscrewing the handle (S) before turning on the cylinder valve.
 In order to remove the gas hose from the junction (R) press the grip (T) and take the hose away.
 To save gas consumption it is possible, particularly with low welding currents, to lower the rate of flow to less than 2 liters/min, provided that the arc is sufficiently protected and the welding without porosity.

MAINTENANCE AND USEFUL ADVICES

ATTENTION: before checking the inside, disconnect the welding machine plug from the supply line.
 Do not bring the torch near to the face to check gas and wire outlet.
 Stop the welding machine after use in order to avoid energy wastes.
 Turn always the gas off after use.
 The welding machine is provided with a thermal cut-out device. In case of intervention, wait for some minutes to allow the generator cooling.
 Possible extensions to the supply wire must be of right section and always not lower than the one of the wire given in equipment.
 Cut the welding wire with tools which do not bend it.
 During the welding very small spatters of molten metal deposit inside the gas nozzle, therefore it is better to remove the slags formed.
 Periodically check that the hole of the current nozzle has not excessively widened.
 Inside the torch hose (50) there is the wire guide sheath (47) which must be periodically cleaned, by blowing in a jet of dry and cleaned air.
 Avoid absolutely to beat the torch and to hit it violently; periodically check the electrical and gas connections.

WELDING PROBLEMS

ALUMINIUM
WELDING DOES NOT SET OR MAKES SMALL BALLS OF METAL:

- 1) The gas is not PURE ARGON.
- 2) The position of adjustment is not suitable
- 3) The position of the torch cable on the machine is wrong (polarity)
- 4) The material has not the same composition of the welding wire
- 5) The material is too thick

STAINLESS STEEL
THE WELD IS DARK. THIS IS NORMAL. SUITABLE DEOXIDIZERS CAN BE BOUGHT TO SOLVE THIS PROBLEM.

THE WELD BEAD PILES UP, MAKES SMALL BALLS OR GETS DETACHED WHEN IT HAS BEEN CARRIED OUT:

- 1) Gas is not suitable. DO NOT USE CO₂
 - 2) THE MATERIAL TO BE WELDED HAS NOT THE SAME COMPOSITION OF THE WELDING WIRE
 - 3) The material to be welded is too thick
 - 4) The position of the torch cable on the machine is wrong (polarity)
- THE MATERIAL TO BE WELDED WRITHES ITSELF DURING THE WELDING PROCESS.**

This is normal for the welding process of these types of steels.

WELDING WITH GAS - COPPERPLATED STEEL WIRE
THE WELD BEAD PILES UP, MAKES SMALL BALLS AND SPATTER (many sparks):

- 1) The position of the torch cable on the machine is wrong (polarity)
- 2) The speed adjustment of the wire is too high or the power is too low

N.B.: If you weld with CO₂ protection gas it is normal that spatters increase.

POROUS WELD
THIS DEFECT IS COMMON TO ALL COPPERPLATED STEEL WIRE AND IS DUE TO THE LACK OF GAS.

WELDING WITHOUT GAS - FLUX CORED WIRE

WELD MATERIAL DOES NOT SET. POROUS WELD:

- 1) The position of the torch cable on the machine is wrong (polarity).
- 2) The wire preceded the weld bead when the welding has been carried out.
- 3) The material to be welded is not suitable to be welded with that wire

B. THIS WIRE CAN BE COMPARED TO A BASIC ELECTRODE.

N.B. BEFORE WELDING WITH ANY WIRE AND ON ANY MATERIAL REMOVE OILS, GREASES, SUPERFICIAL TREATMENTS, (ZINC PLATING-GALVANISATIONS-SILKINGS AND SO ON...). THESE ELEMENTS MAY CAUSE POROSITIES - STICKINGS - DEFECTS IN THE WELD BEAD.

PROBLEMS WITH THE MACHINE

THE WIRE MOVES FORWARDS IN JERKS

- 1) The current nozzle is not suitable
- 2) Current nozzle with worn out hole
- 3) Wire reel is not well wound
- 4) Ovalized roller (not round)
- 5) Knotted torch
- 6) Wire speed too low or too high
- 7) Wire pressing unit too tight

THE WIRE DOES NOT MOVE FORWARD BUT THE REMOTE CONTROL SWITCH TRIPS

- 1) Reel with wire crossings
- 2) A wire of the wire feed motor is loose
- 3) Contacts inside the torch are oxidized
- 4) Wire pressing unit too tight

THE WIRE DOES NOT MOVE FORWARD AND THE REMOTE CONTROL SWITCH DOES NOT TRIP

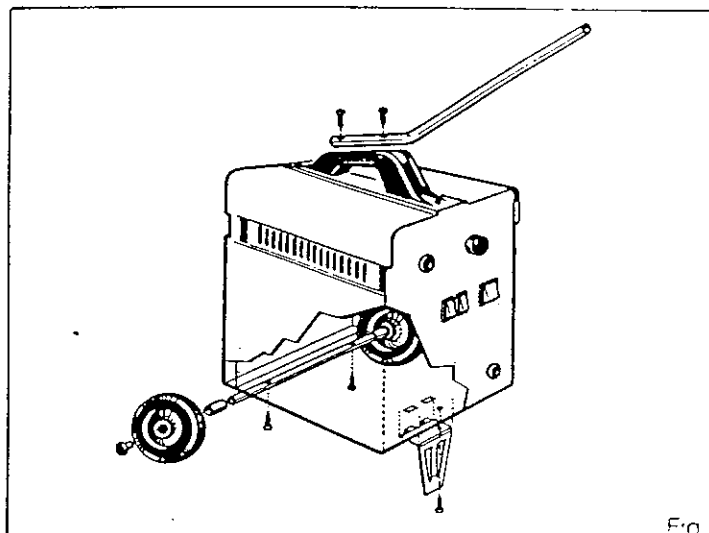
- 1) A wire inside the torch is loose
...Contacts inside the torch are oxidized
- 3) A wire inside the machine is loose
- 4) Defective circuit board

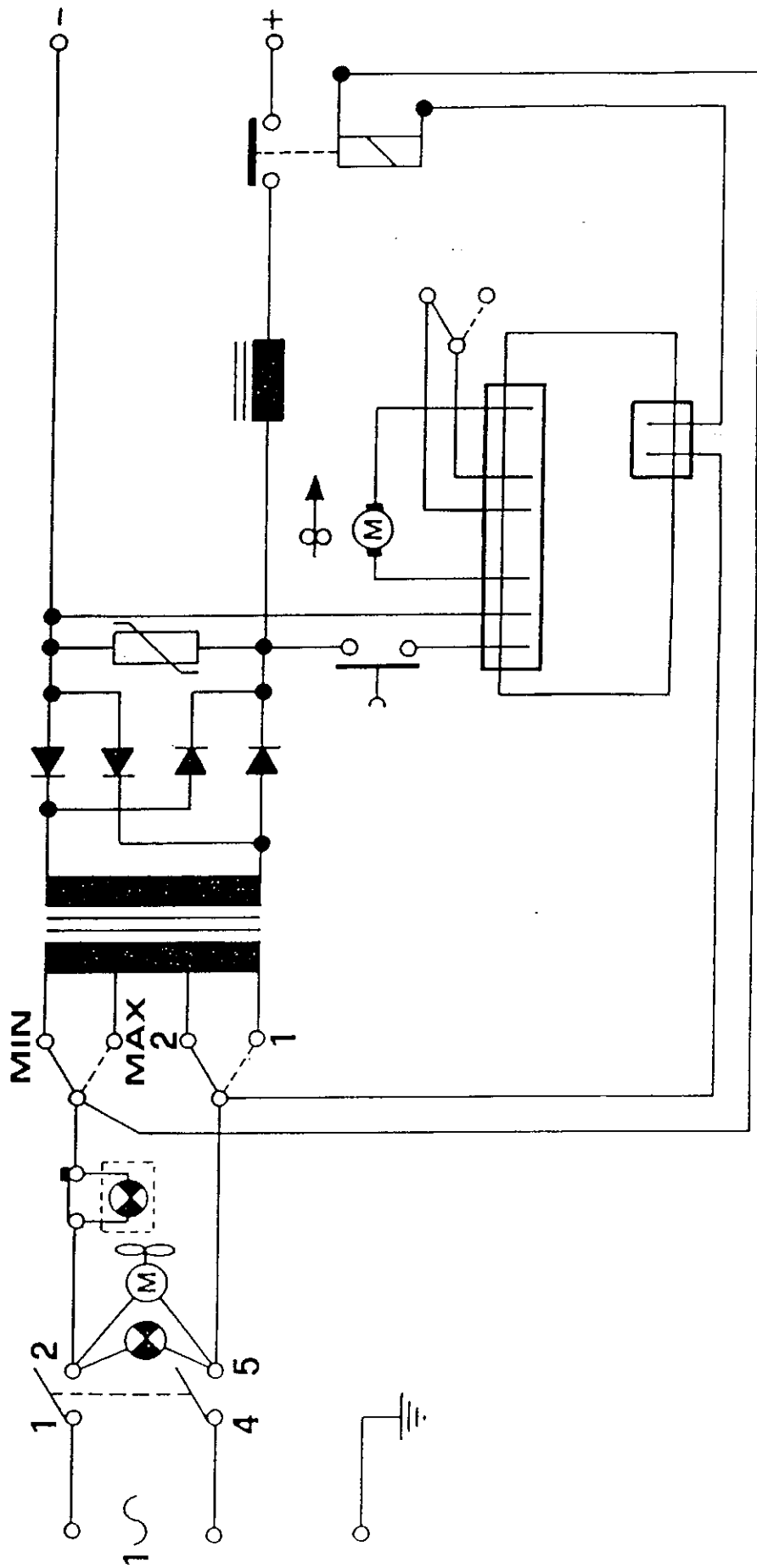
THE MACHINE IS WELDING OR HAS WELDED FOR A LONG TIME AND STOPS

THE THERMOSTAT HAS BEEN ACTIVATED. THAT IS NORMAL. IN 10 MINUTES APPROX. AND THE MACHINE WILL START WORK AGAIN.

PRESSING THE PUSH BUTTON OF THE TORCH THE WIRE FEED MOTOR IDLES BUT WHEN THE WIRE PRESSING UNIT IS WELDED THE WIRE FEED MOTOR STOPS. CONTACTS INSIDE THE TORCH ARE OXIDIZED.

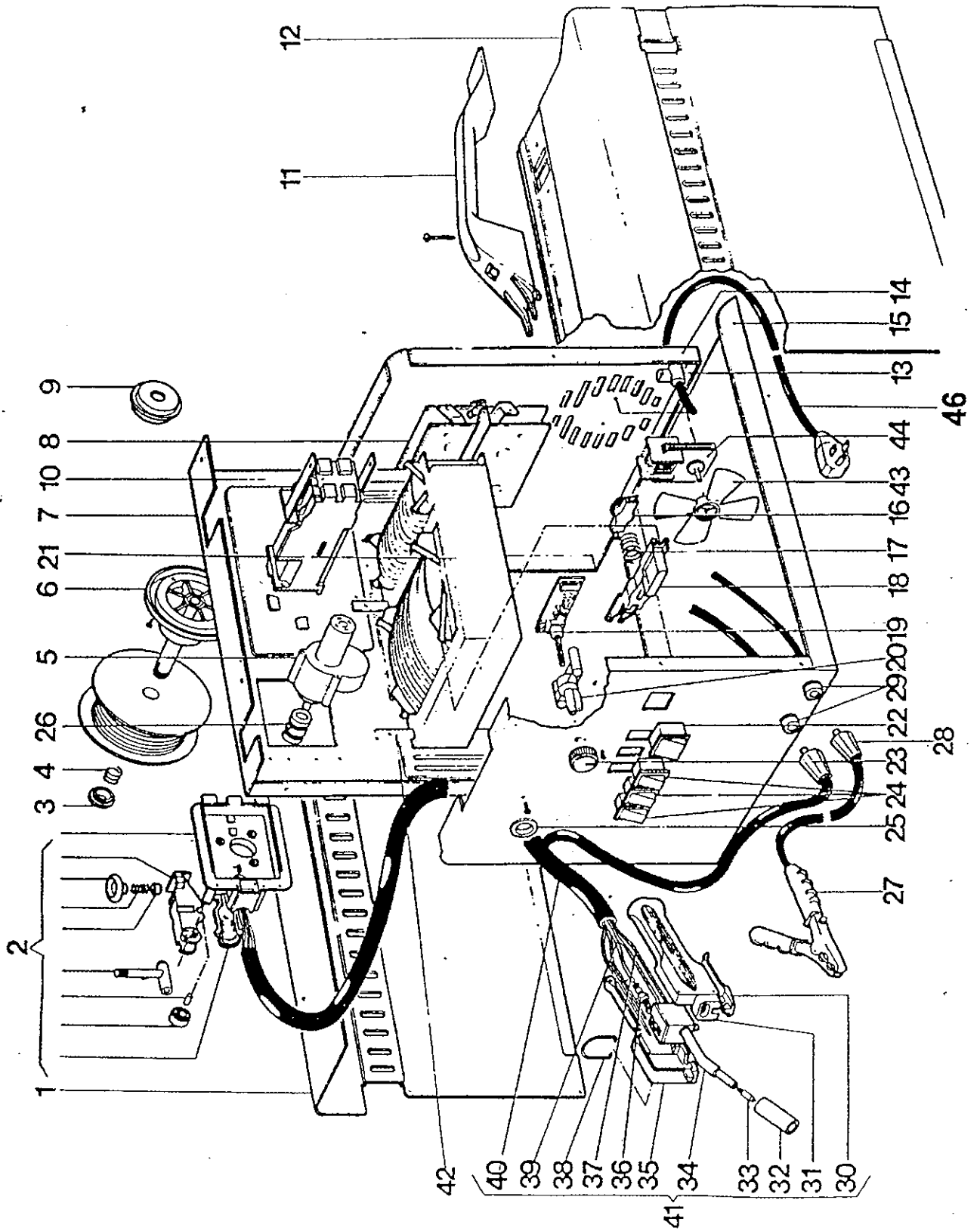
OPTIONAL: Upon request the wheel kit for the assembly can be supplied - see Fig. 10





ITEM	DESCRIPTION	PART No	QTY
1.	Loose Cover	OCE5800969	1
2.	Wire Drive Repair Kit	OCE5710108	1
3.	Spool Retaining Ring	OCE3080465	1
4.	Spool Retaining Spring	OCE3115010	1
5.	Wire Feed Motor	OCE5710106	1
6.	Reel Support	OCE3060191	1
7.	Equipment Support Panel	OCE5800797	1
8.	Rectifier	OCE3200070	1
9.	Outer Reel Support	OCE3060192	1
10.	Contactactor	OCE3190275	1
11.	Handle	OCE3055170	1
12.	Fixed Cover	OCE5800970	1
13.	Cable Holder	OCE3180002	1
14.	Rear Panel	OCE5802024	1
15.	Base Panel	OCE5801746	1
16.	Thermostat	OCE3190357	1
17.	Thermostat Spring	OCE3115012	1
18.	Thermostat Support	OCE3060132	1
19.	Circuit Board	OCE5600838	1
20.	Circuit Board Support	OCE3060136	1
21.	Transformer	OCE5600655	1
22.	Switch	OCE3190002	1
23.	Knob	OCE3055125	1
24.	Switch	OCE3190079	3
25.	Cable Outlet	OCE3180026	1
26.	Wire Feed Roller	OCE3080388	1
27.	Work Clamp	7976762	1
28.	Output Plug	7977160	2
29.	Output Socket	7977159	2
30.	Torch Trigger Lever	OCE3120018	1
31.	L/H Handle	OCE3055613	1
32.	Gas Nozzle	OCE1311	1
33.	Contact Tip	0.6mm OTW11/23	1
		0.8mm OTW11/30	
		0.9mm OTW11/35	

ITEM	DESCRIPTION	PART No	QTY
34.	Complete Push Button Assembly	OCE5750517	1
35.	R/H Handle	OCE3055612	1
36.	Quick Coupling	OCE3160022	1
37.	Conduit Liner	OCE5580017	1
38.	Torch Hook	OCE3060333	1
39.	Gas Hose	OCE5580005	1
40.	Torch Hose	OCE5580003	1
41.	Complete Torch	OCE8153100	1
42.	Locking Device	OCE3060378	2
43.	Fan Blade	OCE3065114	1
44.	Fan Motor	OCE3165059	1
45.	Optional Wheeling Kit	OCE152	1
46.	Supply Cable	OCE3195090	1

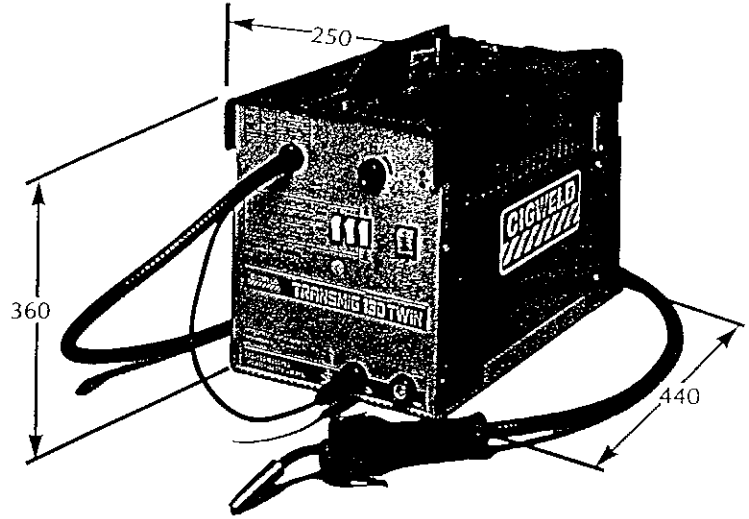


SPECIFICATIONS

DIMENSIONS

Supply Voltage	200-240 V
Frequency	50/60 Hz
Rated Input Current	7.6 A
Rated Input	1.7 kVA
Open Circuit Voltage	20-275 V
Rated Output Range	37A/16V-90A/18.5V
Min. Generator Requirements*	6.0 kVA
Welding Range	37-130 A
Duty Cycle	20% @ 90A
Weight	22.5 kg

* Minimum related kVA for a single phase generator or per phase rated kVA of a three phase generator.



WELDING WIRES

CIGWELD SPOOL PACK	Description & Wire Size	Net Wt.	Part No.	Applications	Recommended Shielding Gases*	Machine Polarity Setting
Autocraft Wires for Mild Steel	Minispool 0.6mm	3kg	72004	Suitable for the general purpose filler and butt welding of mild steel components including sheet and tubular sections such as tanks, hoppers, ductwork, railers, gates, pipes, frames and furniture etc.	Argoshield™ 30 Argoshield™ 31 and Argoshield™ 60	DC Electrode Positive
	Minispool 0.8mm	3kg	72005			
	Handispool 0.6mm	5kg	72008			
	Handispool 0.8mm	5kg	72009			
Shield-Cor B Gasless Mild Steel	Minispool 0.9mm	5kg	72016	Particularly suited to 'outside' welding jobs on mild and galvanneal steels where no shielding gas is required.	No shielding gas required	DC Electrode Negative
Autocraft 316LSI for Stainless Steel	Minispool 0.9mm	1kg	72020	Recommended for the critical welding of matching 316/316L stainless steels. Also suitable for the general purpose welding of austenitic stainless steel grades including 301, 302, 304/304L etc.	Argoshield™ 30 Argoshield™ 31 and Argoshield™ 60	DC Electrode Positive
	Handispool 0.9mm	5kg	72021			
Autocraft AL5356 for Aluminium & Alloys	Minispool 0.8mm	5kg	72022	Suitable for the welding of cast and wrought aluminium alloys containing 5% Magnesium, including grades 5083, 5454, 5456 and 5086, and marine grade alloys.	Welding Grade Argon	DC Electrode Positive
	Handispool 1.2mm	2kg	72023			

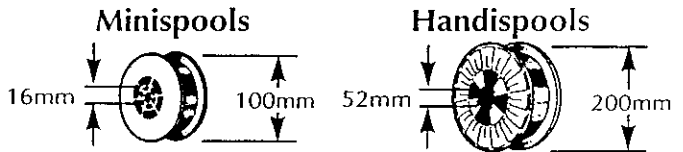
* Other Argoshield mixtures may be suitable for use with these Autocraft wires. Argoshield is a registered Trademark of The BOC Group.

CONTENTS

POWER SOURCE WITH TORCH, WELDING MASK, BRUSH/CHIPPING HAMMER, GAS REGULATOR/FLOWMETER, GAS HOSE, WORK LEAD, GASLESS WELDING WIRE.

	OPTIONAL ITEMS	PART NO.
	Wheeling Kit	OCE152
	Contact Tip 0.6mm	OTW11/23
	Contact Tip 0.8mm	OTW11/30
	Contact Tip 0.9mm	OTW11/35*
	Contact Tip 1.0mm	OTW11/40
	Torch Gas Nozzle	OCE1311*

*SUPPLIED WITH UNIT



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CIGWELD

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