

JET CP 4.0 CENTRAL



EN Safety instruction for use and maintenance - Do not destroy this manual
FR Instruction de securite d'emploi et d'entretien - Conserver ce livret d'instructions
ES Instrucciones de seguridad, empleo y mantenimiento - Conservar el presente manual
IT Istruzioni per la sicurezza nell'uso e per la manutenzione - Conservare il presente libretto
PT Instruções de segurança de utilização e de manutenção - Conserve este manual
NL Veiligheidsinstructies voor gebruik en onderhoud - Bewaar deze handleiding
RO Instrucțiuni privind siguranța în exploatare și întreținerea - Pastrati acest manual
EL Οδηγίες ασφαλείας κατά τη χρήση και τη συντήρηση – φυλάξτε το παρόν εγχειρίδιο
RU Руководство по безопасной эксплуатации и техническому обслуживанию

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1.0 TECHNICAL DATA

CONTACT CUTTING AND DISTANCE CUTTING	
Current	120 A
Duty cycle	60%
Cutting gas	compressed air
Cooling	AIR
Flow/bars	230 l/mn – 5 bars
Arc striking	Break of short circuit
Harness length	6 M - W000274854
	15 M - W000274855
In association with the power source	PLASMAJET 2C
	PLASMAJET 4C
European Standards	
	EN 60974-7
This equipment is protected by the following patents:	FR 9206760, FR 9801146 and US 6.169.264, FR 9715751 and US 6.147.318, FR 9816038
Origin equipment fitted to the torch	
Nozzle	C 1.4 W000268224
Electrode	C W000302576
front plat skirt	W000302667

2.0 GENERAL

The Plasma Jet is obtained by the combined effect of a continuous electric arc and a flow of gas. the thermal and kinetic energy of the column of ionized gas, or plasma, melts the material to be cut and ejects it from the groove.

For torch JET CP 4.0 CENTRAL, the gas used is compressed air, which acts simultaneously as cooling agent and as plasma-forming gas. The torch is built round the two main components which generate the plasma:

1. The electrode, which is the source of cathodic emission and the root of the arc,
2. The nozzle, which constricts and ejects the plasma and, as a secondary function, acts as the anode during the pilot arc phase.
3. The different parameters are often interdependent and influence the results of the cutting operation:
4. The diameter of the nozzle must be matched to the generator power (current) selected.
5. The speed of advance is applied by the operator as a function of the thickness to be cut and the power selected. For PLASMAJET equipment, the nature and flow rate of the gas are fixed from the start: the flow rate results from the feed to the installation of compressed air at 4.5 to 5.5 bars. A reduction of the pressure, within this adjustment band, optimizes cutting of thicker materials.
6. As a general rule, High power, selected as a function of the thickness to be cut, enables high cutting speeds, with consequent:
 - reduction (or disappearance) of adherent dross,
 - reduction of the "Heat Affected Zone",
 - increased quantity of material removed,
 - increased production of smoke.

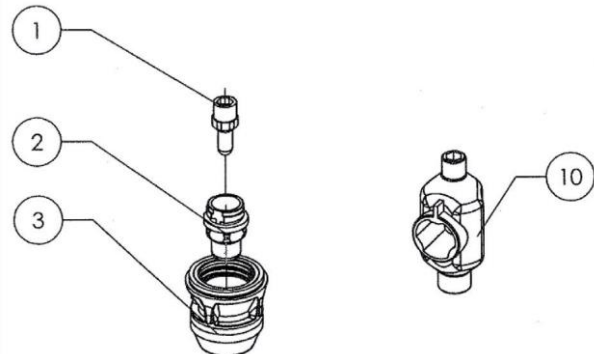
For the PLASMAJET - Parts may be up to 10 mm for contact cutting.

3.0 OPERATION

3.1 FITTING COMPONENTS

Choose a nozzle as a function of the type of generator, the current range selected and the type of work to be done; choose an electrode and a skirt/shoe to go with it see tables:

1. The elements: Electrode (1) Nozzle (2) are fitted to the torch using the multi-purpose wrench only and applying a moderate tightening torque.
2. Screw the skirt (3) on to the torch body; it has to be present to validate the "Safety" function of the generator.



3.2 USE FOR CUTTING

It is possible to ignite the pilot arc in the air. Make sure not to direct the nozzle at anyone or at anything but the object to be cut.

To ignite the arc, simply operate the safety trigger. This requires two movements:

1. Slide it longitudinally to unlock it
2. Press sideways to actuate the breaker.

To start on thin parts, no special precautions are necessary: position the torch on the workpiece, at the starting point, actuate the trigger and piercing will be immediate; on the other hand, for thicker parts, there is a risk of damage from rebounding particles of metal, to both the nozzle and the skirt. As far as possible, then, start the cut at the edge of the sheet.

In other cases, where starting in the middle of the sheet cannot be avoided, set a limit of not more than 1/3 of the maximum capacity of the range. Incline the torch slightly and move it gently during the transfer in order to allow the particles to be ejected laterally

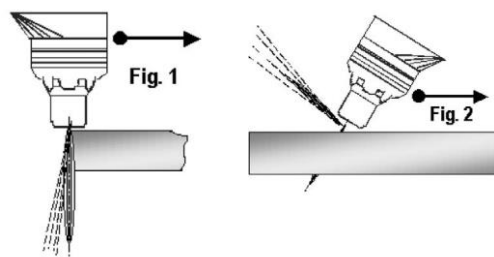
If the results of the cut are unsatisfactory:

1. Adapt the cutting speed to the thickness being cut,
2. Check that the nozzle and electrode are in good condition.
3. If necessary, choose a different power range.

To achieve a regular cutting trajectory, it is possible to press the end of the torch against a template or rule. if a long nozzle is used with a metal rule, be sure to interrupt the arc on leaving the work, to prevent it from remaining ignited due to contact between the nozzle and the rule, with risk of damage to the channel.

Before carrying out any operation on the torch, after cutting, wait for the after-gas to finish flowing to allow the nozzle to cool. If necessary, actuate the after-gas a second time to complete the cooling process.

WARNING. WHEN THE ARC IS IGNITED IN THE MIDDLE OF A WORK PIECE, PARTICLES OF METAL MAY BE EJECTED UPWARDS ONTO THE NOZZLE AND DAMAGE IT. TO AVOID THIS, ORIENT THE TORCH SO THAT THE PARTICLES CAN ESCAPE SIDWAYS. PERFORM THE CUT, KEEPING THE STARTING POINT IN THE WASTE.



3.3 CONTACT CUTTING

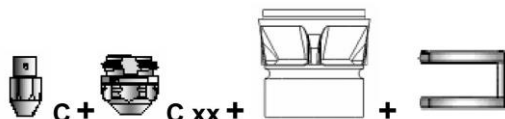


mm 	Mild steel		Stainless		Aluminium		
	I (A) 	35 A FL 0,8	50 A FL 1,2	35 A FL 0,8	50 A FL 1,2	35 A FL 0,8	50 A FL 1,2
1 mm		5,50		4,80		7,50	
2 mm		3,50		3,00		5,30	
3 mm		2,40	4,50	1,80	2,30	3,30	4,80
4 mm		1,70	3,00	1,25	1,40	2,30	3,30
5 mm		1,20	1,70	0,70	0,85	1,60	2,20
6 mm		0,80	0,84	0,48	0,54	1,20	1,50
8 mm		0,50	0,50	0,30	0,35	1,00	0,90
10 mm			0,30		0,27		0,50

X.XX Travel speed for a result of quality cut (optimal cut surface finish, and least dross).

Y.YY Travel speed for a result of separation cut.

3.4 DISTANCE CUTTING



mm 	Mild steel				Stainless				Aluminium				
	I (A) 	35 A C1,0	50 A C1,2	85 A C1,4	120 A C1,8	35 A C1,0	50 A C1,2	85 A C1,4	120 A C1,8	35 A C1,0	50 A C1,2	85 A C1,4	120 A C1,8
1 mm		5,00				5,00					8,40		
2 mm		3,30				2,80					5,40		
3 mm		2,30	2,60			1,40	2,30				3,40	3,90	
4 mm		1,60	1,90			0,80	1,50				2,20	2,70	
5 mm		1,00	1,30	3,00		0,50	0,90	2,90			1,60	2,10	4,80
6 mm		0,60	0,80	2,20		0,35	0,55	2,10			1,00	1,40	3,70
8 mm		0,30	0,50	1,50	3,55	0,24	0,36	1,30	3,25	0,60	1,00	2,80	4,55
10 mm		0,18	0,39	1,10	2,55	0,18	0,27	1,00	2,15	0,38	0,68	1,80	3,45
12 mm			0,24	0,70	1,75		0,18	0,60	1,30		0,50	1,40	2,55
15 mm			0,10	0,45	1,20			0,36	0,80			0,80	1,55
20 mm				0,36	0,77			0,24	0,40			0,50	1,00
25 mm				0,24	0,42			0,15	0,27			0,36	0,70
30 mm					0,33				0,18				0,40
35 mm									0,12				0,30
40 mm									0,10				0,20
45 mm					0,07				0,06				0,14

X.XX Travel speed for a result of quality cut (optimal cut surface finish, and least dross).

Y.YY Travel speed for a result of separation cut.

4.0 MAINTENANCE

REMINDER: FOR THE SAFETY OF PERSONNEL, ALWAYS TAKE THE PRECAUTION OF SWITCHING OFF THE APPARATUS BEFORE CARRYING OUT ANY OPERATION ON IT OR WHEN IT IS NOT IN USE.

4.1 NOZZLE

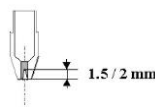
Do not remove the nozzle immediately after cutting, but let it cool during the after-gas flow.

Do not use tools such as slip-joint pliers, in order to avoid distorting the nose of the torch.

The nozzle is easily unscrewed using the combination wrench W000302578.

Replace the nozzle when the edges of the cut are no longer even, or when the cutting speed is significantly reduced.

4.2 ELECTRODE



Check the depth of wear of the electrode: 1.5 to 2 mm.

This degree of wear corresponds to an average period of use of 1 to 2 hours, as a function of the power of the arc and the number of ignitions.

If the electrode is drilled, make sure that the nozzle's gasket is repaired, in order to guarantee:

1. the compressed air flows,
2. the service life of the wear parts,
3. the cutting performance of the torch

Do not try to use any more of the electrode, which would entail a risk of piercing the dip tube and destroying the torch.

WHEN REPLACING THE ELECTRODE AND THE NOZZLE, USE ONLY THE WRENCH W000302504 SUPPLIED WITH THE TORCH.

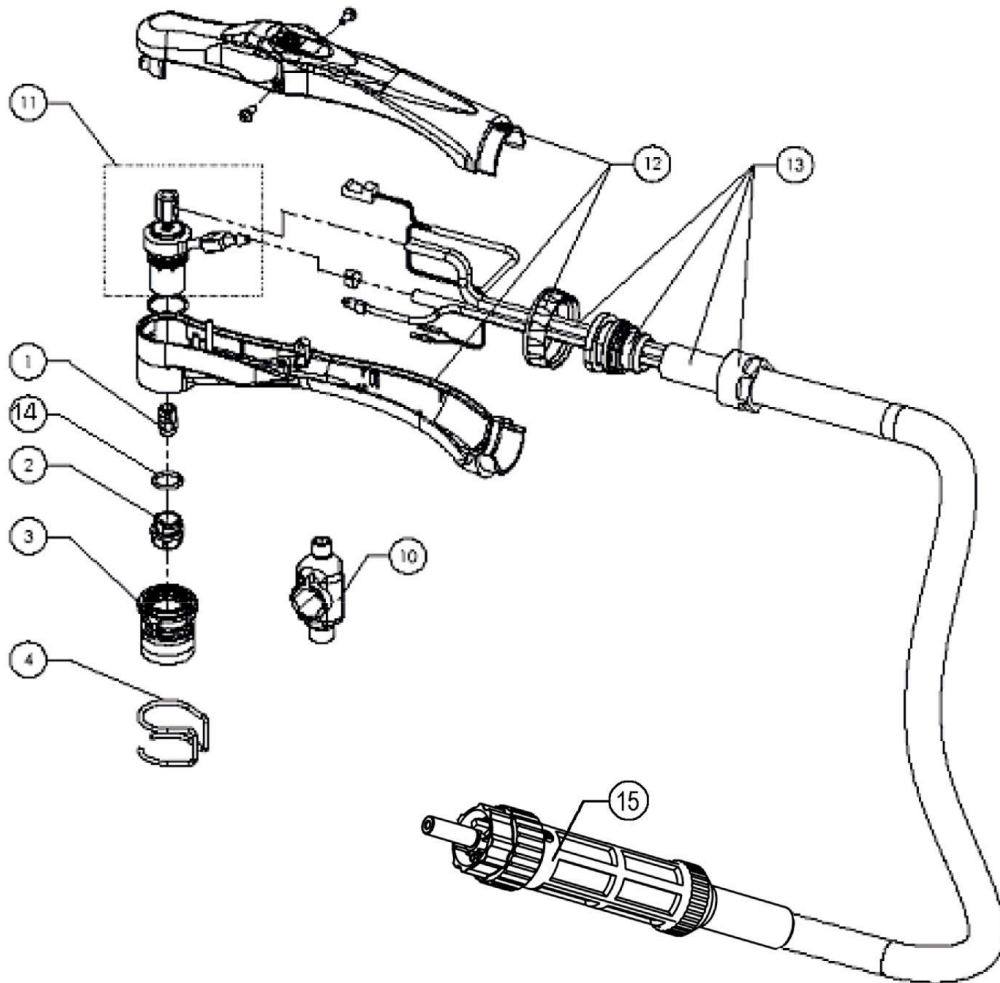
4.3 CONTACT CUTTING WEAR PARTS

	W000302668	SKIRT CONTACT
	W000302575	ELECTRODE FL
	W000302569	NOZZLE FL 0,8
	W000302568	NOZZLE L 1,2

4.4 DISTANCE CUTTING WEAR PARTS

	W000302667	SKIRT DISTANCE
	W000302666	SKATE
	W000271310	SKIRT DISTANCE WITH CRENEL
	W000274878	BEVELLING SKIRT
	W000302576	ELECTRODE
	W000302571	NOZZLE C 1,0
	W000302572	NOZZLE C 1,2
	W000302524	NOZZLE C 1,4
	W000302669	NOZZLE C 1,8

SPARE PARTS / PIÈCES DÉTACHÉES / LISTA DE LAS PIEZAS DE RECAMBIO / LISTA PEZZI DI RICAMBIO / ERSATZTEILLISTE / PEÇAS SOBRESSELENTES RESERVDALAR / WISSELSTUKKEN / LISTE AF RESERVEDELE / LISTE OVER RESERVEDELER / VARAOSALUETTELO / LISTA PIESE COMPONENTE / ZOZNAM NÁHRADNÝCH DIELOV / SEZNAM NÁHRADNÍCH DÍLŮ / PÓTKATRÉSZEK LISTÁJA / LISTA CZĘŚCI ZAMIENNYCH ΚΑΤΑΛΟΓΟΣΑΝΤΑΛΛΑΤΙΚΩΝ / ПЕРЕЧЕНЬ ЗАПАСНЫХ ЧАСТЕЙ



R.	CODE	DESCRIPTION
10	W000302578	COMBINATION WRENCH
11	W000266534	JET CP 4.0 TORCH BODY
12	W000265844	HANDLE
13	W000276637	CABLE ASSEMBLY JET CP 4.0 – 6 M
13	W000276638	CABLE ASSEMBLY JET CP 4.0 – 15 M
14	W000269523	NOZZLE O'RING VITON 13.3X2.4
15	W000276319	TORCH CONNECTOR



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