SAF-FRO

OPTIPULS i

Inverter technology MIG/MAG welding installation.

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AIR LIQUIDE WELDING

OPTIPULS i

Formidably easy to use, compact in size and offering exceptional welding performance, this new tool offers an unrivalled level of user comfort.

- Smooth or pulsed current MIG/MAG welding for all your non-alloy steel, stainless steel and aluminium applications.
- High-performance arc striking, very gentle melting and perfect arc stability for very accurate welding of thin plate.
- The synergic laws are divided into sixteen segments, for perfect adjustment of the welding arc, whatever the required power.
- Their power rating guarantees a high current reserve for welding with flux-cored wire and covered electrodes.
- Optimum design integrating the torch cooling unit makes handling extremely easy.
- The four-roller wire feed unit mounts on top of the welding set with the cables and harnesses unwinding to the rear over special-purpose supports.

Effective solutions for welding:

- **non-alloy steel with flux-cored wire,**
- **stainless steel and special steel,**
- **aluminium and aluminium alloy.**

Essential advantages

For successful welding:

- perfect arc striking,
- remarkable melting and arc stability,
- 16-segment synergic laws,
- wire/gas combination selection,
- adjustable arc fading,
- adjustable melting dynamics,
- choice of flux-cored or metal cored wires,
- coated electrode welding.

For operator comfort:

- very simple front panel,
- presetting of all parameters, with set values maintained after welding,
- synergic adjustment of welding parameters,
- easy access to internal parameters,
- easy handling: light in weight and compact in size,
- space for stowing cables and harnesses.

OPTIPULS 380i and 500i W

Effective solutions for welding non-alloy steel with flux-cored wire, stainless steel and special steel, aluminium and aluminium alloy.

OPTIPULS 380i W, 500i W + flux-cored wires for welding non-alloy steel: quality and productivity.

Welding applications using flux-cored wires are increasingly numerous. The OPTIPULS 380i W and 500i W are ready to meet these new expectations. They offer you preselection of the most widely used flux-cored wires, including flux-cored wires (FLCW) and metal-powder-cored wires (MTCW). Pulsed current can be another strong point when using basic flux-cored wires in the globular melting range. The DV44i wire feed unit is rugged, easy to handle and offers high performance. Its lightness and compact size mean it can pass through a manhole and the absence of electronics makes it totally reliable!

OPTIPULS 380i W and 500i W for welding stainless steel and special steel: the optimum solution.

Very high performance welding power supplies are needed for welding stainless steel. The OPTIPULS 380i W and 500i W are totally suitable for all stainless steel welding tasks. The pulse shapes have been designed to ensure very gentle and regular melting. There are many varied grades of wire for welding high-alloy steel. We have preselected the two most widely used grades (308 L and 316 L) for you. Inconel wire can also be used. The OPTIPULS 380i W and 500i W are capable of welding very thin stainless steel plate.

SAFDUAL series 100

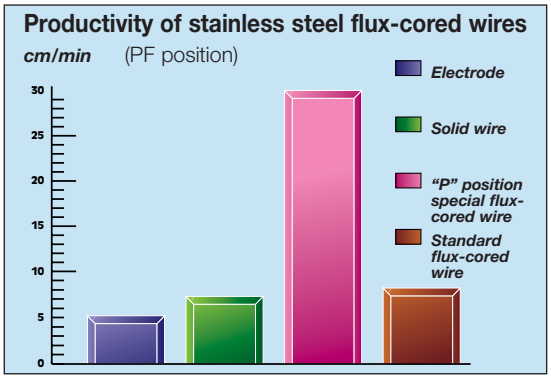
Fast solidification enables high-current welding in all positions with a significant improvement in productivity (see example below).

Productivity in PF position (vertical upward).

	SAFER NF 510 electrode	NERTALIC 70A solid wire	SAFDUAL 100 flux-cored wire
Diameter	4 mm	1.2 mm	1.2 mm
Current	165 A	140 A	250 A
Instantaneous rate of deposition	1.7 kg/h	1.7 kg/h	3.5 kg/h
Actual rate of deposition*	0.6 kg/h	0.75 kg/h	1.6 kg/h

** 35% duty factor for the electrode and 45 % for semi-automatic (solid or flux-cored wire).*

The OPTIPULS i therefore find applications in industries such as agrifoods, thin sheet metal work and even pressure vessels. It is also designed for the use of stainless steel flux-cored wires on thicker plate. The 600 series flux-cored wires include the SAFDUAL 650P and SAFDUAL 652P for improved productivity in positional welding with a 80 % Ar - 20 % CO_2 type gas (ATAL 5A).



Smooth current MAG welding with flux-cored wire.

Technical characteristics

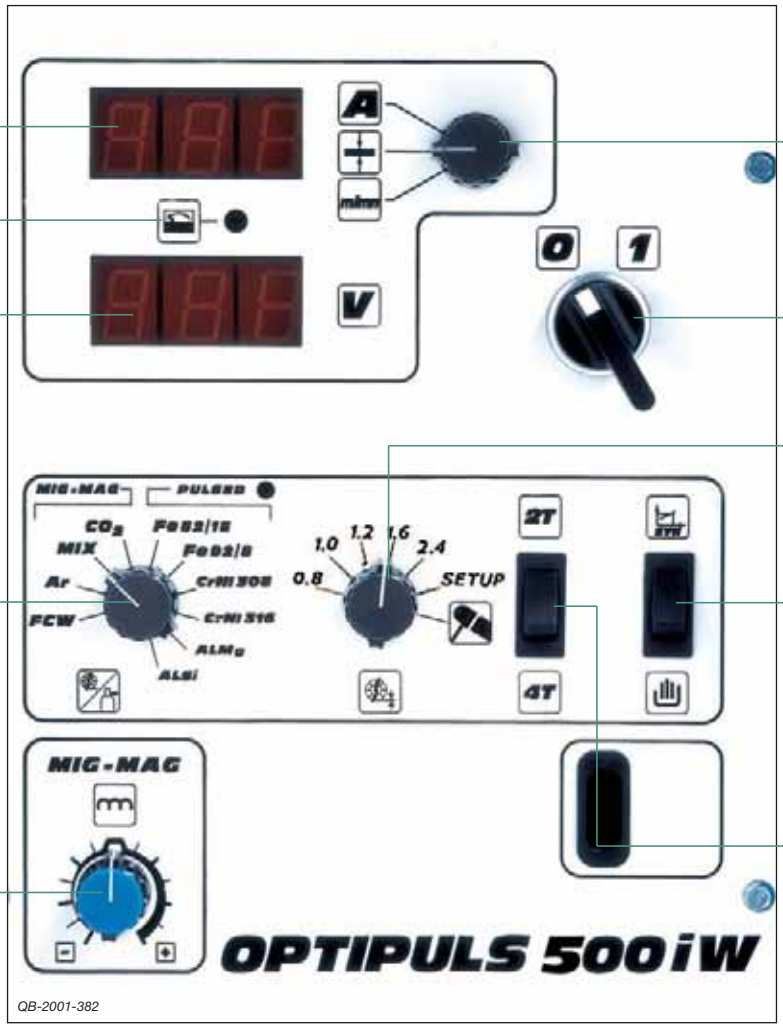
■ **Pre-setting and display of**
- wire feed rate,
- thickness,
- current.

■ **Indicator showing** most recent parameters retained.

■ **Pre-setting and display of voltage.**

■ **Selector**
- smooth current,
- pulsed current,
- wire/gas combination

■ **Choke adjustment,** smooth current.



■ **Selector**
- current,
- thickness,
- wire speed feed.

■ **On/off.**

■ **Selector**
- wire diameter,
- set-up,
- coated electrode.

■ **Selector**
- synergic,
- manual.

■ **2-stage/4-stage** cycle selector.

		OPTIPULS 380i W	OPTIPULS 500i W
Primary		400 V - 50/60 Hz	
Three-phase primary voltage			
Primary consumption at max current		28 A	44 A
Secondary		96.8 V	57 V
No load voltage			
Adjustment range		10 A - 350 A	10 A - 500 A
Duty cycle at 40° C	at 60%	350 A	450 A
	at 100%	300 A	400 A
Wires usable	Steel/SS	0.8 - 1.6 mm	
	Aluminium	1.0 - 1.6 mm	
	Flux-cored wire	1.0 - 2.4 mm	
Welding cycle		2S - 4S	
Mode		• synergic or manual • adjustment by set-up of the cycle parameters • flux cored-wire selection	
Dimensional characteristics:		1090 x 610 x 970	
Dimensions (L x l x h)			
Weight		96 kg (water) 91 kg (air)	107 kg (with cooling unit) -
DV44i wire feeder		4	
Number of rollers			
Wire feed rate		0 to 20 m/min	
Protection		IP 23	
Standards		EN 60974-1	

Range OPTIPULS i

OPTIPULS 380i W with water cooling

The water-cooled version of the OPTIPULS 380i ensures great user comfort.

It offers very high performance and is very easy to use.

It can handle the most difficult smooth and pulsed current applications.

Its high power rating (350 A) makes it equally ideal for flux-cored wire welding.

Finally, its original and modern design makes the OPTIPULS 380i W the ideal installation.

OPTIPULS 500i W with water cooling

OPTIPULS 500i W is a powerful installation for heavy duty cycle applications.

Working in specific purposes as aluminium or stainless steel welding is very easy.

The equipment is also perfectly suited for flux cored wire of different variety up to 2.4 mm diameter.

The power of OPTIPULS 500i W is also well appreciated in on site applications or for large metalworking assemblies.

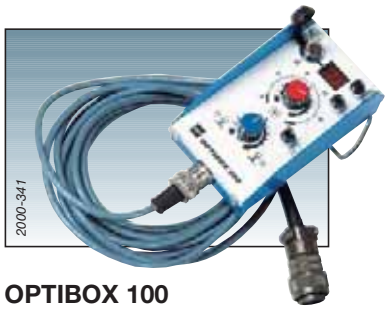
OPTIPULS i ordering information

Options

Remote control BB-BOX
Remote control of wire feed speed and arc length (voltage).
Catalogue number: 9160-1071

Pivoting support
Supports and orients the DV44i wire feed unit complete with its trolley.
Catalogue number: 9160-1064

Slinging arm
For suspending the wire feed unit.
Catalogue number: 9160-1059
(non illustrated)



OPTIBOX 100
Remote control allowing storage of 97 programs, wire speed and voltage. Possibility of locking or limiting the adjustment range.
Catalogue number: 9160-1068

Standard offer reference :
V0 03 500 (380i W) - V0 03 600 (500i W)

• Power supply only

OPTIPULS 380i W **with** water cooling unit	9160-1420
OPTIPULS 380i W ready for connection of DVA wire feed unit (42 V) and ALUTORCHE, **with** water cooling unit	9160-1418
OPTIPULS 500i W **with** water cooling unit	9160-1422

• Package : complete installation ready for use comprising power supply, DV 44i wire feed unit withs heathed harness and PROMIG torch

	OPTIPULS 350i / 380 i W PROMIG NG 341 / 341 W	OPTIPULS 500i W PROMIG NG 441 W
with 10 m harness and 3 m torch installation **with** water cooling unit	9160-1611	9160-1617

• DV 44i wire feed unit: for standard applications with sheathed harness, spool cover and trolley

	OPTIPULS 380i W and 500i W
DV 44i with 2 m harness, pre-equipped for water cooling	9160-1430
DV 44i with 5 m harness, pre-equipped for water cooling	9160-1431
DV 44i with 10 m harness, pre-equipped for water cooling	9160-1432

• Special equipment for aluminium

	OPTIPULS 380i W	OPTIPULS 500i W
ALUKIT D2 wear parts for feeding 1.0 and 1.2 mm diameter aluminium wire	9162-0084	To equip OPTIPULS 500 i W for aluminium welding, consult SAF-FRO.
ALUKIT D2 wear parts for feeding 1.2 and 1.6 mm diameter aluminium wire	9162-0085	
ALUNET aluminium wire cleaning pad	0002-0014	

• Specific discardable parts for feeding flux-cored wire

wire diameter	wire guide (entry)	wire guide (inter)	roller	wire guide (exit)
1.0 mm	9161-7006	9161-1810	9161-7011	9160-1821
1.2 - 1.6 mm	9161-7006	9161-1810	9161-7011	9160-1823
1.6 - 2.4 mm	9161-7006	9160-1811	9161-7012	9160-1819

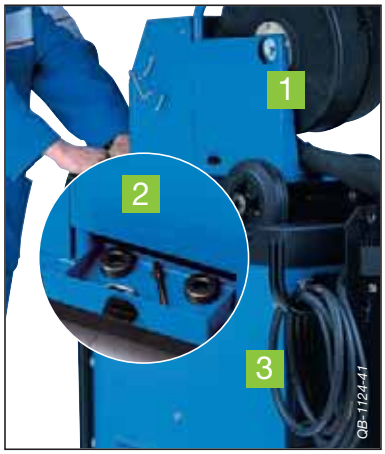
• PROMIG NG torches

	3 m length	**4 m length**
PROMIG NG 341 air (350 A at 60 %)	W 000 260 894	W 000 260 895
PROMIG NG 441 air (400 A at 60 %)	W 000 260 897	W 000 260 898
PROMIG NG 241W water (250 A at 100 %)	W 000 260 900	W 000 260 901
PROMIG NG 341W water (340 A at 100 %)	W 000 260 903	W 000 260 904
PROMIG NG 441W water (400 A at 100 %)	W 000 260 906	W 000 260 907

OPTIPULS i - DV 44 i

DV44i wire feed unit

- Powerful wire feed unit with four-roller mechanism, handling all grades of wire up to 2.4 mm diameter.
- Tachometer-based speed regulation from 0 to 20 m/min.
- Rugged and reliable (no electronics).
- Low weight.
- Minimum overall dimensions (can be passed through a manhole).
- Short torch connection.



Easy handling

1. The wire feed unit stows easily on top of the power supply.
2. Wear parts can be easily put away in the side drawer.
3. The cables wind onto their support.
4. Simple connector are perfectly protected at the rear of the power supply.

Wire feed unit shipped complete with:

- trolley,
- spool cover,
- sheathed harness (various lengths available),
- pre-equipped for water cooling

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AIR LIQUIDE WELDING
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Founded in 1902, and now present in 65 countries with 31 900 employees, Air Liquide is the world leader in industrial and medical gases and related services. The group offers innovative solutions based on constantly enhanced technologies to help manufacture many indispensable everyday products and preserve life.

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