

# ***FLEX and BUFFALO***

A complete range of rugged installations for MMA/TIG welding and gouging.



# Power, ruggedness, compactness and thyri



**SAF-FRO FLEX 4000 CELL and BUFFALO 500 and 650 can withstand the most difficult working conditions (tropical climate, high relative humidity, etc). Combining power with reliability, the FLEX 4000 CELL and the BUFFALO 500 and 650**

## For welding in the wide open spaces



## For Gouging

The FLEX and BUFFALO installations offer exceptional gouging performance:

- 6.3 mm Ø electrode (FLEX 4000 CELL),
- 8 mm Ø electrode (BUFFALO 500),
- 13 mm Ø electrode (BUFFALO 650).

The BUFFALO and FLEX units can also be stacked and connected in parallel, reducing their footprint.



# stor\* technology for the best of welding

can cope with all MMA and TIG welding and gouging applications, even when you need power and you have to use long welding cables (outdoor work, on site, pipeline laying, ship building, etc). Using “thyristor” technology, all welding parameters, are held constant with main supply, maintained with in tolerance limits of  $\pm 15 \%$ .

Selection Table

	BUFFALO 350 CC/CV	FLEX 4000 CELL	BUFFALO 500	BUFFALO 650
Welding current	5 - 350 A	10 - 400 A	20 - 500 A	20 - 630 A
Rated current @ 60%	300 A	300 A	450 A	470 A
Duty cycle	30 %	35 %	45 %	35 %
Max. electrode diameter	6.3 mm	6.3 mm	6.3 mm	6.3 mm
Cell	NO	Yes	Yes	Yes
Max. gouging diameter	5 mm	6.3 mm	10 mm	13 mm
Remote control	Option	Option	Option	Option
Wheels kit	Included	Included	Option	Option
Ampermeter/Voltmeter	Included, digital	Included, digital	Option	Option
TIG	Yes with TIG module	Yes TIG lift	Yes with TIG module	YES with TIG module
MIG	Yes with MIG module	No	Yes	Yes
Generator compatible	No	Yes	Yes	Yes
Input	400 V - 50-60 Hz	230/400 V - 50-60 Hz	220/380/415 V - 50-60 Hz	220/380/415 V - 50-60 Hz
Weight	29 kg	146 kg	180 kg	190 kg

## BUFFALO 350i CC/CV

- Buffalo concept (multi process)
- Inverter technology
- Light (29 kg) and powerfull

## BUFFALO

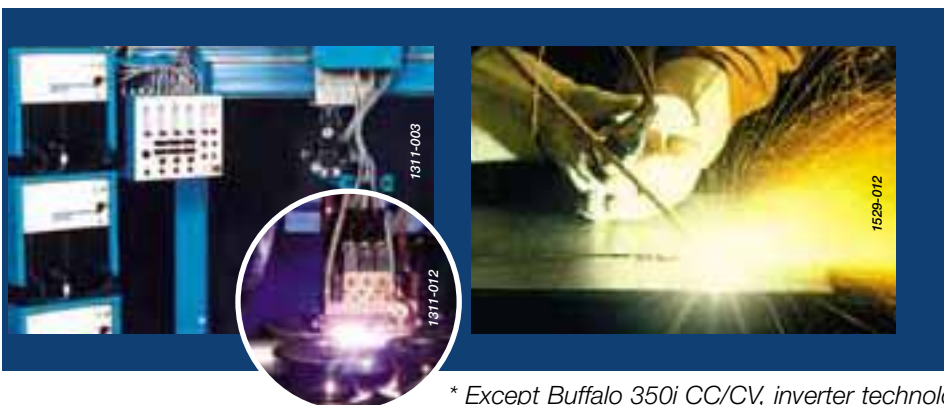
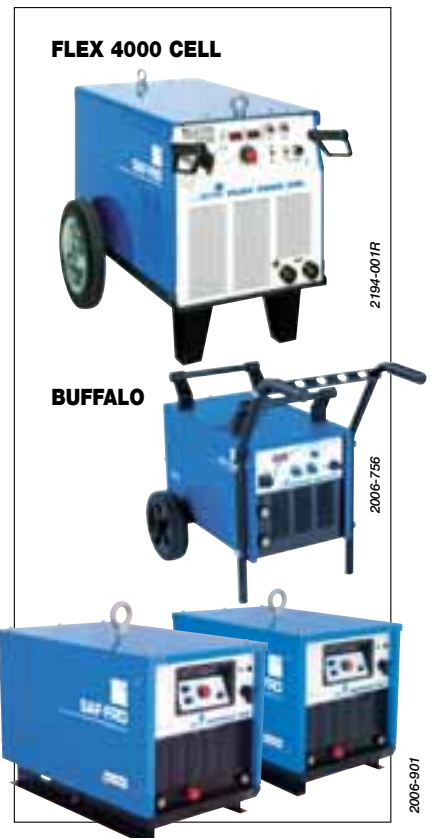
Centre of all your welding applications

- MIG process
- TIG process
- MMA process
- Gouging
- Automatic applications TIG/Plasma

## FLEX 4000 CELL

Simple and rugged installation:

- MMA process (coated electrode)
- TIG welding (LIFT START)
- Gouging
- Delivered with wheels, and voltmeter/ampermeter



\* Except Buffalo 350i CC/CV, inverter technology

# BUFFALO 350i CC/CV



1881-038

**BUFFALO 350i CC/CV** is a very rugged, extremely compact and heavy duty inverter base MMA machine able to operate in extreme conditions thanks to its rugged construction though incorporating advanced technology. Mobile thanks to its reduced size and weight, it is a multi-process installation suitable for most application.

- 1** Plug for remote control
- 2** Current adjustment potentiometer
- 3** Arc Force setting potentiometer
- 4** On/off switch
- 5** Process selector switch
- 6** Digital display



## A concentration of power

- Power, ruggedness and reliability,
- Mobility thanks to its reduced size and its light weight (29 kg) and the wheels kit,
- Digital display,
- Multi process.

### Sectors of activity concerned:

- Heavy boilermaking,
- Transport and especially railway and shipyard,
- Metal structure fabrication.



2001-370R

### Options:

#### For MMA:



**B-Box remote control:\***  
Cat. no. 0320 – 2710

#### For MIG smooth current:



**BB-Box remote control:\***  
Cat. no. 9160 – 1071



**Wire feed unit DV 44i 10 m:**  
Cat. no. 9160 – 1436



**MIG unit:**  
Cat. no. 9160 – 1070



**Torch PROMIG NG 341 3 m:**  
Cat. no. W 000 260 894

#### For TIG DC:



**B-Box remote control:\***  
Cat. no. 0320 – 2710



**PROTIG 30 V R 5 m:**  
Cat. no. 0421 – 0011

#### For MIG "on-site" :



**Wire feed unit DEVIDARC:**  
Cat. no. 9160 – 0186



**B-Box remote control:\***  
Cat. no. 0320 – 2710



**Torch PROMIG NG 341 3 m:**  
Cat. no. W 000 260 894

\* Remote control with digital display on request.

# FLEX 4000 CELL



Dedicated to the professional users of coated electrode welding, FLEX 4000 CELL is a rugged equipment for MMA welding but also for TIG welding and gouging. The structure is designed for heavy duty on-site welding, with all kind of electrodes up to Ø 6.3 mm.



- 1 On/off switch
- 2 Arc on
- 3 Digital ampermeter
- 4 Digital voltmeter
- 5 Hot-Start adjustment
- 6 Arc-Force adjustment
- 7 Thermal security
- 8 Current adjustment
- 9 TIG/MMA selector
- 10 Local/remote current adjustment switch
- 11 Remote control socket



## Main Features

- Pre-setting of the welding current from 10 to 400 A (stepless regulation),
- Stabilized output with compensation of the input voltage,
- Fan stop automatically after about 8 minutes of rest,
- Can be equipped with a remote control box,
- Digital ampermeter/voltmeters,
- Heavy duty cycle 300 A at 60 %,
- TIG DC welding with a torch with valve, TIG LIFT starting,
- Suitable for gouging (carbon electrode 6 mm max),
- Hot-Start and Arc Force functions adjustable on the front panel,
- Working with 50 m cables (right size).

### Options:



Remote control:  
Cat. no. W 000 219 557

# BUFFALO 500 and 650



**BUFFALO can withstand the most difficult working conditions. Combining power with reliability, the BUFFALO can cope with all arc and TIG welding and gouging applications.**

**1** Optional: ampermeter/voltmeter

**2** Arc Force adjustment: essential to improve the melting of coated electrodes, including cellulosic electrodes

**3** Welding current continuous regulation

**4** Safety features: thermal cut-out lamp, protection against lack of cooling

**5** Multiprocess selector:

- ARC: all types of electrode, rutile, basic or cellulosic,
- TIG: with torch with integral cock or TIG unit (BUFFALO TIG),
- gouging

**6** Hot Start: this setting ensures clean arc striking with coated electrodes



## Main Features

- 47 mm Ø hoisting ring: ideal for moving the unit around the site.
- Burn-back control: the BUFFALO 500 and 650 incorporate SAF-FRO's burn-back control system.
- Maintenance: the cooling fan cuts in according to the welding current and time of use, reducing maintenance and minimizing ingress of dust, especially when gouging. The electronics inside the BUFFALO units are sealed for protection.

### Options:



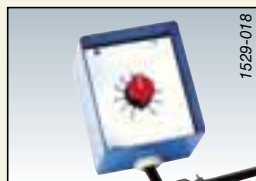
1529-11-QB

**Wheels kit**  
Cat. no. 0320-2087



1529-09-QB

**Site trolley**  
Cat. no. 0320-2089



1529-018

**Remote controller**  
Cat. no. 0387-4044



2223-30

**BUFFALO TIG unit with welding cycle and HF arc striking**  
Cat. no. 0389-0034



1529-11-QB2

**Front tail**  
Cat. no. 0320-2097



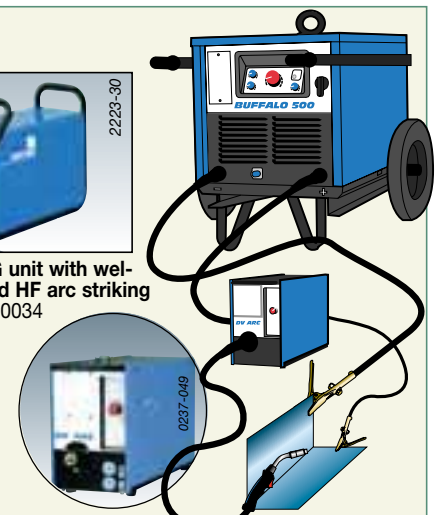
1529-010

**Voltage reducing device (10 V)**  
Cat. no. 0320-2085



1529-15

**Ampermeter/voltmeter**  
Cat. no. 0320-2088



**Standalone MIG-MAG welding set DEVIDARC**  
Cat. no. 9160-0186

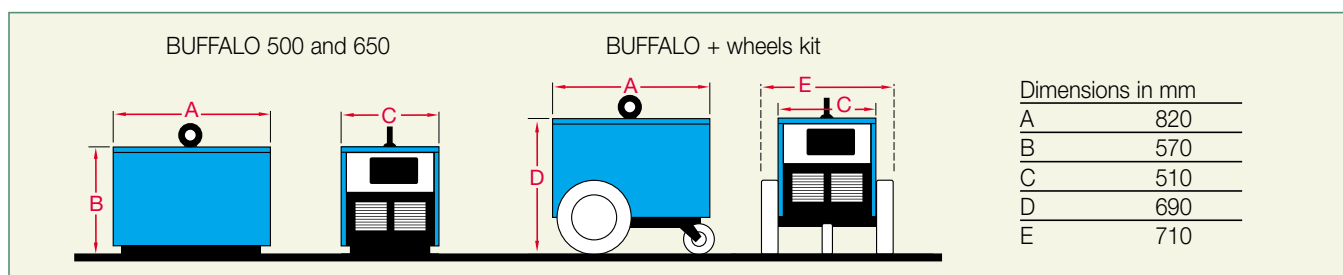


### Technical characteristics

	BUFFALO 350 i CC / CV	FLEX 4000 CELL	BUFFALO	
			500	650
<b>Primary</b>				
<b>Three phase power supply</b>	400 V +/- 10% - 50/60 Hz	230/400 V - 50/60 Hz	230/400/440 V - 50-60 Hz	
<b>Consumption at max. current</b>	28.5 A	83/48 A	94/54/49 A	130/73/68 A
<b>Secondary</b>				
<b>No-load voltage</b>	93 V	80 V	68 V	75 V
<b>Welding current</b>	5 - 350 A	10 A/11 V to 400 A/36 V	20-500 A	30-630 A
<b>Protection index</b>	IP 23	IP 23	IP 23	IP 23
<b>Duty cycle at 40 °C</b>	<b>at 100 %</b>	250 A	230 A/29 V	350 A
	<b>at 60 %</b>	300 A	300 A/32 V	450 A
	<b>at 35 %</b>	350 A	400 A/36 V	500 A (at 45%)
<b>Electrodes diameter</b>	<b>Welding</b>	1.6 to 6.3 mm	1.6 to 6.3 mm	
	<b>Gouging</b>	6.0 mm	-	10.0 mm
<b>Dimensions (L x W x H)</b>	525 x 300 x 390 mm	970 x 670 x 730 mm	820 x 510 x 570 mm	
<b>Net weight</b>	29 kg	146 kg	180 kg	190 kg
<b>Standard</b>	EN 60974-1	-	EN 60974-1	

### To order

	BUFFALO 350 i CC / CV	FLEX 4000 CELL	BUFFALO	
			500	650
<b>Power source</b>	W 000 263 711	W 000 242 391	W 000 263 700	W 000 263 701
<b>Add-ons:</b>				
<b>Accessories kit MMA 500 A</b>	W 000 141 882	W 000 141 882	-	-
<b>Remote control box 10 m</b>	W 000 147 476	W 000 219 557	W 000 147 724	
<b>Torch PROTIG 30 V 5 m</b>	W 000 143 068	W 000 143 068	-	-
<b>Maintenance box for PROTIG 30 V</b>	W 000 143 175	W 000 143 175	-	-
<b>Ampermeter/voltmeter</b>	included	included	W 000 147 458	
<b>15 m extension for remote box</b>	-	-	W 000 147 723	
<b>Wheels kit</b>	-	-	W 000 167 549	
<b>Site trolley</b>	included	included	W 000 167 551	
<b>Voltage reducer</b>	-	-	W 000 147 456	
<b>DEVIDARC</b>	W 000 100 078	W 000 100 078	W 000 100 078	





## Contacts

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Founded in 1902, Air Liquide is the world leader in industrial and medical gases and related services. The company has offices in 70 countries and employs a work force of 35,900. Drawing on constantly renewed technologies, Air Liquide develops groundbreaking solutions used in making countless everyday products and in helping to preserve life.