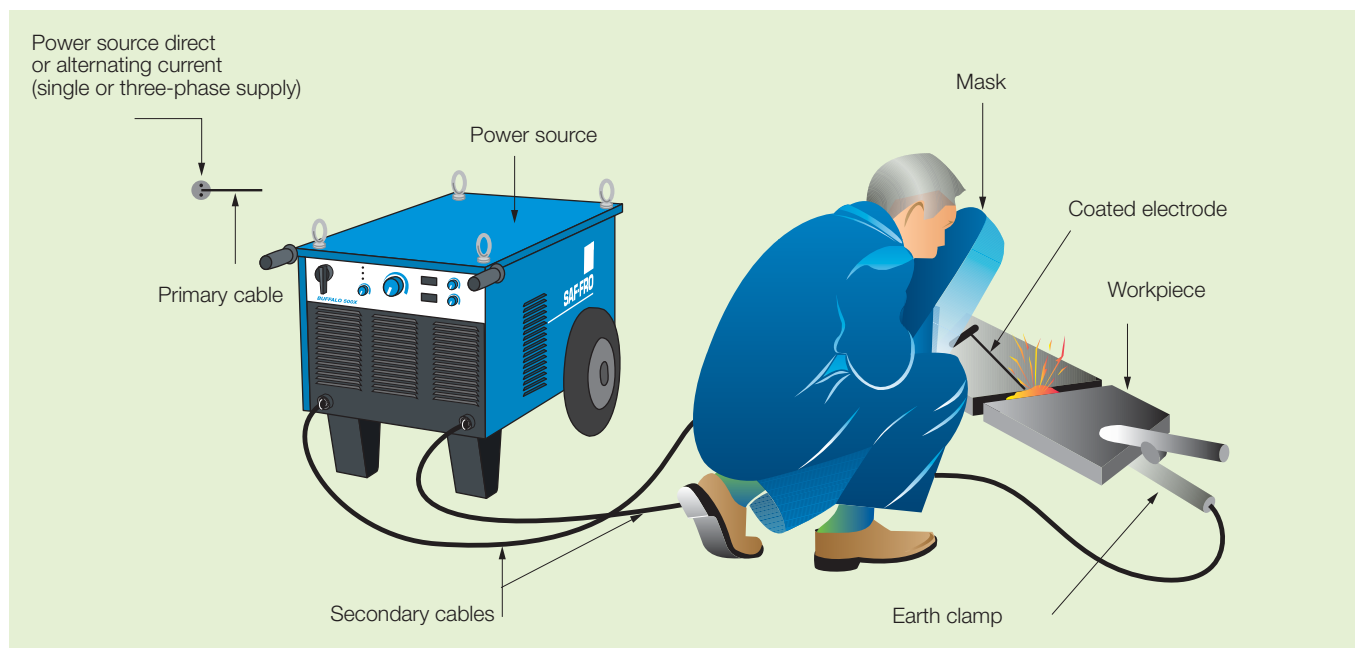


# Section 1 - MMA welding

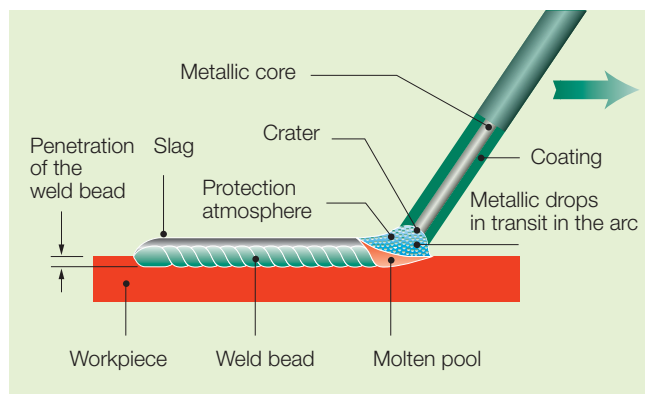
## General information and choice criteria



### Scheme of a manual installation for welding with coated electrode



### The transfer of metal coated electrode



### Choice of the intensity of current

Thicknesses for flat welding, butt welding and fillet welding (mm)	Electrode diameter (mm)	Average intensity for rutile electrodes (A)
1.6	1.6	40
2.0	2.0	55
2.0-3.0	2.5	70
3.0-5.0	3.2	110
6.0-10	4.0	160
> 8.0	5.0	200
> 10.0	6.3	290

### 3 specific MMA power source features:

- Arc Force device gives a more stable arc in all welding conditions.
- Hot Start device allows an easy arc striking.
- Antistick device prevents from accidental electrode short circuiting.

### Criteria choice for MMA power sources all DC welding current

Name	Main power supply	No load voltage	Technology	Setting **	VRD	PFC	Current range DC	Electrode diameter	Weight
<b>SAXO 1300G</b>	Single phase	69 V	Inverter	P	No	No	10 – 130 A	1.6 – 3.2 mm	3.5 kg
<b>SAXO 1600G</b>	Single phase	87 V	Inverter	P	No	No	5 – 160 A	1.6 – 4.0 mm	7 kg
<b>PRESTO 140 PFC</b>	Single phase	48.4 V	Inverter	P	No	Yes	5 – 140 A	1.6 – 3.2 mm	6.6 kg
<b>PRESTO 160 PFC</b>	Single phase	48.4 V	Inverter	P	No	Yes	5 – 160 A	1.6 – 4.0 mm	6.6 kg
<b>PRESTO 180 PFC</b>	Single phase	48.4 V	Inverter	P	No	Yes	5 – 180 A	1.6 – 4.0 mm	6.6 kg
<b>PRESTO 190 PRO</b>	Single phase	67 V (14 V)*	Inverter	P	Yes	Yes	5 – 160 A	1.6 – 4.0 mm	9 kg
<b>PRESTO 220 VRD</b>	Three phase	105 V (14 V)*	Inverter	P	Yes	No	5 – 220 A	1.6 – 5.0 mm	19 kg
<b>RODARC 250 DC</b>	Three phase	62/66 V	Rectifier	M	No	No	45 – 220 A	2.0 – 4.0 mm	57 kg
<b>RODARC 400 DC</b>	Three phase	63/70 V	Rectifier	M	No	No	50 – 325 A	2.5 – 6.3 mm	107 kg
<b>RODARC 450 DC</b>	Three phase	63/70 V	Rectifier	M	No	No	60 – 400 A	2.5 – 6.3 mm	123 kg
<b>SAFEX M 340</b>	Three phase	67 V	Rectifier	M	No	No	45 – 325 A	2.0 – 6.3 mm	108 kg
<b>SAFEX M 450</b>	Three phase	70 V	Rectifier	M	No	No	65 – 405 A	2.5 – 6.3 mm	125 kg
<b>SAFEX C2</b>	Three phase	66 V	Rectifier	P	No	No	20 – 300 A	1.6 – 6.3 mm	255 kg
<b>BUFFALO 400X (WOW***)</b>	Three phase	68/75 V	Thyristor	P	Yes (option)	No	10 – 400 A	1.6 – 6.3 mm	128 kg
<b>BUFFALO 500X (WOW***)</b>	Three phase	68/75 V	Thyristor	P	Yes (option)	No	10 – 500 A	1.6 – 6.3 mm	176 kg
<b>BUFFALO 650X (WOW***)</b>	Three phase	68/75 V	Thyristor	P	Yes (option)	No	10 – 630 A	1.6 – 6.3 mm	176 kg

\* with VRD    \*\* P = Potentiometer – M = Mechanical

\*\*\* WOW = exists also as version without wheels and handles

# 1 - MMA welding

## Portable Inverters for DC welding

The **SAXO** range has been designed for light maintenance and repair applications. The weight and size has been reduced whilst maintaining a high quality welding performance.

### SAXO 1300G / SAXO 1600G

Ultra light inverters for fast and quality work.

#### Features:

- Lightweight and compact.
- Hot start function & anti-sticking device.
- Supplied ready to use.
- Accommodates all electrode types (except Cellulosic).
- Generator compatible.



2008-722

2010-007

	SAXO 1300G	SAXO 1600G
Power supply single phase 50/60 Hz	230 V (±15%)	230 V (±20%)
Primary effective consumption	14 A	16 A
Primary consumption at I max.	30 A	36 A
No-load voltage	69 V	87 V
Welding current	10 - 130 A	5 - 160 A
Duty cycle 10 min. cycle (at 40 °C)	at 20%	130 A
	at 60%	70 A
	at 100%	55 A
Electrode diameter	1.6 to 3.2 mm	1.6 to 4.0 mm
Connector diameter	9 mm	
Dimensions (L x l x h)	220 x 120 x 320 mm	230 x 145 x 365 mm
Weight	3.5 kg	7 kg
Protection class	IP 23	
Insulation class	H	
Standards	EN 60974-1 / EN 60974-10	



0264-050

To order	SAXO 1300G	SAXO 1600G
<b>Complete set</b>	W000271554	W000274151
<b>Comprising:</b>		
Power source	●	●
Primary cable with Schuko plug	●	●
Equipped welding cables	●	●
Mask	●	-
Hammer-brush	●	-
Tool case	●	-
Diameter 2.5 mm electrode smallpack	●	-
<b>Options</b>		
TIG torch with valve WTT2 9V 4 m	W000278876*	
FURIOUS carrying case	-	W000371907
Wear parts box WTT2 9	W000371535	

\* TIG arc striking without HF

# 1 - MMA welding

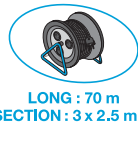
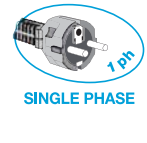
## Portable DC Inverters

The **PRESTO PFC** range is fitted with the new SAF-FRO inverter technology. The PFC controller is the technical solution to achieve conformance to the limitation of the harmonic current for equipment connected to public low voltage network which is now mandatory in Europe (EN 61000 - 3 - 12 standard). PFC results in lower effective current consumption at the same output welding power, also maximising electronic component lifetime.

### PRESTO 140 PFC / 160 PFC / 180 PFC

#### Features:

- Improved generator compatibility with PFC controller addition.
- Hot start and anti-stick functions.
- Reduced noise. Intelligent cooling fan.
- Ergonomic handles for carrying and cable rolling.
- Usable with long primary extension cable (70 m in 2.5 mm<sup>2</sup> section).
- Lightweight - 6.6 kg.



2008-372

	PRESTO 140 PFC	PRESTO 160 PFC	PRESTO 180 PFC
Power supply single phase	230 V (+15% /-20%) – 50/60 Hz		
Primary effective consumption	12 A	15 A	15 A
Primary consumption at I max.	18.5 A	21.5 A	25 A
No-load voltage	48.4 V	48.4 V	48.4 V
Welding current	5 - 140 A	5 - 160 A	5 - 180 A
Duty cycle 10 min. cycle (at 40 °C)	at 35%	140 A (40%)	180 A (20%)
	at 60%	120 A	140 A
	at 100%	100 A	120 A
Electrode diameter	1.6 to 3.2 mm	1.6 to 4.0 mm	1.6 to 4.0 mm
Connector diameter	9 mm		
Dimensions (L x l x h)	320 x 170 x 395 mm		
Weight	6.6 kg		
Protection class	IP 23		
Insulation class	H		
Standards	EN 60974-1 / EN 60974-10		

To order	PRESTO 140 PFC	PRESTO 160 PFC	PRESTO 180 PFC
Power source only	W000270360	W000270338	W000272659
<b>Add ons</b>			
MMA kit arc 25C25+	W000260683	●	●
<b>Options</b>			
TIG torch with valve WTT2 17V 4 m	W000278880*	●	●
FURIOUS carrying case	W000371907	●	●
Wear parts box WTT2 17	W000371536	●	●

\* TIG arc striking without HF

# 1 - MMA welding

## Portable DC Inverters

**PRESTO PRO and VRD** welding machines have been designed to meet the most demanding conditions for on-site welding applications, offering reliable operation and high duty cycle. Each machine features the special Voltage Reduction Device (VRD) for increased safety when used in mines, shipyards and petrochemical plant.

**PRESTO 190 PRO and 220 VRD**

**Features:**

- Rugged on site concept,
- Hot Start function and anti-sticking device,
- Arc Force regulation on front panel,
- Suitable for rutile, basic and cellulosic electrodes,
- TIG lift+ device for PRESTO 190 PRO & 220 VRD, including up slope and down slope regulation & TIG exit fuzzy method (arc extinguishing),
- Ergonomic handles (easy lifting and rolling of the cables),
- Digital display of parameters,
- Generator compatible,
- Usable with long primary extension cable (up to 70 m in 2.5 mm<sup>2</sup> section) only for PRESTO 190 PRO,
- Remote control plug,
- VRD for increased safety.

**2 YEARS WARRANTY**

**Cellulosic**

**VRD**

**COMPATIBLE WITH MOTOR GENERATOR**

**PFC Power Factor Control**

**1 ph SINGLE PHASE**

**SAVE ENERGY**

**LONG : 70 m SECTION : 3 x 2.5 mm<sup>2</sup>**

2010-080

2009-063

	<b>PRESTO 190 PRO</b>	<b>PRESTO 220 VRD</b>
<b>Power supply 50/60 Hz</b>	230 V (±20%) single phase	400 V (±20%) three phase
<b>Primary effective consumption</b>	16 A	9 A
<b>Primary consumption at I max.</b>	21 A	14 A
<b>No-load voltage</b>	67 V (14 V VRD)	105 V (14 V VRD)
<b>Welding current</b>	5 – 160 A	5 – 220 A
<b>Duty cycle 10 min. cycle (at 40 °C)</b>	<b>at 35%</b>	160 A (50%)
	<b>at 60%</b>	150 A
	<b>at 100%</b>	130 A
<b>Electrode diameter</b>	1.6 to 4.0 mm	1.6 to 5.0 mm
<b>Connector diameter</b>	13 mm	
<b>Dimensions (L x l x h)</b>	200 x 365 x 475 mm	250 x 470 x 450 mm
<b>Weight</b>	9 kg	19 kg
<b>Protection class</b>	IP 23	
<b>Insulation class</b>	H	
<b>Standards</b>	EN 60974-1 / EN 60974-10	

<b>To order</b>	<b>PRESTO 190 PRO</b>	<b>PRESTO 220 VRD</b>
<b>Power source only</b>	W000272661	W000268693**
<b>Add ons</b>		
MMA kit arc 25C50	W000260684	●
<b>Options</b>		
Remote control 10 m long	W000242069	●
TIG torch with valve WTT2 17V 4 m	W000278880*	●
Adaptator TIG torch (9-13 mm) for WTT2 17V	W000306139	●
TIG torch with valve WTT2 26V 4 m	W000278885*	●
Wear parts box WTT2 17 & WTT2 26	W000371536	●

\* TIG arc striking without HF

\*\*delivered with welding cable and electrode holder & welding cable with earth clamp

# 1 - MMA welding

## MMA DC rectifiers

The **RODARC** power source range has been designed for the most demanding on-site and workshop applications.

Highly efficient welding using rutile and basic electrodes at a competitive value.

### RODARC 250 DC

Ideal for all types of coated electrodes up to 4.0 mm.

#### Features:

- Ideal for rutile, basic, stainless steel and special electrode.
- Fan cooling.
- Mechanical amperage adjustment.
- Heavy duty undergear as standard.

2  
WARRANTY  
YEARS



2007-087

### RODARC 400 DC

Ideal for all types of coated electrodes up to 6.3 mm.

#### Features:

- Mechanical amperage adjustment.
- High duty cycle.
- Fan cooling.
- Heavy duty undergear as standard.

2  
WARRANTY  
YEARS



2010-608

### RODARC 450 DC

Ideal for all types of coated electrodes up to 6.3 mm.

#### Features:

- Robust design and performance.
- Mechanical amperage adjustment.
- High duty cycle.
- Fan cooling.
- Heavy duty undergear as standard.

2  
WARRANTY  
YEARS



2006-900

	RODARC 250 DC	RODARC 400 DC	RODARC 450 DC	
Power supply three phase	230 V / 400 V (±10%) - 50/60 Hz			
Primary effective consumption	22 A / 13 A	34 A / 19.5 A	53 A / 30 A	
Primary consumption at I max.	36 A / 28 A	57 A / 33 A	78 A / 45 A	
No-load voltage	62 V / 66 V	63 V / 70 V	63 V / 70 V	
Welding current	45 to 220 A	50 to 325 A	60 to 400 A	
Duty cycle	at 35%	220 A	325 A	400 A (45%)
10 min. cycle (at 40 °C)	at 60%	170 A	250 A	345 A
	at 100%	130 A	190 A	265 A
Electrode diameter	2.0 to 4.0 mm	2.5 to 6.3 mm	2.5 to 6.3 mm	
Connector diameter	13 mm			
Dimensions (L x l x h)	450 x 620 x 890 mm	560 x 730 x 1 080 mm	560 x 730 x 1 080 mm	
Weight	57 kg	107 kg	123 kg	
Protection class	IP 23			
Insulation class	H			
Standards	EN 60974-1 / EN 60974-10			

To order	RODARC 250 DC	RODARC 400 DC	RODARC 450 DC		
Power source only	W000263690	W000263694	W000263699		
<b>Add ons</b>					
MMA kit arc	35C50	W000011139	●	-	-
	50C50	W000260681	-	●	-
	50C50+	W000260682	-	-	●
<b>Options</b>					
TIG torch with valve WTT2 26V 4 m	W000278885*	●	●	●	
TIG box M200	W000305050**	●	●	●	
TIG torch with trigger PROTIG NG 30 RLS 8 m	W000278359**	●	-	-	
TIG torch with trigger PROTIG NG 40 RLS 8 m	W000278361**	-	●	●	
Wear parts box	PROTIG NG 30	W000306443	●	-	-
	PROTIG NG 40	W000306444	-	●	●
	WTT2 26	W000371536	●	●	●

\* TIG arc striking without HF \*\* TIG arc striking with HF

# 1 - MMA welding

## MMA DC rectifiers

The **SAFEX** power source range offers rugged and reliable welding operation for all workshop and on-site applications. Efficient, powerful and user friendly, the SAFEX machines provide both performance and reliability.

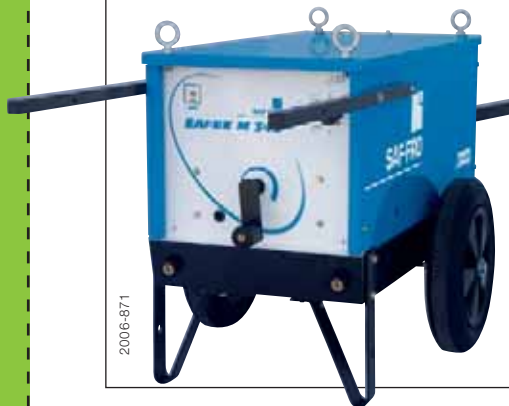
### SAFEX M 340

The versatile arc welding machine.

#### Features:

- Mechanical amperage adjustment.
- Simple, user friendly operation.

**2 YEARS WARRANTY**



2006-871

### SAFEX M 450

Powerful, very easy to maintain and simple to use.

#### Features:

- Mechanical amperage adjustment.
- Heavy duty undergear and lifting bolts ensures full workshop and on-site manoeuvrability.

**2 YEARS WARRANTY**



2006-875

### SAFEX C2

Excellent for use on worksites in the most difficult working conditions

#### Features:

- Mechanical amperage adjustment.
- Powerful performance.
- Rutile, basic and cellulosic electrodes - 1.6 to 6.3 mm.
- Remote control option.

**2 YEARS WARRANTY**



2007-089

**Cellulosic**

	SAFEX M 340	SAFEX M 450	SAFEX C2
Power supply three phase	220 V / 380 V (±10%) - 50 Hz		
Primary consumption at I max.	35 A (380 V) 60 A (220 V)	45 A (380 V) 78 A (220 V)	30.5 A (380 V) 52 A (220 V)
No-load voltage	67 V	70 V	66 V
Welding current	45 – 325 A	65 - 405 A	20 - 300 A
Duty cycle	325 A	405 A	300 A (45%)
10 min. cycle	240 A	300 A	270 A
(at 40 °C)	210 A	260 A	230 A
Electrode diameter	2.0 to 6.3 mm	2.5 to 6.3 mm	1.6 to 6.3 mm
Connector diameter	13 mm		
Dimensions (L x l x h)	880 x 670 x 670 mm	880 x 670 x 670 mm	900 x 600 x 710 mm
Weight	108 kg	125 kg	255 kg
Protection class	IP 23		
Insulation class	H		
Standards	EN 60974-1 / EN 60974-10		

To order	SAFEX M 340	SAFEX M 450	SAFEX C2
Power source only	W000263703	W000263705	W000263702
<b>Add ons</b>			
MMA kit arc	50C50	W000260681	●
	50C50+	W000260682	-
<b>Options</b>			
Remote control	W000305043	-	●
TIG torch with valve WTT2 26V 4 m	W000278885*	●	●
TIG box M200	W000305050**	●	●
TIG torch with trigger PROTIG NG 30 RLS 8 m	W000278359**	-	●
TIG torch with trigger PROTIG NG 40 RLS 8 m	W000278361**	●	-
Wear parts box	PROTIG NG 30	W000306443	●
	PROTIG NG 40	W000306444	-
	WTT2 26	W000371536	●

\* TIG arc striking without HF \*\* TIG arc striking with HF

# 1 - MMA welding

## DC Rectifier machines for welding & gouging (thyristor technology)

**BUFFALO X** - Reliable and of robust design, these machines provide excellent and consistent service in demanding on-site and workshop conditions.

BUFFALO X provides both MMA and Gouging electrode capability and MIG and TIG process options using additional add-on equipment.

### BUFFALO 400X, 500X, 650X

#### Features:

- Exceptional multi-use and versatile equipment,
- Digital display,
- Hot start device,
- Arc dynamism function for improved arc stability,
- Built in characteristic's selector MMA/gouging/TIG Lift arc and MIG (CV),
- In option Voltage Reduction Device (VRD) for greater safety,
- In MIG mode (CV) BUFFALO X sets will provide optimum results,
- High performance power capability,
- Maintained performance with long length cables (up to 50 m) BUFFALO X sets will remain efficient for all applications,
- 42V DC auxiliary supply,
- Remote control plug.

Cellulosic

2 YEARS WARRANTY

COMPATIBLE WITH MOTOR GENERATOR

2011-372



2008-794

	BUFFALO 400X	BUFFALO 500X	BUFFALO 650X
Power supply three phase	230 V / 400 V (±15%)– 50/60 Hz		
Primary effective consumption	40.6 A / 23.5 A	57.6 A / 33.3 A	61.5 A / 35.4 A
Primary consumption at I max.	69 A / 39.9 A	85.1 A / 57.6 A	102.2 A / 59.4 A
No-load voltage	68 V / 75 V	68 V / 75 V	68 V / 75 V
Welding current	10 A (42 A*) - 400 A	10 A (48 A*) - 500 A	10 A (52 A*) - 630 A
Duty cycle at 35%	400 A	500 A (45%)	650 A
10 min. cycle at 60%	300 A	430 A	470 A
(at 40 °C) at 100%	230 A	340 A	370 A
Electrode diameter	1.6 to 6.3 mm		
Connector diameter	13 mm		
Dimensions (L x l x h)	1000 x 600 x 600 mm		
Weight	128 kg	176 kg	176 kg
Protection class	IP 23		
Insulation class	H		
Standards	EN 60974-1 / EN 60974-10		

\* minimum current used in cellulosic electrode

To order	BUFFALO 400X	BUFFALO 500X	BUFFALO 650X
Power source - with handle and wheels	W000272663	W000272664	W000272665
- WOW (without handles & wheels)	W000277996	W000277992	W000277993
<b>Add ons</b>			
MMA kit arc 50C50+	W000260682	●	●
<b>Options</b>			
Remote control MMA 10 m long <sup>(1)</sup>	W000219557	●	●
Remote control extension cable 15 m	W000305056	●	●
VRD board 400X	W000373273	●	-
VRD board 500X	W000373272	-	●
VRD board 650X	W000275160	-	●
48V AC socket for auxiliary service	W000274337	●	●
TIG torch with valve WTT2 26V 4 m	W000278885*	●	●
TIG box M200	W000305050**	●	●
TIG torch with trigger PROTIG NG 40 RLS 8 m	W000278361**	●	●
Wear parts box PROTIG NG 40	W000306444**	●	●
Wear parts box WTT 26	W000371536	●	●
Kit handles and wheels (for WOW version)	W000278006	●	●
ARCAIR K 2000 torch for gouging	W000010999	●	-
ARCAIR K 4000 torch for gouging	W000010992	-	●
Panel to connect ARCAIR torch	W000370297	●	●
MIG-MAG DV Yard	Consult us	●	●

\* TIG arc striking without HF \*\* TIG arc striking with HF <sup>(1)</sup> on demand up to 50 m long