



# MATRIX E



## INVERTER POWER SOURCES FOR ELECTRODE WELDING

Powerful, compact and lightweight MATRIX E's thanks to their innovative digital control of the welding process are the most high performing and technologically advanced products ever manufactured. Built according to the very latest IGBT based inverter technology, these DC power sources thanks to their excellent arc characteristics, are recommended for highest standard applications with any electrode. Suitable to be used in shipyards, steel construction, pipe welding and maintenance, MATRIX E's ensure an extraordinary stability of the welding parameters and their "fast dynamic characteristic" enables to achieve quality results even with the most difficult cellulosic and basic electrodes, and also in TIG with "Lift" mode arc striking.

MATRIX 2700 E SV is standard supplied with 230/400 V three phase input voltage.

MATRIX 2200 E, single phase unit, thanks to PFC can be use with 16 A fuse mains, thus becoming the ideal choice for all qualified welding applications and maintenance jobs, whenever power and portability are needed.



CC

Inverter

DC  
+ -

DIGITAL  
888



- ▶ Digital control of all the welding parameters
- ▶ Excellent welding characteristics in MMA with any kind of electrodes, including cellulosic, and in TIG with "Lift" mode
- ▶ Low energy consumption
- ▶ High reliability when used with generator sets
- ▶ Suitable to be used with mains cable lengths over 100 m
- ▶ Digital Ammeter and Voltmeter
- ▶ ENERGY SAVING function to operate the power source cooling fan only when necessary
- ▶ Possibility of activating the VRD function
- ▶ Possibility of memorizing welding parameters (99 JOBS)
- ▶ STAND BY function on the remote control
- ▶ Auto-diagnostic feature for trouble shooting
- ▶ Control panel protected against accidental impact
- ▶ Control rack protection cover
- ▶ IP 23 protection class and dust-proof electronic components, thanks to the innovative "Tunnel" fan cooling system, allow operation in the toughest work environments
- ▶ Electrode Antisticking function

### ENERGY SAVING

The built-in "Energy Saving" function activates the machine fan motor only when necessary, not only obtaining a significant energy saving, but also ensuring less maintenance for the power source.



### PFC POWER FACTOR CORRECTION - MATRIX 2200 E

The wave shape of the current drawn from the mains is made sinusoidal by the PFC device with a consequent total lack of harmonic disturbances in the mains and consumption optimization, which enables to utilize the power source at full range on a 16 A fuse. The PFC circuit gives the machine a wider protection against mains voltage fluctuations, by also making it safer whenever being operated by power generator sets.

## CONTROL PANEL

1. Welding current electronic adjustment
2. Digital adjustable ARC FORCE and HOT START
3. Digital Ammeter and Voltmeter with welding current presetting and Hold Function of the last read value
4. Welding process selector switch
  - MMA: welding of coated electrodes: rutile, basic, cast iron and aluminium
  - MMA Cell: for welding of cellulosic electrodes
  - MMA CrNi: for welding of stainless steel
  - TIG: by the innovative “Lift” mode arc striking with thermic control (TCS), quick and precise striking is achieved, by minimising any tungsten inclusion and avoiding any incision onto the workpiece. The SWS (Smart Welding Stop) synergic system reduces the electrode wearing and avoids any oxidation on the welded joint.



## ACCESSORIES

- Trolley (MATRIX 4200 E)
- Roll bar protection (MATRIX 4200 E)
- CD 6 remote control with cable from 8 to 25m
- Polarity changeover



TECHNICAL DATA			MATRIX 2200 E		MATRIX			
			MMA	TIG	2700 E SV	2800 E	4200 E	
Single phase input 50/60 Hz	V	+20% -20%	230		---	---	---	
Three phase input 50/60 Hz	V	+20% -20%	---		230	400	400	400
Input Power @ I <sub>2</sub> Max	kVA		6,6	6,0	8,0	10,5	10,5	17,4
Delayed Fuse (I <sub>eff</sub> )	A		16		16	10	10	16
Power Factor / cos φ			0,99/0,99		0,98/0,99		0,95/0,99	0,95/0,99
Efficiency Degree			0,80		0,82	0,84	0,83	0,88
Open circuit voltage	V		100		100	100	100	100
Current range	A		5 - 180	5 - 220	5 - 220	5 - 270	5 - 270	5 - 420
Duty cycle at (40°C)	A	100%	120	140	150	180	190	270
	A	60%	150	180	180	220	210	340
	A	X%	180 (30%)	220 (30%)	220 (30%)	270 (30%)	270 (30%)	420 (40%)
Standards			EN 60974-1 • EN 60974-10 •					
Protection Class	IP		23 S		23 S	23 S	23 S	23 S
Insulation Class			F		F	F	F	F
Dimensions		↗ mm	430		465	465	500	
		→ mm	185		185	185	220	
		↑ mm	390		390	390	425	
Weight	kg		12		16,5	15	20	

Other voltages available on request

These power sources are built for industrial environment use. EMC (CISPR 11): class A

