

CC

Inverter

DC
+ -

DIGITAL
888

PULSE
MMA



TIG INVERTER WELDING EQUIPMENT

Based on the very latest IGBT inverter technology, TIG power sources with high frequency arc striking of the MATRIX series are equipped with an innovative digital panel for the complete control of all the welding parameters.

The excellent technical characteristics of these welding machines, coupled with the high technology of their digital control, allow high quality TIG welding, suitable for the toughest industrial applications and maintenance.

These highly advanced technology power sources are robust and user friendly: MATRIX HF's, DC output only, enable TIG welding of mild and stainless steel, copper and its alloys.

MATRIX series power sources also offer excellent performance in MMA welding with the most difficult basic and cellulosic electrodes.



coldTACK

Innovative spot welding device to achieve precise and safe joining with a minimal thermal input. **“Multi-coldTACK”** function grants cold spotting in a rapid sequence, thus further widening the benefits of the single spot. Thanks to **“Perfect-Point”** function, coldTACK allows to obtain the most precise spot positioning.



RCT - Running coldTACK

RCT is the acronym of **Running coldTACK**; indeed the TIG RCT process allows to benefit of all the coldTACK advantages, by repeating the single coldTACK point in a continuous way, in order to achieve a cold and perfect welding seam.

Using TIG RCT the welding seam is much colder in comparison to the one achievable with Pulse TIG and it represents the ideal solution to weld thin materials with a very low heat transfer. TIG RCT is a direct current process not available in AC welding.



- ▶ Standard equipped with pulse mode integrated into the control with available “Easy Pulse” facility
- ▶ TIG DC min current from 1A / TIG AC min current from 3A
- ▶ Excellent TIG welding characteristics
- ▶ HF IGNITION - intelligent HF ignition grants a more accurate and prompter Arc Striking in all conditions
- ▶ “Energy Saving” function to operate the power source cooling fan and the torch water cooling only when necessary
- ▶ Low energy consumption
- ▶ Electromagnetic disturbance reduction because of high frequency used at arc striking only
- ▶ Electrode type selection (MMA - MATRIX 3001 HF only)
- ▶ Use of special TIG torches will enable the remote control of the welding parameters directly from the torch
- ▶ Overheating thermostatic protection
- ▶ Metallic main structure with shock-proof fibre compound front panel
- ▶ Control panel protected against accidental impact
- ▶ Robust handle integrated into the chassis
- ▶ Sloping front panel easy to read and adjust and highly visible from any direction
- ▶ Reduced weight and size, easy-to-carry
- ▶ IP 23 protection class and dust proof electronic components, thanks to the innovative “tunnel” fan cooling system, allow their use in the toughest environments
- ▶ Possibility of memorizing welding parameters (99 JOBS)
- ▶ LIFT ARC CURRENT - with possibility to set the value of the starting current in LIFT.



MATRIX 3001 HF

- ▶ Digital adjustment of all the welding parameters
- ▶ Digital Ammeter and Voltmeter with welding current presetting and Hold Function of the last read value
- ▶ Digital display for the presetting of the welding parameters
- ▶ Full monitoring of the welding parameters
- ▶ Welding process selector switch: TIG DC • TIG DC “Lift” • MMA
- ▶ Welding mode selector switch: 2T/ 4T • Spot Timer

MMA FUNCTIONS

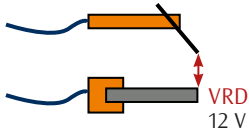
- ▶ Adjustable Arc Force for choosing the best welding arc dynamics
- ▶ Adjustable Hot Start to improve the arc striking with difficult electrodes
- ▶ Electrode Antisticking function

MATRIX 2600 HF - 3000 HF - 4200 HF

- ▶ Welding mode “cycle”
- ▶ Personalised welding program storing and recalling
- ▶ 4 Pulse mode TIG:
 - SYN: automatic pulse parameters setting in function of chosen peak current
 - FAST: up to 500 Hz in TIG DC
 - ULTRA FAST: up to 2000 Hz in TIG DC with contained deformation on very thin sheet.
 - SLOW: to have both peak and base current time adjustments



MATRIX 4200 HF
CT400



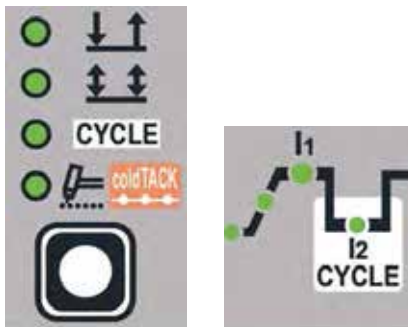
VRD - VOLTAGE REDUCTION DEVICE

VRD device reduces the open circuit voltage to values below 12V, by enabling the use of the machine in highly hazardous environments for the operator's maximum safety.

FUNCTIONS	MATRIX			
	3001 HF		2600 HF • 3000 HF • 4200 HF	
	TIG	MMA	TIG	MMA
High Frequency striking	•		•	
"Lift" mode striking	•		•	
Pre Gas	•		•	
Initial Current			•	
Up Slope	•		•	
Welding current	•		•	
2nd welding current	"CYCLE"		•	
Base current	"PULSE"		•	
Base current time	"PULSE"		•	
Peak current	"PULSE"		•	
Peak current time	"PULSE"		•	
Pulse frequency	"PULSE"		•	
Down Slope		•	•	
Final current			•	
Post gas	•		•	
Spot time	•		•	
Hot Start		•		•
Arc Force		•		•
Electrode type selection		•		

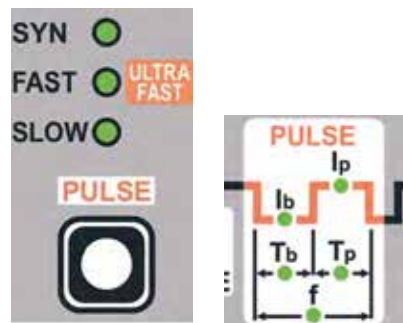
"CYCLE" FUNCTION

"CYCLE" function allows, by simply pressing the torch trigger, to continuously switch between two current values, previously preselected. This function is most suitable for welding different thickness profiles, requiring a continuous current adjustment change.



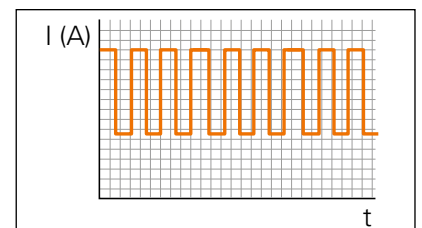
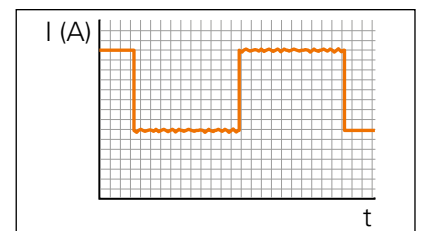
"EASY PULSE"-SYN FUNCTION

"EASY PULSE-SYN" facility, in function of the chosen peak current, generates, in a simple and automatic way, an adequate pulse frequency and base current, both readjustable in a synergic way. Pulse parameter values preselected in the control will save setting time, by ensuring the best possible pulse parameter combinations, ideal for less skilled welders.



ULTRA FAST HIGH PULSE FREQUENCY

Pulse TIG welding allows a better arc control and less deformation of the workpiece. The possibility of utilizing very high pulse frequency, up to 2000 Hz, ideal for welding thin thickness, enables to obtain a remarkable reduction in the arc cone and in the thermally altered area, by also having a more stable and concentrated arc together with an increase in both penetration and speed too.





ACCESSORIES

- VT 100 trolley for lodging gas cylinder and water cooling equipment
- VT 200 trolley for lodging gas cylinder and water cooling equipment (for MATRIX 4200HF)
- CT 400 trolley for lodging gas cylinder and water cooling equipment
- HR 23 and HR 32/30 water cooling equipment
- PSR 7 foot remote control
- CD 6 remote control
- Up/Down torches

TECHNICAL DATA		MATRIX 2600 HF		MATRIX 3000 HF		MATRIX 3001 HF		MATRIX 4200 HF	
		TIG	MMA	TIG	MMA	TIG	MMA	TIG	MMA
Three phase input 50/60 Hz	V ^{+20%} / _{-20%}	400		400		400		400	
Input Power @ I ₂ Max	kVA	7,1	9,6	9,1	9,2	9,1	9,8	13,3	17,4
Delayed Fuse (I _{eff})	A	10	10	10	10	10	10	16	16
Power Factor / cos φ		0,95/0,99	0,95/0,99	0,95/0,99	0,95/0,99	0,95/0,99	0,95/0,99	0,76/0,99	0,82/0,99
Efficiency Degree		0,86	0,86	0,87	0,87	0,87	0,87	0,86	0,86
Open circuit voltage	V	100	100	100	100	100	100	100	100
Current range	A	5 - 260	10 - 250	5 - 300	10 - 270	5 - 300	10 - 270	5 - 420	10 - 400
Duty cycle at (40°C)	A 100%	200	190	210	200	210	200	270	270
	A 60%	230	220	250	230	250	230	340	340
	A X%	260 (40%)	250 (40%)	300 (35%)	270 (35%)	300 (35%)	270 (35%)	420 (40%)	400 (40%)
Standards		EN 60974-1 • EN 60974-3 • EN 60974-10							
Protection Class	IP	23 S		23 S		23 S		23 S	
Insulation Class		F		F		F		F	
Dimensions	↗ mm	495		495		495		560	
	→ mm	185		185		185		220	
	↑ mm	390		390		390		425	
Weight	kg	14		17,5		17,5		25	

Other voltages available on request