



MATRIX X AC/DC

THE ULTIMATE SOLUTION
FOR AC/DC TIG



MATRIX X AC/DC are high efficiency TIG AC/DC inverter power sources, studied to satisfy the most advanced and sophisticated request in the TIG welding market.

MATRIX X AC/DC are standard equipped with the new X VISION interface, simple and complete, for the total control and monitoring of all the welding parameters.

Their excellent characteristics, coupled with the high technology of the digital control, allow a perfect stability of the welding arc, granting high performance TIG welding in the more sophisticated industrial applications and maintenance.

MATRIX X AC/DC enable TIG welding of all metals including Aluminium and its alloys, and they also offer excellent performance in MMA welding with the most difficult basic and cellulosic electrodes.

Thanks to PFC the single phase **MATRIX X 220 AC/DC** optimizes the amount of energy consumption by allowing the use of this powerful power source, without problems, with 16 A fuse mains and power generator sets.



- X Vision interface
- Excellent welding performance
- Fast arc control



MATRIX X AC/DC FEATURES

- TIG DC minimum current from 1A and TIG AC starting from 3A
- Excellent welding characteristics in TIG with all material and MMA with any type of electrodes, cellulosic included
- Smart HF IGNITION to grant more accurate and prompter Arc Striking in all conditions
- LIFT ARC CURRENT - with possibility to set the value of the starting current in LIFT
- Use of Up/Down TIG torches will enable to adjust directly from the torch both welding parameters and memorized JOBS
- Reduced weight and size, easy-to-carry
- Control rack protection cover
- Compact water cooling equipment integrable with the power source (optional)
- Simple automation: TSA1 TIG KIT (Optional)

TIG 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.



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.



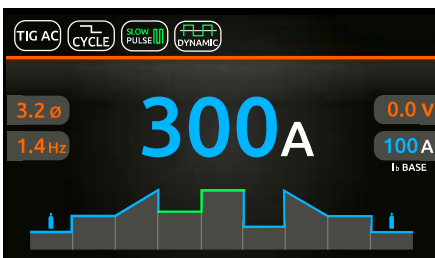
X VISION CONTROL DISPLAY

X Vision control display with "ONE CLICK KNOB" encoder for the pre-setting and monitoring of all the welding parameters:

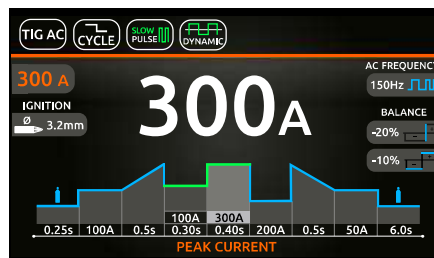
- User friendly interface
- Digital Ammeter and Voltmeter with welding current pre-setting and Hold Function of the last read value
- Welding mode "cycle"
- Personalized welding program storing and recalling
- Possibility of copying job/s easily from one machine to another via USB
- Advance setting infographic



WELDING MODE



WELDING SETTING MODE



ADVANCE JOB MANAGEMENT



PULSE DC MODE



SYN PULSE

SYN PULSE will synergically generate pulse frequency and base current



ULTRA FAST

HIGH PULSE FREQUENCY IN DC
Adjust frequency up to 2000 Hz



FAST PULSE

Adjust frequency from 0,5 Hz to 500 Hz

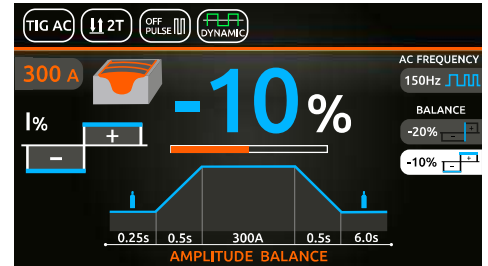
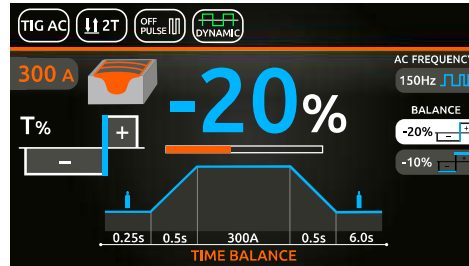


SLOW PULSE

Adjust separately current/time of peak and base

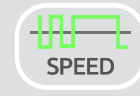
BALANCE PLUS

Possibility of independently adjust both current time (t) and its amplitude (A) while staying in either positive or negative polarity, by offering a perfect control of penetration and arc cleaning with a drastic reduction in lateral undercuts.



DYNAMIC

Square wave: high arc dynamics for all applications



SPEED

Mixed wave: optimal penetration at high welding speed and low consumption of the electrode



SOFT

Sinusoidal wave: smoother and softer arc with a reduced noise, ideal for medium thickness



COLD

Triangular wave: low heat transfer with reduced deformation, ideal for small thickness

TECHNICAL DATA	MATRIX X								
	220 AC/DC		300 AC/DC		400 AC/DC		500 AC/DC		
	TIG	MMA	TIG	MMA	TIG	MMA	TIG	MMA	
Single phase input 50/60 Hz	V +/- 20%	230		-		-		-	
Three phase input 50/60 Hz	V +/- 20%	-		400		400		400	
Input Power @ I ₂ Max	kVA	5,6	6,2	9,0	9,6	19,0	24,7	26,0	31,0
Delayed Fuse (I _{eff})	A	16	16	10	10	32	32	40	50
Power Factor / cos φ		0,99/0,99	0,99/0,99	0,93/0,99	0,94/0,99	0,65/0,99	0,67/0,99	0,73/0,99	0,73/0,99
Efficiency Degree		0,81		0,83		0,86		0,87	
Open circuit voltage	V	85		85		85		85	
Current range	A	1 - 220	10 - 180	1 - 300	10 - 250	1 - 400	10 - 400	1 - 500	10 - 500
Duty cycle at (40°C)	A 100 %	140	120	210	190	350	350	400	400
	A 60 %	180	150	250	220	400	400	500	500
	A X %	220 (30%)	180 (30%)	300 (35%)	250 (40%)	-	-	-	-
Standards		EN 60974-1 - EN 60974-3 - EN 60974-10							
Protection Class	IP	23 S		23 S		23 S		23 S	
Dimensions (L x W x H)	mm	530 x 215 x 410		530 x 215 x 410		710 x 290 x 530		710 x 290 x 530	
Weight	Kg	20		21,5		53		54	