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CEA

TIG

made in italy
SINCE 1950





MATRIX X AC/DC

THE ULTIMATE SOLUTION FOR AC/DC TIG

TIG INVERTER WELDING EQUIPMENT

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 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.

MATRIX X AC/DC



X Vision interface

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. TIG DC minimum current from 1A and TIG AC starting from 3A.



Excellent welding performance

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. 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.

Other characteristics

- Excellent welding characteristics in TIG with all material and MMA with any type of electrodes, cellulosic included
- Smart HF IGNITION for an accurate and prompter Arc Striking in all conditions
- Use of Up/Down TIG torches will enable to adjust welding parameters and JOBS
- Reduced weight and size, easy-to-carry
- Compact water cooling equipment integrable (optional)
- Simple automation: TSA1 (Optional)



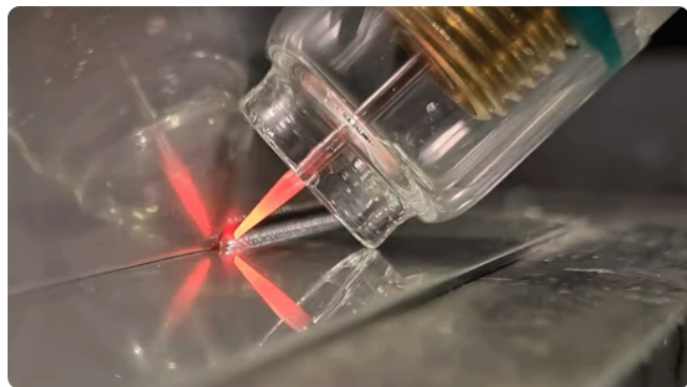
TECHNICAL FEATURES



COLDTACK

Innovative spot welding device to achieve precise and safe joining with a minimal thermal input.

Multi-cold.TACK function grants cold spotting in a rapid sequence, thus further widening the benefits of the single spot. Thanks to Perfect-Point function, cold.TACK allows to obtain the most precise spot positioning.



CYCLE FUNCTION

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

X VISION CONTROL DISPLAY TIG

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



TIG RCT - RUNNING COLDTACK

RCT is the acronyms of Running cold.TACK; indeed, the TIG RCT process allows to benefit of all the cold.TACK advantages, by repeating the single cold.TACK 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.





MMA FUNCTIONS

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

PULSE MODE

SYN PULSE

SYN PULSE will synergically generate pulse frequency and base current

ULTRA FAST

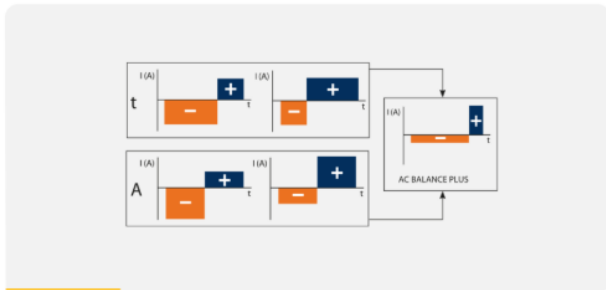
Adjust frequency up to 2000 Hz

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.

WAVE SHAPES SPECIAL TIG AC FUNCTIONS

DYNAMIC

Square wave: high arc dynamics for all applications

SOFT

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

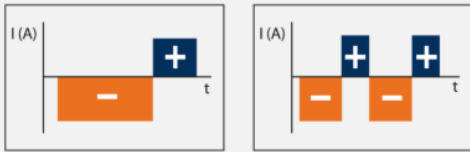
SPEED

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

COLD

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





FREQUENCY CONTROL IN AC

Frequency adjustment of the various AC wave shapes for better directional control, reduction of the thermally altered area, deeper penetration and electrode lower wearing out. High level frequency enables to weld very thin material with excellent results. Low frequency is ideal for medium thickness or whenever edge preparation is not accurate.

MMA AVAILABLE IN DC AND AC

Thanks to CEA inverter technology it's possible to perform a great MMA welding not only in DC, but also in AC. This specific feature is standard available and it's the perfect solution to avoid magnetization during the welding process.



NEGATIVE TIG IGNITION

Compared to the traditional positive ignition, it is possible to take advantage of the special negative ignition mode. With this function, possible inclusions can be further reduced during the ignition phase.

Available accessories

DISCOVER ALL AVAILABLE ACCESSORIES



HRX 20
032120



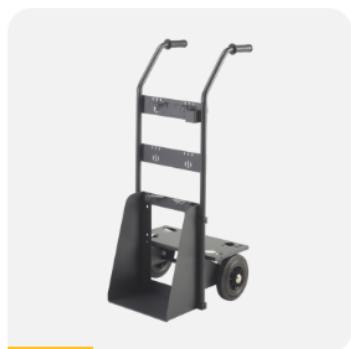
HRX 30
032115



HRX 52
032130



CEA CL-1100
402275A



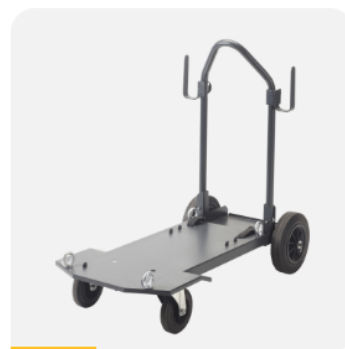
TROLLEY VT 101
234929



TROLLEY CT 401
234931



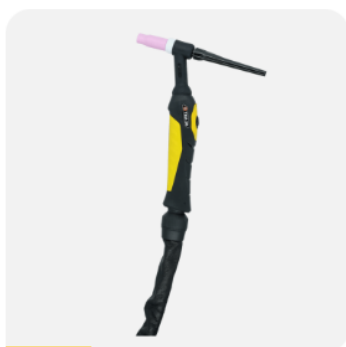
TROLLEY CT 70
234914



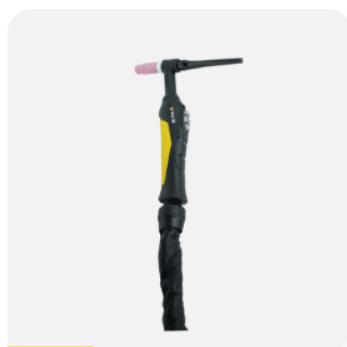
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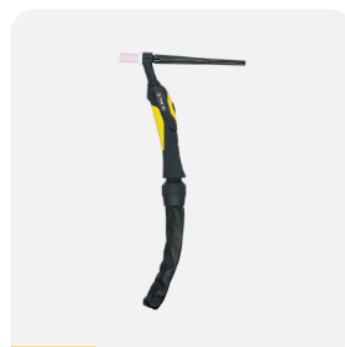
TROLLEY PRIME CT 80
234932



CEA TORCH TXA 26.4
020562



CEA TORCH TXA 26.4
"UP/DOWN"
020662



CEA TORCH MINI TXH
20.4
020667



**CEA TORCH MINI TXH
20.4 "UP/DOWN"**
020680



CEA TORCH TXH 18.4
020672



**CEA TORCH TXH 18.4
"UP/DOWN"**
020677



**35 MM² / 4 M GROUND
CABLE WITH CLAMP**
239601



**70 MM² / 4 M GROUND
CABLE WITH CLAMP**
239607



**REDUCER WITH
FLOWMETER AND 1
MANOMETER**
020916



**TSA1 - TIG SIMPLE
AUTOMATION KIT**
031118



**TSA5 - TIG SIMPLE
AUTOMATION KIT**
031119



DFX1
353485



DFX5
353486



CD 6/8
236243



PSR7
020919



**ADAPTER FOR TORCH
AND PSR 7**

460056



A6 KIT

460005

Datasheet

MATRIX X AC/DC: TECHNICAL FEATURES

TECHNICAL DATA			MATRIX X220 AC/DC		MATRIX X300 AC/DC		MATRIX X400 AC/DC		MATRIX X500 AC/DC	
			TIG	MMA	TIG	MMA	TIG	MMA	TIG	MMA
Single phase input 50/60 Hz	V	+20% -20%	230		-		-		-	
Three phase input 50/60 Hz	V	+20% -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 ₂ @ 60%)	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 (LxWxH)	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	



WELDING TOGETHER

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