

2021

NEW FEATURES FOR TIG

# MATRIX

QUICK PRESENTATION OF THE MAJOR  
IMPROVEMENTS OF THE NEW PCB AND SW.



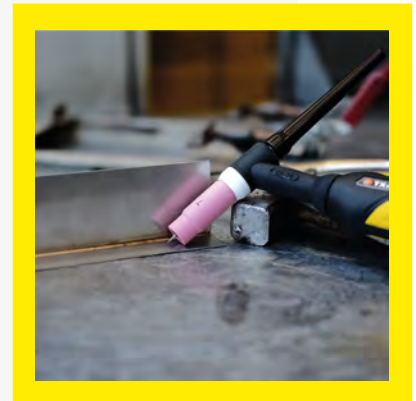
# TIG RCT

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TIG RCT is a new welding process, now available on all the Matrix range, which allows to weld in TIG to realize very cold welding seams.

RCT is the acronym of **RUNNING COLD TACK**; 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.

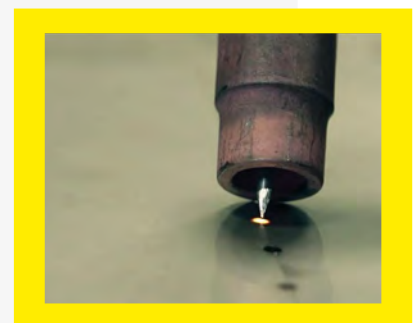


# HIGHLIGHT

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## **ColdTACK**

ColdTACK is an innovative spot welding option to achieve precise and safe joining with a minimal thermal input. Each single coldTACK can be formed by one or more current peaks in a rapid sequence, this peak sequence allows a further reduction of the heat transfer and grants to realize a more precise and flat spot on the welding joint.



# MINIMUM CURRENT

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The new MATRIX PCB and software allow you to achieve the highest control possible of the arc during welding. Thanks to that, it's now possible to set the minimum current in TIG DC and TIG AC to the following values:

- TIG DC – min current from 1 A
- TIG AC – min current from 3 A





# TIG IGNITION

## HF IGNITION

This new intelligent HF ignition grants a more accurate and prompt Arc Striking in all conditions. By this new HF ignition, you are always sure to start the welding process at the right time.

## TIG AC: ELECTRODE POLARITY ARC IGNITION

It is now possible to select the Tungsten electrode polarity, at the arc ignition, also in EN (Electrode Negative) in addition to the standard EP (Electrode Positive). EN setting allows you, in some circumstances, to get a longer life of the electrode point.

## LIFT ARC CURRENT

It is possible to set the value of the starting current in LIFT. The value is no longer fix at 45 A as before, now it is different according to the equipment model (I.e. 15 A for MATRIX 2200 and 45 A for MATRIX 5100). This new function has been implemented to optimize the arc according to the different power source model.

## SPECIAL LIFT ARC MODE WITH TORCHES WITHOUT TRIGGER

This function is studied to weld with TIG torches with built-in gas valve without trigger. It is very useful every time you weld with very long TIG torches where it is not possible to have the HF arc ignition with built-in gas valve.

# MMA AC

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MMA welding mode can now be set in MMA AC in all Matrix AC-DC power sources.



# WELDING CONTROL

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## TIG AC

The new AC wave forms grant a less noisy arc for superior welding comfort.

## DIGITAL WELDING CONTROL

Thanks to the new and faster micro-processor, both the current response and the arc stability have been improved throughout the whole current range.

## STORED JOBS

Thanks to larger size memory, the possibility to store personalized JOBS has been increased from 5 up to 99.



# DIAGNOSTIC

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New diagnostic information is now available on the display for a useful identification of problems which may occur on the machine. This makes your Service Department operations more easier and quicker.



# EXPERT TIPS

Choosing the right Tungsten electrode is a critical part of an efficient welding procedure.

Type, size and shape of the Tungsten electrode change in function of the power source, welding current value, metal and its thickness too. This becomes more important when you're going to set MATRIX's at the lowest initial current values. For this reason, to reach the best result with these minimum current values, we recommend the below listed Tungsten electrodes:

## DC Welding:

- GREY (2% Cerium - excellent arc starts at low amperages) it's the right choice for working with thin metal sheets.
- BLUE (2% Lanthanum – excellent arc, less tip wear and long life);

## AC Welding:

- BROWN (1% Zirconium - it retains a balled tip and has a high resistance to contamination);
- WHITE (0.8% Zirconium)
- BLUE (2% Lanthanum);
- GOLD (1.5% Lanthanum);
- GREEN (pure – 99.5% Tungsten- very low contamination, less expensive than “alloyed” ones, higher consumption rate, difficult to start at low current);





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