

# Matrix X



TIG

# MATRIX X RANGE COMPLETED

THE ULTIMATE SOLUTION FOR TIG

MATRIX X 220 HF

MATRIX X 300 HF

MATRIX X 220 AC/DC

MATRIX X 300 AC/DC

MATRIX X 400 AC/DC

MATRIX X 500 AC/DC





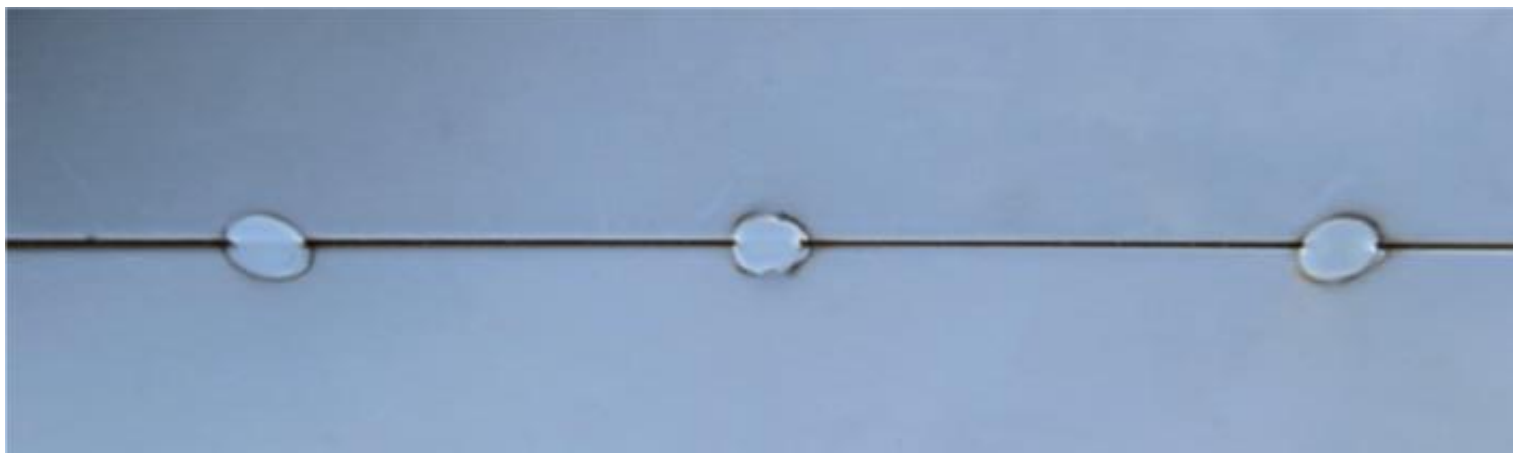
# MATRIX X

- Matrix X **Dc** 220, 300
- Matrix X **AcDc** 220, 300, 400, 500
- **New XV user-interface (= X.Vision)**
- Also available -- with conventional operation-panel
- u/d torches (parameters + jobs)
- **Very stable/reliable ignition**
  - **DC** – 1A min.current
  - **AC** – 3A min.current
- **Perfect-Point** ... best-possible Spot-Position
- Repeated-Ignition Function
- Ignition - always on positive wave (AC)



## RCT ... Running Cold Tack

- COLD TACK => **RCT** Running Cold Tack - on DC
- For thin sheets
- Minimal thermal input – compared to (puls) TIG
- Default-Setting
  - Amperage => max.
  - Tack-Time
  - Pause-Time => 1 sec (to avoid malfunction of automatic helmets)
  - Quan. of Impulses => **1** (max. 10)





## PULS-modes

- SYN (Easy-Puls)
  - Synergic Puls - based on set peak current.
  - Simple
  - DC
- SLOW
  - Peak / base current + time - individually adjustable
  - Optimal filler-deposition => good look
  - Useful – in combination with BALANCE / Frequency
  - AC / DC
- FAST
  - 0,5 - 500 Hz for more concentrated arc cone!
  - Smaller arc-diameter
  - Less deformation
  - DC
- ULTRA-FAST
  - Up to 2000 Hz
  - DC





# AC wave-forms

- **DYNAMIC**

- Rectangular wave
- Most common
- High arc stability
- Small-medium thickness

- **COLD**

- Triangular Wave
- Low heat transfer -- with reduced deformation
- Small thickness

- **SOFT**

- Sinusoidal wave
- Silent an soft arc
- Butt welding joints

- **SPEED**

- Mixed Wave
- Good penetration at high welding speed
- Big thickness
- Longer electrode life

- **Overview**

- Rectangular
- Triangular
- Sinusoidal
- Mix wave-form

**DYNAMIC TIG**

COLD TIG

SOFT TIG

**SPEED TIG**

... for all applications

... for small thickness

... for low noise

... for high speed /  
long electrode-life

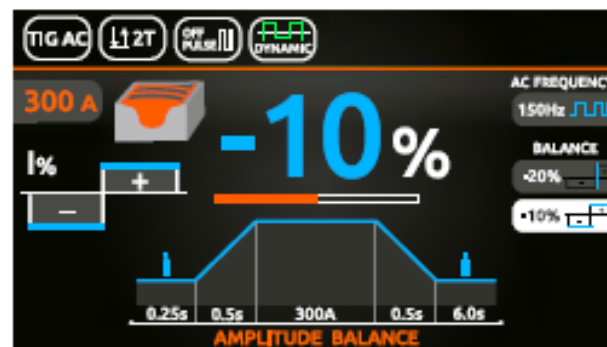
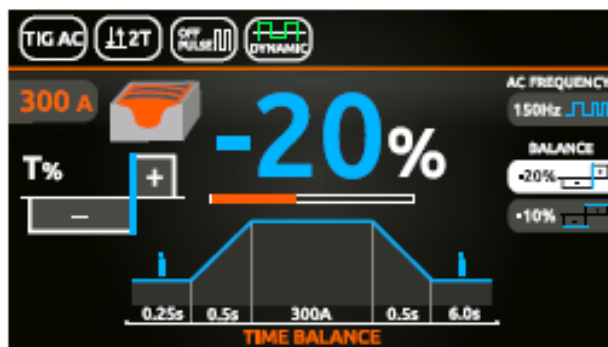
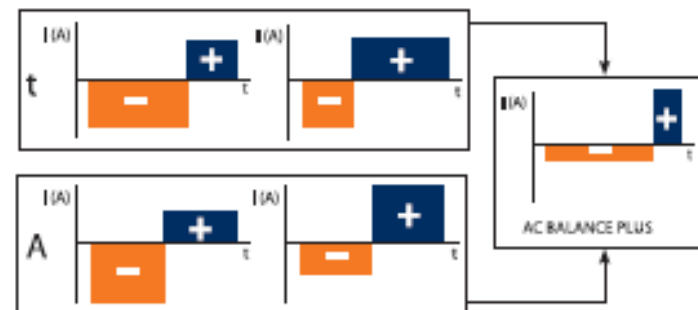




# Balance / Frequency

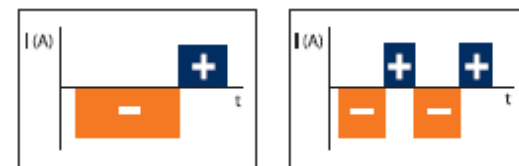
## Balance

- Positive and negative wave – separately adjustable
- Pos / Neg – power
- Pos / Neg – time
- Proportion of Pos / Neg wave



## AC Frequency

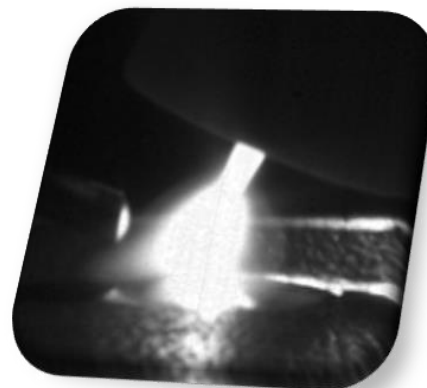
- High frequency => very thin sheets, high welding-speeds (automatic use)





# Tungston-Electr. Diameter

- Elektrode-diameter adjustable
  - Ignition-Current adjusted
  - Shaping of ball („calotte“)

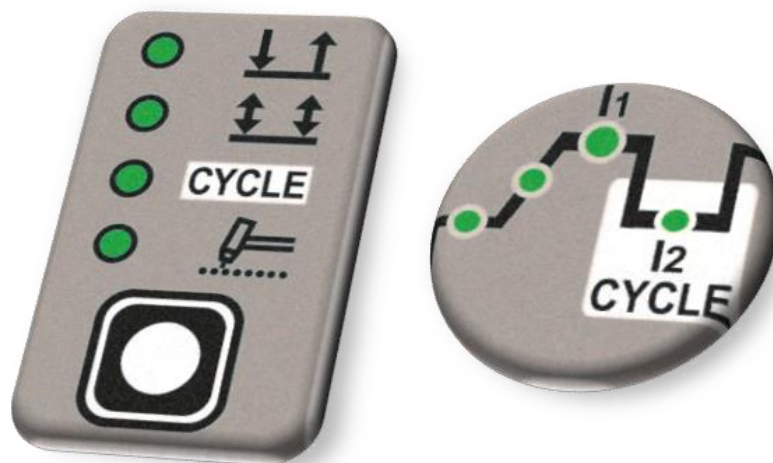


- MMA – also in AC possible
  - To avoid blowing-effect
  - Hotstart and Arcforce adjustable



# Cycle-function

- Switching between 2 set Amp-levels – by torch-trigger





# MATRIX - accessories



PSR 7 5 m foot remote control



# Matrix X

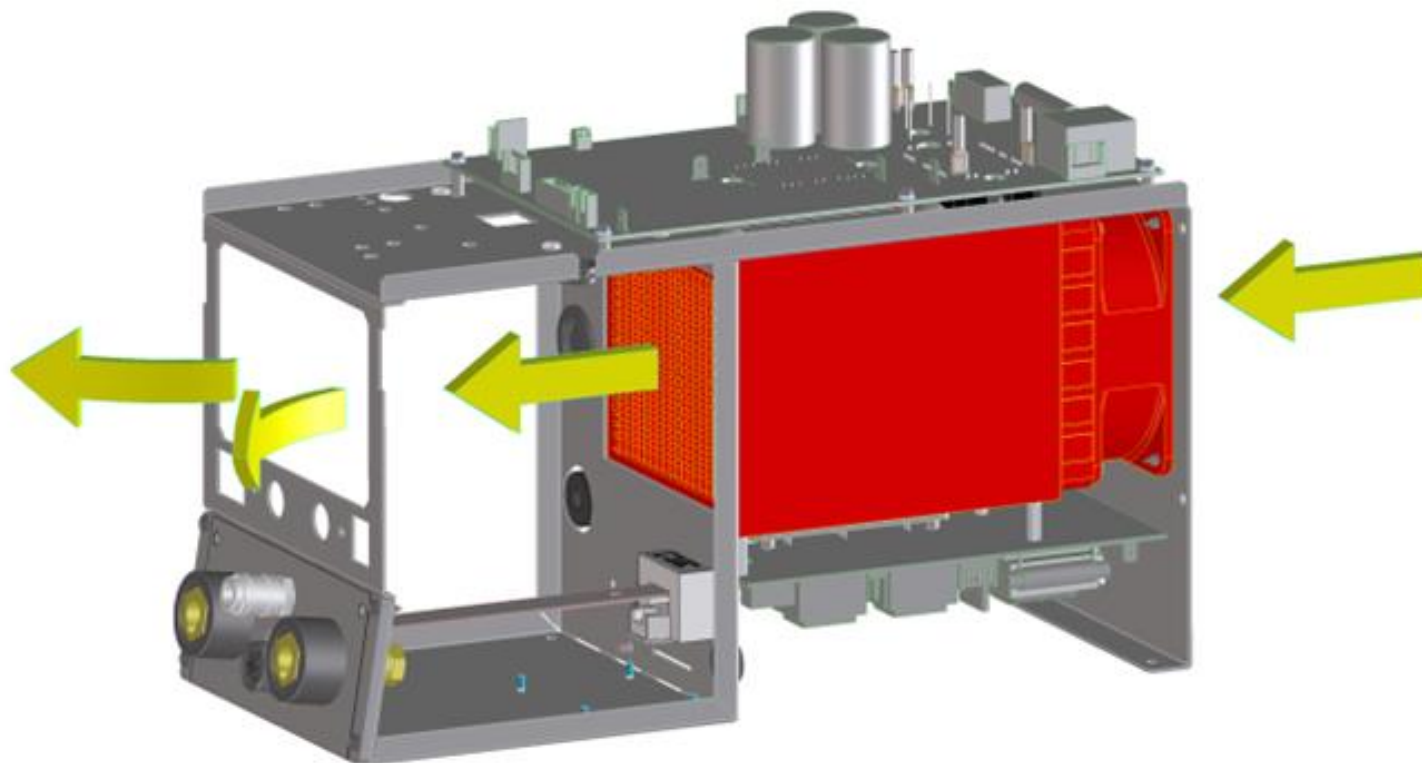
- Very small and compact
- 300A version .... 17kg





# Matrix X

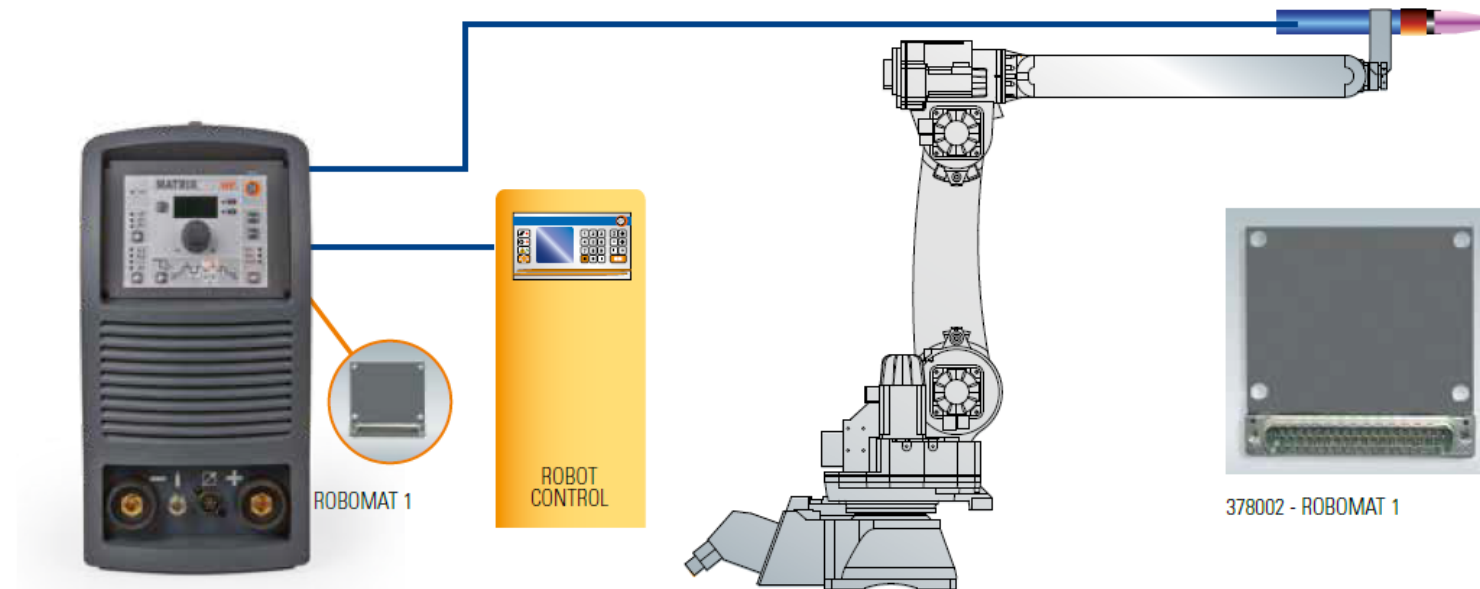
- Modern Cooling-concept
- High duty-cycle (60% - 400A/500A version)
- No metallic dust on electronic components
- Less maintenance





# Matrix X – for robotic/automatic use

- ....



CODE	DESCRIPTION	EURO	%	MATRIX 3000 HF-R		MATRIX 4200 HF-R	
				COOLING		COOLING	
				AIR	WATER	AIR	WATER
<b>POWER SOURCES - DC</b>							
004531	Power source <b>MATRIX 3000 HF-R</b> 400 V - 3 Phase	3.820,00	M2	✓	□		
004556	Power source <b>MATRIX 4200 HF-R</b> 400 V - 3 Phase	4.890,00	M2			✓	□

# Matrix X - target-group



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