

OMEGA 4.A

ON TABLE



Device description

This device includes three separate elements:

- Press
- Pulse Touch Generator
- Security PLC Integrated

PRESS

An ergonomic table

- Two-handed cycle start command using sensitive button
- Power On command with dedicated light pushbutton
- Emergency stop on front.
- 8 x M8 holes with tap for fixing jigs

Column

- Extruded, anti-flex column
- Welding module fixed in dovetails
- Built-in cable trays
- Rigid construction of table / column connection

Electro-pneumatic unit

- Clean, dry compressed air, maximum 7 bar (101 PSI) and minimum 6 bar
- Air loss detection
- Safety valve for pneumatic supply
- 25 micron air filter
- Two-handed control with 6 mm gap
- Movements controlled by dual safety distributor

Acoustic unit

- Enclosed transducer with optional cooling
- Booster with 3-axis seating adjustment
- Connection via HF 'Lemo' connector

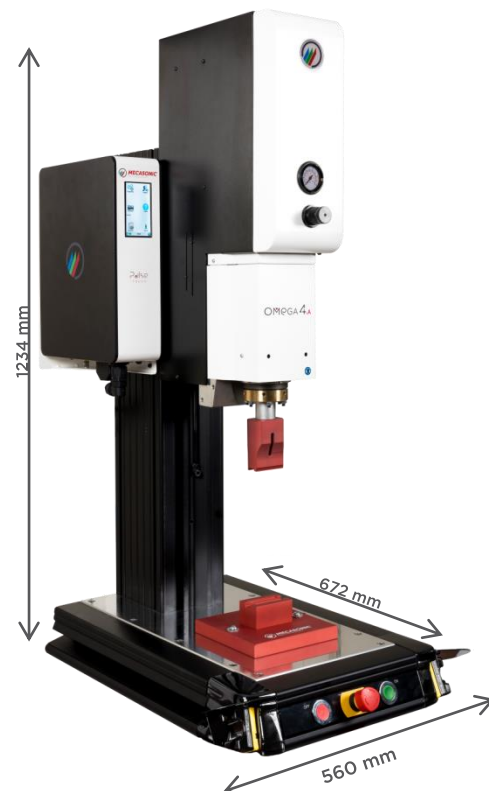


WELDING MODULE

- Welding module adjustment assisted by air cylinder
- Travel: 100 or 200 mm
- Module height adjustable over 250 mm
- Cylinder diameter: 40 – 63 – 80 mm
(depending on model, see table of equipment available)
- Maximum force: 2700 Newton in 80 mm ø cylinder
- Minimum force: 20 Newton in 40 mm ø cylinder
- Movable unit guided on rails using cross rollers
- Cylinder mounted in line with sonotrode
- Safe travel using adjustable mechanical stop

Functions

- Fully modular
- As standard, interfacing with operator's PLC via SubD-37 connection (binary I/O)
- Intuitive operator interface with 4,7" colour touch-screen for configuring setting and monitoring production
- 6 welding modes (including 2 RWS modes, exclusive to Mecasonic)
- 2 welding steps
- Time mode with energy limits
- Energy mode with time limits
- Mixed Time AND Energy mode
- Mixed Time OR Energy mode
- RWS Power mode
- Good part | bad part control windows
- Control window precision: 0.01 s, 1 J, and 1 W
- Multi-lingual menu system
- Dedicated safety PLC
- Start-up self-checking
- Single-phase 230 V electrical supply, line, neutral, and earth, 50/60 Hz
- Weight: 90 kg
- Maximum overall dimensions: 1234 × 672 × 560 mm



PULSE TOUCH

- Power | Frequency (depending on model, see table of available equipment)
- Control concept with touch interface, with direct connection to a controller via digital, analogue and optional RS485 bus inputs/outputs.
- 24VDC integrated power supply unit (with integrated 1.25 amp fuse)
- 24VDC digital inputs and outputs for control
- Assembly controlled by digital processing (DSP)
- Digital PLL to adjust the frequency
- Maximum length of the HF coaxial cable: 15 m

Functionalities

- Time mode (accurate to 10ms) with energy limits
- Energy mode (accurate to 1 J) with time limits
- Multi-criteria welding phase
- Dynamic amplitude adjustment
- Power measurement with an accuracy of $\pm 1\%$ of the rated power of the generator
- Monitoring electrical signals from generator for system analysis.
- Identification of limit charge states of the generator and the convertor
- Reinforce protection of the generator
- Shuts off in case of error or limits reached
- Progressive start and progressive stopping time can be adjusted to protect the acoustic head
- Transmission of data by optional RS422/485 fieldbuses.
- Parameter setting integrated touch screen.

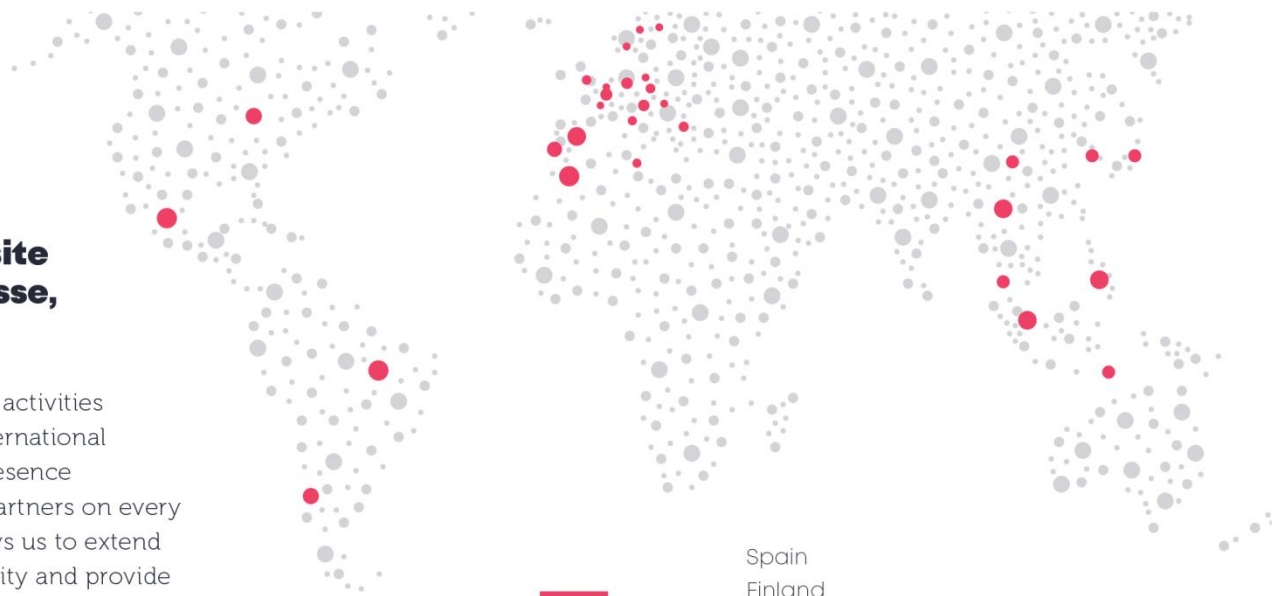


EQUIPMENT AVAILABLE

Frequency	Power	Converter Booster	Cylinder			Stroke available
			40 mm	63 mm	80 mm	
20 KHz	1000 W	20 KHz		X	X	100
						200
20 KHz	1500 W	20 KHz		X	X	100
						200
20 KHz	2000 W	20 KHz		X	X	100
						200
20 KHz	3000 W	20 KHz		X	X	100
						200
30 KHz	1000 W	30 KHz		X		100
						200
40 KHz	800 W	40 KHz	X			100
						200

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