

MAGNA S

Suspended High Frequency Welder
for large technical textiles, tents, high speed doors

Welding Head:

- Manual operation rotating turret with APEX planetary gears
- True 180°+degrees rotation with preset zero starting point
- Low height work table (floor level work function)
- Suspension assembly for ceiling beam installation
- Built in touch screen HMI
- Integrated HF generator, pneumatic and electric power supply unit
- Pneumatically driven downstroke electrode motion
- Pneumatic earthing foot for EMF emission control

ZTG Hi-Q Gen5 HF generator

- Power supply: 3 x 400V; 50Hz
- Power installed: 40 kVA
- Output power: max. 25 kW
- Working frequency: 27,12 MHz stabilized (+/-0.6%)
- High-Q Gen5 stabilised HF resonating cavity (smooth regulation)
- Metal-Ceramic air cooled triode
- Fully programmable min/max power output



Zemat Technology Group is a leading European design and manufacturing company of high frequency welding machines and auxiliary processing equipment

MAGNA S - quick overview

- The MAGNA S ceiling suspended HF Welder has an output power of 10-25kW, pneumatic press, automatic PLC control and touch screen HMI. The machine is installed directly on the factory's ceiling support beam, allowing 360 degree access around the work table and floor level production.
- The HF generator, air cylinders and electric power supply unit is fully integrated within the suspended weld head creating an open space for a lightweight work table of various sizes and shapes (rectangular or round). It can be installed right above the floor to allow to easy handling of heavy and high volume dimensional fabrics. The size of the welding/work table are custom made in accordance with the HF welding electrode length.
- Magna S machine is equipped with a hand operated rotating turret with 180+ deg. rotation function. They allow for open and easy access to the work table and the welding head from any direction and are used in the production process of large technical textile structures, high speed doors, fishery tanks, tents, tensile and membrane structures, advertising billboards, oil-booms, water cisterns, pool-liners, etc.

Main applications:

- Small and large format technical textiles PVC or PU coated
- Tensile structures, tents, shade systems, truck covers, water cisterns
- Swimming pool liners and covers, oil booms, flood dams and water tanks
- Advertising signs and large format billboards
- High speed doors, fishery tanks

Features:

- 10" HMI with color touch screen (located on HF welding head) controlled by latest generation PLC
- ZTG WELDSAVE - Registering the real-time weld parameters & saving them in Excel file/USB
- Unlimited number of saved recipes (above 1000) with easy sorting capability
- Storing weld parameters on USB
- Multilevel viewing/editing of weld settings secured with passwords
- ZTG iCOM™ internet interface unit allowing remote control (via VPN) of all aspects of machine setup and weld cycles – this Plug-N-Play unit does not interfere with internal client LAN settings
- VNC Server - control the machine's HMI via internet browser
- ZTG HF AutoTuning System™ - automatic control of output HF power based on Zemat TG custom HF power matching algorithms
- ZTG SafeDOWN™ - tooling bar press protection system for operator safety and ease of operating and positioning of welded material
- Pressure Logic System PLS™ - intelligent down-stroke pressure setting for thick and heavy fabrics' welding cycles
- Manual weld cycle – operator sets up all parameters of welding cycle
- Automatic weld cycle – operator chooses the HF weld cycle with preprogrammed options (power output, time of weld, pressure and distance)
- Fully programmable work power and maximum output power
- ZTG AntiFlash™ ultra-fast solid state antiflash circuit
- Direct operation with triode interdiction
- Built-in grid signal filter, plate signal filter mounted on welding head
- Fully CE, FCC compliant, EMC tested

Optional Features:

- Laser Guide Projectors - projecting red laser lines for quick material guidance on the work table
- ZTG FLEXel™ (flexible electrode) - soft electrode for multilayer fabric welding
- Onsite ISO17025 EMC compliance testing full diagnostic testing and certification of the local factory EMC/EMS parameters according to the latest guidelines required by the CE standards.



- Custom built tooling and electrodes available upon request. Each machine is built according to customers needs. Modifications and adjustments of machine parameters available at additional cost.
- Machine fully comply with CE regulations for EMC, FCC and OSHA standards.

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Technical specification

Magna S 25M

Working (HF welding) table size	custom made / various shapes and sizes
Space behind electrode axis	open 360°
Working frequency	27,12 MHz stabilized (±0.6%)
Electrode length	up to 1500 mm
Maximum welding surface	up to 40cm ² from 1kW output power*
Welding electrode drive	pneumatic cylinder
Welding electrode stroke	10 - 160 mm (adjustable)
Electrode-tool holder	fast clamping system
Push down pressure	up to 3500 kg
Push down pressure regulation	smooth 150 - 3500 kg
Air consumption	max. 60 nl/cycle
Cooling system	Air chiller for electrode temperature stabilization

*depending on welded fabric characteristics