

OPTIMA series HFKP

High Frequency Rotary Welder
Turntable 4/6 Work Stations

- Precision indexing rotary work table to 0.1mm
- Fully automated HF weld cycles with adjustable rotating speed
- High Pressure Sealing With Enhanced Ram Guidance
- Production speed: 5/7 cycles/min depending on welding and rotating times
- C-Frame welded steel structure with integrated HF generator
- Pneumatic HF press operation (hydraulic on request)
- Optional loaders/unloaders and electrode heating/cooling
- ZTG AT™ Autotuning and ultrafast ARC limiter
- Work platens up to 700x800mm
- Ideal for PVC, PU, PET-G and A-PET products
- Freestanding control panel with touch screen HMI/PLC



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ZEMAT TG is a leading design company and manufacturer of turntable 4 or 6 station high frequency welding machines. Turntable OPTIMA series HF Welder is made specifically for production serving various industries: automotive, medical, rehabilitation, packaging, recreation, textile and clothing, reflective garments, etc. The machine provides manufactures with a high power HF output and a custom mandrel style press for a versatile and reliable sealing/welding process.

OPTIMA's worktable is equipped with special high precision rotary indexing gear controlled by frequency inverter. The machine operation is based on step by step technology with possibility of multiple welds in one cycle.

With the use of touch screen HMI and programmable PLC operator can easily input multiple weld/seam recipes. OPTIMA series machines have production power outputs from 8kW to 15kW for multi-cavity production loads and specialized products. Automatic weld cycles, optional preheated weld platen, pneumatic or hydraulic weld head drive, electronic motion and weld cycle counter make this machine a perfect tool for high end production facility where precision, durability and strength are the key.

ZEMAT TG always puts quality, precision, efficiency and safety first!

Main applications:

- Medical equipment: blood, urine, colostomy and drainage bags
- Automotive: pneumatic lumbar support systems, sun visors, carpets, seats, door panels and car tops
- Packaging: clam-shell and blister PVC, PET-G, A-PET
- Stationery: covers, albums, business card holders, notebooks
- Garments and protective clothing
- Advertising, embossed logos, signs

Technical and Safety Features:

- Precision rotating motion/weld accuracy to 0.1mm
- Work platens up to 700x800 mm
- C-Frame welded steel structure
- Fully automated weld cycles with multiple recipes
- ZTG AT™ Autotuning HF power output system
- Simple to setup and easy to operate
- Plexiglass safety gate at tooling column
- High production capacity with programmable PLC
- Custom heavy duty pneumatic quick die disconnect system
- Pneumatic or hydraulic electrode drive
- Output overload protection with warning indicator/reset
- Hi-Q cavity stable and efficient HF generator
- Ultra-fast sensitive ARC sensor
- Manual, semi-automatic and automatic operation
- Freestanding control panel with touch screen HMI/PLC
- CE, EMC, EU, FCC and OSHA compliant



| Technical Specifications: | HFKP8 | HFKP12 | HFKP15 |
|--|---|-----------------------|-----------------------|
| Emitted maximum HF output power | 8kW | 18kW | 22kW |
| Installed power – maximum | 12kW | 12kW | 15kW |
| Power supply | 3x415V; 50Hz | 3x415V; 50Hz | 3x415V; 50Hz |
| Main fuse | 32 A | 40A | 40A |
| Working frequency | 27.12MHz (+/-0.6%) | 27.12MHz (+/-0.6%) | 27.12MHz (+/-0.6%) |
| Oscillator type / Power tube | Air cooled metal-ceramic triodes 3CX/ITL series | | |
| Antiflash system | Standard | Standard | Standard |
| HF Auto-tuning System(ATS) | Optional | Optional | Optional |
| PLC control system | MITSUBISHI with touch panel HMI | | |
| Electrode pneumatic press (at 0,4-0,7 Mpa) | 1200kg | 1200kg | 1900kg |
| Compressed air consumption | 90nl/cycle | 130nl/cycle | 130nl/cycle |
| Electrode platen working stroke | 300mm | 300mm | 300mm |
| Welding table dimensions | 400x500mm | 500x600mm | 500x600mm |
| Heated electrode plate Regulated up to 120°C | Regulated up to 120°C | Regulated up to 120°C | Regulated up to 120°C |
| Welding surface each working cycle max. | 200 cm ² | 300 cm ² | 375 cm ² |
| Preheated electrode platen | Standard | Standard | Standard |
| Protective HF radiation shield | Standard | Standard | Standard |