

TruHeat MW Series

Homogeneous, precise and reproducible microwave heating based on highly efficient GaN- transistors











Features

- Frequency range / sweeping between 2.4 GHz – 2.5 GHz
- Frequency / Phase switching time of less than one millisecond
- Phase synchronization capability between multiple generators
- Ultra fast pulsing in ns-range for advanced plasma and heating applications
- Drop-in magnetron replacement
- MTBF of more than 100,000 hours
- EtherNet / EtherCat (optional) interface for remote control and monitoring

Applications

- Fast, contactless heating of low-loss dielectric materials (e.g. plastics, glass)
- Homogeneous / controlled microwave distribution of larger components (e.g. CFK curing)
- Drying of materials (e.g. plastic, filters)
- Microwave pyrolysis
- Microwave Plasma Assisted Chemical Vapour Deposition

Benefits

	High flexibility for different operation modes (CW, pulsed, modulated signals)
	Low annual failure rate and short MTTR ensuring high system availability
	Microwave induced heating / plasma parameter can be easily tuned to the application using nanopulses
	Reduced operational expenditures through high overall efficiency and long lifetime
	Complete product protection even in case of multiple generators
	Long-life microwave generator with MTBF at least 20 times longer in comparison to conventional magnetrons
	Frequency and phase tunability by software to enable large-area homogeneous heating
	No external circulators and for many applications no 3-stab tuners necessary

Exemplary technical data

RF output	
Output power	0 W – 8000 W ¹
Rated power	8000 W
Nominal load impedance	50 Ω
Output frequency	2.4 GHz – 2.5 GHz
Networking connection data	
Line voltage	3/PE AC 400 bis 480 V ±10 %
Line frequency	50/60 Hz ±3 Hz
Line input power	17.6 kVA
Power factor	>0.85
Communication interfaces	
EtherNet	Yes
EtherCat	Optional
PROFINET	Optional
Housing	
IP protection class	20
Dimensions (W x H x D)	553 mm x 1168 mm x 1000 mm
Cooling requirements	
Maximum water pressure	10 bar
Minimum pressure difference	3 bar
Minimum flow rate	24 l/min
Coolant temperature	15 °C – 25 °C
General	
Overall efficiency	typ. > 50% (depending on frequency and CW/Pulse)
Certificates / standards	ROHS, CE, EN61000-3-12,-3, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN55024, EN 55011 Group 2 Class A, EN 61010-1
Ambient conditions	
Outside temperature	15 °C – 40 °C
Humidity	30% – 80% (not condensing)

¹ Single generator unit