
CUSTOMIZED AND CONTINUOUS MICROWAVE PROCESSING UNIT

Salient features

- Continuous pipe flow system for liquid food and conveyor system for solid food
- Equipped with infrared (IR) lamp for preheating solid food
- Temperature sensors at inlet and outlet; IR-type for solid and thermocouple-type for liquid food
- Chiller for immediate cooling of MW heated liquid food
- Forced air cooling for magnetrons, and auto-cut facility in case of overheating
- Exhaust to remove water vapours from MW cavity
- Door double security by contact
- Variable control of MW power, timer for pulsating power, IR temperature, Pump flow, and conveyor speed
- The two opening ends contain MW absorption material to prevent leak

Advantages

- ✓ Quick heating compared to conventional thermal technology
- ✓ Suitable for both solid and liquid
- ✓ Precise control
- ✓ Can function at both batch and continuous mode
- ✓ Multiple controllable options available for researching process
- ✓ Low operation cost
- ✓ Compact equipment size
- ✓ Instant start-up or shutdown
- ✓ High throughput rate
- ✓ High energy efficiency and minimum heat loss
- ✓ Fewer environmental problems compared to conventional heating
- ✓ MW directly heats moisture and polar compounds prevents outside burns in solid
- ✓ Safety features: magnetron cooling system, auto-cut on possible overheating or opening the middle door, and MW absorption area near inlet-outlet of conveyor

Specifications

- Operates at single phase 415 V and 50 Hz AC current
- Maximum input power consumption is 8 kWh
- Maximum dimensions: 420 cm × 65 cm × 190 cm (L × W × H)

- Contains 2 magnetrons, each having 1 kW microwave (MW) output power
- Infrared heating lamp output power: 3 kW
- Generates MW with frequency 2450 ±50 MHz
- Manpower requirement: 2
- Power absorption efficiency: 32.6% for 1.6 L liquid sample in continuous mode at 0.4 L/min flow rate



Customized & continuous microwave processing unit

Machine developed by

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Price / Unit

~ 12 Lack Rupees

More information

Publication

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