

Microwave Extraction Pilot Plant Equipment

This machine can be used as a testing equipment for microwave extraction experiments in universities and research institutions, suitable for foods, medicine, and chemicals. It can also be used as a pilot plant equipment, providing accurate processing data for large-scale microwave extraction production lines.



Overview

Versatile Microwave Extraction System

This dual-purpose microwave extraction pilot-plant equipment serves as both a research tool for universities and laboratories and a pilot-scale system for industrial process development. It enables precise microwave extraction experiments for food, medicine, and chemical applications, providing critical data for scaling up to large production lines. The system features a robust, fully automated design with adjustable microwave power and precise temperature control to ensure optimal extraction yields.

Technical Specifications

Capacity	50—500L
Microwave Power	30 kw
Microwave Frequency	2450 MHZ
Agitation Power	2.25 kw
Agitation Speed	0 — 100 r/min
Input Supply Voltage	380V / 50HZ (3-phase)

Operational Performance

Temperature Range	30—95°C
Water Extraction Time	<0.6 – 2h per pot
Alcohol Extraction Time	<0.5 – 1.5h per pot
Compatible Solvents	Water, Alcohol

Safety & Control

Safety Features

Explosion-proof • Microwave leakage < 5Mw/cm²

Control System

Fully automatic PLC controlling system

System Components

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- Feeding hopper
- Microwave chamber
- Extraction chamber
- Discharging funnel
- Control & detection system
- Power distributing cabinet