

FD450

High-Capacity Commercial Freeze Dryer



130 kg/cycle · 5.76 m² tray area · 24 trays · 4 compressors · from 44,700 € net

Technical Data

Max Ice Extraction	130 Kg per cycle
Drawer Loading Volume	576 Liters
Tray Size	400 x 600 mm (24 trays)
Total Tray Area (24 trays)	5.76 m²
Energy Consumption	approx. 5.5 kW/h average (preliminary)
Chamber Type	Extruded Aluminium Tube, 7 mm wall
Chamber Finish	Hard Anodized 25µ inside and outside
Number of Drawers	24 (standard)
Shelf Material	Anodized Aluminium or Stainless Steel
Shelf Temperature Range	-40°C to +80°C
Temperature Sensors	PT100 Class A, ± 1°C precision
Vacuum Pump	Two-Stage Rotary Vane or Scroll Pump
Pump Down Time	20 minutes to 0.1 mbar

Final Vacuum	< 0.07 mbar (50 mTorr max)
Leak Rate	10⁻⁴ mTorr/sec
Vacuum Sensor	Pirani
Heating Power	Up to 400 Watt per tray
Heating System	Electrical Heating Mat
Defrost Time	20 - 60 minutes (electrical)
Refrigeration Compressors	4 x Embraco Piston Type
Refrigeration Power	8 kW
Refrigerant	R449A (alt.: R448A / R452A)
Min Cooling Temperature	-40°C
Door Material	40 mm Acrylic
Door Gasket	Silicone Rubber
Door Lock	Manual, Mechanical Closing
Control System	Siemens Simatic PLC
Monitor	Kinco HD Color Touchscreen
Connectivity	Ethernet / IoT WAVE Network
Dimensions (L x W x H)	1900 x 890 x 1300 mm
Total Weight	approx. 900 Kg (preliminary)
Noise Level	< 65 dB at 1 m
Max Ambient Temperature	< 23°C
Electricity EU Version	400V / 3 / N, 32 A
Electricity US Version	240V / 1 / N (120V / 2 / N)
Max Electrical Load	22 kW (32 A / 400 V / 3-phase)