FOOD FREEZE DRYERS

QS-FD-100 / 200 Industrial Freeze Drying Line

The QS-FD-100 and QS-FD-200 share one industrial platform: a track-type, square SUS304 freeze-drying chamber with trolley loading, a large-area copper cold trap and –60 °C refrigeration. Choose 103.68 m² (≈1 ton wet material per batch) or 207.36 m² (≈2 tons per batch).

1-2 t / batch	207 m²	1 unit
CAPACITY	MAX DRYING AREA	MINIMUM ORDER







Key features

- **Trolley loading on rails.** Track-type design lets you pre-load trays on trolleys in the freezing room and roll full batches into the chamber in minutes.
- **Copper cold trap.** An extra-large pure copper-tube condenser captures ice fast and evenly, keeping vacuum stable through primary drying.
- **Precision, zone by zone.** Four independent shelf-heating channels with 0.1 °C accuracy for flexible multi-product production.
- **Engineered for utilities.** Evaporative condensing (57 kW / 112.5 kW) and Danfoss valves keep running costs predictable in hot climates.

Model comparison

PARAMETER	QS-FD-100	QS-FD-200
Drying area	103.68 m²	207.36 m²

PARAMETER	QS-FD-100	QS-FD-200
Wet-material capacity	≈ 1,000 kg / batch	≈ 2,000 kg / batch
Overall dimensions	7000 × 4000 × 2300 mm	12000 × 4000 × 2300 mm
Inner chamber (L × W × H)	4000 × 1456 × 1706 mm	7500 × 1456 × 1706 mm
Trays (400 × 600 × 28 mm)	432 pcs	864 pcs
Total power	135 kW	Quoted per configuration
Evaporative cooling	57 kW	112.5 kW
Evaporative condenser	100 m²	150 m²

Technical specifications

Models	QS-FD-100 / QS-FD-200
Configuration	Freeze-drying vacuum chamber × 1 + low-temperature water trap × 1
Insulation	100 mm polyurethane, density ≈ 42 kg/m³, B2 fire rating
Refrigerant piping	Φ16 supply / Φ22 return copper pipe, insulated
Chamber material	SUS304 stainless steel, welded square-tube reinforcement; mirror-finish liner, brushed outer shell
Chamber shape	Square (replaces cylindrical design — saves floor space and energy)
Door	SUS304 front-opening door with acrylic sight glass; food-grade O-section silicone seal
Product temperature probe	Custom PT100, ±0.1 °C
Heating shelves	6063 aluminium alloy heated shelves + trays, electric heating
Tray size	400 × 600 × 28 mm
Shelf heating	Max. 80 °C, 0.1 °C control accuracy, 4 independent channels
Cold trap	Extra-large pure copper-tube coil, SUS304 shell
Defrost	Water bath or spray
Refrigeration	−60 °C ultra-low temperature single-unit two-stage compressor, R404A or R507
Expansion & solenoid valves	Danfoss TEX2-05 / Danfoss EVR
Energy saving	Compressor auto-stops by product dryness; actual consumption approx. 60% of rated

Standard configuration; final values are confirmed in the quotation. Voltage, heating source and layout can be customised.

Applications

Fruit & vegetable plants · Pet food · Instant meals · Dairy snacks

Request a quotation — Email inquiry@foodfreezedryerfactory.com · WhatsApp / Tel +86 176 2154 1688 · www.foodfreezedryerfactory.com/products/qs-fd-100-200-industrial-freeze-drying-line/