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REAL MILOTECH EQUIPMENT

FREEZE DRYER SYSTEMS

Vacuum freeze-drying technology for premium food processing.

8 KG / 18 KG / 32 KG / 50 KG / 100 KG

INTERNATIONAL CATALOGUE 2026

HOW FREEZE DRYING WORKS

THE SCIENCE BEHIND PREMIUM DEHYDRATION

01

PRE-FREEZING

The product is frozen before vacuum drying begins.

02

VACUUM

Chamber pressure is reduced to support sublimation.

03

PRIMARY DRYING

Ice changes directly into vapor; the condenser captures moisture.

04

SECONDARY DRYING

Residual bound moisture is reduced under controlled conditions.

SUBLIMATION: solid ice becomes water vapor without first melting into liquid.

WHY CHOOSE FREEZE DRYING?

PRODUCT VALUE THROUGH CONTROLLED MOISTURE REMOVAL

STRUCTURE & SHAPE

Can help reduce collapse and preserve a porous product structure.

COLOR & APPEARANCE

Low-temperature processing can limit heat-related changes.

AROMA & FLAVOR

Useful for delicate ingredients and premium sensory profiles.

REHYDRATION

Porous dried structures may rehydrate effectively.

PRODUCT FLEXIBILITY

Suitable for selected foods, herbs and specialty ingredients.

PROCESS REPEATABILITY

A validated recipe supports consistent batch outcomes.

Actual retention and shelf-life depend on ingredient, process validation and packaging.

APPLICATIONS

REPRESENTATIVE PRODUCT CATEGORIES

FRUITS

Berries, mango, tropical fruits and specialty fruit ingredients.

VEGETABLES

Selected vegetables and high-value plant ingredients.

EDIBLE BIRD'S NEST

Premium bird's nest products requiring gentle processing.

BOTANICALS & HERBS

Aromatic herbs, leaves, roots and botanical ingredients.

MUSHROOMS

Specialty mushroom products and delicate slices.

SPECIALTY FOODS

Premium functional and value-added formulations.

Product suitability and final moisture specifications are established during process trials.

ENGINEERING OVERVIEW

ACTUAL MILOTECH EQUIPMENT PHOTO



Actual Milotech freeze dryer • representative configuration

VACUUM CHAMBER
Cylindrical chamber and hinged door.

SHELF & TRAY SYSTEM
Removable trays for batch loading.

CONTROL INTERFACE
Operator panel for cycle management.

REFRIGERATION & CONDENSER
Subsystems supporting freezing and vapor capture.

VACUUM & HEAT TRANSFER
Coordinated to execute the selected recipe.

MODEL RANGE AT A GLANCE

VACUUM FREEZE DRYERS • 8 KG TO 100 KG

FD-8	FD-18	FD-32	MFD-50	MFD-100
8 kg	**18 kg**	**32 kg**	**50 kg**	**100 kg**
5 trays	6 trays	7 trays	8 trays	20 trays
3.5 kW max	3.5 kW max	15 kW max	15 kW max	22 kW max
220 V	220 V	380 V	380 V	380 V
Pilot / R&D	**Small business**	**Growing output**	**Industrial**	**Industrial**

Batch loading is the maximum fresh-material input; final process configuration is product-dependent.

FD-8 | 8 kg PER BATCH

COMPACT / PILOT FREEZE DRYER



Actual Milotech unit • representative photo

A compact platform for R&D, pilot batches and small-volume premium production.

Batch loading	**8 kg**
Trays	**5**
Machine size	**800 × 900 × 1300 mm**
Tray dimensions	**270 × 500 × 20 mm**
Max electrical input	**3.5 kW**
Power supply	**220 V / single phase**
Freezing value	**−20°C**
Condenser value	**−40°C**
Dry-stage maximum	**70°C**

Published model data; final values subject to engineering confirmation.

FD-18 | 18 kg PER BATCH

GROWING PRODUCTION FREEZE DRYER



Actual Milotech unit • representative photo

Designed for SMEs increasing production frequency and repeat batch output.

Batch loading	**18 kg**
Trays	**6**
Machine size	**900 × 1500 × 1000 mm**
Tray dimensions	**370 × 700 × 20 mm**
Max electrical input	**3.5 kW**
Power supply	**220 V / single phase**
Freezing value	**−20°C**
Condenser value	**−40°C**
Dry-stage maximum	**70°C**

Published model data; final values subject to engineering confirmation.

FD-32 | 32 kg PER BATCH

INDUSTRIAL BATCH FREEZE DRYER



Actual Milotech unit • representative photo

A higher-capacity option for established food brands and OEM production.

Batch loading	**32 kg**
Trays	**7**
Machine size	**1200 × 1250 × 1800 mm**
Tray dimensions	**470 × 710 × 20 mm**
Max electrical input	**15 kW**
Power supply	**380 V / three phase**
Freezing value	**−20°C**
Condenser value	**−40°C**
Dry-stage maximum	**70°C**

Published model data; final values subject to engineering confirmation.

TECHNICAL SPECIFICATIONS

COMPARATIVE MODEL DATA • 8 / 18 / 32 / 50 / 100 KG

PARAMETER	FD-8	FD-18	FD-32	MFD-50	MFD-100
Max. fresh load	8 kg	18 kg	32 kg	50 kg	100 kg
Trays	5	6	7	8	20
Tray size (mm)	270×500×20	370×700×20	470×710×20	560×800×20	450×800×20
Machine size (mm)	800×900×1300	900×1500×1000	1200×1250×1800	1200×1200×1700	1700×1800×2000
Max. input (kW)	3.5	3.5	15	15	22
Average input (kW)	1.8	3.0	8.0	8.0	12.0
Power supply	220 V / 1 ph	220 V / 1 ph	380 V / 3 ph	380 V / 3 ph	380 V / 3 ph
Freezing (°C)	−20	−20	−20	−20	−20
Condenser (°C)	−40	−40	−40	−40	−40
Dry-stage max (°C)	70	70	70	70	70

Average electrical input is indicative, not an energy guarantee. Confirm all specifications before ordering.

PROJECT SELECTION & SUPPORT

FROM PROCESS DEVELOPMENT TO OPERATIONS

01

PRODUCT

Ingredient, slice thickness, initial moisture and sensitivity.

02

OUTPUT

Batch loading, daily production and expected cycle time.

03

UTILITIES

Available electrical supply, space, cooling and site requirements.

04

VALIDATION

Drying recipe, target moisture and packaging requirements.

AFTER-SALES & TECHNICAL SUPPORT

12-month warranty • Operator guidance • Maintenance and technical assistance

INDUSTRIAL MODEL RANGE

ADDITIONAL 50 KG & 100 KG FREEZE DRYERS

MFD-50

50 kg

FRESH MATERIAL PER BATCH (MAX)

Trays	**8**
Tray surface	**3.6 m²**
Chamber volume	**600 L**
Maximum input	**15 kW**
Power supply	**380 V / 3 phase**

MFD-100

100 kg

FRESH MATERIAL PER BATCH (MAX)

Trays	**20**
Tray surface	**7.2 m²**
Chamber volume	**1400 L**
Maximum input	**22 kW**
Power supply	**380 V / 3 phase**

Select the final configuration based on product trials, drying cycle and utility availability.

MFD-50 | 50 KG PER BATCH

INDUSTRIAL VACUUM FREEZE DRYER • TECHNICAL DATA

MAX. FRESH LOAD	50 kg	TRAY AREA	3.6 m²	TRAYS	8

Machine dimensions	1200 × 1200 × 1700 mm	Refrigeration capacity	5 hp
Chamber volume	600 L	Heating capacity	6 kW
Tray dimensions	560 × 800 × 20 mm	Heat transfer pump	1 kW
Freezing temperature	−20°C	Vacuum pump	1 kW
Condenser temperature	−40°C	Minimum input	1.5 kW
Max. dry-stage heating	70°C	Maximum input	15 kW
Lowest pressure	< 200 Pa	Average input*	8 kW
Defrosting method	Water-assisted defrost	Power supply	380 V / 3 phase

Construction: stainless steel 304 • Machine weight: 900 kg • *Average electrical input is indicative.

MFD-100 | 100 KG PER BATCH

INDUSTRIAL VACUUM FREEZE DRYER • TECHNICAL DATA

MAX. FRESH LOAD	100 kg	TRAY AREA	7.2 m²	TRAYS	20

Machine dimensions	**1700 × 1800 × 2000 mm**	Refrigeration capacity	**8 hp**
Chamber volume	**1400 L**	Heating capacity	**10 kW**
Tray dimensions	**450 × 800 × 20 mm**	Heat transfer pump	**1.5 kW**
Freezing temperature	**−20°C**	Vacuum pump	**1.5 kW**
Condenser temperature	**−40°C**	Minimum input	**1.5 kW**
Max. dry-stage heating	**70°C**	Maximum input	**22 kW**
Lowest pressure	**< 200 Pa**	Average input*	**12 kW**
Defrosting method	**Water-assisted defrost**	Power supply	**380 V / 3 phase**

Construction: stainless steel 304 • Machine weight: 1500 kg • *Average electrical input is indicative.

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FREEZE DRYER SYSTEMS

Tell us your product, batch size and target output. We will recommend a suitable configuration.

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ENGINEERED IN VIETNAM