

# FLOOR TYPE FREEZE DRYER



# FLOOR TYPE FREEZE DRYER

Used in Perishable Substances, Waste Products, Laboratory, Research, Proteins, Organic Tissues, Waste Products, Plant Material, Polymers, Pharmaceuticals, Nutraceuticals, Plant material.

Also known as Floor Standing Freeze Dryer, Freeze Drying Equipment, Floor Type Freeze Dryer, Laboratory Floor Type Freeze Dryer, laboratory Floor Standing Freeze Dryer, Laboratory Freeze Drying Equipment, Floor Standing Lyophilizer, Floor Type Lyophilizer, Standard Freeze Dryer, Manifold Freeze Dryer, Top Press Freeze Dryer, Top Press with Manifold Freeze Dryer, T-Manifold Freeze Dryer.

## FDR21 FLOOR TYPE FREEZE DRYER

7 Inch color touch control LCD display

Display run time & vacuum parameter

The cold trap with freezing function eliminates the low temperature refrigerator

Imported compressor, high capability of water-capture, low noise

Mixed refrigerant, green environmental protection

Built-in heat exchanger effectively reduces the temperature of cold trap

Anti-return oil vacuum pump to prevent the pollution of the material

Transparent bell-cap drying room is safe and visual

Optional distribution defrosting function

Optional nitrogen inflating valve



## SPECIFICATIONS

Model	FDR21-4ST	FDR21-4MF	FDR21-4TP
Type	Standard	Manifold	Top Press
Drying area	0.12 m <sup>2</sup>	0.07 m <sup>2</sup>	0.12 m <sup>2</sup>
Tray size	200 x 4 mm	200 x 3 mm	200 x 4 mm
Tray Capacity	1.5 L	2 L	1.5 L
Condenser Temperature	< -55°C (-80 or -100optional )		
Vacuum	< 10 Pa		
Tray Spacing	70 mm		
Vials number (only for reference)	160 (22) 280 (16) 420 (12)	85 (22) 185 (16) 260 (12)	160 (22) 280 (16) 420 (12)
Ability to capture Water	6 Kg		
Machine Size	400x500x600 mm		
Power	950 W		
Voltage	220 V 50 HZ /110 V 60 Hz		
Power Supply	220 V 50 HZ /110 V 60 Hz	-	-
Plate Load Capacity	-	-	-
Water Holding Capacity	-	-	-
Freeze Drying Surface Area	-	-	-
Vacuum Degree	-	-	-
No of Sealed Valves	-	-	-
Flask	-	-	-
Overall Dimension (mm)	-	-	-

Model	FDR21-4TM	FDR21-6ST	FDR21-6MF
Type	Top Press with Manifold	Standard	Manifold
Drying area	0.07 m <sup>2</sup>	0.27 m <sup>2</sup>	0.094 m <sup>2</sup>
Tray size	200 x 3 mm	240 x 4 mm	240 x 3 mm
Tray Capacity	2 L		1.5 L
Condenser Temperature	< -55°C (-80 or -100optional )		
Vaccum	< 10 Pa		
Tray Spacing	70 mm		
Vials number (only for reference)	85 (22) 185 (16) 260 (12)	260 (22) 480 (16) 920 (12)	165 (22) 285 (16) 560 (12)
Ability to capture Water	6 Kg		
Machine Size	401x500x600 mm	800x530x900 mm	
Power	950 W	850 W	
Voltage	220 V 50 HZ /110 V 60 Hz		
Power Supply	-	-	-
Plate Load Capacity	-	-	-
Water Holding Capacity	-	-	-
Freeze Drying Surface Area	-	-	-
Vacuum Degree	-	-	-
No of Sealed Valves	-	-	-
Flask	-	-	-
Overall Dimension (mm)	-	-	-

Model	FDR21-6TP	FDR21-6TM	FDR21-6TF
Type	Top Press	Top Press with Manifold	T-Manifold
Drying area	0.27 m <sup>2</sup>	0.094 m <sup>2</sup>	-
Tray size	240 x 4 mm	240 x 3 mm	-
Tray Capacity	2 L	1.5 L	-
Condenser Temperature	< -55°C (-80 or -100optional )		<50°C
Vaccum	< 10 Pa		-
Tray Spacing	70 mm		-
Vials number (only for reference)	260 (22) 480 (16) 920 (12)	165 (22) 285 (16) 560 (12)	-
Ability to capture Water	6 Kg		-
Machine Size	800x530x900 mm		-
Power	850 W		1300 W
Voltage	220 V 50 HZ /110 V 60 Hz		-
Power Supply	-	-	220 V 50 HZ /110 V 60 Hz
Plate Load Capacity	-	-	1 L
Water Holding Capacity	-	-	6 Kg/24 h
Freeze Drying Surface Area	-	-	0.27 m <sup>2</sup>
Vacuum Degree	-	-	<10 Pa
No of Sealed Valves	-	-	24 pieces for 24 ampoules
Flask	-	-	8
Overall Dimension (mm)	-	-	800x530x900 mm



FDR21-4ST



FDR21-4MF



FDR21-4TP



FDR21-4TM



FDR21-6ST



FDR21-6MF



FDR21-6TP



FDR21-6TM



FDR21-6TF

## FDR22-4TM T-MANIFOLD FREEZE DRYER

7 Inch color touch control LCD display

Display run time & vacuum parameter

The cold trap with freezing function eliminates the low temperature refrigerator

Imported compressor, high capability of water-capture, low noise

Mixed refrigerant, green environmental protection

Built-in heat exchanger effectively reduces the temperature of cold trap

Anti-return oil vacuum pump to prevent the pollution of the material

Transparent bell-cap drying room is safe and visual

Optional distribution defrosting function

Optional nitrogen inflating valve



### SPECIFICATIONS

Model	FDR22-4TM
Type	T-Manifold
Plate Load Capacity	1 L
Condenser Temperature	<50°C
Water Holding Capacity	4 Kg/24 h

Freeze Drying Surface Area	0.092 m <sup>2</sup>
Vacuum Degree	<10 Pa
No of Sealed Valves	24 pieces for 24 ampoules
Overall Dimension (mm)	500x400x650 mm
Power	950 W
Power Supply	220 V 50 HZ /110 V 60 Hz

## FDR21 FLOOR TYPE FREEZE DRYER



### SPECIFICATIONS

Model	FDR21-12ST	FDR21-18ST	FDR21-24ST	FDR21-08TP
Type	Standard type			Top Press type
Condenser Temperature	-110°C			
Freeze Drying area	0.12 m <sup>2</sup>	0.18 m <sup>2</sup>	0.24 m <sup>2</sup>	0.08 m <sup>2</sup>
Bulk capacity	1.2 L	1.8 L	2.4 L	0.8 L
Tray	φ200mm, 4pcs	φ200mm, 6pcs	φ200mm, 8pcs	φ180mm, 3pcs
Round bottom flask	-	-	-	-

Model	FDR21-01TP	FDR21-12MT	FDR21-18MT	FDR21-24MT
Type	Top Press type	Manifold Type		
Condenser Temperature	-110°C			
Freeze Drying area	0.1 m <sup>2</sup>	0.12 m <sup>2</sup>	0.18 m <sup>2</sup>	0.24 m <sup>2</sup>
Bulk capacity	1.0 L	1.2 L	1.8 L	2.4 L
Tray	φ180mm, 4pcs	φ200mm, 4pcs	φ200mm, 6pcs	φ200mm, 8pcs
Round bottom flask	-	1000ml,500ml ,250ml	1000ml,500ml ,250ml ,100ml,50ml	

Model	FDR21-08TM	FDR21-01TM	FDR21-10T	FDR21-12LST
Type	Top Press with Manifold Type		T Type	Standard type electric heating shelf
Condenser Temperature	-110°C		-	-110°C
Freeze Drying area	0.08 m <sup>2</sup>	0.1 m <sup>2</sup>	-	0.12 m <sup>2</sup>
Bulk capacity	0.8 L	1.0 L	-	1.2 L
Tray	φ180mm, 3pcs	φ180mm, 4pcs	-	φ200mm, 4pcs
Round bottom flask	1000ml,500ml ,250ml ,100ml,50ml		-	-

Model	FDR21-18LST	FDR21-24LST	FDR21-08LTP	FDR21-01LTP
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Type	Standard type electric heating shelf		Top Press type electric heating shelf	
Condenser Temperature	-110°C			
Freeze Drying area	0.18 m <sup>2</sup>	0.24 m <sup>2</sup>	0.08 m <sup>2</sup>	0.1 m <sup>2</sup>
Bulk capacity	1.8 L	2.4 L	0.8 L	1.0 L
Tray	φ200mm, 6pcs	φ200mm, 8pcs	φ180mm, 3pcs	φ180mm, 4pcs
Round bottom flask	-	-	-	-

Model	FDR21-12LMT	FDR21-18LMT	FDR21-24LMT	FDR21-08LTE
Type	Manifold type Electric heating shelf			Top Press with Manifold type electric heating shelf
Condenser Temperature	-110°C			
Freeze Drying area	0.12 m <sup>2</sup>	0.18 m <sup>2</sup>	0.24 m <sup>2</sup>	0.08 m <sup>2</sup>
Bulk capacity	1.2 L	1.8 L	2.4 L	0.8 L
Tray	φ200mm, 4pcs	φ200mm, 6pcs	φ200mm, 8pcs	φ180mm, 3pcs
Round bottom flask	1000ml,500ml ,250ml ,100ml,50ml			

Model	FDR21-01LTE		FDR21-27LST	FDR21-36LST	FDR21-09LTP
Type	Top Press with Manifold type electric heating shelf		Standard type		Top Press Type
Condenser Temperature	-110°C				
Freeze Drying area	0.1 m <sup>2</sup>		0.18 or 0.27 m <sup>2</sup>	0.36 m <sup>2</sup>	: 0.09 m <sup>2</sup>
Bulk capacity	1.0 L		1.8 or 2.7 L	3.6 L	0.9 L
Tray	φ180mm, 4pcs		φ240mm, 4 or 6pcs	φ240mm, 8pcs	φ200mm, 3pcs
Round bottom flask	1000ml,500ml ,250ml ,100ml,50ml		-	-	-

Model	FDR21-12LTP	FDR21-27LMT	FDR21-36LMT	FDR21-09LTM
Type	Top Press Type	Manifold Type		Top Press with Manifold Type
Condenser Temperature	-110°C			
Freeze Drying area	0.12 m <sup>2</sup>	0.18 or 0.27 m <sup>2</sup>	0.36 m <sup>2</sup>	: 0.09 m <sup>2</sup>
Bulk capacity	1.2 L	1.8 or 2.7 L	3.6 L	0.9 L
Tray	φ200mm, 4pcs	φ240mm, 4 or 6pcs	φ240mm, 8pcs	φ200mm, 3pcs
Round bottom flask	-	1000ml,500ml ,250ml ,100ml,50ml		

Model	FDR21-12LTM		FDR21-8AT	FDR21-27STE	FDR21-36STE
Type	Top Press with Manifold Type		T Type	Standard type electric heating shelf	
Condenser Temperature	-110°C				
Freeze Drying area	0.12 m <sup>2</sup>		-	0.18 or 0.27 m <sup>2</sup>	: 0.36 m <sup>2</sup>
Bulk capacity	1.2 L		-	1.8 or 2.7 L	3.6 L
Tray	φ200mm, 4pcs		-	φ240mm, 4 or 6pcs	φ240mm, 8pcs
Round bottom flask	1000ml,500ml ,250ml ,100ml,50ml		-	-	-

Model	FDR21-09TPE	FDR21-12LTE	FDR21-27LME	FDR21-36LME
Type	Top Press type electric heating shelf		Manifold type Electric heating shelf	
Condenser Temperature	-110°C			
Freeze Drying area	0.09 m <sup>2</sup>	0.12 m <sup>2</sup>	0.18 or 0.27 m <sup>2</sup>	0.36 m <sup>2</sup>
Bulk capacity	0.9 L	1.2 L	1.8 or 2.7 L	3.6 L
Tray	φ200mm, 3pcs	φ200mm, 4pcs	φ240mm, 4 or 6pcs	φ240mm, 8pcs
Round bottom flask	-	-	1000ml,500ml ,250ml ,100ml,50ml	

Model	FDR21-09TME	FDR21-12TME
Type	Top Press with Manifold type electric heating shelf	
Condenser Temperature	-110°C	
Freeze Drying area	0.09 m <sup>2</sup>	0.12 m <sup>2</sup>
Bulk capacity	0.9 L	1.2 L
Tray	φ200mm, 3pcs	φ200mm, 4pcs
Round bottom flask	1000ml,500ml ,250ml ,100ml,50ml	



FDR21-12ST



FDR21-18ST



FDR21-24ST



FDR21-08TP



FDR21-01TP



FDR21-12MT



FDR21-18MT



FDR21-24MT



FDR21-08TM



FDR21-01TM



FDR21-10T



FDR21-12LST



FDR21-18LST



FDR21-24LST



FDR21-08LTP



FDR21-01LTP



FDR21-12LMT



FDR21-18LMT



FDR21-24LMT



FDR21-08LTE



FDR21-01LTE



FDR21-27LST



FDR21-36LST



FDR21-09LTP



FDR21-12LTP



FDR21-27LMT



FDR21-36LMT



FDR21-09LTM



FDR21-12LTM



FDR21-8AT



FDR21-27STE



FDR21-36STE



FDR21-09TPE



FDR21-12LTE



FDR21-27LME



FDR21-36LME





FDR21-09TME



FDR21-12TME

## FDR22 IN SITU FREEZE DRYER



### SPECIFICATIONS

Model	FDR22-03M	FDR22-56M
Type	Food freeze Dryer	
Lowest condenser temperature	-50 °C	
Drying area	0.3m <sup>2</sup>	0.56m <sup>2</sup>
Tray temperature	heating to +50 °C	
Trays load capacity	3L	6L



FDR22-03M



FDR22-56M

## FDR28-40C IN SITU FREEZE DRYER



### SPECIFICATIONS

Model	FDR28-40C
Type	Silicone Oil Heating In-situ pilot freeze Dryer
Lowest condenser temperature	-50 °C
Drying area	0.1m <sup>2</sup>
Tray temperature	-40°C to +50°C
Trays load capacity	1L

## FDR29-60C IN SITU FREEZE DRYER

Pre-freeze-drying integrated

LCD display, PID control, with freeze-drying curve

Square stainless steel material tray, easy to operate and clean,

Configurable inflation valve, one-time dry inert gas

Vacuum sealing, liquid crystal display partition temperature, cold trap curve

Shuangjia PLC controller supports 20 programs, and each program can be divided into 40 segments of programming

Freeze-drying program parameters can be modified during operation, and record the final drying curve

Optional USB connection function, export curve data to U disk

Optional computer remote connection function

Optional manual capping device

4 freeze-dried bottles are optional



### SPECIFICATIONS

Model	FDR29-60C
Type	Electric heating in situ freeze dryer
Lowest condenser temperature	-50°C
Drying area	0.1m <sup>2</sup>
Tray temperature	-50°C to +60°C
Trays load capacity	1.5L

## FDR23-50C IN SITU FREEZE DRYER



### SPECIFICATIONS

Model	FDR23-50C
Type	Silicone Oil Heating In-situ pilot freeze Dryer
Condenser Temperature	-50°C
Drying area	0.2m <sup>2</sup>
Tray temperature	-40°C to +50°C
Trays load capacity	2~3kg/24hr

## FDR24-55M IN SITU FREEZE DRYER

The pre-freeze-drying is carried out in situ, which reduces the tedious operation of the drying process and realizes the automation of the freeze-drying process

Silicone oil is used as a circulating medium, with high temperature control accuracy, shelf temperature difference  $\leq 1^{\circ}\text{C}$ , and uniform drying effect

Shelf temperature is adjustable, controllable, groping, pilot test and production process

20 programs can be stored, each program can be set to 36 segments, the program parameters can be modified during the operation of the freeze dryer, and the final drying curve can be recorded

Touch screen operation, PID control, display drying curve

The square tray is not easy to deform, easy to operate and easy to clean

Equipped with an inflation valve, it can be filled with dry inert gas

The drying room adopts high-transmittance colorless transparent organic glass door, which can clearly observe the change process of materials during operation

Optional eutectic point testing device



### SPECIFICATIONS

Model	FDR24-55M
Type	Silicone Oil Heating In-situ pilot freeze Dryer
Condenser Temperature	-50°C
Drying area	0.34m <sup>2</sup>
Tray temperature	-40°C to +60°C
Trays load capacity	3kg/24hr

## FDR25-180M IN SITU FREEZE DRYER

One-piece design, compact equipment installation

The maintenance orientation is concentrated on one side, which is convenient for maintenance

A variety of security interlocking functions to fully protect the product

The equipment is conveniently connected to the clean room, and can be connected to the isolator

Realize dual control of clean room and maintenance room, but interlocking with each other

Simple operation, all run automatically



### SPECIFICATIONS

Model	FDR25-180M
Type	Pilot In-situ freeze Dryer
Condenser Temperature	-75°C
Drying area	1m <sup>2</sup>
Trays load capacity	15kg
Liquid loading capacity	15L

## FDR26-24M IN SITU FREEZE DRYER

One-piece design, compact equipment installation

The maintenance orientation is concentrated on one side, which is convenient for maintenance

A variety of security interlocking functions to fully protect the product

The equipment is conveniently connected to the clean room, and can be connected to the isolator

Realize dual control of clean room and maintenance room, but interlocking with each other

Simple operation, all run automatically



### SPECIFICATIONS

Model	FDR26-24M
Type	Pilot In-situ freeze Dryer
Condenser Temperature	-75°C
Drying area	0.24m <sup>2</sup>
Trays load capacity	6.5kg/24hr
Tray temperature	-50°C to +60°C
Computer connection	RS232

## FDR27-03M IN SITU FREEZE DRYER

One-piece design, compact equipment installation

The maintenance orientation is concentrated on one side, which is convenient for maintenance

A variety of security interlocking functions to fully protect the product

The equipment is conveniently connected to the clean room, and can be connected to the isolator

Realize dual control of clean room and maintenance room, but interlocking with each other

Simple operation, all run automatically



### SPECIFICATIONS

Model	FDR27-03M
Type	Pilot In-situ freeze Dryer
Condenser Temperature	-75°C
Drying area	0.3m <sup>2</sup>
Trays load capacity	7kg
Tray temperature	-50°C to +60°C
Liquid loading capacity	4L
Computer connection	RS232

## FDR23 IN SITU FREEZE DRYER

One-piece design, compact equipment installation

The maintenance orientation is concentrated on one side, which is convenient for maintenance

A variety of security interlocking functions to fully protect the product

The equipment is conveniently connected to the clean room, and can be connected to the isolator

Realize dual control of clean room and maintenance room, but interlocking with each other

Simple operation, all run automatically



### SPECIFICATIONS

Model	FDR23-02M	FDR23-05M
Type	Pilot In-situ freeze Dryer	
Condenser Temperature	-75°C	
Drying area	2m <sup>2</sup>	0.5m <sup>2</sup>
Trays load capacity	30kg	10kg
Liquid loading capacity	30L	10L
Computer connection	RS232	-



FDR23-02M



FDR23-05M

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