

# Manifold Freeze Dryers

## MFDQ Series



# Manifold Freeze Dryers

## Manifold Freeze Dryer MFDQ 1000

Manifold Freeze Dryer MFDQ 1000 is a table top unit with a condensing capacity of 3 kg to 4 kg / 24 h and a temperature of -50 °C. Equipped with four trays with a bulk capacity of 1.2 L allowing any shape or size of sample to be freeze dried. It allows larger glassware like flasks to be dried independent of the shelving units. Flasks can be added and removed independently without disturbing the surrounding flask's activity. Big opening condenser with external coiling tubes facilitates pre-freezing function.

### Features

- ◆ Ice condenser capacity is 3 to 4 kg / 24 h
- ◆ Condenser temperature ( - 50 °C )
- ◆ Display of sample temperature , vacuum curve degree , cold trap temperature curve
- ◆ Clear acrylic door for easy product viewing during processing
- ◆ High pumping speed vacuum pump
- ◆ Pre-freezing function
- ◆ Anti-corrosive stainless steel air inlet valve
- ◆ USB port to output freeze drying data

### Optional features

- ◆ Intake backfilling filter
- ◆ Air inlet filter for pump
- ◆ Nitrogen inflation valve
- ◆ Vacuum control valve
- ◆ Eutectic point testing device
- ◆ Electrical heat defrosting
- ◆ Vacuum pump oil return
- ◆ Oil mist filtration system
- ◆ RS232 interface and software for data storage on computer

# Manifold Freeze Dryers

## Manifold Freeze Dryer MFDQ 2000

Manifold Freeze Dryer MFDQ 2000 is a table top unit with a condensing capacity of 3 kg to 4 kg / 24 h and a temperature of -80 °C. Equipped with four trays with a bulk capacity of 1.2 L allowing any shape or size of sample to be freeze dried. It allows larger glassware like flasks to be dried independent of the shelving units. Flasks can be added and removed independently without disturbing the surrounding flask's activity. Big opening condenser with external coiling tubes facilitates pre-freezing function.

### Features

- ◆ Ice condenser capacity is 3 to 4 kg / 24 h
- ◆ Condenser temperature ( - 80 °C )
- ◆ Display of sample temperature, vacuum curve degree, cold trap temperature curve
- ◆ Clear acrylic door for easy product viewing during processing
- ◆ High pumping speed vacuum pump
- ◆ Pre-freezing function
- ◆ Anti-corrosive stainless steel air inlet valve
- ◆ USB port to output freeze drying data

### Optional features

- ◆ Intake backfilling filter
- ◆ Air inlet filter for pump
- ◆ Nitrogen inflation valve
- ◆ Vacuum control valve
- ◆ Eutectic point testing device
- ◆ Electrical heat defrosting
- ◆ Vacuum pump oil return
- ◆ Oil mist filtration system
- ◆ RS232 interface and software for data storage on computer

# Manifold Freeze Dryers

## Manifold Freeze Dryer MFDQ 1001

Manifold Freeze Dryer MFDQ 1001 is a table top unit with a condensing capacity of 3 kg to 4 kg / 24 h and a temperature of -50 °C. Equipped with six trays with a bulk capacity of 1.8 L allowing any shape or size of sample to be freeze dried. It allows larger glassware like flasks to be dried independent of the shelving units. Flasks can be added and removed independently without disturbing the surrounding flask's activity. Big opening condenser with external coiling tubes facilitates pre-freezing function.

### Features

- ◆ Ice condenser capacity is 3 to 4 kg / 24 h
- ◆ Condenser temperature ( - 50 °C )
- ◆ Display of sample temperature , vacuum curve degree , cold trap temperature curve
- ◆ Clear acrylic door for easy product viewing during processing
- ◆ High pumping speed vacuum pump
- ◆ Pre-freezing function
- ◆ Anti-corrosive stainless steel air inlet valve
- ◆ USB port to output freeze drying data

### Optional features

- ◆ Intake backfilling filter
- ◆ Air inlet filter for pump
- ◆ Nitrogen inflation valve
- ◆ Vacuum control valve
- ◆ Eutectic point testing device
- ◆ Electrical heat defrosting
- ◆ Vacuum pump oil return
- ◆ Oil mist filtration system
- ◆ RS232 interface and software for data storage on computer

# Manifold Freeze Dryers

## Manifold Freeze Dryer MFDQ 2001

Manifold Freeze Dryer MFDQ 2001 is a table top unit with a condensing capacity of 3 kg to 4 kg / 24 h and a temperature of -80 °C. Equipped with six trays with a bulk capacity of 1.8 L allowing any shape or size of sample to be freeze dried. It allows larger glassware like flasks to be dried independent of the shelving units. Flasks can be added and removed independently without disturbing the surrounding flask's activity. Big opening condenser with external coiling tubes facilitates pre-freezing function.

### Features

- ◆ Ice condenser capacity is 3 to 4 kg / 24 h
- ◆ Condenser temperature ( - 80 °C )
- ◆ Display of sample temperature, vacuum curve degree, cold trap temperature curve
- ◆ Clear acrylic door for easy product viewing during processing
- ◆ High pumping speed vacuum pump
- ◆ Pre-freezing function
- ◆ Anti-corrosive stainless steel air inlet valve
- ◆ USB port to output freeze drying data

### Optional features

- ◆ Intake backfilling filter
- ◆ Air inlet filter for pump
- ◆ Nitrogen inflation valve
- ◆ Vacuum control valve
- ◆ Eutectic point testing device
- ◆ Electrical heat defrosting
- ◆ Vacuum pump oil return
- ◆ Oil mist filtration system
- ◆ RS232 interface and software for data storage on computer

# Manifold Freeze Dryers

## Manifold Freeze Dryer MFDQ 1002

Manifold Freeze Dryer MFDQ 1002 is a table top unit with a condensing capacity of 3 kg to 4 kg / 24 h and a temperature of -50 °C. Equipped with eight trays with a bulk capacity of 2.4 L allowing any shape or size of sample to be freeze dried. It allows larger glassware like flasks to be dried independent of the shelving units. Flasks can be added and removed independently without disturbing the surrounding flask's activity. Big opening condenser with external coiling tubes facilitates pre-freezing function.

### Features

- ◆ Ice condenser capacity is 3 to 4 kg / 24 h
- ◆ Condenser temperature ( - 50 °C )
- ◆ Display of sample temperature, vacuum curve degree, cold trap temperature curve
- ◆ Clear acrylic door for easy product viewing during processing
- ◆ High pumping speed vacuum pump
- ◆ Pre-freezing function
- ◆ Anti-corrosive stainless steel air inlet valve
- ◆ USB port to output freeze drying data

### Optional features

- ◆ Intake backfilling filter
- ◆ Air inlet filter for pump
- ◆ Nitrogen inflation valve
- ◆ Vacuum control valve
- ◆ Eutectic point testing device
- ◆ Electrical heat defrosting
- ◆ Vacuum pump oil return
- ◆ Oil mist filtration system
- ◆ RS232 interface and software for data storage on computer

# Manifold Freeze Dryers

## Manifold Freeze Dryer MFDQ 2002

Manifold Freeze Dryer MFDQ 2002 is a table top unit with a condensing capacity of 3 kg to 4 kg / 24 h and a temperature of -80 °C. Equipped with eight trays with a bulk capacity of 2.4 L allowing any shape or size of sample to be freeze dried. It allows larger glassware like flasks to be dried independent of the shelving units. Flasks can be added and removed independently without disturbing the surrounding flask's activity. Big opening condenser with external coiling tubes facilitates pre-freezing function.

### Features

- ◆ Ice condenser capacity is 3 to 4 kg / 24 h
- ◆ Condenser temperature ( - 80 °C )
- ◆ Display of sample temperature , vacuum curve degree , cold trap temperature curve
- ◆ Clear acrylic door for easy product viewing during processing
- ◆ High pumping speed vacuum pump
- ◆ Pre-freezing function
- ◆ Anti-corrosive stainless steel air inlet valve
- ◆ USB port to output freeze drying data

### Optional features

- ◆ Intake backfilling filter
- ◆ Air inlet filter for pump
- ◆ Nitrogen inflation valve
- ◆ Vacuum control valve
- ◆ Eutectic point testing device
- ◆ Electrical heat defrosting
- ◆ Vacuum pump oil return
- ◆ Oil mist filtration system
- ◆ RS232 interface and software for data storage on computer

# Manifold Freeze Dryers

## Specifications

Model No.	MFDQ 1000	MFDQ 2000
Condenser temperature	-50 °C	-80 °C
Condenser capacity	3 to 4 kg / 24 h	3 to 4 kg / 24 h
Freeze drying area	0.12 m <sup>2</sup>	0.12 m <sup>2</sup>
Bulk capacity	1.2 L	1.2 L
Vial capacity $\Phi$ 12 mm	820 pieces	820 pieces
Vial capacity $\Phi$ 16 mm	460 pieces	460 pieces
Vial capacity $\Phi$ 22 mm	244 pieces	244 pieces
Manifold	8 ports	8 ports
Cooling	Air cooling	Air cooling
Flasks	1000 ml	1000 ml
	500 ml	500 ml
	250 ml	250 ml
	100 ml	100 ml
	50 ml	50 ml
	600 ml wide neck flask	600 ml wide neck flask
	1200 ml wide neck flask	1200 ml wide neck flask
Condenser size	$\Phi$ 215 mm, 140 mm deep	$\Phi$ 215 mm, 140 mm deep
Defrosting	Off cycle defrosting	Off cycle defrosting
Drying chamber size	$\Phi$ 260 x 460 mm	$\Phi$ 260 x 460 mm
Trays	4 layers	4 layers
Tray dimension	$\Phi$ 200 mm	$\Phi$ 200 mm
Tray spacing	70 mm	70 mm
Vacuum pump flow rate	7.2m <sup>3</sup> / h	7.2m <sup>3</sup> / h
Power	970 W	1400 W
Voltage	220 V / 50 Hz	220 V / 50 Hz
	120 V / 60 Hz	120 V / 60 Hz
Dimensions	610 x 450 x (370 + 460) mm	850 x 680 x (400 + 460) mm
Weight	75 kgs	135 kgs



# Manifold Freeze Dryers

## Specifications

Model No.	MFDQ 1001	MFDQ 2001
Condenser temperature	-50 °C	-80 °C
Condenser capacity	3 to 4 kg / 24 h	3 to 4 kg / 24 h
Freeze drying area	0.18 m <sup>2</sup>	0.18 m <sup>2</sup>
Bulk capacity	1.8 L	1.8 L
Manifold	8 ports	8 ports
Cooling	Air cooling	Air cooling
Flasks	1000 ml	1000 ml
	500 ml	500 ml
	250 ml	250 ml
	100 ml	100 ml
	50 ml	50 ml
	600 ml wide neck flask	600 ml wide neck flask
	1200 ml wide neck flask	1200 ml wide neck flask
Condenser size	Φ 215 mm, 140 mm deep	Φ 215 mm, 140 mm deep
Defrosting	Off cycle defrosting	Off cycle defrosting
Drying chamber size	Φ 260 x 460 mm	Φ 260 x 460 mm
Trays	6 layers	6 layers
Tray dimension	Φ 200 mm	Φ 200 mm
Tray spacing	50 mm	50 mm
Vacuum pump flow rate	7.2m <sup>3</sup> / h	7.2m <sup>3</sup> / h
Power	970 W	1400 W
Voltage	220 V / 50 Hz	220 V / 50 Hz
	120 V / 60 Hz	120 V / 60 Hz
Dimensions	610 x 450 x (370 + 460) mm	850 x 680 x (400 + 460) mm
Weight	75 kgs	135 kgs

# Manifold Freeze Dryers

## Specifications

Model No.	MFDQ 1002	MFDQ 2002
Condenser temperature	-50 °C	-80 °C
Condenser capacity	3 to 4 kg / 24 h	3 to 4 kg / 24 h
Freeze drying area	0.24 m <sup>2</sup>	0.24 m <sup>2</sup>
Bulk capacity	2.4 L	2.4 L
Manifold	8 ports	8 ports
Cooling	Air cooling	Air cooling
Flasks	1000 ml	1000 ml
	500 ml	500 ml
	250 ml	250 ml
	100 ml	100 ml
	50 ml	50 ml
	600 ml wide neck flask	600 ml wide neck flask
	1200 ml wide neck flask	1200 ml wide neck flask
Condenser size	Φ 215 mm, 140 mm deep	Φ 215 mm, 140 mm deep
Defrosting	Off cycle defrosting	Off cycle defrosting
Drying chamber size	Φ 260 x 460 mm	Φ 260 x 460 mm
Trays	8 layers	8 layers
Tray dimension	Φ 200 mm	Φ 200 mm
Tray spacing	35 mm	35 mm
Vacuum pump flow rate	7.2m <sup>3</sup> / h	7.2m <sup>3</sup> / h
Power	970 W	1400 W
Voltage	220 V / 50 Hz	220 V / 50 Hz
	120 V / 60 Hz	120 V / 60 Hz
Dimensions	610 x 450 x (370 + 460) mm	850 x 680 x (400 + 460) mm
Weight	75 kgs	135 kgs