

Manifold Freeze-Dryer

Manifold Series

- Advanced Microprocessor Controls
- Manifold Dryer with 12 to 48 Ports
- 20 Liters in 24 hours, 30L Capacity
- Internal Condensing Coil—316L
- -53C or -85C Condenser Temperature
- 316L Construction
- CFC-free Refrigeration
- Hot Gas Defrost



12 Port Single Tier Manifold shown.

Millrock has responded to customer demand for a cost effective high performance manifold freeze dryer. The Manifold Series takes a market proven design and has added the most advanced microprocessor control available on a manifold unit.

The Manifold Freeze-Dryer Series boasts a 20L per 24 hour condensing rate with a 30L capacity. For water based samples, the -53 C condenser is the perfect choice. For samples containing solvents or with low eutectic points, the -85 C condenser provides maximum performance.

For labs that need quick turn-around, hot gas defrost supplies fast/automatic defrosting.

Choose from a 12, 24, 36 and 48 port manifold. All provide ample space for small and large samples to be dried simultaneously. Straight-thru vacuum valves offer a more direct vapor path.



MD85 with Optional Stainless Steel Door

Opti-Dry Series	MD53	MD85
Temperature	-53 C	-85 C
Condenser Capacity	30L, 20L in 24 Hr	30L, 20L in 24 Hr
Compressor	2 HP	2+2 HP
Cabinet Dimensions	40"Wx34"Dx37"H	40"Wx34"Dx37"H
Voltage	230V, 60Hz, 1 Ph, 30A Or 200V, 50Hz, 1 Ph, 30A	230V, 60Hz, 1 Ph, 30A Or 200V, 50Hz, 1 Ph, 30A

Special points of interest:

- Large compressors offer fast condensing rates compared to similar systems
- Internal Condensing Coil, 316L
- Advanced Third Generation controls (3Gen) provides all the features required to protect the product and perform consistent freeze-drying runs

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3Gen Microprocessor Controls

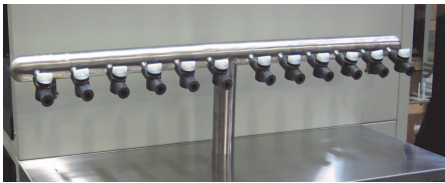


Millrock has taken manifold freeze-drying to a new level with the new 3Gen control system. Millrock's team first developed features like the 'ready' indicator and auto-power-outage recovery, and we now bring you '3rd Generation' controls with a display that is easy to read and intuitive.

With a back lit display and industrial tested microprocessor, freeze drying has never been easier. Display parameters include vacuum, condenser temperature, run time, ambient temperature, and even displays when to maintain your vacuum pump oil.

Inside the control is a new level of data acquisition that provides more accurate readings so that better control decisions can be made.

Microprocessor Instrumentation	
Display	Backlit Matrix LCD Temperature Vacuum Voltage Messaging
Vacuum Display	0 to 3000 mT
Control Features	Auto Start-up 'Ready' Indication Power Failure Recovery
Alarms and Reminders	Low Voltage High Ambient Power Outage Change Vacuum Pump Oil Clean Air Condenser



Manifold

12, 24, 36, and 48 port-tiered manifolds are offered with the Manifold Dryer series and come complete with vacuum valves. Each port is 1/2" external diameter. The ports are spaced to provide room for the largest flasks.



Vacuum Valves

The straight-thru design of Millrock valves provide less flow restriction and have greater internal diameter than other 3/4" diameter valves. The end result is faster, more consistent drying.



Vacuum Pump

A 200 Lpm vacuum pump is recommended.

Accessories



Flaskware—A complete line of flaskware is offered by Millrock, including flasks from 75 ml to 1200 ml with snap-on silicone tops.

Stainless Steel Freezedryware™ - Freezedryware provides the perfect solution to bulk drying and drying vials on a manifold freeze drying system.



Adapters— Glass adapters provide an easy connection from the vacuum valve to hoses and other accessories. 3/4" to 3/4" and 3/4" to 1/2" adapters are available in both straight and 45 degree. Ampoule adapters for smaller product samples are also available.

Other products offered by Millrock Technology:

- Laboratory Series Tray Dryer, 3 Shelf, 8 Liter Capacity, -53C and -85C Internal Condenser
- Revo Series Tray Dryer, 5 Shelf, 30 Liter Capacity, -53C and -85C External Condenser

Note: All specifications subject to change without notice. Specifications based on a 20C ambient.

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