

CMFD

Console Manifold Freeze Dryer

APPLICATIONS

Laboratory Research
Proteins
Organic Tissues
Waste Products
Plant Material
Polymers

CMFD Console Manifold Freeze Dryer Features-

Millrock has responded to customer demand for a cost effective high performance manifold lyophilizer. **CMFD Console Manifold Freeze Dryer** takes a market proven design and has added the most advanced microprocessor control available on a manifold unit. The **CMFD** lyophilizer boasts a 20L per 24 hour condensing rate with a 30L total capacity. For water based samples, the -53 C condenser is the perfect choice. For samples containing solvents or with low melting 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 24 and 48 port manifold. All provide ample space for small and large samples to be freeze dried simultaneously. Straight-thru vacuum valves offer an unrestricted vapor path.

SYSTEM PERFORMANCE

- Condenser refrigeration pull down from +20 to max low in less than 20 minutes
- Vacuum pull down to 100 mT in less than 20 minutes
- Vacuum leak rate less than 30 mT per hour
- Vacuum level 10 mT in clean dry system (-85C)

CONTROL SYSTEM

- Advanced microprocessor controls

PRODUCT ADDITION

- 24 or 48 port manifold

CONDENSER

- 316L stainless steel construction on all wetted parts
- 20 liters in 24 hours, 30L total capacity
- Exposed coil condenser for maximum efficiency
- Hot gas defrost

REFRIGERATION

- Area available CFC-free refrigerants
- Hot gas defrost

VACUUM

- 195 lpm corrosion resistant vacuum pump



CMFD

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MILLROCK[®]
TECHNOLOGY

millrocktech.com

SPECIFICATIONS

CMFD™ STANDARD SPECIFICATIONS

CONDENSER TEMPERATURE	-53C or -85C
CONDENSER CAPACITY	30 L
CONDENSING RATE	20L in 24 hours
CONDENSER STYLE	Exposed Coil
DEFROST	Hot Gas
COMPRESSORS (HERMETIC)	2 HP (-53C), 2 HP & 2 HP (-85C)
VACUUM PUMP	195 LPM, corrosion resistant
CONTROL SYSTEM	3Gen Microprocessor Control
CABINET	40" w x 34"d x 32"h
ELECTRICAL	208/230V, 50/60Hz, 30A, 1 phase



Console Manifold Freeze Dryer

3GEN MICROPROCESSOR CONTROLS

Millrock has taken bench top freeze drying to a new level with the new 3Gen control system. Intuitive and easy to use Millrock's team first developed features like the 'READY' indicator and auto power-outage recovery. We now bring you '3rd Generation' controls with a display that is easy to read and even more intuitive to use.

With a backlit 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.

MICROPROCESSOR INSTRUMENTATION

DISPLAY	Backlit Matrix LCD Temperature, Vacuum, Voltage, Messaging	CONTROL FEATURES	Auto Start-up 'Ready' Indication Power Failure Recovery
VACUUM DISPLAY	0 to 3000 mTorr	ALARMS & REMINDERS	Low Voltage, High Ambient, Power Outage Change Vacuum Pump Oil, Clean Air Condenser

ACCESSORIES



MANIFOLD

A 24 or 48 port manifold is provided and comes complete with vacuum valves. Each port is 1/2" external diameter. The ports are spaced to provide room for the largest flasks.



FLASKWARE

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



STAINLESSWARE FREEZEDRYWARE™

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



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.



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.



VACUUM PUMP

A 195 lpm vacuum pump is recommended.

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