

FREEZE DRYER SOLUTIONS



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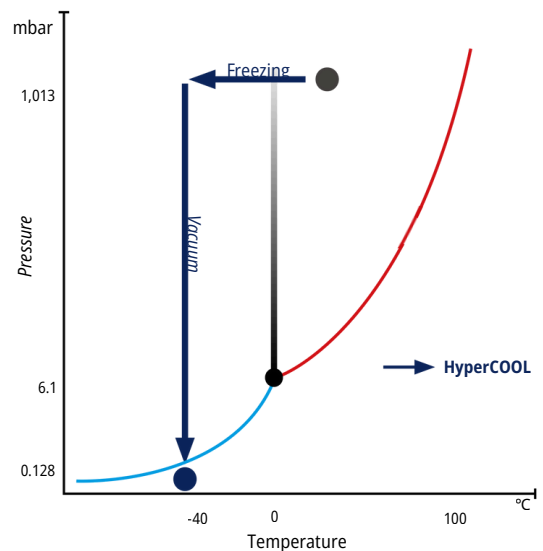
HYPERCOOL FREEZE DRYER

PRACTICAL SOLUTIONS FOR LONG-TERM STORAGE AND PRESERVATION

The **HyperCOOL, freeze dryer** (lyophilizer) is a dependable laboratory instrument designed for the effective removal of moisture from a pre-frozen samples by applying a deep vacuum to convert the frozen water molecules directly into vapor, bypassing the liquid phase. This process ensures complete drying while preserving the structure and quality of the drying sample.

The system operates at ultra-low temperatures, ranging **from -55°C or -110°C**, making it suitable for a wide variety of samples, including biological materials, aqueous products, and solvents with low freezing points.

The HyperCOOL is a practical solution for laboratories needing reliable sample preservation. It serves as a solution for applications in biotechnology, food preservation, environmental science, and research, ensuring samples remain stable and ready for long-term storage or further analysis.



APPLICATIONS

Biological Samples

Tissues, cells, enzymes and proteins for preservation and research.
Nucleotides and DNA/RNA for genomic studies.

Biotechnological Samples

Drug development materials and sensitive biological products requiring ultra-low temperatures.

Environmental Samples

Water and soil extracts for pollutant analysis.

Chemical and Organic Solvents

Volatile solvents such as acetonitrile, methanol, ethanol and other compounds used in chemical synthesis or chromatography preparation.

Specialized Research Samples

Delicate organic materials like flowers for display or research.
Reactive or unstable compounds requiring precise temperature control.

Food and Beverage Samples

Fruits, vegetables and flavor compounds for nutritional and sensory preservation.

TECHNICAL SPECIFICATIONS



	HC3055 / HC3110	HC9090PLUS
Ultimate Chamber Temp.*	-55 / -110 (°C)	-90 °C
Cold Trap Volume	4 L	12 L
Cold Trap Size	Ø 165 x H 202 mm	Ø 305 x H 355 mm
Ice Condensing Capacity	3 kg	9.8 kg
Display Type	4" LCD	7" touch LCD with graphic display
Display Parameters	Vacuum, Time, Temperature	Vacuum, Time, Temperature (tray, sample, chamber), Real Time Graph
Control	ON / OFF (Vacuum, Defrost)	ON / OFF (Vacuum, Defrost), Temperature
Ice Condensing Performance	2.5 kg / 24h	9 kg / 24h
Power Requirement (Resting)	642 / 819 (VA)	1,500 VA
Power Supply	AC 230 V, 50 Hz (AC 220-230 V, 50/60 Hz; 110 V optional)	AC 220-230 V, 60 Hz (50 Hz, 110 V optional)
Dimension	W 400 x D 660 x H 570 mm	W 600 x D 708 x H 885 mm
Weight	58 / 72 (kg)	130 kg
Cat. No.	Hyper-HC3055 / Hyper-HC3110**	Hyper-HC9090P

*The ultimate chamber temperature should be 15-20 °C lower than the sample's freezing temperature.
 **integrated Pirani gauge version is also available: Hyper-HC3055P and Hyper-HC3110P.



Durability

The whole top plate and internal chamber are Teflon-coated; providing excellent resistance against aggressive solvents.



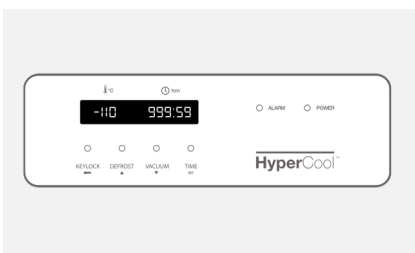
Shortened total cycle time

Hidden cooling coils allows condensed ice to be pulled out after a quick de-ice function for quick repetitive run setting.

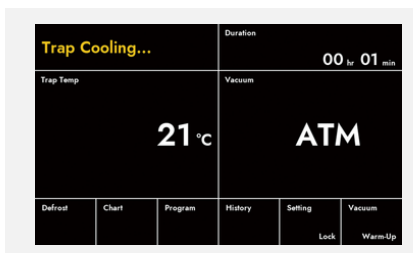


Easy maintenance

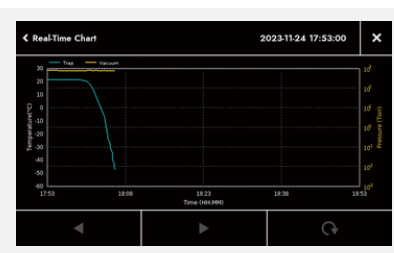
The condenser, a key freeze dryer component, is located at the front covered by a magnetic, detachable cover for easy maintenance.



HyperCOOL Basic Display

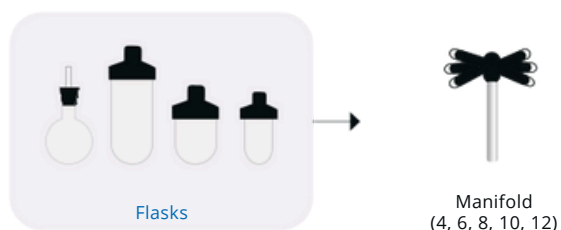


HyperCOOL Plus Display

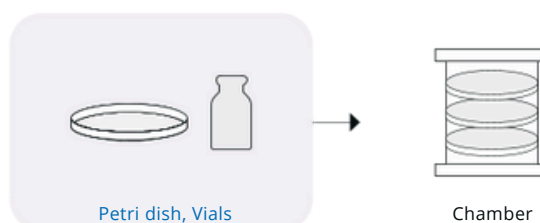


CONFIGURATIONS

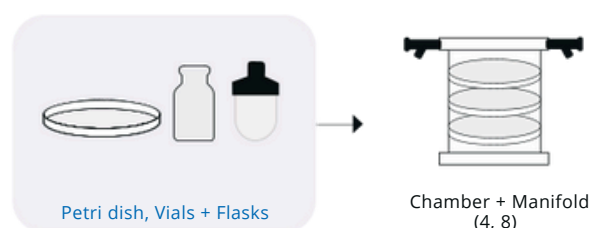
Description	No. of Valve	Cat. No.
Basic	8	HC-MFB-8V
Basic	6	HC-MFB-6V
(Extendable)	4	HC-MFB-4V
Extension	6	HC-MFE-6V
	4	HC-MFE-4V



Description	Cat. No.
Acrylic chamber with top	HC-CH30P
SUS rack with 3 trays	HC-CR25
Additional tray (1EA)	HC-CR-TS



Description	Cat. No.
Acrylic chamber with 4 valve top	HC-CH30-4V
Acrylic chamber with 8 valve top	HC-CH30-8V
SUS rack with 3 trays	HC-CR25
Additional tray (1EA)	HC-CR-TS



Description	Cat. No.
Acrylic chamber with 3 trays incl. stoppering top and base plate	HC-SP30M



Description	Cat. No.
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Acrylic base plate for HyperCOOL to connect accessories to the main body.
Exception (HCCH300-TF, Stoppering chambers)

HC-CPB



Rotary vane pump
Pumping speed: 50/60Hz - 200 L/min
Ultimate pressure: $\leq 1 \times 10^{-3}$ torr (1.3×10^{-1} Pa)

GVP-W2V20



Oil mist trap for rotary vane pump

GVP-WOF150

Manifold Accessories



manifold drying.
 $\varnothing 60$ (150 / 300 mL)
 $\varnothing 90$ (300W ~ 1,200 mL)

HC-AGF150
HC-AGF300
HC-AGF300W
HC-AGF600
HC-AGF900
HC-AGF1200



2 mL tube holder for
3 x 20 x 2 mL

900mL
HC-TR9-2
1,200mL
HC-TR12-2



15 mL tube holder for
12 x 15 mL conical

900mL
HC-TR9-15
1,200mL
HC-TR12-15



50 mL tube holder for
4 x 50 mL conical

900mL
HC-TR9-50
1,200mL
HC-TR12-50

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