

HyperCOOL™

Freeze Dryer & Cooling Trap

HyperCOOL is a lab scale freeze dryer using the lyophilization phenomena. HyperCOOL is designed for safety, robustness and convenience for the successful freeze drying and cold trap. It is suitable for drying of aqueous products, various solvents and products with a low freezing point. HyperCOOL with stylish, modern and unique design will help you enjoy your daily laboratory work to the fullest!

Two models of 3 kg HyperCOOL, HC3055 and HC3110 can be selected depending on the ice condensing temperature, -55 °C and -110 °C. HyperCOOL empowers HyperVAC-LITE and HyperVAC-MAX to guarantee high-performance and capacity as a cooling trap as well as the freeze dryer. The digital screen indicated with actual temperature and operating time is simple and intuitive for user-friendly control. Also, AWB (Alarm-Wait-OK), keylock, vacuum, defrost, power indicators of the display provide useful information. HC3055, HC3110 basically has the condenser chamber with Teflon coating. It provides the chemical resistance against aggressive solvents and acids such as HCl, TFA, DMSO, etc. and ensures longevity, easy cleaning and decontamination.

HyperCOOL with 8 kg ice capacity, HC8080 has a very large size cold trap that it can be used for prefreezer and it does not need the exclusive prefreezer system. In addition, HC8080 includes a high vacuum rotary vane pump in the body case without necessarily purchasing separate pump. It has the intuitive and easy control as a dial type to turn on cooling and vacuum and adjust the time. LCD display shows the vacuum pressure, trap temperatures and the other processing parameters.



► Features

- HyperVAC-MAX empowered by HyperCOOL guarantees capacity and performance at higher level.
- Extended applications for concentrating wider range or larger volume of solvents
- HyperCOOL by itself, when equipped with manifolds or chambers, becomes a versatile freeze dryer.
- The compatible vacuum rotary vane pump generates vacuum down inside the chamber.
- Effective for evaporating organic solvents as well as concentrating dissolved nucleic acids
- Up to 12 external bottles can be accommodated by the manifolds of HyperCOOL.
- Automatic De-Vac and De-Ice functions installed

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► Technical Specifications

Model Name	HC3055	HC3110	HC8080
Ultimate Chamber Temp (at RT) (°C)	-55	-110	-80
Chamber Volume (L)	4		25
Trap (Chamber) Size (Ø x L)	165 x 202		305 x 355
ICE Condensing Capacity (kg)	3		8
ICE Condensing Performance (kg/day)	2.5		
Compressor	1/2 HP	1/2 HP x 2	1 HP x 2
Refrigerant	R507	R507/R1150	R507/R1150
Power supply	230 V, 50 Hz (AC 220-230 V, 50/60 Hz; 110 V optional)		
Power Requirement (Resting, VA)	642	819	1500
Dimension (W x D x H, mm)	400 x 660 x 570		710 x 610 x 960
Weight (kg)	58	72	186
Digital Readout	Temperature, Time		Temperature, Time, Vacuum Pressure
Function	KEYLOCK, DEFROST, VACUUM, TIME		MODE, DEFROST, VACUUM, TIME
Cat. No.	Hyper-HC3055 (Hyper-HC3055-110)	Hyper-HC3110 (Hyper-HC3110-110)	Hyper-HC8080 (Hyper-HC8080-110)

► Applications

- Study and QC of dried foods like dried fruits, meats, etc.
- Stock of bacteria, virus, fungi, etc.
- Seed preservation of plants or mushrooms
- Improved preservation of flowers and dry display study
- Pharmaceutical study and production
- Research and production of vaccine and antidote
- Tissue or cell preparation for EM analysis
- Medical research
- Archaeological finds like books, textiles, leather
- Restoration of wet documents

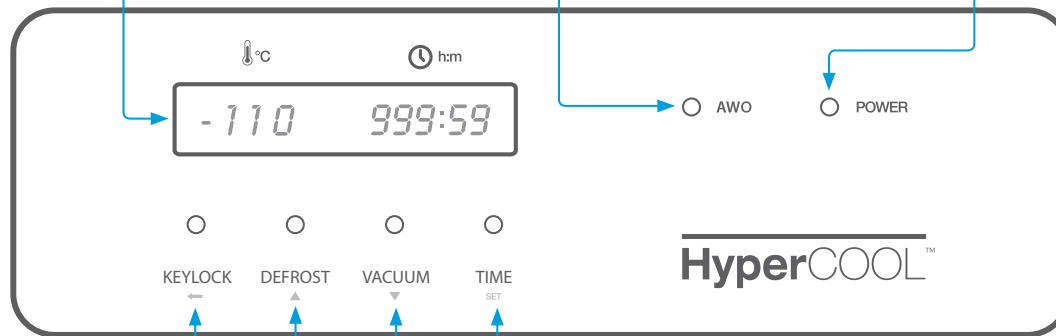
► Control Panel

[HC3055, HC3110, HC8080]

- Display Panel
- Actual Temperature (°C) and Operating Time (H:M)

LED	HC3055	HC3110	HC8080
ON	< -50 °C	< -90 °C	< -70 °C
Flashing (1 sec interval)	-50~-20 °C	-90~-20 °C	-70~-20 °C
Flashing (5 sec interval)	> -20°C		

- LED ON : Main Power ON



- DEFROST, VACUUM or TIME function can be locked during operation.
- Locked : LED ON
- * In case of HC8080, MODE button

- Chamber defrosting by hot gas injection

- Turning on/off the vacuum pump
- 30 °C~RT : VACUUM inactive (LED flashing)
- <-30 °C : VACUUM activated (LED flashing)
- VACUUM ON (LED ON)
- <-50 °C : automatic pump on (LED ON)

- LED ON : TIME setting mode
- Set H:M using the control buttons (◀, ▲, ▼, SET)

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HyperCOOL Cover Plate



Cat. No.	HC-CPP
Details	HyperCOOL HC3055, HC3110 Trap Plate for Connection Vacuum Hose to Vacuum Concentrator



Cat. No.	HC-CPP-A
Details	HyperCOOL HC3055, HC3110 Trap Plate for Connection Vacuum Hose to Vacuum Concentrator with Table A (GVCT-MA)



Cat. No.	HC-CPB
Details	HyperCOOL HC3055, HC3110 Acrylic Base for Manifold or Chamber



Cat. No.	HC-CPB(8)
Details	HyperCOOL HC8080 Acrylic Base for Manifold or Chamber



Cat. No.	HC-CPP(8)
Details	HyperCOOL HC8080 Trap Plate for Connection Vacuum Hose to Vacuum Concentrator

Manifold



Cat. No.	HC-MFB-4V
Details	4-Valve Manifold Basic with four rubber valves on a stainless steel bar, 30 cm



Cat. No.	HC-MFB-6V
Details	6-Valve Manifold Basic with six rubber valves on a stainless steel bar, 30 cm



Cat. No.	HC-MFE-4V
Details	4-Valve Manifold Extension with four rubber valves on a stainless steel bar, 20 cm



Cat. No.	HC-MFE-6V
Details	6-Valve Manifold Extension with six rubber valves on a stainless steel bar, 20 cm



Cat. No.	HC-MFB-8V
Details	8-Valve Manifold Basic with 8 rubber valves on a stainless steel bar, 30 cm

Chamber and Rack



Cat. No.	HC-CH30P
Details	Acrylic Chamber Trunk and Plain Top, ø30 cm, height 40 cm



Cat. No.	HC-CH30-4V
Details	Acrylic Chamber Trunk and Top with 4 Rubber Valves, ø30 cm, height 40 cm



Cat. No.	HC-CR25
Details	Stainless Steel Rack with 3 Sets of SS Shelves and Trays, ø25cm (Trays can be inserted up to 5)

Cat. No.	HC-CR-TS
Details	A Set of a Tray and a Shelf



Cat. No.	HC-CH30-8V
Details	Acrylic Chamber Trunk and Top with 8 Rubber Valves, ø30 cm, height 40 cm

Flask and others

Cat. No.	Details
HC-GF40	Freeze Drying Glass Flask 40 ml with rubber lid and stainless steel connector
HC-GF80	Freeze Drying Glass Flask 80 ml with rubber lid and stainless steel connector
HC-GF120	Freeze Drying Glass Flask 120 ml with rubber lid and stainless steel connector
HC-GF150	Freeze Drying Glass Flask 150 ml with rubber lid and stainless steel connector
HC-GF300	Freeze Drying Glass Flask 300 ml with rubber lid and stainless steel connector
HC-GF600	Freeze Drying Glass Flask 600 ml with rubber lid and stainless steel connector
HC-GF900	Freeze Drying Glass Flask 900 ml with rubber lid and stainless steel connector
HC-GF1200	Freeze Drying Glass Flask 1200 ml with rubber lid and stainless steel connector
HC-GFT34	Rubber lid for 34 mm diameter Flask (Glass Flask 40 ~ 80 ml)
HC-GFT60	Rubber lid for 60 mm diameter Flask (Glass Flask 120 ~ 300 ml)
HC-GFT90	Rubber lid for 90 mm diameter Flask (Glass Flask 600 ~ 1200 ml)
V04CS12250-00	Stainless Steel connector
HC-AA	Acetal Adaptor for the connection Vacuum Hose to Rubber Valve
HC-VH	Vacuum Hose with 2 Clamps, 100 cm
GVP-W2V20	High Vacuum Rotary Vane Pump, 0.4 kW(0.5 HP), 200 L/min, 1X10-3 torr
GVP-WOF150	Oil Mist Trap

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HyperCOOL Package Information



Cat. No.	Details
GZ-HC3055-M4B	Manifold Type Freeze Drying System -55 °C with 4 Valves Basic incl. a Rotary Vane Pump, Oil Mist Trap & Connections (Hyper-HC3055 + HC-CPB + HC-MFB-4V + HC-VH + GVP-W2V20 + GVP-WOF150)
GZ-HC3110-M4B	Manifold Type Freeze Drying System -110 °C with 4 Valves Basic incl. a Rotary Vane Pump, Oil Mist Trap & Connections (Hyper-HC3110 + HC-CPB + HC-MFB-4V + HC-VH + GVP-W2V20 + GVP-WOF150)



Cat. No.	Details
GZ-HC3110-CHR	Chamber Type Freeze Drying System -110 °C with 3 Shelves Rack incl. a Rotary Vane Pump, Oil Mist Trap & Connections (Hyper-HC3110 + HC-CPB + HC-CH30P + HC-CR25 + HC-VH + GVP-W2V20 + GVP-WOF150)



Cat. No.	Details
GZ-HC3110-CH4VR	Multi-Type Freeze Drying System -110 °C with 3 Shelves Rack & 4 Valves Chamber incl. a Rotary Vane Pump, Oil Mist Trap & Connections (Hyper-HC3110 + HC-CPB + HC-CH30-4V + HC-CR25 + HC-VH + GVP-W2V20 + GVP-WOF150)



Cat. No.	Details
GZ-HC3110-CH8VR	Multi-Type Freeze Drying System -110 °C with 3 Shelves Rack & 8 Valves Chamber incl. a Rotary Vane Pump, Oil Mist Trap & Connections (Hyper-HC3110 + HC-CPB + HC-CH30-8V + HC-CR25 + HC-VH + GVP-W2V20 + GVP-WOF150)

Cat. No.	Details
GZ-MHC3110-M4EC	Multi-Purpose, Vacuum Concentration and Freeze Drying System -110 °C with 8 Valves Manifold incl. a Rotary Vane Pump, Oil Mist Trap, Connections & a Table B (Hyper-VC2200 + GVCT-MB + Hyper-HC3110 + HC-CPB + HC-MFB-4V + HC-MFE-4V + HC-VH + GVP-W2V20 + GVP-WOF150)

Cat. No.	Details
GZ-MHC3110-CH8VRC	Multi-Purpose, Vacuum Concentration and Freeze Drying System -110 °C with 3 Shelves Rack & 8 Valves Chamber incl. a Rotary Vane Pump, Oil Mist Trap, Connections & a Table B (Hyper-VC2200 + GVCT-MB + Hyper-HC3110 + HC-CPB + HC-CH30-8V + HC-CR25 + HC-VH + GVP-W2V20 + GVP-WOF150)

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Cat. No.	Details
GZ-HC8080-M4B	Manifold Type Freeze Drying System -80 °C with 4 Valves Basic (Hyper-HC8080 + HC-CPB(8) + HC-MFB-4V)



Cat. No.	Details
GZ-HC8080-M6B	Manifold Type Freeze Drying System -80 °C with 6 Valves Basic (Hyper-HC8080 + HC-CPB(8) + HC-MFB-6V)



Cat. No.	Details
GZ-HC8080-M8B	Manifold Type Freeze Drying System -80 °C with 8 Valves Basic (Hyper-HC8080 + HC-CPM(8) + HC-MFB-8V)



Cat. No.	Details
GZ-HC8080-CHR	Chamber Type Freeze Drying System -80 °C with 3 Shelves Rack (Hyper-HC8080 + HC-CPB(8) + HC-CH30P + HC-CR25)



Cat. No.	Details
GZ-HC8080-CH4VR	Multi-Type Freeze Drying System -80 °C with 3 Shelves Rack & 4 Valves Chamber (Hyper-HC8080 + HC-CPB(8) + HC-CH30-4V + HC-CR25)



Cat. No.	Details
GZ-HC8080-CH8VR	Multi-Type Freeze Drying System -80 °C with 3 Shelves Rack & 8 Valves Chamber (Hyper-HC8080 + HC-CPB(8) + HC-CH30-8V + HC-CR25)