

## Freeze Dryer

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### Freeze Dryer & Cooling Trap

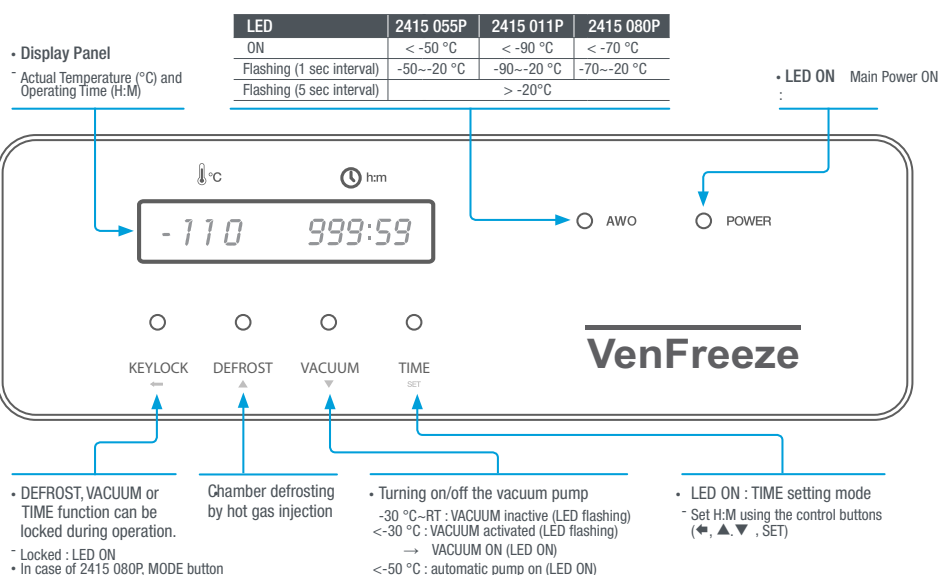


VenFreeze is a lab scale freeze dryer using the lyophilization phenomena. It is designed for safety, robustness and convenience for the successful freeze drying and cold trap. It is suitable for drying of aqueous products, various solvents and products with a low freezing point with stylish, modern and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

Two models of 3 kg, 2415 055P and 2415 110P can be selected depending on the ice condensing temperature, -55°C and -110°C. VenFreeze empowers Ven-LITE and Ven-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. 2415 055P, 2415 110P 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.

VenFreeze with 8 kg ice capacity, 2415 080P 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, It 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.

#### ► Control Panel



# Freeze Dryer

## ► Features

- Ven-MAX empowered by VenFreeze guarantees capacity and performance at higher level.
- Extended applications for concentrating wider range or larger volume of solvents
- VenFreeze 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 VenFreeze.
- Automatic De-Vac and De-Ice functions installed

## ► Technical Specifications

Model Name	2415 055P	2415 110P	2415 080P
Ultimate Chamber Temp (at RT) (°C)	-55	-110	-80
Chamber Volume (L)	5		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

## ► Accessories

### Cover Plate



Cat. No.	<b>HC-CPP</b>
Details	2415 055P, 2415 110P, Trap Plate for Connection Vacuum Hose to Vacuum Concentrator



Cat. No.	<b>HC-CPP-A</b>
Details	2415 055P, 2415 110P Trap Plate for Connection Vacuum Hose to Vacuum Concentrator with Table A (GVCT-MA)



Cat. No.	<b>HC-CPB</b>
Details	2415 055P, 2415 110P, Acrylic Base for Manifold or Chamber



Cat. No.	<b>HC-CPP(8)</b>
Details	2415 080P Trap Plate for Connection Vacuum Hose to Vacuum Concentrator



Cat. No.	<b>HC-CPB(8)</b>
Details	2415 080P Acrylic Base for Manifold or Chamber

# Freeze Dryer

## Manifold



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



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



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



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



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

## Chamber and Rack



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



Cat. No.	<b>HC-CR25</b>
Details	Stainless Steel Rack with 3 Sets of SS Shelves and Trays, ø25cm (Trays can be inserted up to 5)
Cat. No.	<b>HC-CR-TS</b>
Details	A Set of a Tray and a Shelf



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



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

## Flask and others

Cat. No.	Details
<b>HC-GF40</b>	Freeze Drying Glass Flask 40 ml with rubber lid and stainless steel connector
<b>HC-GF80</b>	Freeze Drying Glass Flask 80 ml with rubber lid and stainless steel connector
<b>HC-GF120</b>	Freeze Drying Glass Flask 120 ml with rubber lid and stainless steel connector
<b>HC-GF150</b>	Freeze Drying Glass Flask 150 ml with rubber lid and stainless steel connector
<b>HC-GF300</b>	Freeze Drying Glass Flask 300 ml with rubber lid and stainless steel connector
<b>HC-GF600</b>	Freeze Drying Glass Flask 600 ml with rubber lid and stainless steel connector
<b>HC-GF900</b>	Freeze Drying Glass Flask 900 ml with rubber lid and stainless steel connector
<b>HC-GF1200</b>	Freeze Drying Glass Flask 1200 ml with rubber lid and stainless steel connector

Cat. No.	Details
<b>HC-GFT34</b>	Rubber lid for 34 mm diameter Flask (Glass Flask 40 ~ 80 ml)
<b>HC-GFT60</b>	Rubber lid for 60 mm diameter Flask (Glass Flask 120 ~ 300 ml)
<b>HC-GFT90</b>	Rubber lid for 90 mm diameter Flask (Glass Flask 600 ~ 1200 ml)
<b>V04CS12250-00</b>	Stainless Steel connector
<b>HC-AA</b>	Acetal Adaptor for the connection Vacuum Hose to Rubber Valve
<b>HC-VH</b>	Vacuum Hose with 2 Clamps, 100 cm
<b>GVP-W2V20</b>	High Vacuum Rotary Vane Pump, 0.4 kW(0.5 HP), 200 L/min, 1X10-3 torr
<b>GVP-WOF150</b>	Oil Mist Trap

# Freeze Dryer

## Packing Information



Cat. No.	Details
<b>2415 055P-M4B</b>	Manifold Type Freeze Drying System -55 °C with 4 Valves Basic incl. a Rotary Vane Pump, Oil Mist Trap & Connections (2415 055P + HC-CPB + HC-MFB-4V + HC-VH + GVP-W2V20 + GVP-WOF150)
<b>2415 110P-M4B</b>	Manifold Type Freeze Drying System -110 °C with 4 Valves Basic incl. a Rotary Vane Pump, Oil Mist Trap & Connections (2415 110P + HC-CPB + HC-MFB-4V + HC-VH + GVP-W2V20 + GVP-WOF150)



Cat. No.	Details
<b>2415 110P-CHR</b>	Chamber Type Freeze Drying System -110 °C with 3 Shelves Rack incl. a Rotary Vane Pump, Oil Mist Trap & Connections (2415 110P + HC-CPB + HC-CH30P + HC-CR25 + HC-VH + GVP-W2V20 + GVP-WOF150)



Cat. No.	Details
<b>2415 110P-CH4VR</b>	Multi-Type Freeze Drying System -110 °C with 3 Shelves Rack & 4 Valves Chamber incl. a Rotary Vane Pump, Oil Mist Trap & Connections (2415 110P + HC-CPB + HC-CH30-4V + HC-CR25 + HC-VH + GVP-W2V20 + GVP-WOF150)



Cat. No.	Details
<b>2415 110P-CH8VR</b>	Multi-Type Freeze Drying System -110 °C with 3 Shelves Rack & 8 Valves Chamber incl. a Rotary Vane Pump, Oil Mist Trap & Connections (2415 110P + HC-CPB + HC-CH30-8V + HC-CR25 + HC-VH + GVP-W2V20 + GVP-WOF150)



Cat. No.	Details
<b>2415 110P-M4EC</b>	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 (VC2200 + VCT-MB + 2415 110P + HC-CPB + HC-MFB-4V + HC-MFE-4V + HC-VH + GVP-W2V20 + GVP-WPWF150)



Cat. No.	Details
<b>2415 110P-CH8VRC</b>	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 (VC2200 + GVC-MB + 2415 110P + HC-CPB + HC-CH30-8V + HC-CR25 + HC-VH + GVP-W2V20 + GVP-WOF150)



Cat. No.	Details
<b>2415 080P-M4B</b>	Manifold Type Freeze Drying System -80 °C with 4 Valves Basic (2415 080P + HC-CPB(8) + HC-MFB-4V)



Cat. No.	Details
<b>2415 080P-M6B</b>	Manifold Type Freeze Drying System -80 °C with 6 Valves Basic (2415 080P + HC-CPB(8) + HC-MFB-6V)



Cat. No.	Details
<b>2415 080P-M8B</b>	Manifold Type Freeze Drying System -80 °C with 8 Valves Basic (2415 080P + HC-CPB(8) + HC-MFB-8V)



Cat. No.	Details
<b>2415 080P-CHR</b>	Chamber Type Freeze Drying System -80 °C with 3 Shelves Rack (2415 080P + HC-CPB(8) + HC-CH30P + HC-CR25)



Cat. No.	Details
<b>2415 080P-CH4VR</b>	Multi-Type Freeze Drying System -80 °C with 3 Shelves Rack & 4 Valves Chamber (2415 080P + HC-CPB(8) + HC-CH30-4V + HC-CR25)



Cat. No.	Details
<b>2415 080P-CH8VR</b>	Multi-Type Freeze Drying System -80 °C with 3 Shelves Rack & 8 Valves Chamber (2415 080P + HC-CPB(8) + HC-CH30-8V + HC-CR25)