

Frozen in Time Ltd.

Manufacturers of Freeze Driers
and Vacuum Cold Traps

D-Series Freeze drying Machine Range



The D series are general purpose freeze drying machines. The drying chambers can be cooled to -40°C or heated to $+50^{\circ}\text{C}$. The chambers are made from 304 grade stainless steel. The frame and panels are of powder coated steel. The internal trays can be made from stainless steel sheet or aluminium expanded mesh as required.

The controls are manual with liquid crystal vacuum and temperature displays. All controls are on a touch sensitive membrane keypad with LED's to show active functions. The drying chamber has 4 mobile temperature probes that can be inserted into samples and read on the control panel. Both chambers share a single air cooled refrigeration system. Each model can be built with a dedicated refrigeration system on each chamber when low temperatures and prolonged drying cycles are required.

Our freeze drying software allows the machine to be controlled from a PC. This enables the machine to be pre-programmed, the process to be monitored on a graph and reports to be printed for traceability

HSD-Series Freeze Drier Specifications

	<i>D6/14</i>	<i>D9/17</i>
<i>Overall Dimensions W x H x L cm</i>	80 x 145 x 160	110 x 180 x 180
<i>Specimen Chamber Diameter x Length cm</i>	60 x 140	90 x 170
<i>Tray Area m² and Levels</i>	3.85 – 6	10 – 9
<i>Condenser Chamber Temperature</i>	-55°C	-55°C
<i>Specimen Chamber Temperature Range $^{\circ}\text{C}$</i>	-40 to $+50^{\circ}\text{C}$	-40 to $+50^{\circ}\text{C}$
<i>Condenser chamber Defrost</i>	Hot Gas	Hot Gas
<i>Chamber Doors</i>	Clear Acrylic	Clear Acrylic
<i>Condenser Ice Capacity</i>	27litre	50 litre
<i>Refrigerant</i>	R-507	R-507
<i>Vacuum Pump</i>	Ulvac GLD 201	Edwards E2M28
<i>Refrigeration m³/h - Hp</i>	Frigopol 19 - 5	Frigopol 24-5.4
<i>Isolation Valve \varnothing cm</i>	Butterfly 15	Butterfly 25
<i>Power Requirements</i>	3ph 380 - 415v	3ph 380 - 415v
<i>Warranty - Parts and Labour</i>	12 months	12 months