

Frozen in Time Ltd.

Manufacturers of Freeze Drying Machines
and Vacuum Cold traps

HS-3 & HSL-3 Freeze drier

The HS-3 freeze drier is a general-purpose, high-performance pilot unit featuring stainless steel shelves with internal circulating heat transfer fluid for heating and cooling, enabling it to meet the stringent demands of the pharmaceutical and biotechnology industries. The key features of this unit are its drying options using up to six shelves with a total area of 1.95 m² and a shelf spacing of 60 mm, and a hydraulic vial stoppering device. The HS-3 is also ideal for product development and small-scale production activities.

The HS-3 comes with fully automatic controls as standard. The touch screen Scada system takes full control of the whole freeze drier. Please see additional information.

Also available in a clean room version where all accessible parts are behind in a separate room. **UK Manufactured**

Technical Data	HS-3	HSL-3
Ice condenser capacity	35 kg	35 kg
Ice condenser performance:	20 kg / 24 h	20 kg / 24 h
Ice condenser temperature:	-55 °C	-85 °C
Defrost:	Hot gas	Hot gas & electric
Shelf dimensions:	50 × 65cm	50 × 65cm
Number of shelves:	6 +1	6 +1
Shelf area:	1.95 m ²	1.95 m ²
Shelf spacing:	min. 6cm	min. 6cm
Shelf temperature:	-45 °C to +60 °C	-65 °C to +60 °C
Shelf temperature accuracy:	max. ±1 °C	max. ±1 °C
Cooling systems:	Air cooled	Air cooled
Refrigeration:	Single Stage	Cascade
Isolation Valve:	Ø20cm	Ø20cm
Unit dimensions:	210 × 150 × 100cm (H × W × D)	210 × 150 × 100cm (H × W × D)
Refrigerant:	R449A	R449A & R23

Part No`s

HS-3 Automated FIT/LYO/83/1
HSL-3 Automated FIT/LYO/86/1



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