

# 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 m<sup>2</sup> 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
<b>Ice condenser capacity</b>	35 kg	35 kg
<b>Ice condenser performance:</b>		
<b>Ice condenser temperature:</b>	20 kg / 24 h	20 kg / 24 h
<b>Defrost:</b>	-55 °C	-85 °C
<b>Shelf dimensions:</b>	Hot gas	Hot gas & electric
<b>Number of shelves:</b>	50 x 65cm	50 x 65cm
<b>Shelf area:</b>	6 +1	6 +1
<b>Shelf spacing:</b>	1.95 m <sup>2</sup>	1.95 m <sup>2</sup>
<b>Shelf temperature:</b>	min. 6cm	min. 6cm
<b>Shelf temperature accuracy:</b>	-45 °C to +60 °C	-65 °C to +60 °C
<b>Cooling systems:</b>	max. ±1 °C	max. ±1 °C
<b>Refrigeration:</b>	Air cooled	Air cooled
<b>Isolation Valve:</b>	Single Stage	Cascade
<b>Unit dimensions:</b>	Ø20cm	Ø20cm
<b>Refrigerant:</b>	210 x 150 x 100cm (H x W x D)	210 x 150 x 100cm (H x W x D)
	R507	R507 & R23



### Part No`s

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



**Wolflabs**

# Wolf Laboratories Limited

[www.wolflabs.co.uk](http://www.wolflabs.co.uk)

Tel: 01759 301142

Fax: 01759 301143

[sales@wolflabs.co.uk](mailto:sales@wolflabs.co.uk)



**Use the above details to contact us if this literature doesn't answer all your questions.**

**Pricing on any accessories shown can be found by keying the part number into the search box on our website.**

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

