



# HSL-3

CASCADE REFRIGERATION



**Low  
Temperature**



**Shelf  
Stoppering**



**Clean Room  
Compatible**



**Nitrogen Purge  
Optional**



## Key Features

H-Series Freeze Driers are the ideal solution for high end pharmaceutical, clean room, pilot & production use.

Our low temperature H-Series range provides the capability to reach temperatures as low as  $-85^{\circ}\text{C}$ , as well as features such as advanced temperature, pressure & time control.

The HSL-3 is a general-purpose, high performance pilot unit ideal for drying a variety of products at low temperatures. It is available in a clean room version where the accessible parts are external to the clean room. The HSL-3 is suited for product development & small-scale production.



**Research**



**Lab**



**Pharma**

## Technical Data

## HSL-3

Ice Condenser Capacity	35kg
Ice Condenser Performance	20kg /24h
Ice Condenser Temperature	$-85^{\circ}\text{C}$
Defrost	Hot Gas & Electric
Number of Shelves	6+1
Shelf Area	1.95m <sup>2</sup>
Shelf Spacing	60mm
Chamber Temperature	$-65^{\circ}\text{C}$ to $+60^{\circ}\text{C}$
Cooling systems	Air cooled
Refrigeration	Frigopool Cascade
Unit Dimensions (H x W x L)	2.1m x 1.5m x 1.1m
Refrigerant	R404A & R1150
Vacuum	Kurt J Lesker RV224
Chamber Dimensions	850mm id x 850mm
Power Supply	380-415v 32a 3~
Control System	Manual or Automatic Control

**FROZEN IN TIME**  
Manufacturers of freeze driers and vacuum cold traps

