

LSM60 LYODRY MAXI CHAMBER FREEZE DRYER



TECHNICAL VACUUM EXCELLENCE SINCE 2008

**FULLY AUTOMATED, CONTROLLABLE SHELF TEMPERATURES
-60°C TO +60°C, DATA LOGGING/ANALYSIS, STOPPERING OPTION**

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LyoDry Freeze Dryers provide an extended choice of process and control options for reliable, reproducible freeze drying of a wide range of sample types.

LSM60 [LyoDry Maxi Freeze Dryer](#) is suitable for vial and bulk samples for laboratory and pharmaceutical applications. Utilising the very latest technology in vacuum, refrigeration and control, LSM60 LyoDry Maxi provides unrivalled product protection and operator interfacing. A full system mimic on the touch screen display provides a user friendly interface, giving a clear indication of system status.

UK designed, manufactured and maintained. Quality assured.



Option of 3, 4 or 5 shelves, shelf area up to 0.85m ² , temperature controlled -60°C to +60°C	18Kg ice condenser capacity, -85°C condenser temperature
Fully automated, touch screen control	Data logging, real time and historical analysis, remote view (option)
Up to 200 reproducible process profiles (recipes)	Password protected user accounts
Stoppering (option), Pressure Control (option)	Automatic end point determination
Hot gas defrost	CFC refrigeration
Designed to fit through a standard laboratory doorway	Dry vacuum pump (option) 316L SS finish (option)
12 month warranty, extended warranties available (option)	Installation, commissioning, operator training
UK designed, manufactured and maintained	Quality assured

LSM60 LyoDry Maxi has the option of either three, four or five temperature controlled shelves, between -60°C and +60°C with an accuracy of better than $\pm 0.5^\circ\text{C}$. The shelves can be moved up and down via a hydraulically operated ram for stoppering.

Freezing, primary and secondary drying, end point determination, backfill and stoppering sequences are all controlled by a central processor unit, allowing complex pressure/temperature profiles to be controlled accurately and reproducibly without operator intervention. In excess of 200 profiles can be stored and retrieved as required.

The compact design allows the equipment to move easily through most standard sized laboratory doorways, and commissioning is simple and straightforward requiring only mains electric supply (no pneumatic or water services needed).

MechaTech Systems Ltd,
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Registered in England and Wales No. 06469333

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TECHNICAL SPECIFICATION

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Shelf Temperature		-60°C to +60°C
Max Condenser Temperature		-85°C
Condenser Capacity		18 Litres
Condenser Rate		12 litres in 24 hours
Condenser Defrost		Hot gas
Refrigeration		CFC Free - Cascade - Air Cooled
No. Of shelves (excluding compensating shelf)		3/4/5
Shelf area (per shelf)		0.172 m ²
Shelf dimensions (w x d)		360 x 480
Shelf material		316L Stainless Steel
Shelf Heat Transfer		Silicon Fluid
Working height:	3 shelf	min 44 mm; max 100 mm
	4 shelf	min 30 mm; max 72 mm
	5 shelf	min 21 mm; max 55 mm
Shelf cool down times (with no load, from 25°C)		
	(to -35°C)	50 minutes
	(to -40°C)	60 minutes
	(to -55°C)	130 minutes
	(to -60°C)	160 minutes
Stoppering		Electrical/Automatic
Vacuum pump:	1. Type	Edwards RV12 with EMF20 mist filter
	2. Nominal Pumping Speed	12 m ³ /hr
	3. Pump down time (to 0.5mbar)	Approx. 10 minutes
Vacuum gauge		Pirani (or Capacitance Manometer option)
Inter-chamber valve		Electrical QSB
Electrical:	a) UK supply	230V, 50Hz, 1ph, 32 amp
	b) US supply	110V, 60Hz, 1ph
Dimensions (w x h x d) (including turret)		700 x 2120 x 1050mm
Gross weight		525 Kg
Temperature Control		±0.5°C
Data Logging		Yes
End Point Determination		Pressure rise
Pressure Control		Optional

MechaTech Systems provide installation, commissioning and end user training for the entire range of [LyoDry freeze dryers](#). A comprehensive Factory Acceptance Testing programme is submitted to the client for approval. Full design, installation and operational qualification support can be undertaken in the client's presence. Service contracts with extended warranties are available as an option.

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