

# LYODRY PRODUCTION FREEZE DRYER



TECHNICAL VACUUM EXCELLENCE SINCE 2008

**UP TO 42 TEMPERATURE CONTROLLED SHELVES  $\pm 60^{\circ}\text{C}$ ,  
DATA LOGGING/ANALYSIS, TOUCH SCREEN**

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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.

The [LyoDry Production Freeze Dryer](#) is the largest in the LyoDry range, for production scale, controlled freeze drying of bulk samples in a single cycle. The LyoDry Production Freeze Dryer is equipped with a rectangular drying chamber, containing up to 42 temperature controlled shelves, controllable  $\pm 60^{\circ}\text{C}$ .

Using the latest technology in vacuum, refrigeration and control, the LyoDry Production Freeze Dryer 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. It is a 'through-the-wall' configuration with a separate plant room, and therefore ideally suited to freeze drying pharmaceutical product in a clean room environment.



Large shelf area (up to 16.8m <sup>2</sup> ), high capacity ice condenser	Up to 42 temperature controlled shelves (including 2 radiant shelves) $\pm 60^{\circ}\text{C}$
Fully automated, touch screen control, automatic end point determination	Data logging, real time and historical analysis, remote view (option), audit trail
Up to 200 reproducible process profiles (recipes)	Password protected user accounts
Comprehensive alarms and security configuration, password protected user accounts	Ideal for clean room with external plant room
Manufactured in 316L stainless steel	UK designed, manufactured and maintained

MechaTech Systems Ltd,  
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Thornbury Industrial Estate,  
Thornbury, Bristol, UK. BS35 3UR  
Registered in England and Wales No. 06469333  
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## TECHNICAL SPECIFICATION

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SHELF	dimensions (w x d)	600 mm x 680mm
	surface area (each)	0.4m <sup>2</sup>
	thickness	11.55mm ± 0.15mm
	material	316L stainless steel
	flatness / m	± 1.5mm
	temp. variation across shelf (with static load)	± 1.2°C
	cooling rate / min	0.5°C / min
	heating rate / min	2°C/min
	temperature control (stable state)	± 1°C
	temperature range	-60°C to 60°C
CONDENSER	material	316L stainless steel
Condenser minimum operating temperature (no load, under vacuum)		≤ -80°C
	ice capacity: small condenser	15
	large condenser	90
	condensing rate	4 l/hr
POWER	supply voltage	415V
	phase	3ph
	power	~60kW
	frequency	50Hz
	fused supply	125A
REFRIGERATION	cooling	Semi-hermetic compressor - CFC free - water cooled
	gas type	R507
	cooling power	15 HP (11KW)
VACUUM	ultimate vacuum	0.037 Torr
	pressure control (stable state)	± 0.075 Torr
	evacuation time: atmopshere to 20 Torr	< 5 minutes
	20 Torr to 0.5 Torr	< 5 minutes
WEIGHT		(largest model) Approx. 4500kg
NOISE		< 50db

MechaTech Systems provide installation, commissioning and end user training for the entire range of LyoDry freeze dryers. All freeze dryers are fully assembled and tested prior to shipment. 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 presence of the client.

LyoDry Freeze Dryers are UK designed, manufactured and supported. Quality assured.

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