

# BIODRY VACUUM DRYER



TECHNICAL VACUUM EXCELLENCE SINCE 2008

**UP TO 42 TEMPERATURE CONTROLLED SHELVES 20°C TO 65°C  
DATA LOGGING/ANALYSIS, ENDPOINT DETERMINATION**

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The [BioDry Vacuum Dryer](#) is a fully automated, production scale vacuum dryer for industrial vacuum drying in a clean room environment, designed to remove solvent (typically water) at low temperatures in controlled and reproducible batches. Suitable for pharmaceutical, food and beverage applications, the BioDry Vacuum Dryer features touch screen control with data analysis and end point determination eliminating under-drying or wasteful over-drying.



BioDry Vacuum Dryer comprises a rectangular drying chamber which contains up to forty two product shelves, which are temperature controlled 20°C to 65°C. Both condenser and drying chamber are fitted with a common refrigeration system, capable of switching the condenser refrigeration duty to the drying chamber. The operator interface enables the user to control and monitor the vacuum drying process, including editing and loading, monitoring, acknowledging alarms and security access. BioDry Vacuum Dryer is a 'through-the-wall' system - the machinery is located in a separate plant room - and therefore ideally suited to a quieter cleanroom environment where only the chamber and operator interface are exposed.

Large Shelf Area (up to 16.8m <sup>2</sup> )	42 Temperature Controllable Shelves (including 2 radiant shelves) +20°C/+65°C
High Capacity Condenser	Fully Automated, Touch Screen Control
Data logging / Analysis	Reproducible Process Profiles
Automatic Endpoint Determination	Comprehensive Alarms System and Security Configuration
Manufactured in 316L Stainless Steel	UK Designed, Manufactured and Supported

MechaTech Systems Ltd,  
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Registered in England and Wales No. 06469333  
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<b>MODEL</b>		BIODRY VACUUM DRYER	
<b>SHELF</b>	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	20°C to 65°C	
<b>CONDENSER</b>	material	316L stainless steel	
Condenser minimum operating temperature (no load, under vacuum)		-50°C to -60°C	
	ice capacity:		
	single condenser	15 /30 Kg	
	dual condenser	30/60 Kg	
	condensing rate	10 l/hr	
<b>POWER</b>	supply voltage	415V	
	phase	3ph	
	power	-60kW	
	frequency	50Hz	
	fused supply	125A	
<b>REFRIGERATION</b>	cooling	Semi-hermetic compressor	
	gas type	R507	
	cooling power	15 HP (11KW)	
<b>VACUUM</b>	ultimate vacuum	0.037 Torr	
	pressure control (stable state)	± 0.075 Torr	
	evacuation time:	atmosphere to 20 Torr	< 5 minutes
		20 Torr to 0.5 Torr	< 5 minutes
<b>WEIGHT</b>		Approx. 4500kg	
<b>NOISE</b>		< 50db	

MechaTech Systems provide installation, commissioning and end user training. All systems 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.

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