

# VACUUM TRAY DRYER

**MECHATECH SYSTEMS**

TECHNICAL VACUUM EXCELLENCE SINCE 2008

**NINE TEMPERATURE CONTROLLED SHELVES TO 250°C  
DATA LOGGING AND ANALYSIS, TOUCH SCREEN**

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Vacuum Dryers range from small units for research and development to pilot and production scale vacuum drying systems for drying sensitive materials such as pharmaceutical materials, food and beverage, waste materials, etc. Options include control automation, shelf temperatures and chamber sizes to suit your product and capacity requirements. The Vacuum Tray Dryer pictured below can be customised to your application and specification.

The Vacuum Tray Dryer contains up to nine product shelves, which can be controlled between ambient temperature and +250°C, with an accuracy of better than  $\pm 0.5^\circ\text{C}$ .

Based around a large drying chamber mounted alongside a refrigerated chamber, the integral heated shelves have a temperature variation of less than  $2^\circ\text{C}$ .

Fully Automated, Touch Screen Control

Up to Nine Product Shelves with Total Drying Area of up to 1.7 m<sup>2</sup>

Controllable Shelf Temperatures between Ambient and + 250°C.

High Capacity (45kg)

Data Logging / Analysis

Reproducible Process Profiles

UK Designed, Manufactured & Supported



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

A full system mimic on the touch screen display provides a user friendly interface giving a clear indication of system status.

Suitable for vial and bulk samples, the dryer is easily adaptable for either laboratory or small-scale production.

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

Registered in England and Wales No. 06469333

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## TECHNICAL SPECIFICATION

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MODEL	Bespoke - exact configuration to be confirmed	
No. of shelves (excluding radiant shelf)		9
Shelf dimensions (w x d)		375 x 500mm
Shelf area (total)		1.7 m <sup>2</sup>
Shelf capacity (total)		45 Kg
Shelf material		316L Stainless Steel
Shelf temperature		Ambient to +250°C
Working height (max shelf gap)		98mm
Typical shelf heat up times (with no load, from 25°C ):		
	to +100°C	30 minutes
	to +200°C	55 minutes
Condenser temperature		-85°C
Condenser capacity		30 Litres
Defrost		Hot Gas and/or water
Defrost time (water inlet temp @ 40°C )		Approx 10 minutes
Refrigeration		Cascade
Vacuum pump:		
	1. Type	Edwards E2M18
	2. Nominal Pumping speed	18 m <sup>3</sup> /hr
	3. Ultimate vacuum (total pressure)	1.0 x 10 <sup>-3</sup> mbar
	4. Pump down time (to 0.5 mbar)	Approx 15 minutes
Inter-chamber valve		Electrical QSB
Electrical supply UK		415V, 50Hz, 3 ph, 15 KW
Dimensions (w x h x d)		1900 x 1940 x 1250 mm
Gross weight		825 Kg
Temperature control		+ 0.5°C
Data logging		Yes
End point determination		Pressure rise
Gas backfill		Yes / Automatic
Pressure control		Option

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

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