



MOISTURE REMOVAL OVENS (DEHYDRATING)



Thermoline
S C I E N T I F I C

ECONOMY DEHYDRATING OVEN



(AMBIENT +10°C TO +200°C)

(Image: TD-80F)



Thermoline Digital Economy Dehydrator

High Air Flow Moisture Removal Oven with Digital Temperature Control

- Stainless steel internal liners (easy clean surface and corrosive resistant)
- Fibreglass insulation for energy efficiency
- Stainless steel sheathed electric heating element
- Digital set point controller featuring error codes
- Monitoring port hole
- Fresh air inlet and exhaust air outlet
- Removable and Adjustable chrome plated shelving



Product Details

Thermoline's economy dehydrating ovens are designed and manufactured in Australia for all non critical laboratory and light industrial functions. This range includes one dehydrating model which is ideal for applications where moisture removal is required. This model is very well engineered making it reliable and long lasting.

Optional Accessories

Additional shelving available

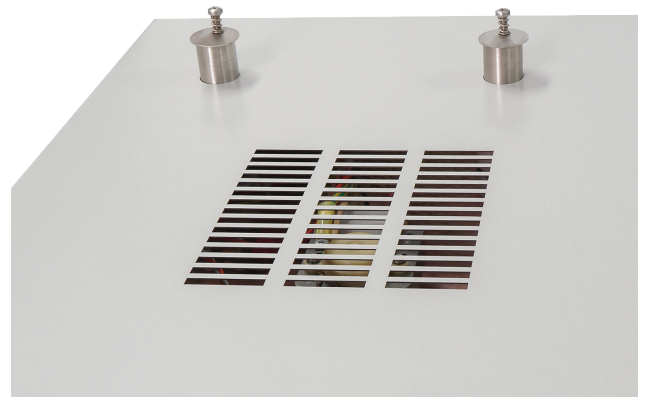
Additional monitoring cable port holes

Controlled temperature ramp to setpoint

Safety Features

Auto over temperature safety (Failsafe)

Over current protection



SPECIFICATIONS

Model	TD-80F
Internal Dimensions (WxDxH mm)	395x410x400
External Dimensions (WxDxH mm)	515x550x735
Capacity (litres)	80
Shelves	2
Temperature Range	Ambient +10°C to +200°C
Temperature Uniformity	±2°C at 100°C (unloaded and vents closed)
Electrical	1530 W / 6.5 Amps
Weight (kg)	55
Casters	No

PREMIUM DEHYDRATING OVENS



(AMBIENT +10°C TO +200°C)

(Image: TD-500F)



Premium Dehydrating Ovens

Premium High Air Flow Moisture Removal Oven with Digital Temperature Control

- Sizes range from 150 to 700 litres
- Energy efficient digital control technology
- Long life high speed fan motors
- Adjustable stainless steel shelving
- Custom designed air handling system
- Large 50mm adjustable air and exhaust outlet
- Control accuracy better than $\pm 0.25^{\circ}\text{C}$
- Spatial variation at 100°C of $\pm 2^{\circ}\text{C}$ (unloaded, vents closed)
- Sealed liner
- Lockable castors



Horizontal air flow system



Thermoline's range of Dehydrating Ovens are designed to remove large quantities of moisture from products and samples.

Typical applications include moisture removal from powder, soil, paper, timber, plaster, fabric, coal and many other minerals. The ovens feature a high air flow rate to ensure effective drying and chamber heating.

An adjustable air inlet and an adjustable air exhaust vent supply fresh air into the chamber while removing moist air from the chamber.

Thermoline also manufactures large dehydration ovens designed in conjunction with the Department of Primary Industries for soil testing.

Left: Top of oven showing adjustable air exhaust vents.

Safety Devices

Auto over temperature safety (Failsafe)

Over current protection

Controller error codes for open CCT sensor or control malfunction

Oven exterior cool to touch even when at maximum operating temperature

Optional Accessories

Additional shelving

Additional monitoring cable ports

Programmable controller

Key door locks

SPECIFICATIONS

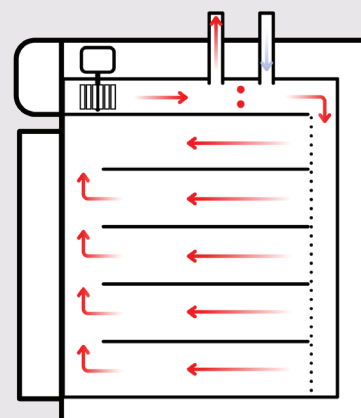
Model	TD-150F	TD-500F	TD-700F
Capacity (litres)	150	500	700
Internal Dimensions (WxDxH mm)	500x510x600	650x650x1200	650x650x1500
External Dimensions (WxDxH mm)	620x670x930	780x830x1640	780x830x1940
Shelves	3	5	6
Temperature Range	Ambient +10°C to 200°C		
Temperature Uniformity	±2°C at 100°C (unloaded and vents closed)		
Electrical (W)	2050 (8.5 amps)	3100 (13 amps)	
Weight (kg)	78	150	170

Horizontal Air Flow System in Fan Forced Models

Thermoline's fan forced dehydrating ovens feature a unique horizontal air flow system which ensures dry heated air is directed across each shelf space for effective drying of samples anywhere inside the oven. Heated air is blown down the rear of the oven where it is then forced over the shelf spaces via a perforated rear wall.

Moist air is vented outside the oven via a top port hole. This prevents additional moisture building up inside the oven. Internal air flow can be regulated by opening and closing the top ventilation ports.

The horizontal air flow system features in all premium dehydrating ovens, volatile material dehydrating ovens, large capacity dehydrating ovens and glassware drying ovens.



(Image: TD-630F)



NEW! Double Door Dehydrating Oven

High Air Flow Moisture Removal Oven
with Digital Temperature Control

- Large 630 litre capacity
- Energy efficient digital control technology
- Long life high speed fan motors
- Adjustable chrome plated shelving
- Custom designed air handling system
- Large 50mm adjustable air and exhaust outlet
- Spatial variation at 100°C of $\pm 2^{\circ}\text{C}$ (unloaded, vents closed)
- Sealed liner
- Lockable castors



SPECIFICATIONS

Model	TD-630F
Capacity (litres)	630
Internal Dimensions (WxDxH mm)	1300x690x650
External Dimensions (WxDxH mm)	1450x795x1030
Shelves	3 levels
Temperature Range	Ambient +10°C to 200°C
Temperature Uniformity	$\pm 2^{\circ}\text{C}$ at 100°C (unloaded and vents closed)
Electrical (W)	3100 (13 amps)
Weight (kg)	180

DEHYDRATORS FOR VOLATILE MATERIALS



(AMBIENT +10°C TO +200°C)

(Image: TD-150F-AS1681)

This dehydrator has been built to meet Australian Standard AS1681-2002



Dehydrating Ovens For Volatile Materials

High Air Flow Moisture Removal Oven For Volatile Materials

- Stainless steel internal liner for easy and quick cleaning
- Positive and continuous minimum ventilation
- Inbuilt purge timer remove volatile vapours
- Built to the Australian Standard AS1681-2002
- Digital display of internal and control temperatures
- Removable or adjustable chrome plated shelving
- Air handling systems provides controlled heated air across each shelf position
- Corrosion resistant heating element ensures long life
- Adjustable fresh air inlet and adjustable exhaust outlet
- Lockable castors

These dehydrators, in 150 litres and 500 litre capacities, are designed and manufactured by Thermoline to store volatile materials such as bitumen, paint or varnish. This range is built to the Australian Standard AS1681-2002.

Both models have a stainless steel interior with colorbond exterior, are fully insulated with high grade fibreglass and have long life fan motors and heating elements. These models also feature energy efficient digital control technology.

For added safety, Thermoline manufactures these ovens with an Air Flow Sensor which measures the pressure differential between the inlet and outlet ports, and will shut down the oven if the pressure is lower than 5 Pascals or higher than 45 Pascals.

The air flow sensor will detect the following events and shut down the oven:

- A value lower than 5pa indicates that an air circulating fan may have failed.
- A value Higher than 45pa indicates that there may be a restriction to flow or blockage in the inlet or the outlet ports.

In both cases above the oven would not be capable of purging four volumes of air, therefore a volatile condition may exist and the oven is shut down.

Safety Devices

- Auto over temperature safety (Failsafe)
- Over current protection
- Controller error codes for sensor and/or control malfunction
- Exterior of oven cool and safe to touch even when at maximum operating temperature
- Safety Air Flow Sensor

Model	TD-150F-AS1681	TD-500F-AS1681
Capacity (litres)	150	500
Internal Dimensions (WxDxH mm)	500x550x600	650x650x1200
External Dimensions (WxDxH mm)	620x670x930	780x830x1640
Shelves	3	5
Temperature Range	Ambient +10°C to 200°C	
Temperature Uniformity	±2°C at 100°C unloaded with vents closed	
Electrical (W)	2030 (8.5 amps)	3060 (13 amps)
Weight (kg)	78	150

Pressure relief port equal to 1:4.5 times oven volume

Pressure Vent Port System

Thermoline’s unique safety vent port located on the top of these ovens creates a release in the event of an explosion inside the chamber.

In the case of an explosion, the pressure can be safely and quickly removed via the vent limiting damage to other components and parts such as the door.

This unique feature developed by Thermoline ensures hazardous materials can be safely heated inside any lab.



LARGE CAPACITY DEHYDRATING OVEN



(AMBIENT +10°C TO +150°C)

(Image: TD-78T-2-D)



Large Capacity Dehydrating Oven

Large Capacity Moisture Removal Oven with Digital Temperature Control

- Large capacity volume of 2500 litres
- Stainless steel internal liner fully TIG welded and sealed
- Electronic digital control for uniform and stable temperatures
- Adjustable air vents for both inlet and exhaust
- Fully insulated with fibreglass wool
- Control accuracy at set point $\pm 0.25^{\circ}\text{C}$
- Solid construction designed to facilitate large volume samples
- Controllable temperature range ambient +10°C to +150°C
- Industrial hinges and door catch mechanics
- Heavy duty castors fitted

Thermoline Scientific has a range of large style Dehydrating ovens which have been designed with the assistance and in consultation with the Department of Primary Industries for the removal of large amounts of moisture in Soils, however our TD-Series of dehydrating ovens will perform equally when loaded with other materials or samples.

This large capacity model is supplied with heavy duty castors to allow users to easily move the oven where needed.

Safety Devices

Auto over temperature safety (Failsafe)

Over temperature thermostat cut-off protects samples and oven

Over current protection

Optional Accessories

Stainless steel perforated shelving trays

Stainless steel solid shelving trays

Open wire chrome plated shelves

Ramp to set point

Stainless steel external construction

Additional alarms



Image: STAR 700 controller mounted on external side



Image: Inside shelving

Controller

The large capacity dehydrating ovens are powered by Thermoline's **Select Touch And Run (STAR 700)** touch pad control system. The STAR 700 touch pad control system offers easy to program control of temperature.

Standard features of the STAR 700 are a large 154x87mm rugged, touchscreen operator interface terminal which has a full colour TFT LCD display with LED Backlighting. The STAR 700 allows for the operator to synchronize programmed settings to real time.

The STAR 700 has ethernet connectivity which, once connected, will allow the operator to perform all functions via the PC. The STAR 700 logs the performance of the cabinets to onboard memory. This memory can hold up to 800 days of logged data. For ease of use we have incorporated a live trend screen to allow the operator to quickly check the performance conditions within the cabinet. Alternatively the operator can download the logged data to a USB flash drive for archiving or review via a PC.

No specific software is required to view logged data. A simple spreadsheet program is sufficient (Microsoft Excel or similar).

SPECIFICATIONS

Model	TD-78T-2-D
Type	Upright / Floormount
Useable Volume (litres)	2500
Doors	2 Solid Doors
Shelf / Tray Positions	13 at 100mm centres (13x per door)
Number of Shelves (Optional Extra) (WxD mm)	26 Stainless Steel (open wire type) 755x900
Number of Trays (Optional Extra) (WxDxH mm)	78 Stainless Steel (solid base) 755x300x50
Number of Trays (Optional Extra) (WxDxH mm)	78 Stainless Steel (perforated base) 755x300x50
Number of Fans	3 Centrifugal Type
Motor Type	External TEFC
Temperature Range	Ambient +10°C to +150°C
Temperature Control	Full Colour Touch Screen
Ventilation	Adjustable through flow of ambient air
Internal Dimensions (WxDxH mm)	1650x1000x1620
External Dimensions (WxDxH mm)	1770x1190x2325
Internal Material	304 Grade Stainless Steel
External Material	Colorbond Steel
Electrical Elements	3x3000W
Electrical	15A / 3 Phase / 415V
Packed Size (HxWxD cm)	251x196x136
Weight (kg)	550



Thermoline Scientific have been manufacturing and distributing high quality laboratory and scientific testing equipment since 1970. Over this time, Thermoline has grown to be a leading brand in the science industry, with our equipment being used in small and large Hospitals, Universities and Research Laboratories across Australia and the Asia Pacific region.

We're proud to say that we are 100% Australian owned and operated.

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