TD-AS1681 Volatile Material Ovens

User Manual & Setup Guide

TD-AS1681 RANGE

Omron E5CC

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Thermoline SCIENTIFIC

Contents

Symbols

General Warning Sign

Warning sign: signifies a general warning, and indicates a risk to people specified by the supplementary sign that if not avoided, may result in death or serious injury.

Flammable

Warning; Flammable: signifies a flammable warning, and indicates a risk of flammable content as specified by the supplementary sign that if not avoided, may result in a fire by igniting flammable material.

Warning; Electricity

Warning; Electricity: signifies a electricity warning, and indicates a risk of contact with electricity as specified by the supplementary sign that if not avoided, could result in injury.

Warning; Hot Surface

Warning; Hot Surface: signifies hot surface warning, and indicates a risk to people specified by the supplementary sign that if not avoided, will result in contact with hot surface.

General Prohibition Sign

General Prohibition: signifies a prohibited action, indicates a risk to people specified by the supplementary sign that if not avoided, will result in death or serious injury.

Do Not Expose Outside

Do Not Expose Outside: signifies prohibiting the exposure to direct sunlight, and indicates a raised temperature due to sunlight or placement on hot surface can cause harmful damage to cabinet.

General Information

This user manual is intended for Thermoline's TD-AS1681 drying oven range. We recommend that you read this user manual the whole way through before you start using the cabinet. Consider this manual as a part of the cabinet and an integral part to its function. We recommend keeping it close and within easy access.

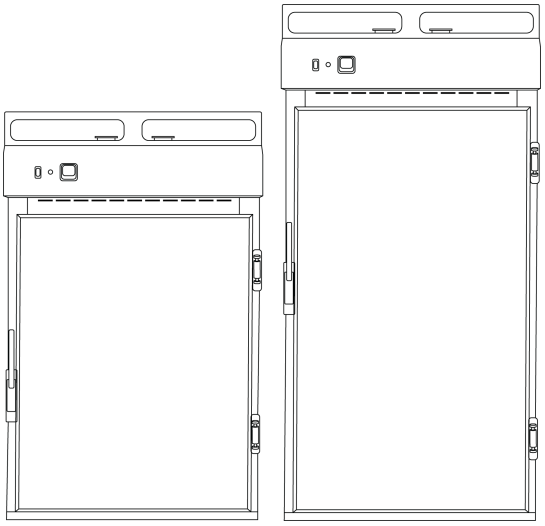
It is recommended that a copy of the Australian Standard for "Safety requirements for electrically heated Type 1 ovens in which flammable volatiles occur" AS1681-2002 be obtained as important information regarding the safe practices and methods for the calculation of ventilation rates are contained within.

These unique drying ovens are built to the requirements set in Australian Standard AS1681-2002 and as such, feature positive and continuous minimum ventilation with an inbuilt purge timer to remove volatile vapours. Designed to operate between ambient +10°C and 200°C and available in 150 and 500 litre capacities, both are designed and manufactured by Thermoline to store volatile materials such as bitumen, paint or varnish.

- Operating Temperature of Ambient +10°C to 200°C

The Thermoline range of ovens are set to function with specific operating ranges. The optimum operating conditions will be explained further in this manual.

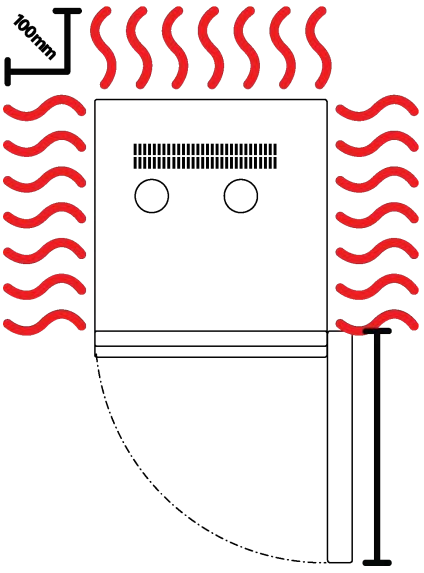
Product Specifications



Dimensions

External	TD-150F-AS1681	TD-500F-AS1681
WxDxH (mm)	630x660x1120	780x810x1790
Internal		
WxDxH (mm)	500x510x600	650x650x1200

Clearance	TD-150F-AS1681	TD-500F-AS1681
Front (mm)	630	780
Back (mm)	100	
Sides (mm)	100	



Technical Specifications

Technical Specifications	TD-150F-AS1681	TD-500F-AS1681
Temperature Range	Ambient +10°C to 200°C	
Temperature Uniformity	+/-2°C @ 100°C	+/-4°C @ 100°C
Heater Power	900 watts	3000 watts
Electrical	5A/230V	13A/230V
Nominal Capacity	150L	500L
Porthole Diameter	No porthole allowed	
Weight	120kg	230kg

As per the guidelines in Australian Standard AS1681-2002, these ovens have an internal purge timer factory set to provide a preventilation perod of not less than four changes of fresh air (vents at minimum position) prior to heating elements operating, either initially, upon opening the door or after accidental shutdown.

Minimum Purge Rate (L/min)	106	151
Minimum Purge Rate (L/min)	232	245

Note: It is the operators responsibility to ensure the flow rate is adequate for the volume and type of solvent introduced into this oven. Refer to Australian Standard AS1681-2002.

Technical Specifications

Features	TD-150F-AS1681	TD-500F-AS1681
Shelves (max @100mm spacing)	3 (max 4)	5 (max 9)
Lockable Castors	✔	✔
Internal Fan	✔	✔
Omron E5CC	✔	✔
Solid Door	✔	✔
Safety		
Over Temp Safety	✔	✔
Over Current Protection	✔	✔
Explosion Vent Port	✔	✔
Automatic Purge Timer	✔	✔
Safety Air Flow Sensor	✔	✔
Fibreglass Insulation	✔	✔

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.

Options	
BMS Plug	**No volt contact closure plug and socket connection to a Building Management System**
Additional Shelves	**Additional Stainless Steel shelves to suit**

Operating Environment

TD-AS1681 Volatile Material Oven Operating Environment

Ensure that the TD-AS1681 volatile material oven is placed in the correct environment, away from direct sunlight or direct heat sources such as heaters **(Fig 1)**. The product shouldn't be placed in a room where the ambient temperature exceeds that of which it was designed to operate. As volatiles are being purged from the oven external ventilation from the oven exhaust may be required.

TD-AS1681 volatile material ovens should be stored inside at all times. Failure to adhere to this could cause significant drops in cabinet performance and damage to items stored inside.

Extreme Operating Environment:

- **Temperature:** *10°C to 32°C (+/-2.0°C)*
- **Humidity:** *Up to 85%RH*

Optimal Environment: (Fig 2)

- **Temperature:** 23°C (+/-2.0°C)
- **Humidity:** 50%RH (+/-5%RH)

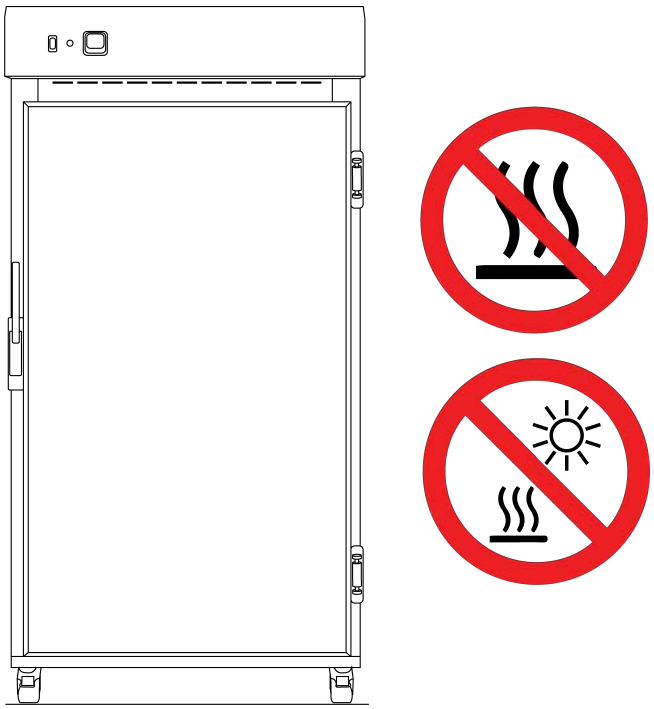


Fig 1. Suitable Environment

Bench Top Location

Bench Top Requirements:

- Under no circumstances should any ovens be stacked on top of each other **(Fig 2)**.
- Thermoline 150 litre ovens have removable castors for benchtop storage. To safely remove castors, simply tip the cabinet over gently onto it's back or side and unscrew the castors from the bottom the cabinet **(Fig 3).** This is a two person job so please get assistance.

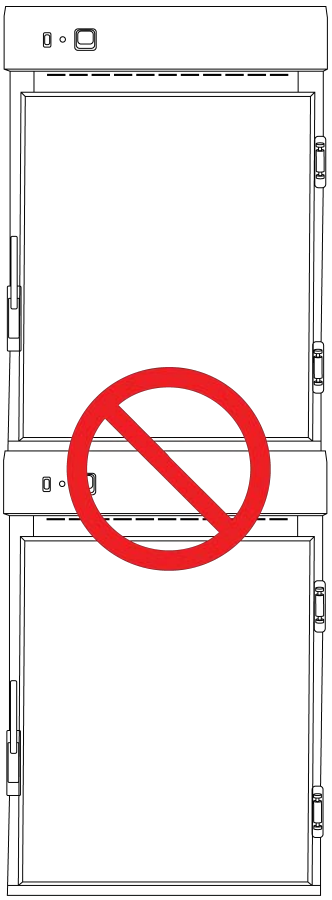


Fig 2.

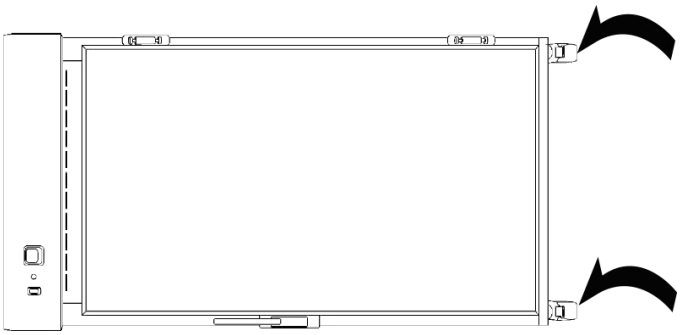


Fig 3.

Electrical Connections

Depending on the model, the TD-AS1681 volatile material ovens either require a 15amp, 230V, 50hz power supply or a 10amp 230V 50hz power supply. Requirements are shown in the table below.
A dedicated outlet should be used for all TD-AS1681 volatile material ovens. Do not use power boards or the like. A 3-pin moulded plug is supplied as standard.

	Electrical requirements
TD-150F-AS1681	*10A/230V*
TD-500F-AS1681	*15A/230V*

Electrical Conditions:

- All TD-AS1681 volatile material ovens include a 2.5m removable mains power lead with a three-pin plug and right angle female IEC plug (straight plug for 15A). Ensure the product is reasonably distanced from the power supply. **(Fig 1)**
- On the oven itself is a male IEC socket **(Fig 2)** and **(Fig 3).**

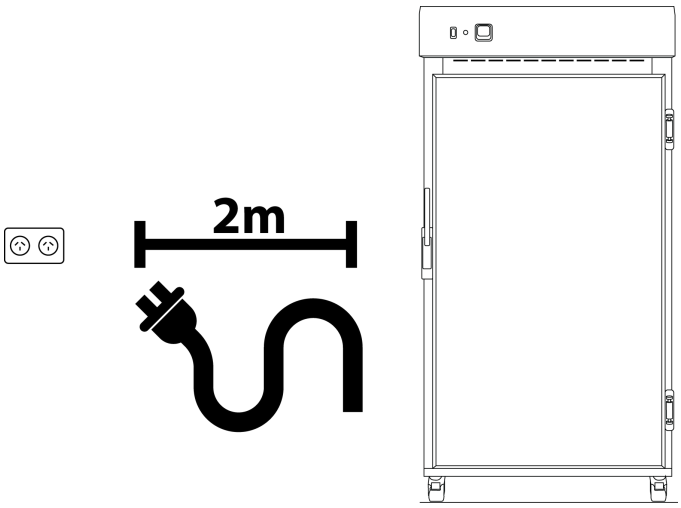


Fig 1. Suitable distance from power supply (2m)

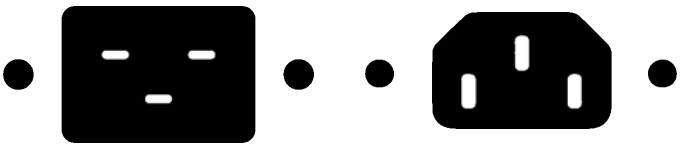


Fig 2. 15amp IEC socket

Fig 3. 10amp IEC socket

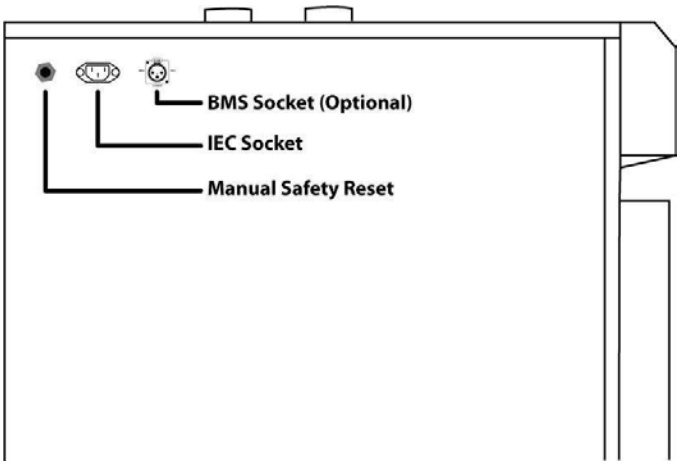


Fig 4. Location of of the IEC socket.

Operating Environment Warnings

Do not store items on top of the cabinet as this will also affect ventilation! CAUTION: When installing more than one cabinet in the same location ensure that they are positioned in such a way that warm air exhausted from one cabinet, is not drawn directly into the other cabinet.

Drying ovens should be stored inside at all times. Failure to adhere to this could cause significant drops in cabinet performance and damage to items stored inside.

WARNING: Where the atmosphere in which the oven is installed is likely to become hazardous due to exhaust from the oven. Adequate ventilation and other precautions will be required.

Unpacking

Unpacking process for foam wrapped or boxed

- The TD-AS1681 volatile material oven will be delivered foam wrapped and on its castors via sensitive freight **(Fig 1)** or in a box on a skid **(Fig 2)**.
- If the TD-AS1681 volatile material oven is delivered on a skid, a forklift may be required to lift it off the skid.
- Please don't dispose of the packaging until the oven is inspected. If damage is present upon opening your package, notify your supplier or Thermoline Scientific without delay on +61 2 9604 3911 or email at service@thermoline.com.au.

Fig 1. Unpacking Process (foam wrapped)

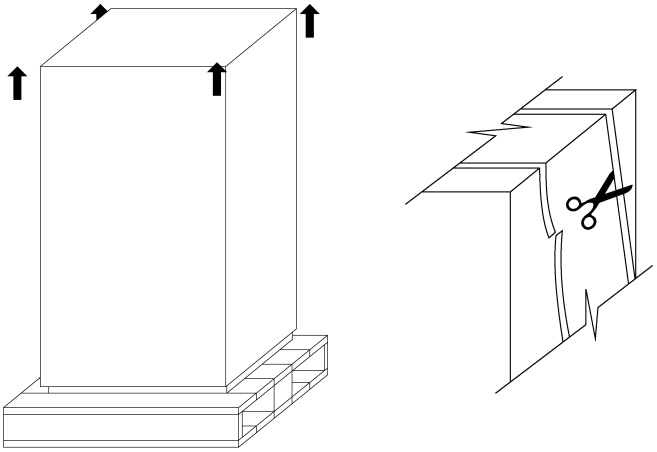


Fig 2. Unpacking Process (Box)

Moving

Moving the TD-AS1681 volatile material oven:

- Ensure that the TD-AS1681 volatile material oven is rolled on an even and flat surface. Uneven surfaces can cause the oven to fall over.

NOTE: TD-AS1681 volatile material ovens are 'Top Heavy'. Do not move the cabinet too quickly. **(Fig 3 & 4)**

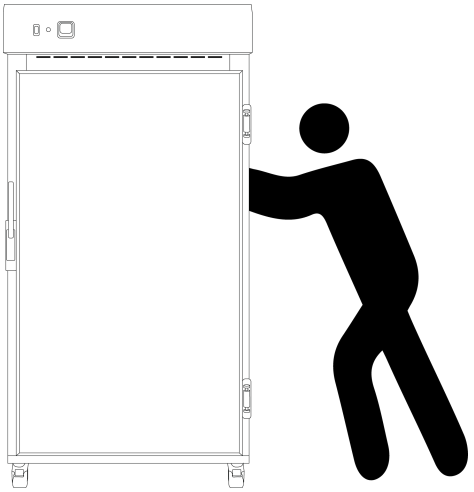
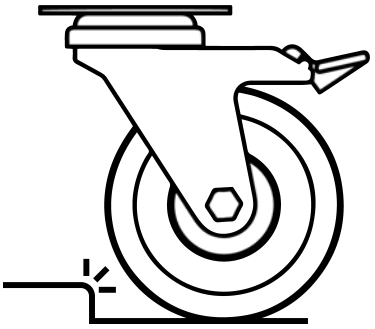


Fig 3. Safe moving of cabinet.



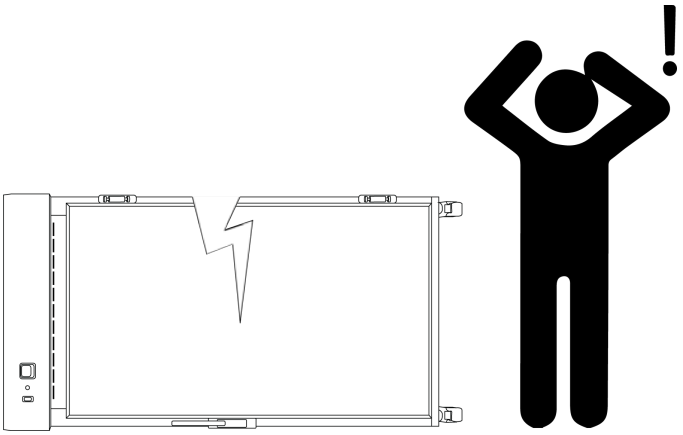


Fig 4.

Castors

The TD-AS1681 volatile material ovens are equipped with lockable castors to prevent cabinet movement.

Castor Setup:

- Ensure that the TD-AS1681 volatile material oven is placed on an even and flat surface. Uneven surfaces can cause issues within the cabinet. Uneven surfaces can cause the cabinet to fall over or roll away with unlocked castors.
- Castors can be fixed in place by pushing down on the brake lever. Ensure the castors are locked to prevent unwanted movement from the drying oven **(Fig 1)**.
- Ensure when placing the TD-AS1681 volatile material oven into place that the castors can be accessed so they can be locked **(Fig 3)** and unlocked **(Fig 2)**. Please contact your supplier or Thermoline should there be any damage to the castors.

Fig 1.

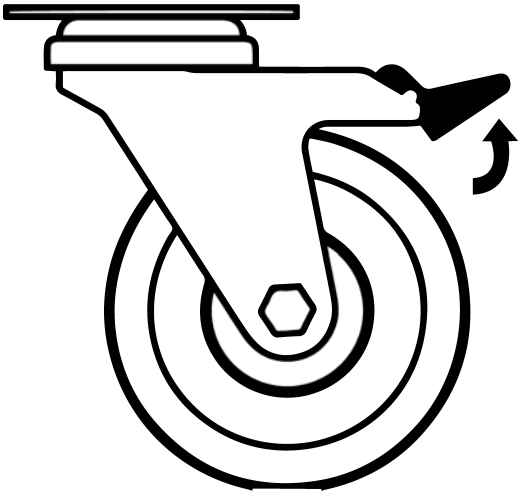


Fig 2. Castor Unlocked

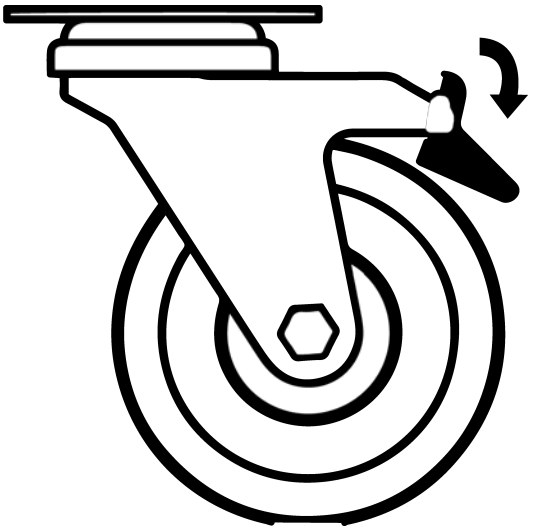


Fig 3. Castor Locked

Drying Oven Location

Location Requirements:

- The TD-AS1681 volatile material oven requires a level surface to operate correctly. **(Fig 1)**
- Do not store items on top of the TD-AS1681 volatile material oven **(Fig 2).** Space is required to accommodate the inlet and outlet vents.
- The TD-AS1681 volatile material oven requires ventilation. Thermoline still suggests 100mm on the sides and back that also aids with accessibility **(Fig 3).** 300mm at the top to ensure the inlet and outlet vent is not obstructed in any way.
- The TD-AS1681 volatile material oven door should also be allowed to open and close at full range. **(Fig 4)**

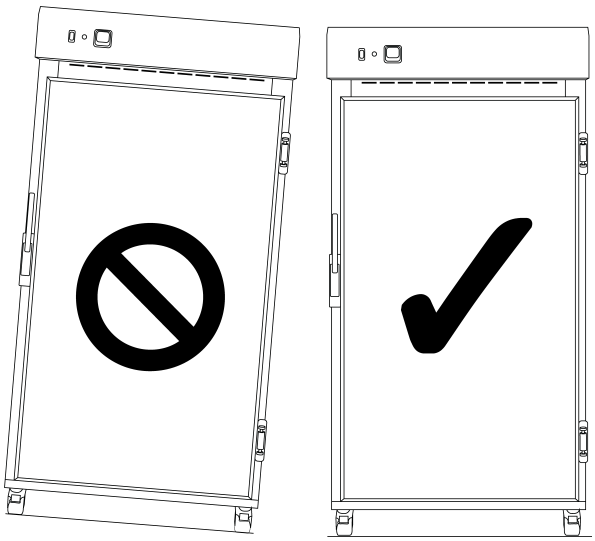


Fig 1 . Correct Levelling

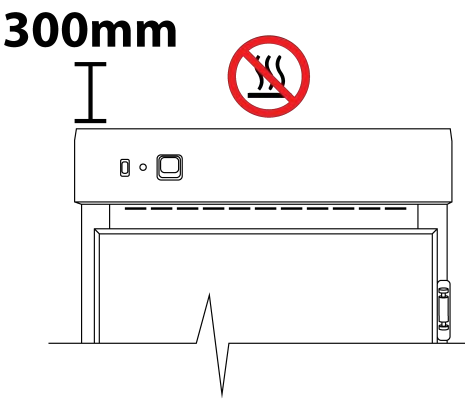


Fig 2.

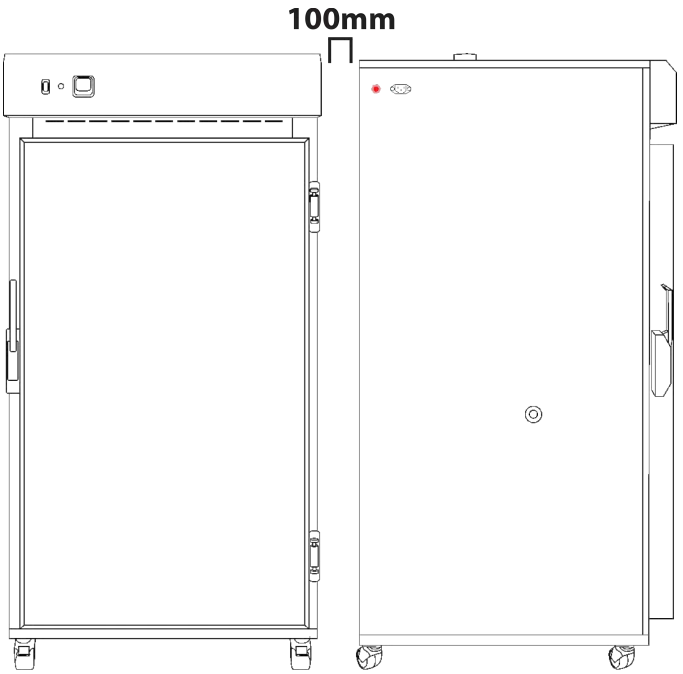


Fig 3.

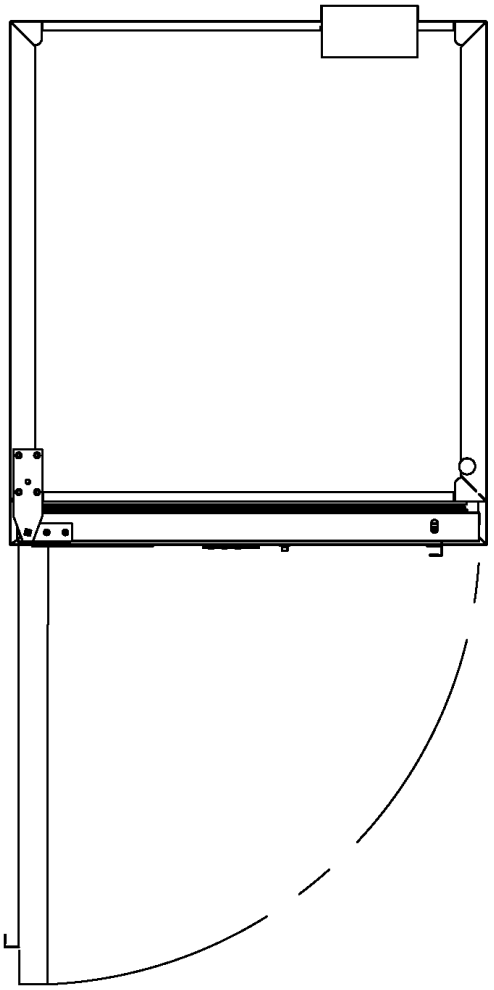


Fig 4.

Setup

Shelves

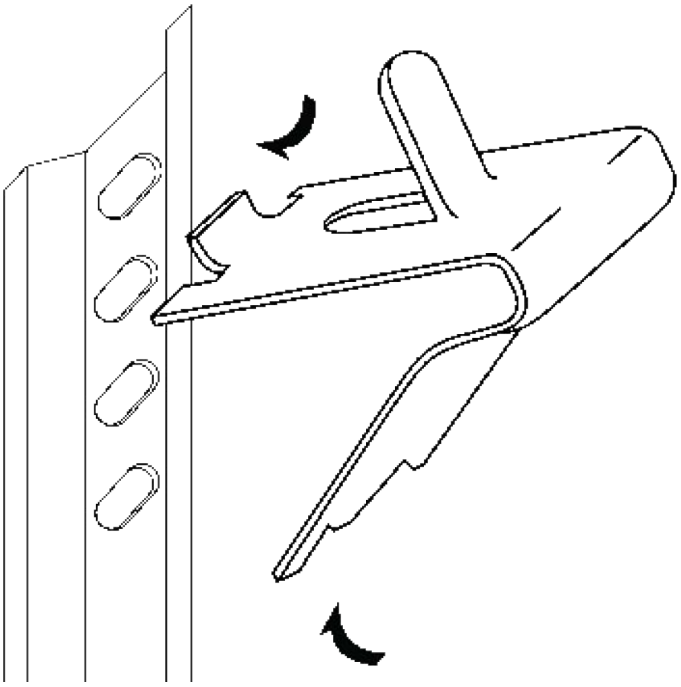
All TD-AS1681 volatile material drying ovens comes equipped with shelves used for holding items while the oven is in operation. They allow for more than one item to be conditioned at a time. The shelves can be adjusted to different heights to accommodate different size items.

To adjust the shelf clips you must:

- Hook the top of the clip into the slot seen below.
- Pinch and squeeze the base of the clip
- Push base of clip into slot and release.
- To remove, repeat process.

Shelving:

- All ovens are supplied with adjustable shelf clips to accommodate different size items within the cabinet, The amount of shelf clips supplied changes depending on the size of the cabinet ordered.



Model	Shelvex Length (mm)
TD-150F-AS1681	455
TD-500F-AS1681	915

SAFETY NOTE:

- The edges of the clips can be sharp. Thermoline recommends using protective gloves while adjusting or moving the clips (e.g. leather gloves).

Inlet and Exhaust

All TD-AS1681 volatile material drying ovens feature an inlet and an exhaust port on top of the cabinet. The inlet regulates the amount of fresh (dry air) that enters the cabinet and the outlet regulates the amount of exhaust air that can exit the cabinet. In combination, this regulates the rate of drying. Please note that the TD-AS1681 volatile material oven has a 25mm hole in the top of each flap. There is a minimum required flow and the cabinet must remain within the required pressure differential to operate.

Exhaust Requirements:

- The top covers of the inlet and exhaust can be rotated either way to open up the exhaust and allow airflow **(Fig 2)**. The air vents are located on the top of the cabinet. **(Fig 1)**
- On all TD-AS1681 volatile material drying ovens covered in this manual the exhaust is on the left and in the inlet is on the right as you look at the oven. Due to the location and number of fans in the different models the location may differ slightly, but they are still in this configuration. (**Fig 3)**.
- The TD-AS1681 volatile material drying oven's vents can also be connected to a ventilation system whether it is exhaust only or both inlet and exhaust. To do so, you must first remove the vent covers **(Fig 4)**.
- To prevent a potential pressure restriction, please ensure that the pipe is no smaller than 75mm in diameter for proper ventilation (**Fig 4)**.

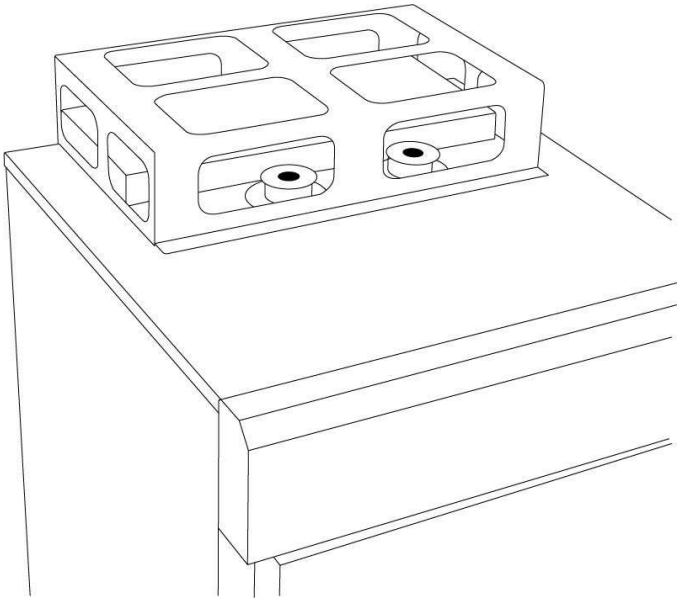


Fig 1.

Fig 2.

Fig 3.

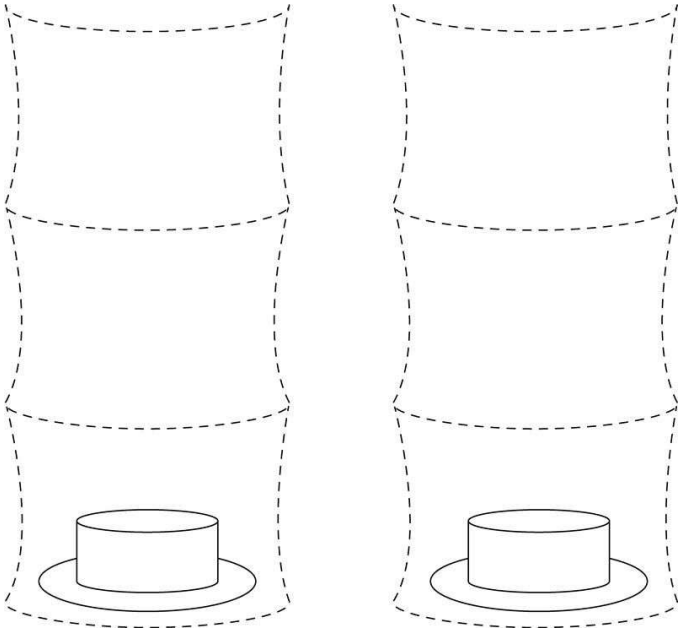
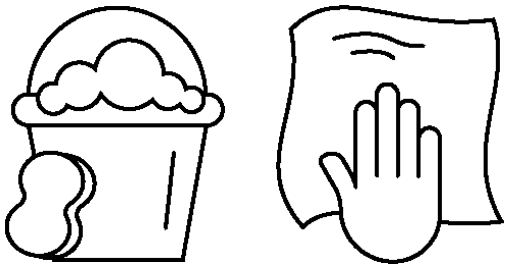


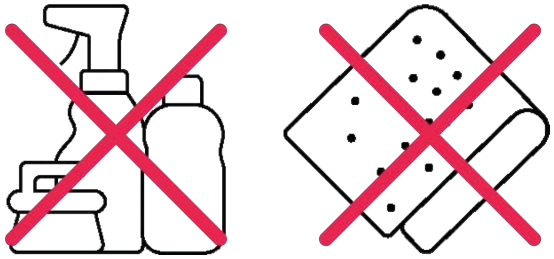
Fig 4. Recommended minimum diameter 75mm

Cleaning

The interior, exterior, and door gasket can be cleaned as often as required using a soft cloth and soapy water. Never use abrasive cleaners or scouring pads as these will scratch the surface and may result in corrosion. Never use caustic type cleaning agents.

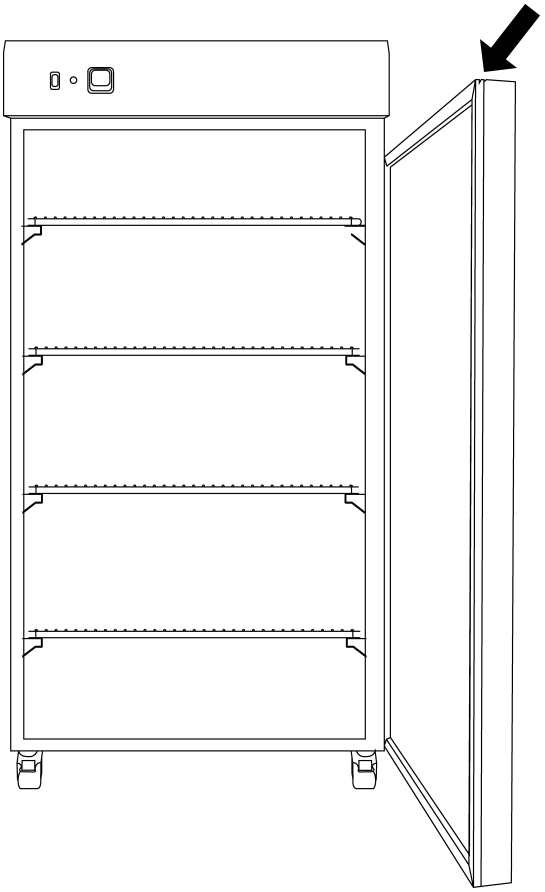


All cabinets have electrical components. Power should be turned off prior to cleaning. These items should not be subjected to any levels of moisture.



The door gasket should be cleaned regularly with a mild soap solution. If a gasket is to be replaced, please contact Thermoline Scientific. Regular inspection is recommended.

Door Gasket



Setup Warnings

Ensure when placing the cabinet into place that the castors can be accessed so they can be locked and unlocked. Any damage to the castors must be noted to the supplier or manufacturer

Ensure there are no blockages around the or on top of the exhaust as this will effect proper ventilation.

Caution must be taken when removing the packaging particularly when using knives to cut tape and cardboard.

TD-AS1681 Purge Controls

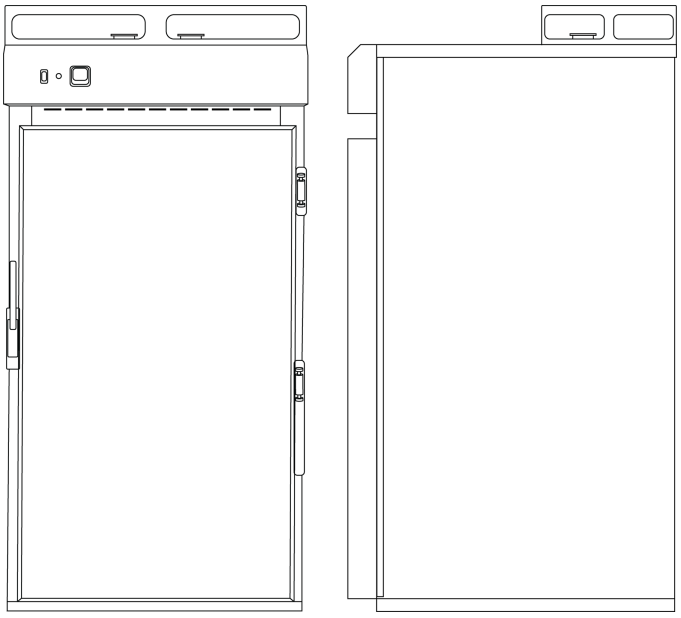
Purge Time AS1681-2002

A critical requirement of AS1681-2002 is a calculated, non-operator adjustable set time (purge time) based upon the oven volume and the minimum ventilation rate to atmosphere before the heating is applied. Any reduction in the factory set purge time or the minimum ventilation rate will render this equipment non-compliant to AS1681-2002 and could result in equipment damage and/or personal injury.

Factory Set Purge Times:

- Model: TD-150F @ 7 minutes
- Model: TD-500F @ 15 minutes

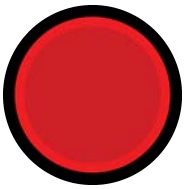
All Thermoline TD-AS1681 ovens are fitted with an Air Pressure Safety device. This monitors the air pressure in the differential between the exhaust and inlet ports and shuts down the oven if an out of tolerance pressure is present. This is a latching alarm that requires the oven's power to be cycled to reset this.



Purge Light

The **PURGE LIGHT** is located on the right of the Omron controller as identified by the graphic above. The light is substantially larger than the alert lights.

The oven is equipped with a purge light. In the case of the purge taking place at the start of every cycle. In this instance, the red purge light will be illuminated



Purge Timer

Note: As per guidelines set in AS1681-2002.

The timer is located within the Omron purge controller and is factory set. The timer is initiated upon the closure of the oven door and delays the operation of the heating until the set purge time has expired. This device also monitors the differential air pressure at the Inlet and Exhaust ports. If either or both ports are to become blocked and there is a restriction of flow, then the oven will shut down due to an increase in the pressure differential between the Inlet and Exhaust ports. The device will also shut down the oven if there is no pressure differential, which indicates that the fan motor(s) may have failed.

Below is a step by step guide through the purge timer.

- Upon turning on the power, the circulating fan(s) are activated and the purge time is activated.
- The diagram below points to the **PURGE ALERT LIGHT.** This light will be illuminated when the cabinet is purging. **(Fig 1)**
- Purging is started upon turning on the power, the circulating fan(s) are activated and also the purge time is activated. **(Fig 2)**
- Each cabinet has a different set of factory set purge times. These are default on every cabinet and described in the **PURGE DURATIONS** section.

Fig 1.

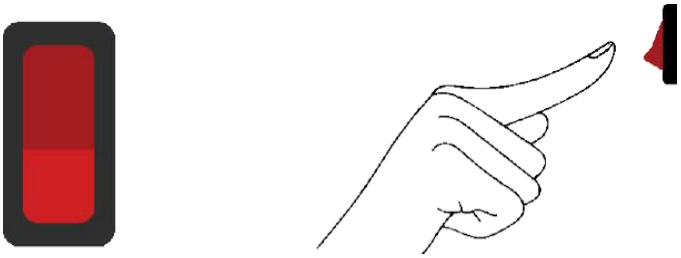


Fig 2.

Air Pressure Safety

The oven features a unique Air Pressure Safety **(Fig 3.)** that triggers when the pressure differential between the intake and air exhaust is out of range. If either or both ports become blocked and there is a restriction to flow, then the oven will shut down due to an increase in the pressure differential between the Inlet and Exhaust ports. The device will also shut down the oven in the event that there is a low-pressure differential. This can indicate that the fan motor(s) may have failed.

How to Reset Air Pressure Safety:

- The low and high-pressure differential is a latching alarm.
- Low is a 5pa and the high is 45pa.
- To reset the air pressure safety, simply cycle power to the oven, ensuring that the cause has been addressed and fixed first.

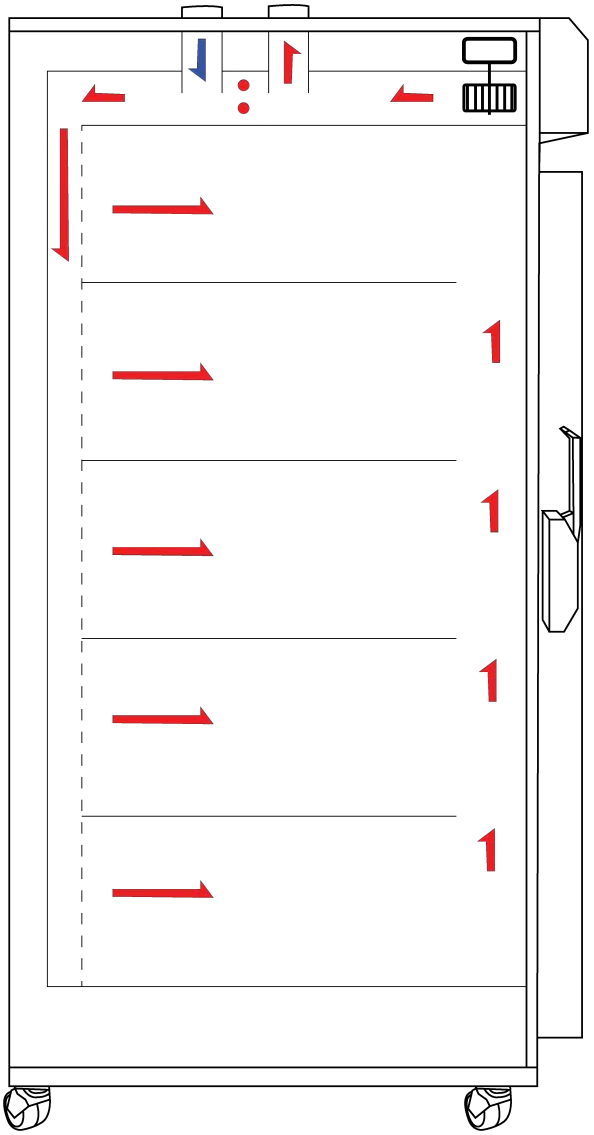


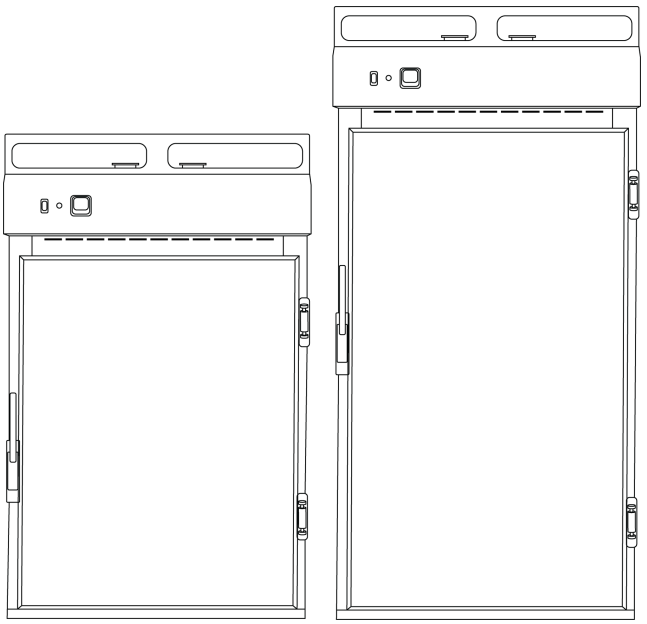
Fig 3.

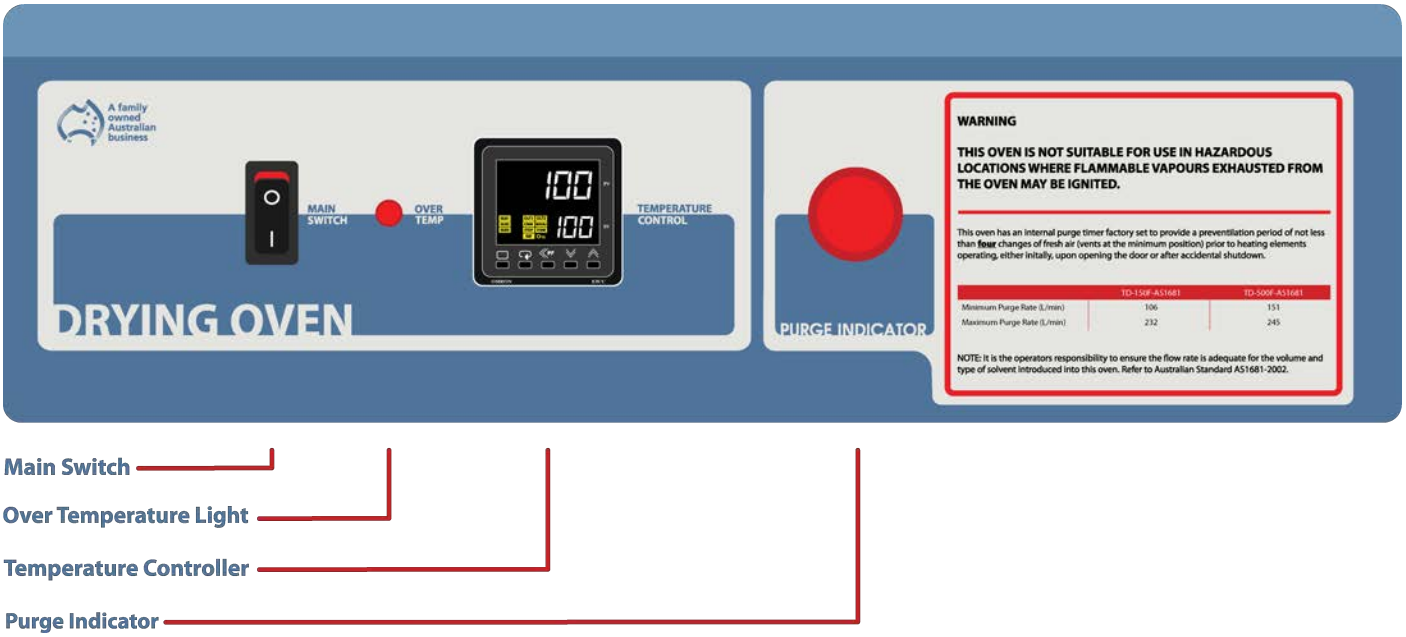
Start Up Procedure

Start Up Procedure

Start-Up process for the oven:

- Before proceeding, please make sure that all internal and external packaging has been removed from the appliance and that all tape, plastic bags and foam pieces have been removed.
- Take the supplied lead and plug it into the male IEC socket on the rear of the oven. Next, plug the 3-pin plug into a 10amp or 15amp General Purpose Outlet depending on which is required.
- Turn the main switch adjacent to the temperature control to 'ON' to start the Oven.
- The controller will not come on until the purge is finished. The red purge light will stay on indicating the oven is in purge mode and powered up.





Main Switch

Over Temperature Light

Temperature Controller

Purge Indicator

Loading

TD-AS1681 volatile material drying ovens require constant air flow throughout the cabinet to maintain the desired temperature. Correct loading of the shelves must be considered for efficient cabinet performance.

Loading Requirements:

- Distribute the load evenly over all the shelves rather than stacking everything on one shelf. This is to ensure unobstructed airflow throughout the chamber.
- Ensure the highlighted area of the cabinet is clear of all obstructions to ensure that proper ventilation is allowed throughout the cabinet. **(Fig 1 & 2.)**
- Never block off air vents in the rear panel.
- Do not load samples on the floor of the drying oven.

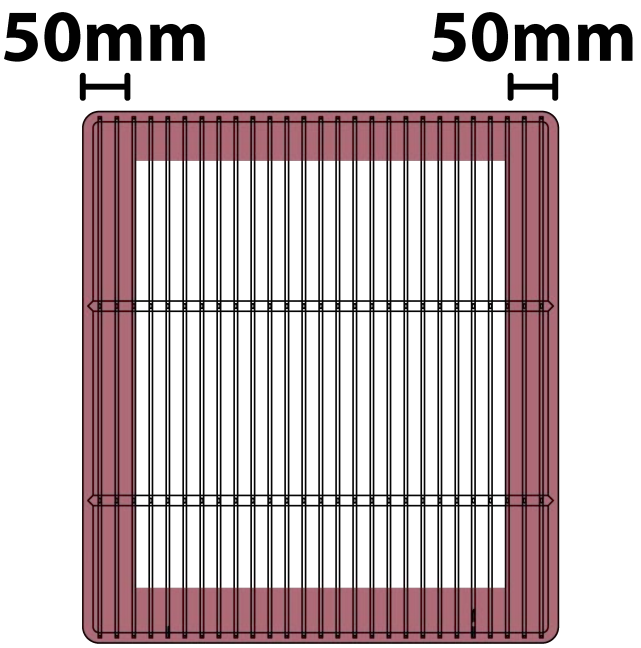


Fig 1.

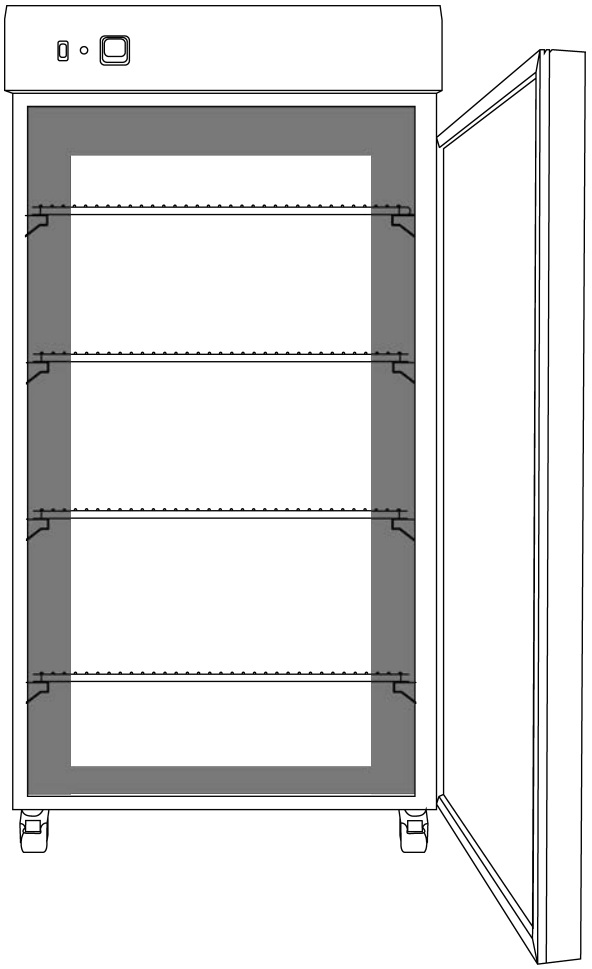


Fig 2.

Omron User Guide

The controller is an Omron E5CC microprocessor based instrument with digital indication of set temperature and operating temperature. The instrument has been factory configured for range, sensor type, and engineering parameters for optimum control.

Note: Limited access to the controller is available. The operator has access to alter the temperature set point and parameters used for calibration purposes only.

Scroll Button: Used to view the set temperature target and start/reset the ramp/dwell function.

Page Button: Used to view calibration offset parameter and the ramp/dwell control parameters.

Increase/Decrease Button: Used to increase and decrease the parameter settings.

Side Arrow: Used to move the cursor when changing temperature

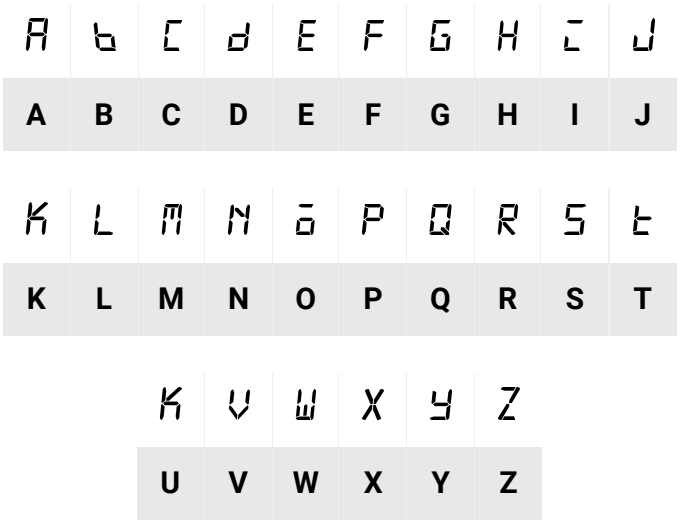
PV ***Process Value:*** Current temperature within the cabinet

SV ***Set Value:*** Set temperature within the cabinet.

Display Symbols

The Omron E5CC controller comes with an array of functions. The table below is an overview of the LED indicators displayed throughout use. Familiarise yourself with them so you are able to recognise problems or faults easily.

LED	Name	Meaning
SUB1	Auxillary Output 1	N/A
SUB2	Auxiliary Output 2	N/A
SUB3	Auxiliary Output 3	High Alarm
OUT1	Control Output 1	Heat Output ON
OUT2	Control Output 2	N/A
CMW	Communications Wiring	N/A
STOP	Stop	N/A
RSP	Remote SP	N/A
MANU	Manual	N/A
TUNE	AT/ST	N/A
	Setting Change Protection	N/A



Temperature Control

How to
Use the " **<<PF** " button to move the cursor. The digits in **SV** will flash, indicating that it can be changed.

Change the temperature by using the " **UP** " or " **DOWN** " arrows. When the desired temperature is set, leave for a few seconds and the digits will stop flashing to confirm entry.

UP

DOWN

SCROLL

SIDE ARROW

PAGE

Sensor Calibration

There are a number of factors that will affect the accuracy of the temperature displayed in relation to the actual temperature inside the Oven. These could include the following:

- Sample load inside the cabinet (the load should be distributed evenly).
- Product temperature (at higher temperatures the heat loss from the product will be greater).
- Location of the sensor (the temperature sensor can never be placed in the centre of the oven because it could be damage.

The Omron temperature control has a parameter that can correct the temperature displayed. This sensor correction parameter is displayed as " **iNS** " (Input Shift).

In simple terms, this parameter adds or subtracts a correction value to the displayed temperature to make it read the correct temperature.

The calibration sensor can be affixed to the centre of the middle shelf.

Once the oven has stabilised, any difference in the temperature reading can be offset using the sensor correction parameter.

The calibration parameter can be accessed as follows:

How to
Press **PAGE** to display sensor correction parameter.

Use the **UP** or **DOWN** button to adjust the sensor correction.

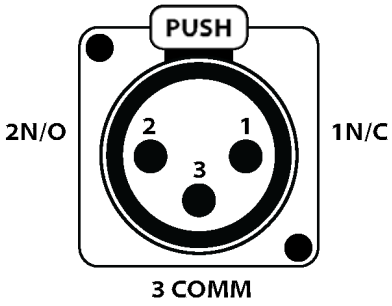
After this, allow the digit to stop flashing and the screen will display the adjusted value.

BMS Output

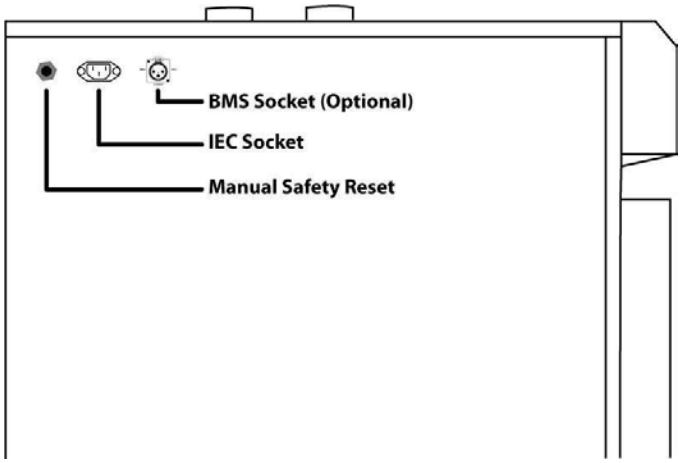
The TD-AS1681 volatile material oven can be fitted with an optional 3-pin socket to allow for connection to a building monitoring system or phone dialler. A plug is also supplied separately to connect the socket to your system.

The alarm contacts have no voltage present but we recommend that the wiring is connected by a suitably qualified technician.
An alarm can be triggered by the following:

- Loss of power
- High temperature inside cabinet (2°C above setpoint)



1N/C: Will open loop upon alarm situation. This is the optimal option as any break in the loop is detected.
2N/O: Will close loop upon alarm situation.
3COMM: At least one wire in connected to this pin.



Location of BMS plug

Manual Reset Safety Thermostat

The over-temperature safety thermostat is not operator adjustable. It will electrically isolate the heating elements in the event of an over-temperature situation. The main aim of this safety is to protect from overheating in the event that there is no airflow through the cabinet. This could be a failure of the air circulating fans or the cabinet being overstocked.

Resetting the over-temperature safety thermostat:

- Allow the cabinet to cool down before resetting the thermostat.
- Locate the safety reset at the back of the cabinet. It is displayed as a red or black knob (**Fig 1**).
- Once the cabinet has cooled down, turn the black or red knob anti-clockwise .**(Fig 2)**
- Once the knob is off, press the red button firmly until you feel a “click”. This will restart the circulating fan and turn the digital display on again.

NOTE: This will allow the heaters to operate again. If this keeps tripping contact a qualified service technician to investigate possible causes of fault.

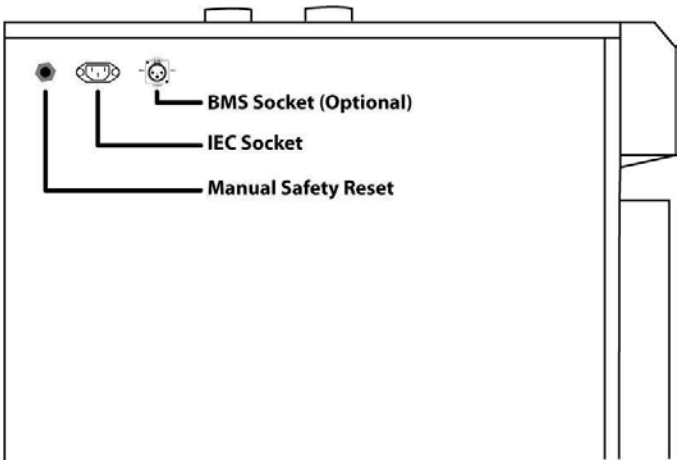


Fig 1.

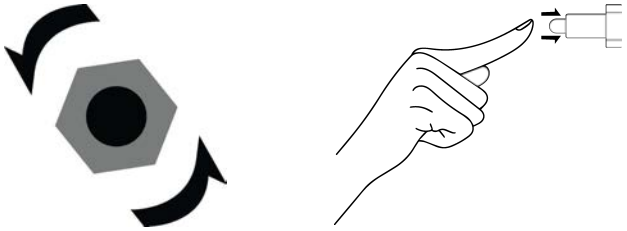


Fig 2.

Troubleshooting

Problem	Fix	Part Number
Oven Temperature does not match the controller read out.	**Sensor Issue** There could be a few reasons why the oven temperature is not matching the controller readout. One possibility is that the temperature sensor inside the oven is not properly calibrated or functioning correctly. If the offset is greater than 5 degrees, then your sensor may need replacing. Replace your oven sensor. To complete this, you will need to contact a technician. **Offset Issue** Another issue could also be the offset of the controller being off and needing adjustment. Check the Offset in the controller. Select "iNS" - Input Shift and adjust accordingly. See Sensor Calibration for more in-depth information regarding Offset Calibration.	40716- **PT100 Sensor** 
The "ALM" light is illuminated on the controller and the PV is reading far higher than usual.	It is likely that the temperature offset has been inadvertently adjusted. Please follow the sensor calibration instructions to bring the " **iNS** " (Input Shift) value back to zero.	
There is no air flow in the oven	**Fan Failure** Limited air flow within the Oven could be related to the failure of the internal fan.	50429 - **D Series Motor** 
The word "Stop" is showing on the controller	1. Press the 'PAGE' button and the "SCROLL' button simultaneously until 'oAPt' appears on the screen. 2. Press 'SCROLL' button until you see the parameter 'PMSK' on the screen. 3. Press the 'DOWN' button to turn off. 4. Press the 'PAGE' button and the 'SCROLL' button simultaneously to take you back to the main menu. 5. Press 'SCROLL' until you see 'R-S' on the screen. 6. Press the 'DOWN' button to turn 'STOP' to 'RUN' 7. Press the 'PAGE' and the 'SCROLL' button simultaneously until 'oAPt' appears on the screen 8. Press 'SCROLL' until you see the parameter 'PMSK' on the screen 9. Press the 'DOWN' button to turn on 10. Press the 'PAGE' and the 'SCROLL' button simultaneously to take you back to the main menu. **Please note if other parameters are changed by mistake further issues may occur.**	

Troubleshooting

Problem	Fix	Part Number
Lever latch door will not close (latch too tight) or does not close firmly (latch too loose).	**Adjustable strike** If the latch feels overly tight or will not completely close the strike will likely need to be brought forward (away from the cabinet). Alternatively, if the latch feels loose when closed and it doesn't hold the door firmly closed the strike may need to be moved back (towards the cabinet). There is a Philips head screw in the bottom that once loosened will allow you to move the strike forwards or backwards. There is a grooved surface that enables the screw to remain in position once tightened. Thermoline suggests making only very small changes to the strike location (one groove at a time) while making adjustments.	
	 	
Purge light out	**Pressure Differential has tripped** If the purge light is out and the controller is still out, the pressure differential has tripped. When closing the doors, do it softly to avoid creating an unnecessary pressure differential. Check the inlet and outlet port for a blockage The fan motors have failed.	50429 - **D Series Motor** 

Technical and Repair Support

When contacting Thermoline regarding information about the product, it is important to have the Serial Number and other related information with you. The serial number is on a silver sticker, usually located near the power IEC socket.

Contact Thermoline service on +61 2 9604 3911 or email at service@thermoline.com.au

Thermoline
SCIENTIFIC
ABN 80 000 859 129
SALES AND MANUFACTURING
10-12 Ross Place, Wetherill Park NSW 2164 Australia
Phone: +61 2 9604 3911 Email: sales@thermoline.com.au

Model:
Serial No:
Watts/Amps:
Volts:

Warranty

Have the following information available when you contact the service department. Model number and serial number. This is generally found on the exterior of the cabinet in the form of a stick-on label. The company name, address, contact name, contact phone number. A brief description of the problem. All warranty claims must be reported to, and agreed to by a Thermoline representative prior to any work being carried out.

Standard 24 Month Warranty

Thermoline Scientific Equipment Pty Ltd ABN 80 000 859 129 ('Thermoline')

Thermoline warrants to the original purchaser that this product will perform to its product specification for a period of 2 years from date of purchase, provided that the installation of the product has been carried out in accordance with the latest version of the manufacturer's instructions and further provided that the use of the product complies with that specified in the relevant specification. Thermoline is not responsible for any loss or damage arising from incorrect usage, usage outside the suitability of the product as stipulated in the manufacturer's instruction, damage caused by accident, fire, flood, act of God or failure to properly install, operate or maintain the goods in accordance with the printed instructions provided.

The following statement applies only to product sales that fall within the definition of a Consumer Sale set out in the Australian Consumer Law contained within the Competition and Consumer Act (Cth) 2012:

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. Notwithstanding the preceding clause and to the extent permissible by law, the liability of Thermoline is limited, in relation to the warranted product and at the option of Thermoline to:

Replacing the product or the supply of equivalent product;
The repair of the product;
The payment of the cost of replacing the product or of acquiring equivalent product; or
The payment of the cost of having the product repaired.

To the extent permitted by law, all other warranties whether implied or otherwise, not set out in this Warranty are excluded and Thermoline is not liable in contract, tort (including, without limitation, negligence or breach of statutory duty) or otherwise to compensate the Purchaser for:

any increased costs or expenses;
calibration/certification services;
any loss of profit, revenue, business, contracts or anticipated savings;
any loss or expense resulting from a claim by a third party.
Any special, indirect or consequential loss or damage of any nature whatsoever caused by Thermoline's failure in complying with its obligations or the purchaser's failure due to accident damage, impact, misuse or negligence.

The benefits given to the purchaser in this Warranty are in addition to other rights and remedies under a law in relation to the products or services to which this warranty applies. This warranty applies only to products purchased and installed in Australia and does not cover any consumable items e.g. filters, light globes, ultrasonic nebulizers. The warranty does not extend to labour and freight costs where the warranted product is located outside Australia.

To make a warranty claim, contact Thermoline on 02 9604 3911 or service@thermoline.com.au.

We are proudly Australian owned

We will continue to invest in Australian manufacturing.