Ovens

User Manual & Setup Guide

TD & TD-FM RANGE

Omron E5CC-T

ABN: 80 000 859 129
Head Office: 10-12 Ross Place
Wetherill Park NSW 2164 Australia

Phone: +61 2 9604 3911
Email: hello@thermoline.com.au
Web: www.thermoline.com.au

TABLE OF 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.

Warning; 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 an 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 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.

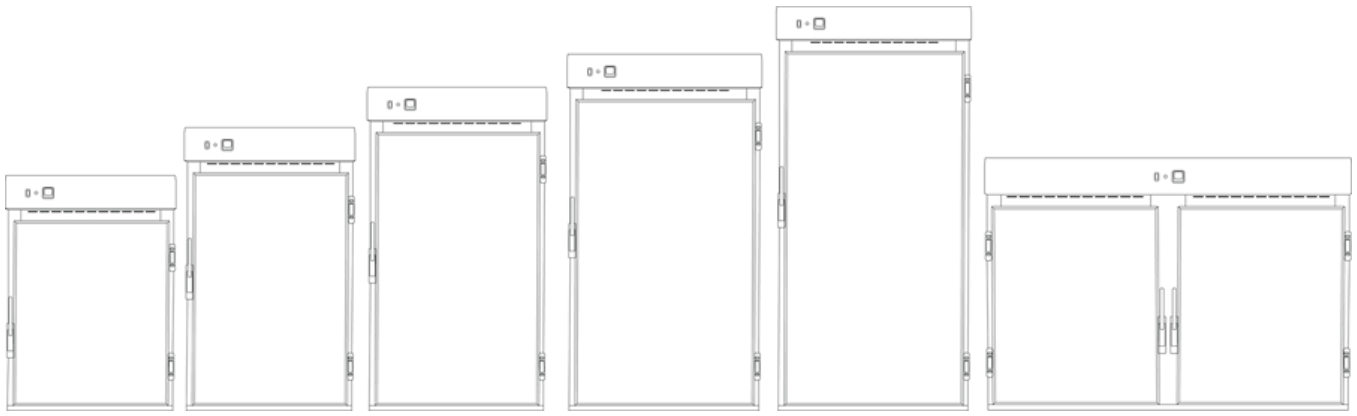
The Thermoline drying ovens 80F, 150F, 250F, 500F, 630F and 700F models are designed and manufactured to remove large quantities of moisture from products and samples. Designed to operate between ambient +10°C and 200°C, the Thermoline drying oven offers an industry-standard in moisture removal. Thermoline also offers specific macadamia models with a reduced maximum temperature and extra shelves.

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

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

- Operating Temperature of Ambient +10°C to 70°C for macadamia models

Product Specifications



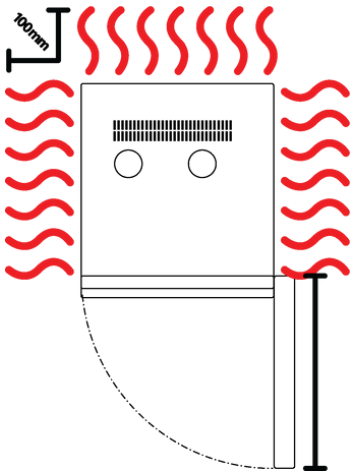
Dimensions

External WxDxH (mm)	TD-80F	TD-150F	TD-250F	TD-500F	TD-700F	TD-630F
	520x560x800	630x660x1010	630x660x1360	780x810x1680	780x810x1980	1450x860x1100

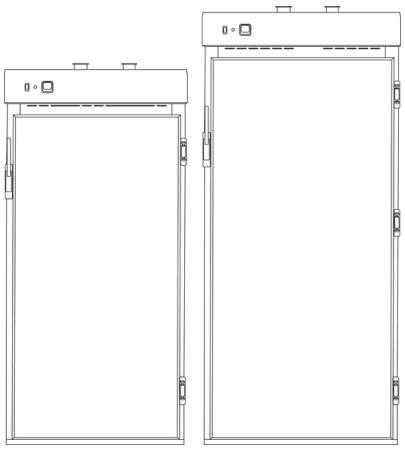
Note: Inlet and Exhaust ports extend the overall height of the ovens by approximately 40mm.

Internal WxDxH (mm)						
	390x400x400	500x510x600	500x510x950	650x650x1200	650x650x1500	1300x690x650

Clearance	TD-80F	TD-150F	TD-250F	TD-500F	TD-700F	TD-630F
Front (mm)	520	630		780		725
Back (mm)	100					
Sides (mm)	100					



Technical Specifications



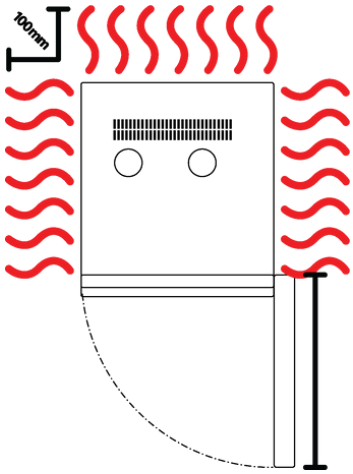
Dimensions

External WxDxH (mm)	TD-500FM	TD-700FM
	780x810x1680	780x810x1980

Note: Inlet and Exhaust ports extend the overall height of the ovens by approximately 40mm.

Internal WxDxH (mm)		
	650x650x1200	650x650x1500

Clearance	TD-500FM	TD-700FM
Front (mm)	780	
Back (mm)	100	
Sides (mm)	100	



Technical Specifications

Technical Specification	TD-80F	TD-150F	TD-250F	TD-500F	TD-700F	TD-630F
Temperature Range	Ambient +10°C to 200°C					
Temperature Control Stability	+/- 0.1°C					
Temperature Uniformity	+/-2°C @ 100°C			+/-4°C @ 100°C		
Heater Power	1500 watts			3000 watts		
Electrical	7A/230V			13A/230V (requires 15A supply)		
Nominal Capacity	80L	150L	250L	500L	700L	630L
Porthole Diameter	13mm					
Weight	60kg	100kg	110kg	170kg	190kg	190kg

Technical Specification	TD-500FM	TD-700FM
Temperature Range	Ambient +10°C to 70°C	
Temperature Control Stability	+/- 0.1°C	
Temperature Uniformity	+/-2°C @ 70°C (unloaded and vents closed)	
Heater Power	1500W	
Electrical Requirement	10A/230V	
Nominal Capacity	500L	700L
Porthole Diameter	13mm	
Weight	170kg	190kg

Technical Specifications

Features	TD-80F	TD-150F	TD-250F	TD-500F	TD-700F	TD-630F
Shelves (max @100mm spacing)	2 (max 3)	3 (max 4)	4 (max 6)	5 (max 9)	6 (max 11)	3 levels (max 4)
Lockable Castors	Optional	✔	✔	✔	✔	✔
Internal Fan	✔	✔	✔	✔	✔	✔
Omron E5CC-T	✔	✔	✔	✔	✔	✔
Solid Door	✔	✔	✔	✔	✔	✔
Fibreglass Insulation	✔	✔	✔	✔	✔	✔
Safety						
Over Temperature Safety	✔	✔	✔	✔	✔	✔
Over Current Protection	✔	✔	✔	✔	✔	✔
Options						
BMS Plug	No volt contact closure plug and socket connection to a Building Management System					
Additional Shelves	Additional Stainless Steel shelves to suit					
Heavy Duty Shelves	Update to allow for higher loads on shelves (limits total number of shelves possible for use)					
Door Locks	Key lockable door locks					
Customisable Port Hole	Add additional stainless steel 13mm port holes or choose 50mm port holes					
Glassware Drying	See TGD-range for oven models specific to drying of laboratory glassware					
Natural Convection	See TO-range for oven models without fan forced circulation					

Technical Specifications

Features	TD-500FM	TD-700FM
Shelves	10	12
Lockable Castors	✔	✔
Internal Fan	✔	✔
Omron E5CC-T	✔	✔
Solid Door	✔	✔
Fibreglass Insulation	✔	✔
Safety		
Over Temperature Safety	✔	✔
Over Current Protection	✔	✔
Options		
BMS Plug	No volt contact closure plug and socket connection to a Building Management System	
Door Locks	Key lockable door locks	
Customisable Port Hole	Add additional stainless steel 13mm port holes or choose 50mm port holes	

The controller is preset with the following program using the Ormon E5CC-T

48 hrs. at 38˚C
48 hrs. at 45˚C
48 hrs. at 52˚C

"As per the Recommended Standards for Sampling Nut-In-Shell and Kernel Recovery Evaluation"

Operating Environment

Drying Oven Operating Environment

Ensure that the drying 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.

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. **Extreme Operating Environment:**

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

Optimal Environment: (Fig 2)

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

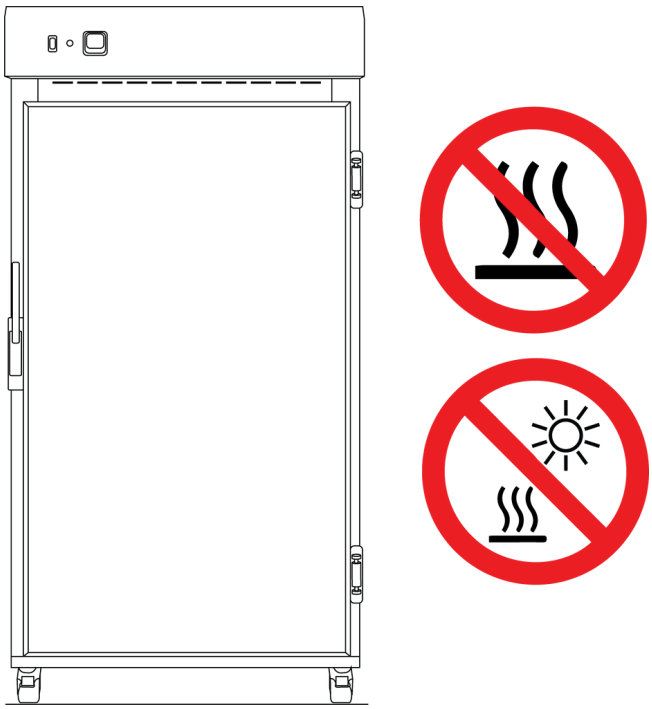


Fig 1. Suitable Environment

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.

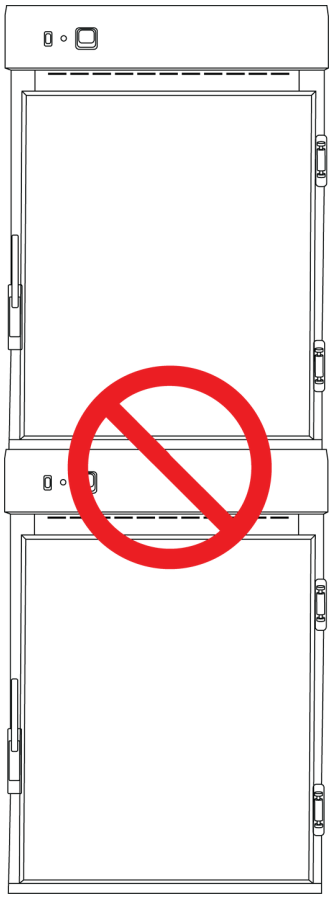


Fig 2.

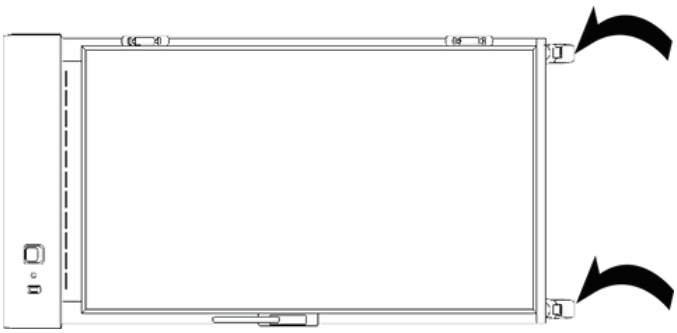


Fig 3.

Electrical Connections

Depending on the model the drying ovens either require a require a 15amp, 230V, 50hz power supply or a 10amp 230V 50hz power supply. Requirements are shown in the below table.

A dedicated outlet should be used for all ovens. Do not use power boards or the like. A 3-pin moulded plug is supplied as standard.

	Electrical requirements
TD-80F TD-150F TD-500FM TD-700FM	*10A/230V*
TD-500F TD-630F TD-700F	*15A/230V*

Electrical Conditions:

- All drying 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).**

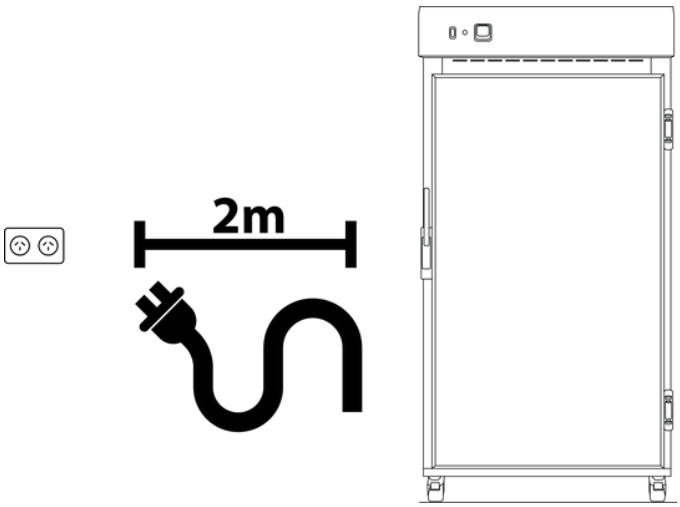


Fig 1. Suitable distance from power supply (2m)

Fig 2. 15amp IEC socket

Fig 3. 10amp IEC socket

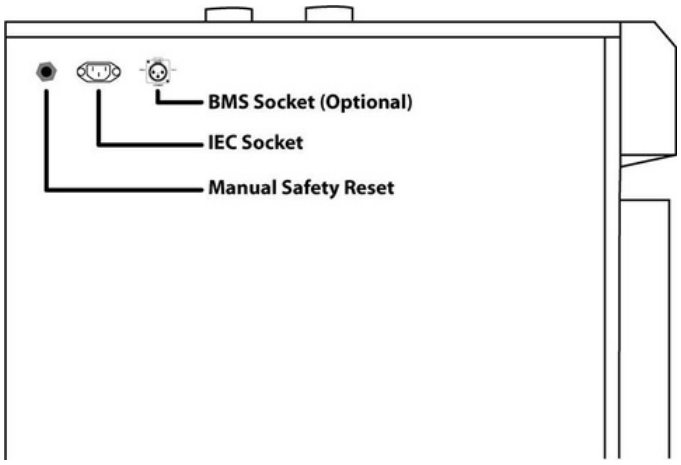


Fig 4. Location of of the IEC socket.

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.

Drying ovens are not suitable for use with flammable solvents! They are fitted with components that may be the source of ignition.

The drying ovens are designed for large capacity drying, and hot moist air will be discharged.

Setup

Unpacking

Unpacking process for foam wrapped or boxed

- The drying 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 drying 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 without delay on +61 2 9604 3911 or email at service@thermoline.com.au.

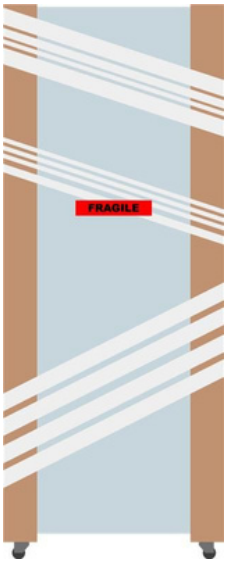


Fig 1. Unpacking Process (foam wrapped)

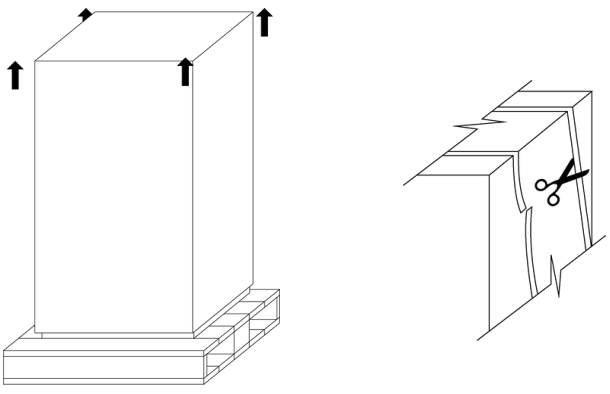


Fig 2. Unpacking Process (Box)

Moving

Moving the drying oven:

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

NOTE: Drying ovens are 'Top Heavy'. Do not move the cabinet too quickly. **(Fig 3 & 4)**

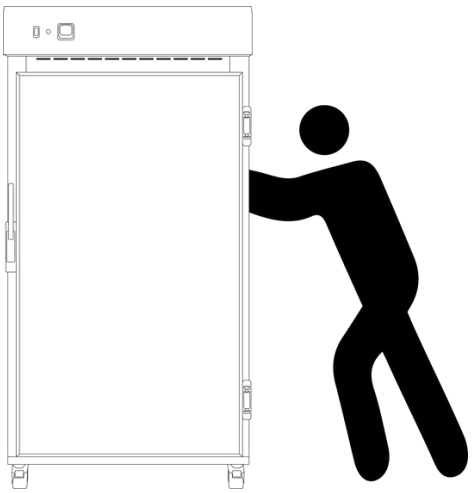


Fig 3. Safe moving of cabinet.

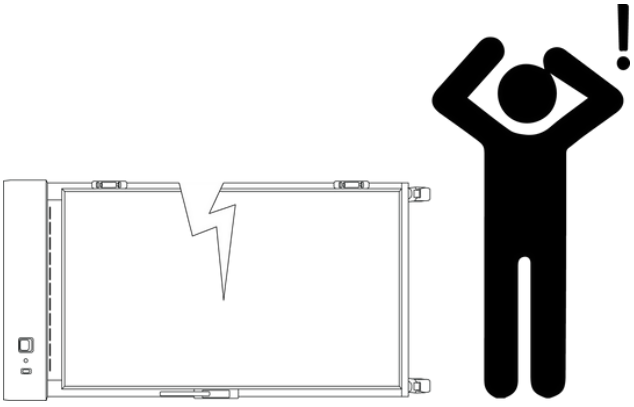


Fig 4.

Castors

The drying ovens are equipped with lockable castors to prevent cabinet movement.

Castor Setup:

- Ensure that the drying 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 drying 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.

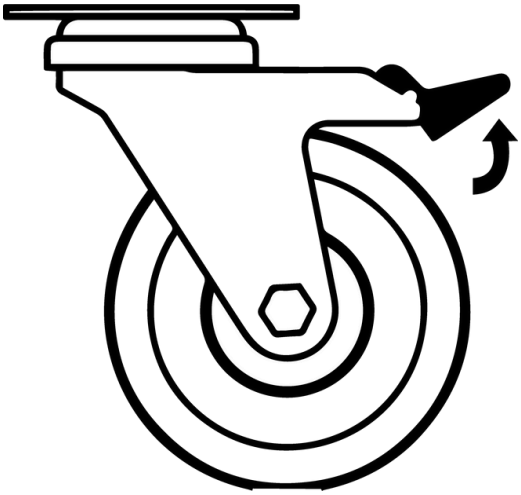


Fig 2. Castor Unlocked

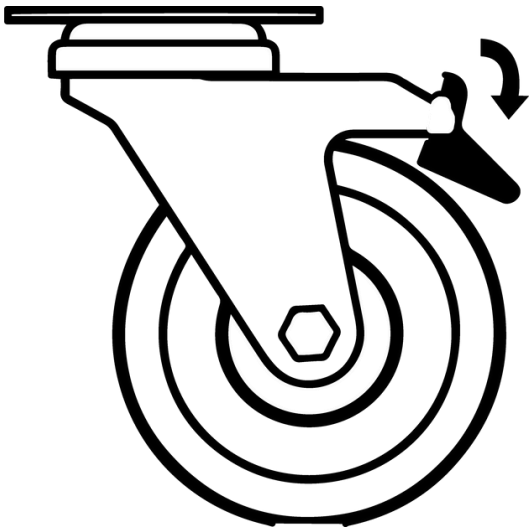


Fig 3. Castor Locked

Drying Oven Location

Location Requirements:

- The drying oven requires a level surface to operate correctly. **(Fig 1)**
- Do not store items on top of the drying oven **(Fig 2)**. Space is required to accommodate the inlet and outlet vents.
- The drying 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 drying oven door should also be allowed to open and close at full range. **(Fig 4)**

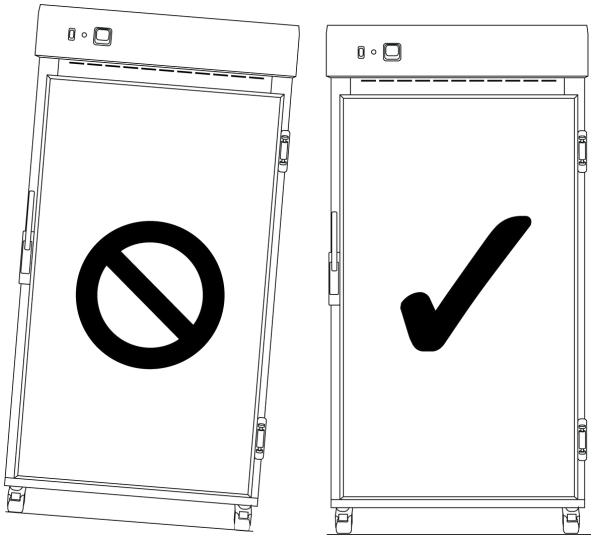


Fig 1. Correct Levelling

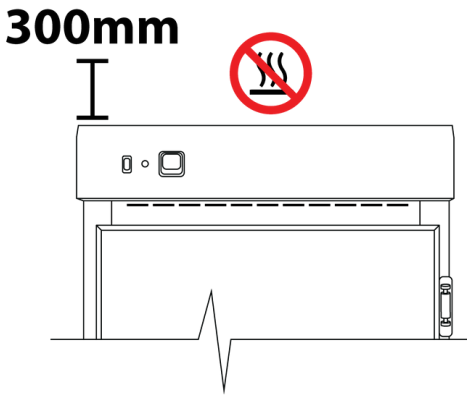


Fig 2.

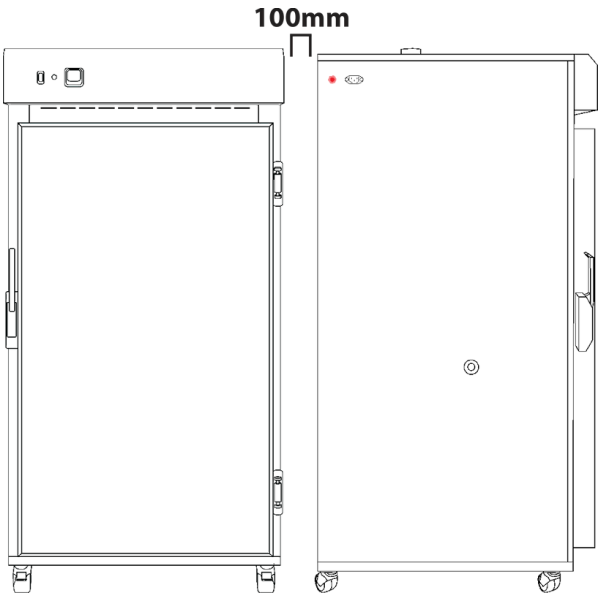


Fig 3.

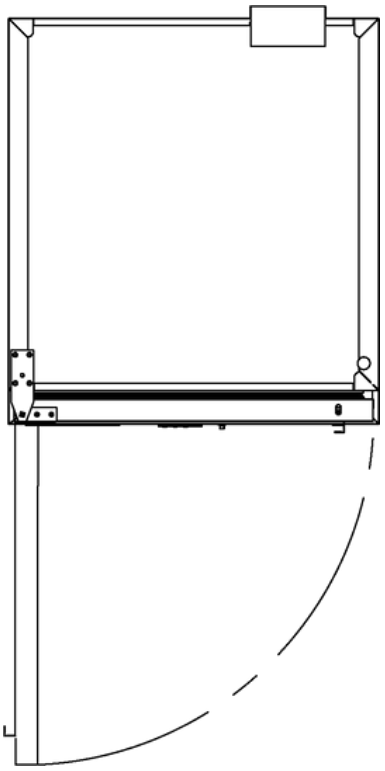


Fig 4.

Setup

Shelves

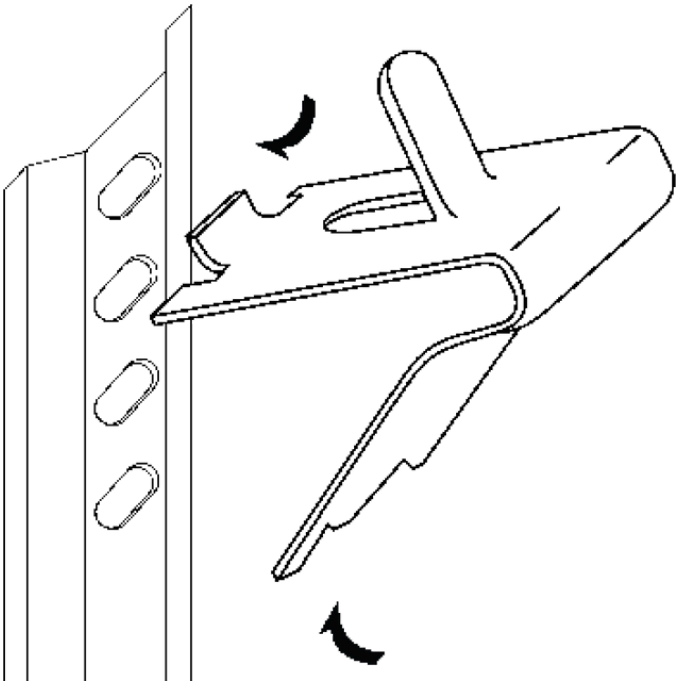
All ovens comes equipped with shelves used for holding items while the oven is in operation. They allow for more than one item to be conditioned at a time. The shelves can be adjusted to different heights to accommodate different size items.

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-80F	304
TD-150F	455
TD/-250F	455
TD-500F TD-500FM	915
TD-700F TD-700FM	1219
TD-630F	455

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 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.

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 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 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 drop, please ensure that the pipe is no smaller than 75mm in diameter for proper ventilation **(Fig 4)**.

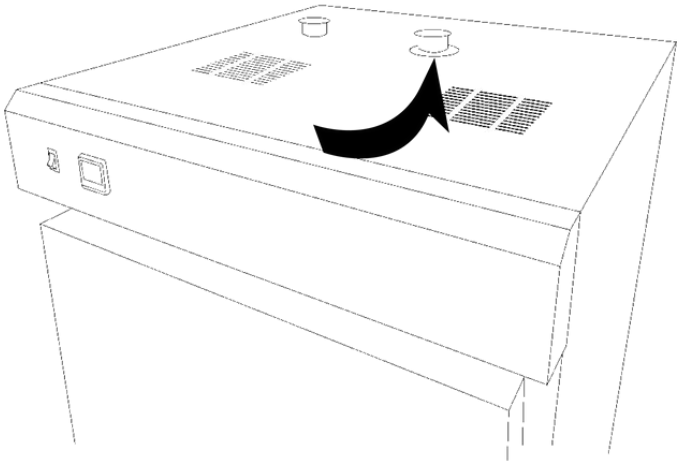


Fig 1.

Fig 2.

Fig 3.

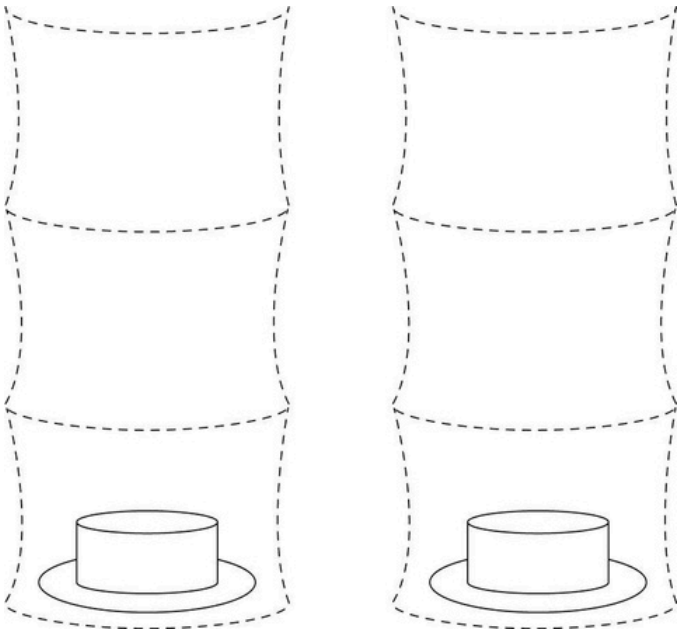
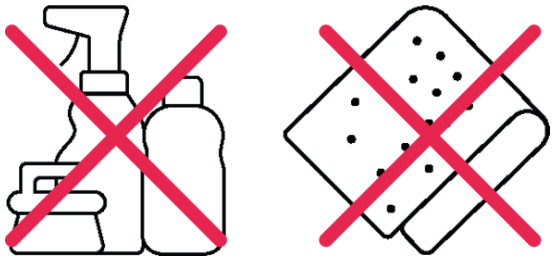


Fig 4. Recommended minimum diameter 75mm

Cleaning

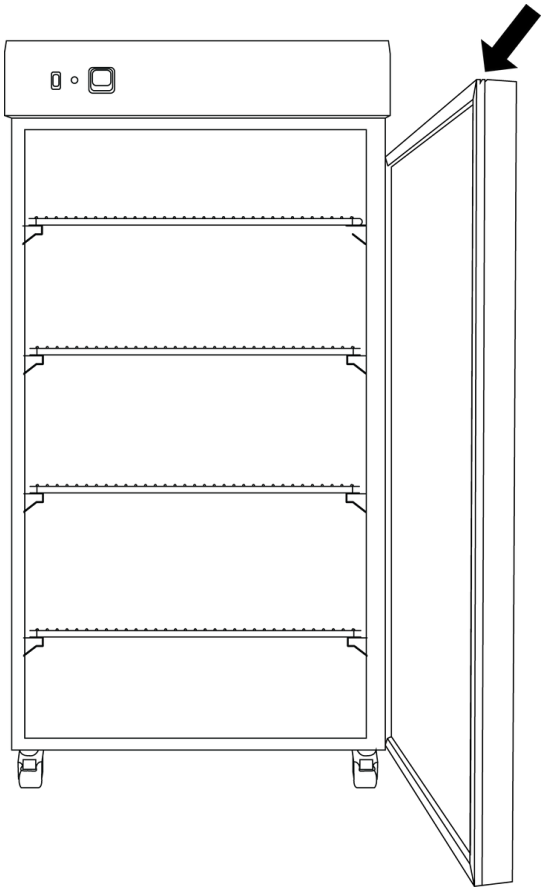
The interior, exterior, and door gasket can be cleaned as often as required using a soft cloth and soapy water. Never use abrasive cleaners or scouring pads as these will scratch the surface and may result in corrosion. Never use caustic type cleaning agents.

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



Door Gasket

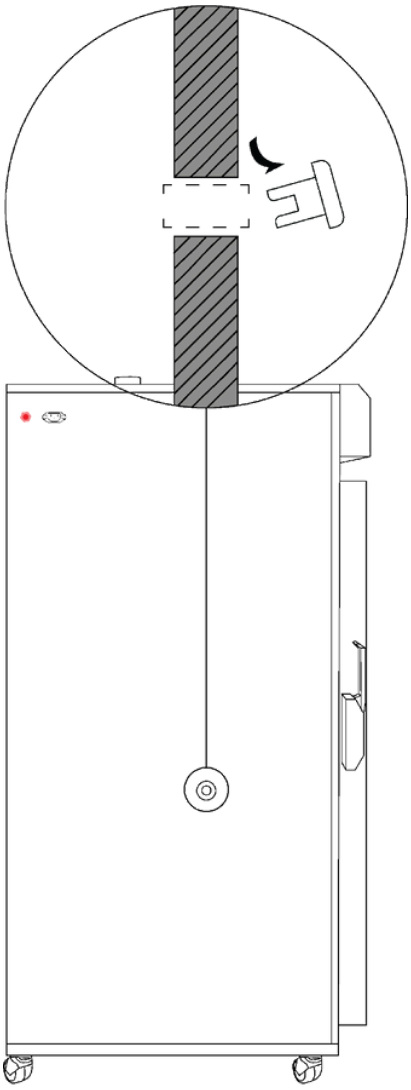
The door gasket should be cleaned regularly with a mild soap solution. If a gasket is to be replaced, please contact Thermoline. Regular inspection is recommended.



Setup

Port Hole

The port hole can be found on the left side of the drying oven. The cabinet comes equipped with a plug that may be removed by simply pulling it out. Keep the plug safe in case the port hole needs to be closed again.



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 or on top of the exhaust as this will effect proper ventilation.

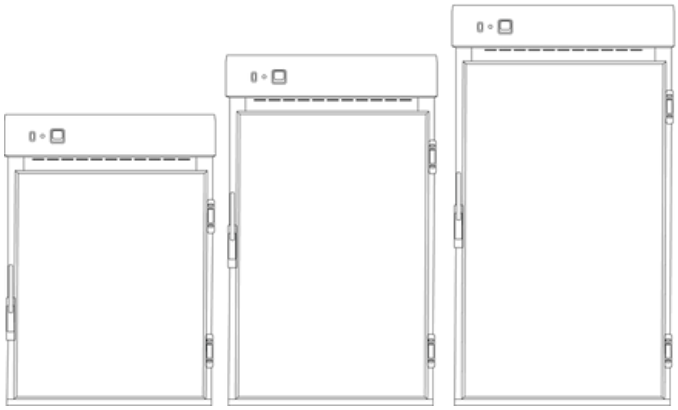
Caution must be taken when removing the packaging particularly when using knives to cut tape and cardboard.

Start Up Procedure

Start Up Procedure

Start Up process:

- 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 side 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 go through a warm up period where all segments of the display will be on, before indicating the set temperature (SV) on the lower display and oven actual temperature (PV) on the top display.
- Please see TM-009-UM Omron MSP manual for programming instructions on this controller.
  There is a link and QR code to this manual.



Loading

Drying ovens require constant airflow 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.

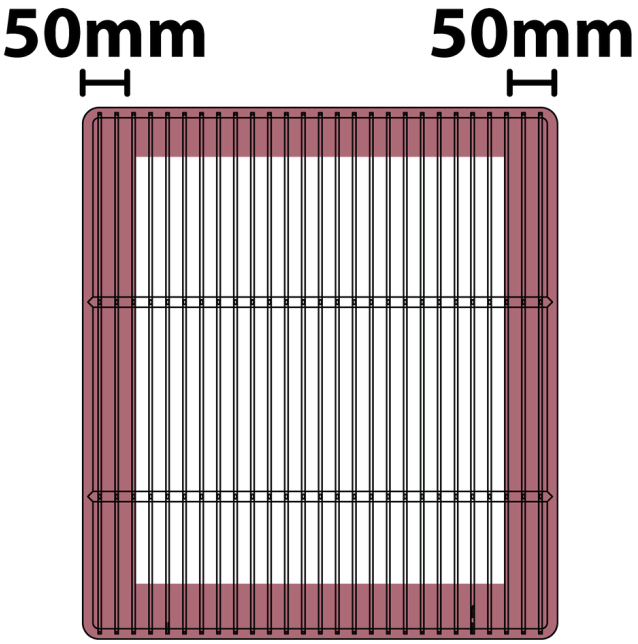


Fig 1.

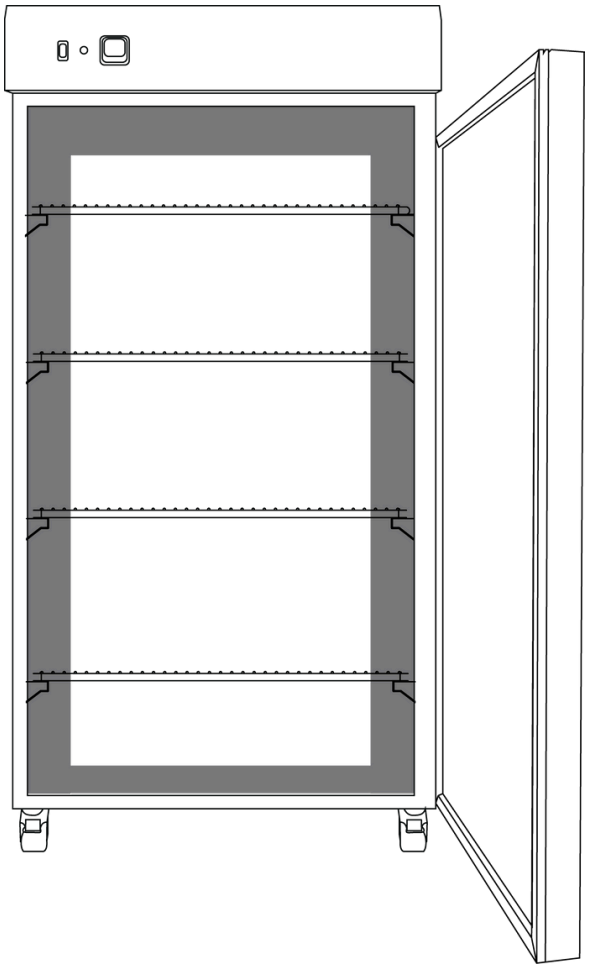


Fig 2.

Omron Display Guide

The controller is an Omron E5CC-T microprocessor based device with digital indication of set temperature and operating temperature as well as multi step programming as standard.

Note: Limited access to the controller is available. The operator has access to alter the temperature set point, programming 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 Symbol

The Omron E5CC-T controller comes with an array of functions depending on the equipment it has been installed in. 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	Alarm BMS
SUB2	Auxiliary Output 2	Hi Alarm
SUB3	Auxiliary Output 3	Low Alarm
OUT1	Control Output 1	Heat output
OUT2	Control Output 2	Cooling output
CMW	Communications Write	Always on
RST	Reset	Program Off
FSP	Fixed Set Point	Program Off
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

Omron Programming Guide

Please use the below link or QR code to access the programming guide.

OMRON-MSP

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 incubator 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 incubator 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. Press **PAGE** to exit back to the main screen.

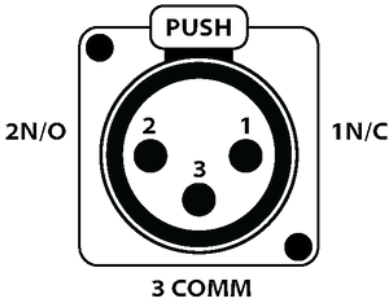
BMS Output

The drying 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.

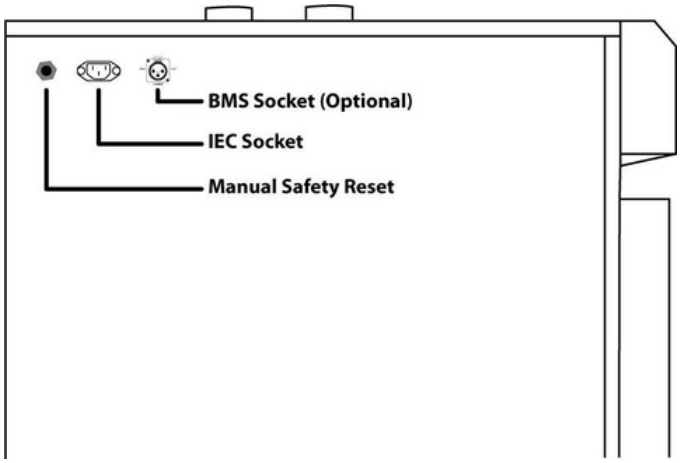
The alarm contacts have no voltage present but we recommend that the wiring is connected by a suitably qualified technician.

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.

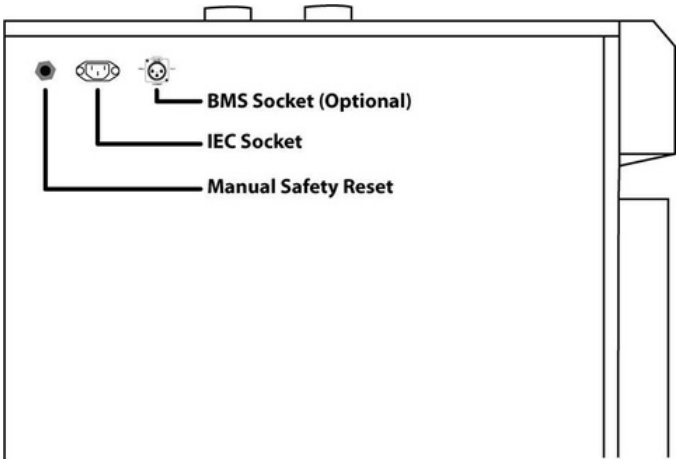


Fig 1.

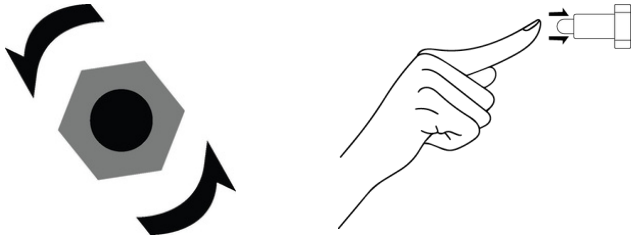


Fig 2.

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 Ovens 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 ow in the oven	**Fan Failure** Limited airflow 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 2. simultaneously until 'oAPt' appears on the screen. 3. Press 'SCROLL' button until you see the parameter 4. 'PMSK' on the screen. Press the 'DOWN' button to 5. turn off. Press the 'PAGE' button and the 'SCROLL' 6. button simultaneously to take you back to the main 7. menu. Press 'SCROLL' until you see 'R-S' on the 8. screen. Press the 'DOWN' button to turn 'STOP' to 9. 'RUN' Press the 'PAGE' and the 'SCROLL' button simultaneously until 'oAPt' appears on the screen Press 'SCROLL' until you see the parameter 'PMSK' on the screen 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 rmly (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.	
		

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

Model:
Serial No:
Watts/Amps:
Volts:

Phone: +61 2 9604 3911
Email: hello@thermoline.com.au

2 Years Warranty

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.