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PTY LTD**

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Fluid Warming Cabinet

Single Models:

F105BT; F420FS; F420C; F210FS; F210C; F210WB; F210S; F260FS; F260C; F260WB; F260S

Combination Models

**FF105FS; FB105FS; FS105FS; FF210FS; FB210FS; FS210FS; FF210C; FB210C; FS210C
FF260FS; FB260FS; FS260FS; FF260C; FB260C; FS260C**



Operation, Maintenance and Installation Manual

**Note: Due to Malmet's Policy of continuous product improvement;
design and technical specifications are subject to change without notice.**

Serial Number:	Supplied to:
Date Installed:	Installed by:



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Foreword

To obtain maximum life and efficiency from your Malmet Warming Cabinet and to ensure safe operation, please read this manual thoroughly and follow all instructions before operating the machine.

This manual provides information on the operation of the machine. It is recommended that all persons operating the equipment have access to this manual for training purposes.

This device is not intended for use by any person without the proper training, experience or knowledge.

The specifications supplied in this manual were in effect at the time of publication. However, owing to Malmet (Australia)'s policy of continuous improvement, changes to these specifications may be made at any time without notice on the part of Malmet (Australia) Pty Ltd.

Quality Policy

Malmet 's quality management system is certified to ISO 9001:2015 and ISO 13485:2016 and guarantees the quality of this product.

Certifications

ARTG Registration Number: 188762 Class 1

Electrical Safety: Certificate of Suitability ASA 12050102 to AS/NZS 60335.1

EMC compliant: IEC 60601-1-2 Emission

Important Warranty Reminder

Should you have any problems with your device, contact the company from whom you purchased it, or Malmet (Australia) Pty Ltd.

It is important that the name from whom you purchased your device and the name of the installer are recorded on the front page of this manual. The installer is responsible for the correct installation, start up and demonstrating the operation of this device. They are also responsible for issuing relevant certificates of compliance (these may differ from state to state).

Malmet Head Office and Factory Contact Details

Malmet (Australia) Pty Ltd

9-11 McKay Avenue
PO Box 373
LEETON NSW 2705

Telephone: +61 2 6953 7677

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Safety Instructions - Warnings

Please read and understand this manual before using this device, if this device is used in a manner not specified by the manufacturer protection by the device may be impaired.

Please refer to this manual for information wherever this warning symbol is displayed -



Be aware of 240 Voltage.



Disconnect power when servicing.



Mains power GPO must be in an accessible position so device can be isolated from mains power during service.



If the supply cord is damaged it must be replaced by a special cord or assembly from the manufacturer or its service agent.



Do not overload shelves.



Do not obstruct hot air outlet above top shelf.



Castors are provided for convenience but not as a means to be wheeled across thresholds or similar obstacles. Castors enable the device to be moved easily aside for cleaning the floor or making space.



Wall mounted units must be mounted to load bearing walls.



All cabinets should be located on a level floor surface and should never be operated on a sloping surface.



Install temperature probes and element over temperature protection thermal cut-outs correctly.



Design Parameters

Single Fluid Warming Cabinet 105 Lt Model F105BT is designed to hold 24 litres of fluid in 1 and 2 litre bottles and bags in each fluid warming section of the cabinet. 105 litre models have 3 shelves with 2 being adjustable; 8 litres per shelf maximum load.

Single Fluid Warming Cabinet 210 Lt Models F210FS, F210C, F210WB, F210S are designed to hold 52 litres of fluid in 1 and 2 litre bottles and bags. 210 litre models have 4 shelves with 3 being adjustable; 13 litres per shelf maximum load.

Single Fluid Warming Cabinet 260 Lt Models F260FS, F260C, F260WB, F260S are designed to hold 60 litres of fluid in 1 and 2 litre bottles and bags. 260 litre models have 4 shelves with 3 being adjustable; 15 litres per shelf maximum load.

Single Fluid Warming Cabinet 420 Lt Models F420FS, F420C are designed to hold 91 litres of fluid in 1 and 2 litre bottles and bags. 420 litre models have 7 shelves with 6 being adjustable; 13 litres per shelf maximum load.



Do not overload shelves. Heated air must be allowed to circulate around the fluid containers.

The temperature can be adjusted up to a maximum of 37°C and **has a lock out feature, which allows only authorised staff to change the temperature.**

A fluid temperature sensor plate is located in the cabinet, which enables actual fluid temperature to be monitored.

All Malmét Fluid Warming Cabinets are designed to be left on permanently.

Electrical Rating 240V 50Hz 2.8 Amps supplied with IEC power cord standard 10 Amp plug.

Wall Mounted Place into position and bolt to the wall using the bracket supplied and then plug the unit into a standard 240V outlet.



This appliance is not intended for use by young children or infirmed persons.

Section A – Unit Operation

NOTE

The Fluid Warming Cabinet is factory set to 37°C.
We recommend you check with your fluid supplier for the correct temperature.

Before Starting the Device

The device should be run initially on a power supply not protected by an earth leakage circuit breaker for approximately three hours. This will allow any moisture in the heater to dry out. The device can then be connected to an earth leakage circuit breaker protected circuit if required.

Plug into standard 240V outlet.

Starting the Device

Press the standby button, the pre-set temperature of the cabinet appears for approximately five seconds. After five seconds the device switches to display the actual cabinet temperature.



Changing the set temperature (lock out feature) AUTHORISED PERSONNEL ONLY

Authorised operators can change the temperature by holding the up and down temperature buttons at the same time for a total of 5 seconds. The temperature can then be adjusted. The setting will revert back to tamper proof 5 seconds after the temperature is adjusted or if the up and down temperature buttons are not pressed within 5 seconds.

Temperature Sensor Plate

When new product is introduced into the cabinet the temperature of the fluid can be monitored using the temperature sensor plate.

1. Place fluid container on the Fluid Sensor Plate located on the bottom shelf ensuring the sensor disc is completely covered.
2. Wait two minutes for an accurate temperature reading to be obtained.
3. To view actual fluid temperature, via the main display board, press and hold down either of the up or down temperature buttons.

Note 1: It can take an average of eight hours for a full load of fluid containers to reach required temperature. This time may vary depending on the configuration of the load. It is recommended that the cabinet is re-stocked at the end of each day.

Note 2: Rotation of stock is important, as once warmed, solution should be used within 14 days.

Temperature Cut Out

The device has a built in electronic over temperature cut out which will switch off the elements if the selected temperature is exceeded by 5°C, and 'Ot' will flash on the display panel. (See Fig 1)

If the electronic cut out fails, a secondary safety bi-metallic cut out temperature switch will switch off the power to the elements.

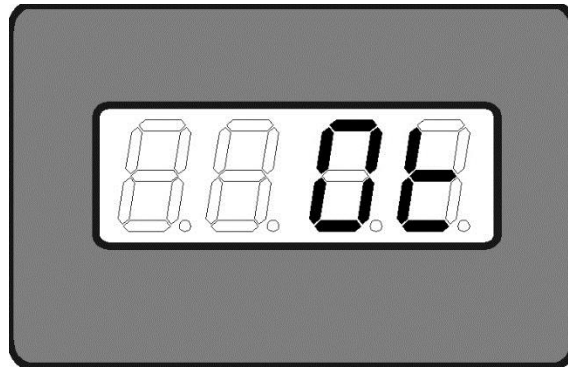


Fig 1



Section B – Device Maintenance

Preventative Maintenance

- Daily Wipe out inside doors and chamber with warm water and detergent.
- Weekly Wipe over outside panels with stainless steel cleaner.
- Annually To be performed by Malmel Technician or other authorised personnel.
1. Check electrical connections as per AS/NZS 3551:2012
 2. Perform temperature calibration
 - Insert calibrated thermometer
 - Allow cabinet temperature to stabilise
 - Compare cabinet display temperature to thermometer value & ensure discrepancy is within +/- 2 °C.

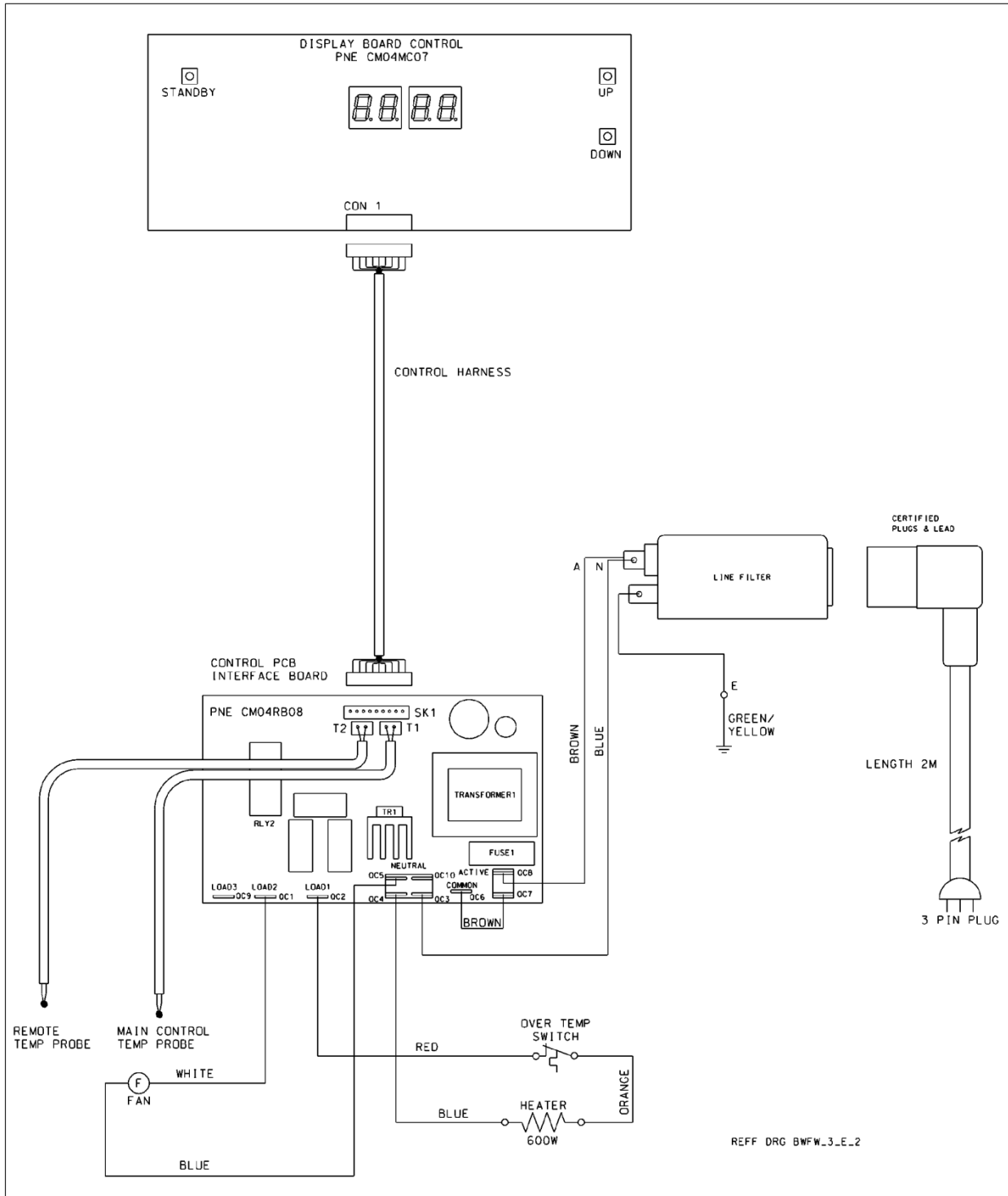
Devices should have regular Test and Tag procedures undertaken.

Trouble Shooting Guide

Problem	Probable Cause	Suggested Remedy
Display not on or won't turn on.	No Mains power supply. Power point not turned on. Display will not turn on. Faulty display board. Interconnecting harness failure. Relay board fault.	Check power supply and lead plugged in. Check power switched on. Press Standby button. Switch off power supply at main and Call for Service.
Display turns on. (Runs for approximately ½ - 1 hour then turns off).	Fan failure.	Switch off power supply at main and Call for Service.
Display is on but unit not heating.	Element failure. Relay board failure.	Switch off power supply at main and Call for Service.
Display indicates Ot	Fan Failure. Element on. Continuously unable to switch off. (Relay Board Failure)	Switch off power supply at main and Call for Service.
Display indicates O/C	Control Temperature Thermistor is broken or unplugged.	Switch off power supply at main and Call for Service.
Display on but unit cooling down.	Element failure. Relay board failure.	Switch off power supply at main and Call for Service.



Wiring Diagram





Section C – Device Installation

Floor Bench Skirt

Floor Bench Skirt is factory fitted to the cabinet. To level, remove the four plastic plugs from the inside floor and adjust the feet by turning the slotted screw head. Once the device is level, replace the plugs.

If the Floor-Bench Skirt is ordered separately to convert a warming cabinet, the conversion will take approximately fifteen minutes and requires a screwdriver only. Carefully, place the warming cabinet on its back. The base is pre-drilled with ten nutsert holes. Using the screws supplied, fasten the Floor-Bench Skirt. Carefully, stand the warming cabinet upright and level as above.

The front panel of the Floor-Bench Skirt is removable to clean under the warming cabinet.

Combination Cabinets

To level, remove the four plastic plugs from the inside floor and adjust the feet by turning the slotted screw head. Once the warming cabinet is level, replace the plugs.

The front panel of the floor skirt is removable to clean under the warming cabinet.

Cabinet Stand

Cabinet Stand is factory fitted to the warming cabinet. To level, remove the front panel of the stand and adjust the feet by turning the slotted screw-head. This panel can also be removed to clean under the warming cabinet.

If the stand is ordered separately to convert a warming cabinet, the conversion will take approximately fifteen minutes and requires a screwdriver only. Carefully, place the warming cabinet on its back. The base is pre-drilled with ten nutsert holes. Using the screws supplied, fasten the stand. Carefully, place the warming cabinet upright and level as above.

Combination Conversion Kit

This comprises a Floor-Bench Skirt and a Rear Joining Bracket. Conversion will take approximately fifteen minutes and requires a screwdriver only. Carefully, place the bottom warming cabinet on its back. The base is pre-drilled with ten nutsert holes. Using the screws supplied, fasten the Floor-Bench Skirt. Carefully, stand the warming cabinet upright.

Remove the 7 plugs (3 small and 4 large) on the top of the bottom warming cabinet, place the top warming cabinet in position locating the bottom hinge bolts in the four large holes. Remove the two screws in the warming cabinet that secure the slide out service tray and slide out as far as it will go. There are three securing holes located inside the top of the service compartment. Using the screws supplied, fasten the warming cabinets together and replace the service tray.

The back of both warming cabinets are pre-drilled with four nutsert holes, using the screws supplied, fix the Rear Joining Bracket into position. Place the warming cabinet in position and level.



Plugs must be replaced after levelling or the temperature control of the warming cabinet may be compromised.



Wall Mounted Cabinet

Wall Mounting Brackets are supplied for single 210 litre and 260 litre models. Secure the bracket to the wall, ensuring it is level. It is recommended to use 4 (8mm x 50mm) long coach screws for stud position walls and dyna bolts for solid walls.

Two people are required to lift the cabinet to the height of the Mounting Bracket, move the top of the warming cabinet to the wall at approximately 45° and locate on the Wall Mounting Bracket. When secure swing the bottom of the warming cabinet to the wall ensuring it is firmly pushed onto the wall bracket. To remove, reverse this procedure.



CAUTION: WALL MOUNTED BLANKET CABINET WHEN FULLY LOADED WEIGHS APPROXIMATELY 143 KG.
UNLOADED WEIGHT APPROXIMATLY 83 KG

Warming Cabinets with Castors






All warming cabinets should be located on a level floor surface and should never be operated on a sloping surface.

Check that all swivel wheels are in lock position.

Should the warming cabinet require to be moved, disconnect power plug from the GPO.



Device Specifications

Capacity – Single (Litres of fluids)	105 Litre models	24 Litres maximum load
	210 Litre models	52 Litres maximum load
	260 Litre models	60 Litres maximum load
	420 Litre models	91 Litres maximum load
Shelves – Single	105 Litre models (3 shelves with 2 adjustable)	Maximum load: 8 litres per shelf
	210 Litre models (4 shelves with 3 adjustable)	Maximum load: 13 litres per shelf
	260 Litre models (4 shelves with 3 adjustable)	Maximum load: 15 litres per shelf
	420 Litre models (7 shelves with 6 adjustable)	Maximum load: 13 litres per shelf
Electrical Rating	Volts	240V
	Phase / Hz	1 ph / 50 Hz
	Amps	2.8 Amps
	Watts	0.6 kW
Environment operating conditions	Temperature Relative Humidity	+10°C to +25°C +30% to +70%
Electrical Connection	IEC right angle Power Cord with 3 Pin Plug	10 Amp (into standard GPO 240 Volt)
Hot Air Fan	Continuous operation	Ball bearings 230V 50 Hz
Elements	Circular Unfinned	Incoloy 840 sheathed 10mm diameter tubular
	Rated	240V 600 watt
Control PCB	Microprocessor Control Relay	PCB (SKCM325) Access via compatible RS232
	Overtemp Protection	Electronic cutout @ 5°C above set point
Temperature Control	Incremental 1°C – 50°C	Factory set at 37°C
Secondary Overtemp Protection	High Limit	Auto reset Bi-Metallic Disc 60°C
Materials	Doors	Bi-parting, double glazed with powder coated frames
	Cabinet	304/4 and 430D stainless steel
Environment conditions Transport and Storage	 Fragile  Keep away from rain  Do not stack	



If the supply cord is damaged it must be replaced by a special cord or assembly from the manufacturer or its service agent.



Warranty Statement

This warranty is provided, and operates in addition to, the statutory warranties Malmet (Australia) Pty Ltd ("Malmet") provides to any consumer under the Australian Consumer Law (if applicable) or by virtue of any other applicable legislation.

Subject to the following conditions, we provide, from the date of purchase, the following warranty on Malmet devices and spare parts for products manufactured by Malmet and sold in Australia:

- a. Functional components found within the device to be defective in workmanship or material will be repaired or replaced free of charge subject to the periods of warranty specified in the table below.
- b. A decision regarding whether the defective components will be repaired or replaced will be determined at the sole discretion of Malmet or its authorised agents or representatives.
- c. The structural warranty covers any structural components within the device, which fail to perform their intended function due to faulty manufacture or deterioration within the warranty period.
- d. Parts replaced in devices under warranty are warranted for the balance of the original warranty period for that device.

Malmet Devices	
Device Components	Parts & Labour
Structural Guarantee	2 Years from Date of Purchase
All other components	2 Years from Date of Purchase

Malmet Spare Parts
1 Year from Date of Purchase

The installer is responsible for the correct installation, start up and demonstrating the operation of the product. They are also responsible for issuing the relevant certificates of compliance (these may differ from state to state).

CONDITIONS AND EXCLUSIONS

- Device must be installed and commissioned according to Malmet’s instructions (outlined in Malmet Operation, Maintenance and Installation Manual) and operated to the purpose it was designed.
- Device must be serviced as instructed in the Operation, Maintenance and Installation Manuals.
- To the extent permitted by law, this warranty shall not cover damage, malfunction or failure resulting from accident, misuse or misapplication, improper or unauthorised repair, neglect or modification or use of unauthorised replacement parts or accessories, inclusive of detergent, or improper voltage. The warranty may be void if the serial number is removed or altered.
- Parts damaged in transit back to Malmet Leeton due to poor packaging could result in warranty claim being rejected in part or in full.
- Any part tampered with or which has been altered by unauthorised repairs and/or modifications will be rejected under a warranty claim to the extent permitted by law (to the extent the Australian Consumer Law applies, Malmet will assess the extent to which the tampering or unauthorised repairs contributed to the failure).
- Reasonable access must be allowed for maintenance. If any additional equipment is needed to provide access to the device, this must be provided (and paid for) by the owner.
- It is the owner's responsibility to provide safe access to the device. Malmet, or any of its authorised service agents, may refuse to perform maintenance or warranty work if access is unsafe, as determined by Malmet or any of its authorised service agents acting reasonably.
- Should a warranty claim be rejected you will be advised in writing with a full explanation of our reasons.
- Malmet have a Warranty Claim Procedure that is fair to our customers and provides an efficient system of replacement and/or repair of faulty parts. If at any time you believe we are not meeting our commitment to you please contact Malmet Head Office via email: info@malmet.com.au



- To the extent permitted by law, no responsibility will be accepted for outside elements including, but not limited to storms, pest and vermin that may cause damage to the device.
- To the extent permitted by law, no responsibility will be accepted for damage incurred as a result of, or incidental to, electrical surges or brown outs or for any other consequential damages.
- If there is no certificate of compliance for plumbing or electrical, Malmet reserves the right to refuse service on non-compliant installations.
- To the extent permitted by law, claims for damage to contents, carpet, ceilings, foundations or any other consequential loss either direct or indirect resulting from, power spikes, incorrect operation, incorrect installation, faulty product or any other cause, are excluded.
- This warranty, and to the extent permitted by law, any warranties owed by Malmet under the Australian Consumer Law or other applicable legislation, are not transferrable and cannot be sold, assigned or transferred in any other way from the purchaser to any other person.
- To the extent permitted by law, unauthorised use of any parts that were not supplied or approved for use in the applicable device by Malmet will result in this warranty and any warranty claims applicable to that device being void.
- Warranty labour (service work) shall not include devices located outside of city metropolitan areas of Melbourne, Sydney, Adelaide, Perth and Brisbane. Costs outside these areas shall be borne by the owner. The owner shall be notified of this prior to the warranty call out.
- Warranty labour (service work) shall be performed during normal business hours (Monday – Friday 7am – 4pm), excluding public holidays.

To the extent permitted by law, a charge will be made for work done or a service call made where:

- There is no default apparent with the device, as determined by Malmet or its authorised representative or agent acting reasonably.
- The defective operation of the device is due to failure of electricity or water supply.
- Defects are caused by neglect, incorrect application, abuse or by accidental damage of the device.
- An unauthorised person has attempted to repair the device.
- Harsh environmental situations including, but not limited to, water quality that may cause the water tank damage cannot be covered under this warranty.

How to make a claim under this warranty

If you believe there is a defect in a device you have purchased from Malmet, you must notify Malmet in writing of such defect, by sending an email (**Notice of Defect**) to info@malmet.com.au prior to the expiration of the applicable warranty period set out in this warranty.

For the avoidance of doubt, Malmet must receive your Notice of Defect prior to the expiration of the warranty period.

To the extent permitted by law, Malmet will not reimburse you for any expense you incur in claiming or attempting to make a claim for repair or replacement of a component under this warranty.



Please complete details below:

Date Purchased:	Warranty Expiry Date:
Sold To:	For Service Contact:

PROOF OF PURCHASE

Please retain your proof of purchase (receipt, invoice or commissioning certificate is accepted).

E.&O.E.

In the interest of continued product improvement, Malmet reserves the right to alter specifications without notice.

AUSTRALIAN CONSUMER LAW DISCLAIMER (APPLIES ONLY TO THE EXTENT YOU ARE A 'CONSUMER' WITHIN THE MEANING OF THE AUSTRALIAN CONSUMER LAW):

Malmet 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



Manufactured by
Malmet (Australia) Pty Ltd
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www.malmet.com.au