

OWNER'S MANUAL

Cambro Camtherm® Heater for Pellets and Plates

This manual covers instructions for the following models:

CHPEL80 – Cambro Camtherm Pellet Heater

CHPL100 – Cambro Camtherm Plate Heater

Table of Contents

Introduction	1
Section I Product Information	2
Section II Safety Precautions	2
Section III Start Up	3
Section IV Maintenance	3
Section V Troubleshooting Guides	4
Section VI Replacement Parts	4
Section VII Parts Diagram	5
Section VIII Wiring Diagram and Electrical Components	6-7
Section IX Cambro Warranty	8

For Service, call 800-854-7631 x4118.

Please provide the following information:

Model number: _____

Serial number: _____

Introduction

Congratulations on the purchase of your new Cambro Camtherm Heater. This Owner's Manual provides you with a step-by-step guide to assembling, operating and maintaining your Heater.

IMPORTANT SAFETY INFORMATION: Read and follow all instructions and warnings in this manual. Warnings are identified with a signal word: **DANGER**, **WARNING**, or **CAUTION**.

If you have any further questions, please do not hesitate to contact your Cambro Sales Representative, visit our Web site at www.cambro.com or call our Customer Service Department at 800 833 3003.



CAMBRO®

www.cambro.com

Section I - Product Information

These units are designed to heat plates or pellets. All models are equipped with self-leveling mechanisms that are calibrated at the factory. The temperature indicator light will light up once the unit is turned on. The fan motor will begin to circulate the heated air in and around the plates/pellets in a convection process that promotes a quick and even heat absorption by the plates/pellets. Once the air inside the cabinet has reached the desired and preset temperature, the thermostat will continue to maintain this temperature by regulating the power to the heating element. To dispense pellets or plates use the Cambro Plate and Pellet Lifter (MDSPL) to safely lift the pellets and plates from the unit.

The Cambro Pellet Heater accommodates 9" (22,8 cm) diameter pellets.

The Cambro Plate Heater accommodates plates ranging from 9" (22,8 cm) to 10.5" (26,7 cm) diameter.

Model	CHPEL80	CHPL100
	Pellet Heater	Plate Heater
Number of Stacks	2	2
Capacity	80 pellets (40 in each stack)	100 plates (50 in each stack)
Overall Dimensions		
Width	33 3/4" (85,73 cm)	
Depth	25 1/4" (64,14 cm)	
Height	46 1/4" (117,48 cm)	
Product Weight	248 lbs (112,5 Kg)	
Electrical Specifications		
Voltage/Phase	208/240 VAC	
Amperage	15	
Watts	3500	
Hz	50/60	
NEMA Plug Configuration	6-15	
Cord Length	6' (183 cm)	
Factory Set Temperature	270° – 290° F (132° – 143° C)	150° – 170° F (65° – 77° C)
Heat-Up Time	2 hours from cold start (breakfast): 1 1/2 hours for reload and reheat (lunch, dinner)	1 1/2 hours from cold start (breakfast): 1 hours for reload and reheat (lunch, dinner)

Section II – Safety Precautions

Refer to your local code or the National Electrical Code to be sure the unit is connected to the proper power source. A protected circuit of the correct voltage and amperage must be available for connection of the line cord.

Important Safeguards

WARNING: Electric shock hazard. Unit must be grounded. Plug supplied power cord into a properly grounded receptacle that matches the plug. Do not use any adapter. Do not use an extension cord. Make sure receptacle is protected by a dedicated circuit breaker rated at 15 amps or greater.

DANGER: Electric shock hazard. Turn main power switch on unit OFF and unplug unit before servicing or performing any maintenance.

WARNING: Hazardous voltage inside. Do not open back of cabinet. No user-serviceable parts inside. For service please call Cambro at 800-854-7631 x4118.

WARNING: Unit power should be on during plate or pellet dispensing, but power must be turned OFF between meals and after the last meal of the day. Failure to comply can cause unit to overheat and will void warranty.

WARNING: Adjustments and service work should be performed only by a Cambro qualified service technician. For service please call Cambro at 800-854-7631 x4118.

NOTICE: This equipment is intended for commercial foodservice use only. Not for household use.

NOTICE: Do not use any corrosive cleaners. Use only cleaners designed for stainless steel.

DANGER: Keep hands and fingers away from the lid hinges (pinch point) located on either side between the lids. Lift and close using the lid handles only.

Section III - Start Up

1. Remove all external packing materials, tape and protective coverings and inspect for damage. Keep packing materials if damage is discovered.
2. Wipe all surfaces of the cabinet and self-leveling dispensers with a clean damp cloth and dry thoroughly.
3. Select a location within reach of a 208/240 VAC, 50/60 Hz grounded NEMA No. 6-15 electrical outlet.
4. Place the unit near enough to the electrical outlet so that the power cord is not stretched or strained when plugged in.
5. When unit is properly located, engage the two rear caster brakes by pushing down on the wheel brake levers.
6. Make sure the power switch is in the OFF position before plugging the power cord into the electrical receptacle.
7. Plug the unit into the electrical outlet.
8. Place pellets or plates into the self-leveling dispensers.
9. Close both lids.
10. Turn the power switch to the ON position.

Section IV - MAINTENANCE

The following procedures should be followed during the regular maintenance and cleaning of all Camtherm Heaters.

WARNING: Make sure unit is unplugged, pellets or plates are removed, and completely cool before cleaning or maintenance. Turn the unit off, disconnect the plug from the outlet, remove all plates/pellets and allow the cabinet to cool. Remove the plug by grasping the plug body and pulling it straight out of the receptacle. Never pull on the cord.

NOTICE: Do not use abrasives, harsh chemicals, or chlorine products for cleaning.

WARNING: Do not steam or pressure clean or hose down the cabinet. This could damage the equipment and possibly cause an electrical shock to the operator.

WARNING: Repairs should be done by qualified service personnel only.

A. Cabinet

Clean the outside of the cabinet with a mild, nonabrasive soap or detergent in a warm water solution. A commercial stainless steel cleaner can also be used for this procedure.

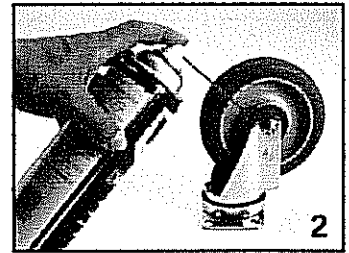
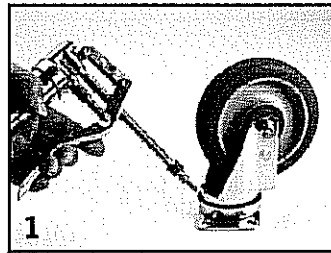
B. Uprights, Rollers and Basket

1. Clean inside uprights, leveling shelves and baskets with a mild, nonabrasive soap or detergent in a warm water solution. Squeeze out any excess liquid from soft cloth to ensure liquid does not slosh into the bottom of the unit. A commercial stainless steel cleaner can also be used.
2. Air dry completely before use.
3. Lubricate basket rollers if necessary with food grade lubricant that can withstand high heat temperature of no less than 350° F (177° C).

C. Casters

Caster maintenance should be performed after every cleaning.

1. Grease swivel raceway of caster using a lubricant such as Lubriplate #930-AA, Keystone #84EPXLT multi-purpose grease or equivalent. Apply grease using a grease gun with a needle nose adapter or a tube-type applicator such as Sta-lube Moly-graph Assembly Lube. These can be obtained at most auto parts stores.
2. Use a light oil such as WD-40 on the hub. Check caster for damage and test caster spin and swivel rotation before returning to service.



D. Cord and Plug

1. Inspect plug blades for distortion and replace cord if any blades are missing, bent or broken.
2. Inspect exterior wiring. If wires are showing on the outside of the unit remove the unit from service. For service, call Cambro at 800-854-7631 ext. 4118.

TROUBLESHOOTING GUIDE

NOTE: Electrical Adjustments or Electric Part Replacements Under Warranty Must Be Carried Out ONLY by An Authorized Cambro Service Technician. For Service in the USA or CANADA Call 1-800-854-7631 ext. 4118.

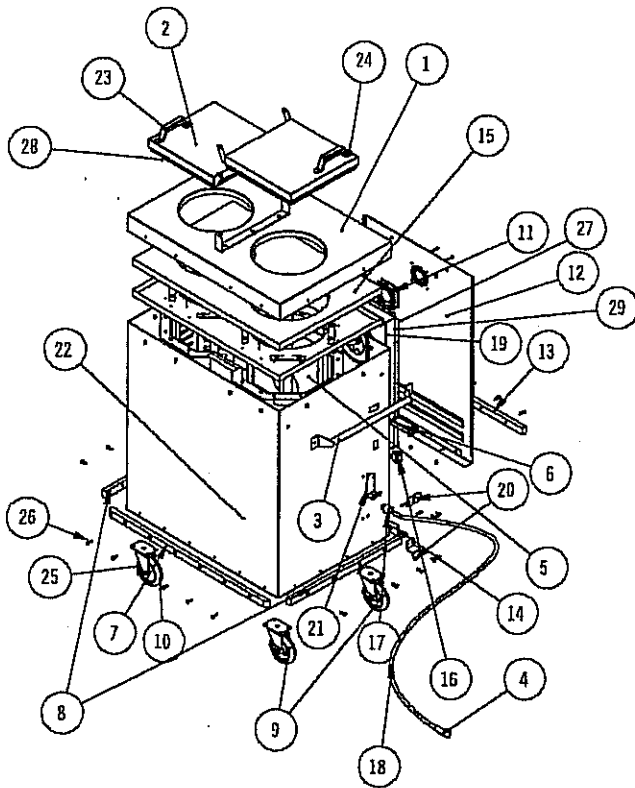
Owner/Operator Reference		
Issue	Possible Cause	Possible Solution
Self Levelling Dispenser for Plates or Pellets Does Not Glide Smoothly	Worn Out, Over Extended or Unattached Springs	Inspect all springs for wear, over-extension or detachment. Replace worn springs as necessary or reattach existing springs that have come loose.
	Debris on Dispenser Rollers	Clear rollers of debris and lubricate per maintenance/cleaning instructions in manual.
	Debris on Dispenser Uprights	Clean uprights thoroughly per maintenance/cleaning instructions in manual.
Unit Does Not Roll Smoothly	Debris on Casters	Clean casters thoroughly. Refer to caster maintenance section in manual.
	Lack of Lubrication on Caster Axles and Bearings	Clean axles and bearings and lubricate with WD-40 or similar spray lubricant. Refer to caster maintenance section in manual.
Unit Operates But Plates Are Too Hot	Using Pellet Heater to Heat Plates or Faulty Heating System	Check to make sure unit is a plate heater and not a pellet heater. Check the model number on the data sticker by the cord (should be CHPL100) and/or confirm type of unit by Pellets looking for Pellets Only or Plates Only sticker located on top of unit. If it is a plate heater, CALL FOR SERVICE.
Unit Operates But Pellets Are Not Hot Enough	Using Plate Heater to Heat Pellets or Faulty Heating System	Check to make sure unit is a pellet heater and not a plate heater. Check the model number on the data sticker by the cord (should be CHPEL80) and/or confirm type of unit by looking for Pellets Only or Plates Only sticker located on top of unit. If it is a pellet heater, CALL FOR SERVICE.
Service Technician Reference		
Issue	Possible Cause	Possible Solution
Unit Powers On But Does Not Heat	Thermal Overload Protection Activated	Owner/Operator Call for Service. Technician: Manually reset thermal limit switch located in rear of unit on the left side of the power plant underneath insulation.
	Faulty Relay	Owner/Operator Call for Service. Technician: Open back cover. Ensure that relay wiring is properly and securely connected. Listen for relay 'click' when unit is powered on. If there is no click, replace relay.
	Faulty Heating Elements	Owner/Operator Call for Service. Technician: Ensure both elements are securely connected and operating properly. Replace if necessary.
Unit Powers On But Does Not Display Temperature.	Temperature Controller Protection Fuse Blown	Owner/Operator Call for Service. Technician: Inspect and if fuse is blown, replace. If fuse is ok, replace Temperature Controller.
	Faulty Controller Relay	Owner/Operator Call for Service. Technician: Check controller and replace if necessary.
Unit Powers On and Heats Up But Never Reaches Factory Set Operating Temperature	Faulty Heating Elements	Owner/Operator Call for Service. Technician: Ensure both elements are securely connected and operating properly. Replace if necessary.
	Faulty, Disconnected or Obstructed Blower Fans	Owner/Operator Call for Service. Technician: Ensure both fans are properly and securely connected, unobstructed and operating properly. Replace if necessary.
Unit Overheats	Faulty Exhaust Fan	Owner/Operator Call for Service. Technician: Open back cover. Ensure that fan wiring is properly and securely connected. If wiring is properly and securely connected, replace the fan.
Unit Plugged In, Power Confirmed, Turn Unit On and Nothing Happens	Wiring Not Connected	Owner/Operator Call for Service. Technician: Open back cover. Ensure that all wiring is properly and securely connected.
	Faulty Controller	

Section VI – Replacement Parts

Please visit www.cambro.com for a complete list of replacement parts or contact your local Cambro Representative or Distributor.

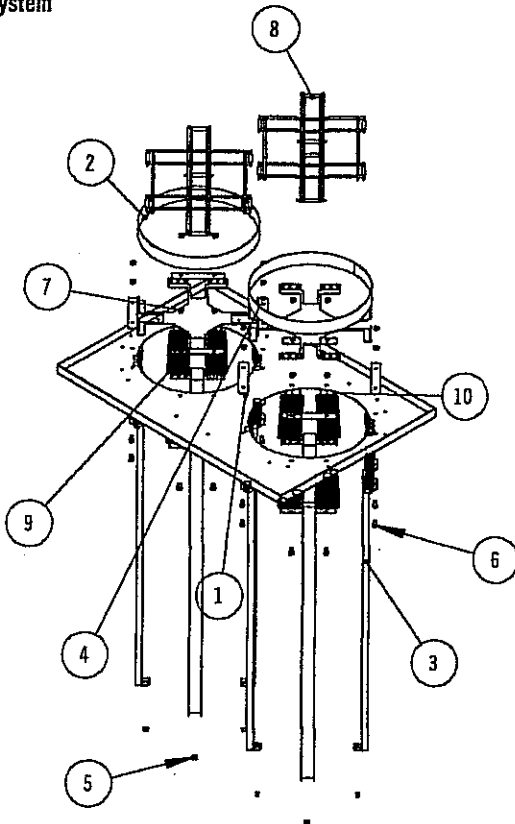
Section VII – Parts Diagram

A. Cabinet



ITEM	DESCRIPTION
1	Top Assembly
2	Top Lid (without handle)
3	Cart Handle
4	Electrical Plug
5	Interior Ducting
6	PID Controller
7	Front Center Bumper
8	Front End Bumpers
9	Rear 5" (12,7 cm) Caster, Swivel with brake
10	Front 5" (12,7 cm) Caster, Rigid
11	Exhaust Fan
12	Rear Panel
13	Rear Center Bumper
14	Rear End Bumper
15	Inner Top Insulation
16	ON / OFF Switch
17	Liquid-Light Connector
18	6' (183 cm) Electrical Cord
19	Control Panel
20	Cord Holder
21	Plug Holder
22	Cabinet Exterior
23	Lid Handle
24	Lid Handle Plug
25	Caster Nut
26	Bumper Screw
27	Fuse, 2 AMP, Slow-Blow
28	Lid Gasket, High Temp
29	Limit Switch

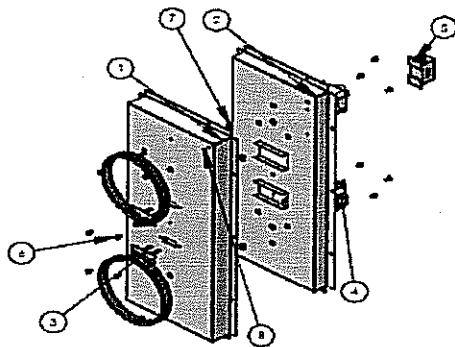
B. Dispenser System



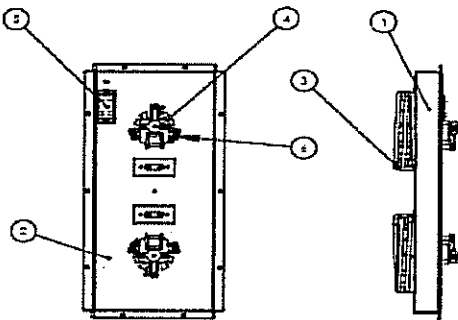
ITEM	DESCRIPTION
1	Interior Top Panel
2	Spacer Ring
3	Dispenser Upright
4	Backing Steel
5	Nut, Cage, Square, 10-24, Zinc
6	1/4-20 x 1/2" Hex Bolt
7	1/4"-20 S/S Nut
8	Plate / Pellet Holder
9	Plate / Pellet Holder Base
10	Stainless Steel Extension Spring

C. Power Plant

ITEM	DESCRIPTION
1	Inner Convection Unit Cover
2	Outer Convection Unit Cover
3	Heating Element 1700 w 208/240V
4	Blower Motor EM3025 LH/1-af d 58
5	Power Relay 240V/30A
6	Screw, Truss HD, 10-24 x 1/2" S/S
7	Nut, Cage, Square, 10-24, ZINC
8	Insulation .5"



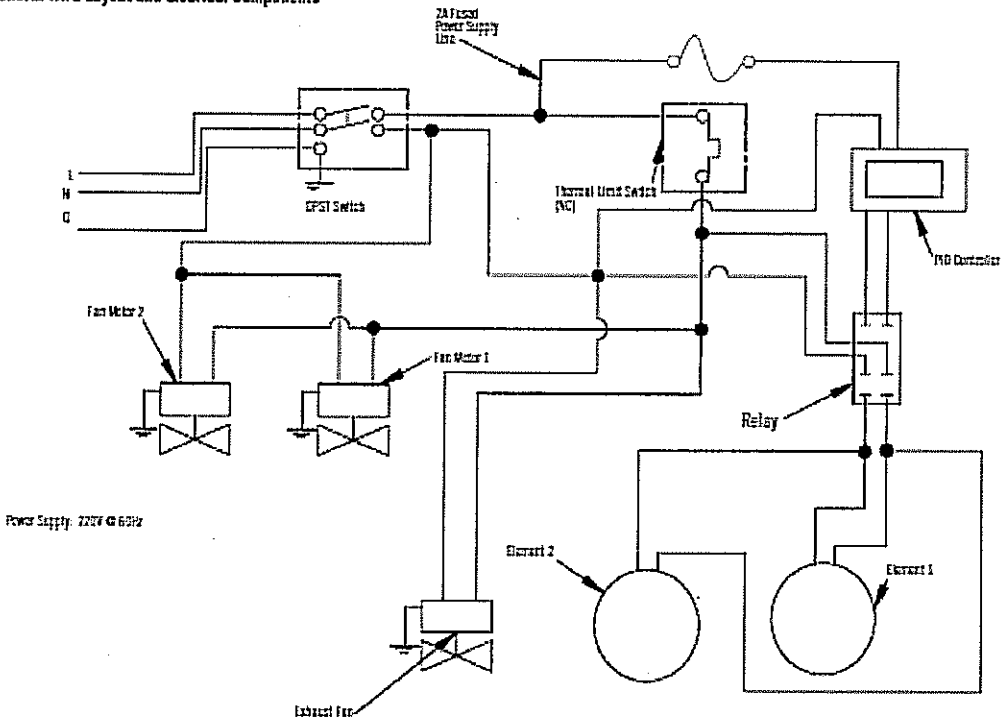
View A. General



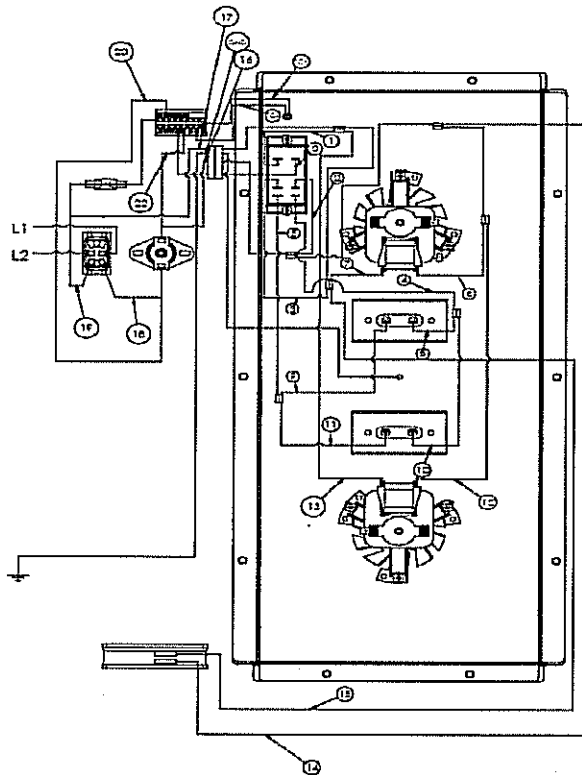
View B. Details

Section VIII – Wiring Diagram and Electrical Components

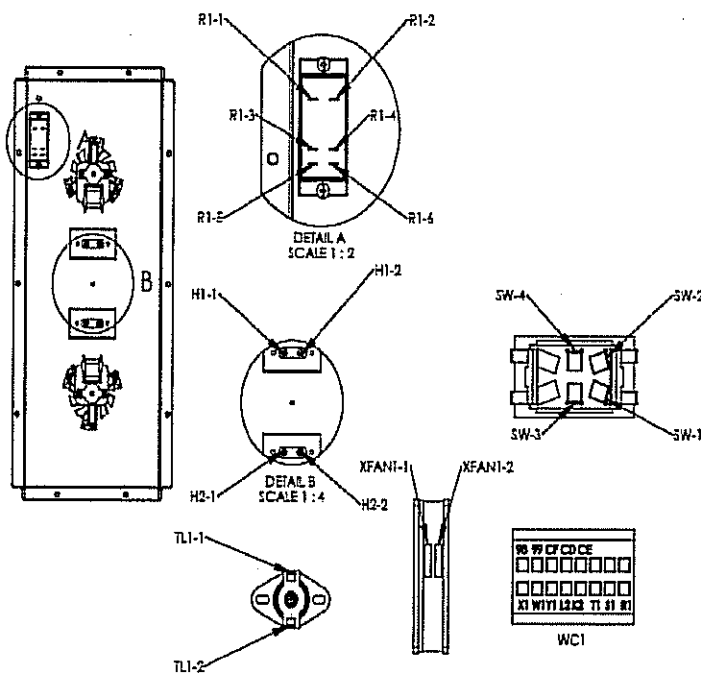
A. General Wire Layout and Electrical Components



B. Wire Detail



Wire Number	From	To
0	R1-2	TC-L2
1	R1-1	HRNS
2	R1-4	HRNS
3	R1-3	HRNS
4	R1-6	HRNS
5	R1-5	HRNS
6	FAN1-1	HRNS
7	FAN1-2	HRNS
8	HEAT1-1	HRNS
9	HEAT1-2	HRNS
10	HEAT2-1	HRNS
11	HEAT2-2	HRNS
12	FAN2-1	HRNS
13	FAN2-2	HRNS
14	XFAN-1	HRNS
15	XFAN-2	HRNS
16	TL1-1	HRNS
17	SW1-3	HRNS
18	SW1-4	HRNS
19	SW1-3	TC-98
20	TL1-1	TC-99
21		
22	TL1-2	TC-K2
23	L1	SW1-1
24	N1	SW1-2
25	G1	Cabinet



LEGEND	
R1	Relay 1
FAN1	Blower Fan 1
FAN2	Blower Fan 2
HEAT1	Heating Element 1
HEAT2	Heating Element 2
XFAN	Exhaust Fan
TL1	Thermal Limit 1
SW1	Switch 1
L1	Power Supply Live
N1	Power Supply Neutral
G1	Ground
TC1	Temperature Controller
HRNS	Wiring Harness

LIMITED ORIGINAL COMMERCIAL ELECTRICAL EQUIPMENT WARRANTY

Cambro Manufacturing warrants its new product(s) to be free from defects in material and workmanship for a period of one (1) year from the date of shipment from authorized CAMBRO distribution locations.

This Warranty is subject to the following conditions and limitations:

1. This warranty is limited to product(s) sold by Cambro Manufacturing to the original user in the continental United States and Canada. For International Warranty Claims contact your local Cambro Representative.
2. The Liability of Cambro Manufacturing is limited to the repair or replacement of any part found to be defective. Parts and labor required for preventative maintenance or cleaning are not covered under this warranty.
3. Cambro Manufacturing will bear normal charges incurred in the repair or replacement of a warranted piece of equipment within 50 miles (80 kilometers) of an authorized service agency. Time and travel charges in excess of 50 miles (80 kilometers) will be the responsibility of the person or firm requesting the service. All labor to repair and/or service the warranted unit(s) shall be performed during regular working hours. Overtime premium will be charged to the buyer and is NOT covered by this warranty.
4. Charges incurred by delays or operating restrictions that hinder the service technician's ability to access or perform service to equipment in question are NOT covered by this warranty. This includes Institutional, Correctional, Military, and Marine facilities.
5. Cambro Manufacturing will bear no responsibility or liability for any product(s) which have been mishandled, abused, misapplied, misused, subjected to harsh chemical action, damaged by flood, fire, or other acts of nature, field modified by unauthorized personnel or which have altered or missing serial numbers.
6. Cambro Manufacturing does not recommend or authorize the use of any product(s) in a non-commercial application, including but not limited to residential use. The use or installation of any product(s) in non-commercial applications renders all warranties, express or implied, including the warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE, null and void, including any responsibility for damage, costs and legal actions resulting from use or installation of product(s) in any non-commercial setting.
7. Adjustments such as calibrations, leveling, tightening of fasteners or utility connections normally associated with the original installation are the responsibility of the dealer or installer and not that of Cambro Manufacturing. Improper installation includes, but is not limited to, use of inadequate electrical wiring and/or insufficient or improper voltage.
8. Replacement part(s) which are replaced in the field by CAMBRO authorized service technicians ONLY will be warranted for the duration of the equipment warranty or 90 days effective from date of installation, whichever is greater. This warranty is for part(s) cost only and does not include freight or labor charges.
9. This states the exclusive remedy against Cambro Manufacturing relating to the product(s), whether in contract or in tort or under any other legal theory, and whether arising out of warranties, representations, instructions, installations or defects from any cause. Cambro Manufacturing shall not be liable, under any legal theory, for loss of use, revenue or profit, or for substitute use of or performance, or for incidental, indirect, or special or consequential damages or for any other loss or cost of a similar type.
10. THIS WARRANTY AND THE REPRESENTATIONS AND TERMS SET FORTH HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES, INCLUDING BUT NOT LIMITED TO, OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY AND FITNESS FOR PARTICULAR USE AND CONSTITUTES THE ONLY WARRANTY OF CAMBRO MANUFACTURING WITH RESPECT TO THE PRODUCT(S).

RETURN POLICY: Cambro Manufacturing products cannot be returned without prior written factory authorization (RMA). The restocking charge is 15% plus any costs required to recondition the equipment. No returns accepted after 90 days from date of invoice. Electrical components returned are subject to inspection prior to credit being issued. Electrical components which have been installed by an operator or non-approved service agent are not returnable for credit.

