

Our associates will ensure the tool works properly before you leave the store. If you experience issues with the tool while completing your project, simply bring it back to the Tool Rental Center to get a replacement. If you purchase Damage Protection at the time of your rental, you are not responsible for repair costs for tools that break due to normal use.





Propane
Convection Heater
OPERATOR'S MANUAL
MH-0200-CM10



CAUTION

RISK OF INJURY! READ ENTIRE MANUAL BEFORE OPERATING!
THIS MANUAL IS AN IMPORTANT PART OF THE PORTABLE HEATER
AND MUST REMAIN WITH THIS UNIT!




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 **NEVER LEAVE HEATER UNATTENDED WHILE BURNING OR WHILE CONNECTED TO A FUEL SOURCE.**

WARNING

 **WARNING:** This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

INTRODUCTION

Congratulations on the purchase of your new Mi-T-M® Heater! You can be assured your Mi-T-M® Heater was constructed with the highest level of precision and accuracy. Each component has been rigorously tested by technicians to ensure the quality, endurance and performance of this heater.

This operator's manual was compiled for your benefit. By reading and following the simple safety, installation and operation, maintenance and troubleshooting steps described in this manual, you will receive years of troublefree operation from your new heater. The contents of this manual are based on the latest product information available at the time of publication. The Manufacturer reserves the right to make changes in price, color, materials equipment, specifications or models at any time without notice.



IMPORTANT!

A "DANGER, WARNING or CAUTION" safety warning will be surrounded by a "SAFETY ALERT BOX". This box is used to designate and emphasize Safety Warnings that must be followed when operating this heater. Accompanying the safety warnings are "Signal Words" which designate the degree or level of hazard seriousness. The "Signal Words" used in this manual are as follows:

DANGER: INDICATES AN IMMINENTLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.

WARNING: INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

CAUTION: INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED MAY RESULT IN MINOR OR MODERATE INJURY OR DAMAGE TO THE HEATER.

The symbols set below are "Safety Alert Symbols". These symbols are used to call attention to items or procedures that could be dangerous to you or other persons using this equipment.



ALWAYS PROVIDE A COPY OF THIS MANUAL TO ANYONE USING THIS EQUIPMENT. READ ALL INSTRUCTIONS IN THIS MANUAL AND ANY INSTRUCTIONS SUPPLIED BY MANUFACTURERS OF SUPPORTING EQUIPMENT BEFORE OPERATING THE HEATER AND ESPECIALLY POINT OUT THE "SAFETY WARNINGS" TO PREVENT THE POSSIBILITY OF PERSONAL INJURY TO THE OPERATOR.

Once the unit has been uncrated, immediately write in the serial number of your unit in the provided below.

SERIAL NUMBER _____

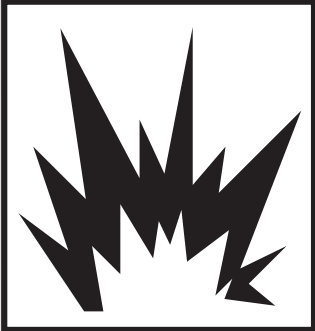


Inspect for signs of obvious or concealed freight damage. If damage does exist, file a claim with the transportation company immediately. Be sure that all damaged parts are replaced and that the mechanical and electrical problems are corrected prior to operation of the unit. If you require service, contact Mi-T-M® Customer Service.

Mi-T-M® Corporation, 50 Mi-T-M Drive, Peosta, IA 52068
563-556-7484 / 800-553-9053 / Fax 563-556-1235
Monday - Friday 8:00 a.m. - 5:00 p.m. CST

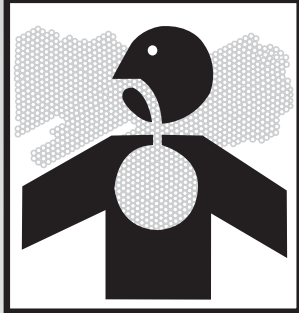
Please have the following information available for all service calls:

1. Model Number
2. Serial Number
3. Date and Place of Purchase

IMPORTANT SAFETY INSTRUCTIONS

Hazard	Potential Consequence	Prevention
<p>RISK OF EXPLOSION OR FIRE</p>  	<p>Serious injury or death may occur from normal electrical sparks in motor and pressure switch</p> <p>Serious injury may occur if the heater air inlet or outlet is blocked.</p> <p>Serious injury or death may occur if improper fuels are used, if heater is running while refilling.</p> <p>Serious injury may occur if heater is not placed on level surface.</p>	<p>Always operate heater in a well ventilated area free of flammable vapors, combustible dust, gases or other combustible materials.</p> <p>Never place objects in front of air inlet (rear) or air outlet (front) of heater. Never use duct work in front or at rear of heater. Keep all combustible material away from this heater.</p> <p>Never use fuels such as gasoline, benzene, paint thinners, or other oil compounds in this heater. This heater is EXTREMELY HOT while in operation.</p> <p>Never transport heater with fuel in its tank.</p> <p>Bulk fuel storage should be a minimum of 25 ft. from heaters, torches, portable generators, or other sources of ignition. All fuel storage should be in accordance with federal, state, or local authorities having jurisdiction.</p> <p>Never move or handle heater while still hot.</p> <p>If equipped with a thermostat, the heater may start at any time.</p> <p>Always locate heater on a stable and level surface</p> <p>Keep away from children and animals.</p>
<p>RISK OF BURNS</p> 	<p>Serious injury could occur from touching exposed metal parts. These areas can remain hot for some time after the heater is turned off.</p>	<p>Never allow any part of your body or other materials to make contact with any exposed metal parts on the heater.</p>


IMPORTANT SAFETY INSTRUCTIONS

Hazard	Potential Consequence	Prevention
<p>RISK TO BREATHING</p> 	<p>Serious injury or death could occur from failure to provide proper ventilation according to this manual..</p>	<p>This is a direct-fired heater. It is primarily intended for use for temporary heating of buildings under construction, alteration or repair. Direct-fired means that all of the combustion products of the heater enter the heated space. This appliance does produce small amounts of carbon monoxide. Carbon monoxide is toxic. Humans can tolerate small amounts of carbon monoxide, and precautions should be taken to provide proper ventilation..</p> <p>Early signs of carbon monoxide poisoning resemble the flu. Symptoms of improper ventilation are: * headache * dizziness * burning of the nose and eyes * nausea * dry mouth * sore throat</p> <p>Use this heater only in well ventilated areas! Provide at least a three square foot (2,800 sq cm) opening of outside air for every 100,000 BTU/hr of heater rating.</p> <p>People with breathing problems should consult a physician before using the heater.</p> <p>Carbon Monoxide Poisoning: Early signs of carbon monoxide poisoning resemble flu-like symptoms such as headaches, dizziness, and/or nausea. If you have these symptoms, your heater may not be working properly.</p> <p>Get fresh air at once! Have the heater serviced. Some people are more affected by carbon monoxide than others. These include pregnant women, those with heart or lung problems, anemia, or those under the influence of alcohol, or at high altitudes.</p> <p>Never use this heater in living or sleeping areas.</p>



NEVER LEAVE HEATER UNATTENDED WHILE BURNING OR WHILE CONNECTED TO A FUEL SOURCE.

IMPORTANT SAFETY INSTRUCTIONS

 **FIRE, BURN, INHALATION, AND EXPLOSION HAZARD. KEEP COMBUSTIBLES, SUCH AS BUILDING MATERIALS, PAPER OR CARDBOARD, A SAFE DISTANCE AWAY FROM THE HEATER AS RECOMMENDED BY THESE INSTRUCTIONS. NEVER USE THE HEATER IN SPACES WHICH CONTAIN PRODUCTS SUCH AS GASOLINE, SOLVENTS, PAINT THINNERS, DUST PARTICLES, VOLATILE OR AIRBORNE COMBUSTIBLES, OR ANY UNKNOWN CHEMICALS. THIS IS AN UNVENTED PORTABLE HEATER. IT USES AIR (OXYGEN) FROM THE AREA IN WHICH IT IS USED. ADEQUATE COMBUSTION AND VENTILATION AIR MUST BE PROVIDED. REFER TO VENTILATION.**

 **WARNING: IF THE INFORMATION IN THIS MANUAL IS NOT FOLLOWED EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE.**

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

AN LP CYLINDER NOT CONNECTED FOR USE SHALL NOT BE STORED IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

WHAT TO DO IF THE SMELL OF GAS IS PRESENT:

DO NOT attempt to light heater

Extinguish any open flame

Shut off gas to heater


If odor continues, contact your local gas supplier or fire department.

Do not touch any electric switch, do not use any phone in your building

Immediately call your gas supplier from a neighbors phone. Follow the gas suppliers instructions

If you can not reach your gas supplier, call the fire department

Service must be done by a qualified service agency or the gas supplier.

 **CALIFORNIA RESIDENTS: COMBUSTION BY-PRODUCTS PRODUCED WHEN USING THIS PRODUCT CONTAIN CARBON MONOXIDE, A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS (OR OTHER REPRODUCTIVE HARM). DO NOT OPERATE THIS HEATER UNTIL YOU HAVE READ, AND THOROUGHLY UNDERSTAND THESE SAFETY AND OPERATING INSTRUCTION. FAILURE TO COMPLY WITH THE PRECAUTIONS AND INSTRUCTIONS PROVIDED WITH THIS HEATER CAN RESULT IN DEATH, SERIOUS BODILY INJURY, PROPERTY LOSS OR DAMAGE FROM THE HAZARDS OF FIRE, EXPLOSION, BURNS, ASPHYXIATION OR CARBON MONOXIDE POISONING. ONLY PERSONS WHO CAN READ AND UNDERSTAND THESE INSTRUCTIONS SHOULD USE OR SERVICE THIS HEATER.**

 **! SAVE THESE INSTRUCTIONS !** 

 **NEVER LEAVE HEATER UNATTENDED WHILE BURNING OR WHILE CONNECTED TO A FUEL SOURCE.**



**THE FOLLOWING PAGES CONTAIN OPERATING AND
MAINTENANCE INSTRUCTIONS.**

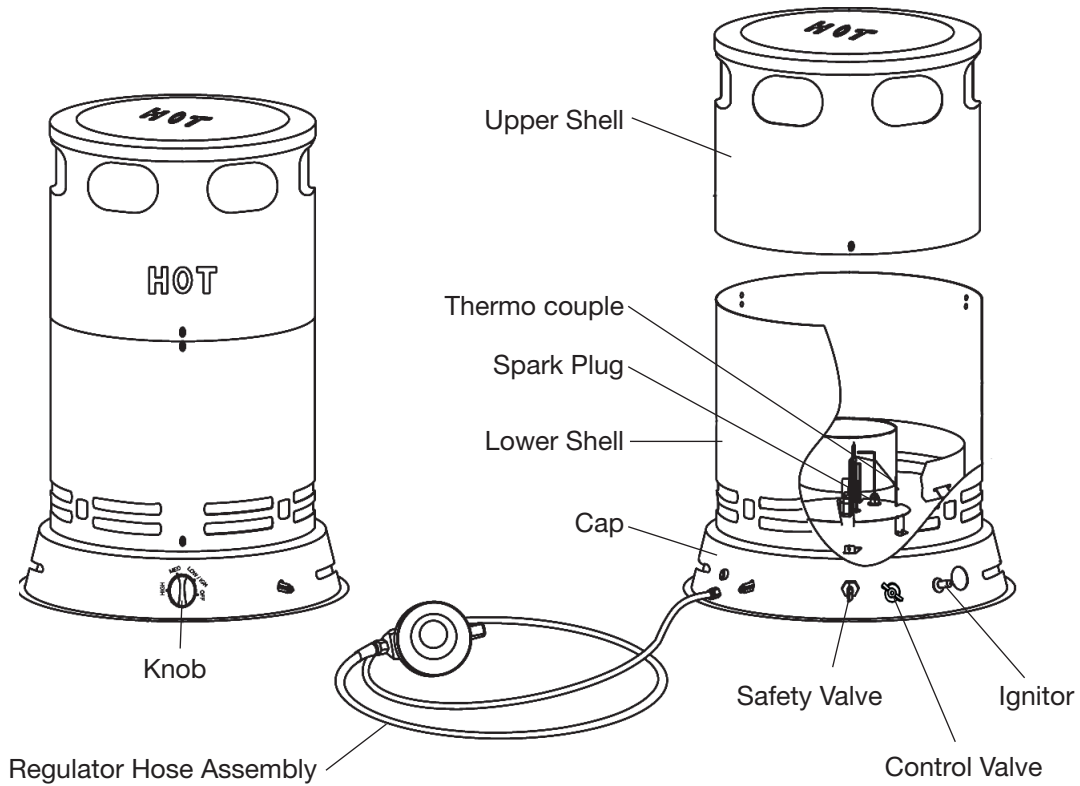
**DO NOT ATTEMPT TO OPERATE THIS HEATER UNTIL YOU
HAVE READ AND UNDERSTOOD ALL SAFETY PRECAUTIONS
AND INSTRUCTIONS LISTED IN THIS MANUAL.**

**INCORRECT OPERATION OF THIS UNIT CAN CAUSE SERIOUS
INJURY!!**

**DO NOT ALTER OR MODIFY THIS EQUIPMENT
IN ANY MANNER!**

**NEVER LEAVE HEATER UNATTENDED WHILE BURNING OR
WHILE CONNECTED TO A FUEL SOURCE.**

HEATER FEATURES



HEATER SPECIFICATIONS

Model	MH-0080-CM10	MH-0200-CM10
Rating BTU/Hr	60,000-80,000	70,000-200,000
Fuel Consumption Lbs/Hr	2.76 to 3.7	3.25 to 9.25
Supply Pressure	20-200 psi	20-200 psi
Manifold Pressure	10.5" to 8.5" W.C.	5.0" to 4.0" W.C.
Spark Gap	.195	0.130
Size (L x W x H)	15.7" x 15.7" x 21.8"	16" x 16" x 26.4"
Net Weight (Lbs)	11.5	14.3

⚠ NEVER LEAVE HEATER UNATTENDED WHILE BURNING OR WHILE CONNECTED TO A FUEL SOURCE.

GENERAL SAFETY INFORMATION

⚠ WARNING: IMPROPER USE OF THIS HEATER CAN RESULT IN SERIOUS INJURY OR DEATH FROM BURNS, FIRE, EXPLOSION, ELECTRICAL SHOCK AND /OR CARBON MONOXIDE POISONING.

This heater is designed and approved for use as a construction heater in accordance with the standard for Gas-Fired Construction Heaters ANS Z83.7 * CSA 2.14-2017. CHECK WITH YOUR LOCAL FIRE SAFETY AUTHORITY IF YOU HAVE ANY QUESTIONS ABOUT APPLICATIONS. Other standards govern the use of fuel gasses and heating products for specific uses. Your local authority can advise you about these.

⚠ WARNING: NOT FOR USE WITH DUCTWORK.

⚠ WARNING: NOT FOR HOME OR RECREATIONAL VEHICLE USE. THE HOSE ASSEMBLY SHALL BE PROTECTED FROM TRAFFIC, BUILDING MATERIAL AND CONTACT WITH HOT SURFACES BOTH DURING USE AND WHILE IN STORAGE.

IMPORTANT: Read this User's Manual carefully and completely before attempting to operate or service this heater. Improper use of the heater can cause serious injury or death from fire, explosion and carbon monoxide poisoning.

Every possible circumstance that may involve a hazard cannot be anticipated. The warnings in this manual and attached to the unit are therefore not all-inclusive. If a procedure, work method or operating technique not specifically recommended by the manufacturer is used, you must be sure it is safe for you and others. You should also insure that equipment will not be damaged or made unsafe by the operating or maintenance method you choose. CHECK WITH YOUR LOCAL FIRE SAFETY AUTHORITY IF YOU HAVE ANY QUESTIONS ABOUT APPLICATIONS. This heater is designed and approved for use as a construction heater under ANSI Z83.7-2011/CSA 2.14-2011.

Other standards govern the use of fuel gases and heat producing products in specific applications. Your local authority can advise you of these.

You must provide the propane gas and cylinder(s). Use this heater only with a propane vapor withdrawal supply system. Refer to Chapter 5 of the Standard for Storage and Handling of Liquefied Petroleum Gas , ANSI/NFPA 58. Your local library or fire department will have this booklet.

⚠ WARNING: AIR QUALITY HAZARD

- Do not use this heater for heating human living quarters
- Use of direct-fired heaters in the construction environment can result in exposure to levels of CO, CO₂, and NO₂ considered to be hazardous to health and potentially life threatening
- Do not use in unventilated areas
- Know the signs of CO and CO₂ poisoning • Headaches, stinging eyes • Dizziness, disorientation • Difficulty breathing, feels of being suffocated
- Proper ventilation air exchange (OSHA 29 CFR 1926.57) to support combustions and maintain acceptable air quality shall be provided in accordance with OSHA 29 CFR Part 1926.154, ANSI A10.10 Safety Requirements for Temporary and Portable Space Heating Devices and Equipment used in the Construction Industry or the Natural Gas and Propane Installation Codes CSA B149.1
- Periodically monitor levels of CO, CO₂ and NO₂ existing at the construction site – at the minimum at the start of the shift and after 4 hours.
- Provide ventilation air exchange, either natural or mechanical, as required to maintain acceptable indoor air quality
- Ensure that the flow of combustion and ventilation air exchanges cannot become obstructed
- As the building “tightens up” during the construction phase ventilation may need to be increased

USA 8-Hr Time weighted average (OSHA 29 CFR 1926.55 App A)

CO	50 ppm
CO ₂	5000 ppm
NO ₂	

⚠ NEVER LEAVE HEATER UNATTENDED WHILE BURNING OR WHILE CONNECTED TO A FUEL SOURCE.

GENERAL SAFETY INFORMATION

USA – Ceiling Limit (Short Term Exposure Limit = 15 minutes)

CO	
CO ₂	
NO ₂	5 ppm

Canada 8-hr time weighted average WorkSafe BC OHS Guidelines Part 5.1 and Ontario Work-places Reg 833

CO	25 ppm
CO ₂	5000 ppm
NO ₂	3 ppm (Reg 833)

Canada STEL (15 minutes Reg 833/1 hour WSBC) WorkSafe BC OHS Guidelines Part 5.1 and Ontario Work-places Reg 833

CO	100 ppm
CO ₂	15,000 ppm (WSCB) 30,000 ppm (Reg 833)
NO ₂	1.0 ppm (WorkSafeBC) 5.0 ppm (Reg 833)

Note: Installation of this appliance at altitudes above 2000 ft (610 m) shall be in accordance with local codes, or in the absence of local codes, the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or National Standard of Canada, Natural Gas and Propane Installation Code, CSA B149.1.

IMPORTANT SAFETY INFORMATION

1. Check the heater thoroughly for damage before each use. DO NOT operate a damaged heater.
2. DO NOT modify this heater or operate a heater that has been modified from it's original state.
3. For outdoor use, and indoor use only in well ventilated areas. For this heater, consult Ventilation on Page 13 of this manual. For additional heaters, provide more ventilation.
4. Provide at least 3 square feet of opening for ventilation per 100,000 BTU of rated operation.
5. NEVER use heater in occupied dwellings.
6. NEVER use heater in a tent.
7. Operate heater in a manner that will not directly expose it to water, rain or dripping water.
8. Keep heater area free from combustible materials such as gasoline, paint thinners and other flammable vapors and liquids. Dust is combustible. Do not use heater in areas of high dust concentration prior to each use of the heater. If there is excessive abrasion or wear, or if the hose is cut, replace it with the proper assembly shown in the parts list, prior to using the heater.
9. Operate only on level and stable surfaces.
10. NEVER leave heater unattended.
11. Keep children and animals away from heater.
12. Never operate heater while unattended or sleeping.
13. Before connecting the heater to the propane cylinder, make sure that the heater regulator knob is in the OFF position.
14. NEVER handle an operating or hot heater, as severe burns may result. All exposed surfaces may become very hot during operation. Always allow at least 15 minutes of cooling time before handling the heater.
15. Always disconnect and remove the heater from the cylinder after use.
16. Locate LP cylinder at least 6 feet from the heater and do not discharge the heater towards any LP cylinder unless it is at least 20 feet from the heater



NEVER LEAVE HEATER UNATTENDED WHILE BURNING OR WHILE CONNECTED TO A FUEL SOURCE.

GENERAL SAFETY INFORMATION

PROPANE SUPPLY

The chart on this page, shows the minimum number of 100 lb. cylinders required in cold weather. Your local LP dealer will help you select the proper supply system. The amount of LP gas used by this heater varies. The two factors that will determine this are as follows:

Average Temp. (°F)	MH-0080-CM10 100 lb cylinder	MH-200-CM10 100 lb. cylinder
32°	1	2
20°	1	2
10°	2	3
0°	2	3
-10°	2	3
-20°	2	3

The amount of gas in the tank.

The temperature of the cylinder and surrounding area.

 **WARNING: EXTREMELY HOT DURING OPERATION. DO NOT TOUCH ANY METAL COMPONENTS WHILE IN OPERATION. KEEP GASOLINE AND ANY OTHER FLAMMABLE LIQUIDS AWAY FROM HEATER.**

 **WARNING: BE SURE TO READ AND UNDERSTAND ALL OF THE SAFETY INFORMATION IN THIS MANUAL BEFORE LIGHTING THIS HEATER.**

 **CAUTION: HEATER HAS HIGH SURFACE TEMPERATURES. BE SURE TO KEEP CHILDREN, PETS AND CLOTHING AWAY FROM THE HEATER. BE SURE TO KEEP BURNER AND HEATER REGULATOR CLEAN AND FREE FROM ANY DEBRIS. MAINTAIN SAFE DISTANCES FROM HEATER AS SHOWN.**

You must provide the propane gas and cylinder(s). Use this heater only with a propane vapor withdrawal supply system. Refer to Chapter 5 of the Standard for Storage and Handling of Liquefied Petroleum Gas, ANSI/NFPA 58. Your local library or fire department will have this booklet.

LP Characteristics - Flammable, explosive under pressure, heavier than air, and pools in low areas.

In its natural state, propane has no odor, but for your safety an odorant that smells like rotten cabbage has been added.

Contact of LP gas with the skin can cause freeze burns.

Heater is manufactured for use with LP gas only. DO NOT attempt to convert to any other gas. Such modifications are dangerous, and will void warranty.

When heater is not in use, LP supply must be turned OFF.

Be sure that the propane cylinder is located on a level and stable surface.

Do not use this heater in a basement or below ground level. Propane is heavier than air, and will always seek the lowest level. If you suspect a leak, shut off the valve at the propane cylinder immediately. Do not use a flame to check for leaks! Use a 50/50 solution of dish soap and water to check for leaks. Repair any leaks before attempting to re-light the heater.

Check the "O" ring on the heater inlet fuel connector for damage before each use. Replace if damaged or worn.

MINIMUM CLEARANCES FROM COMBUSTIBLES:

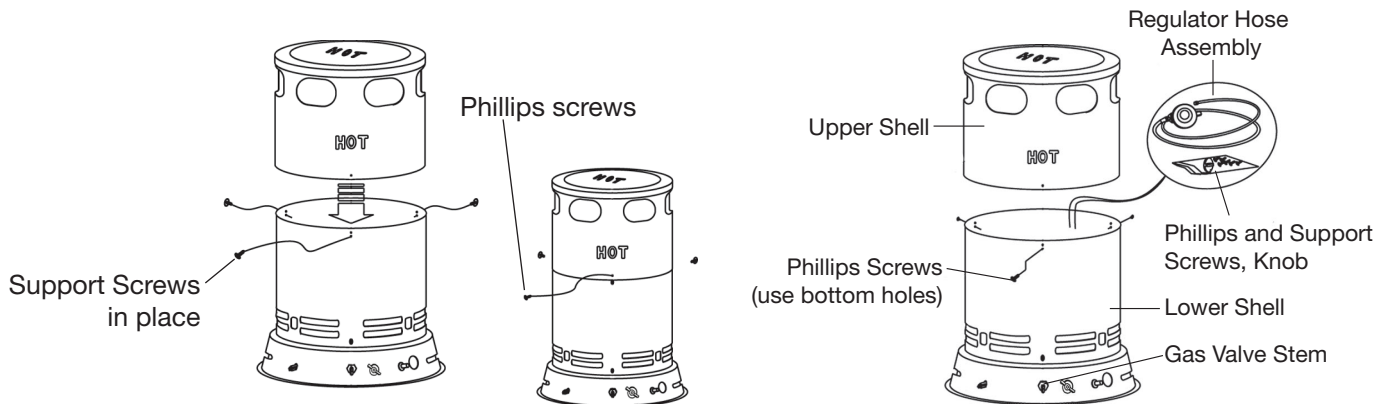
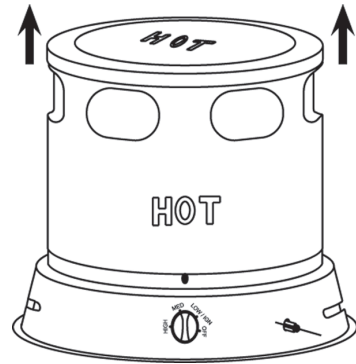
	MH-0080-CM10	MH-0200-CM10
Top	6 feet	8 feet
Sides	4 feet	4 feet

 **NEVER LEAVE HEATER UNATTENDED WHILE BURNING OR WHILE CONNECTED TO A FUEL SOURCE.**

ASSEMBLY

ASSEMBLING THE HEATER

1. Remove heater from carton
2. Slide upper housing straight up and off of lower housing, and remove all of the packed items from inside heater.
3. Remove all packaging protecting heater during shipping. Retain plastic caps covering inlet and regulator hose for storage
4. Save carton and packing materials for later storage.
5. Inspect heater closely for any damage that may have occurred during shipping. If there is any damage, return the heater to the place of purchase.
6. Attach 4 (four) of the phillips head screws to the bottom row of holes in the lower housing.
7. Slide upper housing over lower housing, lining up the four remaining screw holes. Insert 4 (four) phillips head screws and tighten securely.



WARNING: NEVER ATTEMPT TO LIGHT A HEATER UNTIL IT IS FULLY ASSEMBLED.

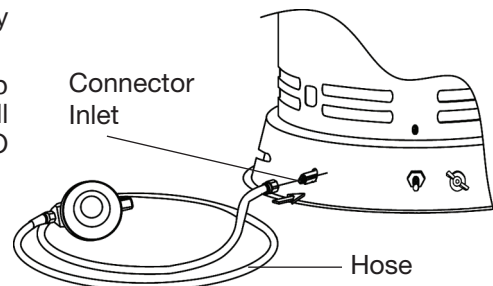
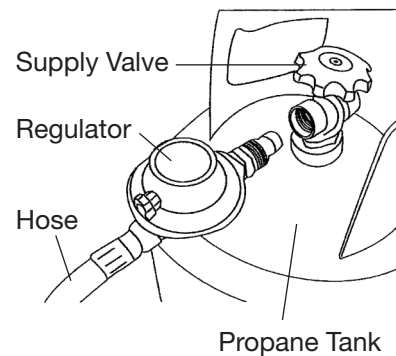
CONNECTING TO GAS SUPPLY

IMPORTANT! Always use a propane cylinder that has a connection device that is compatible with the hose and regulator assembly supplied.

1. To connect hose and regulator assembly, rotate fitting on hose/regulator **COUNTERCLOCKWISE** into threads on tank valve (see Figure 5). Be sure to tighten firmly.

Important: Be sure to position the regulator so that the regulator is horizontal, also as shown .

2. To connect to heater inlet, rotate clockwise and tighten firmly with a wrench.
3. Check all connections for leaks, using a 50/50 solution of dishsoap and water. Bubbles at the connections show a leak. Correct all leaks before lighting heater. **NEVER USE AN OPEN FLAME TO CHECK FOR LEAKS.**



NEVER LEAVE HEATER UNATTENDED WHILE BURNING OR WHILE CONNECTED TO A FUEL SOURCE.

OPERATION

THEORY OF OPERATION

Fuel Supply System Fuel is supplied under pressure from the fuel cylinder to the heater by the hose/regulator assembly. The regulator maintains a constant flow of fuel to the heater.

System of Ignition As the fuel is sprayed into the combustion chamber, through a supply nozzle, the Piezo ignitor ignites the fine mixture of fuel and air.

Automatic Control System If the flame should extinguish, the Automatic Control Valve shuts down the heater.



WARNING: REVIEW AND UNDERSTAND ALL OF THE WARNINGS IN THE SAFETY INFORMATION SECTION OF THIS MANUAL.



WARNING: DUE TO VERY HIGH SURFACE TEMPERATURES, IT IS IMPORTANT TO KEEP CHILDREN, FURNITURE AND CLOTHING AWAY FROM THE HEATER. KEEP CONTROL AND BURNER AREA FREE FROM DIRT AND DEBRIS.



WARNING: EXTREMELY HOT WHILE IN OPERATION. DO NOT TOUCH HEATER WHILE OPERATING. KEEP CHILDREN, FURNITURE, CLOTHING, GASOLINE AND OTHER FLAMMABLE LIQUIDS AND VAPORS AWAY FROM HEATER.

NOTE: Once the gas connection has been made, air may be trapped in the gas line. Before lighting the heater it will be necessary to purge any air trapped in the line. Once this is done the heater will light and operate normally. Purging the gas line will be necessary every time the gas cylinder is replaced.

PREPARING FOR OPERATION

1. Check the heater for possible shipping damage. If any is found, immediately notify your local dealer.
2. Follow all Safety Information in this manual.

LIGHTING INSTRUCTIONS (MH-0080-CM10)

1. Stop! Read all of the Safety Information provided with this heater
2. Turn valve on propane cylinder counterclockwise until fully open
3. Press in Control Knob and turn counterclockwise to LOW/IGN position
4. If burner does not ignite, turn Control Knob to OFF position and repeat the ignition procedure
5. Keep Control Knob pressed in for approximately 15 seconds before releasing.
6. If the flame goes out, wait 5 minutes, and repeat the ignition and lighting steps
7. After heater ignites, turn Control Knob to desired heat setting.

RELIGHTING INSTRUCTIONS

1. Rotate valve on cylinder clockwise to close it, and wait five (5) minutes.
2. Relight following the LIGHTING INSTRUCTIONS.

SHUT-DOWN INSTRUCTIONS

1. Turn Control Knob to the OFF position
2. Rotate valve on cylinder clockwise to close it

LIGHTING INSTRUCTIONS (MH-0200-CM10)



WARNING: BEFORE LIGHTING HEATER, TURN MAIN BURNER VALVE TO LIGHT POSITION. READ SAFETY WARNING: INFORMATION BEFORE STARTING THE HEATER.

1. Fully open the valve on the propane tank, and set burner valve to LIGHT position, then wait 15 seconds before Step 2.



NEVER LEAVE HEATER UNATTENDED WHILE BURNING OR WHILE CONNECTED TO A FUEL SOURCE.

OPERATION

2. Depress the red button on the safety shut-off valve, admitting gas to the burner. Then push and release the ignition button until the burner lights.
3. When the burner lights, continue to keep the red button depressed for 30 seconds, then release.
4. If burner goes out, wait 5 minutes and repeat lighting procedure.
5. When burner lights, open burner valve to ON position, to operate heater. Partially close valve to regulate heat output.

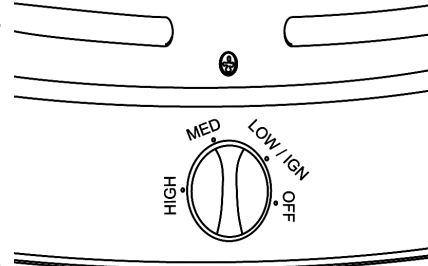
Note: Adjusting burn rate too low can cause soot. Watch for and avoid a yellow flame.

RELIGHTING INSTRUCTIONS

1. Rotate valve on cylinder clockwise to close it, and wait five (5) minutes.
2. Relight following the LIGHTING INSTRUCTIONS.

SHUT-DOWN INSTRUCTIONS

1. Turn Control Knob to the OFF position
2. Rotate valve on cylinder clockwise to close it



⚠ WARNING: NEVER ATTEMPT TO SERVICE THIS HEATER WHILE IT IS STILL OPERATING, OR HOT OR CONNECTED TO THE GAS SUPPLY. SEVERE BURNS CAN RESULT.

VENTILATION

For these heaters, provide a minimum of 2.5 square feet of space for the MH-0080-CM10, or a minimum of 6 square feet of space for the MH-0200-CM10 by opening a window or door to provide fresh, outside air. Provide at least 3 square feet of opening for ventilation per 50,000 BTU of rated operation.

⚠ NEVER LEAVE HEATER UNATTENDED WHILE BURNING OR WHILE CONNECTED TO A FUEL SOURCE.

MAINTENANCE

MAINTENANCE AND STORAGE

Inspect your heater before each use. Check all connections for leaks, following the procedure outlined in this manual. Check the Regulator Hose for any cracks, breaks or wear. If the hose is damaged replace it with the correct manufacturers part.

After use, always disconnect the heater from the cylinder, and store the heater separately from the tank. Be sure to close the tank valve after use, and before storage.

Always store the propane cylinder outdoors, but not in an enclosed area. Never store the cylinder near high heat, direct sunlight or open flames. Never store the cylinder indoors. The cylinder should be stored outdoors in accordance with chapter 5 of the Standard for Storage and Handling of Liquefied Petroleum Gasses (ANSI/INFP 58).

Always keep your heater clean, inside and out.

Have heater inspected annually by a qualified service technician.

Place the plastic covers over the fittings the heater was supplied with when putting heater away for the season.

Always store the heater in a clean, dry and safe place.



NEVER LEAVE HEATER UNATTENDED WHILE BURNING OR WHILE CONNECTED TO A FUEL SOURCE.

TROUBLESHOOTING

SYMPTOM

Burner fails to ignite

PROBABLE CAUSE

1. Valve on supply cylinder closed
2. Cylinder excess flow check valve closed
3. Burner nozzle blockage
4. Ignition system not sparking

REMEDY

1. Open cylinder valve
2. Close cylinder valve, wait one minute, and re-open slowly
3. Replace Burner Nozzle
4. Inspect igniter wires for damage, be sure spark gap is .195"

Heater will not fire (ignite)

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1. Not enough time for thermocouple to warm up
 2. Gas pressure too low
 3. Thermocouple needs replacing, or loose
 4. Control valve damaged

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1. Keep Control Valve depressed for at least 45 seconds
 2. Check cylinders for adequate gas
 3. Replace or tighten thermocouple connection
 4. Replace Control Valve

Heater stops running by itself

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1. Cylinder valve not fully open
 2. Clogged burner orifice
 3. Gas pressure too low
 4. Fuel supply too low

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1. Be sure cylinder valve is fully opened
 2. Replace burner
 3. Be sure regulator is operating properly
 4. Replace low fuel supply with new, full cylinder

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