CLASSIC™

OUTDOOR WOOD FURNACE

OWNER'S MANUAL

CL 4030
TITANIUM

CL 5036
TITANIUM

CL 6048
TITANIUM

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.**
- **WHAT TO DO IF YOU SMELL GAS**
  - **Do not try to light any appliance.**
  - **Do not touch any electrical switch.**
  - **Immediately call your gas supplier. Follow the supplier's instructions.**
  - **If you cannot reach your gas supplier, call the fire department.**
- **Installation and service must be performed by a qualified installer, service agency or the gas supplier.**

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IN THE U.S., THIS APPLIANCE IS FOR NON-RESIDENTIAL APPLICATIONS ONLY

SAVE THESE INSTRUCTIONS

(p/n 9000961) - REV. B

CLASSIC™

Central Boiler, Inc. • 20502 160th Street • Greenbush, MN 56726
CentralBoiler.com

Central Boiler Classic Titanium models CL 4030, CL 5036 and CL 6048 outdoor hydronic heaters by Central Boiler are listed by OMNI-Test Laboratories to the applicable portions of the following standards: UL 2523-13 Solid Fuel-Fired Hydronic Heating Appliances, Water Heaters and Boilers, CSA B366.1-11 (R2015) Solid-Fuel-Fired Central Heating Appliance. Dual Fuel models tested to applicable portions of ANSI Z21.13-2017/CSA 4.9-2017 - Gas-fired Low Pressure Steam and Hot Water Boilers, B140.3-1962 (R2015) - Oil Burning Stoves and Water Heaters, UL 726-11 Standard for Safety Oil-Fired Boiler Assemblies, and certified to add to an existing heating system.

CL 4030 – Water Capacity: 140 gal.(530 liters) – Weight: 1,140 lbs (517 kg)
CL 5036 – Water Capacity: 196 gal. (742 liters) – Weight: 1,492 lbs (677 kg)
CL 6048 – Water Capacity: 393 gal. (1488 liters) – Weight: 2,140 lbs (971 kg)

French Owner's Manual and decal set available upon request from your dealer.
(Manuel d'installation en français et décalcomanies disponible sur demande auprès de votre revendeur)

- Register at time of purchase for FREE 25 Year Limited Warranty -

Verify your warranty and check status of water samples at: CentralBoiler.com/w25

For parts and accessories, service or repairs, call your authorized Central Boiler dealer or heating contractor. Record the information below for future reference.

Model	Serial Number	Installation Date
Dealership Name		Phone Number
Owner Name		

Contents

How to Use This Guide

The guide is divided into sections to help with the operation and maintenance of the outdoor furnace. If questions arise that are not answered with this manual, consult with your authorized Central Boiler dealer.

CENTRAL BOILER ONLINE RESOURCES

Enter **CentralBoiler.com** in your browser or scan the code using any QR code reader app on your smartphone to access Central Boiler's library of information to help with installation, operation and maintenance of your Central Boiler outdoor furnace.

Detailed Furnace Installation Variations - https://www.CentralBoiler.com/explore/furnace-installation/

View and/or download PDFs to assist in installation of your outdoor furnace. Information and examples regarding pumps, foundations, chimneys and support structures, ThermoPEX piping, and example configurations for a variety of heating configurations.

Online Support Center

https://www.CentralBoiler.com/Support/

Enter your furnace serial number and find articles, answers, parts and more information.

Online Support Center

CentralBoiler.com/Support

Enter your serial number for information specific to your furnace.

Write your ***serial number*** here for future reference.

YouTube

Videos to supplement the Owner's Manual are available at
www.youtube.com/centralboilerinc
Watch tips on initial startup, testing system water and more.

EPA RESOURCES

EPA's Burnwise Program - https://www.epa.gov/burnwise

How to Use a Moisture Meter Video - http://www.youtube.com/watch?v=jM2WGgRcnm0

EPA offers tips on how to properly use a moisture meter to test firewood before using in a wood-burning stove or fireplace. Wet wood can create excessive smoke which is wasted fuel.

Split, Stack, Cover and Store Video - http://www.youtube.com/watch?v=yo1--Zrh11s

EPA offers four simple steps to properly dry firewood before using in a wood-burning stove or fireplace. Wet wood can create excessive smoke which is wasted fuel. Burning dry, seasoned firewood with a moisture content of 20% or less can save money and help reduce harmful air pollution.

Resources to Help Burn Wood the Right Way - https://www.epa.gov/burnwise/resources-help-you-burn-wood-right-way-and-promote-burn-wise-program
Find tip sheets, brochure and flyers, and more information.

NOTE: The warranty can be voided by operating a residential hydronic heater in a manner inconsistent with the Owner's Manual.

INSTALLATIONS IN MASSACHUSETTS:

1. All installation components must be products approved in the Commonwealth of Massachusetts by the Gas and Plumbing Board.
2. The maximum run of tubing from the water heater to a fan coil is 50 linear feet.
3. Persons operating this hydronic heater are responsible for operation of the hydronic heater so as not to cause a condition of air pollution as defined in 310 CMR 7.01(1).

Labeling and Terminology

The outdoor furnace and this guide use the following terms and symbols to bring attention to the presence of hazards of various risk levels and important information concerning the use and maintenance of the outdoor furnace.

⚠ DANGER

This symbol and text indicate an imminently hazardous situation which, if ignored, will result in death or serious injury.

⚠ WARNING

This symbol and text indicate the presence of a hazard which can cause severe personal injury or death to an operator or bystander, or substantial property damage if ignored.

⚠ CAUTION

This symbol and text indicate the presence of a hazard which can cause minor personal injury or property damage if ignored.

NOTE: Indicates supplementary information worthy of particular attention relating to installation, operation, or maintenance of the outdoor furnace but is not related to a hazardous condition.

Be sure to follow all instructions and related precautions as they are meant for your safety and protection. Store this manual in a readily accessible location for future reference.

Important Precautionary Information

Be sure to read carefully and understand these precautions before, during and after the installation, operation and maintenance of the furnace.

NOTE: All operations must be in accordance with local and state codes which may differ from the information in this manual.

⚠ CAUTION

This outdoor furnace is not intended to be the only source of heat. In the event of a prolonged power failure, a generator may be used to prevent lines from freezing. Should the outdoor furnace be left unattended, run out of fuel or require service, an alternate heating source in the building being heated should be in place to prevent damage caused by freezing.

⚠ WARNING

This outdoor furnace and/or chimney is not intended or safety tested to be used or installed in a building where contents of that building could be damaged or where a financial loss could occur from smoke, soot, fire or water.

⚠ WARNING

The outdoor furnace vent cap must fit loosely on the vent opening. Do not force the cap down or try to seal it tightly onto the vent pipe. Do not extend or restrict the vent pipe or opening. DO NOT ALLOW THE OUTDOOR FURNACE TO BE PRESSURIZED.

⚠ WARNING

Be sure the outdoor furnace is filled with water before firing. Never fire the outdoor furnace when the water level is more than 1" (2.5 cm) below the FULL mark on the sight gauge. MolyArmor 350 must be added before the initial fill (see Water Quality and Maintenance).

⚠ WARNING

Disconnect the electrical power to the outdoor furnace before replacing an electrical component.

⚠ WARNING

Do not attempt service inside the electrical control panel without first disconnecting the electrical power at the main power source.

NOTE: Any electrical installation should be done by a qualified installer in accordance with applicable codes.

⚠ WARNING

Allow the outdoor furnace to thoroughly cool and completely clean out the firebox before draining water from the outdoor furnace. If the water in the outdoor furnace ever boils, be sure to check the water level and restore to full. If water is added, the proper level of MolyArmor 350 Corrosion Inhibitor (p/n 2900630) must be maintained.

⚠ WARNING

When cleaning the outdoor furnace, be careful not to spill any coals.

⚠ WARNING

ALWAYS store ash in a covered non-combustible container.

⚠ WARNING

Maintain the following clearances from combustibles for the furnace installation:

- **44" (112 cm) from the back**
- **12" (30.5 cm) from the sides**
- **48" (122 cm) from the front**
- **18" (46 cm) from chimney inspection cover**
- **The foundation must be noncombustible**

⚠ WARNING

Do not allow combustible materials (straw, hay or wood) near the outdoor furnace. Keep the perimeter of the outdoor furnace clear and clean.

⚠ WARNING

For fire safety, keep all combustible materials at least six feet (two meters) away from the outdoor furnace, especially around the door area. Debris of wood chips and other combustibles in the area may be easily ignited if a hot coal is spilled out of the firebox and left unnoticed.

⚠ WARNING

The firebox door must be closed and latched at all times except when filling the firebox with wood. Leaving the firebox door open may lead to a runaway fire. In the event of a runaway fire, close the firebox door. In the event of a chimney or soot fire, close the firebox door and make sure power is off to the outdoor furnace.

⚠ WARNING

All covers must be maintained at all times except during maintenance, inspection and service.

⚠ WARNING

When opening the firebox door, the door switch will shut off the primary air actuator motor while the firebox door is open. Do NOT disable the door switch.

NOTE: The prohibition against burning these materials does not prohibit the use of fire starters made from paper, cardboard, saw dust, wax and similar substances for the purpose of starting a fire in an affected wood heater.

NOTE: Do not use chemicals or fluids to start the fire. Use kindling or gas-fired wood ignition option to start an initial fire.

NOTE: The sight gauge valve should always be closed, except when checking water level. Water will automatically drain from the sight gauge tube when the valve is closed. Remember that this type of valve requires only 1/4 turn to open or close.

⚠ WARNING

This heater is designed to burn natural wood only. DO NOT BURN: unseasoned wood, treated wood, colored paper, cardboard, trash or garbage.

NOTE: Chloride or sulfurous gases can be generated if plastic or rubber is burned and will mix with the moisture from the wood and form hydrochloric or sulfuric acids in the firebox, creating corrosion.

NOTE: This outdoor furnace is not to be used with an automatic stoker.

⚠ CAUTION

This outdoor furnace is not to be connected to a chimney flue serving another appliance.

⚠ WARNING

When adding wood to the firebox, be careful not to get pinched between the wood and the door frame, or any part of the outdoor furnace. Use extreme care with large pieces of wood that may be difficult to handle.

NOTE: At least one circulation pump must run continuously to ensure proper operation of the outdoor furnace.

NOTE: A 40-watt appliance light bulb is recommended if replacement is necessary. Do not install a bulb in excess of 60 watts.

NOTE: In case of a power outage, either a generator or 12V battery with a power inverter can be used to provide electricity to operate the outdoor furnace.

Foundation

The outdoor furnace may be installed directly on stable, level ground without the necessity of a foundation, although installing the outdoor furnace on a foundation offers many advantages. The outdoor furnace is less likely to move due to frost heaving. A foundation keeps the area directly around the outdoor furnace free of standing water and can help to keep unwanted pests out. It can also raise the furnace up to provide a more comfortable height of the firebox door opening.

If the ground is unstable, one option is to use patio blocks under the perimeter of the base. Another option is to pour a concrete foundation.

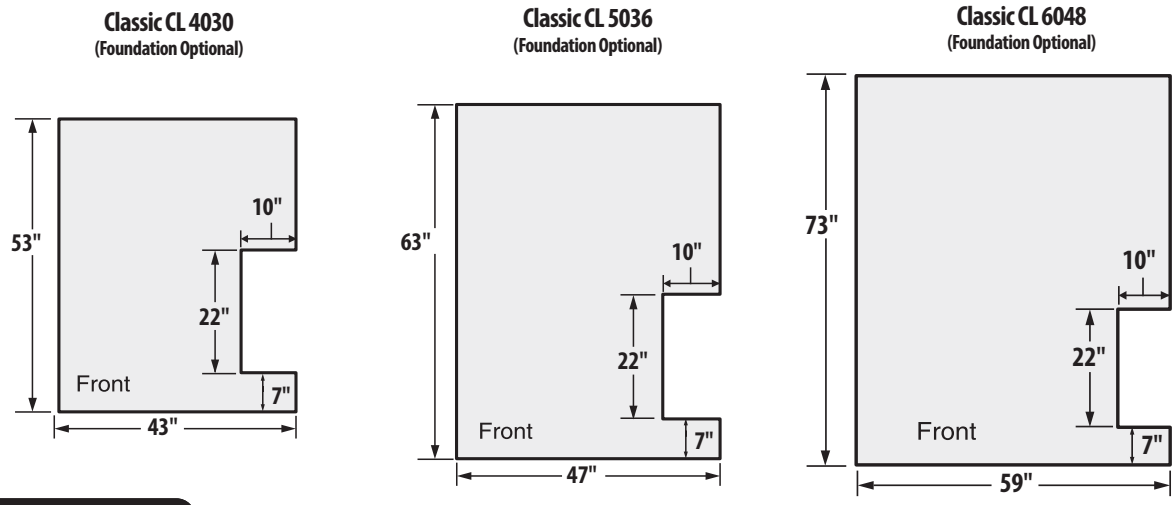
To install the outdoor furnace on a concrete foundation, refer to the illustration for dimensions and for the location of the hollowed-out area for each model. A 4" to 6" (10 to 15 cm) thick concrete slab works well; however, a thicker slab may be used to obtain the desired door opening height.

If the area for the concrete slab is unstable and/or affected by frost heaving, consider installing 2" closed-cell insulation beneath the front portion of the slab and under the area of the ground used for walking.

⚠ CAUTION

Do not use any combustible materials for the foundation.

NOTE: The installation surface or foundation must be noncombustible. The hot supply and return lines must also be protected from possible exposure to sunlight, fire or physical damage that may be caused by an occurrence outside the outdoor furnace enclosure. Foundations may consist of concrete, crushed rock or patio blocks.



⚠CAUTION
Do not use any combustible materials for the foundation.

Outdoor furnace must be installed on a noncombustible surface or foundation that incorporates an enclosure that will prevent supply and return lines from possible exposure to sunlight, fire, or physical damage that may be caused by an occurrence outside the outdoor furnace enclosure. Foundation may consist of concrete, crushed rock, or patio blocks.

Access to Ports on Outdoor Furnace

Ports are provided that allow mounting circulation pumps on the outdoor furnace. Refer to the illustrations in this section for proper supply and return line and pump installations for your model.

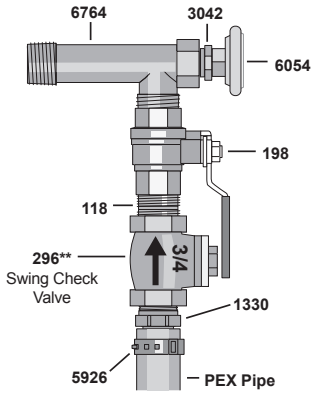
NOTE: The Installation Guide provides more information on pump selection. For even more detailed information, see the Hydronic Component Selection Guide (p/n 2482), available from your Central Boiler dealer.

NOTE: At least one circulation pump must run continuously to ensure proper operation of the outdoor furnace.

Classic CL 4030/5036 – 1-Pump Configuration

Return Side View

For illustration purposes only.



****For 1-1/4" lines use p/n 5871.**
Central Boiler recommends installing swing check valves on the return lines to eliminate reverse flow.

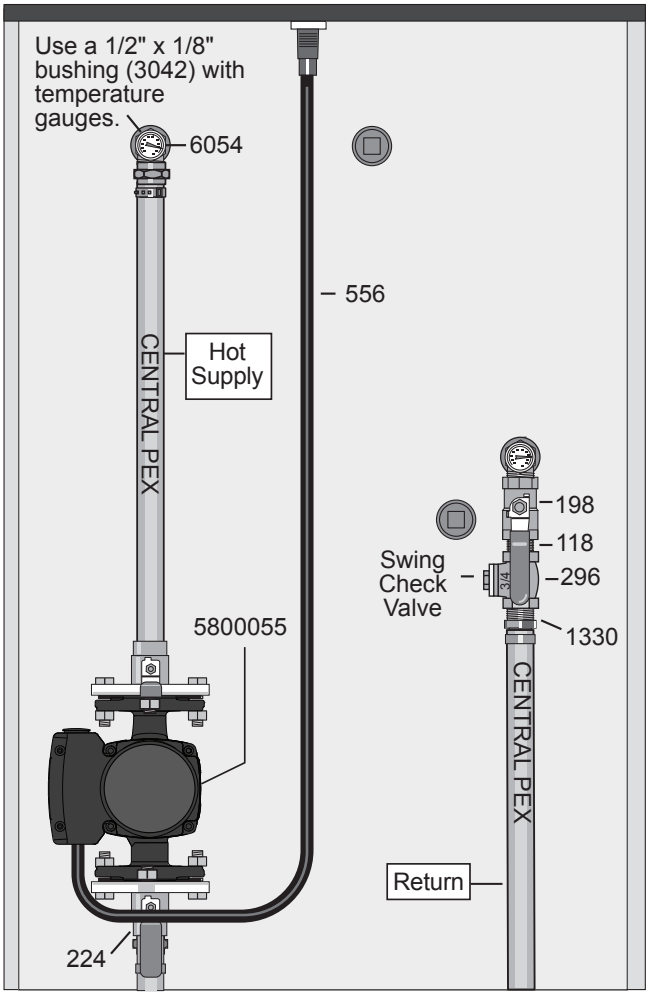
Power disconnect shuts off all power including pumps.

1 - Pump Parts List*

Qty	p/n	Description
1	118	3/4" Close Nipple
1	5800055	Pump
2	198	3/4" Ball Valve
1	224	3/4" Isolation Flange Kits
1	296	3/4" Swing Check Valve
1	556	Power Supply Cord, 32"
2	1330	3/4" x 1" MPT to PEX
2	3042	1/2" x 1/8" Bushing
2	6054	Temperature Gauge
4	5926	1" PEX Clamp Crimp Ring
1	6593	Grounding Rod Kit

NOTE

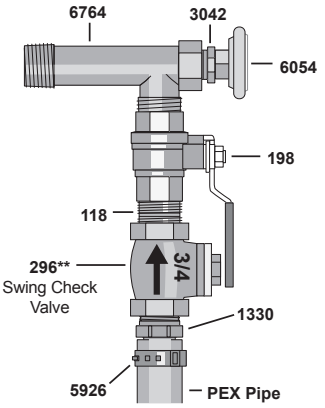
A Grounding Rod Kit (p/n 6593) must be installed with every furnace.



Classic CL 6048 – 3-Pump Configuration

Return Side View

For illustration purposes only.



****For 1-1/4" lines use p/n 5871.**
Central Boiler recommends installing swing check valves on the return lines to eliminate reverse flow.

Power disconnect shuts off all power including pumps.

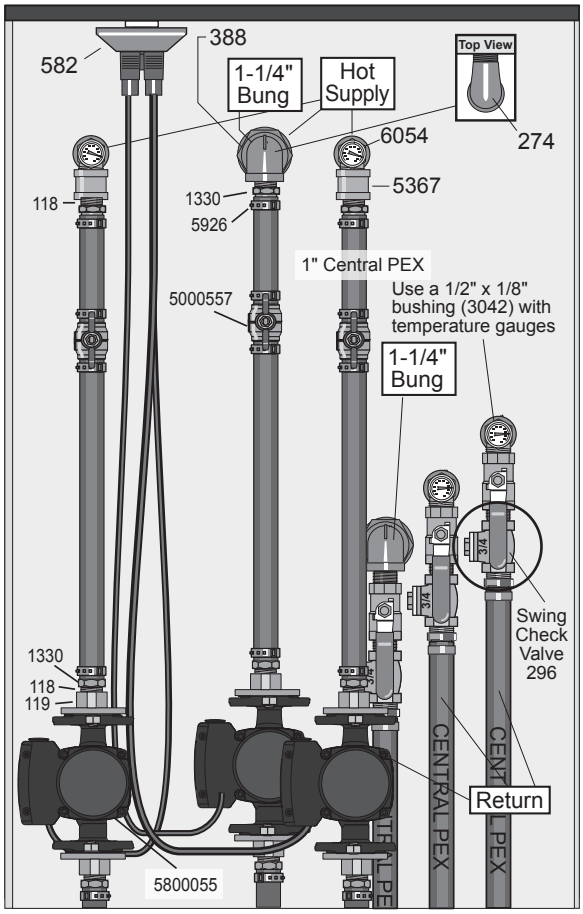
Parts List*

Qty	p/n	Description
3	118	3/4" Close Nipple
3	119	Pump Flange Kit, 3/4"
12	5926	Clamp Crimp Ring, 1"
2	274	3/4" Black 90˚ Street Elbow
3	296	3/4" Swing Check Valve
2	388	1-1/4" x 3/4" Bushing
3	5000557	Ball Valve, Full Port, PEX 1"
3	556	Power Supply Cord, 32"
1	582	6 Outlet Converter
6	1330	3/4" x 1" MPT to PEX
4	3042	1/2" x 1/8" Bushing
2	5367	3/4" Brass Coupling
4	6054	Temperature Gauge
1	6593	Grounding Rod Kit
2	6764	3/4" x 3/4" x 1/2" Offset Tee
3	5800055	Pump, UPMS 20-58 F

*Parts and accessories sold separately.
Pump size may vary.

NOTE

A Grounding Rod Kit (p/n 6593) must be installed with every furnace.



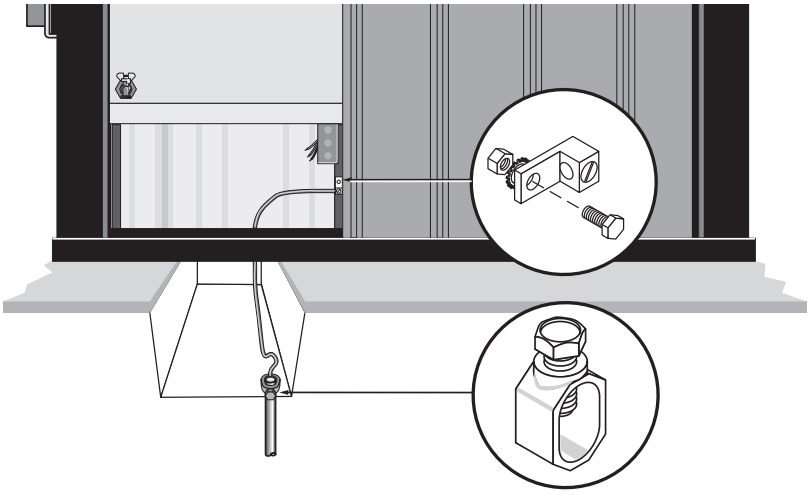
Ground Rod Kit

The outdoor furnace must be electrically bonded to ground in accordance with the requirements of the authority having jurisdiction or, in absence of such requirements, with the National Electrical Code, ANSI/NFPA 70 and/or the Canadian Electrical Code Part 1, CSA C22.1 Electrical Code.

Install a Ground Rod Kit (p/n 6593) and connect it to the outdoor furnace.

1. In the water line trench near the outdoor furnace, drive the ground rod into the ground until the top of the ground rod is below the ground surface.
2. Route the ground wire from the ground rod under the outdoor furnace base and over to the frame of the outdoor furnace.
3. Secure the ground terminal with a cap screw (1/4" x 3/4"), star washer and nut. Secure the ground wire to the terminal; then secure the ground wire to the ground rod with the clamp. Tighten all hardware securely.

NOTE: A hole for the ground terminal has been pre-punched in the outdoor furnace base near the pumps.



Detailed Furnace Installation Variations

Visit CentralBoiler.com to access a library of detailed illustrations for connecting to a wide variety of existing heating systems and for other heating options.

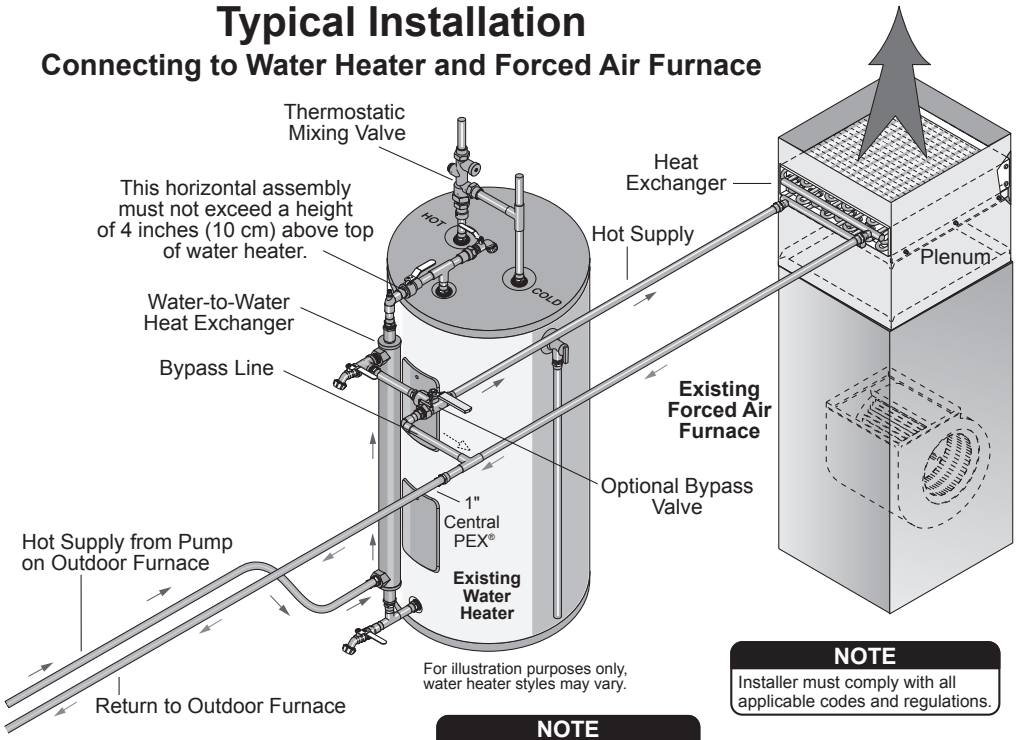
Furnace Installation - Connecting to Your Existing System

A common installation is to connect the outdoor furnace to an existing water heater and then to an existing forced air system. A water-to-air heat exchanger is mounted in the plenum or duct work of the existing furnace. Heated water from the outdoor furnace either continuously flows through the water-to-air heat exchanger or is diverted through a 3-way zone valve. When the thermostat senses the need for heat, the fan on the existing furnace forces air through the heat exchanger, transferring heat throughout the existing ductwork.

NOTE: There are numerous ways to connect to your heating system. Refer to the Central Boiler Outdoor Furnace Installation Guide for other installations.

Typical Installation

Connecting to Water Heater and Forced Air Furnace



For illustration purposes only, water heater styles may vary.

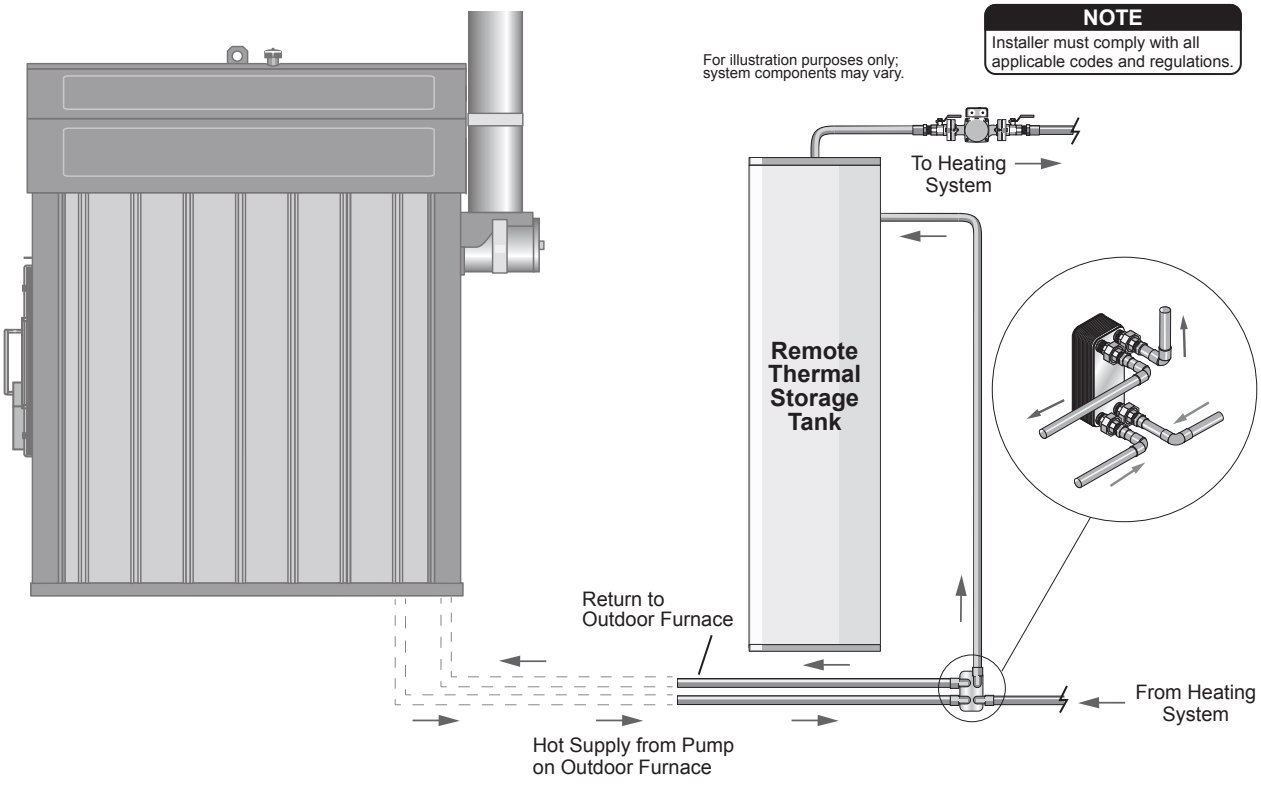
NOTE
Installer must comply with all applicable codes and regulations.

NOTE: A certified electrician must do the electrical installation.

NOTE
Any electrical installation should be done by a qualified installer in accordance with applicable codes.

Remote Thermal Storage Installation

Connecting to Remote Thermal Storage Tank



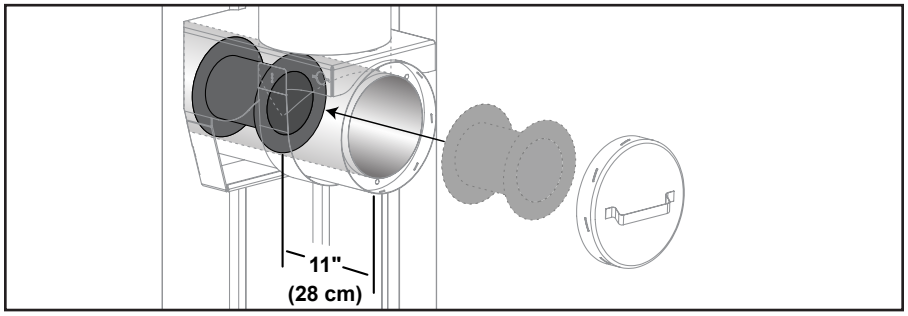
NOTE
Installer must comply with all applicable codes and regulations.

Outdoor Wood Furnace Best Burn Practices

1. Read and follow all operating instructions supplied by the manufacturer.
2. FUEL USED: Only those listed fuels recommended by the manufacturer of your unit. Never use the following: trash, plastics, gasoline, rubber, naphtha, household garbage, material treated with petroleum products (particle board, railroad ties and pressure treated wood), leaves, paper products, and cardboard.
3. LOADING FUEL: For a more efficient burn, pay careful attention to loading times and amounts. Follow the manufacturer's written instructions for recommended loading times and amounts.
4. STARTERS: Do not use lighter fluids, gasoline, or chemicals.
5. CHIMNEY RECOMMENDATIONS: In higher populated areas, extend the chimney to a height above the roofs of surrounding buildings.
6. Always remember to comply with all applicable state and local codes.

Be considerate of neighbors when operating your furnace. If you use your furnace in the summer months, be certain your chimney exhaust is not adversely affecting neighbors with open windows.

NOTE: 4030 Models Only - Remove and discard the shipping tape securing the chimney restrictor; then position the chimney restrictor about 11" in from the end of the chimney tee as shown.



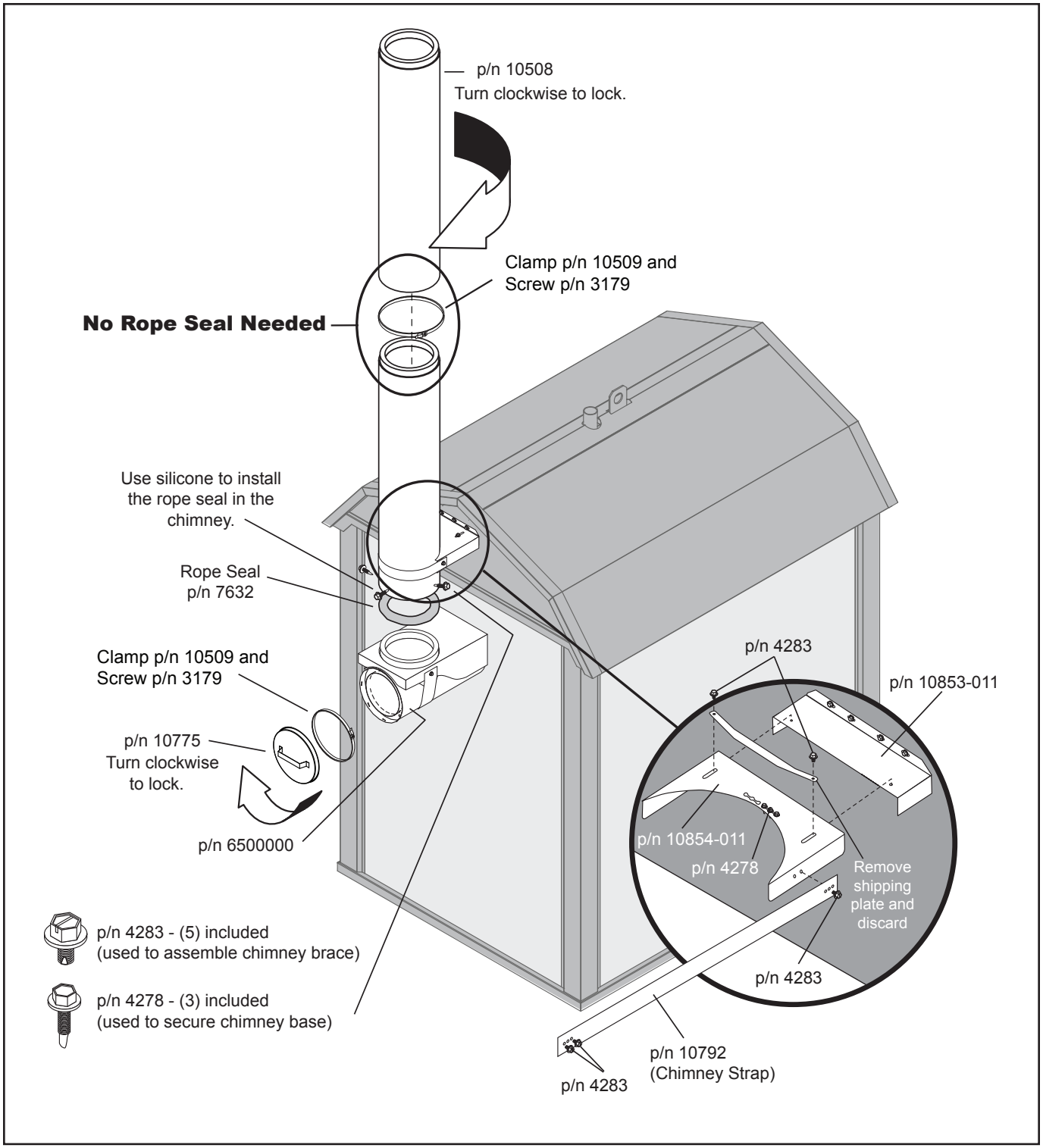
Chimney Recommendations

In higher populated areas, extend the chimney to a height above the roofs of surrounding buildings. Use Central Boiler Chimney Extensions when extending the chimney. When only the standard eight feet (2.4 m) of chimney are used, the sections must be secured at the connection joint with four (4) screws to stabilize the extension.

Chimney Installation

NOTE: Instructions for installing chimney sections and the chimney brace assembly are also provided with the furnace.

1. Remove the two Slotted Hex Screws (p/n 4283) securing the Shipping Plate to the Chimney Brace Assembly.
2. Discard the Shipping Plate and remove the three Self-Tapping Screws (p/n 4278) from the slot in the chimney brace assembly. These screws are used to assemble the chimney sections.
3. Assemble the Chimney Brace Slide (p/n 10854-011) to the Chimney Rafter Brace (p/n 10853-011) with the two Slotted Hex Screws removed in step 1. Do not tighten the screws.
4. Remove the single Slotted Hex Screw securing the Chimney Strap (p/n 10792) to the Chimney Brace Slide.
5. Assemble the chimney as shown.
6. Push the chimney against the Chimney Brace Slide; then wrap the Chimney Strap (p/n 10792) around the chimney and secure with the Slotted Hex Screw.
7. Level the chimney front to back; then tighten the screws on the Chimney Brace Slide.
8. Secure the base of the chimney with three Self-Tapping Screws (p/n 4278).


p/n 10508
Turn clockwise to lock.
Clamp p/n 10509 and
Screw p/n 3179
No Rope Seal Needed
Use silicone to install
the rope seal in the
chimney.
Rope Seal
p/n 7632
Clamp p/n 10509 and
Screw p/n 3179
p/n 10775
Turn clockwise
to lock.
p/n 6500000
p/n 4283
p/n 10853-011
p/n 10854-011
p/n 4278
Remove
shipping
plate and
discard
p/n 4283
p/n 10792
(Chimney Strap)
p/n 4283
p/n 4283 - (5) included
(used to assemble chimney brace)
p/n 4278 - (3) included
(used to secure chimney base)

If extensions are added to the standard eight feet (2.4 m) of chimney, the chimney should be reinforced appropriately. The illustration shows chimney support recommendations when three or more sections are used. When adding sections of chimney, make sure that there is nothing within the fall zone of the chimney that could be damaged. If something is located within the fall zone and cannot be removed, guy wires or braces may need to be installed to prevent a falling chimney from causing damage.

NOTE: If more than three 4-foot (1.2-m) sections of chimney are used, a support (e.g., a pole, pipe or other structural support) may be installed from the ground that can withstand wind. Other reinforcement recommendations are shown.

NOTE: For chimney extensions or chimney replacement, use only genuine Central Boiler chimney components. Parts are available from an authorized Central Boiler dealer.

The installation of a spark arrestor is recommended, particularly where there are dry conditions or where there is combustible material near the unit, unless the installation of a spark arrestor is prohibited by local requirements.

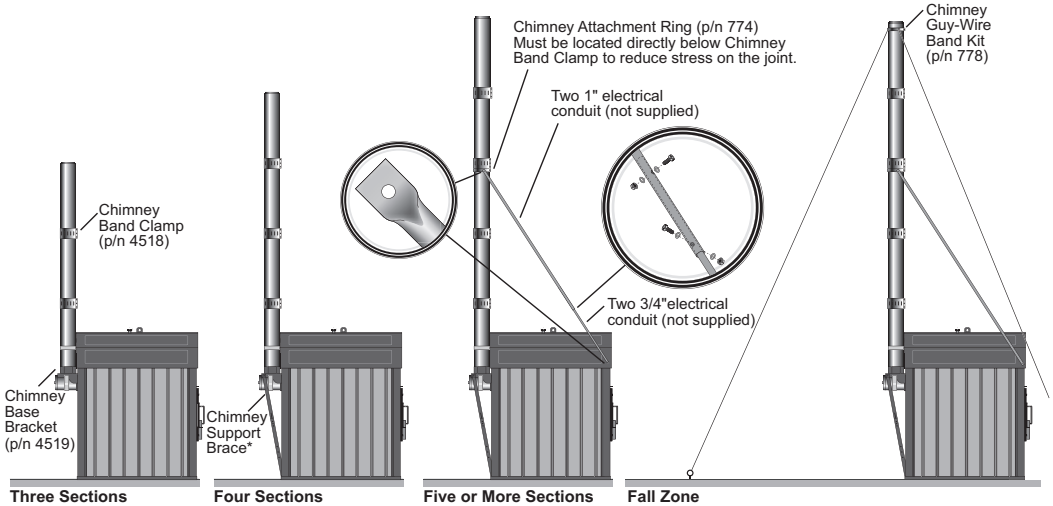
NOTE: If the screen is left on the chimney cap, the spark arrestor should be inspected and cleaned as needed.

Use common sense to avoid potential fires, including exercising caution when disposing of ashes, cleaning and refueling. Keep all highly combustible materials (e.g., gasoline, propane, leaves, pine needles, etc.) away from an operating unit at all times. Take special precautions in windy conditions.

NOTE: You may need to increase the chimney height if conditions occur that force exhaust to low levels.

Chimney Reinforcement Recommendations

for CL 4030, CL 5036, CL 6048, CL 7260 and Pallet Burner



Three Sections
When three sections of chimney are being used a Chimney Band Clamp Kit (p/n 4518) for each joint and a Chimney Base Bracket Kit (p/n 4519) are recommended.

Four Sections
When four sections of chimney are being used a Chimney Band Clamp Kit for each joint, a Chimney Base Bracket Kit and a Chimney Support Brace Kit* are recommended.

Five or More Sections
When five or more sections of chimney are being used a Chimney Band Clamp Kit for each joint, a Chimney Base Bracket Kit, a Chimney Support Brace Kit and a Chimney Attachment Ring (p/n 774) are recommended.

Fall Zone
If objects are placed in the fall zone of the chimney, a Chimney Guy-Wire Band Kit (p/n 778) or additional bracing is recommended.

*Chimney Support Brace Chart	
p/n	Models
4554	CL 4030, CL 5036 & CL 6048
8402	CL 7260 & Pallet Burner

NOTE
- Additional bracing may be necessary in certain areas such as those subject to severe weather, winds, freezing rain, etc.
- Inspect all bracing bi-annually for integrity.

WATER QUALITY AND MAINTENANCE

Follow the steps provided here to add MolyArmor 350 and to fill the outdoor furnace system for the first time, or any time the system has been completely drained and needs to be refilled.

Before you fire the outdoor furnace for the first time, it is very important to perform the following important steps in order.

1. Test Supply Water

Test a sample of the supply water (makeup water) that will be used to fill the outdoor furnace (softened water is recommended). Test strips for testing pH are included in the water test kit which is provided with the outdoor furnace.

1. Collect a small sample of the water to be used to fill the outdoor furnace in a clean container.
2. Dip a test strip from the test kit in the water sample for **1 second** and remove. Shake off excess liquid (very important to prevent water bleed from one pad to the other). Compare the pH test pad to the color chart at **30 seconds**.
3. If the pH level is between 6.5 and 8.0 and there are no other known water quality problems, then the outdoor furnace may be filled with this water.
4. Water that has a pH level of less than 6.5 or greater than 8.0, or that has other known water quality problems, should not be used to fill the furnace. Instead, water should be supplied from a different source.

2. Check the Vent Cap

If the vent cap has been secured with a wire tie-down, the wire tie-down MUST be removed before operating the furnace. If the vent cap is held in place by a spring retainer, the spring retainer can be left in place. The vent cap must fit loosely over the outdoor furnace vent.

3. Check Heating System for Leaks

Close the valves on the outdoor furnace before checking the heating system for leaks.

⚠ CAUTION

Do not pressurize the outdoor furnace or damage could occur. Isolate the furnace when pressure testing by closing all of the valves on the outdoor furnace.

Pressure-test the entire plumbing heating system. Apply 50 psi (3.5 kg/cm^2) of air pressure for thirty minutes and closely monitor for any pressure loss. Inspect all fittings and hose ends for any signs of leakage using leak detection solution (leak soap); repair as necessary.

Release the pressure from the entire plumbing heating system and open the valves on the outdoor furnace.

4. Cover Supply and Return Lines

Backfill the trench for the supply and return lines. Enclose the area where the supply and return lines enter the outdoor furnace. Do not leave the PEX hot supply and return lines exposed to sunlight as exposure to UV rays will damage them.

5. Add MolyArmor through Vent Pipe

⚠ CAUTION

Avoid damaging your furnace and voiding your warranty. Add water treatment BEFORE adding water to the system. Water treatment in your outdoor furnace is just as important as the oil in a car's engine.

MolyArmor 350 Corrosion Inhibitor (p/n 2900630) gives optimum protection for the furnace water jacket and system parts when it is used to initially treat the water and is maintained at a minimum of 350 ppm of moly and pH level between 8.0 and 9.5.

NOTE: The recommended minimal treatment amounts are based on an average heating system with less than 50 feet of ThermoPEX, one heat exchanger in a forced-air furnace and a heat exchanger on a domestic water heater.

NOTE: If the system has a larger than normal water capacity, more MolyArmor 350 should be added at a recommended rate of 6.5 oz. (190 ml) per 10 gallons (37.8 liters) of system water. One gallon (3.78 liters) of MolyArmor 350 Corrosion Inhibitor will treat 200 gallons (757 liters) of system water.

MOLYARMOR 350 MINIMAL TREATMENT AMOUNTS	
Classic CL 6048	2.5 gallons
Classic CL 5036	1.5 gallons
Classic CL 4030	1.5 gallons

1. Add the recommended amount of MolyArmor 350 Corrosion Inhibitor (or more depending on the water capacity of the heating system) through the vent pipe on the outdoor furnace.

NOTE: Be sure to add enough MolyArmor 350 to obtain at least 350 ppm moly. There are no negative effects from adding more than the recommended amount of MolyArmor 350.

6. Fill Outdoor Furnace with Water and Purge Air

NOTE: If adding antifreeze to the system, refer to Adding Antifreeze to Outdoor Furnace System section for important information.

⚠ CAUTION

If using antifreeze, use only a nontoxic boiler-type antifreeze. It is imperative that the entire system contain at least 30% antifreeze concentration mixed with water that is 6.5 to 8.0 pH. Softened water is recommended, if available. Do not use reverse osmosis or deionized water that has very low pH. Be sure to adhere to all warnings and precautions on the antifreeze label.

NOTE: If the outdoor furnace is being filled with water when the temperature is below freezing, circulate the water immediately after filling to prevent freezing the water lines.

NOTE: The circulation pump(s) must be installed in the hot supply line(s).

NOTE: All air must be purged from the water lines when filling the system. Be sure to purge the air from each pump circuit from the outdoor furnace.

NOTE: All valves in the outdoor furnace system should be opened before starting this procedure.

1. Connect a garden hose to the water source to be used to fill the outdoor furnace. Purge the garden house of any impurities by running water through it until the water is clear.
2. Connect the hose to the drain valve on the outdoor furnace. Open the drain valve and fill with water to thoroughly mix the MolyArmor 350, which is heavier than water.

7. Immediately Start the Pump(s); then Heat the System Water to 185˚F (85˚C)

⚠ CAUTION

Be sure the outdoor furnace is filled with water before firing. Never fire the outdoor furnace when the water level is more than 1" (2.5 cm) below the FULL mark on the sight gauge.

NOTE: The sight gauge valve should always be closed except when checking water level. Water will automatically drain from the sight gauge tube. Remember that this type of valve requires only 1/4 turn to open or close.

1. Start the pump(s). Refer to Initial Fire Up - Start of Heating Season in the Owner's Manual to start the outdoor furnace. Bring the water temperature up to operating temperature (185˚F or 85˚C) for hours with the system circulating; then add water to the full mark. Continue to run the pump and circulate the water for 24 hours. If a multi-speed pump is used, set the pump on high.

NOTE: It is important to bring the water in the system up to operating temperature (i.e., 185˚F or 85˚C) immediately after filling the system and to circulate for at least 24 hours to kill bacteria. This also applies any time water is added to the system.

⚠ CAUTION

The water in the system may be hot. Use caution and the appropriate personal protective equipment (PPE) when checking for leaks.

2. Check the system for leaks. Inspect all fittings and hose ends for any signs of leakage. Use several dry paper towels and wrap them around and squeeze each fitting, valve and pipe connection. The paper towels will get wet even if there is a very small leak. Immediately repair any leaks to eliminate the need for adding water. If a screw-type clamp has been used, it may be possible to stop a very slow leak at a hose clamp by tightening the clamp after the system has warmed up and the poly becomes more pliable. It might also be necessary to install a second hose clamp with the screw positioned on the opposite side.

NOTE: After a week of operating, use the procedure in step 2 to check the system for leaks again.

NOTE: If water is ever added, it is important to bring the water in the system up to operating temperature (i.e., 185˚F or 85˚C) immediately. Refer to Water Quality and Maintenance in the Owner's Manual for water testing procedures. If indicated by test results, add MolyArmor 350 as required. Deterioration due to improper operation and/or maintenance is not covered by warranty.

8. Test the Treated System Water

After circulating the heated water in the system for 24 hours, test the treated system water for the recommended moly (at least 350 ppm) and pH level (between 8.0 and 9.5).

⚠ CAUTION

The water in the sight gauge may be hot. Use caution when obtaining a sample.

1. To obtain a system water sample, bend the sight gauge tube away from the outdoor furnace. Before collecting the sample, open the valve and drain about a quart of water from the sight gauge tube; then carefully fill the sample container without contaminating the sample. **Be sure to properly install the sight gauge tube and close the valve when finished.** The water in the sight gauge valve and tube will drain when the valve is closed.
2. Dip a test strip from the test kit in the water sample for **1 second** and remove. Shake off excess liquid (very important to prevent water bleed from one pad to the other). Compare moly test pad to the color chart within 10 seconds. The moly level must be **350 ppm or more**.
3. Compare pH test pad to the color chart at **30 seconds**. The pH of the treated water should be **between 8.0 and 9.5**. If the pH is higher than 10.0, dilute the water in the furnace by draining approximately 1/4 of the water from the furnace. Add MolyArmor 350 and refill with water that has a pH between 6.5 and 8.0. After refilling, circulate the water with furnace at operating temperature for at least 24 hours and test to confirm the moly is **350 ppm or more and the pH is between 8.0 and 9.5.**

Send in Initial Water Sample

NOTE: It is your responsibility as owner to ensure that your water sample information is accurate and that you submit your samples on a timely basis as required by the warranty for your stainless steel outdoor furnace. Failure to do so will result in a one year warranty.

Your owner's packet contains a Water Sample Kit for submitting an initial water test and an informational sheet entitled Submitting Water Samples for Your Titanium Series Outdoor Furnace. Follow the instructions to collect and submit your initial water sample. Additional Water Samples Kits are available from your Central Boiler dealer.

NOTE: Your water sample will be tested and must indicate acceptable levels of water treatment to qualify for the 25 year warranty.

Initial Water Sample

You are required to submit an initial water sample within 30 days of purchase of your outdoor furnace.

Deferred Installation

If your outdoor furnace is not being installed within 30 days of purchase, you must email **service@centralboiler.com** with your name and your furnace serial number. When the furnace installation is complete, send the water sample **within 10 days of the initial fill**.

Check Status of Water Sample

If you have provided an email address, you will receive an email with the results of your water test.

If you did not provide an email address, you will be notified by mail ONLY if your water sample test is NOT ACCEPTABLE. If your water sample test is acceptable, you will NOT be notified with a mailed letter. You can however check the status of your water test online.

Check the status of your water sample at:

CentralBoiler.com/w25

You will need your serial number and postal code. Please allow 2-3 weeks for results to be available. For a deferred installation, your status will be available approximately 10 days after you email the deferred installation message.

Annual Water Sample

You are required to submit a water sample yearly prior to the anniversary date of your initial installation. Record the anniversary date below:

_____

DATE OF INSTALLATION

System Maintenance

Maintaining the corrosion inhibitor at a proper level is imperative to preventing corrosion failures. To qualify for the 25 year warranty, you must follow the instructions in the Owner's Manual concerning initial water treatment and maintenance. When the outdoor furnace is initially put into service, and once a year after that, you are required to submit a water sample to confirm proper maintenance and water treatment. No warranty claim can be approved unless the outdoor furnace registration and the acceptable levels of water treatment are on file at Central Boiler.

Test the pH and moly levels after the first three months and every six months thereafter, and after adding water to furnace.

NOTE: If using antifreeze, test the pH and Moly levels once each month. If the bacterial issues occur, the pH will decrease.

Water Test Kits and Test Results

DATE	pH LEVEL	MOLY LEVEL

Record the results of pH and Moly level tests in the table above.
If additional space is needed, record on a separate sheet of paper.

It is very important to keep record of water test results (including the date, pH and Moly level). The pH and Moly test strips and indicator have a shelf life of approximately two years that can affect their accuracy. Test kits should be stored in a dry area at room temperature to obtain maximum accuracy over a longer period of time.

Biological contamination can occur if the furnace is not heated up to 185˚F immediately after filling it with inhibitor and water as directed.

NOTE: It should not be necessary to add water to the outdoor furnace more frequently than once every twelve months. If it is more frequent, either there is a leak in the system or the outdoor furnace is boiling because of improper operation or maintenance (see Troubleshooting Section in the Owner's Manual). Be sure to locate and repair the problem immediately. Frequently adding water can cause deterioration in the water jacket. ANY time water is added to the system, it is extremely important to bring the water temperature up to operating temperature (185˚F) as soon as possible, even if it is during the off-season. Failure to bring the water in the system up to operating temperature immediately after filling the system can allow bacteria present in the water to multiply and may increase the potential for corrosion in the system.

If the test indicates a significantly lower-than-recommended pH level (below 8.0), add MolyArmor to increase the pH level.

POST HEATING SEASON MAINTENANCE

The water should be left in the outdoor furnace if the outdoor furnace is not being used for an extended period of time.

1. Refer to the Preventive Maintenance Schedule for a list of operations to perform.
2. Shut off the power supply to the outdoor furnace.
3. Place a cover over the chimney to keep rain from entering the outdoor furnace. Clean and oil the chimney flue to the firebox.

Draining Treated System Water

MolyArmor 350 is composed of common materials. Molybdenum compounds characterized as nontoxic in US Public Health Bulletin 293, by the Federal Hazardous Substances Labeling Act, and by the Occupational Safety and Health Act. However, in keeping with good safety and environmental practices, dispose furnace water in accordance with federal, state and local regulation. Unless regulation prohibits, you may drain the outdoor furnace to a home septic system. If doing so, however, be careful not to overflow the septic system.

Do not drain the outdoor furnace in such a manner that the drain water could in any way contact surface water, stream, river, estuary (where a river meets a sea), lake, pond, ocean or other types of waters.

Do not drain to any location within 50 feet (15 meters) of any water well.

Flushing the System

If the system water is brown or orange, it is an indication that the corrosion inhibitor level has not been maintained correctly and corrosion is present in the water jacket. Sludge Conditioner (p/n 166) can be used by circulating the recommended amount through the furnace **for one week** to help clean some of the corrosion from inside the water jacket before flushing, draining and refilling with water and the correct amount of MolyArmor 350.

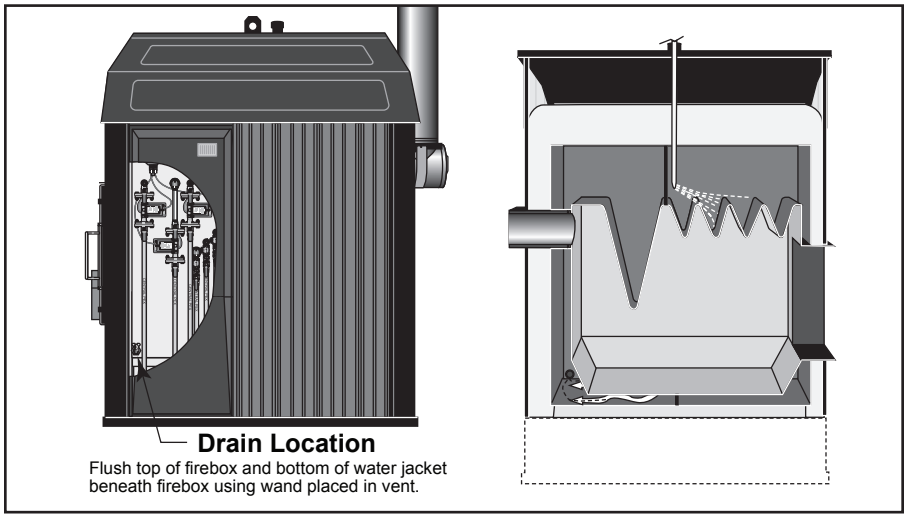
NOTE: Use one unit of Sludge Conditioner per 200 gallons of system water.

1. De-energize the pump(s) and close the supply and return valves on the outdoor furnace. Remove the inspection panel and insulation covering the drain to gain access to the drain valve. Remove the cap and connect a hose to the drain.

2. Open the drain to drain the system; then flush the top of the firebox and bottom of the water jacket beneath the firebox using a wand placed in the vent.

⚠ CAUTION

Completely clean out the firebox before draining water from the outdoor furnace.



3. Close the drain valve securely and replace the cap on drain after flushing the outdoor furnace.

4. Add recommended amount of MolyArmor 350.

5. Fill the outdoor furnace following the procedure in Finalizing the Installation in the Installation Guide. Start the pump(s) and bring the water temperature up to operating temperature (185˚F) for 24 hours with the system circulating to thoroughly mix the MolyArmor 350.

NOTE: ANY time water is added to the system, it is extremely important to bring the water temperature up to operating temperature (185˚F) as soon as possible, even if it is during the off-season. Failure to bring the water in the system up to operating temperature immediately after filling the system can allow bacteria present in the water to multiply, which may increase the potential for corrosion in the system.

6. Insulate the area using a mat of fiberglass insulation.

7. Install the inspection panel and secure with self-tapping screws.

Adding Antifreeze to Outdoor Furnace System

If using other antifreeze, use ONLY uninhibited, undyed, "raw" propylene glycol industrial grade with softened water and add the correct amount of MolyArmor 350 to achieve 350 ppm moly and 8.0 to 9.5 pH levels. Some distributors call this type of antifreeze PGI (shorthand for Propylene Glycol Industrial grade).

Most outdoor furnaces are installed **without** antifreeze when an existing heating system is in place and there is no anticipation of leaving the outdoor furnace unattended for extended periods of time (10 days or more). If the building being heated has an alternate heat source, system water may be kept from freezing by running the circulating pump(s) and drawing heat from the existing furnace or boiler in the home or building.

To prevent freezing if the outdoor furnace is not fired for extended time periods or if lengthy power outages are anticipated during cold weather, a nontoxic propylene glycol may be used in the system. Some types of antifreeze that contain various inhibitors have been known to create problems like coagulation and jelling. To prevent potential problems, **do not use propylene glycol that is premixed with inhibitors**. MolyArmor 350 is compatible with (raw) propylene glycol. It is important to use MolyArmor 350 with straight propylene glycol for corrosion protection. If adding antifreeze to the system, it is imperative that the entire system contain **at least 30% antifreeze concentration mixed with water that is 6.5 to 8.0 pH. Softened water is recommended, if available. Do not use reverse osmosis or deionized water that has very low pH.** Bacterial growth is likely to occur with low antifreeze concentrations and can cause corrosion in the furnace water jacket and/or clogging of heat exchangers. To confirm the antifreeze solution is adequate and to kill bacteria, immediately heat the system up to 185˚ F, allow the pumps to circulate for at least 24 hours and then obtain a sample of the system water. Using an antifreeze tester, the solution must be protected to 10˚F (-12˚C) or below.

NOTE: If using antifreeze, test the pH and Moly levels once each month. If the bacterial issues occur, the pH will decrease.

NOTE: Be sure to adhere to all warnings and precautions on the antifreeze label.

NOTE: Do not use automotive or RV types of antifreeze.

Wood Selection and Preparation

Before You Start Operating Your Classic Outdoor Wood Furnace

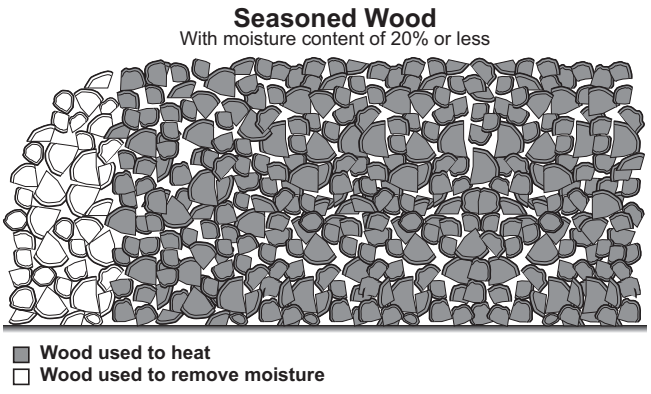
Be sure to read carefully and observe all of the information in the entire Owner's Manual.

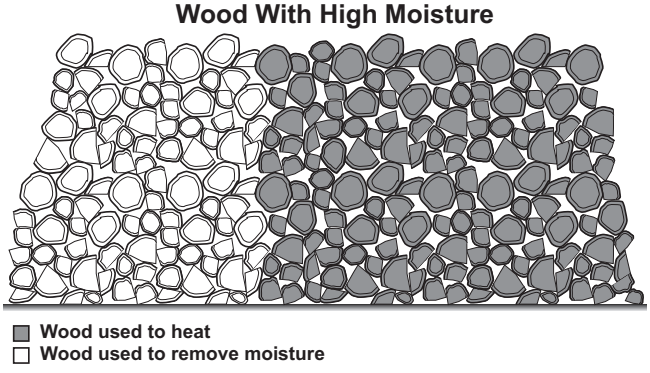
If any questions arise that cannot be answered by the information in this manual, be sure to contact your dealer.

For the best results, it is best to burn seasoned split wood. However, it may be possible to burn some unsplit wood with the split wood depending on quality, size, moisture content and wood type. Properly seasoned wood has a moisture content of 20% or less. It is darker, has cracks in the end grain, and sounds hollow when smacked against another piece of wood. Most wood needs to be split to dry down to 20% within a year. Wood between 4" and 8" (10 and 20 cm) in diameter works well in most cases. Pieces of wood that are too large can reduce output capacity because they burn slower.

- Wood that works well in most cases:
  - Is between 4" and 8" (10 and 20 cm) in diameter
  - Is approximately 60-70% of the length of the firebox
  - Typically weighs 10-15 pounds per cubic foot for heavy heat loads
- Pieces of wood that are too large can reduce output capacity because they burn slower. Wood that is too long can cause bridging.
- Seasoned wood burns more efficiently, minimizes the amount of creosote formation and reduces emissions.
- Maintain a quantity of smaller, drier pieces of wood for relighting the fire if the wood load is burned very low or becomes completely empty.
- Green wood contains about 50% moisture by weight. Energy is required to heat the wood and evaporate the moisture - energy which could have been used to provide heat for the home. The illustration below shows that burning drier, seasoned wood provides more energy for heating your home compared with burning green, unseasoned wood that uses more energy to evaporate the moisture and provides less energy for heating your home.

NOTE: Do not store wood within the outdoor furnace installation clearances or within the spaces required for fueling, ash removal and other routine maintenance operations.





Operating Instructions

Initial Fire Up - Start of Heating Season

NOTE: These procedures apply to initial firing at the start of the heating season.

⚠ CAUTION

Do not burn plastic, garbage, treated wood or fuels not listed for this outdoor furnace.

NOTE: Before firing the outdoor furnace for the first time, make sure the proper amount of MolyArmor 350 has been added and the water level is 1" below the full mark on the sight gauge, as the water will expand when heated.

The outdoor furnace is equipped with a digital temperature controller that closes the outdoor furnace damper when the water temperature reaches the controller's setting. The setting can be adjusted so the outdoor furnace will operate with a water temperature within a range of 150°F-195°F.

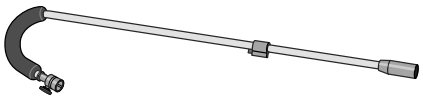
Adjusting Water Temperature

The high water temperature setting can be adjusted anywhere between a range from 150ºF-195ºF. At 10˚F less than the temperature setting (10˚F being the thermostatic differential), the controller will start the draft cycle by opening the damper (and activating the optional draft inducer, if so equipped). When OUT is indicated on the display, the outdoor furnace is calling for heat.

The controller has been preset at the factory to 185ºF. To change the setting (because of a higher than normal heat load or cooler weather) use the following procedure.

NOTE: To reduce condensation in the firebox, it is not recommended to set the temperature below 185˚F (85˚C).

1. Press the SET button on the temperature controller. "SP" will appear in the display.
2. Press SET again to display the current setpoint temperature. The factory preset is 185˚F.
3. Press the UP or DOWN button until the desired value is displayed. This setting can only be set between 150˚F and 195˚F.
4. Press SET to save the setting. "SP" will appear.
5. To exit the programming mode, either press the SET and DOWN buttons at the same time or wait one minute and the controller will automatically exit.



Outdoor Torch

The optional Outdoor Torch (p/n 2900325) is an excellent tool for starting a fire. Attaches quickly to an external propane tank and can be directed at the bottom of a wood pile for quicker, easier combustion.

⚠ CAUTION

If the water in the outdoor furnace boils, be sure to check the water level and restore to full. Add MolyArmor 350 (p/n 2900630) as needed (see Water Quality and Maintenance).

1. The first time you fire the outdoor furnace, place dry kindling wood near the front of the firebox. Use a **small** amount of paper to light fire.
2. Add larger pieces of wood to the fire but do not fill the firebox completely.
3. When the water temperature reaches the controller setting (185˚F) and the damper closes, let the outdoor furnace cycle a few times to be sure it is operating properly; then add more wood.
4. After a few days of operation you will begin to learn how much wood is needed each day. If you only add the amount needed, it is easier to stir the ashes along the sides of the firebox and then to pull them forward (see Firebox Maintenance).

NOTE: Be sure to clean and inspect the firebox as outlined in Section 3.

⚠ CAUTION

Failure to clean the firebox as indicated will result in excessive corrosion.

Periodically during the normal operation of the outdoor furnace, look at the water temperature display. It should indicate a reading that is within 10°F of the controller setting.

A reading of 212°F or above indicates either a low-water condition or a malfunctioning temperature controller or snap disc (unless the door is open or not sealing properly). If the condition persists and the water level is correct, call your dealer for service.

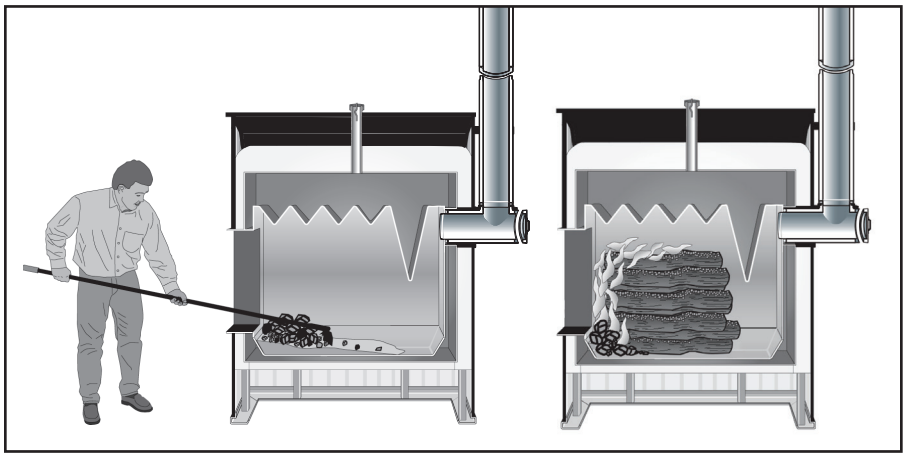
Filling the Firebox

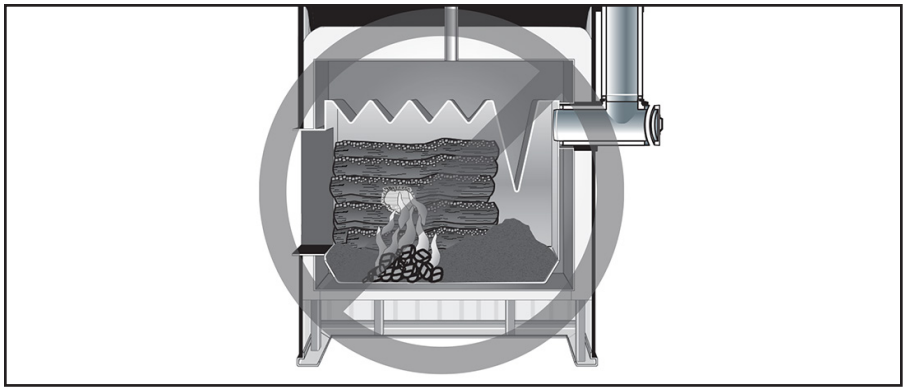
Prior to filling the firebox with wood, **always** pull the hot coals forward to the draft area (front and center of the firebox). With the hot coals pulled to the draft area, added wood ignites faster because combustion air is forced through the hot coals and into the newly added wood. If the coals are pushed to the back, a less efficient burn will result. If needed to extend the burn time, the outdoor furnace may be completely filled.

⚠ WARNING

Keep your face away and stay as far away as possible from the firebox door area when opening the door.

1. Unlatch the door; then stay as far away as possible as the firebox door is opened as smoke and hot gases escaping through the firebox door opening could ignite. From a safe distance, observe the fuel load.
2. If necessary, clean the firebox of excess ashes and/or crusty deposits.
3. Pull the hot coals forward to the draft area (front and center) of the firebox.





⚠ WARNING

Use extreme care if adding wood when wood or coals are already present. Very hot gases may be coming out of the firebox door opening.

4. Load the firebox with wood being careful not to be pinched between the wood and any part of the outdoor furnace.

⚠ WARNING

When adding wood to the firebox, be careful not to get pinched between the wood and the door frame or any part of the outdoor furnace. Use extreme care with large pieces of wood that may be difficult to handle.

5. Close and secure the firebox door. **Do not use the firebox door to ram wood into the outdoor furnace. Do not operate the outdoor furnace with the firebox door open.** Combustion in the firebox cannot be controlled if the firebox door is left open or unsecured. If the firebox door is left open, an uncontrolled burn will result. To return to a controlled burn, close and secure the door.

Adding Heat Load

NOTE: During initial start-up, a considerable amount of moisture from condensation will collect inside the firebox. This is normal and the moisture will evaporate after the first couple of fuel loads.

1. With no heat load draw in the system, monitor the operation of the outdoor furnace until the water temperature reaches the water temperature setpoint.

2. Turn on the pump(s); then start a heat load draw in the system by turning up the thermostat in the house. Monitor the outdoor furnace for one hour or until another cycle occurs (i.e., outdoor furnace goes from combustion to idle mode). If the water temperature drops and does not recover to the water temperature setpoint within one hour of starting the heat load draw, the heat load draw should be shut off, allowing the furnace to cycle to the idle mode again.

NOTE: The outdoor furnace will not operate satisfactorily if the heat load is higher than the output capacity of the outdoor furnace.

3. At this point, there should be glowing coals established in the bottom of the firebox. The firebox can be filled with dry, seasoned split wood.

Maintenance Schedule

PREVENTIVE MAINTENANCE SCHEDULE

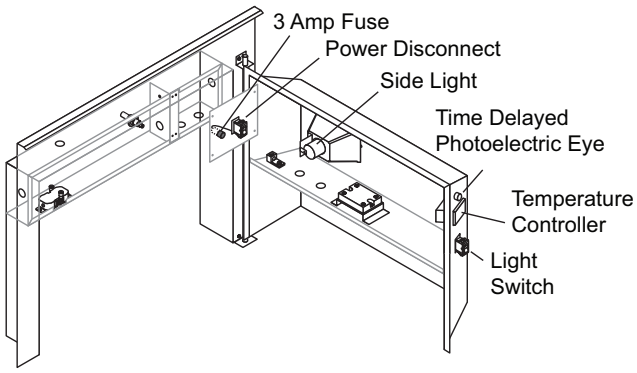
Regular maintenance and inspections can help extend the life of your outdoor furnace and prevent high-cost repairs. This table is meant to serve as a general guideline until you become acquainted with how the outdoor furnace operates with your specific application.

OPERATION	SERVICE INTERVAL: Before first operation of season	Daily	Weekly	Monthly	Semi-Annually	Post Season	See Section Number
Check water level.	●	●					1
Completely remove ash.					C	●	6
Inspect firebox door seal.			D			●	4
Inspect chimney.	●	A	●			●	5
Check vent cap.	●	A					2
Stir ash and pull toward front of firebox.			B				3
Scrape bottom of firebox.				●		●	7
Lubricate door handle.					●		8
Check pH and moly levels of water.	●				E	●	F

NOTE: Check daily for build-up of creosote until experience shows how often cleaning is necessary.

- A When the outdoor furnace is new, daily for the first week.
- B Twice a week.
- C After one month, then midway through the heating season.
- D Weekly until interval for your application can be determined.
- E When new, after three months, then every six months thereafter.
- F Refer to **Water Quality and Maintenance**

Control Locations



ROUTINE MAINTENANCE

⚠ CAUTION

Use only genuine Central Boiler Parts and Accessories if it ever becomes necessary to replace any component of the outdoor furnace.

Routine inspections and maintenance are essential to the proper operation and longevity of the outdoor furnace. The items indicated in the preventive maintenance schedule are intended to serve as a guideline. Actual intervals between inspections and maintenance may vary depending on a number of factors, including your heat load requirements, type of wood used and outdoor temperatures.

NOTE: Proper maintenance of the firebox, chimney transition box and chimney tee are essential for the outdoor furnace to function properly and for longevity.

⚠ CAUTION

Do not burn plastic, garbage, treated wood or fuels not listed for this outdoor furnace.

NOTE: Chloride or sulfurous gases can be generated if plastic or rubber is burned and will mix with the moisture from the wood to form hydrochloric or sulfuric acids in the firebox, creating corrosion.

Creosote - Formation and Need for Removal. When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited this creosote makes an extremely hot fire.

NOTE: If the outdoor furnace is operated correctly, creosote will not form in the chimney.

The chimney connector and chimney should be inspected at least twice monthly during the heating season to determine if a creosote buildup has occurred, and to check for corrosion or condensation. If creosote has accumulated it should be removed to reduce the risk of a chimney fire.

⚠ WARNING

The chimney and chimney connector must be clean and in good condition.

MAINTENANCE SECTIONS

Refer to the Preventive Maintenance Schedule for the recommended intervals with which to perform these maintenance items.

Section 1 - Water Level

Open the sight gauge valve. The sight gauge tube will fill to indicate the level of water in the outdoor furnace. Be sure to close the sight gauge valve after checking water level. The sight gauge valve and tube will drain when the valve is closed.

Section 2 - Vent Cap

Check that the vent cap fits loosely on the vent opening. Check the vent cap copper tube for obstruction; clean with a pipe cleaner if needed.

⚠ WARNING

The outdoor furnace vent cap must fit loosely on the vent opening. Do not force the cap down or try to seal it tightly onto the vent pipe. Do not extend or restrict the vent pipe or opening. DO NOT ALLOW THE OUTDOOR FURNACE TO BE PRESSURIZED.

Section 3 - Stir Ash

Stir the ashes in the firebox and pull them forward to prevent the ashes from sealing in moisture on the bottom and along the edges. It is especially important to scrape the walls and the four corners at the ash line and below. If this maintenance operation is not performed as directed, deterioration can result from the moisture trapped between the ashes and the steel.

1. Remove any heavy or solidified ashes. When ashes build up to either the door frame in the front or the top of the beveled ash pan of the firebox, they should be removed. A hoe, ash rake and shovel for this procedure may be purchased from your Central Boiler dealer. Leave enough ashes and coals to relight the fire.

⚠ CAUTION

Always wear the appropriate personal protective gear when cleaning ashes from the firebox.

2. **Disposal of ashes** - Place ashes in a metal container with a tight-fitting metal lid. It can take many days before the ashes are completely cooled. Other waste should not be placed in this container.

3. Each time the ashes are cleaned out, inspect the door rope (see Section 5) to make sure it is sealing properly.

⚠ WARNING

When cleaning the outdoor furnace, be careful not to spill any hot ash outside of the noncombustible container.

Section 4 - Firebox Door Seal and Bushings

The firebox door rope must be in good condition to ensure an airtight seal. Look for wear spots or portions of the door rope lacking an indentation from the firebox door. The door rope should have a uniform indentation in it all the way around.

1. Open the firebox door. One way to check that the door rope is sealing all the way around the firebox door is to insert a piece of paper similar in size and shape to a dollar bill in several locations around the perimeter of the door and then to close and latch the firebox door.

2. At each location, pull on the piece of paper. If it pulls out easily, either the door rope is sealing improperly and needs to be replaced, or the firebox door needs to be adjusted.

3. Check that the damper is properly sealing when closed. Normal wear over time can create a groove or dent where the damper lid strikes the casting when closing. Replace the damper if it is not sealing properly.

4. Inspect the door casting and heat shields. If the door casting is not cracked through or broken, allowing air to leak in, the door casting should not need to be replaced. Like the damper, it is normal for heat shields to show wear over time. The heat shield should be replaced if it is no longer providing coverage of the casting beneath the heat shield.

NOTE: If the outdoor furnace has been improperly operated with the door partially open, close the door and allow the outdoor furnace to cycle normally for 1 hour before inspecting the door for proper sealing.

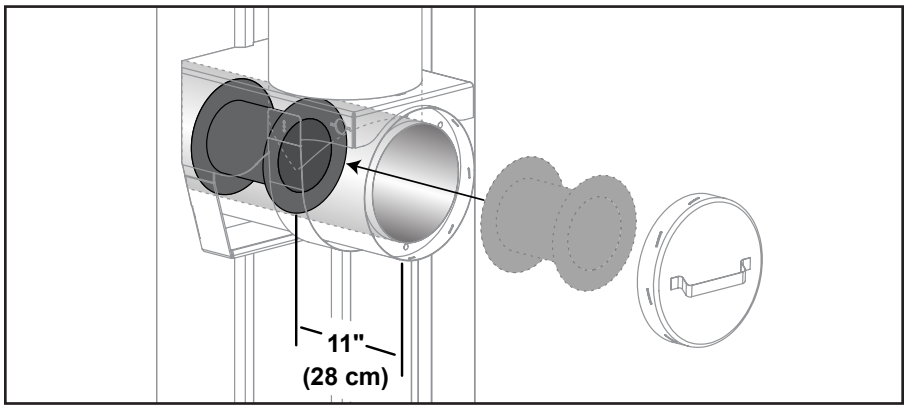
Section 5 - Chimney

NOTE: Creosote is an accumulation of combustion by-products on the surfaces of wood-burning appliances. Twice a month during the heating season, inspect for excessive creosote buildup on the firebox walls, flue and chimney. If present, the buildup should be removed for proper operation and fire safety. Creosote, if ignited in the chimney, results in an extremely hot chimney fire. In case of a chimney fire, close the firebox door.

1. If the flue passageway behind the baffle becomes plugged, it must be cleaned.

2. Inspect the chimney for excessive buildup of creosote and clean, if necessary.

3. **On 4030 models only**, inspect the chimney restrictor for excessive buildup of creosote and clean, if necessary. Make sure the chimney restrictor is positioned 11" in from the end of the chimney tee as shown.



Section 6 - Completely Remove Ash

1. Remove all ashes from the firebox.

⚠ CAUTION

Always wear the appropriate personal protective gear when cleaning ashes from the firebox.

2. Use a wire brush and small scraper to clean the firebox, side walls, back wall and ash pan. Use a light to inspect for corrosion. If corrosion is present, contact your dealer. Lubricate the solenoid plunger with a light petroleum distillate (e.g., WD-40 or equivalent).

3. **Disposal of ashes** - Place ashes in a metal container with a tight-fitting metal lid. It can take many days before the ashes are completely cooled. Other waste should not be placed in this container.

4. Each time the ashes are cleaned out, inspect the door rope (see Section 5) to make sure it is sealing properly.

⚠ WARNING

When cleaning the outdoor furnace, be careful not to spill any hot ash outside of the noncombustible container.

Section 7 - Scrape Bottom of Firebox

Scrape the bottom 12 inches of the firebox clean. Allow the fire to get very low; then move the coals to one side of the firebox.

Use a hoe to clean the other side. Move the coals to the other side and finish cleaning the firebox, leaving some ashes with the live coals. Pull the coals and ashes to the draft area (front and center of the firebox). When the furnace is filled, the coals remaining in the firebox will light the fire.

NOTE: Regular cleaning of the firebox, particularly at the ash line and below, reduces the possibility of corrosion.

The top of the firebox and walls of the firebox above the ash line should be scraped clean if large, thick, dry or crusty deposits are present. A thin, tar-like layer of creosote does not cause any problems in the operation of the furnace.

Section 8 - Door Handle

Lubricate the door handle with a light petroleum distillate (e.g., WD-40 or equivalent).

SERVICEABLE ITEMS

NOTE: These procedures should be performed by a qualified individual and in accordance with any and all federal, state/provincial and local codes and regulations. When performing work on an appliance observe all precautions in the literature, tags and labels attached to the appliance and other safety precautions that may apply. When working with electricity and electrical components, failure to follow precautions could result in property damage, personal injury or death.

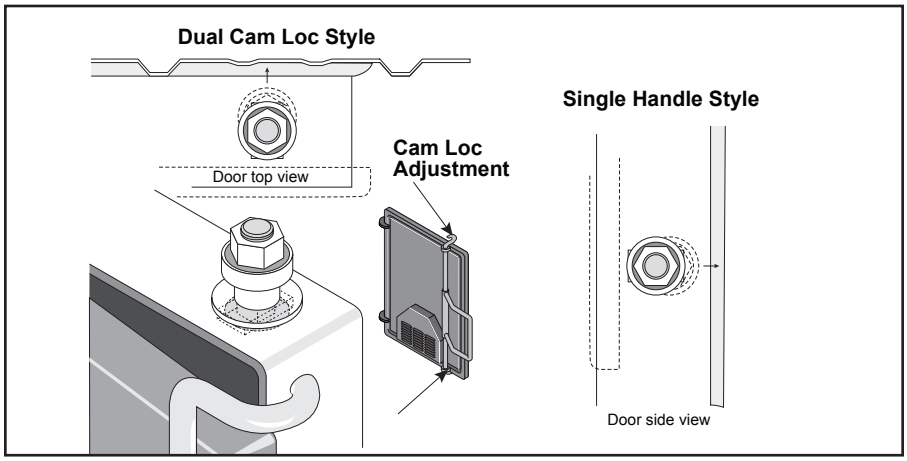
NOTE: If any of these items are under warranty, remember that the warranty covers only the cost of the replacement part. Labor is not covered.

NOTE: Use only genuine Central Boiler parts and accessories if it ever becomes necessary to replace any component on the outdoor furnace.

FIREBOX DOOR CAM LOC ADJUSTMENT

If the firebox door rope has been replaced and it is not sealing properly, the firebox door may need to be adjusted to close more tightly. When adjusting the firebox door, make sure it is not adjusted too tightly as damage to the firebox door, frame or door rope may result.

1. Loosen the adjustment nut (two nuts on the dual Cam Loc® style door) and slide the lock assembly in slightly toward the furnace; then tighten securely. On the dual Cam Loc doors, make sure to adjust both the top and bottom for equal pressure when latched.



FIREBOX DOOR SEAL ROPE

The firebox door seal must be in good condition to ensure an airtight seal. If replacement is necessary due to the firebox door seal becoming damaged or brittle, use the following procedure:

1. Disconnect power to the furnace. Open the firebox door.

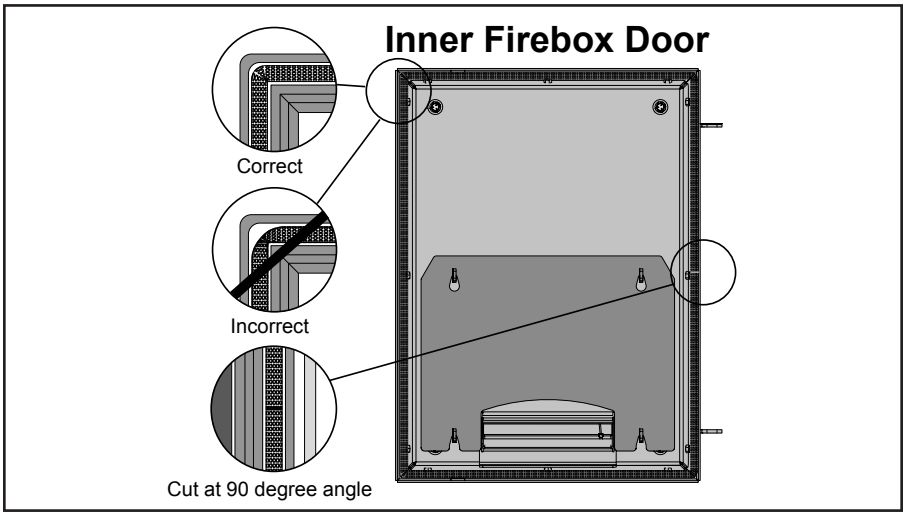
⚠ WARNING

Remove all wood, coals and ash from the firebox and allow the outdoor furnace to thoroughly cool down before performing maintenance.

2. Using a scraper, remove the firebox door seal rope and clean any remaining silicone adhesive from the groove. Any residue left in the groove will interfere with the new seal.

3. Apply a 1/4" (6 mm) diameter bead of silicone sealant into the entire firebox door seal groove.

4. Starting at the center of the top side of the firebox door, insert the new door seal rope into the groove, pressing it firmly into the bead of silicone sealant. Make sure the firebox door seal rope is not stretched as it is pressed into the corners. Force the firebox door seal rope out to fill in the corners as shown.



5. When the seal has been pressed into the groove all the way around the firebox door, cut the end of the rope about one inch (2.5 cm) longer than required and press it tightly against the beginning end of the rope.

6. Close the firebox door.

LIGHT BULB

A 40-watt appliance type bulb is installed in each of the fixtures on the outdoor furnace. Do not install a bulb in excess of 60 watts.

1. Disconnect power to the furnace.

2. Remove the two screws securing the clear plastic lens over the light.

3. Replace the bulb.
4. Ensure that the gasket is aligned correctly; then install the plastic cover and secure with two screws.

SOLENOID

Before replacing the solenoid, check the following items:

- Check to be sure there is incoming power to the furnace.
- Check inside the control panel to see if the fuse has blown. If the fuse is blown, check the draft opening to be sure the linkage operates freely and that there are no obstructions to the door; then replace the fuse.
- To test the solenoid with a multimeter, turn the Power Disconnect Switch to the OFF position and refer to Testing Solenoid.
- If solenoid still does not operate, turn the Power Disconnect Switch to the OFF position and replace the solenoid (see Replacing Solenoid).

TESTING SOLENOID

⚠ WARNING

Do not attempt service on the solenoid without first disconnecting the electrical power at the main power source.

1. Remove the screws securing the draft enclosure cover; then remove the cover.

⚠ CAUTION

Solenoid may be hot.

2. Carefully disconnect the two wire leads connected to the left side of the solenoid by gently pulling and moving them from side to side.
3. Using a multimeter set to Ohms, test the solenoid's resistance by touching the meter leads to the solenoid terminals.
4. If the multimeter reading is between 15 and 30 Ohms, the solenoid is good. If the multimeter reading is less than 15 Ohms or more the 30 Ohms, the solenoid is faulty and should be replaced.
5. If the solenoid is good, carefully attach the wire leads onto the solenoid terminals (white wire connected to the upper terminal).
6. Install the cover and secure with the screws.
7. Turn the Power Disconnect Switch to the ON position.

REPLACING/ADJUSTING SOLENOID

⚠ WARNING

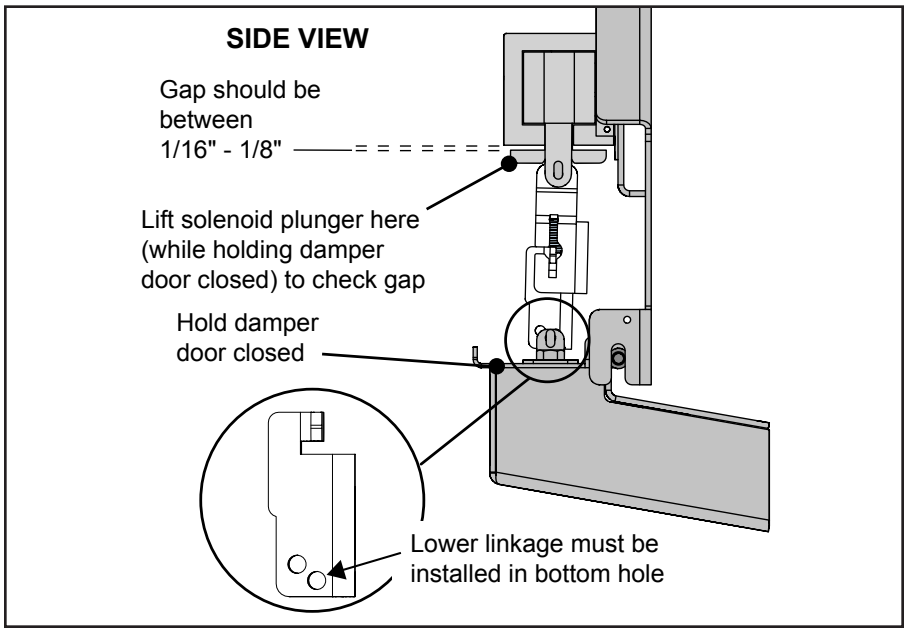
Do not attempt service on the solenoid without first disconnecting the electrical power at the main power source.

1. Remove the screws securing the draft enclosure cover; then remove the cover.

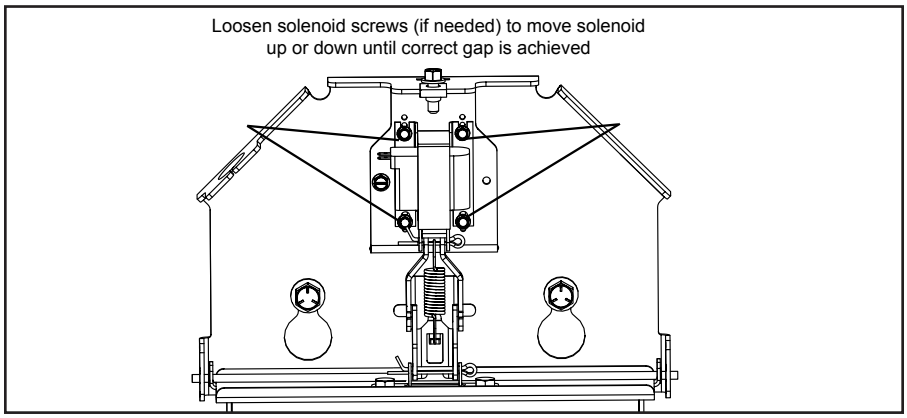
⚠ CAUTION

Solenoid may be hot.

2. Carefully disconnect the two wire leads connected to the left side of the solenoid by gently pulling and moving them from side to side.
3. Remove the top cotter key of the linkage.
4. While supporting the solenoid with your hand, remove the top two solenoid mounting screws and loosen the bottom two.
5. Lift up on the solenoid until it clears the screw heads and remove.
6. Place the new solenoid into position and lightly secure with the screws.
7. Check for correct gap by holding the damper door closed and lifting the solenoid plunger up completely. The gap should be between 1/16" and 1/8".



NOTE: The solenoid mounting screws can be loosened to adjust the solenoid up or down until the correct gap is achieved.



8. Carefully attach the wire leads onto the solenoid terminals (white wire connected to the upper terminal).

9. Install the cover and secure with the screws.

10. Turn the Power Disconnect Switch to the ON position.

NOTE: If the solenoid rattles during operation, the alignment between the solenoid and the lift tab is incorrect. To align the solenoid and lift tab, loosen the four solenoid mounting screws and move the solenoid until the solenoid plunger aligns with the lift tab. Secure the solenoid; then make sure it operates smoothly.

TEMPERATURE CONTROLLER

1. Disconnect the electrical power at the main power source to the outdoor furnace; then open the control panel door. Remove the screws securing the inner door panel; then remove the panel.

⚠ WARNING

Do not attempt service inside the electrical control panel without first disconnecting the electrical power at the main power source.

2. Carefully label each of the wires connected to the temperature controller according to the numbered connections identified on the top of the controller.

3. Using a small screwdriver, loosen the screws securing each of the wires; then pull the wires out of the controller.

4. Depress the tabs on the side of the controller mounting strap; then slide the strap off the controller. Remove the controller from the control panel.

5. Place the new gasket onto the controller. Slide the new controller into position (making sure it is positioned upward) in the control panel; then secure with the mounting strap.

6. Slide each of the labeled wires into their proper positions on the controller; then tighten each of the screws securely.

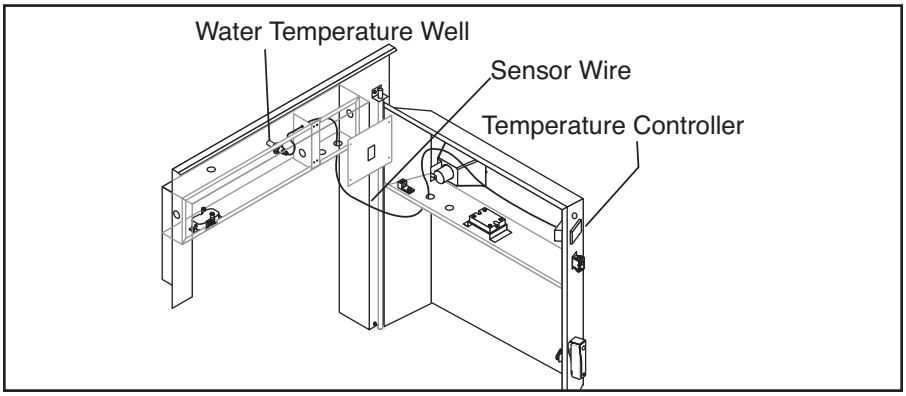
7. Place the inner door panel into position on the door and secure with the screws.

8. Close and secure the door. Connect power to the outdoor furnace.

WATER TEMPERATURE SENSOR

⚠ WARNING

Do not attempt service inside the electrical control panel without first disconnecting the electrical power at the main power source.



To test the water temperature sensor using a multimeter, see Testing Water Temperature Sensor. If the sensor needs to be replaced, see Replacing Water Temperature Sensor.

TESTING WATER TEMPERATURE SENSOR

1. Disconnect the electrical power at the main power source to the outdoor furnace; then open the control panel door. Remove the screws securing the access box panel; then remove the panel.

⚠ WARNING

Do not attempt service inside the electrical control panel without first disconnecting the electrical power at the main power source.

2. Disconnect the sensor wires from the controller.

3. Using a multimeter set to Ohms, touch the meter leads to the wires disconnected from the controller. A reading of 1000 Ohms or less indicates the temperature sensor is good; a reading of more than 1000 Ohms indicates the temperature sensor is faulty and should be replace.

REPLACING WATER TEMPERATURE SENSOR

1. Disconnect the electrical power at the main power source to the outdoor furnace; then open the control panel door. Remove the screws securing the access box panel; then remove the panel.

⚠ WARNING

Do not attempt service inside the electrical control panel without first disconnecting the electrical power at the main power source.

2. Disconnect the sensor wires from the controller.
3. Remove (by pulling) the sensor from the well.
4. Firmly press the new sensor into the well. Secure the sensor in place following the instructions provided with the new sensor.
5. Connect the sensor wires to the controller.
6. Place the access box panel into position and secure with the screws.
7. Close and secure the door. Connect power to the outdoor furnace.

TROUBLESHOOTING

A. OUTDOOR FURNACE DOES NOT HEAT (BUILDING IS LOSING TEMPERATURE)

1. **Out of wood** - Check firebox to see if fire is out. Add wood as necessary. Use good quality wood since poor quality wood will have very short burn times.
2. **Circulation valve(s) closed** - Be sure all valves in the system are open.
3. **Circuit breaker off** - Check the circuit breaker that supplies power to the outdoor furnace.
4. **Solenoid not operating properly** - Disconnect power to the furnace; then check the fuse in the control panel. If fuse is blown, check damper door for obstructions and for free movement. Be sure damper door works freely; then replace the fuse. Refer to Replacing/Adjusting Solenoid to check solenoid gap and adjust if necessary. Be sure that the damper door (when activated by the solenoid) does not contact the louvered cover. Lubricate or adjust as necessary. Check that the spring-loaded linkage and damper door are not binding and that the spring is not broken or missing.
5. **Circulation pump(s) not operating** - Check that circulation pumps are operating. If not, disconnect power to the pump. Close valves at the pump. Disassemble the pump and try to turn the pump shaft. If the shaft is stuck, replace the pump cartridge. Replace only the cartridge whenever possible. If necessary, replace the pump. Follow instructions supplied with the pump.
6. **Air in system** - Check for air in the water lines or heat exchangers. If you hear a gurgling sound in a heat exchanger, air is present in the system. Shut off the pump, wait 15 seconds and start the pump. If it is necessary to force air from lines, refer to Start-up Procedures.
7. **Outdoor furnace exhaust obstructed** - Check furnace exhaust for obstructions by observing the amount of smoke coming out of the chimney with the firebox door slightly ajar. If smoke seems very restricted, remove the firewood and hot coals; then check the chimney (top and bottom) and behind the baffle for obstructions. On 4030 models only, check that the chimney restrictor is not plugged with creosote and that it is positioned 11" in from the end of the chimney tee.
8. **Building(s) poorly insulated or uninsulated** - Poorly insulated or uninsulated buildings, buildings with uninsulated or poorly insulated ceilings, or a lack of proper insulation under radiant flooring can cause excessive fuel consumption and/or heating problems.
9. **Supply and return lines installed incorrectly** - Make sure the hot supply water line is connected to the correct fitting on the outdoor furnace and heat exchanger.
10. **Circulation pump(s) installed backwards** - Check that pump flow direction is correct. If not, shut off power to pump. If the flow is not in the correct direction, disconnect pump from water line and reverse pump mounting to correct flow direction. If the pump is not mounted on the outdoor furnace, check for proper pump mounting location.
11. **Underground supply and return lines insulated poorly** - Heat loss from poorly insulated underground supply and return lines is often indicated by an unusually high amount of snow melting above the lines when the ground temperature is 10˚F or colder.
12. **Supply and return lines uninsulated** - Uninsulated supply and return lines in areas that are not intended to be heated (unheated crawl spaces, etc.) may cause excessive heat loss. Insulate the supply and return lines.
13. **Poor water quality** - Water with high amounts of solids, sand or dirt can create deposits inside the wall of heat exchanger components, reducing the amount of heat output. If this condition is suspected, contact your Central Boiler dealer.

B. OUTDOOR FURNACE IS OVERHEATING

1. **Air entering through the door** - Make sure the firebox door is properly latched and check the condition of the door rope. If it is not sealing properly (indicated by a uniform indentation in the rope), replace the rope. If door does not close tightly, adjust using the appropriate procedure (see Owner Serviceable Items).
2. **Air entering through the damper** - Check to be sure the damper is operating correctly as explained in section A.4. Be sure the damper closes all the way and that no obstructions are present. The damper can wear a groove or the bracket can loosen over time. If that is the case, the damper may need replacement and/or the bracket may need to be adjusted and tightened.

   If the solenoid is sticking, lubricate with silicone spray or a light petroleum distillate (WD-40 or equivalent). Check linkage for binding, or for a missing or broken spring.

NOTE: If the water in the outdoor furnace boils, identify the cause and correct immediately. The outdoor furnace will not typically be damaged by boiling unless it reduces the water level more than 1" below the full mark on the sight gauge. If water boils, restore water level to full and add MolyArmor 350 as needed. If water is added frequently it will cause deterioration in the water jacket which will reduce the life of the outdoor furnace.

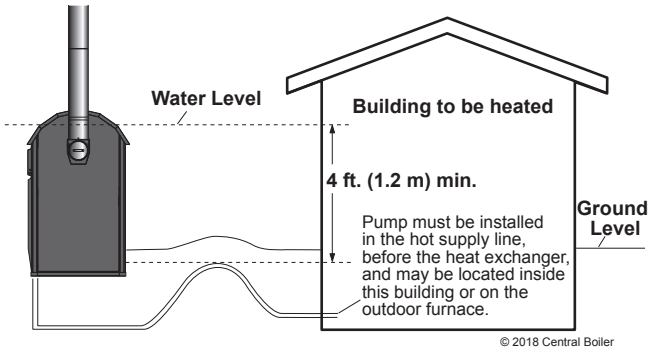
3. **Temperature controller set incorrectly** - The temperature controller should not be set above 195°F.
4. **Water is not circulating** - The pump should run continuously and water needs to circulate continuously through the supply and return lines to keep water temperature uniform in the outdoor furnace.
5. **Circulation valve(s) closed** - Be sure the proper valves in the system are open to allow circulation.

C. SOLENOID DOES NOT OPERATE

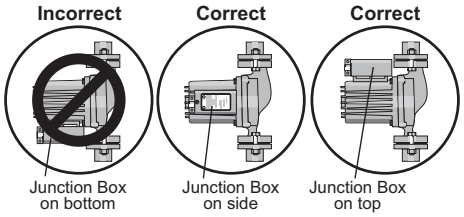
1. **Fuse blown** - Check the fuse. Check damper and solenoid area for obstructions or damage. Be sure the damper door operates properly; then replace the fuse.
2. **Solenoid not operating properly** - Solenoid may be damaged. If so, be sure to check the linkage for free movement and for creosote buildup between the damper door and draft opening. Replace the solenoid if burned out or stuck in the open position. Check that the spring-loaded linkage and damper door are not binding and that the spring is not broken or missing. The solenoid is a serviceable item (see Replacing/Adjusting Solenoid for replacement).

D. FREQUENT PUMP TROUBLE OR POOR WATER CIRCULATION

1. **Pump mounted incorrectly** - If the pump is not mounted on the outdoor furnace, it must be mounted at a minimum of four feet lower than the top water level in the outdoor furnace.



Make sure the pump motor is installed in a horizontal position. The junction box must not be located below the pump motor. If necessary, remove the four screws and rotate the pump body.



2. **Water will not circulate** - If the system has been drained and refilled, or if the system has been opened for any reason (e.g., replacement of pump, adding heat exchangers, repairing a leak), the system must be purged (see Initial Start-up Procedures).
3. **Poor water quality** - Water with high amounts of solids, sand or dirt can cause frequent pump failure. Use softened and/or filtered water.
4. **Deposits in water lines/heat exchanger walls** - If water high in silica or other mineral content has been used, material deposits may build up on the insides of the supply and return lines and on the heat exchanger walls. If this occurs, the system will need to be drained and then cleaned using Sludge Conditioner (p/n 166). The system must then be refilled with the proper amount of MolyArmor 350 Corrosion Inhibitor (p/n 2900630) and fresh water.

E. ERRATIC TEMPERATURE READING ON GAUGE

1. **Return water too cold** - Water circulation may be too slow. The return water should be no more than 20°F-25°F less than the hot supply water. If the water returning to the outdoor furnace is too cold, it may cause erratic temperature readings. Check for partial air lock or install larger pump.

F. BURNING AN EXCESSIVE AMOUNT OF WOOD

1. **High volume water heating** - High volume water heating (e.g., car wash, swimming pool, etc.) will require high wood consumption.
2. **Excessive heat loss** - See items 9-12 of Building is Losing Temperature.
3. **Air entering though door** - See item 1 of Outdoor Furnace is Overheating.

4. **Excessive draft** - If a very tall extension is added to the chimney, the increased draw through the draft may cause excessive wood consumption. Decreasing the draft opening may increase efficiency and reduce wood consumption.
5. **Supply and return line heat loss** - If not using ThermoPEX, supply and return lines buried in a wet, low-lying area may cause a large heat loss that will greatly increase wood consumption.
6. **High heat demand** - Concrete slabs (with radiant heat) that are poorly insulated or are exposed to water or cold outside temperatures will require increased wood consumption (see Hydronic Installations section). Bringing a cold concrete slab up to temperature the first time will take a considerable amount of time and wood; once warm, wood consumption will be reduced if the concrete slab and building are insulated properly. The following will also have a high heat demand: poorly insulated buildings, buildings with large amounts of glass windows/doors, buildings with overhead doors, greenhouses, uninsulated crawl spaces, outdoor air infiltration and air leaking through foundation.

GENERAL INFORMATION

Make note of these precautionary statements, also found on the outdoor furnace.

⚠ DANGER

- Risk of fire or explosion. DO NOT burn garbage, gasoline, drain oil, lighter fluids or other flammable liquids.

⚠ DANGER

- Risque d'incendie ou d'explosion. NE brûlez PAS de déchets, d'essence, d'huile de vidange, de liquide allume-feu ou autres liquides inflammables.

⚠ WARNING

- Risk of fire.
- DO NOT operate with fuel loading or ash removal doors open.
- DO NOT store fuel or other combustible materials within marked installation clearances.
- Inspect and clean flues and chimney regularly.
- DO NOT install or operate furnace before first reading and understanding the Owner's Manual.
- DO NOT allow others to install or operate furnace without first reading and understanding the Owner's Manual.
- DO NOT leave furnace unattended with this door or the firebox door unlatched.

⚠ AVERTISSEMENT

- Risque d'incendie.
- NE vous servez PAS de la chaudière avec les portes d'alimentation en combustible ou d'enlèvement des cendres ouvertes.
- NE stockez PAS le combustible ou autres matériaux combustibles dans le périmètre d'installation indiqué.
- Inspectez et nettoyez régulièrement les carneaux de fumée et la cheminée.
- N'installez PAS et ne vous servez PAS de la chaudière avant d'avoir lu et compris le manuel du propriétaire.
- NE laissez PAS d'autres personnes installer ou faire fonctionner la chaudière avant d'avoir lu et compris le manuel du propriétaire.
- NE laissez PAS la chaudière sans surveillance si cette porte ou la porte du foyer ne sont pas verrouillées.

⚠ CAUTION

- Hot surfaces.
- Keep children away.
- DO NOT touch during operation.
- DO NOT burn treated wood, plastics or rubber in the furnace.
- Maximum draft marked on the nameplate.
- ALWAYS comply with all applicable codes and regulations.
- ALWAYS take care when adding wood to the furnace to prevent hot coals from spilling out.
- ALWAYS store ashes in a covered non-combustible container.

⚠ PRÉCAUTIONS À PRENDRE

- Surfaces brûlantes.
- Tenir les enfants éloignés.
- NE PAS toucher durant le fonctionnement.
- NE PAS faire brûler de bois traité, de plastique ou de caoutchouc dans la chaudière.
- Tirage maximum indiqué sur la plaque signalétique.
- TOUJOURS se conformer à toutes les directives et réglementations en vigueur.
- Faire TOUJOURS attention lors de l'ajout de bois dans la chaudière, afin d'éviter que du charbon brûlant ne tombe en dehors.
- TOUJOURS stocker les cendres dans un récipient couvert non combustible.

p/n 7000226

⚠ WARNING

Remove strapping over vent cap before filling or operating furnace.

⚠ WARNING

Disconnect power before removing this panel.

⚠ AVERTISSEMENT

Coupez l'alimentation électrique avant d'enlever ce panneau.

p/n 7000245

DO NOT BURN GARBAGE

Burning garbage causes damage to components of wood burning appliances.

HPBA Hearth, Patio & Barbecue Association

Refer to your Owner's Manual.

BURN RESPONSIBLY

Preserve Your Right to Burn Wood

- Before installing, consider the direction that the chimney exhaust will travel with prevailing winds.
- BEFORE operating, install a chimney that is at least 2 feet higher than the peak of any residence not served by the furnace within 300 feet of the furnace. Proper chimney height will aid in dispersing the chimney exhaust. Chimney height may need to be greater than the above minimum requirements to prevent exhaust from causing a nuisance. The outdoor wood furnace must be installed in accordance with the manufacturer's recommendations and/or in accordance to all applicable codes and regulations, whichever is more stringent. Refer to your Owner's Manual.
- ONLY burn the proper fuels specified.
- DO NOT create a nuisance. Be certain your chimney exhaust is not adversely affecting neighbors. Creating a nuisance may affect your right to burn wood. If any issue with chimney exhaust arises, take immediate action to solve the issue.
- Properly dispose of ashes into a metal container with a cover.
- It's been said that lighting a fire can be more of an art than a science. You may need to vary techniques to achieve best results. Many factors can have a significant effect such as size of wood, moisture content, wood storage, etc. Over time, you will become familiar with your particular conditions. This will allow you to identify cause and effect in a variety of circumstances and what works best for your conditions.

Protect your right to heat with wood. Careless operation may result in a loss of your rights.

p/n 7000212

NOTICE

Chimney pipe and all extensions must be insulated.

REMARQUE

Coupez l'alimentation électrique avant d'enlever ce panneau.

⚠ CAUTION

HOT Surfaces

Do NOT Touch During Operation

⚠ ATTENTION

Surfaces BRÛLANTES

NE touchez PAS pendant le fonctionnement

p/n 7000240

ATTENTION

Ne pas bloquer, obturer ou sceller l'ouverture du conduit d'évacuation. Sceller l'ouverture pourrait entraîner une augmentation dangereuse de la pression.

p/n 7000524

⚠ WARNING

For safety, keep firebox door latched. Leaving the firebox door open may lead to a runaway fire. In the event of a runaway fire, close the firebox door.

⚠ AVERTISSEMENT

Par mesure de sécurité, maintenez la porte de tirage verrouillée. Le fait de laisser la porte de tirage ouverte peut entraîner un incendie échappé. En cas d'incendie échappé, fermez la porte de tirage.

⚠ CAUTION

Do not start fire until water level is full. Keep face away from firebox door area.

⚠ PRÉCAUTIONS À PRENDRE

N'allumez pas le feu tant que le niveau d'eau n'est pas plein. Gardez le visage éloigné de la porte de tirage et de ses alentours.

p/n 7000211

MAINTENANCE SCHEDULE

DAILY

Stir and scrape ashes in firebox. Check water level.

MONTHLY

Check door rope; check chimney; check vent cap; clean and remove ashes.

BIANNUALLY

Clean firebox, flue, chimney and remove all ashes for inspection; lubricate solenoid plunger with WD-40.

Cover chimney and clean out all ashes when not in use. DO NOT USE WASTE OIL.

READ OWNER'S MANUAL FOR COMPLETE INSTRUCTIONS.

p/n 6048

⚠ WARNING

Disconnect power before removing this panel.

⚠ AVERTISSEMENT

Coupez l'alimentation électrique avant d'enlever ce panneau.

p/n 7000244

WARNING

AVOID DAMAGE!

BEFORE operating this appliance read manual and watch videos for proper operation and maintenance procedures.

Damage or decreased life expectancy of appliance could result if appliance is not properly operated or maintained.

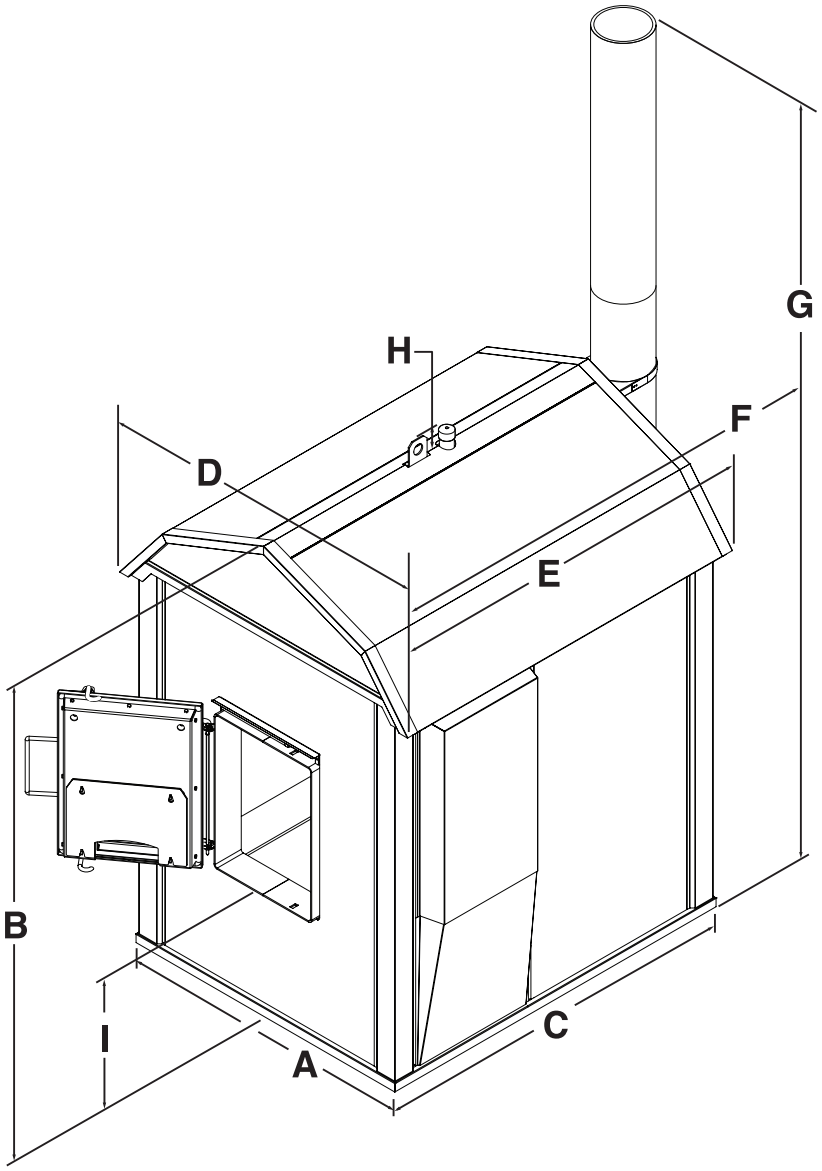
p/n 7000508

CAUTION

Do not plug, block or seal vent opening. Sealing can result in a dangerous buildup of pressure.

p/n 7000522

FURNACE MEASUREMENTS

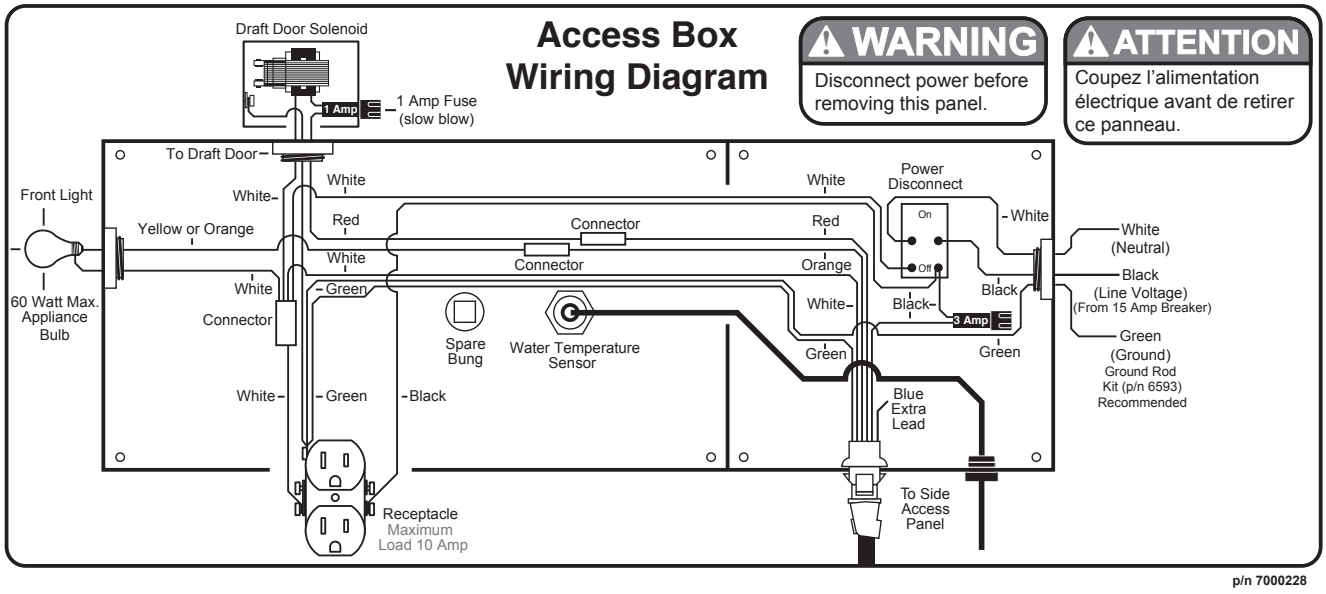


FURNACE MEASUREMENTS									
	A	B	C	D	E	F	G	H	I
CL 4030	43"	70"	53"	49"	53"	66"	144"*	3"	24"
CL 5036	47"	79"	63"	51"	64"	76"	151"*	3"	24"
CL 6048	59"	93"	73"	65"	74"	86"	163"*	3"	24"

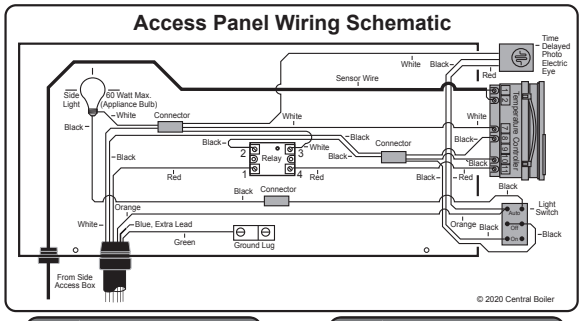
FURNACE MEASUREMENTS (cm)											
	A	B	C	D	E	F	G	H	I	Filling Opening	Firebox Size (l x h x w)
CL 4030	109	178	135	124	135	168	*366	8	61	47 x 47	102 x 76 x 66
CL 5036	119	201	160	130	163	193	*384	8	61	55 x 55	127 x 92 x 76
CL 6048	150	236	185	165	188	218	*414	8	61	55 x 75	152 x 122 x 92

*** Measurement includes two chimney sections.**

WIRING DIAGRAMS



p/n 7000228



WARNING
Disconnect power before removing this panel.

AVERTISSEMENT
Coupez l'alimentation électrique avant de retirer ce panneau.

WARNING
Remove strapping over vent cap before filling or operating furnace.

AVERTISSEMENT
Avant de remplir ou d'utiliser la chauidère, retirez la bande qui passe par-dessus le clapet d'aération.

NOTICE

INSTRUCTIONS

Changing the Furnace Operating Temperature with the Digital Temperature Controller

1. Press the SET button on the temperature controller. "SP" will appear in the display.
2. Press SET again. The set value will now be displayed. The original value is preset at 185˚F (85˚C).
3. Press the UP or DOWN buttons until the desired value is reached.
4. Press SET to save this setting. "SP" will reappear.
5. The controller will exit the programming mode if the SET and DOWN buttons are pressed at the same time or if no buttons are pressed for one minute.

NOTE: When the OUT (output) light on the controller is lit, the controller is calling for heat.

NOTE: The temperature controller will only allow values between 150˚F and 195˚F (65˚C and 90˚C). (It is not recommended to set the controller below 165˚F (74˚C). The value set will be the temperature at which the outdoor furnace's draft door closes. The draft door will open 10˚F (5˚C) below this value.

NOTICE

ATTENTION!
IMMEDIATE ACTION REQUIRED

Add MolyArmor 350 Corrosion Inhibitor IMMEDIATELY before filling with water.

CLASSIC and PALLET BURNER MODELS

CL 4030 - 1.5 units
CL 5036 - 1.5 units
CL 6048 - 2.5 units
Pallet Burner - 3.5 units
CL 7260 - 4.5 units

After filling the system, IMMEDIATELY heat the system water to 185°F and start the pump(s) to circulate water in the system.

Read the Owner's Manual for more information about testing the system water and submitting water samples to be certain that proper MolyArmor 350 and pH levels are achieved.

NOTES

WATER SAMPLE INFORMATION - TITANIUM SERIES MODELS

NOTE: It is your responsibility as owner to ensure that your water sample information is accurate and that you submit your samples on a timely basis as required by the warranty for your stainless steel outdoor furnace. Failure to do so will result in a one year warranty.

WATER SAMPLE LABEL INFORMATION

Use the Water Sample Kit provided in your owner's packet or make a copy of the water sample label below, attach the COMPLETED label to the water sample bottle, and mail your water sample to Central Boiler.

Water Bottle Label

SERIAL: _____ _____

NAME: _____

Test Results will be emailed to:

SAMPLE DATE: _____

- ☐ MolyArmor 350 Inhibitor
- ☐ MolyBoost
- ☐ 1650 XL Inhibitor
- ☐ Propylene Glycol

FOR LAB USE ONLY:		
Moly	pH	Ni

MAILING LABEL

Use the shipping label from the Water Sample Kit provided in your owner's packet or use this shipping label. Be sure to include your return address and apply the required postage.

FROM:

POSTAGE REQUIRED

SHIP TO:

CENTRAL BOILER, INC.
ATTN: WATER QUALITY DEPARTMENT
20502 160TH ST
GREENBUSH MN 56726-9251
UNITED STATES

LIMITED WARRANTY - CLASSIC TITANIUM SERIES MODELS

Central Boiler, Inc. ("Central Boiler") warrants to the original owner, except (a) parts manufactured by others and excluded from warranty coverage below; and (b) parts or items specified below as covered by a limited one year warranty, Central Boiler Classic and Classic Edge Titanium Series furnaces against defects in workmanship and against corrosion failure of the firebox/water jacket assembly for a period of TWENTY-FIVE (25) YEARS from the date of original retail purchase, provided that the Limited Warranty Registration Form is completed and sent to Central Boiler within ten (10) days of the original owner taking possession of the furnace and the original owner strictly complies with the instructions for maintenance and corrosion inhibitor contained in the Owner's Manual; otherwise this Limited Warranty shall be for a period of ONE (1) YEAR from the date of manufacture or one year from original retail purchase, if proof of purchase date can be provided.

If a failure of a warranty covered part occurs that is caused by a defect in workmanship or corrosion, at its option Central Boiler will (1) repair or replace (using new or refurbished replacement parts) the defective or failed part based on the date of original retail purchase at the following prorated scale:

First – Fifth year: Parts and labor will be covered at 100%
Sixth year: Parts will be covered at 70%
Seventh year: Parts will be covered at 60%
Eighth year: Parts will be covered at 50%
Ninth year: Parts will be covered at 40%
Tenth – Twentieth year: Parts will be covered at 15%
Twenty-first – Twenty-fifth: Parts will be covered at 10%

(2) exchange the furnace with a comparable model furnace that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent to the original furnace, or (3) provide a discount off the retail purchase price of a new Central Boiler furnace of comparable model based on the pro-rated scale: Years 1-5 100%, years 6-7 at 50%, years 8-10 at 40%, years 11-15 at 30% and years 16-25 at 10%. A replacement furnace/part assumes the remaining warranty of the original furnace/part or ninety (90) days from the date of replacement or repair, whichever provides longer coverage. If a furnace or part is qualified for replacement under the provisions of this limited warranty, at Central Boiler's discretion, the furnace or part may be required to be returned to Central Boiler for inspection and recycling or disposal.

Because maintaining the corrosion inhibitor at a proper level is imperative to preventing corrosion failures, to qualify for the 25 year warranty the operator must comply with the instructions in the owner's manual for maintenance and corrosion inhibitor and send a furnace water sample when the furnace is initially put into service and once each year thereafter to confirm proper maintenance and corrosion inhibitor. No warranty claim can be approved unless the furnace registration and the required water test verifications are on file at Central Boiler.

Parts Manufactured By Others. Parts that are factory-installed by Central Boiler, but are manufactured by others, may be covered by their own manufacturer's warranty and are not covered by this limited warranty, except the FireStar® combustion controller on the Classic and Classic Edge Titanium Series furnace is warranted against defects in workmanship for a period of two (2) years from the date of original retail purchase, provided that the Limited Warranty Registration Form is completed and sent to Central Boiler within ten (10) days of the original owner taking possession of the furnace; otherwise this limited warranty shall be for a period of ONE (1) YEAR from the date of original retail purchase. This limited warranty covers the controller part only; service calls, mileage, and labor to diagnose the problem and install a new part are not covered.

Parts Covered by a Limited One Year Warranty. The following parts are covered by a limited warranty for workmanship defects for one year: gaskets, seals, heat shields, paint, air charge tube, firebox ash pan, combustors, aquastats, actuators, heat refractory, firebrick, air channels, combustion air tubes, turbulators, chimney sections, and chimney tee. This limited warranty covers the part only; service calls, mileage, and labor to diagnose the problem and install a new part are not covered.

EXCLUSIONS AND LIMITATIONS - This Limited Warranty applies only to Central Boiler Classic and Classic Edge Titanium Series outdoor furnaces. This limited warranty covers only those defects or corrosion failures that arise as a result of normal use of the outdoor furnace and does not cover any other defects or problems, including those that arise as a result of: (a) improper maintenance (b) operation outside the furnace's specifications (see owner's manual), accident, abuse, misuse, misapplication, or parts that are not factory-installed; (c) service performed by anyone other than Central Boiler unless authorized by Central Boiler in writing; (d) modifications undertaken without the written permission of Central Boiler; or (e) if any Central Boiler serial number has been removed or defaced. This limited corrosion warranty will be void if the owner fails to maintain the proper amount of MolyArmor 350 Corrosion Inhibitor in the system, fails to send water samples to Central Boiler as required, or burns materials in the firebox other than natural wood. This limited warranty excludes the cost of shipping, labor to remove or reinstall the furnace, plumbing labor and/or parts and the cost of alternative heat if the furnace is out of service for repairs. Warranty excludes replacement of water, inhibitors or other additives, and parts used in the system whether or not mounted on the furnace, such as pumps, valves, and piping.

Central Boiler is not liable for damage or repairs required as a consequence of faulty installations or applications by others or any event of force majeure. Central Boiler is not liable for incidents or accidents which can be prevented by the owner or that occur from the operation of the outdoor furnace. A backup heating system should be in place to prevent damage in case of failure to refuel the outdoor furnace or in the event that mechanical failure of the outdoor furnace or system occurs. Heat replacement representations found in Central Boiler promotional information should be used only as a guideline. Heat loss for all applications with all weather extremes and other heat variables must be considered when sizing an outdoor furnace for different applications.

THIS LIMITED WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED. CENTRAL BOILER SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IF CENTRAL BOILER CANNOT LAWFULLY DISCLAIM IMPLIED WARRANTIES UNDER THIS LIMITED WARRANTY, ALL SUCH WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY. No Central Boiler dealer or employee is authorized to make any modification, extension, or addition to this limited warranty. CENTRAL BOILER IS NOT RESPONSIBLE FOR DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY. Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages or exclusions or limitations on the duration of implied warranties or conditions, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary by state or province.

OBTAINING WARRANTY SERVICE - To obtain warranty service, contact the Central Boiler dealer from whom you purchased your furnace or contact Central Boiler by telephone (218-782-2575) or mail (20502 160th Street, Greenbush, MN 56726). Please provide the dealer's name, original date of sale, model number and serial number in all communications. Central Boiler reserves the right to require the warranty service to be performed at a Central Boiler facility when deemed necessary by Central Boiler. All corrosion repairs will be performed at Central Boiler unless authorized by Central Boiler in writing.

Design Changes. Central Boiler reserves the right to change and improve the product design for improved performance without assuming responsibility to upgrade previously sold products.

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