BAX

LCCC HT 1.330

Condensing gas fired wall mounted boiler
Installation and servicing instructions

Chaudière murale à gaz à condensation
Notice d'installation et d'entretien en











BEFORE INSTALLING AND WHEN SERVICING BOILER

- To avoid electric shock, disconnect electrical supply before performing maintenance.
- To avoid severe burns, allow boiler to cool before performing maintenance.

DURING BOILER OPERATION

- Do not block flow of combustion or ventilation air to boiler.
- Should overheating occur or gas supply fail to shut off, do not turn off or disconnect electrical supply to circulator. Instead, shut off the gas supply at a location external to the appliance
- Do not use this boiler if any part has been under water. Immediately call a qualified service technician to inspect
 the boiler and to replace any part of the control system and any gas control that has been under water.

BOILER WATER

- If you have an old system with cast iron radiators, thoroughly flush the system (without boiler connected) to remove sediment. The high-efficiency heat exchanger can be damaged by build-up or corrosion due to sediment.
- Do not use petroleum-based cleaning or sealing compounds in boiler system. Gaskets and seals in the system may be damaged. This can result in substantial property damage.
- Do not use "homemade cures" or "boiler patent medicines." Substantial property damage, damage to boiler, and/ or serious personal injury may result.
- Continual fresh make-up water will reduce boiler life. Mineral build up in heat exchanger reduces heat transfer, overheats the stainless steel heat exchanger, and causes failure. Addition of oxygen carried in by make-up water can cause internal corrosion in system components. Leaks in boiler or piping must be repaired at once to prevent make-up water.
- We reccomend the use of water treatment additives to prolong the life of the boiler and prevent against corrosion and contaminant build ups in the heating system.

FREEZE PROTECTION FLUIDS

CAUTION

- Never use automotive or standard glycol antifreeze, even ethylene glycol made for hydronic systems. Use only
 inhibited propylene glycol solutions, which are specifically formulated for hydronic systems. Ethylene glycol is
 toxic and can attack gaskets and seals used in hydronic systems. Ensure that the glycol used never exceeds
 35% of the systems volume as this may damage the systems components.
- Consider piping and installation when determining boiler location. Any claims for damage or shortage in shipment must be filed immediately against the transportation company by the consignee.

HEATING APPLIANCE REMOVAL FROM A COMMON VENT SYSTEM

At the time of removal of an existing heating appliance, the following steps shall be followed with each appliance remaining connected to the common vent system placed in operation, while the other appliances remaining connected to the common vent system are not in operation.

- 1. Seal any unused openings in the common vent system.
- 2. Visually inspect the venting system for proper size and horizontal pitch to determine if there is blockage, leakage, corrosion or other deficiencies that could cause an unsafe condition.
- 3. If practical, close all building doors, windows and all doors between the space in which the appliance remains connected to the common vent system and other spaces in the building. Turn on clothes dryers and any appliances not connected to the common vent system. Turn on any exhaust fans, such as range hoods and bathroom exhausts, at maximum speed. Do not operate a summer exhaust fan. Close all fireplace dampers.
- 4. Place in operation the appliance being inspected. Follow the lighting instructions. Adjust the thermostat so the appliance will operate continuously.
- Test for spillage at the draft hood relief opening after 5 minutes of main burner operation. Use the flame of a match or candle.
- After it has been determined that each appliance remaining connected to common venting system properly vents when tested as outlined, return doors, windows, exhaust fans, fireplace dampers and any other gas burning appliance to their previous condition of use.
- Any improper operation of the common went system should be corrected so the installation conforms to the National Fuel Gas Code, ANSI Z223.1.

When resizing any portion of the common went system, the common vent system should be resized to approach the minimum size as determined using the appropriate tables in Appendix G in the National Fuel Gas Code, ANSI Z 223.1

WARNING

Verify proper operation after servicing.

CONDENSATE REMOVAL SYSTEM

This is a condensing high efficiency appliance; therefore this unit has a condensate removal system. Condensate is nothing more than water vapor, derived from the combustion products. It is very important that the condensate line is sloped away from the boiler and down to a suitable inside drain. A condensate filter, if required by local authorities can be made up of lime crystals; marble or phosphate chips that will neutralize the condensate. This can be done in the field by the installer. It is also very important that the condensate line is not exposed to freezing temperatures, or any other type of blockage. Plastic tubing must be the only material used for the condensate line. Steel, brass, copper or others will be subject to corrosion or deterioration. A second vent may be necessary to prevent condensate line vacuum lock if a long horizontal run is used. Also, an increase in pipe size may be necessary to drain properly. Support of the condensation line may be necessary to avoid blockage of the condensate flow.

CAUTION

The condensate line must remain unobstructed, allowing free flow of condensate. If condensate is allowed to freeze in the line or if the line is obstructed in any other manner, condensate can exit from the boiler condensate trap, resulting in potential water damage to property.

Note:

Use materials approved by the authority having jurisdiction. In the absence of other authority, PVC and CPVC pipe must comply with ASTMD1785, F441 or D2665. Cement and primer must comply with ASTM D2564 or F493. For Canada, use CSA or ULC certified PVC or CPVC pipe, fittings and cement. When installing a condensate pump, select one approved for use with condensing boilers and furnaces. The pump should have an overflow switch to prevent property damage from condensate spillage. Condensate from the Boiler will be slightly acidic (typically with a pH from 3.0 to 4.0). Install a neutralizing filter if required by local codes.

1. INTRODUCTION

The Condensing HT boiler is a wall hung, fan assisted room-sealed combination boiler.

The boiler is designed for use with a fully pumped sealed and pressurised heating system.

The boiler is supplied with a pump, diverter valve, pressure relief valve, expansion tank and pressure gauge fully assembled and tested.

As supplied, the boiler will automatically modulate to provide central heating outputs between 9.4 and 33.0 kW (32,074 and 112,600 Btu/h).

The maximum output available for domestic hot water is 33.0 kW (112,600 Btu/h).

WARNING

It is the law that all gas appliances are installed by a competent person.

It is in your own interest and that of safety to ensure that the law is complied with.

- The installation must conform to the requirements of the authority having jurisdiction or, in the absence of such requirements, to the National Fuel Gas Code, ANSI Z223.1/NFPA 54
 Where required by the authority having jurisdiction, the installation must conform to the Standard for Controls and Safety Devices for Automatically Fired Boilers, ANSI/ASME CSD-1.*
 - Safe lighting and other performance criteria were met with the gas manifold and control assembly provided on boiler when boiler underwent tests specified in ANSI Z21.13-latest edition.
- The installation should conform with CGA B149.1 INSTALLATION CODE and/or local installation Code, plumbing or waste water codes and other codes as applicable.
- Clearances from and protection of combustible material.
- Manufacturer's instructions must NOT be taken in anyway as over-riding statutory obligations.

2. TECHNICAL DATA

2.1 PERFORMANCE

Central Heating		MAX		MIN
		0÷2,000 Ft 0÷610 m	2,000÷4,500 Ft 610÷1,370 m	
Heat Input (Gross)	Btu/h kW	126,376	120,358	37,192
		37.0	35.3	10.9
Heat Output (modulating)	Btu/h kW	112,601	107,239	32,804
		33.0	31.4	9.6
CO ₂ Setting Gas A (Natural Gas)	%	8.7	8.7	8.4
Gas Rate A (Natural Gas)	ft³/h m³/h	124.5	118.6	36.6
		3.53	3.36	1.04
CO ₂ Setting Gas E (LPG Gas)	%	10.0	10.0	9.8
Gas Rate E (LPG Gas)	ft³/h m³/h	48.1	45.8	14.2
		1.36	1.30	0.40
CH Water Temp. (Approx.)	°F °C		176 80	

2.2 SYSTEM

Central Heating (Sealed System)

Max System Pressure	30.0 psi / 2.11 bar	
Min System Pressure	7.25 psi / 0.5 bar	
Max System temperature	176 °F / 80 °C	
Pressure Relief Valve Setting	30.0 psi / 2.11 bar	
Expansion Tank Size	2.2 gal / 10.0 l	
(pre-charge press.)	at 11.6 psi / 0.8 bar	
Flow Connection	3/4" / 22.2 mm	
Return Connection	3/4" / 22.2 mm	
Relief Valve Connection	3/4" / 22.2 mm	
Recommended System Pressure (cold)	21.7 psi / 1.5 bar	