

USER'S INFORMATION MANUAL

CONDENSING HIGH EFFICIENCY GAS - FIRED HOT WATER BOILER

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; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas 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.

AVERTISSEMENT

Assurez-vous de bien suivre les instructions données dans cette notice pour réduire au minimum le risque d'incendie ou d'explosion ou pour éviter tout dommage matériel, toute blessure ou la mort.

- Ne pas entreposer ni utiliser d'essence ni d'autres vapeurs ou liquides inflammables dans le voisinage de cet appareil ou de tout autre appareil.
- **QUE FAIRE SI VOUS SENTEZ UNE ODEUR DE GAZ:**
 - Ne pas tenter d'allumer d'appareils.
 - Ne touchez à aucun interrupteur. Ne pas vous servir des téléphones dans le bâtiment où vous vous trouvez.
 - Appelez immédiatement votre fournisseur de gaz depuis un voisin. Suivez les instructions du fournisseur.
 - Si vous ne pouvez rejoindre le fournisseur de gaz, appelez le service des incendies.
- L'installation et l'entretien doivent être assurés par un installateur ou un service d'entretien qualifié ou par le fournisseur de gaz.

The following terms are used throughout this manual to bring attention to the presence of hazards of various risk levels.

 **DANGER** Indicates an imminently hazardous situation which, if not avoided, will result in death, serious injury or substantial property damage.

 **CAUTION** Indicates a potentially hazardous situation which, if not avoided, may result in moderate or minor injury or property damage.

 **WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death, serious injury or substantial property damage.

NOTICE Indicates special instructions on installation, operation, or maintenance which are important but not related to personal injury hazards.

Basic Operation and Maintenance

 **WARNING** There are no user serviceable parts on this boiler. Warranty does not cover defects caused by attempts to service this boiler by someone other than a qualified gas service technician. These attempts could cause property damage, personal injury or loss of life.

 **CAUTION** Should overheating occur or the gas supply fail to shut off, do not turn off or disconnect the electrical supply to the pump. Instead, shut off the gas supply at a location external to the appliance.

En cas de surchauffe ou si l'admission de gaz ne peut être coupée, ne pas couper ni débrancher l'alimentation électrique de la pompe. Fermer plutôt le robinet d'admission de gaz à l'extérieur de l'appareil.

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 which has been under water.

 **WARNING** Like all central heating appliances, this boiler is equipped with safety devices, which could cause it to shutdown, requiring service to restore normal operation. Where such a shutdown could result in damage from low temperatures (such as frozen pipes), do not leave the heating system unattended during cold weather unless alarms or other safeguards are in place to prevent damage.

A. General

1. This manual covers proper care and use of your new Condensing High Efficiency Gas Fired Boiler.
2. Instructions to safely operate and shut down this boiler are shown on pages 5 and 6 of this manual. For boilers having a manual gas shut-off valve external to the cabinet, follow the instructions on page 5. If the shut-off valve is internal to the cabinet, follow the instructions in page 6. These instructions are also on a label on the boiler.
3. Boiler uses an electronic means built into the ignition system to extinguish burner in the event that flames exit the combustion chamber. If boiler fails to light, call a qualified gas service technician to diagnose and correct the problem.
4. This boiler is equipped with a safety feature which will shut down the burner in the event of a vent system blockage. If boiler fails to function, and boiler is vented through an outside wall accessible from ground level, inspect vent terminal on outside wall for blockage such as a bee's nest or ice. If blockage is found, burner should ignite approximately 30 seconds after blockage is removed. If no blockage is found, or if terminal is inaccessible from ground level, problem must be diagnosed and corrected by a qualified gas service technician.



WARNING Asphyxiation Hazard. In the event that the ignition system does not permit the boiler to light, there is either a problem with the ignition system or a problem with the vent system. Call a qualified gas service technician to diagnose and correct the problem.

A shutdown of the burner due to the pressure switch is an indication that there is a problem with the vent system, such as a blockage. The boiler pressure switch should only be reset after a qualified gas service technician has diagnosed and corrected the venting problem that caused the pressure switch to open.

120°F	More than 5 minutes
125°F	1-1/2 to 2 minutes
130°F	About 30 seconds
135°F	About 10 seconds
140°F	Less than 5 seconds
145°F	Less than 3 seconds
150°F	About 1-1/2 seconds
155°F	About 1 second



DANGER



- Water temperature over 125°F (52°C) can cause severe burns instantly or death from scalds.
- Children, disabled and elderly are at highest risk of being scalded.
- Feel water before bathing or showering
- Installation of an ASSE 1017 or ASSE 1070 certified tempering valve is **REQUIRED** as part of this boiler's installation. Consult manual for details on valve installation and temperature adjustment.

B. Boilers Used to Generate Domestic Hot Water

Boilers covered by this manual can be used to generate domestic hot water (hot water used at fixtures) in addition to space heat. This can be done in one of two ways, depending on the model:

1. Using a separately sold "indirect water heater" or "combi kit".
2. Certain "combi" models covered by this manual have domestic water function built into the boiler itself.

Like all water heaters, domestic hot water systems described above have the potential to deliver scalding water temperatures to any faucet in the system at any time, particularly if they are not installed, maintained, and adjusted correctly. To minimize the risk of scald injury, observe the following precautions:

- a. Observe the relationship between domestic water temperature and time required for scalding to occur shown in Table 1.
- b. Feel water before showering or bathing
- c. Be aware that children, elderly, and disabled are particularly vulnerable to scalding.
- d. When an indirect water heater or external combi kit is used to generate domestic hot water follow instructions provided with that device to adjust domestic water temperature, or consult qualified service technician.
- e. Domestic water temperature adjustments to the "combi" models covered by this manual must only be attempted by a qualified service technician in accordance with the Installation, Operating and Service Instructions.
- f. Equip indirect water heaters and external combi kits with tempering valves if such valves are not supplied with the domestic water heating device. Select, install, and maintain these valves in accordance with the manufacturer's instructions and local codes.
- g. Combi boilers covered by this manual **MUST** be equipped with a ASSE 1017 or ASSE 1070 certified tempering valve selected, installed, and maintained in accordance with the valve manufacturer's instructions and local codes.

User Maintenance

1. On a continuous basis:

- Keep area around boiler free from combustible materials, gasoline, and other flammable vapors and liquids.
- Keep area around the combustion air inlet terminal and area around boiler free from contaminants, including bleaches, fabric softeners, chemicals, sprays, cleaners, paints, paint removers, refrigerants, and cat boxes. Traces of these chemicals can be drawn into the boiler, causing severe corrosion damage to the boiler and/or objectionable odors.
- Keep boiler room ventilation openings open and unobstructed.
- Do not expose boiler to large amounts of dust such as drywall construction or woodworking.

2. On a monthly basis:

 **WARNING** If any of the below listed conditions is found, follow instructions “TO TURN OFF GAS TO APPLIANCE” in Figures 2 & 3 and contact a qualified gas service technician to correct the problem before placing the boiler back in service. Failure to correct these conditions could result in property damage, personal injury or loss of life.

- Inspect vent and combustion air intake terminals for obstruction or damage due to impact or excessive temperature.
- Inspect vent and combustion air exterior wall penetrations to be sure they are weather tight.
- Inspect vent and combustion air intake system for obstructions, loose joints, condensate leakage, sags in horizontal runs of pipe, corrosion, or other deterioration.
- Inspect water and gas pipes for leaks.
- Remove boiler front door and inspect for carbon (soot) in the cabinet, condensate drain leaks, condensate blockage and deterioration of visible controls, wiring or sheet metal components. If you find any of these conditions exist, have a qualified service technician service boiler immediately.

 **DANGER** Explosion Hazard. Do not use matches, candles, open flames or other ignition source to check for leaks.

Make sure that the area around the boiler is clear and free from combustible materials, gasoline and other flammable vapors and liquids.

 **WARNING** Carbon (“soot”) in or near the boiler cabinet area is an indication of a potential carbon monoxide hazard. If carbon is found, immediately follow instructions “TO TURN OFF GAS TO APPLIANCE” in Figures 2 & 3 and contact a qualified gas service technician to correct the problem before placing the boiler back in service.

3. **On an annual basis:** have a qualified gas service technician perform a more detailed inspection in accordance with the Installation, Operating and Service Instructions.

NOTICE This boiler has a heat exchanger made from a special stainless steel alloy which can be severely damaged by frequent additions of water or by the addition of boiler water additives which are not designed for use with stainless steel boilers. If it is necessary to add water to the boiler, have a service technician check the system for leaks. Do not add any chemicals to the boiler not listed in the Installation, Operating and Service Instructions. Warranty does not cover defects caused by not following the service and maintenance procedure shown in the Installation, Operating and Service Instructions.

Lighting and Operating Instructions

FOR YOUR SAFETY READ BEFORE OPERATING/P OUR VOTRE SÉCURITÉ LISEZ AVANT DE METTRE EN MARCHÉ

WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

AVERTISSEMENT: Quiconque ne respecte pas à la lettre les instructions dans la présente notice risque de déclencher un incendie ou une explosion entraînant des dommages, des blessures ou la mort.

- A. This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
- B. BEFORE OPERATING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

WHAT TO DO IF YOU SMELL GAS:

- Do not try to light any appliance.
 - Do not touch any electric switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to turn the gas control knob. Never use tools. If the knob will not turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

- A. Cet appareil ne comporte pas de veilleuse. Il est muni d'un dispositif d'allumage qui allume automatiquement le brûleur. Ne tentez pas d'allumer le brûleur manuellement.
- B. AVANT DE FAIRE FONCTIONNER, renifllez tout autour de l'appareil pour détecter une odeur de gaz. Reniflez près du plancher, car certains gaz sont plus lourds que l'air et peuvent s'accumuler au niveau du sol.

QUE FAIRE SI VOUS SENTEZ UNE ODEUR DE GAZ:

- Ne pas tenter d'allumer d'appareil.
 - Ne touchez à aucun interrupteur ; ne pas vous servir des téléphones se trouvant dans le bâtiment.
 - Appelez immédiatement votre fournisseur de gaz depuis un voisin. Suivez les instructions du fournisseur.
 - Si vous ne pouvez rejoindre le fournisseur, appelez le service des incendies.
- C. Ne poussez ou tournez la manette d'admission du gaz qu'à la main ; ne jamais utiliser d'outil. Si la manette reste coincée, ne pas tenter de la réparer ; appelez un technicien qualifié. Le fait de forcer la manette ou de la réparer peut déclencher une explosion ou un incendie.
- D. N'utilisez pas cet appareil s'il a été plongé dans l'eau, même partiellement. Faites inspecter l'appareil par un technicien qualifié et remplacez toute partie du système de contrôle et toute commande qui ont été plongés dans l'eau.

OPERATING INSTRUCTIONS/ INSTRUCTIONS DE FONCTIONNEMENT

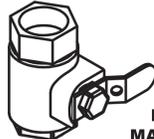
1. STOP! Read safety information above on this label.
2. Set the thermostat to lowest setting.
3. Turn off all electric power to the appliance.
4. This appliance is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
5. Turn the external boiler manual gas valve handle clockwise ↻ to close the gas supply.
6. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to the next step.
7. Turn the external boiler manual gas valve handle counterclockwise ↺ to open the gas supply.
8. Turn on all electric power to the appliance.
9. Set the thermostat to the desired setting.
10. If the appliance will not operate, follow the instructions "To Turn Off Gas To Appliance" and call your service technician or gas supplier.

1. ARRÊTEZ ! Lisez les instructions de sécurité sur la portion supérieure cette étiquette.
2. Réglez le thermostat à la température la plus basse.
3. Coupez l'alimentation électrique de l'appareil.
4. Cet appareil est équipé de l' dispositif d'allumage qui allume automatiquement le brûleur. Ne tentez pas d'allumer le brûleur manuellement.
5. Tourner la chaudière externe manuelle poignée ↻ en clapet à gaz dans le sens des aiguilles d'une montre pour fermer l'offre de gaz.
6. Attendre cinq (5) minutes pour laisser échapper tout le gaz. Reniflez tout autour de l'appareil, y compris près du plancher, pour détecter une odeur de gaz. Si vous sentez une odeur de gaz, ARRÊTEZ ! Passez à l'étape B des instructions de sécurité sur la portion supérieure de cette étiquette. S'il n'y a pas d'odeur de gaz, passez à l'étape suivante.
7. Tourner la chaudière externe manuelle compteur de poignée ↺ en clapet à gaz ouvrir dans le sens des aiguilles d'une montre le gaz approvisionnement.
8. Mettez l'appareil sous tension.
9. Réglez le thermostat à la température désirée.
10. Si l'appareil ne se met pas en marche, suivez les instructions intitulées « Comment couper l'admission de gaz de l'appareil » et appelez un technicien qualifié ou le fournisseur de gaz.

OPEN/OUVERT



CLOSED/FERMÉ



EXTERNAL BOILER
MANUAL GAS VALVE
LA CHAUDIÈRE EXTERNE
MANUELLE DE CLAPET À GAZ

TO TURN OFF GAS TO APPLIANCE/ COMMENT COUPER L'ADMISSION DE GAZ DE L'APPAREIL

1. Set the thermostat to lowest setting.
2. Turn off all electric power to the appliance if service is to be performed.
3. Turn the external boiler manual gas valve handle clockwise ↻ to close gas supply.

1. Réglez le thermostat à la température la plus basse.
2. Coupez l'alimentation électrique de l'appareil s'il faut procéder à l'entretien.
3. Tourner la chaudière externe manuelle poignée ↻ en clapet à gaz dans le sens des aiguilles d'une montre pour fermer l'offre de gaz.

Figure 2: Instructions for Boilers Having a Manual Gas Valve External to Cabinet

**FOR YOUR SAFETY READ BEFORE OPERATING/POUR VOTRE
SÉCURITÉ LISEZ AVANT DE METTRE EN MARCHÉ**

WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

AVERTISSEMENT: Quiconque ne respecte pas à la lettre les instructions dans la présente notice risque de déclencher un incendie ou une explosion entraînant des dommages, des blessures ou la mort.

- A. This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
- B. BEFORE OPERATING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

- A. Cet appareil ne comporte pas de veilleuse. Il est muni d'un dispositif d'allumage qui allume automatiquement le brûleur. Ne tentez pas d'allumer le brûleur manuellement.
- B. AVANT DE FAIRE FONCTIONNER, reniflez tout autour de l'appareil pour déceler une odeur de gaz. Reniflez près du plancher, car certains gaz sont plus lourds que l'air et peuvent s'accumuler au niveau du sol.

WHAT TO DO IF YOU SMELL GAS:

QUE FAIRE SI VOUS SENTEZ UNE ODEUR DE GAZ:

- Do not try to light any appliance.
 - Do not touch any electric switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to turn the gas control knob. Never use tools. If the knob will not turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

- Ne pas tenter d'allumer d'appareil.
 - Ne touchez à aucun interrupteur ; ne pas vous servir des téléphones se trouvant dans le bâtiment.
 - Appelez immédiatement votre fournisseur de gaz depuis un voisin. Suivez les instructions du fournisseur.
 - Si vous ne pouvez rejoindre le fournisseur, appelez le service des incendies.
- C. Ne poussez ou tournez la manette d'admission du gaz qu'à la main ; ne jamais utiliser d'outil. Si la manette reste coincée, ne pas tenter de la réparer ; appelez un technicien qualifié. Le fait de forcer la manette ou de la réparer peut déclencher une explosion ou un incendie.
- D. N'utilisez pas cet appareil s'il a été plongé dans l'eau, même partiellement. Faites inspecter l'appareil par un technicien qualifié et remplacez toute partie du système de contrôle et toute commande qui ont été plongés dans l'eau.

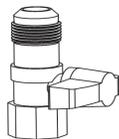
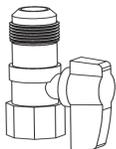
OPERATING INSTRUCTIONS/ INSTRUCTIONS DE FONCTIONNEMENT

1. STOP! Read safety information above on this label.
2. Set the thermostat to lowest setting.
3. Turn off all electric power to the appliance.
4. This appliance is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
5. Remove appliance front door.
6. Turn the manual gas valve handle clockwise ↻ to close the gas supply.
7. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to the next step.
8. Turn the manual gas valve handle counterclockwise ↺ to open the gas supply.
9. Replace appliance front door.
10. Turn on all electric power to the appliance.
11. Set the thermostat to the desired setting.
12. If the appliance will not operate, follow the instructions "To Turn Off Gas To Appliance" and call your service technician or gas supplier.

1. ARRÊTEZ ! Lisez les instructions de sécurité sur la portion supérieure cette étiquette.
2. Réglez le thermostat à la température la plus basse.
3. Coupez l'alimentation électrique de l'appareil.
4. Cet appareil est équipé de l' dispositif d'allumage qui automobile allume maticallyle brûleur. Ne tentez pas d'allumer le brûleur manuellement.
5. Enlevez la porte de devant de l'appareil.
6. Tourner la manuelle poignée ↻ en clapet à gaz dans le sens des aiguilles d'une montre pour fermer l'offre de gaz.
7. Attendre cinq (5) minutes pour laisser échapper tout le gaz. Reniflez tout autour de l'appareil, y compris près du plancher, pour déceler une odeur de gaz. Si vous seutez une odeur de gaz, ARRÊTEZ ! Passez à l'étape B des instructions de sécurité sur la portion supérieure de cette étiquette. S'il n'y a pas d'odeur de gaz, passez à l'étape suivante.
8. Tourner la manuelle compteur de poignée ↺ en clapet à gaz ouvrir dans le sens des aiguilles d'une montre le gaz approvisionnement.
9. Remplacez la porte de devant l'appareil.
10. Mettez l'appareil sous tension.
11. Réglez le thermostat à la température désirée.
12. Si l'appareil ne se met pas en marche, suivez les instructions intitulées « Comment couper l'admission de gaz de l'appareil » et appelez un technicien qualifié ou le fournisseur de gaz.

OPEN/OUVERT

CLOSED/FERMÉ



MANUAL GAS VALVE

MANUELLE DE CLAPET A GAZ

**TO TURN OFF GAS TO APPLIANCE/COMMENT COUPER L'ADMISSION DE GAZ
DE L'APPAREIL**

1. Set the thermostat to lowest setting.
2. Turn off all electric power to the appliance if service is to be performed.
3. Remove appliance front door.
4. Turn the manual gas valve handle clockwise ↻ to close gas supply.

1. Réglez le thermostat à la température la plus basse.
2. Coupez l'alimentation électrique de l'appareil s'il faut procéder à l'entretien.
3. Enlevez la porte de devant de l'appareil.
4. Tourner la manuelle poignée ↻ en clapet à gaz dans le sens des aiguilles d'une montre pour fermer l'offre de gaz.

Figure 3: Instructions for Boilers Having a Manual Gas Valve Inside Cabinet

Important Product Safety Information

Refractory Ceramic Fiber Product



The Service Parts list designates parts that contain refractory ceramic fibers (RCF). RCF has been classified as a possible human carcinogen. When exposed to temperatures above 1805°F, such as during direct flame contact, RCF changes into crystalline silica, a known carcinogen. When disturbed as a result of servicing, these substances become airborne and, if inhaled, may be hazardous to your health.

AVOID Breathing Fiber Particulates and Dust

Precautionary Measures:

Do not remove or replace RCF parts or attempt any service work involving RCF without wearing the following protective gear:

1. A National Institute for Occupational Safety and Health (NIOSH) approved respirator
 2. Long sleeved, loose fitting clothing
 3. Gloves
 4. Eye Protection
- Take steps to assure adequate ventilation.
 - Wash all exposed body areas gently with soap and water after contact.
 - Wash work clothes separately from other laundry and rinse washing machine after use to avoid contaminating other clothes.
 - Discard used RCF components by sealing in an airtight plastic bag. RCF and crystalline silica are not classified as hazardous wastes in the United States and Canada.

First Aid Procedures:

- If contact with eyes: Flush with water for at least 15 minutes. Seek immediate medical attention if irritation persists.
- If contact with skin: Wash affected area gently with soap and water. Seek immediate medical attention if irritation persists.
- If breathing difficulty develops: Leave the area and move to a location with clean fresh air. Seek immediate medical attention if breathing difficulties persist.
- Ingestion: Do not induce vomiting. Drink plenty of water. Seek immediate medical attention.

