

User's Manual for **NEOTHERM**[®]

with the Touchscreen Display

Modulating Boiler

Model NTH

Sizes 399–850 MBTU/h

Water Heater

Model NTV

Sizes 285-850 MBTU/h

FOR YOUR SAFETY: This product must be installed and serviced by a professional service technician, qualified in hot water boiler and heater installation and maintenance. Improper installation and/or operation could create carbon monoxide gas in flue gases which could cause serious injury, property damage, or death. Improper installation and/or operation will void the warranty.

⚠ 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 nearby 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 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.

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A. Safety Notes

Safety notes are used throughout this manual to bring attention to the presence of hazards with various risk levels and to offer important information concerning the life of this product. There are 3 basic types.

⚠ WARNING	Indicates an imminently hazardous situation which, if not avoided, can or will result in death or serious injury and can or will result in catastrophic property damage.
⚠ CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in moderate injury and/or property damage.
NOTE:	Indicates instructions that are important to that topic but not related to personal injury or property damage.

⚠ WARNING
If overheating occurs or if the gas supply fails 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.

⚠ AVERTISSEMENT
En cas de surchauffe ou si l'admission de gaz ne se ferme pas, 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.

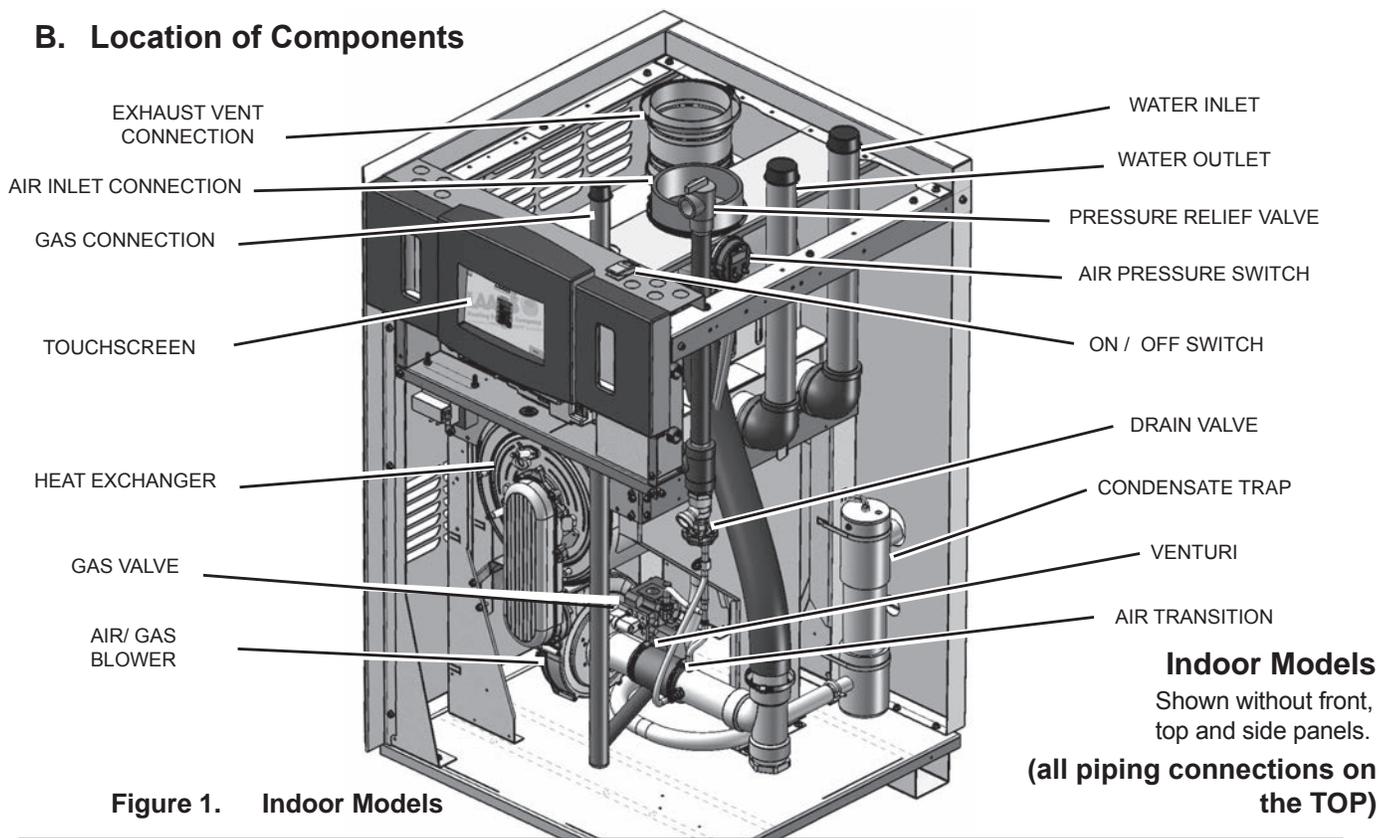
⚠ WARNING
Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

⚠ AVERTISSEMENT
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.

⚠ WARNING
Carbon Monoxide Hazard
This product burns gas to produce heat. The appliance must be properly installed, operated, and maintained to avoid exposure to appreciable levels of carbon monoxide and the installer is required to confirm that at least one carbon monoxide alarm is installed in the living space before the appliance is put into operation.
It is important for carbon monoxide alarms to be installed, maintained, and replaced following the alarm manufacturer's instructions and applicable local codes.

⚠ AVERTISSEMENT
Danger lié au monoxyde de carbone
Ce produit brûle des gaz pour produire de la chaleur. L'appareil requiert une installation, un fonctionnement et une maintenance adéquates afin d'éviter l'exposition à des niveaux appréciables de monoxyde de carbone; l'installateur est requis de confirmer qu'au moins une alarme de détection de monoxyde de carbone est installée dans l'espace de vie avant que l'appareil ne soit mis en service.
Il importe que les alarmes de détection de monoxyde de carbone soient installées, maintenues et remplacées selon les directives du manufacturier et les codes locaux applicables.

B. Location of Components



Outdoor Models
 Shown without back panel.
(all piping connections in the BACK)

⚠ WARNING

The Repair Parts list designates parts that contain refractory ceramic fibers (RCF). RCF has been classified as a possible human carcinogen. When exposed to temperatures above 180°F, such as during direct flame contact, RCF changes into crystalline silica, a known carcinogen. When disturbed as a result of servicing or repair, these substances become airborne and, if inhaled, may be hazardous to your health.

Do not remove or replace RCF parts or attempt any service or repair 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.

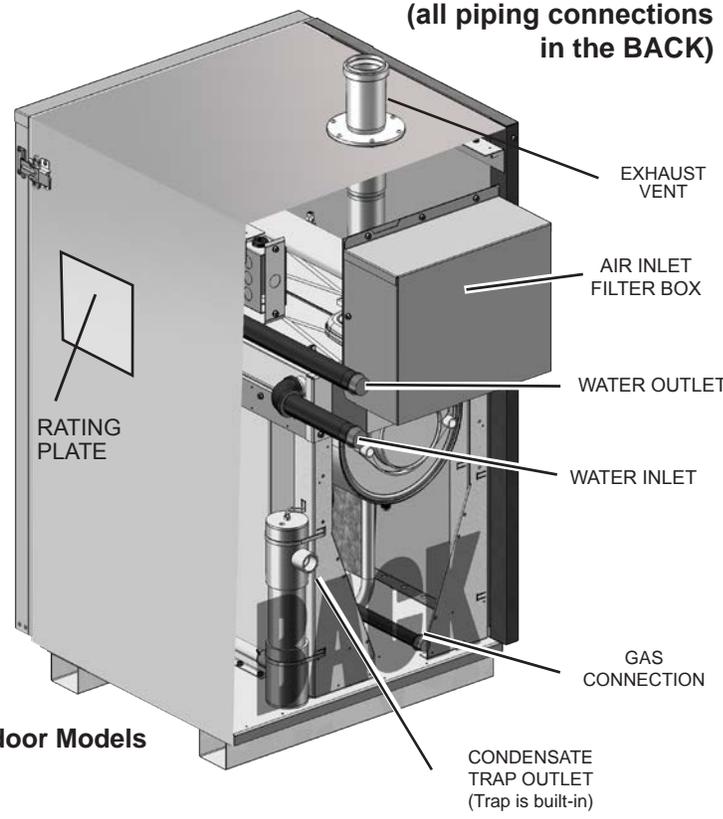


Figure 2. Outdoor Models

Sizes available are 285-850 MBTU/h.
 For complete details to all sizes and dimensions, please refer to the NeoTherm Install and Operating Manual, Doc #1330

C. Start-Up and Shut-Down Decal. Located inside the front access panel.

FOR YOUR SAFETY READ BEFORE OPERATING



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

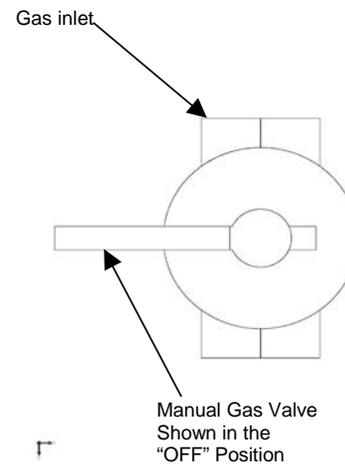
- A. This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
- B. BEFORE OPERATING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and 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 valve handle. Never use tools. If the valve handle 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.

OPERATING INSTRUCTIONS

1. STOP! Read the safety information above on this label.
2. Turn off all electric power to the appliance.
3. Set the thermostat to lowest setting.
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 front access panel.
6. Turn off manual gas valve. Valve is off when valve handle is at a right angle to gas pipe.
7. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you do smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to next step.
8. Slowly turn manual gas valve to "ON". Valve handle will be parallel to gas pipe.
9. Replace front panel.
10. Set thermostat to desired setting.
11. Turn on all electric power to the appliance.
12. If the appliance will not operate, follow the instructions "To Turn Off Gas To Appliance" and call your service technician or gas supplier.



TO TURN OFF GAS TO APPLIANCE

1. Turn off all electric power to the appliance if service is to be performed.
2. Set the thermostat to lowest setting.
3. Remove front access panel.
4. Turn off manual gas valve. Valve is off when valve handle is at a right angle to gas pipe.
5. Replace front panel panel.

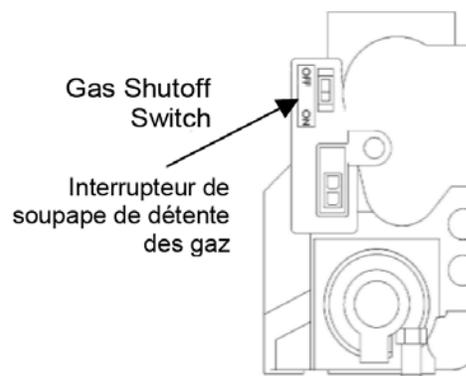


Figure 3. Gas valve for light commercial models

POUR VOTRE SÉCURITÉ, LISEZ AVANT DE METTRE EN MARCHÉ

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

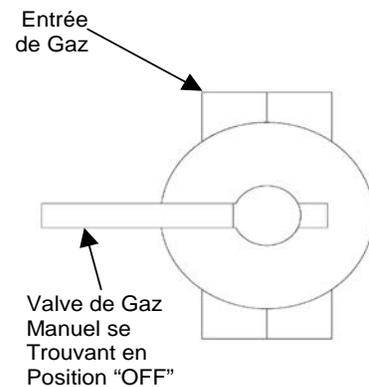
- A. Cet appareil est muni d'un dispositif d'allumage qui allume automatiquement la veilleuse. Ne tentez pas d'allumer la veilleuse manuellement.
- B. **AVANT DE FAIRE FONCTIONNER**, reniflez tout autour de l'appareil pour déceler une odeur de gaz. Reniflez près du plancher, car certains gaz sont plus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

QUE FAIRE SI VOUS SENTEZ UNE ODEUR DE GAZ

- Ne pas tenter d'allumer d'appareil.
Ne toucher 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. N'utilisez que votre main pour fermer la soupape d'arrêt de gaz. N'utilisez jamais d'outils. Si la poignée de la valve ne tourne pas manuellement, ne tentez pas de la réparer. Communiquez avec un technicien de service qualifié. Le fait de forcer ou de tenter de réparer la poignée pourrait causer un incendie ou une explosion.
 - 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.

INSTRUCTIONS DE MISE EN MARCHÉ

1. **ARRÊTEZ !** Lisez les instructions de sécurité sur la portion supérieure.
2. Coupez l'alimentation électrique de l'appareil.
3. Réglez le thermostat à la température la plus basse.
4. Cet appareil est doté d'un dispositif d'allumage qui allumera automatiquement le brûleur. Ne tentez pas d'allumer le brûleur manuellement.
5. Retirez le couvercle avant.
6. Mettez la soupape d'arrêt de gaz à << OFF >>. La valve est en position << OFF >> lorsque la poignée se trouve à angle droit du tuyau de gaz.
7. Attendez cinq (5) minutes afin que le gaz se dissipe. Si vous croyez sentir une odeur de gaz, **ARRÊTEZ !** Reportez-vous aux instructions B ci-dessus, sur cette étiquette. S'il n'y a pas d'odeur de gaz, passez à la prochaine étape.
8. Remettez lentement la soupape d'arrêt de gaz en position << ON >>. La poignée sera parallèle au tuyau de gaz.
9. Remettez le couvercle avant.
10. Réglez le thermostat à la température désirée.
11. Rétablissez l'alimentation électrique à l'appareil.
12. Si l'appareil ne fonctionne pas, suivez les directives relatives à la fermeture de l'alimentation en gaz et communiquez avec votre technicien de service ou le fournisseur de gaz.

**FERMETURE DE L'ALIMENTATION EN GAZ**

1. Coupez toute alimentation électrique à l'appareil si celui-ci doit faire l'objet d'un entretien.
2. Réglez le thermostat au réglage le plus bas.
3. Retirez le couvercle d'accès au panneau de commande.
4. Mettez la soupape d'arrêt de gaz à << OFF >>. La valve est en position << OFF >> lorsque la poignée se trouve à angle droit du tuyau de gaz.
5. Remettez le couvercle d'accès au panneau de commande.

D. The Touchscreen Display



The Touch Screen on OUTDOOR units is located behind the front panel.

Figure 4. Touch Screen

The Touch Screen

The Touch Screen is located front and center on the units and allows you to navigate into all of the functionality and control that is available to setup and customize your heating and/or hotwater system.

Using the Touch Screen

A screen saver is programmed into the display. Simply touch the screen to wake it up.

While under normal operation, the Touch Screen will automatically present this Home Screen. See Menu 1



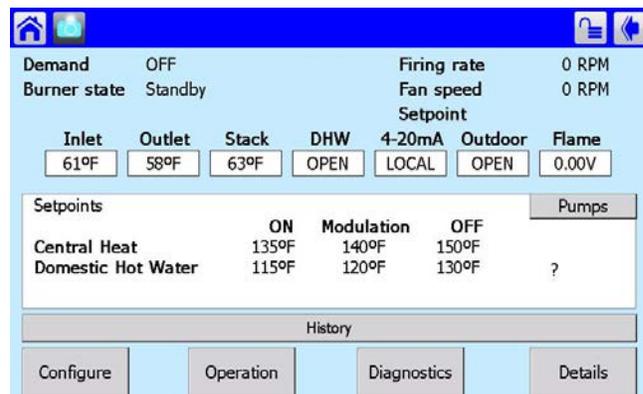
Menu 1. Home Screen

The home screen shows a picture of the unit's controller. The color of the controller depends on the status, as shown below.

Color	Status	Control Icon
Blue	Normal operation	
Red	Lockout	
Gray	Standby mode (Burner switch off)	
Gray and crossed out	Communication problem	
Yellow	Hold state. This could be Anti short cycle, fan speed transitions, etc.	

Boiler Status Colors

To check the operation of the appliance, press the large Control Icon on the Home screen. The system will present a Status Summary screen for the appliance:



Menu 2. Status Summary

Screen Menu Icons



There are several icons at the top of the Touch Screen Menus (and most of the other screens) that will help you move around the system:

Home	Upper left-hand corner	Return to Home page
Camera	Upper left-hand corner	Screen-shot of current menu as a JPG file
Bell	Upper left-hand corner	System in Lockout, Reset required
Padlock	Upper right-hand corner	Locked or Unlocked. See Menu 3
Back	Upper right-hand corner	Return to previous

Sometimes a screen is used to present a list, and often the list is too long to present on a single screen view. To see the rest of the list, pull down on the bar on the right side of the screen, or use the up- and down-arrows.

To make a change, or to get more information about one of the items on the list, press on the line for that item.

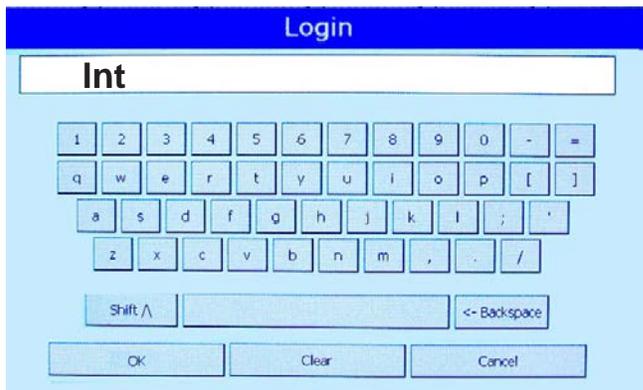
Login (required for some parameters)

To change some parameters, a Login (password) is required. The control system includes three levels of password protection:

- OEM Factory Password** Setup and parameter changes Available only to the factory.
- Login Installer Password** Setup and parameter changes made when the system is installed, and some diagnostic and troubleshooting functions. The installer level password is “Int” (lower case “LNT.”) See Menu 3
- User (no password required)**

Non-critical adjustments and functions, including adjusting the Central Heat and Domestic Hot Water setpoints, monitoring the input and output variables, reading parameters from the controller, and reading the error log

(For some special safety-related functions, besides entering the correct password, the system will ask you to go through an additional “verification” process. For more information, see the section on “Configuration.”)



Menu 3. Keyboard Screen

The passwords used by this system are “case sensitive” – it matters whether a letter in the password is capitalized or not. Pressing the Shift key toggles between capital and lower case letters.

“BS” stands for “Back Space,” and also works as a Delete key.

Anyone can *view* all of the parameters. However, to *change* most of the parameters, you will need a password.

At the bottom of the screen, the system indicates that you need to enter a password.



Menu 4. Login Required

The screen used to Login is similar to the Keyboard screen.

For all configuration and setup instructions, please refer to the NeoTherm Install and Operating Manual, Doc #1330

E. Maintenance

The following maintenance steps will help ensure that your NeoTherm is operating at its best. Perform these steps at least once a year. If you find any issues, contact a qualified service technician for repair.

E.1 General Care

1. Keep the area around the unit free from combustible materials, gasoline, and other flammable vapors and liquids.
2. Ensure that the air intake is isolated from any source of corrosive chemical fumes such as pool chemicals, refrigerants, paint, spray cans, cleaning, and laundry chemicals. When the air intake is contaminated with these chemicals, rapid deterioration of the unit will occur.
3. If desired, clean the jacket surface with a damp cloth and mild detergent. Do not use flammable cleaning materials.
4. If sidewall vented, ensure that the vent and air intake terminals are clear of obstructions. Do not pile snow against the terminals.

E.2 Vent and Air Intake

1. Visually inspect the vent and air intake piping. Ensure that there are no signs of obstructions, leakage, corrosion, or deterioration along the length of the pipe or at the terminals.

E.3 Water Piping and Pressure Relief Valve

1. Visually inspect the water piping and pumps for any signs of leakage.
2. Visually inspect the pressure relief valve for signs of weeping or leakage.

E.4 Condensate Disposal System

1. Visually inspect the condensate trap and drain line for signs of any debris that could cause blockages and ensure that condensate is draining properly. If cleaning of the trap is required, refer to the Installation and Operation manual, or contact a qualified service technician.
2. Inspect the neutralizer (if installed) for any signs of sediment or debris that could cause blockages.

E.5 Annual Service

1. Once a year, contact a qualified service technician to perform a detailed inspection of the unit, the vent and air intake system, water and gas connections, and condensate disposal system.



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