

User's Manual for **Brute MagnaTech®**

Modulating Boiler

Model BMGH1600
1,599 MBTU/h

Model BMGH2000
1,999 MBTU/h

Model BMGH2500
2,499 MBTU/h

Model BMGH3000
3,000 MBTU/h

Model BMGH3500
3,500 MBTU/h

Model BMGH4000
4,000 MBTU/h

Water Heater

Model BMGV1600
1,599 MBTU/h

Model BMGV2000
1,999 MBTU/h

Model BMGV2500
2,499 MBTU/h

Model BMGV3000
3,000 MBTU/h

Model BMGV3500
3,500 MBTU/h

Model BMGV4000
4,000 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 these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury or death.

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 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 ou ni d'autres vapeurs ou liquides inflammables dans le à proximité 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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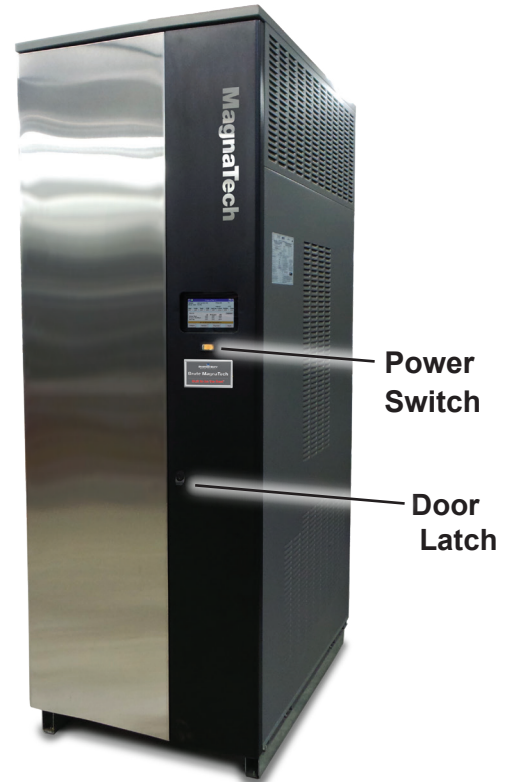
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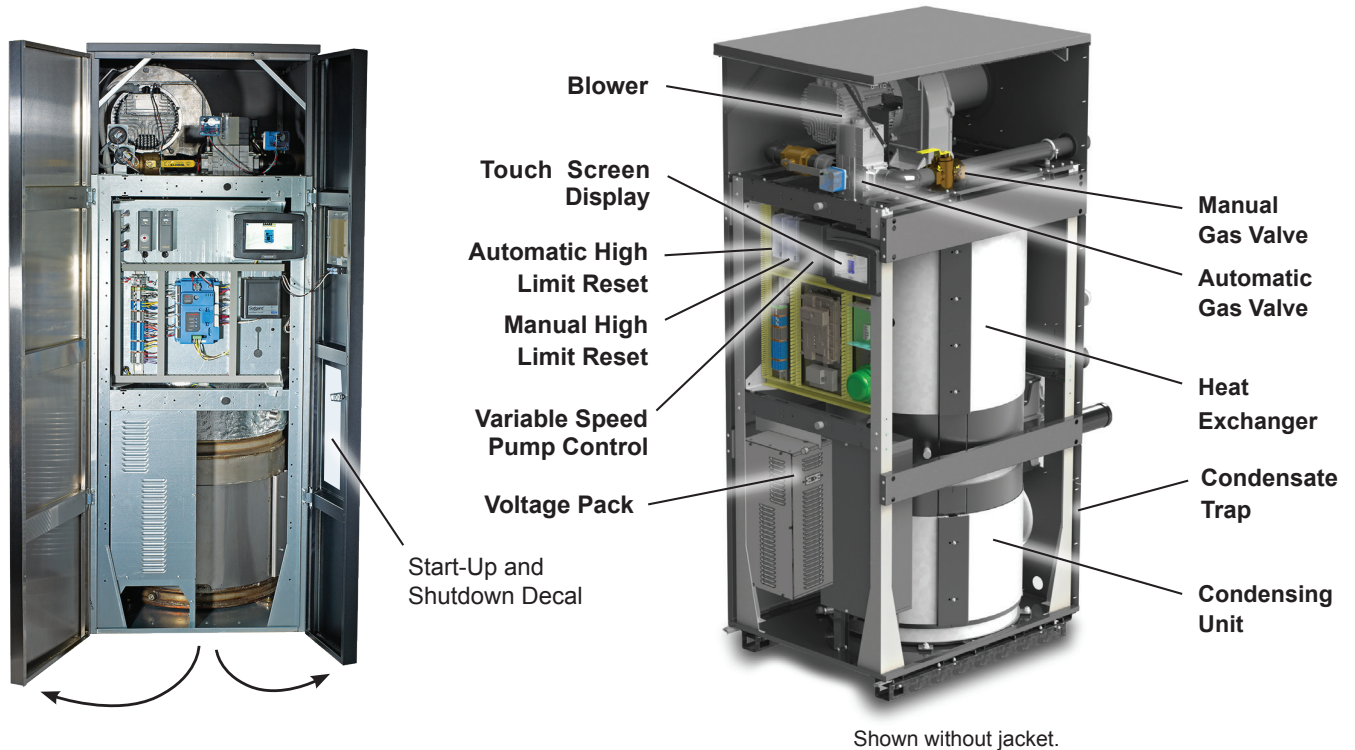
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FAMILIARIZING YOURSELF WITH THE MagnaTech

For full instructions regarding the MagnaTech, please reference the MagnaTech Installation and Operation Manual, Document #1293. If not available at or near the MagnaTech, it can be downloaded at www.bradfordwhite.com



Location of Components

Note - Model 3000 shown for reference.

Some components will vary slightly between the various sizes, but the User Interface & Front Panel remain the same.

Start-Up and Shut-Down Decal. Located on the inside of the right side door.

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.

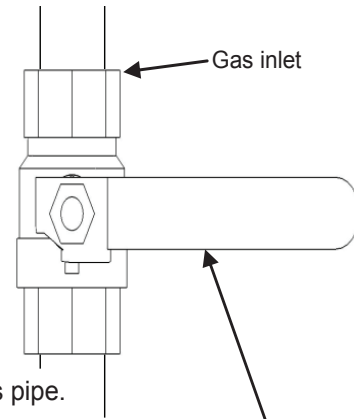
- A. This appliance is equipped with an ignition device which automatically lights the pilot. Do not try to light the pilot by hand.
- B. BEFORE OPERATING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

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 pilot. Do not try to light the pilot by hand.
5. Open front doors.
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 mechanical thermostats to desired settings.
11. Turn on all electric power to the appliance.
12. Set operating thermostat to desired settings using boiler display.
13. If the appliance will not operate, follow the instructions "To Turn Off Gas To Appliance" and call your service technician or gas supplier.



Manual Gas Valve Shown in the "OFF" Position

TO TURN OFF GAS TO APPLIANCE

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

POUR VOTRE SÉCURITÉ, LISEZ AVANT DE METTRE EN MARCHÉ

5. Close front doors.

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.

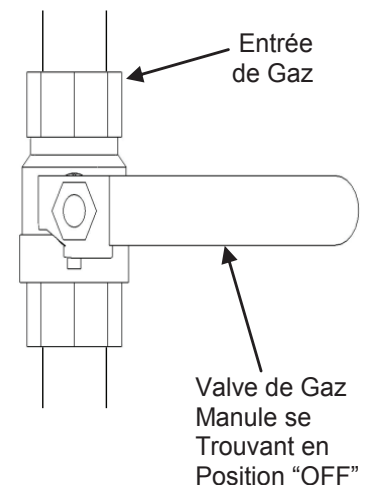
- A.** Cet appareil est équipé d'un dispositif d'allumage qui s'allume automatiquement le pilote. N'essayez pas de lumière le pilote à la main.
- B.** AVANT DE FAIRE FONCTIONNER, reniflez tout autour de l'appareil pour déceler une odeur de gaz. Reniflez près du plancher, car certains gaz sont plus lourds 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 plongées 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 équipé d'un dispositif d'allumage qui s'allume automatiquement le pilote. N'essayez pas de lumière le pilote à la main.
5. Ouvrir les portes 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. Replacez le couvercle avant.
10. Set thermostats mécaniques sur les réglages désirés.
11. Rétablissez l'alimentation électrique à l'appareil.
12. Réglez le thermostat de fonctionnement désirée à l'aide paramètres affichage chaudière.
13. 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.

**FERMENTURE DE L'ALIMENTATION EN GAZ**

1. Coupez toute alimentation électrique à l'appareil si celui-ci doit faire l'objet d'un entretien.
2. Ouvrir les portes avant.
3. Réglez le thermostat au réglage le plus bas.
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. Fermez les portes avant.

SHUTTING DOWN THE MAGNATECH

It may sometimes be necessary to shut down the MagnaTech. Here are the steps required to do this:

1. Switch off the main electrical disconnect switch.
2. Open the front access doors and close the main manual gas valve.
3. If freezing is anticipated, drain the MagnaTech. (Also be sure to protect the piping in the building from freezing.)

The steps listed above may require qualified service personnel.

RESTARTING THE MAGNATECH

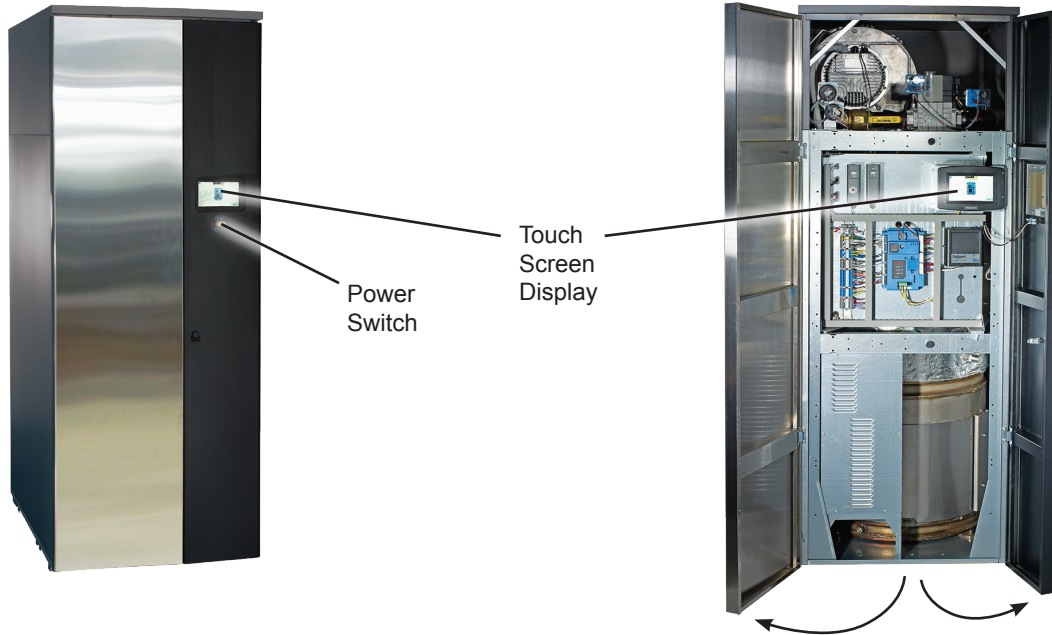
It may be necessary to restart the MagnaTech – for example, after a power interruption. Here are the steps required to do this:

1. Reset any errors using the user interface. See the section on “About Lockouts, Holds, and Alerts.”
2. Turn up the thermostat to call for heat.
3. In approximately 2 seconds, the blower will operate. Ignition should occur after 35-40 seconds. It may take as long as 2-1/2 minutes.
4. If ignition does not occur, wait 5 minutes and then repeat steps 1 through 3.
5. If, after three attempts, the unit still does not light, shut down the boiler and call your service technician.

IN THE EVENT OF POWER FAILURE

The MagnaTech will not operate during an electrical power outage. If there is an extended power outage with danger of freezing, then the MagnaTech (and all other water systems) should be completely drained. Before draining the unit, turn off the gas and turn off the main power switch. When you replace the unit in service, refer to the “Installation and Operation Manual” for instructions on filling and purging.

CONTROLS AND INDICATORS



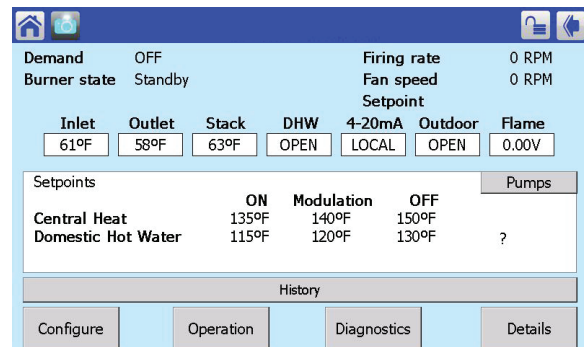
Each MagnaTech has one burner and one burner controller. A complete lead lag system can include up to eight MagnaTechs.

After the system starts, the Touch Screen will automatically present the Home screen:



The icon for each burner controller will appear in one of four colors:

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.



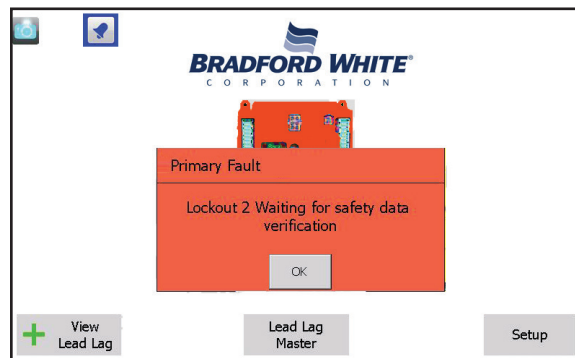
To check the operation of an individual burner, press the large icon on the Home screen. The system will present a Status Summary screen for that burner:

ABOUT LOCKOUTS, HOLDS, AND ALERTS

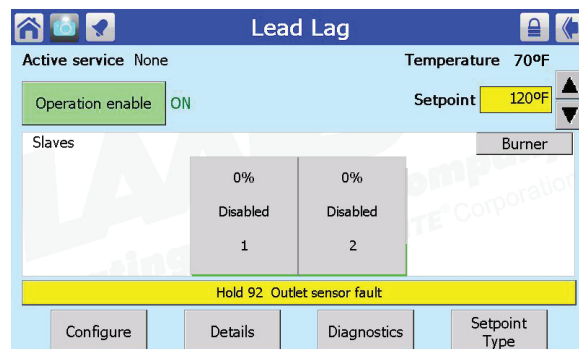
The system responds to three kinds of trouble indications:

- A "lockout" is caused by a serious problem that might involve a safety issue. Once the controller enters a lockout, the burners will shut down, and will not be allowed to run again until the cause of the problem is corrected, and you reset the control system.
- The system may enter a "hold" for a period of time before locking out. This allows the controller to see if the error becomes resolved prior to the hard lockout.
- An "alert" indicates that some feature of the control system's operation was not correct, delayed, or waiting for a response. This does not necessarily indicate a problem.

If a problem occurs while the system is starting up, the system will declare a Hold or Lockout:



If a problem occurs while the system is running, a Bell symbol will appear in the upper left corner of the screen, and the system will present a note across the bottom of the screen. If you tap the bar which includes the message, the system will present more information about the problem. Press the OK button to indicate that you have seen the Lockout or Alert.



If an audible alarm on the display is active, tap the Bell symbol to stop it.

Each error message includes a number. For a more detailed description of each message, see the "Installation and Operation Manual."

The MagnaTech

GENERAL CARE

Keep the area around the MagnaTech clear and free from combustible materials, gasoline and other flammable vapors and liquids. Clean the jacket surfaces with a damp cloth and mild soap. Do not use flammable cleaning materials. Keep the vent terminal free of obstructions. Do not pile snow against the vent terminal.

ANNUAL INSPECTION AND SERVICE

You should visually inspect the vent pipe once a year. Should any corrosion or leaks exist, have the affected parts replaced.

Once each year a qualified service agency should conduct a detailed inspection of all flue product carrying areas of the boiler and vent system. Follow the service instructions in the “Installation and Operating Instructions Manual” for the MagnaTech.

Caution

Do not use this boiler if any part has been under water. Immediately call a qualified service technician to inspect the boiler. Any part of the control system and any gas control which has been under water must be replaced.

WARNING

If the unit overheats or 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 MagnaTech.

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.

FOR SERVICE

Contact your installing contractor, gas utility, Bradford White dealer, or check www.BradfordWhite.com for the nearest authorized representative in your area.



200 Lafayette St.
Middleville, MI 49333
Warranty: (800) 531-2111

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