

# GABO GAS STOVE



WARNING: If the information in these instructions are 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 flamable 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



This appliance is only for use with the type of gas indicated on the rating plate and may be installed in an aftermarket, permanently located, manufactured home (USA only) or mobile home, where not prohibited by local codes. See owner's manual for details. This appliance is not convertible for use with other gases, unless a certified kit is used.

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

- Ne pas entreposer ni utilizer 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'appareil.
- Ne touchez à aucan interrupteur. Ne pas vous servir des téléphones se trouvant dans le bâtiment où vous trouvez.
- Appelez immédiatement votre fournisseur de gaz depuis un voisin. Suivezles instructions du fournisseur.
- Si vous ne pouvez rejoindre le fournisseur de gaz, appelez le service des incindie.
- L'installation et l'entretien doivent être assurés par un installateur ou un service d'entretien qualifié ou par le fournisseur de gaz.

Cet appareil peut être installé dans une maison préfabriquée (É.-U. seulement) ou mobile déjà installée à demeure si les règlements locaux le permettent.

Cet apparcil doit être utilisé uniquement avec les types de gaz indiqué s sur la plaque signalétique. Cet appareil ne peut être converti à d'autres gaz, sauf si une trousse de conversion est utilisée.

## CET APPAREILL EST ÉQUIPIÉ POUR FONCTIONNER AU GAZ NATUREL

Cet appareil est muni d'injecteurs dimensionnés pour une alimentation au gaz naturel.

Consulter les instructions fournies avec l'appareil pour la conversion au propane.

Le injecteur et les instructions nécessaires pour la conversion au propane liquéfie se trouvant.

Attention. Au moment de l'entretien des commandes, étiquetez tous les fils avant de les débrancher. Des erreurs de câblage peuvent entraîner un functionnement inadéquat et dangereux.

S'assurer que l'appareil fonctionne adéquatement une fois 1'entretien terminé.

AVERTISSEMENT: Risque de dommages ou de blessures si les pièces ne sont pas installées conformément à ces schémas et ou si des pièces autres que celles spécifiquement approuvées avec cet appareil sont utilsées.

AVERTISSEMENT: Ne pas utiliser l'appareil si le panneau frontal en verre n'est pas en place, est craqué ou brisé. Confiez le remplacement du panneau à un technicien agréé.

Ne pas utiliser cet appareil s'il a été plongé, même partiellement, dans l'eau. Appeler un technicien qualifié pour inspecter l'apaareil et remplacer toute partie du système de commande et toute commande qui a été plongée dans l'eau.

## **TABLE OF CONTENTS**

Important Safety Information	
Specifications	5
Installation Clearances	6
Venting Requirements	7
Assembly	11
Electrical Connections	20
Lighting Instructions	21
Maintenence	22
Parts List	23

### IMPORTANT SAFETY INFORMATION

The installation must conform with local codes or, in the absence of local codes, with the *National Fuel Gas Code*, *ANSI Z223.1* or the *Canadian Installation Code*, *CAN/CGA B149*.

A manufactured home (USA only) or mobile home OEM installation must conform with the *Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280.* 

The appliance and its appliance main gas valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.5 kPa).

The appliance must be isolated from the gas supply piping system by closing its equipment shutoff valve during any pessure testing of the gas supply system at test pressures equal to or less than 1/2 psi (3.5 kPa).

The installation must provide for adequate ventilation air to the appliance.

This gas appliance must not be connected to a chimney flue serving a separate solid-fuel burning appliance.

The appliance, when installed, must be electrically grounded in accordance with local cades, or, in the absence of local codes, with the *National Electrical Code ANSI/NFPA 70*, or the *Canadian Electrical Code, CSA C22. 1*.

When the appliance is installed directly on carpeting or tile or other combustible material other than wood flooring, the appliance shall be installed on a metal or wood panel extending the full width and depth of the appliance.

The appliance area must be kept clear and free from combustible materials, gasoline and other flammable vapors and liquids.

The flow of combustion and ventilation air must not be obstructed.

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

Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.

Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burns or clothing ignition.

Young Children should be carefully supervised when they are in the same room as the appliance.

Clothing or other flammable material should not be placed on or near the appliance.

Any screen or guard removed for servicing an appliance must be replaced prior to operating the appliance.

Installation and repair should be done by a qualified service person. The appliance should be inspected before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that the control compartments, burners and circulating air passageways of the appliance be kept clean.

## WARNING: Do not operate the appliance with the glass front removed, cracked or broken. Replacement of the glass should be done by a qualified service person.

Warning: Use only the replacement glass assembly, part number 8303567 Do not use substitue materials. Do not strike or slam the glass front. Do not use abrasive cleaners. Do not clean when hot.

#### **SPECIFICATIONS**

INPUT	32,000 Btu/hr(9.38 kW) High Fire,	22,500 Btu/hr(6.7kW) Low Fire	
		Natural Gas	Propane(LP)
Manifold press.		3.5" (0.9 kPa)	1 0.0" ( 2.5 kPa)
Maximum Supply press.		7.0" (1.2 kPa)	13.0" (3.2 kPa)
Minimum S	Supply press.	4.0" ( 1.0 kPa)	11.0" (2.7 kPa)
Orifice Size	2	#32 DMS	#50 DMS
Annual Fuel Utilization Efficiency (AFUE)		73%	71%
Stead State Efficiency		74%	72%
Canadian Efficiency P.4		69%	70%

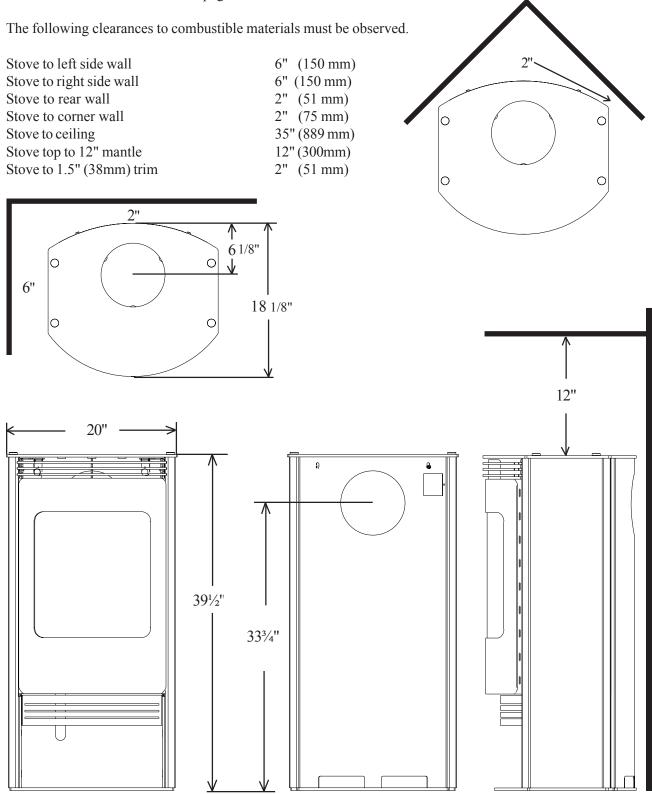
It is recommended that the pilot flame be turned off if the appliance will not be in use for an extended period of time.

This appliance is equipped for use with Natural Gas. A certified kit #8303514 to convert the appliance to use propane is available from your Rais dealer.

This appliance has been certified by OMNI-Test Laboratories, inc. to ANSI Z21.88-2002 • CSA 2.33-2002 Vented Gas Fireplace Heaters and CAN1-2.17-M91, Gas-Fired Appliances for Use At High Altitudes.

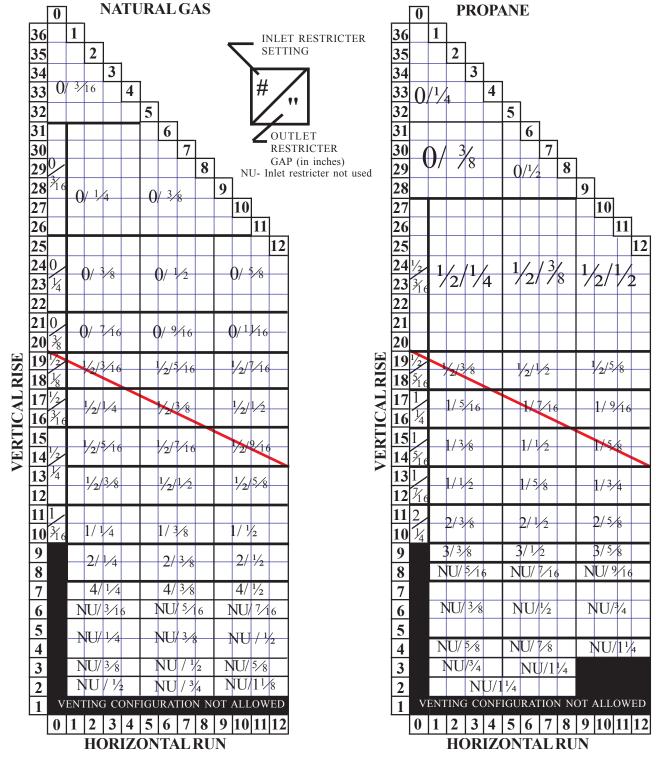
## **INSTALLATION**

Several issues must be addressed when selecting a suitable location for the Gabo. Observing the required clearances to combustible materials, the accessibility of the gas and electrical supply must be considered. In addition, the location of the stove will affect the venting requirements which must also meet the requirements for the vent terminal locations on page 7.

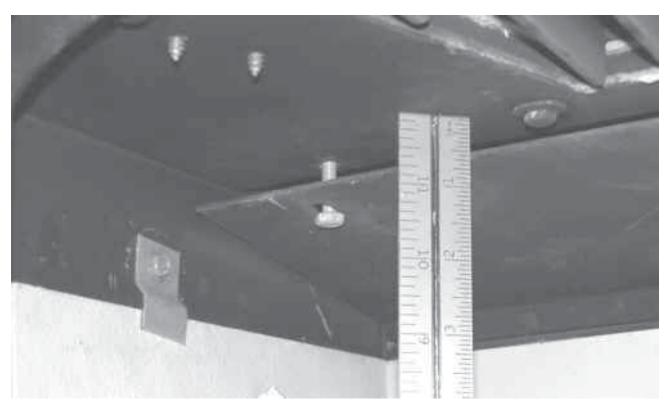


## **VENTING**

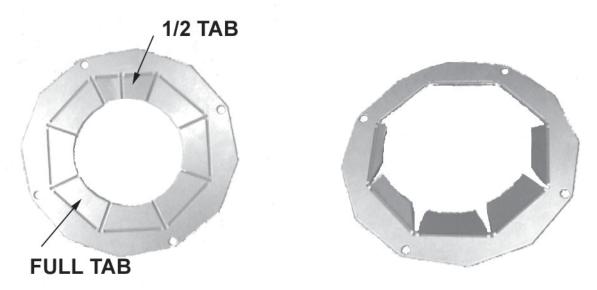
The GaboGas Stove has been tested and listed for installation with the Simpson Duravent GS and Selkirk DT venting components. The total vent length should not exceed 36 feet. The maximum horizontal run is 12 feet. No more than three elbows may be used in the installation. After one elbow is used, four feet of horizontal run must be subtracted for each additional elbow. The stove may be vented in either top or rear exit configuration. Refer to the chart below to determine the correct settings of the inlet plate and outlet restricter gap for the type of fuel and vent configuration. All venting above the red line must incorporate a stainless steel liner.



The first number on the chart refers to the number of tabs that are to be bent down on the inlet restricter and the next number refers to the gap to set the outlet restriction. The outlet restricter is set at  $\frac{1}{2}$ " for the minimum installation on Natural Gas. To change this to another vent configuration, loosen the lock nuts and screw the adjusting bolts in or out as needed. Check the gap on both sides of the restricter plate with a ruler.



The inlet restricter has seven full tabs and two half tabs. If the inlet restricter is required, bend all of the tabs up slightly so the restricter plate can be placed on the vent starter piece.



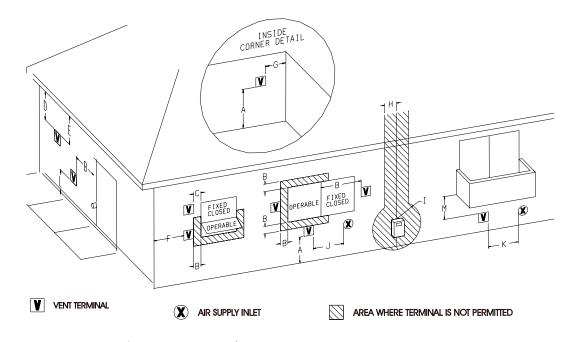
The gasket must be placed between the restricter and the starter piece. Bend down the tabs that are required for the vent configuration from the chart on page 7. Bend the other tabs up to the flat position.



#### **REAR EXIT VENTING**

The Gabo can be vented in rear exit upto 18 inches of vent length. In order to operate satisfactorily, the burner input must be reduced. For natural gas, replace the #32 orifice with #36 by following the instructions on page 12. For propane, install the #53 orifice when the fuel conversion is made. The outlet restricter must be set to a gap of 2-1/8"

The following diagram and table detail the restrictions on the vent terminal location.



		Canadian Installations <sup>1</sup>	US Installations <sup>2</sup>
A=	Clearance above grade, veranda, porch, deck, or balcony	12 inches (30 cm)	12 inches (30 cm)
B=	Clearance to window or door that may be opened	6 inches (15 cm) for appliances $\leq$ 10,000 Btuh (3 kW), 12 inches (30 cm) for appliances > 10,000 Btuh (3 kW) and $\leq$ 100,000 Btuh (30 kW), 36 inches (91 cm) for appliances >100,000 Btuh (30 kW)	6 inches (15 cm) for appliances $\leq$ 10,000 Btuh (3 kW), 9 inches (23 cm) for appliances > 10,000 Btuh (3 kW) and $\leq$ 50,000 Btuh (15 kW), 12 inches (30 cm) for appliances > 50,000 Btuh (15 kW)
C=	Clearance to permanently	*	*
	closed window		
D=	Vertical clearance to ventilated sollocated above the terminal within a horizontal distance of 2 feet (61 cr from the center line of the terminal	a m) *	*
E=	Clearance to unventilated soffit	*	*
F=	Clearance to outside corner	*	*
G=	Clearance to inside corner	*	*
H=	Clearance to each side of	3 feet (91 cm) within a height 15	
	center line extended above meter/regulator assembly	feet above the meter/regulator assembly	*
=	Clearance to service regulator vent outlet	6 feet (1.83 m)	*
J=	Clearance to nonmechanical air supply inlet to building or the combustion air inlet to any other appliance	6 inches (15 cm) for appliances ≤ 10,000 Btuh (3 kW), 12 inches (30 cm) for appliances > 10,000 Btuh (3 kW) and ≤ 100,000 Btuh (30 kW), 36 inches (91 cm) for appliances >100,000 Btuh (30 kW)	6 inches (15 cm) for appliances $\leq$ 10,000 Btuh (3 kW), 9 inches (23 cm) for appliances > 10,000 Btuh (3 kW) and $\leq$ 50,000 Btuh (15 kW), 12 inches (30 cm) for appliances > 50,000 Btuh (15 kW)
K=	Clearance to a mechanical air supply inlet	6 feet (1.83 m)	3 feet (91 cm) above if within 10 (3m) horizontally
L=	Clearance above paved sidewalk or paved driveway located on public property	7 feet (2.13 m) †	*
M=	Clearance under veranda, porch deck, or balcony	12 inches (30 cm) ‡	*

<sup>&</sup>lt;sup>1</sup> In accordance with the current CSA-B149.1 Natural Gas and Propane Installation Code

<sup>&</sup>lt;sup>2</sup> In accordance with the current ANSI Z223.1 / NFPA 54 National Fuel Gas Code

<sup>†</sup> A vent shall not terminate directly above a sidewalk or paved driveway that is located between two single family dwellings and serves both dwellings.

<sup>‡</sup> Permitted only if veranda, porch, deck, or balcony is fully open on a minimum of two sides beneath the floor.

<sup>\*</sup> For clearances not specified in ANSI Z223.1 / NFPA 54 or CSA-B149.1, one of the following shall be indicated:

a) A minimum clearance value determined by testing in accordance with section 2.19.6, or;

b) A reference to the following footnote:

<sup>&</sup>quot;Clearance in accordance with local installation codes and the requirements of the gas supplier".

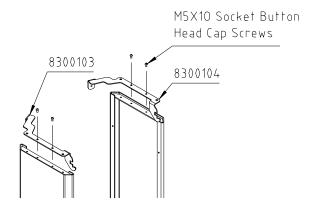
<sup>«</sup>Dégagement conforme aux codes d'installation locaux et aux exigences du foumisseunde gaz.»

## **ASSEMBLY**

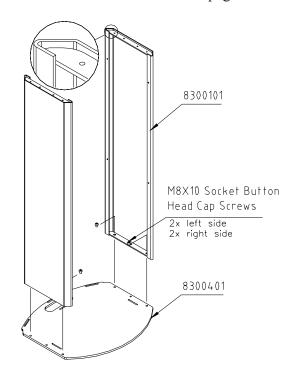
The Gabo Gas Stove is shipped in two containers. One box has the steel shell, the other box has the fire box. Carefully unpack the two boxes near the final location of the stove. A list of fasteners is on page 16.

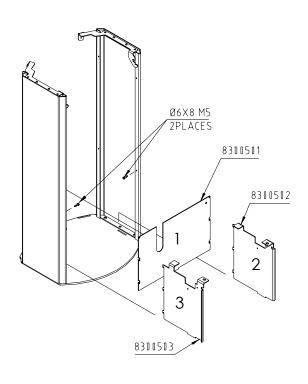
- 1. Place the base plate near the final location of the stove, leaving plenty of room to work around the sides and back.
- 2. Bolt the sides to the base plate with the four M8 X 10 Socket Button Head Cap Screws.

3. Bolt the left and right outer shell brackets to the sides with four M5X10 Socket Button Head Cap Screws.



4. Lock the three panels together to form the firebox support base. Place the support base on the base plate. Make sure the tabs on the bottom of the support base engage the slots in the base plate. Attach two 06X8 M5 Shoulder Screws to the left and right sides



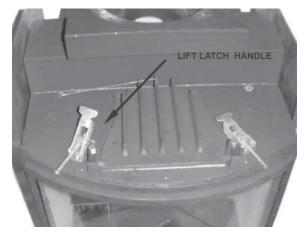


Prepare the firebox for installation in the shell. If the stove is going to converted to burn propane, follow the procedure in the propane conversion kit.

## **FIREBOX PREPARATION**

5. Lift the latch handles to unlock the latches and remove the glass assembly from the firebox and set it aside. Remove all parts and packing materials from the firebox.

If the stove is going to be installed in the rear exit venting configuration, perform the following procedure.



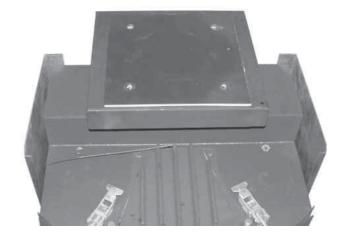
6. Remove the aluminum panels and the burner from the firebox.



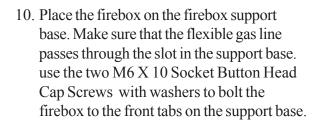
7. Use a 9/16" deep socket wrench to remove the top exit orifice and replace it with the #36 rear exit orifice. Replace the burner and aluminum panels.



8. Remove the rear exit cover plate and screw it to the top exit opening. Screw the vent connector to the rear exit opening.

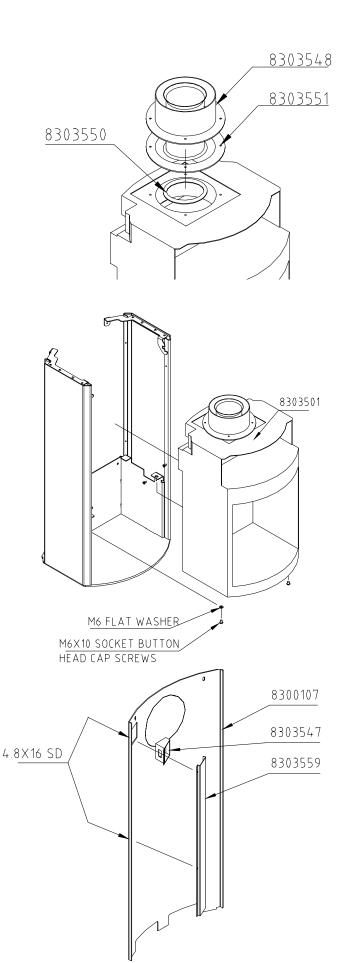


9. If the stove is going to be installed in top exit, install the vent starter piece with the gaskets to the top exit of the firebox with the four 4.8X16 SD screws. If the installation requires the inlet restricter, in stall it and set the tabs to the correct position from the chart on page 7.

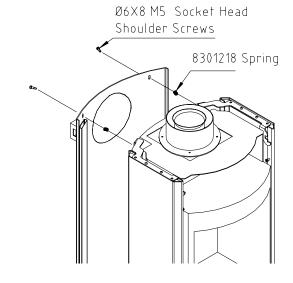


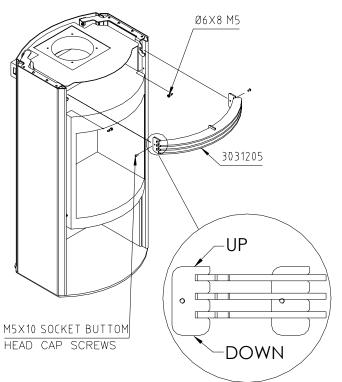
11. If the stove is going to be in rear exit, knock out the rear exit cover plate from the back.

12. Attach the switch housing and wiring heat shield to the back panel with two 4.8X16 SD screws.



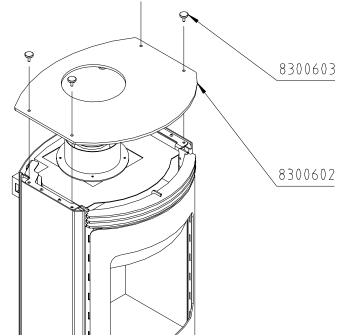
13. Stand the back panel on the base plate and make sure the three tabs on the bottom of the back panel engage the three slots in the base plate. Make sure the wires from the switch clear the support base. Screw the back panel to the left and right side brackets with 06X8 M5 shoulder screws with the 8301218 springs between the back panel and the brackets.



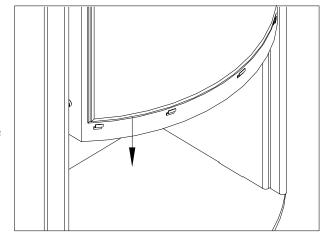


14. Attach two 06X8 M5 Shoulder screws to the left and right sides. Attach two M5X10 screws to the sides of the front grill and slide it into the notches on the left and right side brackets.

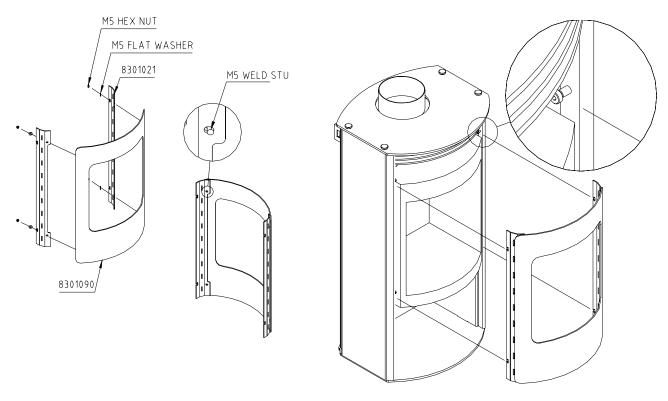
15. Place the top on the stove and attach it with the four 8300603 decorative bolts.



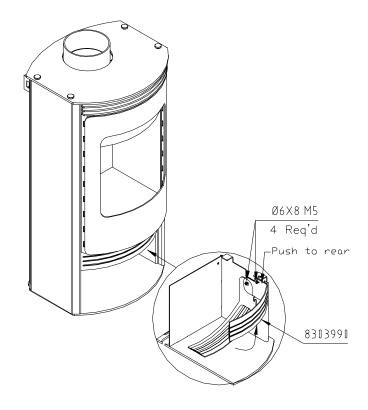
- 16. Move the stove into the final position. Connect the gas supply and the venting. Connect the switch wiring to the valve wiring making sure to match the wire colors. The gas stove is shipped with a flexible connector that has a 1/2" NPT female connection. The gas supply piping should have a separate gas shutoff valve and a 1/8" NPT plugged tapping upsteam of the valve. The stove and its main control valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.5 kPa). The stove must be isolated from the gas supply piping system by closing the main control valve during any pessure testing of the gas supply system at test pressures equal to or less than 1/2 psi (3.5 kPa). After the gas supply has been connected, apply a soapy water solution to all the fittings to check for gas leaks. Never use a flame to test for leaks. Warning: This product must be installed by a licensed plumber or gas fitter when installed within the Commonwealth of Massachusetts.
- 17. Install the log set according to the directions on page 17 for the traditional log set or page 18 for the geometric set.
- 18. Place the glass/frame assembly in the four tabs at the bottom and center it in the opening. Engage the latches and push the latch handles down to lock.



19. Attach the 8301021 front mounting rails to the front with the four M5 Nuts and washers. Mount the front to the stove by engaging the slots on the mounting rails to the screws on the sides. Push in and down.



20. Attach the access door to the support base with the four shoulder screws. Swing the door up and slide toward the rear of the stove.



## **FASTENERS**

The following items can be found in the parts bag shipped with the stove shell.

M5X10 SOCKET BUTTON HEAD CAP SCREWS	M5 HEX NUT	M5 FLAT WASHER	8301218
			W
	(P		
	<b>(a)</b>	(0)	
6 pcs. + 2 (spare)	4 pcs. + 2 (spare)	4 pcs. + 2 (spare)	2 pcs. + 1 (spare)
M6X10 SOCKET BUTTON HEAD CAP SCREWS	M6 FLAT WASHER	Ø6X8 M5 HEXAGON SOCKET HEAD SHOULDER SCREWS	M3 ALLEN WRENCH
© °			
2 pcs. + 2 (spare)	2 pcs. + 2 (spare)	10 pcs. + 2 (spare)	1 pcs.
M8X10 SOCKET BUTTON	4.8X16 SD	8300603	M4 ALLEN WRENCH
HEAD CAP SCREWS			
4 pcs. + 2 (spare)	10 pcs. + 2 (spare)	4 pcs.	1 pcs.
8306501		Ø8 HEX WRENCH	
10 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
Less - 1 lessents   Less - 2 lessents   Less - 1 lessents   Less - 1 lessents   Less - 2 lessents   Less -			
### ALC   100   10			
1 000			
1 pcs.		1 pcs.	

## **INSTALLING THE LOG SET**

#### TRADITIONAL LOG SET

1. Place the embers on the burner in an even layer in the areas shown.



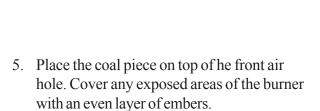
2. Place the large curved log on the burner with the right end all the way to the rear and the front of the log an inch from the left side and to the front.



3. Place the small branch on the pilot cover and on the large log. Make sure the left pin on the large log engages the hole on the bottom of the small branch.



4. Place the small log on the right side and make sure the right pin on the large log engagaes the hole on the bottom.







#### GEOMETRIC SET

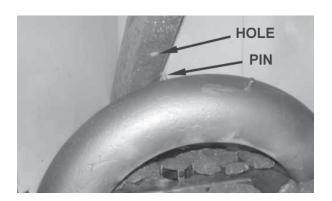
1. Place the embers on the burner in an even layer in the areas shown.



2. Place the large arch on the burner with the right end all the way to the rear. The right end has a flat on the back side of the arch. Position the left end of the arch all the way to the left and to the front



3. Place the beveled end of the small rectangular piece in the left rear corner and on top of the pilot cover. Make sure the left pin on the arch engages the hole on the bottom of the small rectangular piece.



4. Place the long triangular piece on the right pin of the arch with the right end as shown.



5. Place seven small cones upright on the burner top in the pattern shown.



6. Place the remaining 10 cones on their sides as shown.

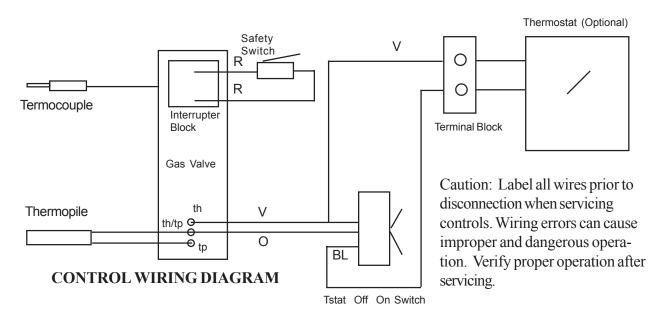


7. Place the ball on the center air hole.



## **ELECTRICAL CONNECTIONS**

The Gabo Gas Stove may be connected to an optional thermostat or remote controller. Connect the wires from the optional thermostat or controller to the terminal block located on the bottom of the fire box on the left. The wires may go to either terminal.



## LIGHTING THE FIRE

#### FOR YOUR SAFETY READ BEFORE LIGHTING

**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 has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- B. BEFORE LIGHTING 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 push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explo
- 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.

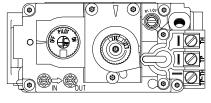
#### LIGHTING THE FIRE

- 1. STOP! Read the safety information above on this label.
- 2. Set the thermostat to the lowest setting.
- 3. Turn off all electric power to the appliance.
- 4. Push in the gas control knob slightly and turn clockwise to "OFF". NOTE: Knob cannot be turned from "PILOT" to "OFF" unless knob is pushed in slightly.
- 5. 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 lable. If you don't smell gas, go to the next step.
- 6. Find pilot Look in the left rear corner of the firebox.
- 7. Turn the knob on the gas control counterclockwise to "PILOT"
- 8. Push in the control knob all the way and hold in. Immediately light the pilot by pushing the piezo. Continue to to hold the control knob in for about one (1) minute after the pilot is lit. Release knob and it will pop back up. Pilot should remain lit. If it goes out, repeat steps 4 through 8.
  - If the knob does not pop up when released, stop and immediately call your service technician or gas supplier.
  - If the pilot will not stay lit after several tries, turn the gas control knob to "OFF" and call your service technician or gas supplier.
- 9. Turn the gas control knob counterclockwise to "ON".

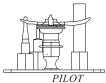
#### TO TURN OFF GAS TO APPLIANCE

- 1. Set the thermostat to the lowest setting.
- 2. Turn off all electric power to the appliance.
- 3. Push in the gas control knob slightly and turn clockwise to "OFF".

The flames should look like the picture on page 22. The flames should have a blue base with clean yellow tips after the fire has been burning for about 20 minutes. The Gabo Gas Stove is equipped with an air shutter to adjust the flame appearance. The air shutter is adjusted by a screw located on the firebox bottom on the right hand side near the gas manifold. Turn the shutter screw counterclockwise to make the flames more yellow and clockwise to make them more blue.



Knob in "OFF" position





## **MAINTENANCE**

A qualified service agency recommended by your Rais dealer should conduct an annual inspection and maintenance of your Gabo Gas Stove, it's venting, and the installation to keep it running safely and efficiently. The following procedures should be performed only by a qualified service person. The gas supply should be turned off whenever a maintenance procedure is performed. All parts of the insert that are removed for servicing must be replaced prior to operating the gas insert.

#### Replacing the Glass

The glass cannot be replaced by itself. The complete glass/frame assembly can be obtained from your authorized Rais dealer.

- 1. Turn the insert completely off and allow it to cool completely.
- 2. Remove the Front Panel.
- 3. Lift the latch handles to unlock the latches and remove the glass assembly from the firebox. If the glass is broken, be sure to wear gloves and eye protection.
- 4. Install the new Glass/Frame assembly in the reverse order. Besure to remove any broken glass from the burner and logs.

#### Cleaning the Glass

Clean the glass with ordinary household glass cleaner and a soft cloth or paper towel.

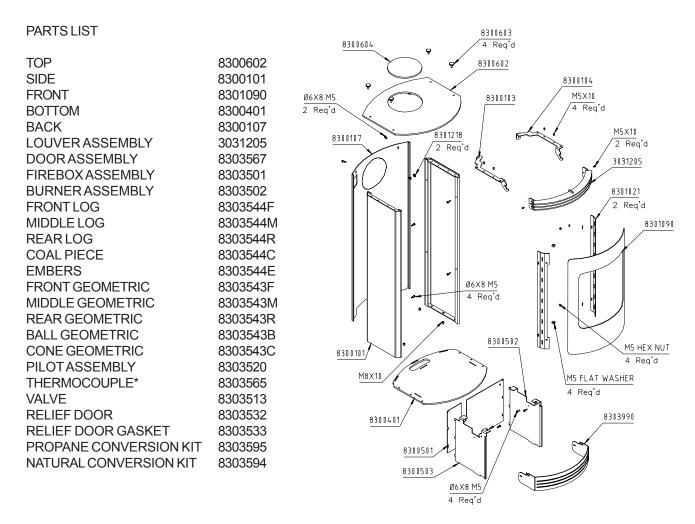
WARNING: Never clean the glass when it is hot. Do not use abrasive cleaners on the glass.

#### **Inspecting the Venting**

An inspection of both of the vent pipes and the vent terminal should be made as part of the annual service appointment. The venting must have no blockage and be in good repair. The vent manufacturer's instructions may provide specific details on vent inspection. Any vent sections that are disassembled must be reassembled and sealed as required.

#### Cleaning the Logs and Burner.

When the stove has completely cooled, carefully lift out each log and brush it lightly with an extra-soft brush. Never use a vacuum cleaner on the logs. Brush the top of the burner to remove any dust or lint.



<sup>\*</sup>This is a quick response thermocouple. replace it only with part no. 8303565

Manufactured by: RAIS A/S Industrivej 20 9900 Frederikshavn, Denmark

For replacement parts and customer service, contact your RAIS dealer or:

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