

GT 120 A - GT 1200 A

Oil-Gas Fired Hot Water Boiler

English

09/02/08



GT 120 A



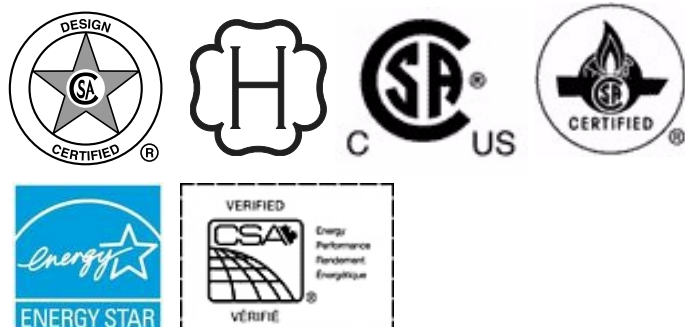
GT 1200 A

Assembly, installation and maintenance manual

Warning:
Before putting the boiler into operation read this manual carefully.

Warning:
The operating manual is part of the documentation that is delivered to the installation's operator. Go through the information in this manual with the owner/operator and make sure that he or she is familiar with all the necessary operating instructions.

Notice:
This manual must be retained for future reference. Improper installation, adjustment, alteration, service or maintenance can cause injury, loss of life or property damage. Refer to this manual. For assistance or additional information consult a qualified installer, service agency or the gas supplier.



De Dietrich 

**Warning:**

indicates presence of hazards that can cause, if not avoided, severe personal injury, death or substantial property damage.

**Caution:**

indicates presence of hazards that will or can cause, if not avoided, minor personal injury or property damage.

**Notice:**

Application comment for optimum use of equipment and adjustment as well as useful information.



Reference to an other instruction book.

Observe the following symbols**DANGER**

due to explosion of gas.

- Work only on gas components when you have a license to do so.
- Note that the assembly of gas and vent connections, the initial start-up, the electrical connections, the maintenance and service can only be performed by a licensed service contractor or technician.

**DANGER**

due to electricity.

- Prior to doing any work on the heating system, disconnect all electrical power to the boiler at the emergency switch.
- It is NOT sufficient to shut off only the boiler control!

**CAUTION!****SYSTEM DAMAGE**

due to improper installation.

- Observe local and state codes as well as common industry practices during the installation and operation of the heating appliance.

**CAUTION!****SYSTEM DAMAGE**

due to inadequate cleaning and maintenance.

- A boiler cleaning and maintenance should be performed annually. Verify complete system operation at the same time.
- Correct the problem immediately to prevent damage to the system!

**Caution:**

Refer to User's Manual regarding the carcinogenic hazard of crystalline silica that may be found during installation, servicing and removal of this boiler.

Please observe the following safety instructions.

Read this manual carefully.

Correct installation and adjustment of the burner and the control panel is a precondition for safe, efficient operation of the boiler.

Read this manual and the specifications on the safety label carefully before attempting to put the burner into operation.



Do not store or use gasoline or other flammable 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 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.

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

**Warning:**

Improper installation, adjustment, and/or operation could cause carbon monoxide poisoning resulting in injury or death.

This product must be installed and serviced by a professional service technician who is experienced and qualified in hot water boiler installation and gas combustion.



Caution: Strict compliance with these instructions is a precondition for the correct operation of the boiler.

**IMPORTANT**

Service on this boiler should be undertaken only by trained and skilled personnel.

Keep boiler area clear and free from combustible materials, gasoline and other flammable vapors and liquids.

Do not place any obstruction in the boiler room that will hinder the flow of combustion and ventilating air.

Read these instructions carefully before proceeding with the installation of boiler. Post instructions near boiler for reference by owner and serviceman.

Maintain instructions in legible condition.

"Installation of this equipment must be in accordance to all local codes and authorities having jurisdiction, in conjunction with national codes"

- Canadian Installations: CSA B149.1 & .2 for gas fired boilers & CSA B139 for oil fired boilers
- USA Installations: NFPA 31 for oil fired boilers & NFPA 54/ANSI Z223.1 for gas fired boilers

"Please consult all applicable codes having jurisdiction in which the boiler is being installed"

The boiler must be connected to a venting system that will safely discharge all flue gases outside effectively and safely.

Contents

Contents	.3
Regulations and guidelines	.4
General	.4
1 Uncrating	.4
1 Requirements for installation in the state of Massachusetts	.5
1 Requirements for installation in the state of Massachusetts (continued)	.6
2 Technical specifications of boilers	.7
3 Main Dimensions	.8
Installation	.10
1 Location	.10
2 Combustion air requirements	.10
Assembly	.11
Piping connections	.21
1 Dimensional Information	.21
2 Example of installation	.22
Chimney connection - Venting	.23
1 Flue size	.23
2 Dimensional information required for the connection	.23
3 Venting layout	.23
4 Termination location	.28
Connecting the burner	.30
Electrical connections	.30
Start up	.30
Periodic maintenance and checks	.31
1 Installation	.31
2 Boiler	.31
1 Precautions required in the case of long boiler stops (one or more years)	.33
2 Precautions required if the heating is stopped when there is a risk of freezing	.33
Spare parts - GT 120 A - GT 1200 A	.34

Regulations and guidelines

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 Z 223.1 / NFPA 54**. In Canada, installation must be in accordance with the requirements of CAN/CGA B149.1 or 2 Installation Code for Gas Burning Appliances and Equipment. 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**.

Install CO detectors per local regulations. Boiler requires yearly maintenance, see "Connecting the burner", page 28.

Only a qualified installing contractor may carry out the installation, the initial start-up, the connection for fixed gas and vent gas, and conversion to another type of gas. The hot water distribution system must comply with the applicable codes and regulations. When replacing an existing boiler, it is important to check the entire hot water distribution system to insure safe operation. Maintenance and cleaning must be carried out at least once a year by a trained service technician. The entire installation must be tested for proper operation. Any defects detected must be fixed immediately.

General

The boilers of the **GT 120 A** range are automatic independent hot-water boilers designed for connecting to a flue which require a separate fuel oil or gas burner.

1 Uncrating

Upon arrival, check shipment to ensure all parts have been shipped. Inspect all items for delivery damage. Report all damage and shortages to the delivery carrier. Report any damage and shortages to the Distributor.

Parts list:

Boiler	Box nr.	GT 123 A	GT 124 A	GT 125 A	GT 126 A
Assembled boiler body	MA3	1			
	MA4		1		
	MA5			1	
	MA6				1
Control S2NA panel or E (Easymatic)		ME50 or FM199	ME50 or FM199	ME50 or FM199	ME50 or FM199

Requirements for installation in the state of Massachusetts

Boiler Installations within the Commonwealth of Massachusetts must conform to the following requirements:

- Boiler must be installed by a plumber or a gas fitter who is licensed within the Commonwealth of Massachusetts.
- Prior to unit operation, the complete gas train and all connections must be leak tested using a non-corrosive soap.
- The vent termination must be located a minimum of 4 feet above grade level. If side-wall venting is used, the installation must conform to the following requirements **extracted from 248 CMR 5.08 (2)**:

(a) For all side wall horizontally vented gas fueled equipment installed in every dwelling, building or structure used in whole or in part for residential purposes, including those owned or operated by the Commonwealth and where the side wall exhaust vent termination is less than seven (7) feet above finished grade in the area of the venting, including but not limited to decks and porches, the following requirements shall be satisfied:

1. INSTALLATION OF CARBON MONOXIDE DETECTORS: At the time of installation of the side wall horizontal vented gas fueled equipment, the installing plumber or gasfitter shall observe that a hard wired carbon monoxide detector with an alarm and battery back-up is installed on the floor level where the gas equipment is to be installed. In addition, the installing plumber or gasfitter shall observe that a battery operated or hard wired carbon monoxide detector with an alarm is installed on each additional level of the dwelling, building or structure served by the side wall horizontal vented gas fueled equipment. It shall be the responsibility of the property owner to secure the services of qualified licensed professionals for the installation of hard wired carbon monoxide detectors.

a. In the event that the side wall horizontally vented gas fueled equipment is installed in a crawl space or an attic, the hard wired carbon monoxide detector with alarm and battery back-up may be installed on the next adjacent floor level.

b. In the event that the requirements of this subdivision cannot be met at the time of completion of installation, the owner shall have a period of thirty (30) days to comply with the above requirements; provided, however, that during said thirty (30) day period, a battery operated carbon monoxide detector with an alarm shall be installed.

2. APPROVED CARBON MONOXIDE DETECTORS: Each carbon monoxide detector as required in accordance with the above provisions shall comply with NFPA 720 and be ANSI/UL 2034 listed and IAS certified.

3. SIGNAGE: A metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum height of eight (8) feet above grade directly in line with the exhaust vent terminal for the horizontally vented gas fueled heating appliance or equipment. The sign shall read, in print size no less than one-half (1/2) inch in size, **"GAS VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OBSTRUCTIONS"**. (Continued)

Regulations and guidelines

Requirements for installation in the state of Massachusetts (continued)

4. INSPECTION: The state or local gas inspector of the side wall horizontally vented gas fueled equipment shall not approve the installation unless, upon inspection, the inspector observes carbon monoxide detectors and signage installed in accordance with the provisions of 248 CMR 5.08(2)(a)1 through 4.

(b) EXEMPTIONS: The following equipment is exempt from 248 CMR 5.08(2)(a)1 through 4:

1. The equipment listed in Section 10 entitled "Equipment Not Required To Be Vented" in the most current edition of NFPA 54 as adopted by the Board; and
2. Product Approved side wall horizontally vented gas fueled equipment installed in a room or structure separate from the dwelling, building or structure used in whole or in part for residential purposes.

(c) MANUFACTURER REQUIREMENTS - GAS EQUIPMENT VENTING SYSTEM PROVIDED. When the manufacturer of Product Approved side wall horizontally vented gas equipment provides a venting system design or venting system components with the equipment, the instructions provided by the manufacturer for installation of the equipment and the venting system shall include:

1. Detailed instructions for the installation of the venting system design or the venting system components; and
2. A complete parts list for the venting system design or venting system.

(d) MANUFACTURER REQUIREMENTS - GAS EQUIPMENT VENTING SYSTEM NOT PROVIDED. When the manufacturer of a Product Approved side wall horizontally vented gas fueled equipment does not provide the parts for venting the flue gases, but identifies "special venting systems", the following requirements shall be satisfied by the manufacturer:

1. The referenced "special venting system" instructions shall be included with the appliance or equipment installation instructions; and
2. The "special venting systems" shall be Product Approved by the Board, and the instructions for that system shall include a parts list and detailed installation instructions.

(e) A copy of all installation instructions for all Product Approved side wall horizontally vented gas fueled equipment, all venting instructions, all parts lists for venting instructions, and/or all venting design instructions shall remain with the appliance or equipment at the completion of the installation.

.....[End of Extracted Information From 248 CMR 5.08 (2)].....

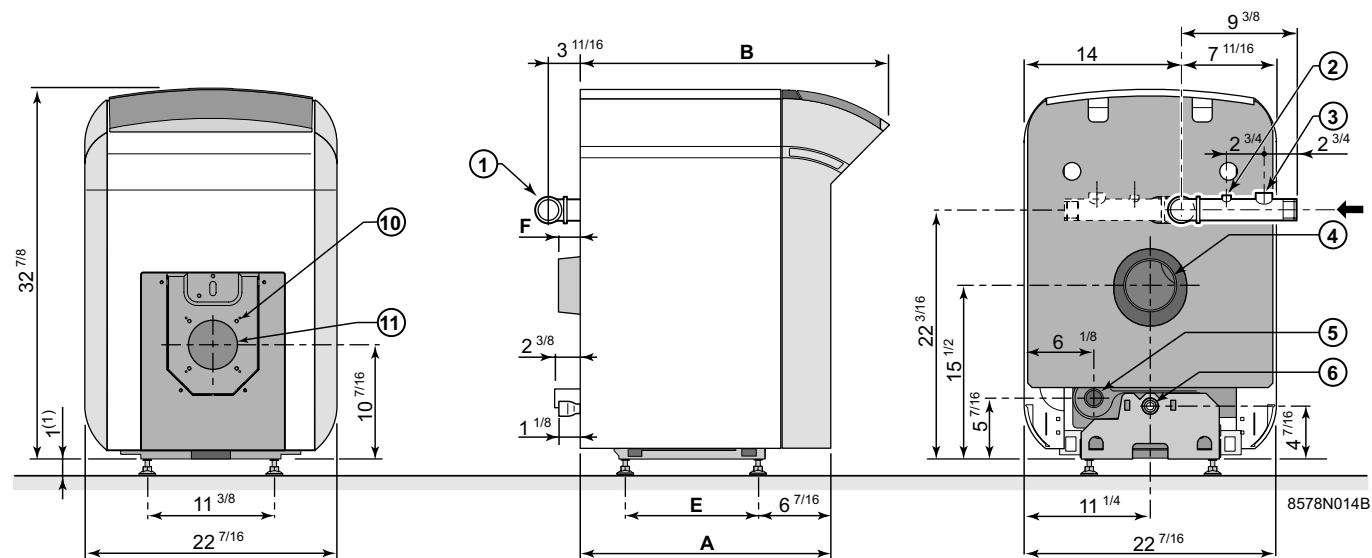
2 Technical specifications of boilers

Item		Unit	GT 123 A	GT 124 A	GT 125 A	GT 126 A
Firing Sequence		Gas-Oil - On-Off - Single Stage Only				
[CSA] - Gas Input		MBH	94	115	144	166
		kW	27.5	33.7	42.2	48.65
[CSA] - # 2 Fuel Oil Input		US GPH	0.65	0.80	1.00	1.15
[CSA] - Output [Gas-Oil]		MBH	78	96	120	138
		kW	22.9	28.1	35.2	40.4
[NET] - Output [Gas-Oil]		MBH	68	83	104	120
[CSA] - AFUE Effy.		%	Gas 85% & Oil 87%			
Cast Iron Sections		#	3	4	5	6
Heating surface area		Sq. ft.	11.1	15.3	19.4	23.6
Water capacity		US Gal	5	6.5	7.9	9.4
		Liter	19	24.5	30	35.5
Water resistance [Δt = °F]	18° F	Ft. H ₂ O	0.13	0.20	0.30	0.42
	27° F	Ft. H ₂ O	0.06	0.09	0.14	0.19
	36° F	Ft. H ₂ O	0.03	0.05	0.08	0.11
Combustion chamber Dimensions	Diameter [Equivalent]	Inch	9.45			
		mm	240			
	Depth	Inch	12.13	17.13	22.13	27.13
		mm	308	435	562	689
	Volume	ft ³	0.57	0.74	0.92	1.09
		m ³	16.0	21.0	26.0	31.0
MAWP [Water]		PSI	ASME IV Rating Class 30 - (60 PSI) [See Canadian Provincial CRN approvals]			
Min. Safety Relief Capacity		MBH	78	96	120	138 ≧
S2NA Panel	Electrical Connection		V/P/H	120/1/60		
	Maximum Temperature [Water]		°F	230		
			°C	110		
	Operating Water Temperature Range		°F	104 - 212		
			°C	40 - 100		
Chamber Resistance		Inch w.c.	0.06	0.09	0.09	0.09
		mbar	0.15	0.22	0.22	0.22
Gas-Vent Category		#	I, II - III or IV			
Boiler Vent Connection		Inch	5	5	5	6
Weight [Dry]		lb	302	357	412	470
		kg	137	162	187	213

- CSA - MBH Output based on Thermal Efficiency Test According to ANSI Z21.13a/CSA 4.9a-2005
- [NET] MBH Output Factor 1.15, Allowance for Piping and Pickup Losses
- Chamber Resistance Based on Neutral Chimney-Vent Pressure
- Gas Vent Category Based on Several Factors [CO₂ content, Vent Pressure & Net-Flue Gas Temp]
- Approved for Direct-Vent, Use Only Approved Venting as Listed
- Natural Draft Applications, Approved for Type L vent [Gas-Oil] or Type B Vent [Gas Only]
- Conversion Btu to kW = 3,412 Btu per kW
- All Models are Design Certified & Eligible to Bear Approval Marking as Shown.
- All Models Certified to Fire; # 2 oil, Natural & Propane Gases. Consult factory for Available Burners.
- All Models Comply and Certified in Accordance to the latest Canadian & US standards
- To Obtain Current IBR Ratings, consult their publications and website.
-

3 Main Dimensions

- GT 120 A



	A	B	øD	E	F
GT 123 A	$22 \frac{1}{4}$	27	$4 \frac{15}{16}$	$11 \frac{13}{16}$	2
GT 124 A	$26 \frac{15}{16}$	32	$4 \frac{15}{16}$	$16 \frac{13}{16}$	2
GT 125 A	$32 \frac{1}{4}$	37	$4 \frac{15}{16}$	$21 \frac{13}{16}$	2
GT 126 A	$37 \frac{1}{4}$	42	6	$26 \frac{13}{16}$	$3 \frac{7}{8}$

(1) Adjustable feet : basic height 1", adjustment range 1" to $1 \frac{9}{16}$ "

1 1 1/4 threaded heating outlet

2 Tapping 1/4"

3 Tapping 3/4"

4 Flue gas nozzle ø D

5 1 1/4 threaded heating return

6 1/2" tapped draining outlet

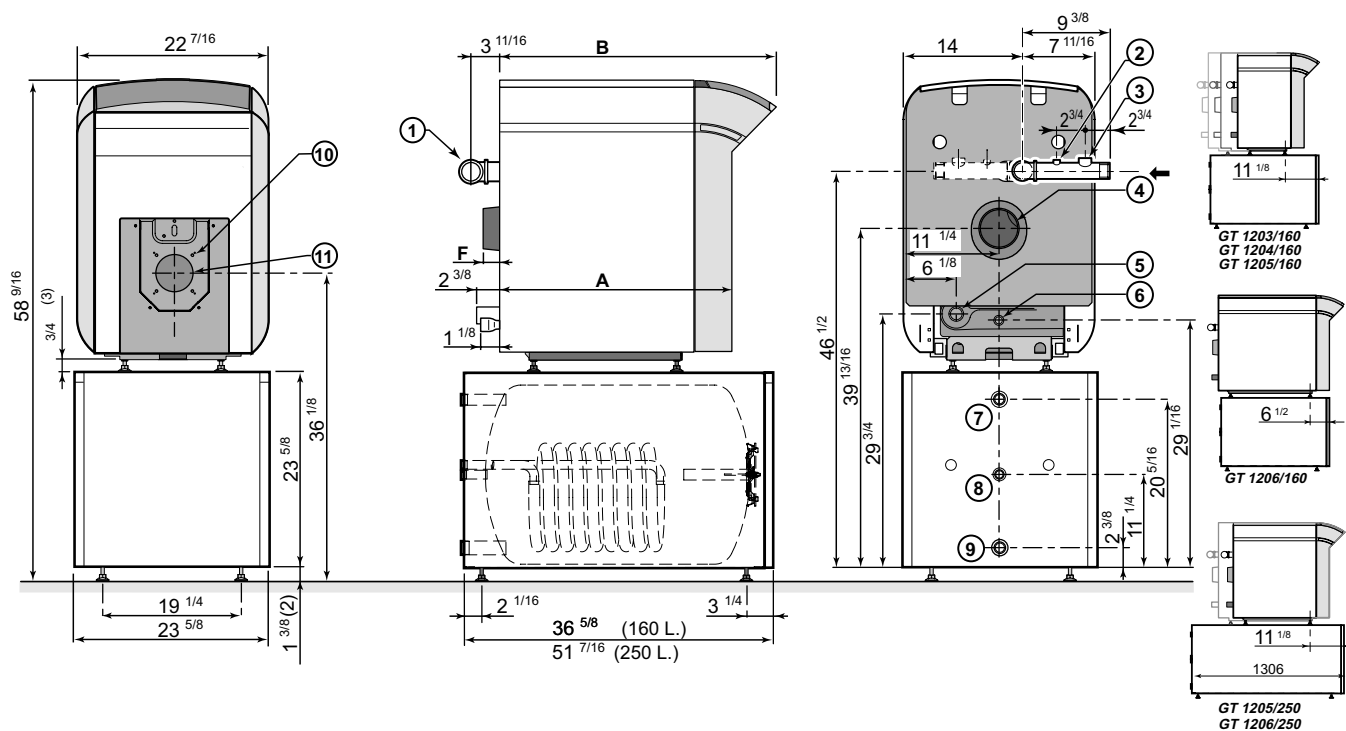
10 4 x M8 on ø $5 \frac{7}{8}$

4 markings on ø $6 \frac{15}{16}$

11 ø $4 \frac{5}{16}$ hole

ø $5 \frac{1}{8}$ cut-out

• GT 1200 A



	A	B	øD	F
GT 1203 A/160	22 1/4	27	4 15/16	2
GT 1204 A/160	26 15/16	32	4 15/16	2
GT 1205 A/160	32 1/4	37	4 15/16	2
GT 1206 A/160	37 1/4	42	7	3 7/8
GT 1205 A/250	32 1/4	37	4 15/16	2
GT 1206 A/250	37 1/4	42	7	3 7/8

(2) Adjustable feet : basic height 1 3/8, adjustment range 1 3/8 to 1 9/16

(3) Adjustable feet : feet screwed to lock at 3/4 adjustment from 3/4 to 1 9/16 possible

1 1 1/4 threaded heating outlet

2 Tapping 1/4"

3 Tapping 3/4"

4 Flue gas nozzle ø D

5 1 1/4 threaded heating return

6 1/2" tapped draining outlet

7 Domestic hot water outlet - R 1

8 Domestic hot water circulation loop return R 3/4

9 Domestic cold water inlet - R 1

10 4 x M8 on ø 5 14/16

4 markings on ø 6 15/16

11 ø 4 5/16 hole

ø 5 1/8 cut-out

R = thread

G = cylindrical external thread, leak tightness by flat washer

Installation

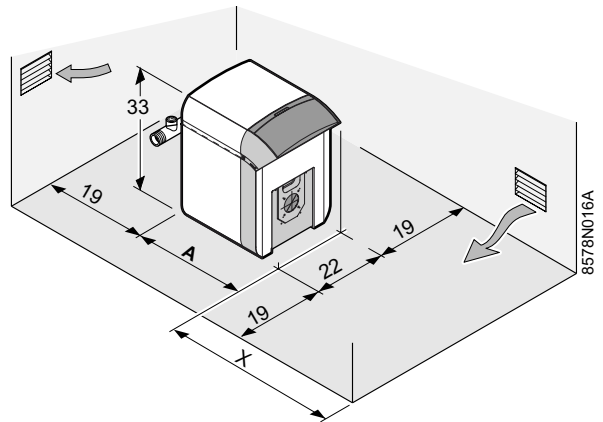
1 Location

Sufficient space shall be left clear around the boiler.

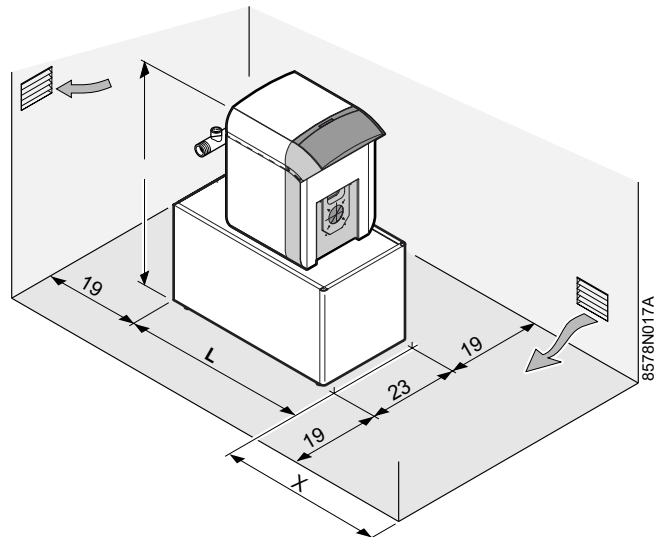
The figures stated in **inches** in the drawings below are the minimum recommended dimensions for providing easy access around the boiler. Dimension 'X' must provide 24 inches in front of the burner for service.

Boiler	A (in)
GT 123 A	22 ^{1/4}
GT 124 A	26 ^{15/16}
GT 125 A	32 ^{1/4}
GT 126 A	37 ^{1/4}

- GT 120 A



- GT 1200 A



Boiler	L (in)
GT 1203 A	36 ^{10/16}
GT 1204 A	36 ^{10/16}
GT 1205 A	37
GT 1206 A	42
GT 1205 A	51 ^{7/16}
GT 1206 A	51 ^{7/16}

i Floor : non combustible - do not install on carpet

2 Combustion air requirements

⚠ Warning:

- Inadequate combustion air supply will result in carbon monoxide [CO] development.
- Ensure boiler room is provided with an obstruction free combustion air source,
- Sources must be sized to provide ample supply, more than one opening maybe required.
- Ensure boiler room must be been with adequate servicing clearances.
- Ensure boiler installed with proper clearance to combustibile materials.
- Do not store combustibile materials, flammable fluids or vapors near the boiler.
- Do not operate the boiler under a negative building pressure.

The combustion air supply depends on the volume and construction of the building, more than one combustion air supply source or openings maybe required. Combustion air sources that are provided by mechanical device or electrically operated must be interlocked with the boiler/burner to ensure they are in the correct position.

The combustion air supply must be from a source that is free from airborne contaminates such as dust, fumes, corrosive elements, hydrocarbons and any other known air containments. If the combustion air quality is unknown or is a concern, please consult the factory for assistance. Failure in complying with any of these requirements will result in void of product warranty.

Particular installation areas and other equipment occupying the same room, precautions regarding the combustion air supply and quality.

- | | |
|---|---|
| <ul style="list-style-type: none"> • Rural areas • Chemical plants • Automotive shops • Beauty shops • Paint shops | <ul style="list-style-type: none"> • Agricultural • Green houses • Mechanical rooms • Other fuel burning equipment. |
|---|---|

The combustion air supply/source must be sized in accordance to local and national codes.

Canada – CSA B149 for gas installations
Canada – CSA B139 for oil installations

US – ANSI Z223.1/NFPA 54 for gas installations
US – NFPA 31 for oil installations

Consult local building codes, for any other additional combustion air supply or source requirements.

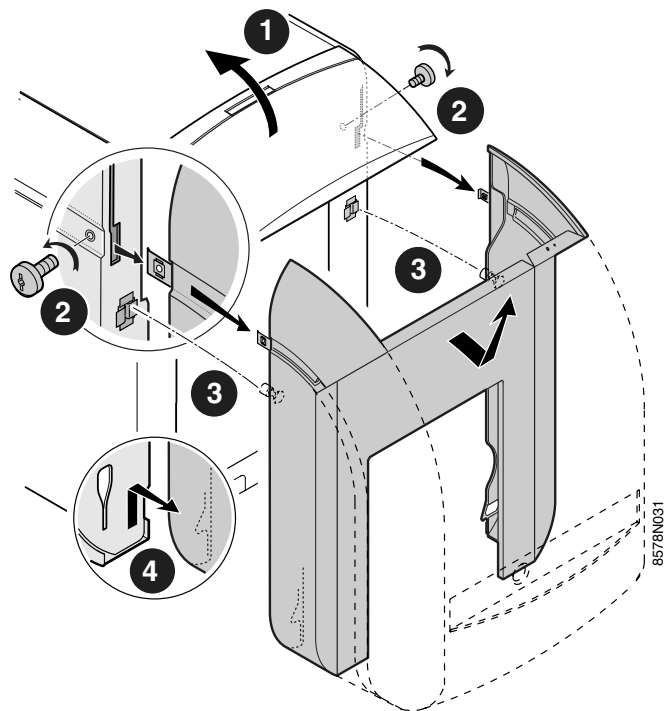
Assembly

The assembly of any options delivered with the boiler is described in the instructions accompanying the options. The list of available options is indicated in the price list in force.

Step one

Removing the front panel

- ❶ Lift the window.
- ❷ Unscrew the two front panel side attachment screws.
- ❸ Unclip the front panel from the clips and notches near the top, and pull it towards you.
- ❹ Remove the front panel from the notches in the bottom of the side panels.



Step two

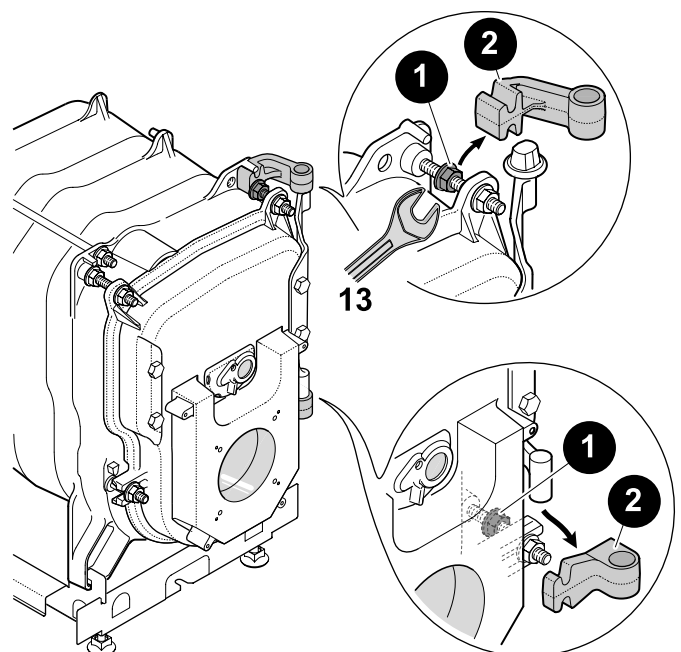
Reverse the direction of opening of the burner door if necessary (opening at left)

When the burner leaves the factory, the burner door opens towards the right. To open the burner door towards the left (if necessary):

- remove the front cap, then
- perform following operations: 2.1, 2.2 and 2.3.

- ❶ Loosen the 2 top and bottom nuts.
- ❷ Remove the lower and upper hinges.

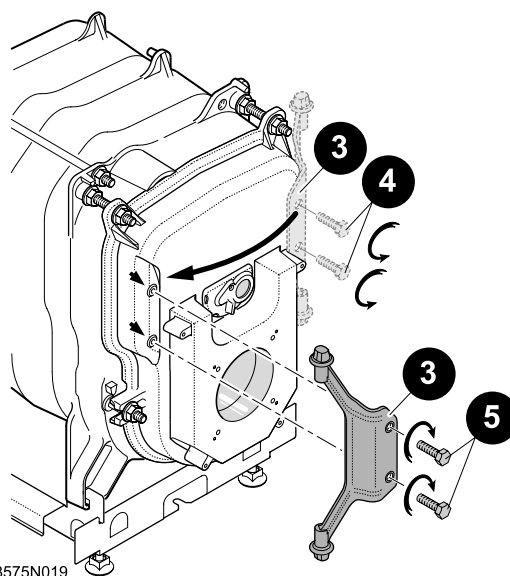
2.1



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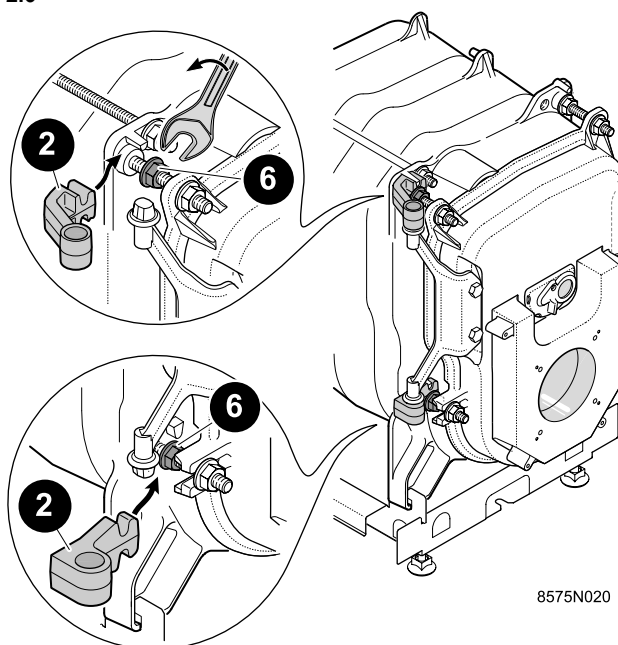
- 3** Remove the cast iron hinge pin for the burner door fixed by the 2 screws **4**. Put the two screws **4** back on the right-hand side.
- Reinstall the cast iron hinge pin **3** for the burner door on the left side using the 2 screws **5**.

2.2



- Reinstall the hinge pins **2** on the left side, fixing them using the nuts located on the burner door hinge pins, on the left side, as shown on the adjacent figure.
- Tighten the 2 nuts. **6**

2.3



Step three

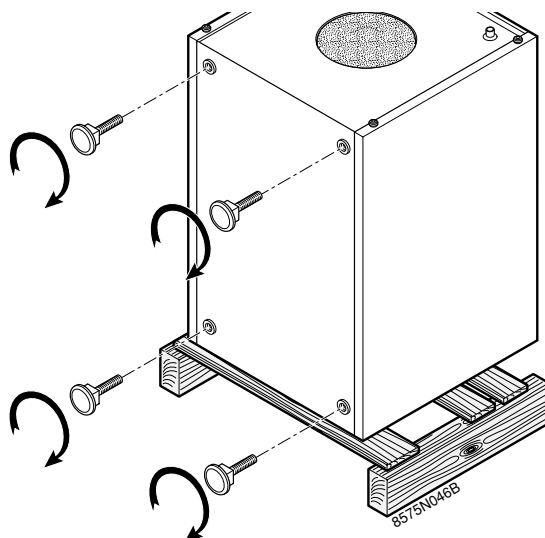
GT120A boilers can be installed on an L160 or L250 domestic hot water tank

- perform following operations: **1**, **2** and **3**.

Fixing the feet

- Screw the 4 adjustable feet (delivered in the hot water tank instruction packet) to the base of the tank.

1

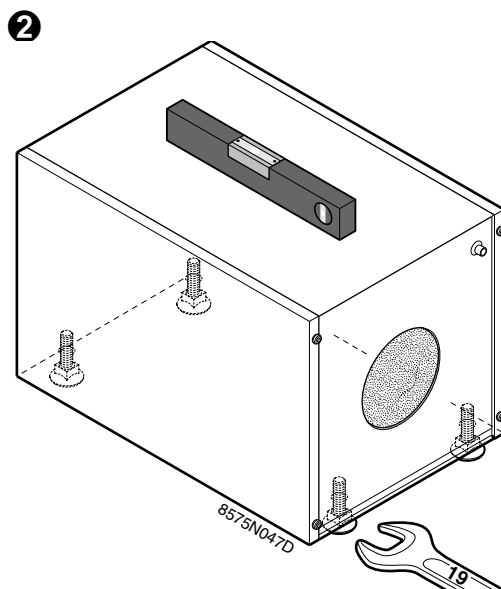


Levelling the tank

- Level the tank using the adjustable feet.

Base measurement $1\frac{3}{8}$,

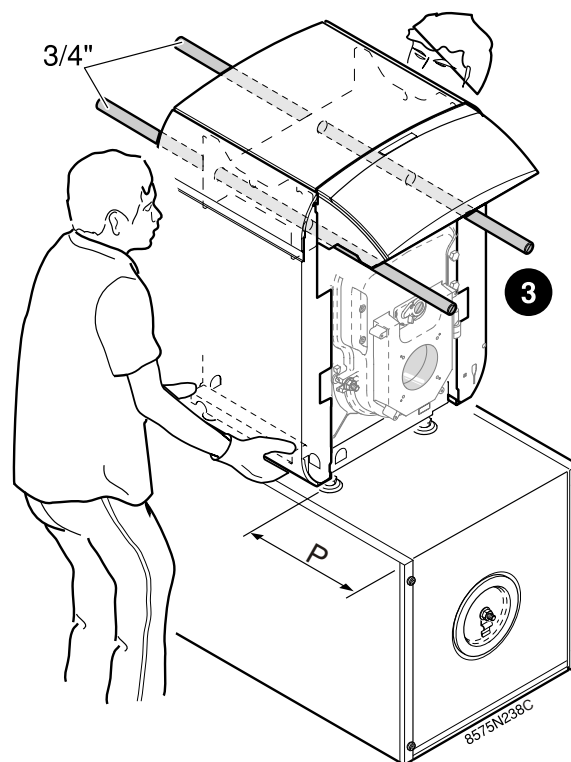
Adjustment from $1\frac{3}{8}$ to $1\frac{9}{16}$ possible.



Fixing the boiler on the DHW tank

Using gloves, lift the boiler using 2 $\varnothing 3/4$ " tubes placed as shown in the drawing, or with the two handles on the lower part of each side of the boiler.

Boiler	GT 1203/160	GT 1206/160
	GT 1204/160	
	GT 1205/160	
	GT 1205/250	
	GT 1206/250	
P (in)	$11\frac{1}{8}$	$6\frac{1}{2}$



Step four

Installing the burner

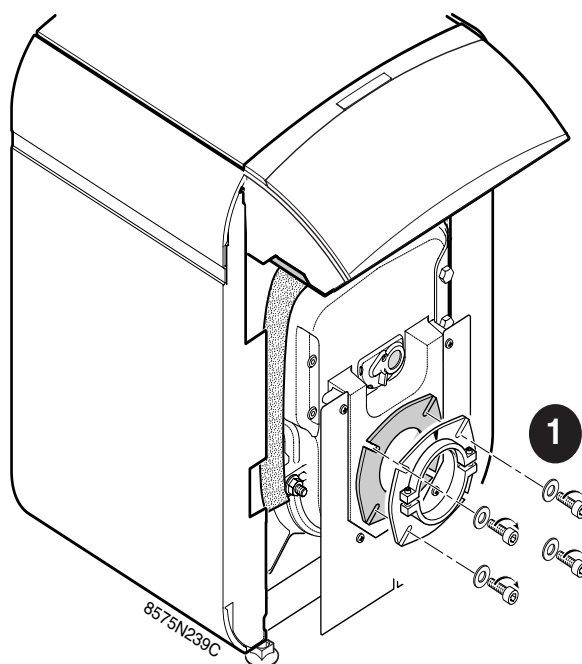
- Installing the burner fixing flange

See burner manufacturer instructions for burner installation.

Diagram 4.1 is for reference only.

Burner mounting tools are not supplied.

4.1



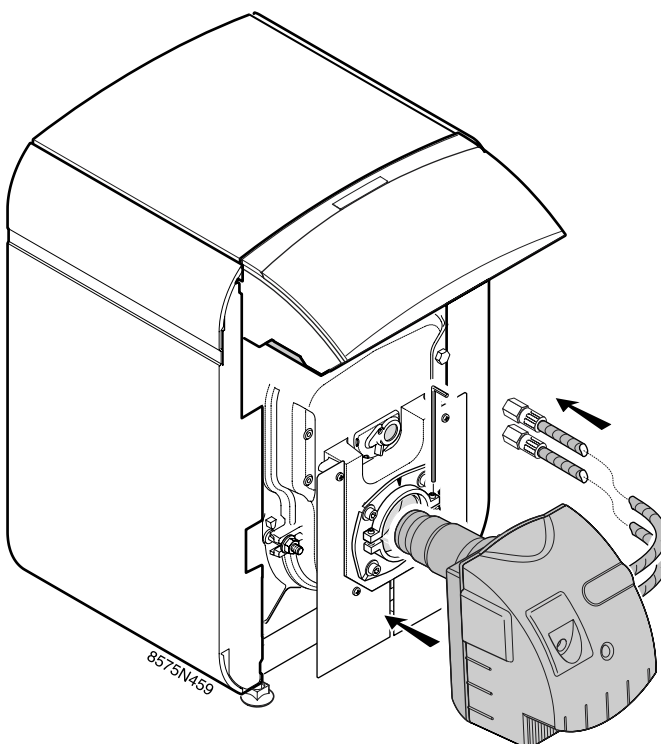
Fixing the burner to the boiler

Note:

When the connections have been made and the installation has been filled with water, start the burner with reference to the instructions provided with it.

Burner shown is for demonstration purposes, only. Consult burner manufactures installation instructions.

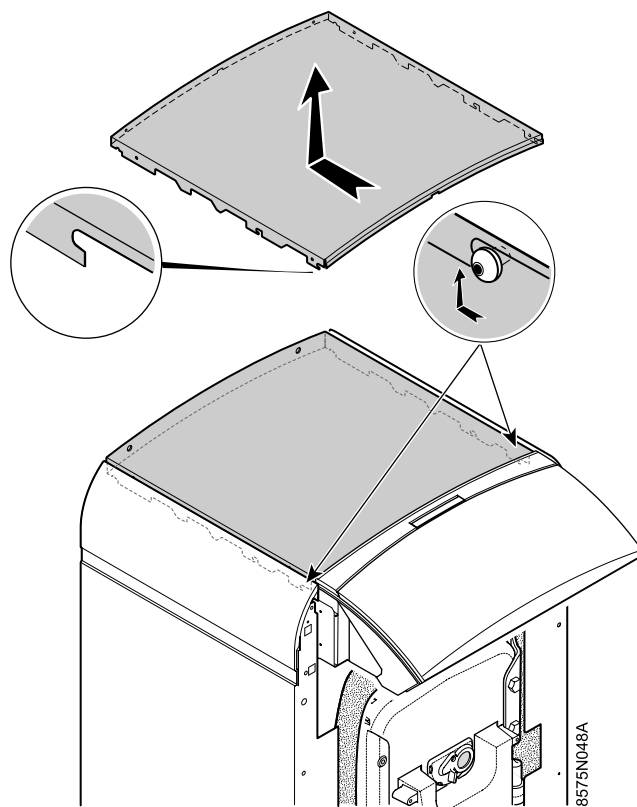
4.2



Step five

Disassembling the cover

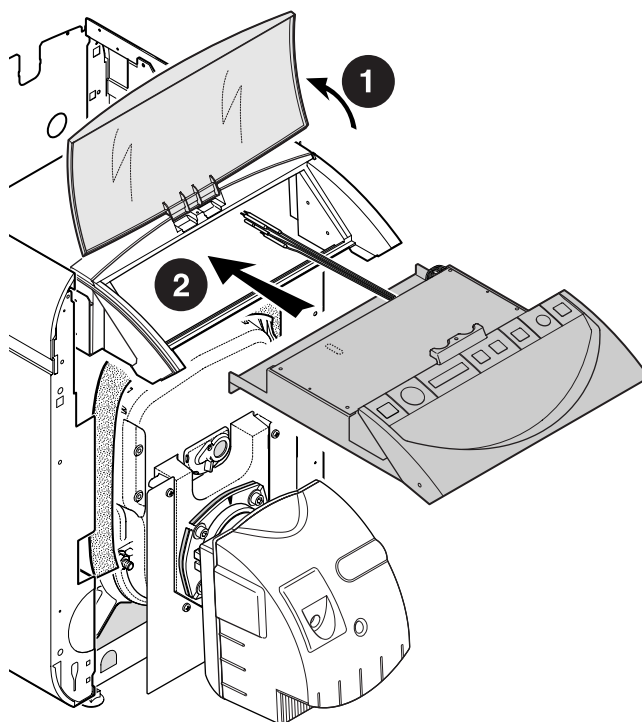
Pull the cover backwards and detach it from the 2 bushings on the side panels.



Step six

Putting the control panel into place

- ❶ Lift the window.
- ❷ Slide the control panel into the opening.



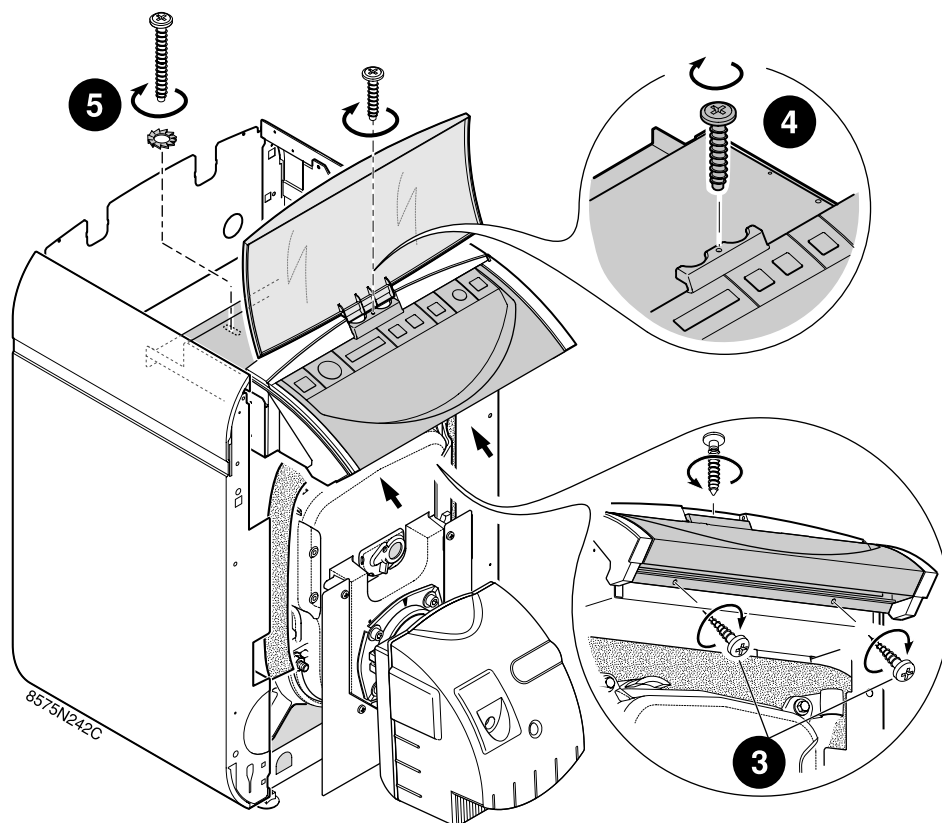
Step seven

Fix the control panel

3 Fix the lower front part of the control panel onto the cross bar using two self tapping screws.

4 Fix the top part of the control panel using the black screw for plastic supplied for this purpose.

5 Fix the back of the control panel on the top of the boiler using the 3.9x32 self tapping screw+ serrated washer.



Step eight

Putting the burner cable into place

1 Install the grommet for the burner cable (delivered in the control panel instructions pack) in the notch provided for it at the control panel support on the side of the burner door opposite the hinges according to European safety standards (originally: on the left side. If the direction of opening of the burner door has been reversed: it will be on the right side).

- Put the burner cable in the grommet.

2 Fit the cable clamp on the side panel (on the side on which the burner cable is located).

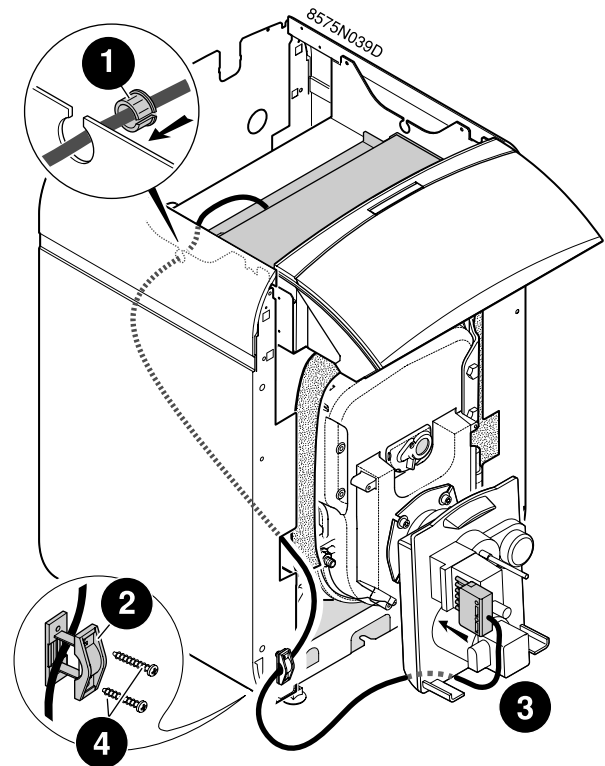
- Remove the burner cover.

3 Connect the connector onto the burner connector.

- Adjust the cable length so that the burner cable has to be disconnected to open the burner door. Slide the surplus cable backwards between the insulation and the side panel, then:

4 Fix the burner cable in the cable clamp using two $\varnothing 3.5 \times 25$ screws.

- Replace the burner cover.



Step nine

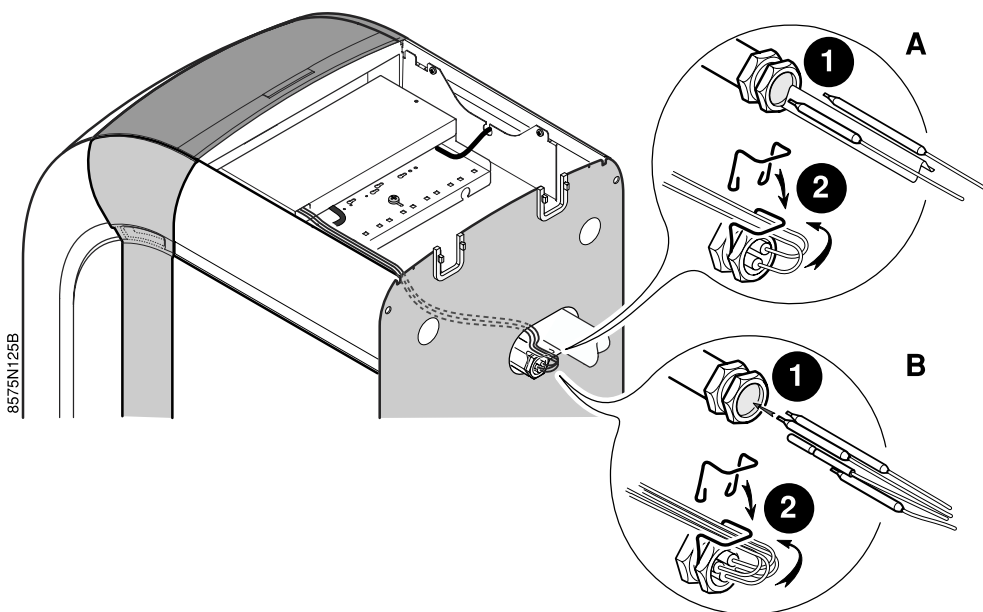
Installing the bulbs

1 Install the bulbs (the number varies depending on the type of the control panel) in the thimble tube at the back of the boiler. Use the thimble tube contact spring (delivered in the casing instructions pack) if there are two bulbs. (The contact spring for the thimble tube is useless if there are four bulbs).

- Hold the cables in place using the thimble tube spring **2**.

A : B control panel : boiler sensor, safety thermostat + contact spring

B : E control panel : thermometer, boiler thermostat, boiler sensor, safety thermostat, no contact spring



Step ten

Assembly of the front panel and the top cover

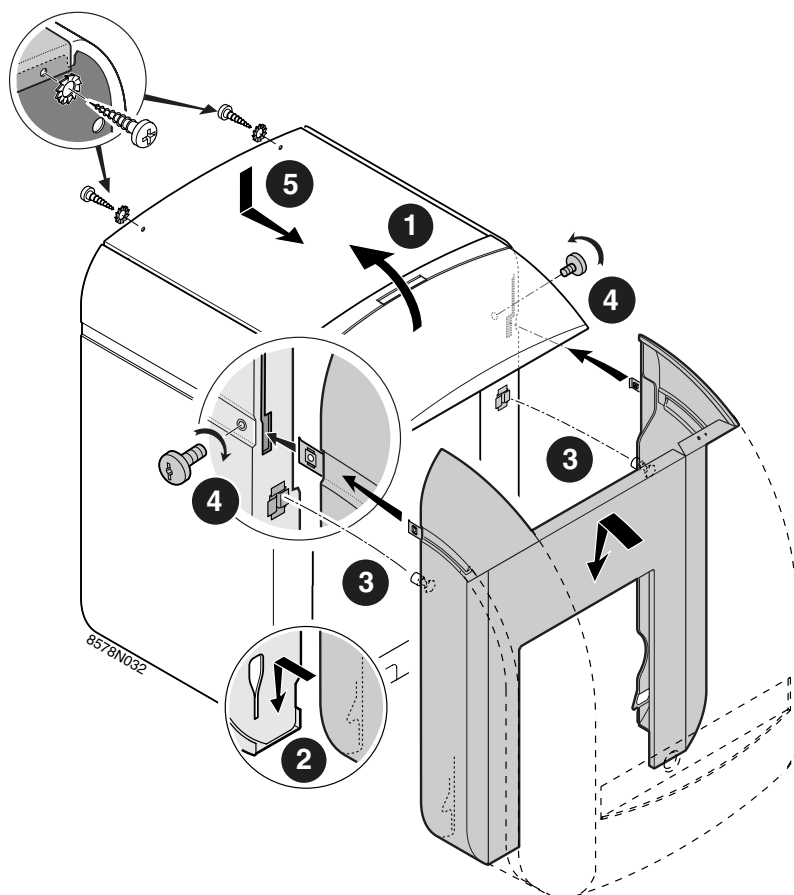
- Assembly of the front :

- ❶ Lift the window.
- ❷ Attach the front panel in the openings in the bottom of the side panels.
- ❸ Engage the front panel in the clips and the notches of the side panels.

- ❹ Put the two attachment screws located on the side panels into place.

- Assembly of the top cover:

- ❺ Put the cover back into place and fix it using two screws + serrated washers (delivered in the cladding instructions pack).



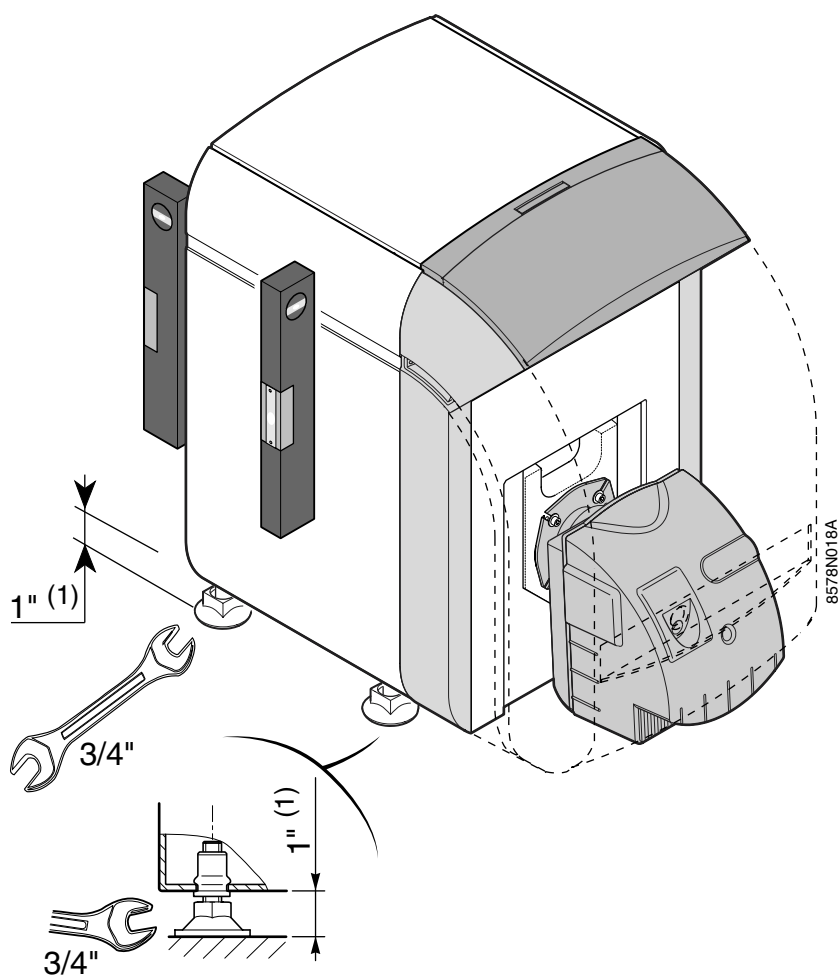
Step eleven

Levelling of the boiler

- Level the boiler by adjusting its adjustable feet (preinstalled on the base).

(1) basic height 1",
adjustment range 1" to 1^{9/16}".

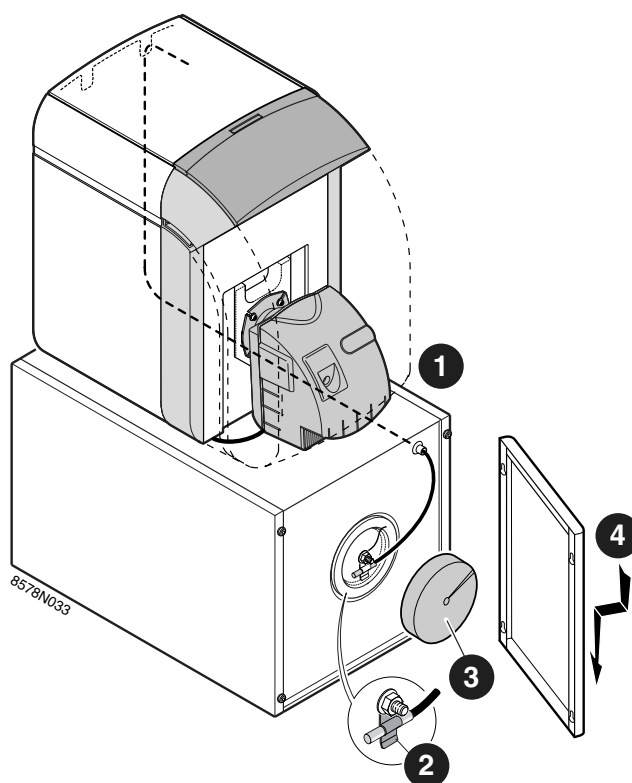
Remark : If the boiler is to be placed on an L160 hot water tank, screw in the feet until locked.



Step twelve

Putting in place the hot water probe

- ❶ Insert the probe cable into the duct of the domestic hot water calorifier.
- ❷ Insert the domestic hot water probe in the attachment lug provided for it on the tank inspection trap. Make the electrical connection in accordance with the instructions for the control panel.
- ❸ Put the thermal insulation for the trap into place sliding it between the anode earthing wire and the trap.
- ❹ Attach the front cap of the hot water calorifier.



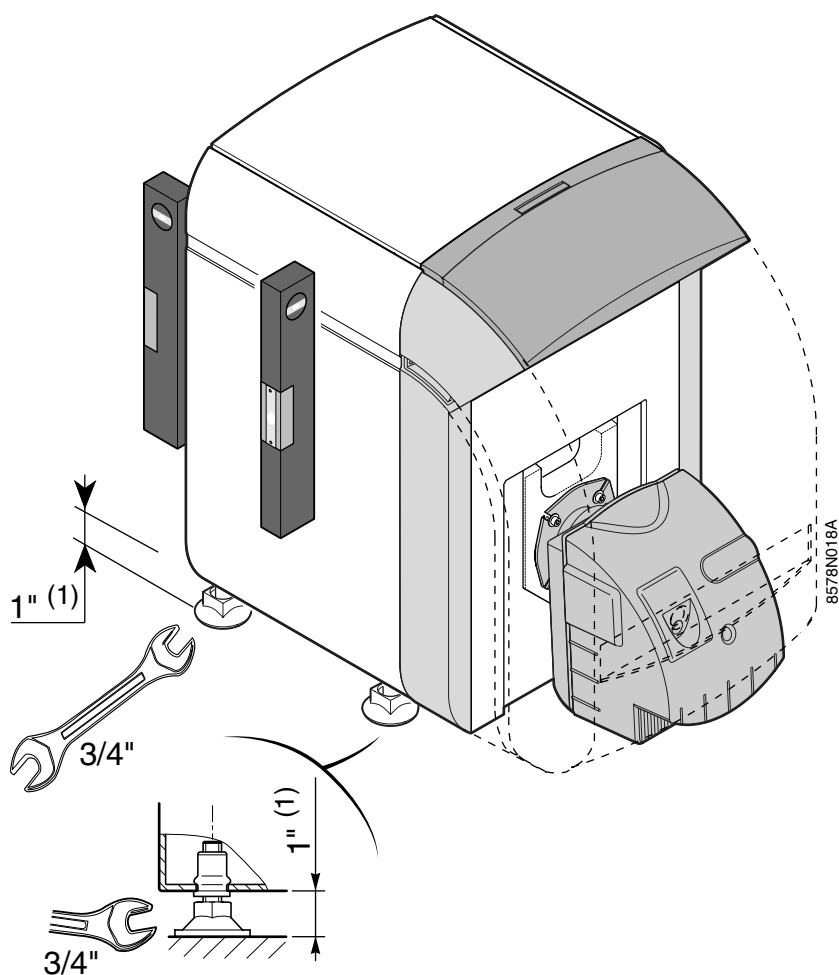
Step eleven

Levelling of the boiler

- Level the boiler by adjusting its adjustable feet (preinstalled on the base).

(1) basic height 1",
adjustment range 1" to 1^{9/16}".

Remark : If the boiler is to be placed on an L160 hot water tank, screw in the feet until locked.

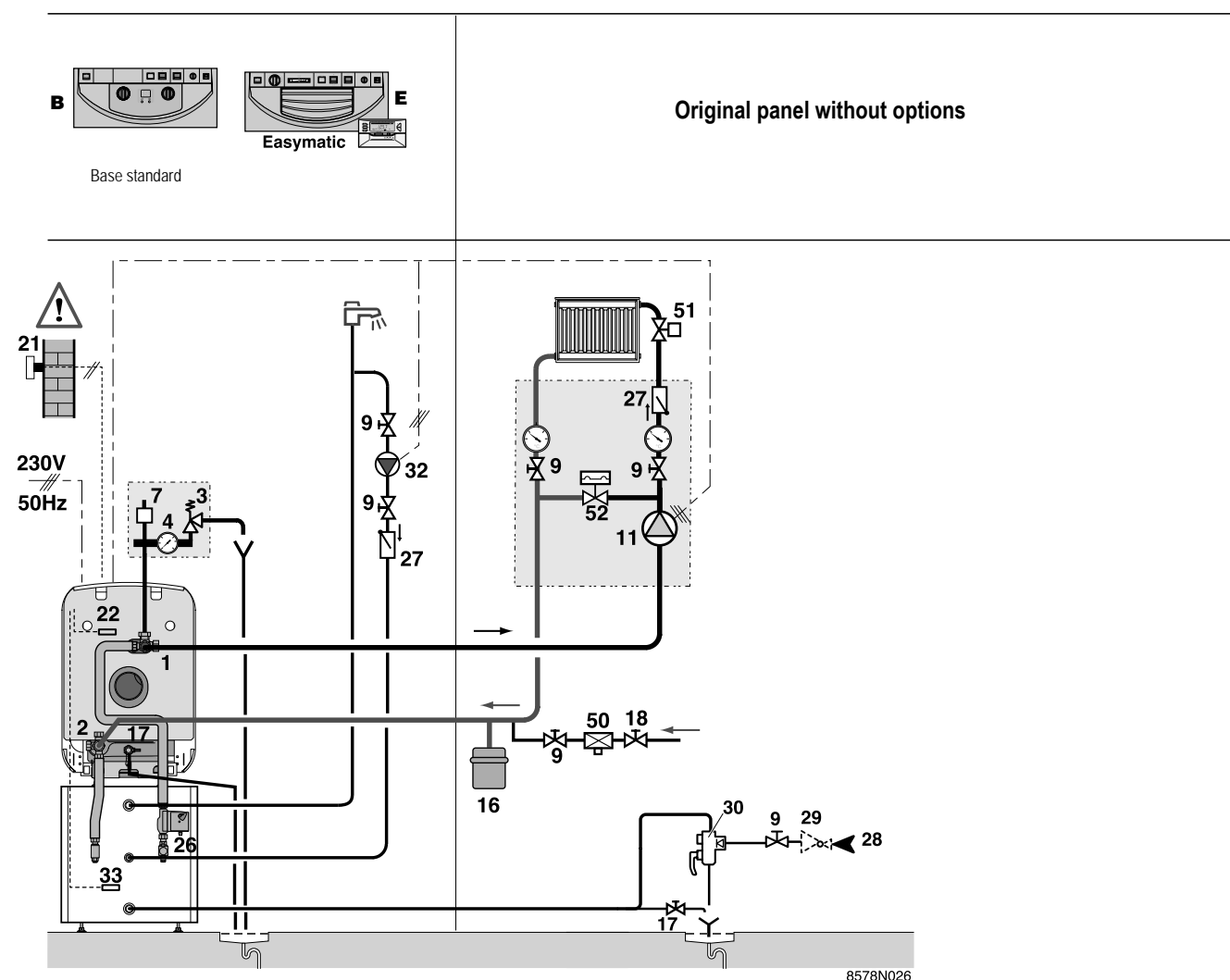


2 Example of installation

The following diagram is given as example. Other connections could be made.

• Installation with 1 direct radiator heating circuit (without mixing valve)

This type of installation can be controlled by a B control panel (base standard) or an E control panel (Easymatic)



- | | |
|--|---|
| 1 Heating supply | 22 Control unit boiler sensor |
| 2 Heating return | 26 Domestic pressurizer pump |
| 3 3-bar safety valve | 27 Non-return valve |
| 4 Manometer | 28 Domestic cold water inlet |
| 7 Automatic bleeder valve | 29 Pressure reducer |
| 9 Valve | 30 Sealed safety device calibrated to 7 bars |
| 11 Heating accelerator | 32 (Optional) dhw looping pump |
| 16 Expansion tank | 33 Delivered domestic hot water temperature probe |
| 17 Draining valve | 50 Disconnecter |
| 18 Heating circuit filling valve | 51 Thermostat valve |
| 21 Outside temperature sensor | 52 Differential safety valve |
| - no probe with B panel | |
| - delivered as original equipment with E panel | |

Venting the Boiler

1 Flue size

For size and height of the chimney, please refer to State and local laws or regulations in force.

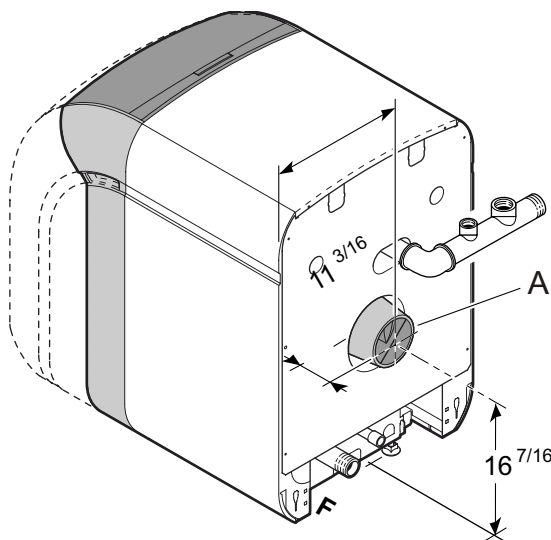
2 Dimensional information required for the connection

The unit shall be installed in keeping with the code of practice, with a sealed pipe.

The section of the pipe used to connect the flue gas nozzle of the boiler to the flue shall be at least equal to that of the nozzle. The pipe shall be as direct and short as possible.

Boiler type	Dimension F
GT 123 A / 1203 A	2
GT 124 A / 1204 A	2
GT 125 A / 1205 A	2
GT 126 A / 1206 A	3 ^{7/8}

A: flue nozzle



Flue connection sizes :

GT 123 A to GT 125 A : Ø 5"

GT 126 A : Ø 6" with flue adapter, please remove adapter in direct vent applications.

3 Venting layout

⚠ Failure to install venting according to the manufactures installation instructions may result in personal or property damage.

1. All venting must be installed according to all applicable local codes, standards or authorities having jurisdiction regarding the venting being used and any other installation requirements.
2. Always follow the venting installation instructions as supplied with the venting for proper installation and assembly of the venting.
3. Always ensure air-tight seal of all positive pressure venting that is being installed
4. Always follow the sidewall or direct vent termination location warnings and minimum distances, consult local codes for additional requirements.
5. All venting must be secured and supported properly, as suggested by the venting manufacturer or by local codes.
6. Check local codes regarding acceptable usage of a condensate 'P' trap or condensate neutralizations system. The 'P' trap must be filled to prevent leakage of flue gases.
7. All direct vent using AL294C rigid positive pressure venting.
 - a) Minimum calculated equivalent vent length = 5 foot.
 - b) Maximum calculated equivalent vent length = 30 foot.
 - c) Do not include vent termination with the calculated vent length
 - d) Each 90° elbow = 10 foot of equivalent vent length
 - e) Each 45° elbow = 5 foot of equivalent vent length
 - f) Venting length shall be as short as possible
 - g) If a vent termination riser is applied, the riser height shall be included with the calculated vent length.
8. All direct vent using CeraFlex flexible venting.
 - a) Minimum calculated equivalent vent length = 5 foot.
 - b) Maximum calculated equivalent vent length = 20 foot.
 - c) Do not include vent termination with the calculated vent length
 - d) Avoid excessive bends or turns with the venting
 - f) Venting length shall be as short as possible
 - g) If a vent termination riser is applied, the riser height shall be included with the calculated vent length.

4. Boiler Venting Gernal



Caution & Warning:

It is advised and recommended that the heating contractor-professional apply vent materials that are approved and agency listed. Installation of any venting must follow all local codes in conjunction with vent manufacturer instructions and appliance manufacturer instructions.

All De Dietrich GT series oil-gas fired cast iron boilers are high performance boilers that could operate under all 4 vent categories as established by ANSI Z21.13/CSA 4.9 Standard. To assist with application where the vent category is unknown a graph 'A' has been provided to assist you in determining the vent category and what venting materials would be acceptable. Although the gas vent categories were developed specifically for gas fired appliances, using this information is helpful for oil fired boilers. It is very important the venting be selected according to the conditions that the boiler will operate under, minimum and maximum firing conditions of the boiler must be respected. The venting installed must comply and be certified to all applicable codes and standard for each jurisdiction.

Gas-Vent Category [4] Definitions:

Cat. I

A Boiler, which operates with a non-positive vent (breach) pressure and flue gas temperatures which avoids excessive condensation production in the chamber and venting.

Cat. II

A Boiler, which operates with a non-positive vent (breach) pressure and flue gas temperatures that produce condensation production in the chamber and venting.

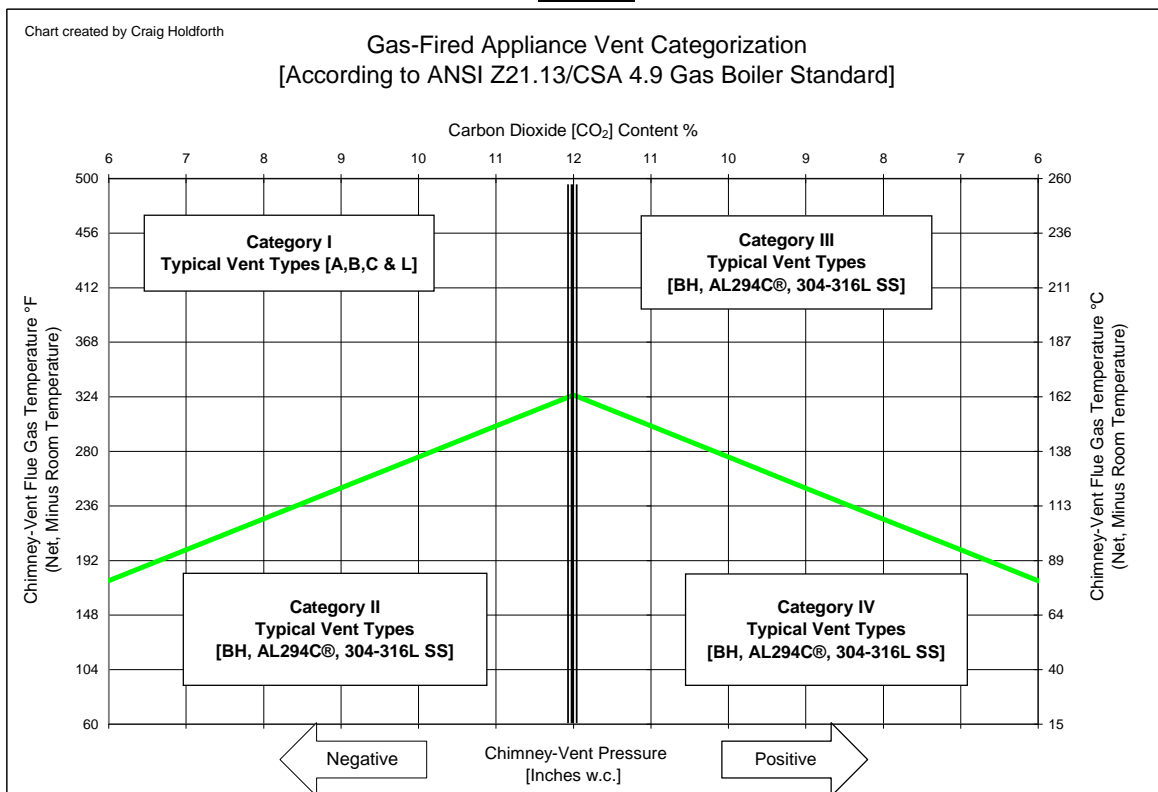
Cat. III

A Boiler, which operates with a positive vent (breach) pressure and flue gas temperatures which avoids excessive condensation production in the chamber and venting.

Cat. IV

A Boiler, which operates with a positive vent (breach) pressure and flue gas temperatures that produce condensation production in the chamber and venting.

Chart A



4.1 Boiler Venting – Category I & II Typical Layouts and Vent System Requirements.



Caution & Warning:

Improperly sealed venting system could result in carbon monoxide [CO] poisoning; ensure adequate support and fastening of system. Ensure venting can safely exhaust all flue gases outside in an effective manner. These systems must operate under a negative vent pressure condition that is stable.



Warning & Cautions for Co-Venting:

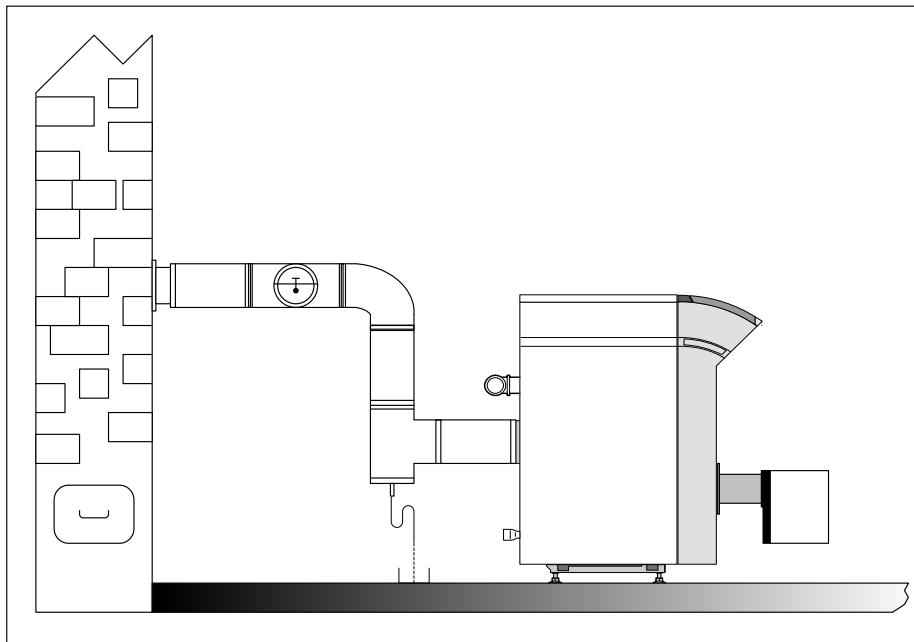
Co-venting with other appliances shall conform latest ANSI Z223.1 & CAN/CGA 149 installation codes, any improper operation shall be corrected, the common venting shall be sized according to the appropriate tables in Part II of the above mentioned codes.

Category I Vent Systems Requirements:

1. Flue gas temperatures above the green line shown in chart A.
2. Usage of an approved vent type certified for category I appliances with a negative breeching pressure
3. A barometric draft control maybe employed as required, but is not necessary for correct operation of the boiler. Consult a chimney-vent specialist for correct application and usage.
4. Breeching and chimney vent sized in accordance to national codes or by good engineering methods.
5. Vent safety device [manual reset] equipped on the venting or as equipped on burner.
6. Condensate TEE fitting supplied on the boiler breeching as close as possible and be orientated to avoid accumulation of flue gas condensation in the boiler or venting is also used to determine flue gas emissions.

Category II Vent Systems Requirements:

1. Flue gas temperatures below the green line shown in chart A.
2. Usage of an approved vent type “BH” for category II appliances with a negative breeching pressure.
3. A barometric draft control maybe employed as required, but is not necessary for correct operation of the boiler. Consult a chimney-vent specialist for correct application and usage.
4. Breeching and chimney vent sized in accordance to national codes or by good engineering methods.
5. Vent safety device [manual reset] equipped on the venting or as equipped on burner.
6. Condensate TEE fitting supplied on the boiler breeching as close as possible and be orientated to avoid accumulation of flue gas condensation in the boiler or venting is also used to determine flue gas emissions.



Caution-Warning:

Flue gas condensation is very aggressive and corrosive which could lead to failure of the venting system or drains, consult local and national codes regarding flue gas condensation disposal. The P-trap assembly must be properly filled with water to avoid escape of flue gas emissions. The flue gas condensation may require neutralization prior to entering the drain.

Venting

4.2 Boiler Venting – Category III & IV Vent Systems Typical Layouts and Requirements.



Caution & Warning:

Improperly sealed venting system could result in carbon monoxide [CO] poisoning; ensure adequate support and fastening of system. Ensure venting can safely exhaust all flue gases outside in an effective manner. These systems must operate under a positive vent pressure condition that is stable. Do not puncture or drill holes in any portion of the venting, venting to be sealed according to the vent manufacturers recommended method.



Warning & Cautions for Co-Venting:

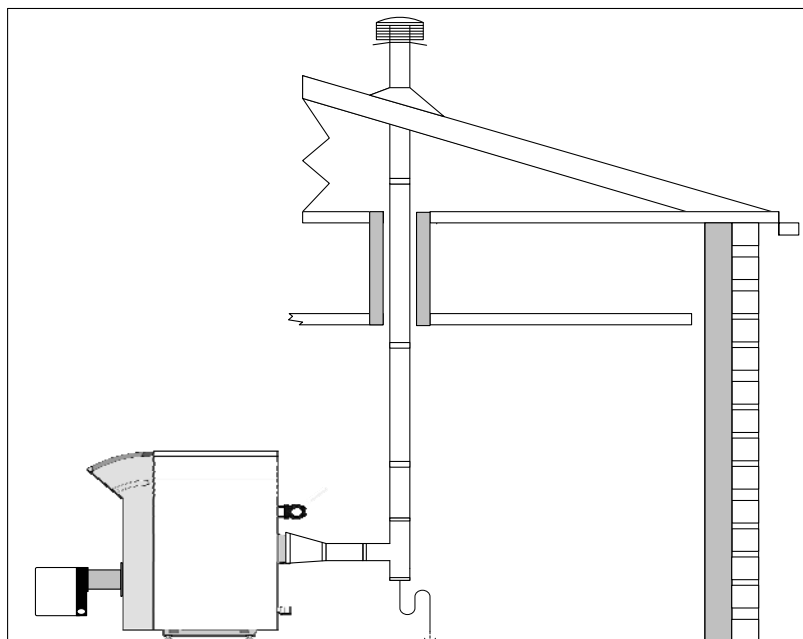
Co-venting with other appliances shall conform latest ANSI Z223.1 & CAN/CGA 149 installation codes, any improper operation shall be corrected, the common venting shall be sized according to the appropriate tables in Part II of the above mentioned codes.

Category III Vent Systems Requirements:

1. Flue gas temperatures above the green line shown in chart A.
2. Usage of an approved type of venting type “BH” Positive breeching pressure
3. Breeching and chimney vent sized in accordance to local national codes or by good engineering methods.
4. Vent safety device equipped on burner [MR].
5. Condensate TEE fitting supplied on the boiler breeching as close as possible and be orientated to avoid accumulation of flue gas condensation in the boiler or venting is also used to determine the flue gas emissions.

Category IV Vent Systems Requirements:

1. Flue gas temperatures below the green line shown in chart A.
2. Usage of an approved type of venting type “BH” Positive breeching pressure
3. Breeching and chimney vent sized in accordance to national codes or by good engineering methods.
4. Vent safety device equipped on burner [MR].
5. Condensate TEE fitting supplied on the boiler breeching as close as possible and be orientated to avoid accumulation of flue gas condensation in the boiler or venting is also used to determine the flue gas emissions.



Caution-Warning:

Flue gas condensation is very aggressive and corrosive which could lead to failure of the venting system or drains, consult local and national codes regarding flue gas condensation disposal. The P-trap assembly must be properly filled with water to avoid escape of flue gas emissions. The flue gas condensation may require neutralization prior to entering the drain.

4.3 Boiler Venting – Oil Fired Direct Vent Systems [Sealed Combustion] Typical Layouts and Requirements.



Caution & Warning:

Improperly sealed venting system could result in carbon monoxide [CO] poisoning; ensure adequate support and fastening of system. Ensure venting can safely exhaust all flue gases outside in an effective manner. These systems must operate under a positive vent pressure condition that is stable. Do not puncture or drill holes in any portion of the venting, venting to be sealed according to the vent manufacturers recommended method.

Oil Direct Vent Systems:

Must be vented using the systems shown in the table, see venting layout drawing for component identification.

System Requirements:

1. Complete venting system by Flex-L-International
2. Vent Safety Switch [Pressure switch], set switch according to sidewall vent switch settings on proceeding page.

	Item	Flex-L Part #	Description	Qty [Req]
Select one only	A	CFT4	CeraFlex Vent Termination 4"	1
		CFRBS4	CeraFlex Vent Termination Riser 4" [Std] 34" Rise	1
		CFRBS4L	CeraFlex Vent Termination Riser 4" [Low] 18" Rise	1
Select one only	B	CFK054-DD	5 ft. Complete CeraFlex Venting Kit De Dietrich GT 120A Series Boilers	1
		CFK104-DD	10 ft. Complete CeraFlex Venting Kit De Dietrich GT 120A Series Boilers	1
		CFK154-DD	15 ft. Complete CeraFlex Venting Kit De Dietrich GT 120A Series Boilers	1
		CFK204-DD	20 ft. Complete CeraFlex Venting Kit De Dietrich GT 120A Series Boilers	1

Individual CeraFlex Vent Kit Components

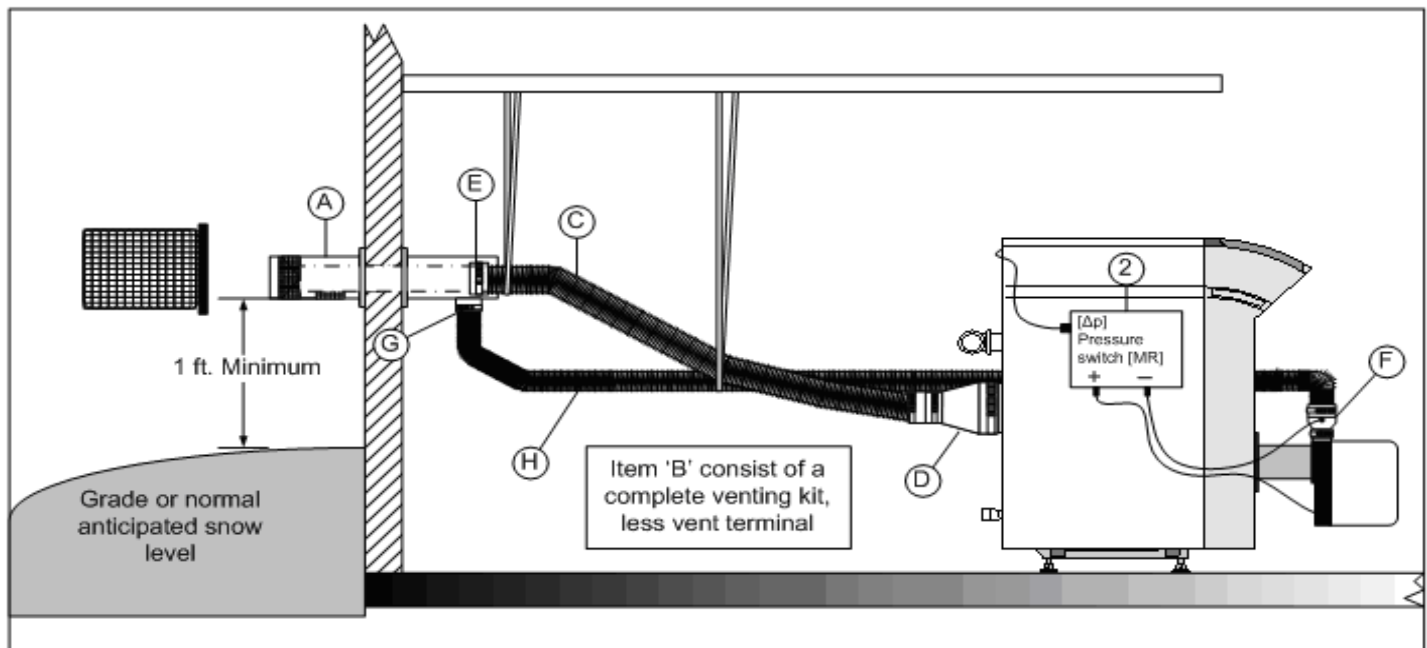
Drawing ID	Flex-L Part #	Description	Qty
C	CFV054-6	CeraFlex-Insulated Vent 5 foot x 4 inch	1
	CFV104-6	CeraFlex-Insulated Vent 10 foot x 4 inch	1
	CFV154-6	CeraFlex-Insulated Vent 15 foot x 4 inch	1
	CFV204-6	CeraFlex-Insulated Vent 20 foot x 4 inch	1
D	CFAA54P-DD	OEM Appliance Adapter 5 inch - 4 inch w/ port	1
E	CFAT44	CeraFlex termination adapter 4 inch - 4 inch	1
F	CFBA34-RL	Riello BF Burner air intake adapter 3 inch - 4" inch	1
G	CFG4C	Air Intake Flex Clamp 4 inch	2
H	L05-04	Air Intake Flex Venting 5 foot x 4 inch	1
	L10-04	Air Intake Flex Venting 10 foot x 4 inch	1
	L15-04	Air Intake Flex Venting 15 foot x 4 inch	1
	L20-04	Air Intake Flex Venting 20 foot x 4 inch	1

Flex-L [CeraFlex] Flexible Venting

- Length must be as short as possible [Min 5 feet & max 20 feet]
- Horizontal runs to be sloped upwards.
- No excessive bends or 90° Elbows in venting, all bends shall be no greater than 120°
- Termination hood to be tilt downward 2-5° away from boiler
- 4" ID exhaust double wall insulated flexible venting & 4" single wall intake air flexible venting
- Venting pressure shall not exceed 0.20" w.c. [0.50 mbar]
- Use termination riser in installations where the min distance from the vent termination and grade cannot be achieved, the rise must be included with the overall vent length.
- Vent terminals through combustible wall require a wall thimble
- Cera-Flex venting to have 1" clearance to combustibles
- Vent Termination zero clearance to combustibles
- DO NOT ENCLOSE ANY PORTION OF THE VENTING
- All venting must be securely supported using non combustible supports.
- Consult manual regarding application and wiring of the vent safety device [Δp] air pressure switch and settings.
- Do not co-vent with any other appliance, these vent systems shown were design for single appliance venting.

Venting

4.4 Boiler Venting – Oil Fired Direct Vent Systems [Sealed Combustion] Typical Layout



WARNING

Harmful and dangerous carbon monoxide [CO] development may result from the following.

Ensure combustion air supply is not obstructed from the source.

Improper sealing of venting system

Do not puncture or drill holes in the venting system.

Install venting according to Flex-L International instructions as supplied with the venting.

WARNING



HOT FLUE GASES – MAY CAUSE PERSONAL INJURY OR PROPERTY DAMAGE.

Installer shall take all necessary precautionary steps and measures in selecting a location for the vent terminal where contact with person or property is greatly reduced.

In areas where vent termination location is limited, a protective screen with heat shield is suggested and recommended.

Vent terminals locations and warnings see section 5.7

Venting

4.5 Boiler Venting – Side-Wall or Direct Vent Systems – Sizing Tables & Requirements



Caution & Warning:

Improperly sealed venting system could result in carbon monoxide [CO] poisoning; ensure adequate support and fastening of system. Ensure venting can safely exhaust all flue gases outside in an effective manner. These systems must operate under a positive vent pressure condition that is stable. Do not puncture or drill holes in any portion of the venting, venting to be sealed according to the vent manufacturers recommended method. Do not co-vent with any other appliance, these appliances were designed for single appliance venting only.

- All venting lengths must be calculated to equivalent lengths, all applications must include at least one 90° elbow
- Venting must be a type 'BH' [AL294C® material]
- Maximum vent length [equivalent] = 30 ft. [9m]
- Minimum vent length [equivalent] 5 ft. [1.5m]
- Maximum number of 90° elbows = 2 or 3 45° elbows, each 90° elbow is equivalent to 10 ft. or straight pipe, the 45° elbow is equivalent = 5 ft.
- Condensate TEE must be provided [equivalent length = 7 ft.]
- Appliance reducing adapter [equivalent length 3 ft.]
- Sealed combustion, combustion air intake sizing, must be sized according to the burner manufacturers instructions
- Vent [breeching] pressure shall not exceed 0.20 inches w.c. [0.50 mbar]
- Vent termination must be a TEE type, follow warning regarding termination locations. Do not include the termination TEE length in the vent length calculation.
- Venting shall be sloped, so any condensation developed will drain through the condensate TEE fitting
- Vent safety device, differential air pressure switch [manual reset] NC switch opens on rise of pressure.

System Requirements:

1. Venting sized to side-wall vent table below
2. Type 'BH' vent material
3. Condensate TEE fitting
4. Termination TEE fitting
5. Vent Safety Device, Differential air pressure switch interlocked with burner.

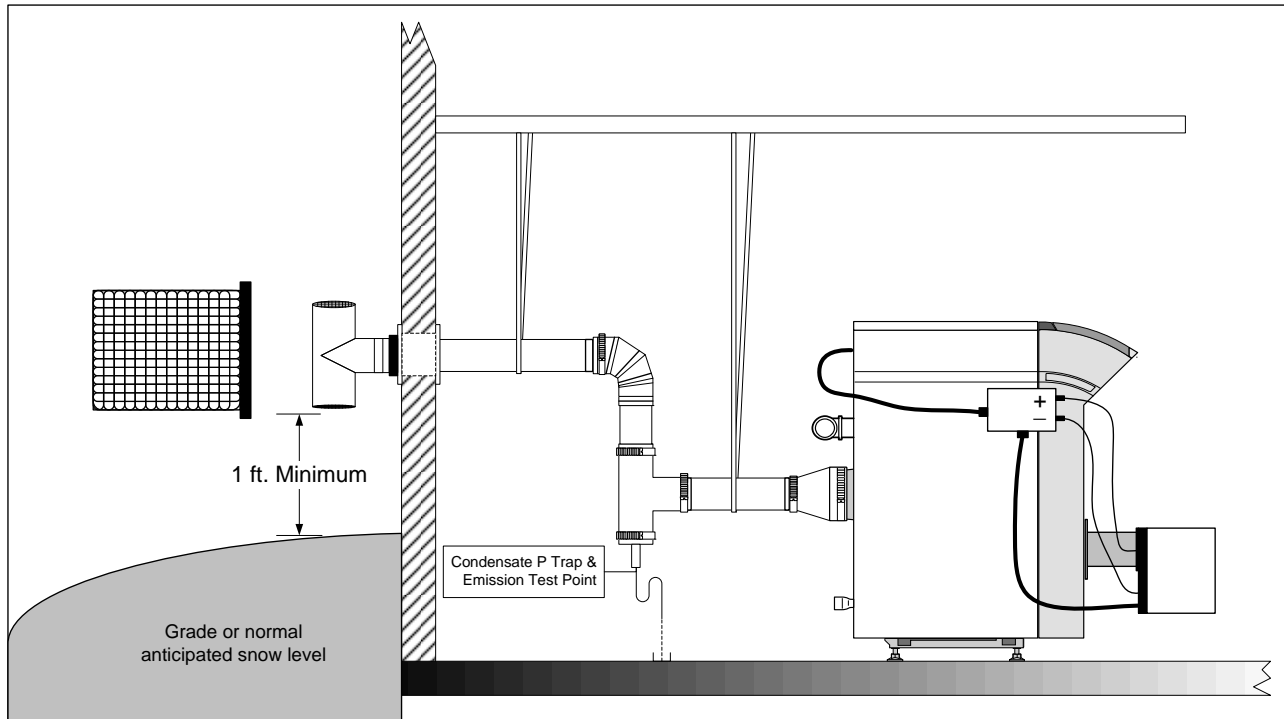
Determining vent length [equivalent] Example:

Appliance reducing adapter	[x1] = 3 ft.
Condensate TEE	[x1] = 7 ft.
12" vent straight vent pipe	[x3] = 3 ft.
Elbow 90°	[x1] = 10 ft.
Termination TEE	[x1] = 0 ft.
Length [equivalent] =	23 ft.

GT 120 A Series

Model	Boiler Connection ø	Oil Vent ø	Gas Vent ø	[Δp] Pressure switch Setting [inches w.c.]
GT 123 A	5 inch	4 inch	3 inch	Set Switch @ 150% above gas burner gas manifold or oil burner head pressure
GT 124 A	5 inch	4 inch	3 inch	
GT 125 A	5 inch	4 inch	4 inch	
GT 126 A	6 inch	4 inch	4 inch	

4.6 Boiler Venting – Side-Wall or Direct Vent Systems – Typical Layout



WARNING



HOT FLUE GASES – MAY CAUSE PERSONAL INJURY OR PROPERTY DAMAGE.

Installer shall take all necessary precautionary steps and measures in selecting a location for the vent terminal where contact with person or property is greatly reduced.

In areas where vent termination location is limited, a protective screen with heat shield is suggested and recommended.

Vent terminals locations and warnings see section 5.7



Caution-Warning:

Flue gas condensation is very aggressive and corrosive which could lead to failure of the venting system or drains, consult local and national codes regarding flue gas condensation disposal. The P-trap assembly must be properly filled with water to avoid escape of flue gas emissions. The flue gas condensation may require neutralization prior to entering the drain.

4.7 All Side-wall and direct Vent termination locations installation precautions:



Warning/Caution:

In all cases avoid potential vent termination locations where excess debris or snow could accumulate and block the vent termination to any degree.

Minimum clearance of 4 ft. [1.22m] horizontally from, and in no case above or below, unless a 4 foot [1.22m] horizontal distance is maintained, from electric meters, gas meters, regulators & relief equipment.

Do Not Co-Vent with any other appliance, specifically design for single appliance venting.

B149.1 (GAS INSTALLATIONS CANADA)

A VENT SHALL NOT TERMINATE.....

Directly above a paved sidewalk or driveway which serves 2 buildings.
 Less than 7 ft. any paved sidewalk or drive way
 Less than 6 ft. of a combustion air inlet to any building
 Less than 4 ft. above a meter/regulator assembly [horizontally] of the vertical center-line of the regulator vent outlet to a maximum vertical distance of 15 ft.
 Less than 4 ft. of any gas service regulator vent outlet
 Less than 1 ft. above grade or normal anticipated snow level for the area
 Less than 3 ft. from windows, doors [that can be opened], combustion air supply or any appliance or building.
 Underneath a veranda, porch or deck unless:
 1. The veranda, porch or deck is fully open on a minimum of 2 sides beneath the floor
 &
 2. The distance between the top of the vent termination and the underside of the veranda, porch or deck is greater than 1 ft.

B139-00 (OIL INSTALLATIONS CANADA)

A VENT SHALL NOT TERMINATE.....

Directly above a paved sidewalk or driveway which serves 2 buildings.
 Less than 7 ft. any paved sidewalk or drive way
 Less than 6 ft. from an open-able window, door or mechanical combustion air supply
 Less than 6 ft. of any combustion air inlet
 Less than 3 ft. of the vertical centerline of the meter/regulator assembly on a horizontal plane perpendicular to the regulator
 Less than 6 ft. of gas service regulator vent outlet
 Less than 4 ft. of oil tank vent or oil tank fill inlet
 Less than 1 ft. above grade or normal anticipated snow level for the area.
 Within 6 ft. of a property line
 Underneath a veranda, porch or deck
 Flue gases are within 6 ft. of combustible material or any openings of surrounding buildings.
 Less than 3 ft. from an inside corner or L-shaped structure
 Where flue gases may be directed towards brickwork, siding or other construction that may cause damaged from heat or condensate from the flue gases.

NFPA 54 / ANSI Z223 (GAS INSTALLATIONS USA)

A VENT SHALL NOT TERMINATE.....

Less than 3 ft. of any combustion air inlet source located within 10 ft.
 Less than 1 ft. from any obstructions
 Less than 1 ft. above grade or normal anticipated snow level for the area.
 Over public walkways, driveways or other areas where condensate or vapor could create nuisance or hazard or could be detrimental to the operation of regulators, relief's, valves or other equipment

NFPA 31 (OIL INSTALLATIONS USA)

A VENT SHALL NOT TERMINATE.....

Less than 5 ft. from vent outlet of the supply tank
 Less than 7 ft. above walkways
 Less than 1 ft. from any door, window or air inlet source
 Less than 1 ft. from grade or snow level.
 Less than 3 ft. from a air intake that is within 10 ft
 Less than 1 ft. from soffit of the roof
 Less than 3 ft. from any building corner or L shape structure


WARNING-CAUTION

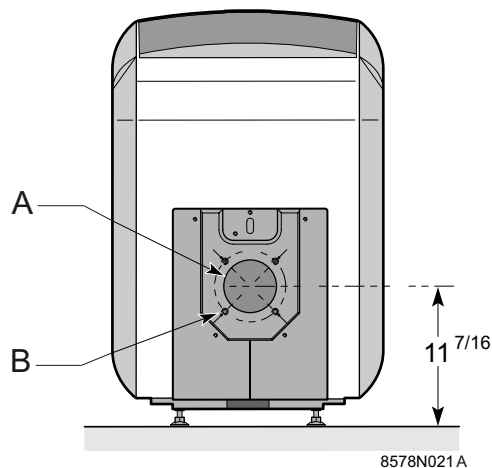
Consult Local Codes & Authorities for other Requirements not mentioned

Connecting the burner

• Connection, adjustment, start up and maintenance

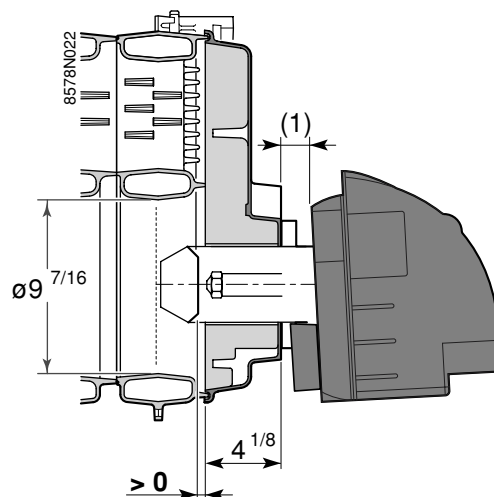
 Refer to the instructions delivered with the burner.

 **Important:** the position of the head of the burner in relation to the door insulating material must be as shown below, particularly if the burner is not a De Dietrich burner.



A Drilling $\varnothing 4 \frac{3}{8}$; Pre-cutout $\varnothing 5 \frac{1}{8}$

B 4 x M8 on $\varnothing 5 \frac{15}{16}$; 4 spot welds on $\varnothing 6 \frac{11}{16}$




(1) See the instructions supplied with the burner

Electrical connections

See the specific instructions supplied with the control panel of the boiler.

Start up

 **Domestic hot water circuits (if they exist) and heating circuits must have been filled and bled, and leak tightness tests must have been carried out on them in accordance with the instructions for the domestic hot water calorifier and boiler.**

 Refer to the following instructions to startup the boiler:

- the specific **instructions** supplied with the burner **control panel**.
- the **instructions** delivered with the **burner**,
- the **instructions** delivered with the **domestic** hot water calorifier.

1 Installation

Water level

Check the water level in the installation regularly, and if necessary top it up without allowing sudden inlet of cold water into the hot boiler.

This operation should only be necessary a few times per season; if it has to be done more frequently, there is probably a leak which should be found and corrected without delay.

Safety devices

Check that safety devices, and particularly the heating circuit safety valve, are working correctly at regular intervals, and at least when the boiler is cleaned.

Note

It is recommended that an boiler should never be drained unless absolutely necessary.

For example: when leaving for several months when there is a risk of frost in the building.

2 Boiler

Please note that an efficient boiler is a clean boiler.

The boiler must be cleaned as often as necessary and, **like the chimney, at least once a year** or more depending on:

- the regulations in force,
- the insurance contract taken out.

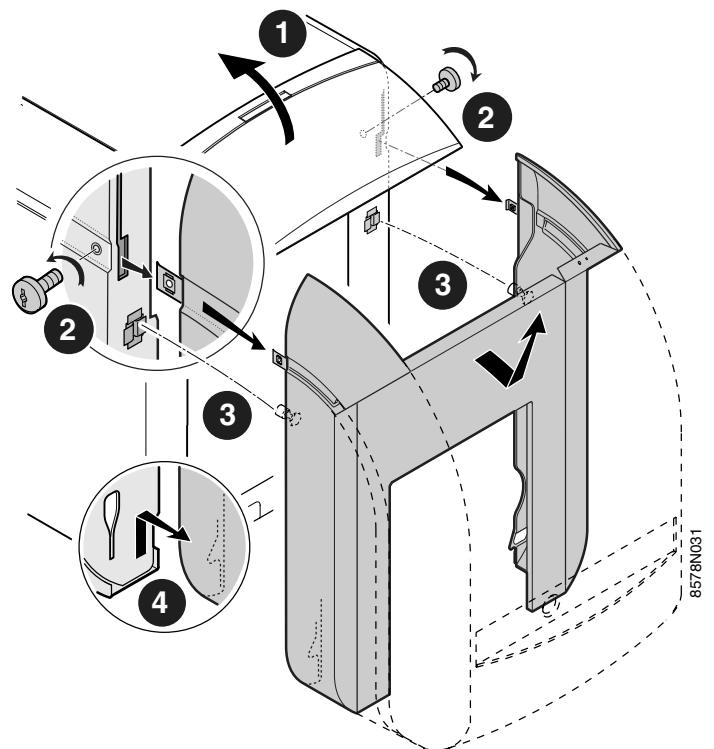
The boiler cladding front panel has to be removed to access the various devices to be maintained and checked.

Proceed as follows :

- ➊ Lift the window.
- ➋ Unscrew the two front cap side attachment screws.
- ➌ Unclip the front cap from the clips near the top.
- ➍ Remove the front cap from the notches at the bottom of the side panels.

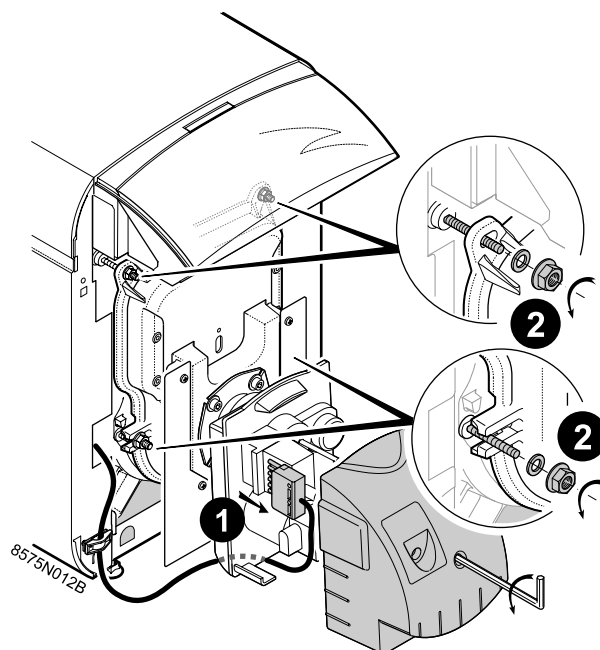
⚠ The operations described below shall always be performed with the boiler and the power supply switched off.

Shutoff the fuel supply when servicing or if the boiler is intended to be shutdown for an extended period of time.

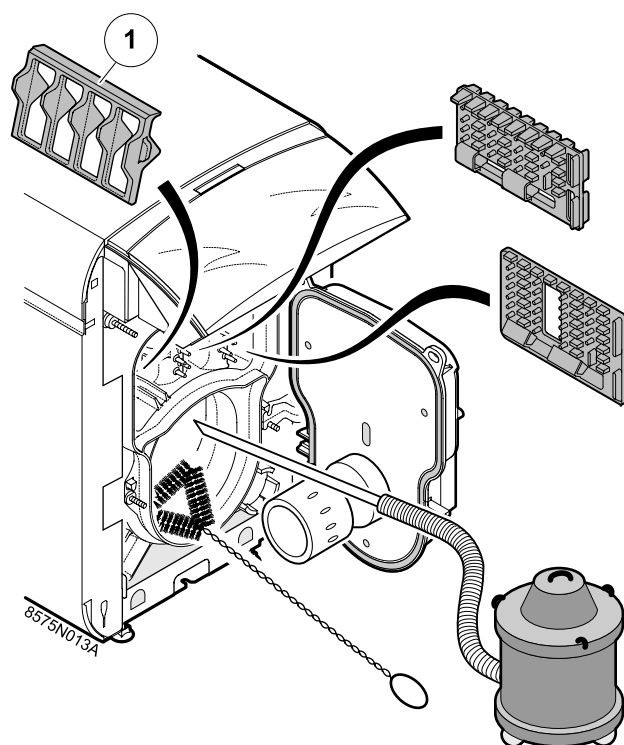


2.1 Sweeping the boiler

- ❶ Disconnect the burner cable.
- ❷ Unfasten the four flanged nuts and flat washers (see burner installation instructions) and open the burner door.



- remove the baffle plates if necessary (variable number depending on the boiler model),
- Carefully sweep the flue ways with the brush supplied for this purpose
- Also brush out the furnace.
- Vacuum the soot from beneath the flue ways and in the burner with a vacuum cleaner with a tube diameter less than 40 mm.
- Put the baffle plates back
- Close the door and put the front panel back.



2.2 Burner maintenance

 Refer to the instructions delivered with the burner.

2.3 Domestic hot water calorifier

Refer to the instructions delivered with the L hot water calorifier.

2.4 Cleaning the cladding and the window

Clean only with a soapy solution and a sponge. Rinse with clean water and wipe with a chamois leather.

1 Precautions required in the case of long boiler stops (one or more years)

The boiler and the chimney must be swept carefully. Close the door of the boiler to prevent air from circulating inside the boiler.

We also recommend removing the pipe connecting the boiler to the chimney and plugging the flue gas nozzle.

2 Precautions required if the heating is stopped when there is a risk of freezing

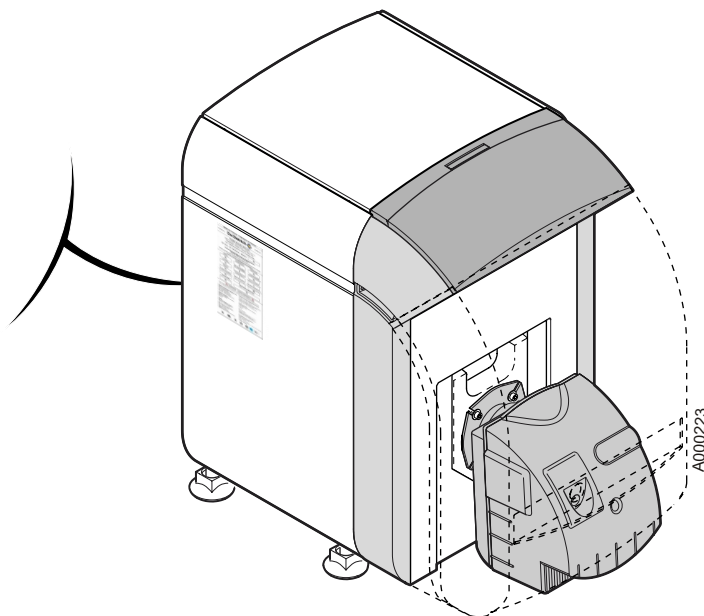
We recommend the use of a correctly dosed antifreeze agent to prevent to the heating circuit from freezing.

If this cannot be done, drain the system completely.

Drain the hot water tank and piping as well.

3 Data, Approval and Warning Labels

The rating and warning labels are affixed to the side of the boiler as shown.

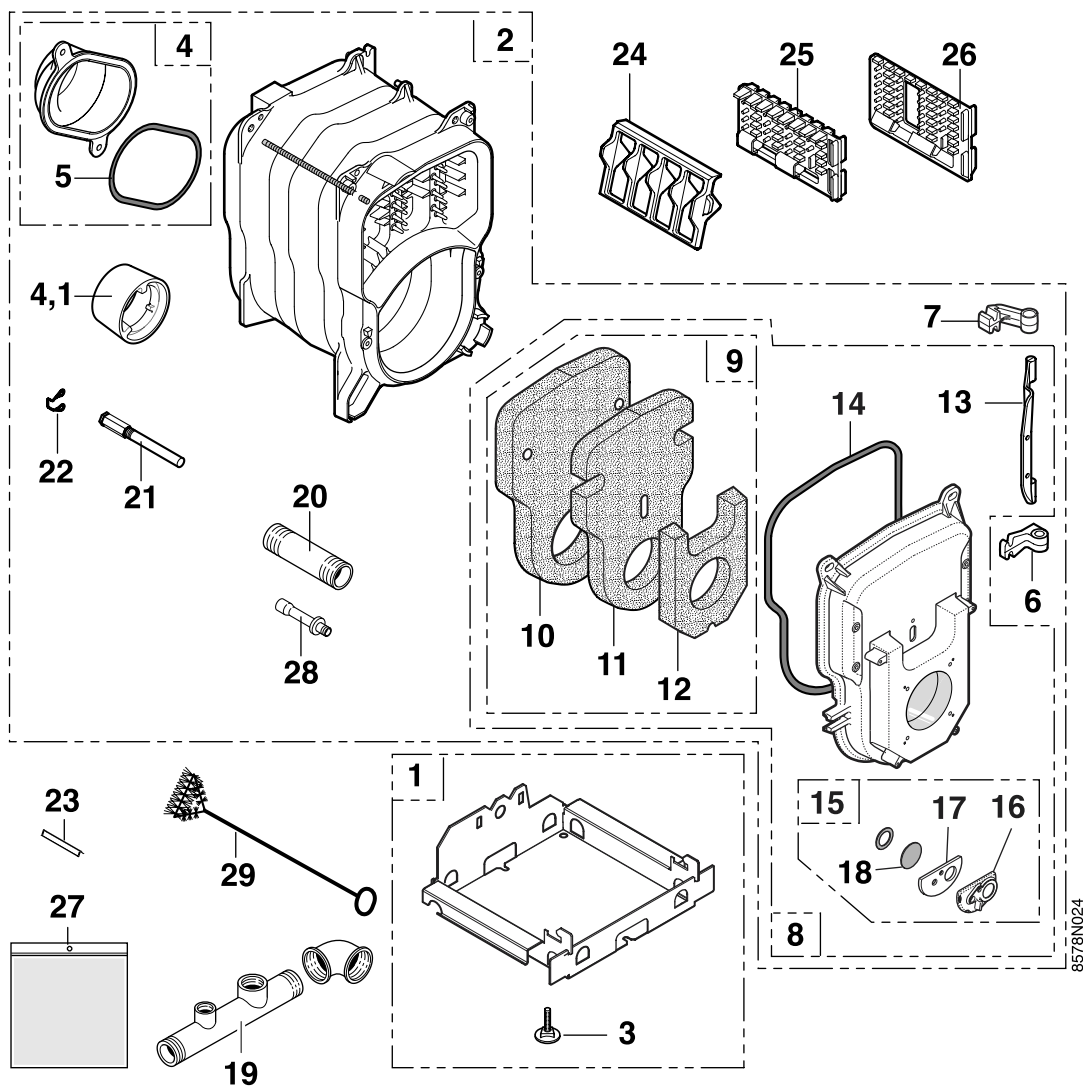
[illegible]



when ordering spare parts, do not forget to state **the code number given opposite the description of the required part in the list.**

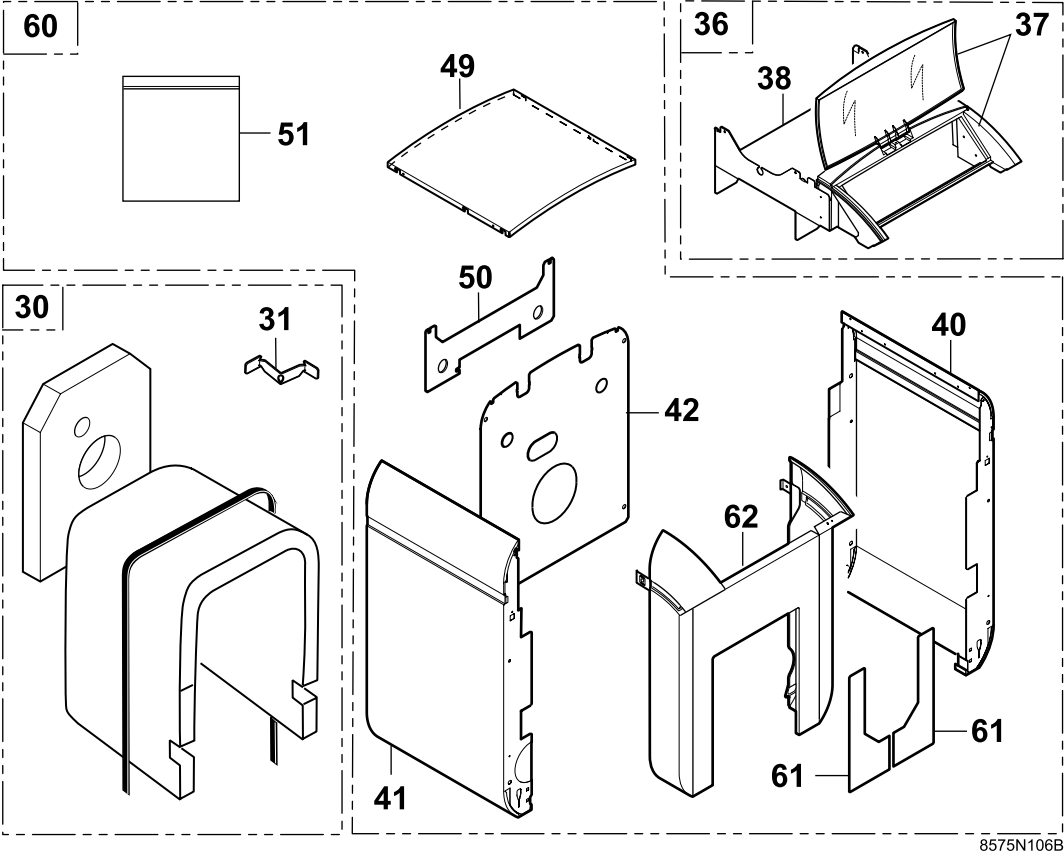
- **Boiler body and cladding:** Refer to the following pages
- **Panel:** Refer to the instructions delivered with the control panel
- **Burner:** Refer to the instructions delivered with the burner
- **Domestic hot water calorifier:** Refer to the instructions delivered with the hot water calorifier

BOILER BODY



8578N024

CASING + INSULATION



8575N106B

Ref.	Code no.	DESCRIPTION
BOILER BODY		
1	8575-8815	Complete base, 3 sections
1	8575-8816	Complete base, 4 sections
1	8575-8817	Complete base, 5 sections
1	8575-8818	Complete base, 6 sections
2	8578-0200	Complete boiler body, 3 sections
2	8578-0201	Complete boiler body, 4 sections
2	8578-0202	Complete boiler body, 5 sections
2	8578-0203	Complete boiler body, 6 sections
3	9786-0646	Adjustable foot
4	8575-8975	Complete GT 120 A nozzle
5	8199-0026	6" ø ring of nozzle
6	8199-0203	Lower hinge
7	8199-0204	Upper hinge
8	8575-8919	Complete burner door
9	8575-5524	Burner door insulation
10	9425-0247	Rear door insulation
11	9425-0246	Intermediate door insulation
12	9425-0245	Front door insulation
13	8199-0207	Pin for burner door
14	9508-6032	Silicone fibreglass seal
15	8575-8925	Complete inspection window
16	8575-0004	Rose
17	9425-0234	Insulation for rose
18	9758-0027	Inspection window
19	9754-9101	Discharge header
20	9754-9102	Outlet / inlet tube
21	9536-1215	Thimble tube
22	9758-1286	Thimble tube spring
23	9536-5613	Divider for thimble tube
24	8199-0015	Left-hand baffle
25	8199-0016	Middle baffle
26	8199-0017	Right-hand baffle
27	8199-8983	Bag of fasteners for body
28	9754-9103	Draining tube
	9508-6036	Silicone-Thermocord ø 8 mm
MISCELLANEOUS		
29	9696-0223	Brush
INSULATING MATERIAL		
30	8575-5509	Complete body insulation, 3 sections
30	8575-5510	Complete body insulation, 4 sections
30	8575-5511	Complete body insulation, 5 sections
30	8575-5512	Complete body insulation, 6 sections

Ref.	Code no.	DESCRIPTION
31	8406-8082	Insulating clips
BOILER CASING		
40	8575-8805	Complete right hand side panel, 3 sections
40	8575-8806	Complete right hand side panel, 4 sections
40	8575-8807	Complete right hand side panel, 5 sections
40	8575-8808	Complete right hand side panel, 6 sections
41	8575-8858	Complete left hand side panel, 3 sections
41	8575-8859	Complete left hand side panel, 4 sections
41	8575-8860	Complete left hand side panel, 5 sections
41	8875-8861	Complete left hand side panel, 6 sections
42	8575-8810	Complete rear panel
49	8575-0510	Complete cover, 3 sections
49	8575-0511	Complete cover, 4 sections
49	8575-0512	Complete cover, 4 sections
49	8575-0513	Complete cover, 6 sections
50	8199-8018	Rear crossbar, 4, 5 and 6 sections
51	8575-5508	Bag of fasteners for casing
60	8575-5513	Complete casing, 3 sections
60	8575-5514	Complete casing, 4 sections
60	8575-5515	Complete casing, 5 sections
60	8575-5516	Complete casing, 6 sections
61	8575-0516	Front door panel
62	8575-8812	Front panel

Note : Please consult burner manufacturer as supplied for exploded view and spare parts listing.

Riello Burner Set-up Table

GT 120 A Boiler - Riello Burner Setup Table

OEM preliminary settings

Boiler Model	Riello Burner	Fuel	Firing Rate	Air Gate	Head	Pressure	Nozzle - Orifice
GT 123 A	40 F3 LBT	Oil	0.65 Gph	2.5	1.0	135 Pump PSI	0.55 x 60° A Delavan
	40 BF3 LBT	Oil		4.5			
	40 G 120 SBT	Nat. Gas	94 MBH	3.0	2.0	1.35" w.c.	1.7 mm
	40 G 120 SBT	Propane		3.25			1.3 mm
GT 124 A	40 F3 LBT	Oil	0.80 Gph	3.0	2.0	130 Pump PSI	0.75 x 80° B Delavan
	40 BF3 LBT	Oil		6.0			
	40 G 120 SBT	Nat. Gas	115 MBH	3.5	3.0	1.65" w.c.	1.7 mm
	40 G 120 SBT	Propane		3.75			1.3 mm
GT 125 A	40 F5 LBT	Oil	1.00 Gph	2.75	1.0	140 Pump PSI	0.85 x 60° B/W Delavan
	40 BF5 LBT	Oil		4.1			
	40 G 200 SBT	Nat. Gas	144 MBH	3.75	1.0	2.10" w.c.	2.0 mm
	40 G 200 SBT	Propane		4.0		2.50" w.c.	1.3 mm
GT 126 A	40 F5 LBT	Oil	1.15 Gph	3.0	2.0	130 Pump PSI	1.00 x 80° B Delavan
	40 BF5 LBT	Oil		4.2			
	40 G 200 SBT	Nat. Gas	166 MBH	3.0	4.0	1.55" w.c.	2.0 mm
	40 G 200 SBT	Propane		3.25		2.00" w.c.	1.3 mm

Typical Emission Range Levels Expected

Fuel	CO2 [%]	O2 [%]	CO [ppm]	Flue Gas [Gross]	Smoke - μ A Signal
Nat. Gas	8.5 - 10	5 - 3%	< 50	275 - 400° F	> 6
Propane	9.0 - 12			Or	> 7
# 2 Oil	11.5 - 13			135 - 200° C	0-Trace

Although several factors will effect the emissions levels expected it is always suggested that the expected range be respected.

The Riello light oil burner combustion head protudes into the chamber approximately 3"

Setting good for altitudes upto 4,500 ft [1371m] ASL

The Manufacturer:



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