GT 220 A

Oil-Gas Fired Hot Water boiler

English
11/20/09

Installation and operating instructions

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. For assistance or additional information consult a qualified installer, service agency or the gas supplier.

De Dietrich

Guideline of Notices

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

Caution:
indicates presence of hazards t hat will or ca n 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 t hat the a ssembly of gas and vent connections, the initial start-up, the electrical connections, the mainte nance and service can only be perfor med by a licensed se rvice contra ctor 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 l ocal and state codes as well as common i ndustry practices during the install ation 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 prob lem immediately to prevent damage to the system!

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

Safety Considerations

Please observe the following safety instructions.

Read this manual carefully.

Correct in stallation 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 bo iler area cle ar 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 and national codes or authorities having jurisdiction"

[Canadian Installations]

- CSA B149 for gas fired boilers
- CSA B139 for oil fired boilers

[USA Installations]

- NFPA 54/ANSI Z223.1 for gas fired boiler
- NFPA 31 for oil fired boilers.

ATTENTION-WARNING:

The boiler must be connected to a venting system that will safely discharge all flue gas to the outside in a safe and effective manner.

Do not use gasoline, crankcase draining, or any other oil containing gasoline.

The boiler is certified to burn fuels as listed on the boiler rating plate. Never burn garbage or paper in the unit, and never leave combustible materials in the vicinity of the boiler.

Contents

Regulations and guidelines

The installation must conform to the requirements of the authority having jurisdiction or, in th e absence of such re quirements, 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 lo cal r egulations. Boiler requires yearly maintenance, see "Connecting the burner", page 24.

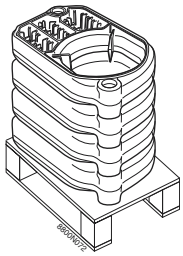
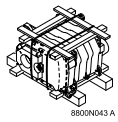
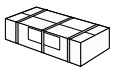
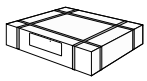
Only a qualified installing contractor maycarry out the installation, the initial st art-up, the connection for fixed gas and vent gas, and conversion to another type of gas. The hot water distribution system must comply with the applic able codes and regulations. When replacing an existing boiler, it 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 GT210A series is a cast iron sectional boiler designed for space and domestic and hot water heating requirements, the boiler is automatically fired and controlled by the boiler control panel. The boiler is certified to burn all the fuels as listed on the rating plate by separate burner. The boiler must always be connected to a vent system that will discharge all flue gases to the outside in a safe and effective manner. Refer to the specific sections in the manual for further details.

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.

Boiler	GT 214 A	GT 215 A	GT 216 A	GT 217 A	GT 218 A	
• Unassembled boiler body						
- front section	1	1	1	1	1	
- intermediate section	2	3	4	5	6	
- rear section	1	1	1	1	1	
- set of assembly rods	-	-	1	1	1	
- accessory package	DR 64	DR 65	DR 66	DR 67	DR 68	
• Assembled boiler body with accessories	DR 84	DR 85	DR 86	DR 87	DR 88	 8800N043 A
Control panel	DR 90	DR 90	DR 90	DR 90	DR 90	 8800N075A
Casing	DR 74	DR 75	DR 76	DR 77	DR 78	 8800N073A

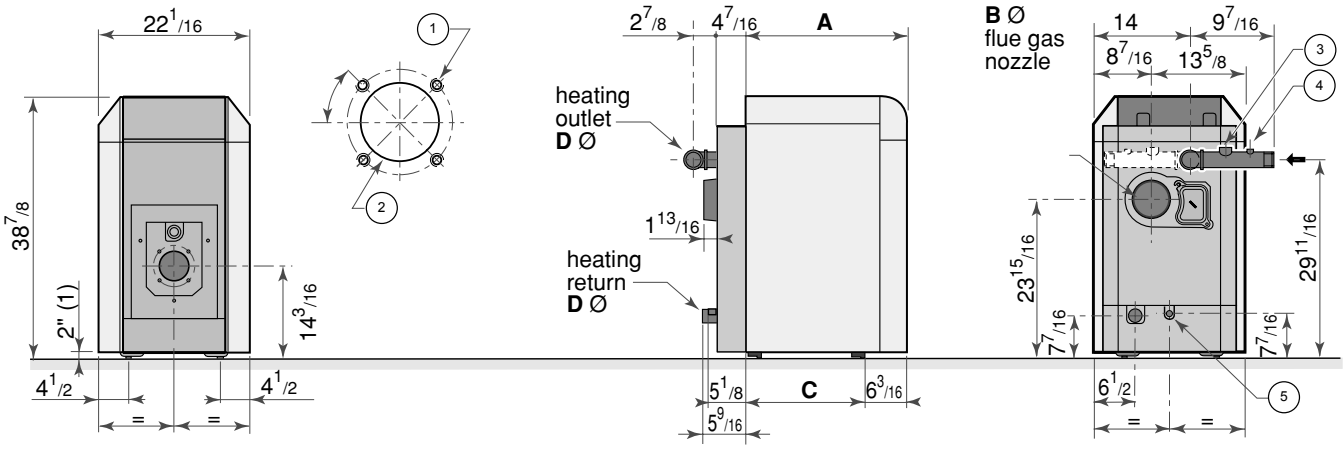
GT 220A Series - Cast Iron Series
Technical Specification Data Table

Item		Unit	Model				
			GT 224A	GT 225A	GT 226A	GT 227A	GT 228A
Firing Sequence			Consult Burner Technical Data				
[CSA] - Gas Input		MBH	173	224	274	324	361
		kW	50.7	65.5	80.3	95.1	105.7
[CSA] - # 2 Fuel Oil Input		US GPH	1.20	1.55	1.90	2.25	2.50
[CSA] - Output [Gas-Oil]		MBH	147	190	233	276	307
		kW	43.2	55.8	68.4	81.0	90.0
NET I=B=R Water Rating		MBH	128	166	203	240	267
Cast Iron Sections		#	4	5	6	7	8
Flue-way baffles		#	3	2	2	2	2
Water Capacity		US Gal	9.5	11.4	13.2	15.1	16.9
		Liter	36	43	50	57	64
Water Resistance [ΔT = °F]	18° F	Ft. H_2O [mbar]	0.667 [19.952]	1.117 [33.391]	1.670 [49.904]	3.058 [91.409]	2.889 [86.368]
	27° F	Ft. H_2O [mbar]	0.297 [8.867]	0.496 [14.840]	0.742 [22.180]	1.359 [40.613]	1.284 [38.375]
	36° F	Ft. H_2O [mbar]	0.167 [4.988]	0.280 [8.355]	0.417 [12.467]	0.765 [22.852]	0.722 [21.592]
Combustion Chamber Dimensions	Diameter [equivalent]	Inch	12.17				
		mm	309				
	Depth	Inch	17.6	22.6	27.6	32.6	37.6
		mm	446	573	700	827	954
	Volume	Ft^3	1.165	1.483	1.801	2.119	2.436
		m^3	0.033	0.042	0.051	0.060	0.069
Combustion chamber and flue way volume	Volume	Ft^3	1.907	2.401	2.931	3.425	3.919
		m^3	0.054	0.068	0.083	0.097	0.111
ASME MAWP [Water]		PSI	60				
Min. Safety Relief Capacity		MBH	162	209	257	304	338
S2NA Panel	Electrical Connection	V/P/H	120/1/60 < 10A				
	Max. Water Temp. Safety Limit [MR]	° F	230				
		° C	110				
	Water Operating Temperature Range	° F	86 - 194 (optional Hi-Temperature kit available)				
		° C	30 - 90 (optional Hi-Temperature kit available)				
Chamber Resistance		inch w.c.	0.08	0.12	0.12	0.16	0.24
		mbar	0.20	0.30	0.30	0.40	0.60
Gas-Vent Category		#	I-II-III-IV & Sidewall				
Boiler Vent Connection		inch	6	6	7	7	7
Weight [Dry]		lb	481	567	655	741	827
		kg	218	257	297	336	375

Note:

- CSA - MBH Output based on Thermal Efficiency Test According to ANSI Z21.13a/CSA 4.9a-2005
- All Models Certified for 0 - 4,500 feet ASL installation altitude
- Chamber Resistance Based on Neutral Chimney-Vent Pressure
- Conversion Btu/Hr to kW = 3,412 Btu/Hr 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
-

3 Main Dimensions (less applied burner)



Model	A*	B = ø	C	D
GT 224A	23 5/16 in.	6	16 11/16 in.	1¼ in.
GT 225A	28 5/16 in.	6	21 11/16 in.	1 ¼ in.
GT 226A	33 5/16 in.	7	26 11/16 in.	1 ½ in.
GT 227A	38 5/16 in.	7	31 11/16 in.	1 ½ in.
GT 228A	43 5/16 in.	7	36 11/16 in.	1 ½ in.

1. Bolt Ø = 5 15/16 inch M8 x 1.25 Bolt diameter threading predrilled, additional marking @ 6 ¾ inch for larger mounting requirements.
2. Combustion head Ø = 4 7/16 inch precut, additional marking @ 5 1/8 inch for larger combustion heads.
3. Supply manifold ¾" port for safety relief valve
4. Supply manifold ¼ inch port for temperature and pressure gauge
5. Drain port ¾ inch.

A* = Dimension will increase with applied burner, consult supplied burner documentation for dimensions and clearances for service/ combustibles.

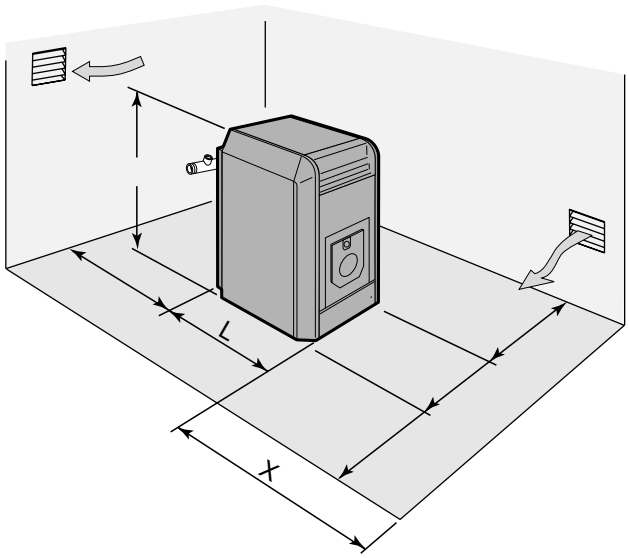
D** = OD Dimension will for breeching connection only actual vent diameter sizing will depend on specific vent application and code requirements.

(1) = Adjustable hot water tank feet for leveling, minimum height =1 3/16 inch, adjustable from 1 3/16 to 2 1/2 inch.

1 Installing the boiler

The boiler does not require any special housekeeping pad as it has been provided with a study frame and leveling bolts for the final installation, but a non combustible pad is suggested to keep occasional water away from the boiler. The boiler requires clearance for combustibles and for servicing, the recommended clearance as shown in the table below. Do not install the boiler on combustible flooring or carpet.

Proper combustion air and ventilation are required for the boiler, inadequate combustion air or makeup air provisions may result in foul boiler room odors, incomplete combustion resulting in carbon monoxide (CO) development or creation of negative building pressure.

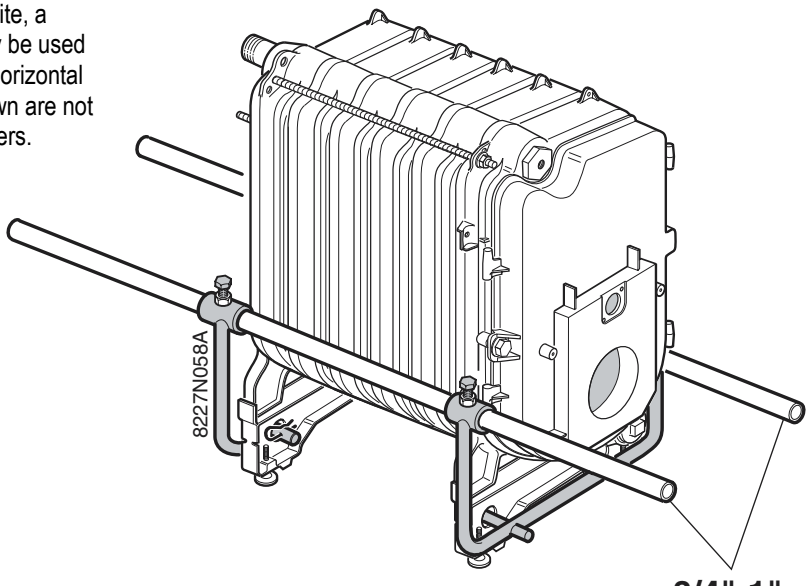


Combustible & Service Clearances						
Model	L = overall length	Sides	Rear	X = Front burner	Top	Vent
GT214A	29 11/16 [754mm]	20 inches [500mm]	20 inches [500mm]	24 inches [600mm] in front of burner	34 inches [800mm]	GAS = 6 inches [150mm]
GT215A	34 11/16 [881mm]					
GT216A	39 11/16 [1008mm]					OIL = 9 inches [230mm]
GT217A	32 11/16 [1135mm]					
GT218	33 11/16 [1262mm]					

⚠ Particular attention must be observed if the boiler is operating near or within vicinity of beauty shops, paint shops or industrial plant where known pollutants, corrosive element may containment affect the quality of combustion air supply, failure to observe this warnings will result in void of warranty of the boiler and any responsibility of De Dietrich.

Consult local codes for combustion air and ventilation requirements, each installation must comply with all local and national codes having jurisdiction.

To facilitate boiler transportation into the final installation site, a special handling tool (package BG 45, no.8218-7723) may be used as shown to transport the boiler or the boiler on the MLS horizontal domestic hot water tank. The two 3/4” or 1” pipes are shown are not supplied with the package BG45, they are supplied by others.



2 Combustion Air Supply

The location of air inlets in relation to the high ventilation openings shall ensure that the air is renewed in the entire volume of the boiler room. The ventilation shall comply with any a pplicable national or local regulations.

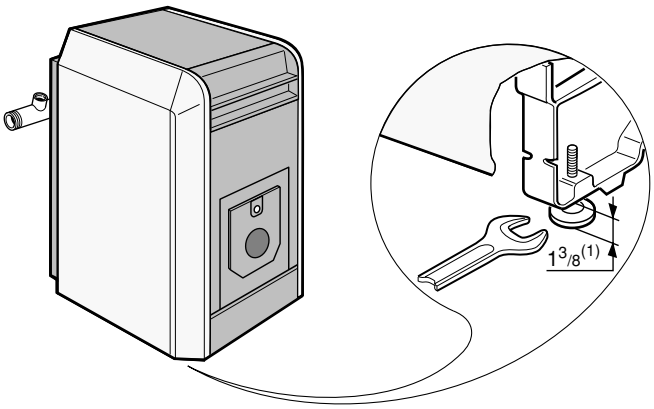
Please note that boilers installed in or close to rooms in which the atmosphere is polluted with chlorine or fluorine compounds may be subject to high corrosion. For example: hairdressing salons, industrial premises (solvents), cooling equipment etc. Boilers installed in such locations shall not be covered by the warranty.

3 Levelling

Level as shown in the d rawing by means of the four adjustable feet (supplied in the bag of fasteners of the casing) put in place while assembling the boiler.

(1) basic height 1 3/8,

adjustment range: 1 3/8 - 2 1/2



Chimney connection

1 Venting the boiler

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

Do not Co-Vent a Direct Vent or Sidewall vent system boiler, these venting options are specifically designed for single boiler venting, follow all local and national codes. The sidewall or direct vent termination must be installed in a location which avoid accumulation of snow or debris that could block the vent terminal. Consult local codes regarding other requirements for the location and installation of the vent terminal.

Co-Venting with other appliances, must be sized and installed according to CSA B149 & ANSI Z223.1, Any improper operation of venting system must be corrected and resized according to the tables in part II of national fuel code Z223.1 & CAN CSA B149 installation codes.

2 Connecting the Venting to the Boiler

Consult local and national codes regarding the sizing of the boiler breeching and chimney venting. See venting section of manual regarding typical venting systems and requirements.

Connecting the burner

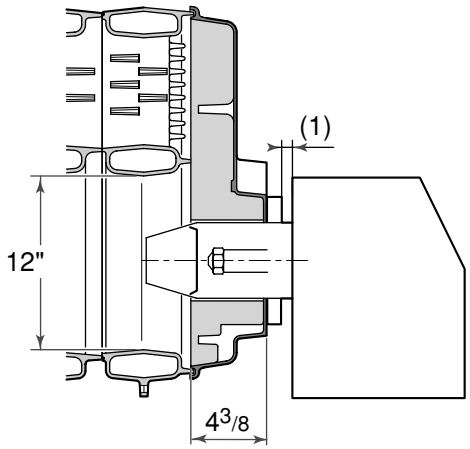
Important: the position of the head of the burner in relation to the door insulating material must be as shown opposite, particularly if the burner is not a De Dietrich burner.

Note:

Refer to the instructions supplied with the burner for in formation relating to the connections, adjustment, commissioning and maintenance of the burner.

(**1**) See burner instructions as supplied

The fuel tank and supply lines to the burner must be installed according all applicable National and local codes

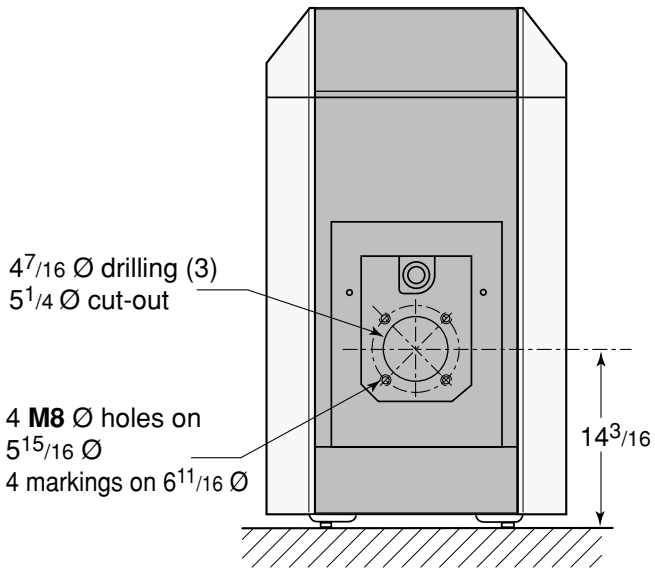


Consult the documentation of the boiler control and the burner documentation as supplied regarding setup, wiring and startup.

Do not attempt to start the burner, until all service and clean-out doors are closed and venting is properly connected to the boiler.

Consult the burner documentation regarding the required maintenance required for the burner, filters and nozzle.

The entire system should be cleaned and check at least once each heating season.



3. Boiler Venting & Chimney General

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 below 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 standards for each jurisdiction.

Gas-Vent Category [4] Definitions:

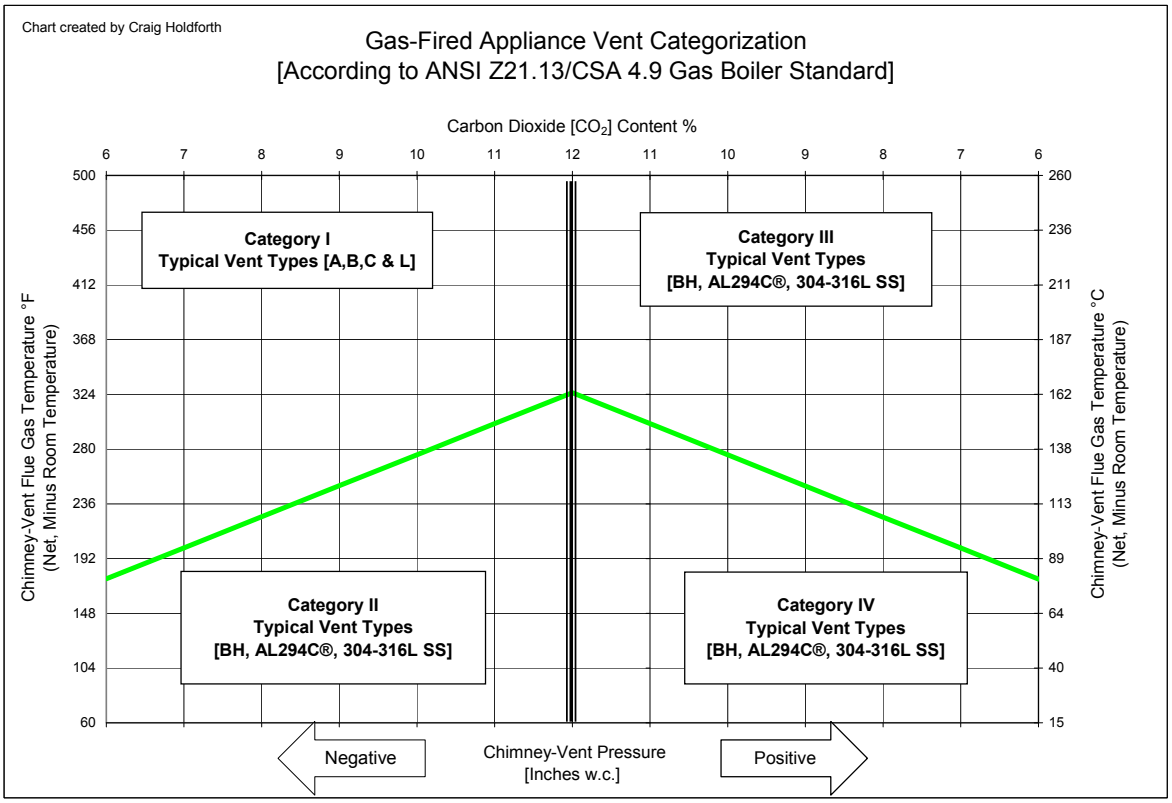
Cat. I
A Boiler, which operates with a non-positive vent (breech) pressure and flue gas temperatures which avoids excessive condensation production in the chamber and venting.

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

Cat. III
A Boiler, which operates with a positive vent (breech) 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 (breech) pressure and flue gas temperatures produces condensation production in the chamber and venting.

Chart A



3.1 Boiler Venting – Category I & II Typical Layouts and Requirements.

Caution & Warning:
Improperly sealed venting system could result in carbon monoxide [CO] poisoning; ensure adequate support and fastening of the 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.

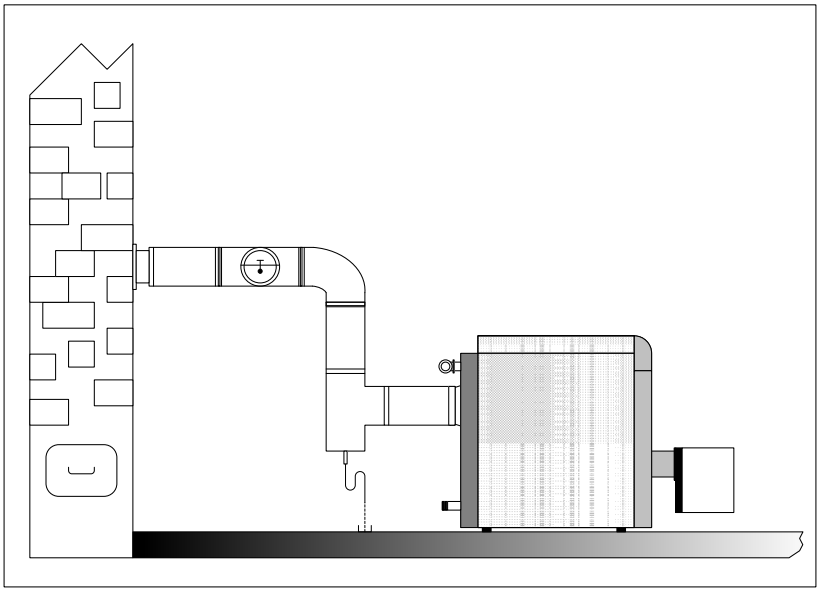
Warning & Cautions for Co-Venting:
Co-venting with other appliances shall conform latest ANSI Z223.1 & CAN/CGA 149 installation codes, any improper operation shall be corrected, the common venting shall be sized according to the appropriate tables in Part II of the above mentioned codes.

Category I Vent Systems Requirements:

1. Flue gas temperatures above the green line shown in chart A.
2. Approved type of venting for category I appliances.
3. A barometric draft control maybe employed as required, but is not necessary for correct boiler operation. Consult a chimney-vent specialist for correct application and usage.
4. Breeching and chimney vent sized in accordance to local and national codes or by good engineering methods.
5. Vent safety device 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. Approved type of venting for category II appliances.
3. A barometric draft control maybe employed as required, but is not necessary for correct boiler operation. Consult a chimney-vent specialist for correct application and usage.
4. Breeching and chimney vent sized in accordance to local and national codes or by good engineering methods.
5. Vent safety device 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.

3.2 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 the 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.

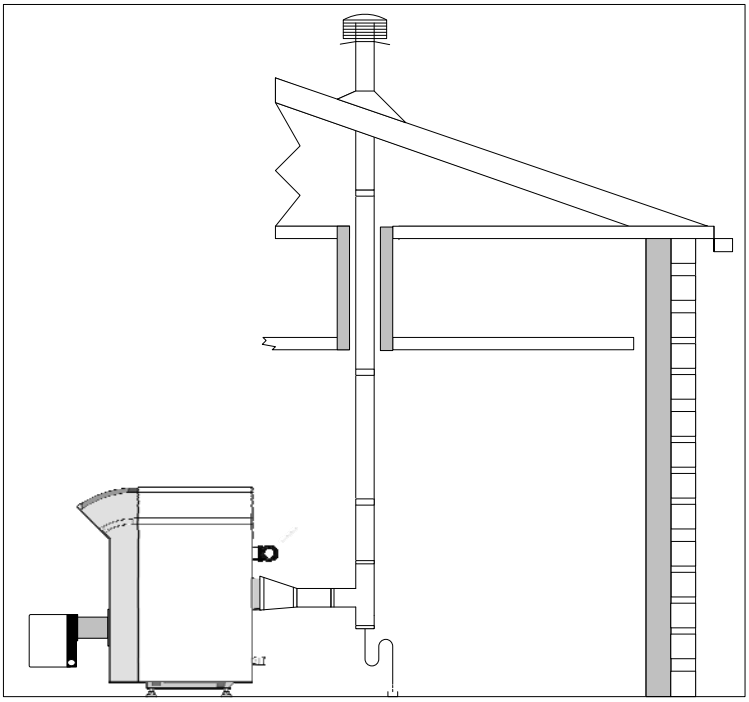
Warning & Cautions for Co-Venting:
Co-venting with other appliances shall conform latest ANSI Z223.1 & CAN/CGA 149 installation codes, any improper operation shall be corrected, the common venting shall be sized according to the appropriate tables in Part II of the above mentioned codes.

Category III Vent Systems Requirements:

1. Flue gas temperatures above the green line shown in chart A.
2. Approved type of venting for category III appliances
3. Breeching and chimney diameter sized in accordance to national & local 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.

Category IV Vent Systems Requirements:

1. Flue gas temperatures below the green line shown in chart A.
2. Approved type of venting for category IV appliances
3. Breeching and chimney diameter sized in accordance to national & local 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.



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.

3.3 Boiler Venting – Side-Wall or Direct Vent Systems Typical Layouts and Requirements.

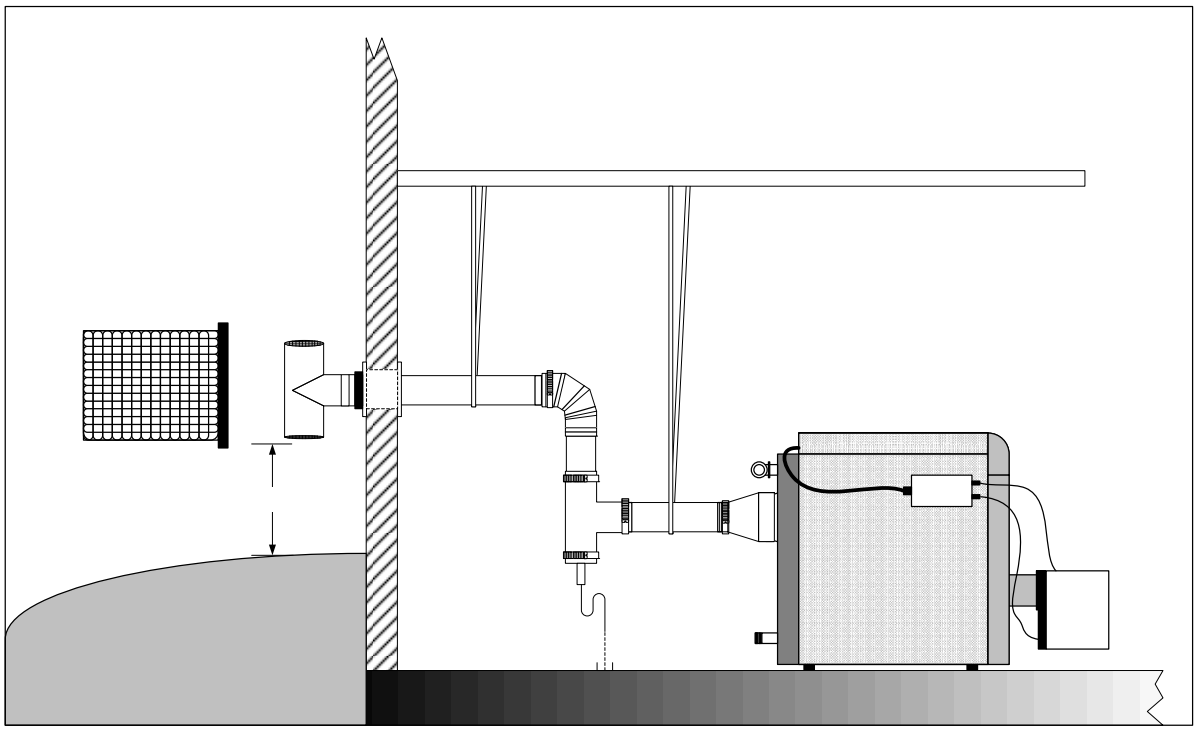
Caution & Warning:
Improperly sealed venting system could result in carbon monoxide [CO] poisoning; ensure adequate support and fastening of the system. Ensure venting can safely exhaust all flue gases outside in an effective manner. These systems must operate under a positive vent pressure condition that is stable. Do not Co-Vent with any other appliance, the venting system was designed for single appliance venting only.

Side-wall & Direct Vent Systems:

These systems do not fall under any of the gas vent categories, these systems are pre-engineered. These applications of this venting system must be followed exactly, for safe, efficient and trouble free operation.

System Requirements:

1. Venting sized accordance to direct vent table
2. Type “BH” [AL294C®] vent material
3. 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 for determining flue gas emissions.
4. Vent termination TEE
5. Vent safety device equipped on burner [MR]



Vent Termination Locations & Warning – See Section 5.5

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.

5.4 Boiler Venting – Side-wall or Direct Vent Systems Sizing Tables & Vent Safety Device

- All venting lengths must be calculated to equivalent lengths, all application 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.
- Optional function of power burners which can employ a n post purge function to exhaust flue gases for a fixed time [1 minute to 4 minutes maximum]
- Burner employing a standby air damper closed position, the closed position should be slightly opened to allow hot flue gases to escape upward through venting and not be entrapped in the combustion head. Important note, that in negative building pressures, the observation and odor of flue gases may enter the boiler room.

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 220 A Series

Model	Boiler Connection ø	Oil-Gas Vent ø	[Δp] Pressure switch Setting [inches w.c.]
GT 224 A	6 inch	4 inch	Set Switch @ 150% above gas burner gas manifold or oil burner head pressure
GT 225 A	6 inch	4 inch	
GT 226 A	7 inch	5 inch	
GT 227 A	7 inch	5 inch	
GT 228 A	7 inch	5 inch	

3.5 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 bock 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 Any Direct Vent or Sidewall Venting System

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 combust ble 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 wi hin 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

Electrical connections

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

Warning
Label all wires prior to disconnecting when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

Maintenance

1 Boiler

Draining

We advise you against draining the installation, unless it is absolutely necessary. Check the water level in the installation regularly and top up if required, making sure you do not suddenly add cold water into a hot boiler.

Cleaning

Please note that an efficient boiler is a boiler with clean exchange surfaces.

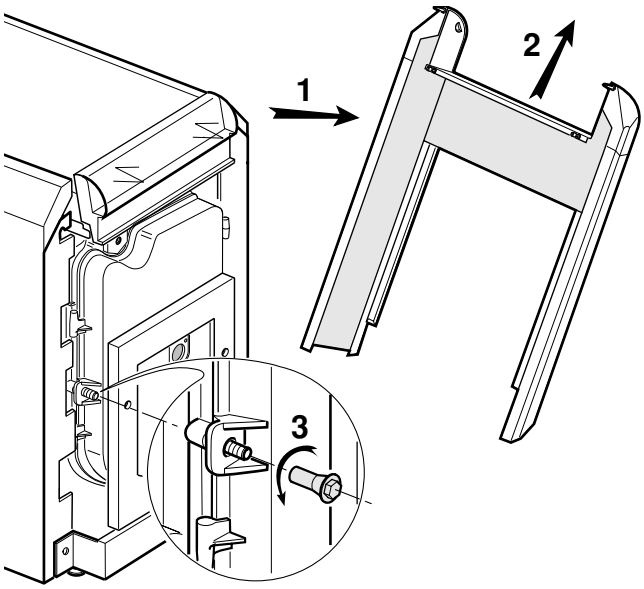
The boiler should be cleaned as and when required, **at least once a year**, depending upon applicable regulations and specific needs.

The operation should not be required more than a few times each season and should not involve large quantities of water. Otherwise, look for the leak and repair it immediately.

The operations described below shall only be performed with the boiler and power supply off.

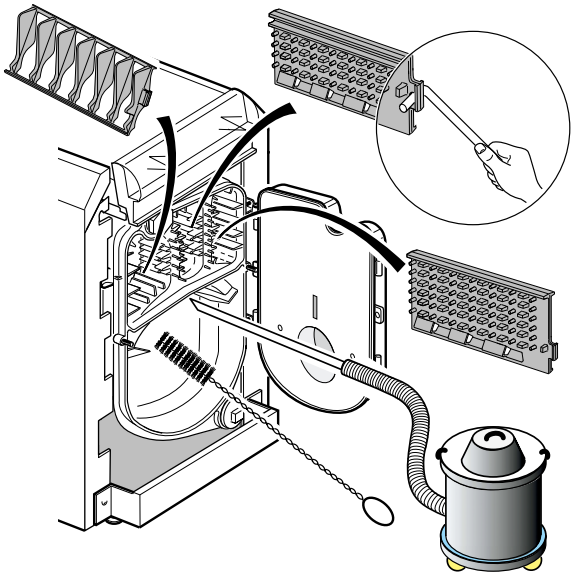
To have access to the exchange surfaces:

- take off the front of the casing,
- open the door by unscrewing the two flanged nuts (17 mm wrench).



- remove the convection accelerators in the flues of the boiler with the supplied removal hook
- carefully sweep the flues with the brush supplied for that purpose
- brush out the furnace as well
- vacuum the soot from beneath the flues and in the furnace with a sweeping brush or a vacuum cleaner with a tube diameter less than 11/2
- put back the convection accelerators
- close the door and put back the front panel.

Refer to the instructions supplied with the burner for burner maintenance.



The Manufacturer:

De Dietrich
BOILERS

Bp 30 – 57, RUE DE LA Gare
F – 67580 MERTZWILLER
Tel: +33/3/88/80/27/00 – Fax: +33/3 88 80 27 99
Ni IRC : 347 555 559 RCS STRASBOURG
www.dedietrich-thermique.com

DDR AMERICAS INC.

In Canada:
1090 Fountain St., Unit #10
Cambridge, Ontario, N3E 1A3 - CANADA
Tel: 519.650.0420 Fax: 519.650.1709

In USA or South America:
1054 North DuPage Avenue
Lombard, Illinois, USA 60148
Tel: 630.953.2374 Fax: 630.953.2376

Toll Free 1.800.943.6275
www.dedietrichboilers.com