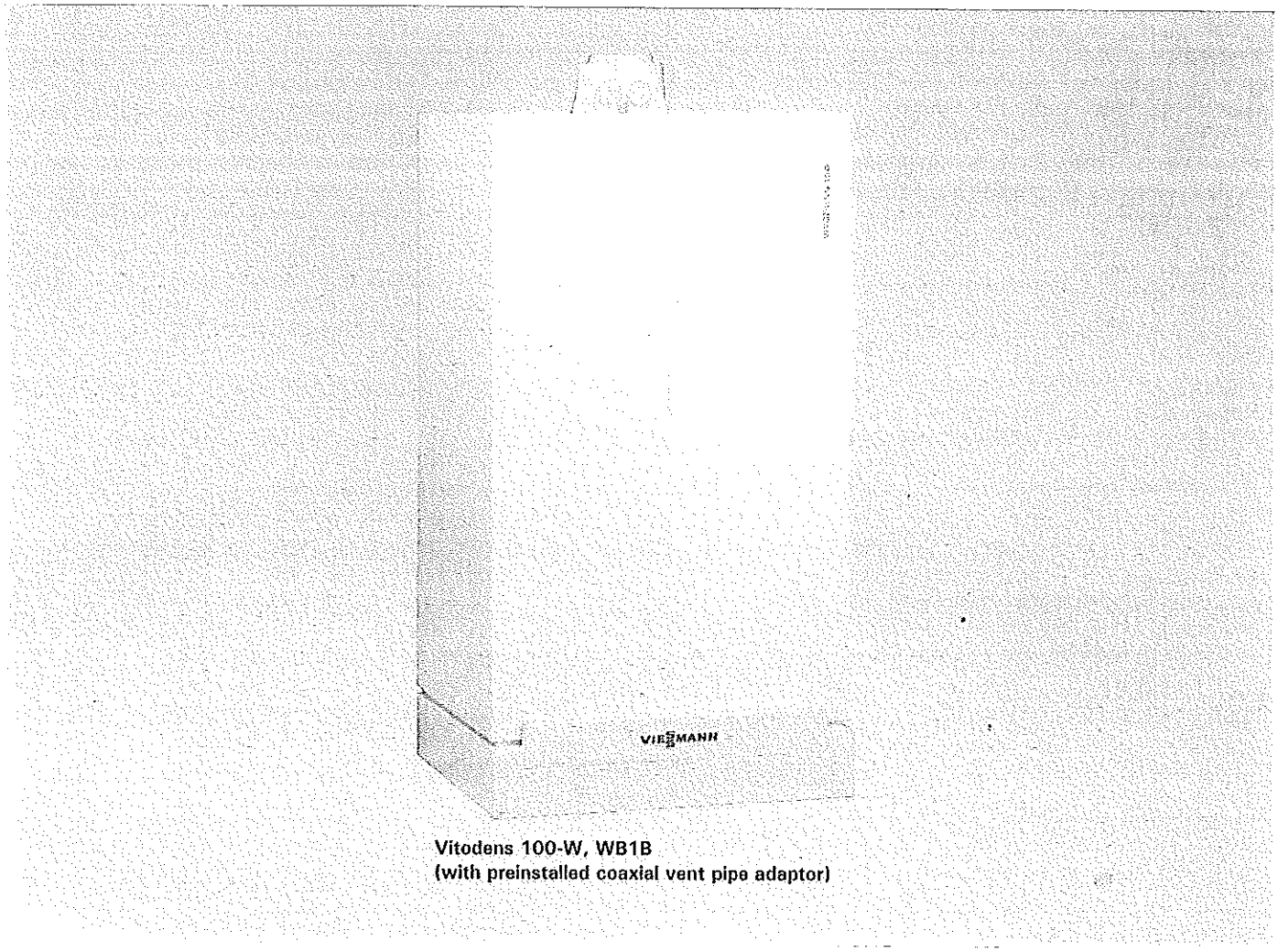
VIESMANN®

VITODENS 100-W®

Gas-fired wall-mounted condensing boiler
37 to 118 MBH / 10.8 to 34.6 kW

Technical Data Manual

Model Nos. and pricing: see Price List



Vitodens 100-W, WB1B
(with preinstalled coaxial vent pipe adaptor)

Vitodens 100-W

WB1B Series

Gas-Fired Wall-Mounted Condensing Boiler
with modulating stainless steel MatriX cylinder burner and stainless steel Inox-Radial heat exchanger for room air independent operation (using a direct vent system) or room air dependent operation

5369 277 v1.5 01/2010

Vitodens 100-W, WB1B 26/35
with piping connections

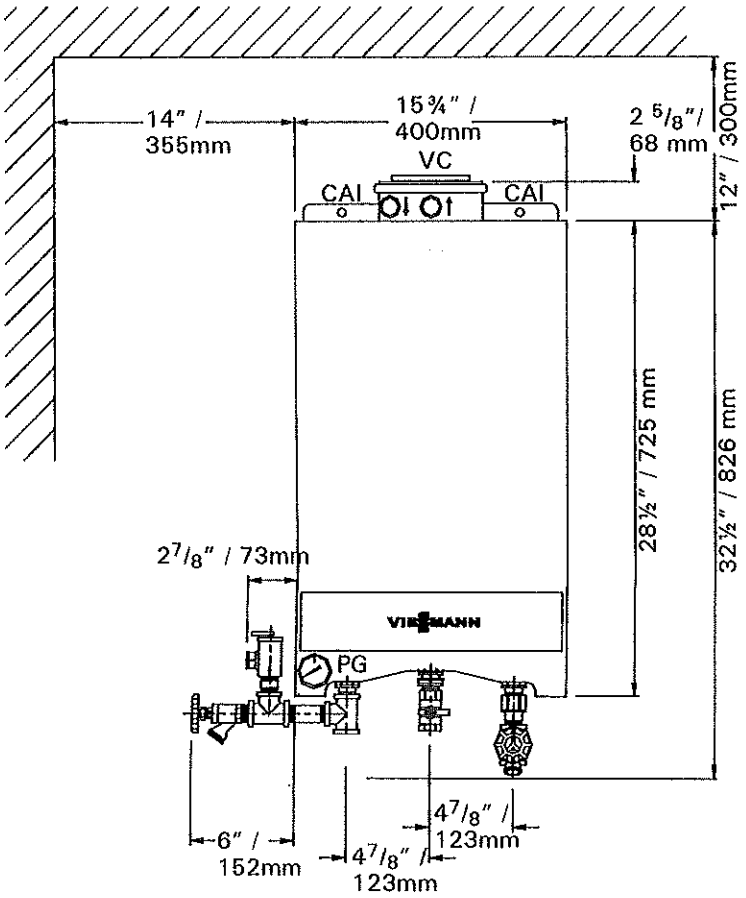


Fig. 2

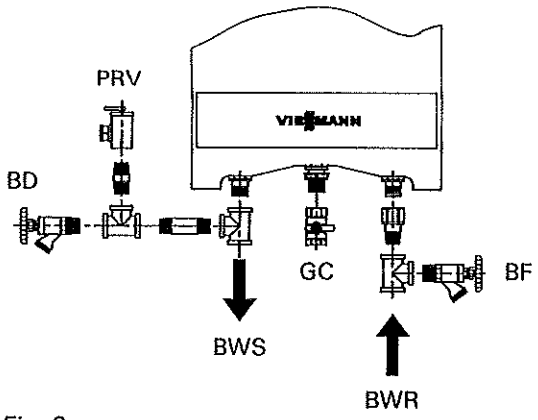


Fig. 3

Piping connections for Vitodens 100-W, WB1B 10-26 and 10-35 (factory supplied)

Legend

BWR	Boiler water return, ¾"
BWS	Boiler water supply, ¾"
BD	Boiler drain
BF	Boiler fill
GC	Gas connection, ¾" NPTM (male thread)
PRV	Pressure relief valve
PG	Pressure gage
VC	Venting connection
CAI	Combustion air inlet connection (optional)

Recommended Minimum Service Clearances

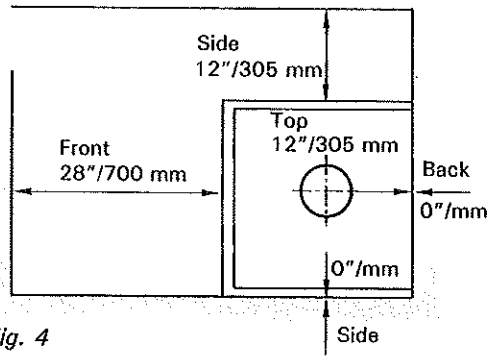


Fig. 4

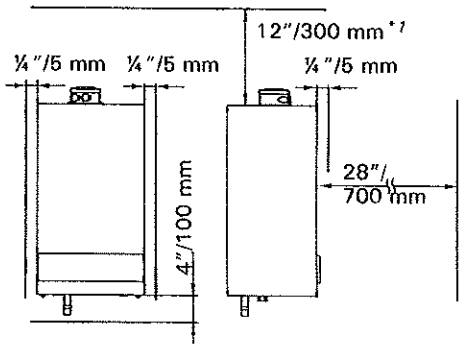


Fig. 5

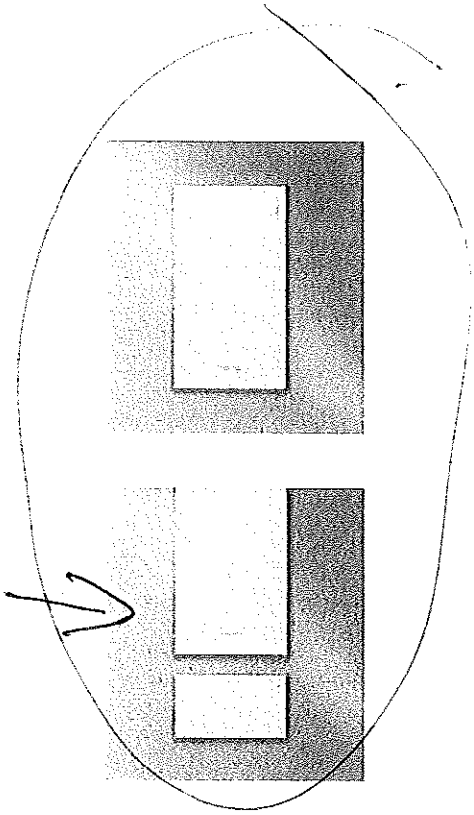
Minimum Clearances to Combustibles

Top	Front	Rear	Left	Right	Vent pipe *1
0	0 AL, CL	0	0	0	0

AL = Alcove
CL = Closet
**1 Refer to the Installation Instructions of the Vitodens Venting System for details.*

Note:
The Vitodens 100-W boiler has passed the zero inches vent clearance to combustibles testing requirements provided by the boiler Harmonized Standard ANSI Z21.13. CSA 4.9.2005 and therefore is listed for zero clearance to combustibles when vented with a single wall special venting system (AL-29-4C material) or UL/ULC-listed CPVC gas vent material. The zero inches vent clearance to combustibles for the Vitodens 100-W boiler supercedes the clearance to combustibles listing that appears on the special venting system label.

Technical Specifications



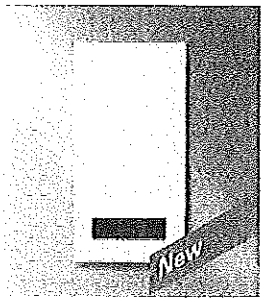
Vitodens 100 wall-mounted gas condensing boiler

Model	WB1B	26	35
Rated input	MBH	37 - 91	37 - 118
Altitude Levels	ft.	up to 10,000	up to 10,000
Dimensions Width x Height x Depth	in.	15.75 x 28.5 x 14.13	
Weight	lbs	78	78

Optional Combi*PLUS* Kit for on-demand DHW

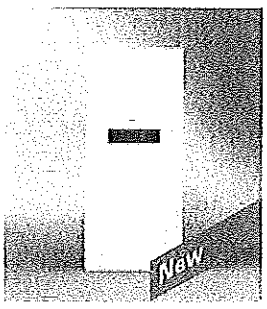
Connected to Model	WB1B	26	35
DHW Supply Temperature	°F / °C	140 / 60	140 / 60
Continuous Draw Rate	USG/h	156[1]	216[1]
Dimensions Width x Height x Depth	in.	17 x 8.7 x 9.8	
Weight	lbs	25	25
Min./Max. distance between boiler and Combi*PLUS*	in.	11.5 / 36	11.5 / 36

[1] At a 63 °F maximum temperature rise.



Vitodens 200 wall-mounted gas condensing boiler

Model	B2HA	19	28	35	45	60	80	100	112	150
Min. Input	MBH	12	19	19	60	60	104	104	113	113
Max. Input	MBH	67	100	125	160	212	285	352	399	530
Dimension										
Width	in.	17.75	17.75	17.75	19	19	19	19	23.63	23.63
Height	in.	41	41	41	40.63	40.63	43.5	43.5	44.5	44.5
Depth	in.	14	14	14	15	15	21	21	27.1	27.1
Weight	lbs	101	106	106	155	155	194	194	298	298



Vitodens 222-F gas condensing boiler and DHW heating system

Model	B2TA	19	35
Rated input	MBH	12 - 67	19 - 125
Max. Allowable Working Pressure	psig	45	45
Dimensions Width x Height x Depth	in.	23.5 x 65.5 x 23.5	
Weight	lbs	313	313
DHW Storage Tank			
Capacity	USG	26.5	26.5
Max. Allowable Working Pressure	psig	150	150
Continuous Draw Rate*	gpm	1.8	3.3
Max. Draw Rate* (over 10 min. period)	gal	44	60

* Based on a temperature rise of 70 °F (50 °F to 120 °F).

Side Wall Vent Termination - Stainless Steel, CPVC or PP(s)

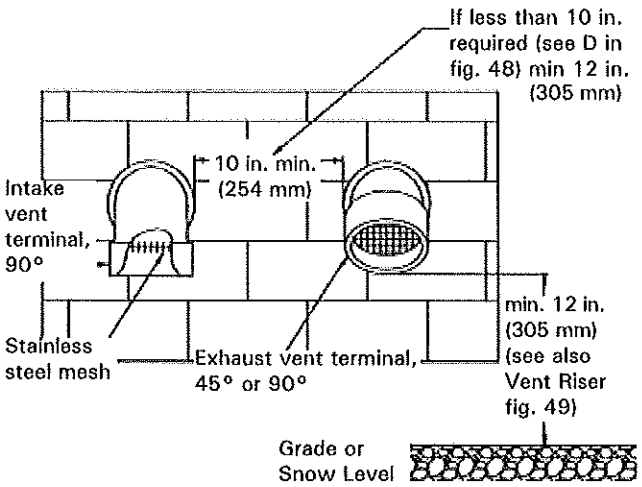


Fig. 47 Side wall vent termination (front view)

IMPORTANT

The exhaust vent/air intake system must terminate so that proper clearances are maintained as cited in local codes or the latest edition of the "Natural Gas and Propane Installation Code" CAN/CSA-B149.1 (Canada), or the "National Fuel Gas Code" ANSI Z223.1 (NFPA 54) (U.S.A.). See page 20.

⚠ WARNING

Vent termination must be at least 12 in. (300 mm) above the anticipated snow level (consult your local building authorities or local weather office). Locate vent termination in such a way that it cannot be blocked by snow.

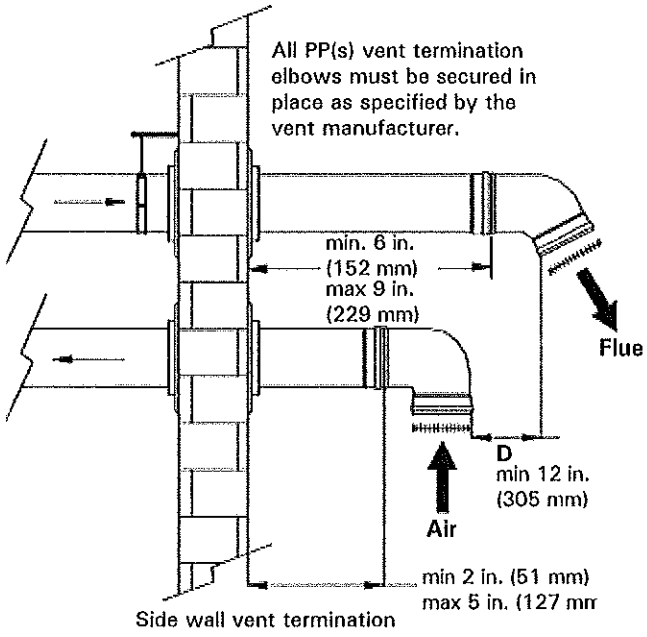


Fig. 48 Side wall vent termination (side view)

IMPORTANT

For PP(s) systems, all exhaust vent and air intake piping and elbows exposed outside, must be UV resistant polypropylene (supplied by the vent manufacturer).

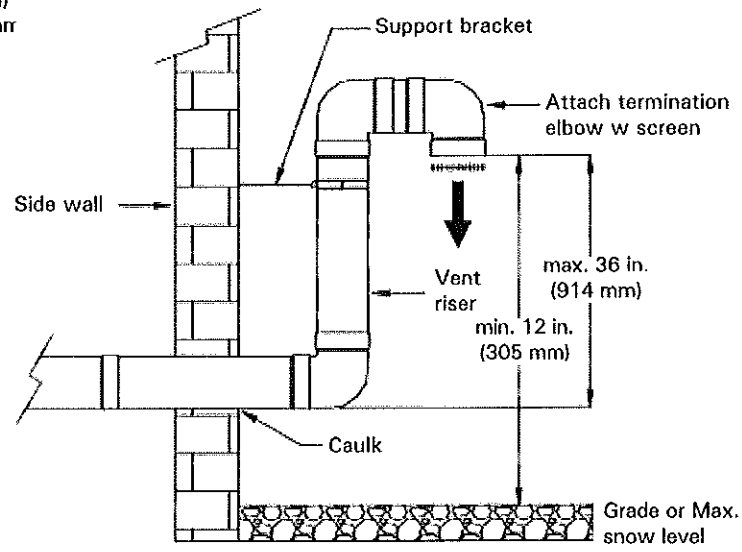


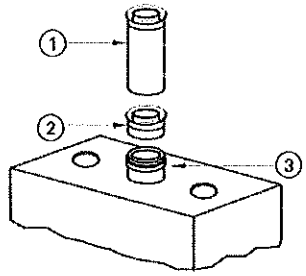
Fig. 49 Installation of field fabricated vent riser

Coaxial Vent System Options (Direct Vent)

IMPORTANT

For PP(s) systems, all exhaust vent and air intake piping and elbows exposed outside, must be UV resistant polypropylene (supplied by the vent manufacturer).

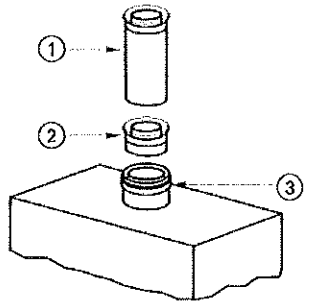
WB1B 26/35, B2TA 19/35 WB2B 19/26/35, B2HA 19/28/35



WB1B 26/35, B2TA 19/35 WB2B 19/26/35, B2HA 19/28/35

#	Component	Supplied
1	Vent Component	*Field*
2	Vent increaser (if required), (60 mm/100 mm to 80 mm/125 mm) (60 mm/100 mm to 100 mm/150 mm)	*Field*
3	Boiler coaxial adaptor (60 mm / 100 mm)	*C/W Boiler*

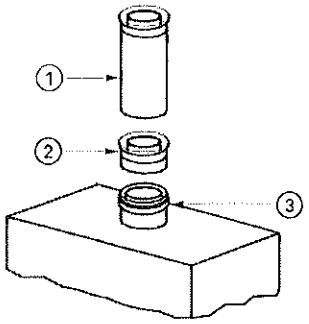
WB2B 45/60, B2HA 45/60



WB2B 45/60, B2HA 45/60

#	Component	Supplied
1	Vent Component	*Field*
2	Vent increaser (if required), (80 mm/125 mm to 100 mm/150 mm)	*Field*
3	Boiler coaxial adaptor (80 mm / 125 mm)	*C/W Boiler*

WB2B 80/105, B2HA 80/100/112/150



WB2B 80/105, B2HA 80/100/112/150

#	Component	Supplied
1	Vent Component	*Field*
2	Vent starter adaptor, (required), (150 mm/110 mm to 150 mm/100 mm) (150 mm/110 mm to 160 mm/110 mm)	*M&G / Duravent* *Centrotherm*
3	Boiler coaxial adaptor (110 mm / 150 mm)	*C/W Boiler*

5774 552 v1.1

Component Installation Guide *(continued)*

Multiple boiler installations (vertical termination with multiple boilers)

When terminating the vertical vent pipes of multiple Vitodens boilers, a minimum clearance of 4 inches (100 mm) is required between the outside edges of each vent pipe.

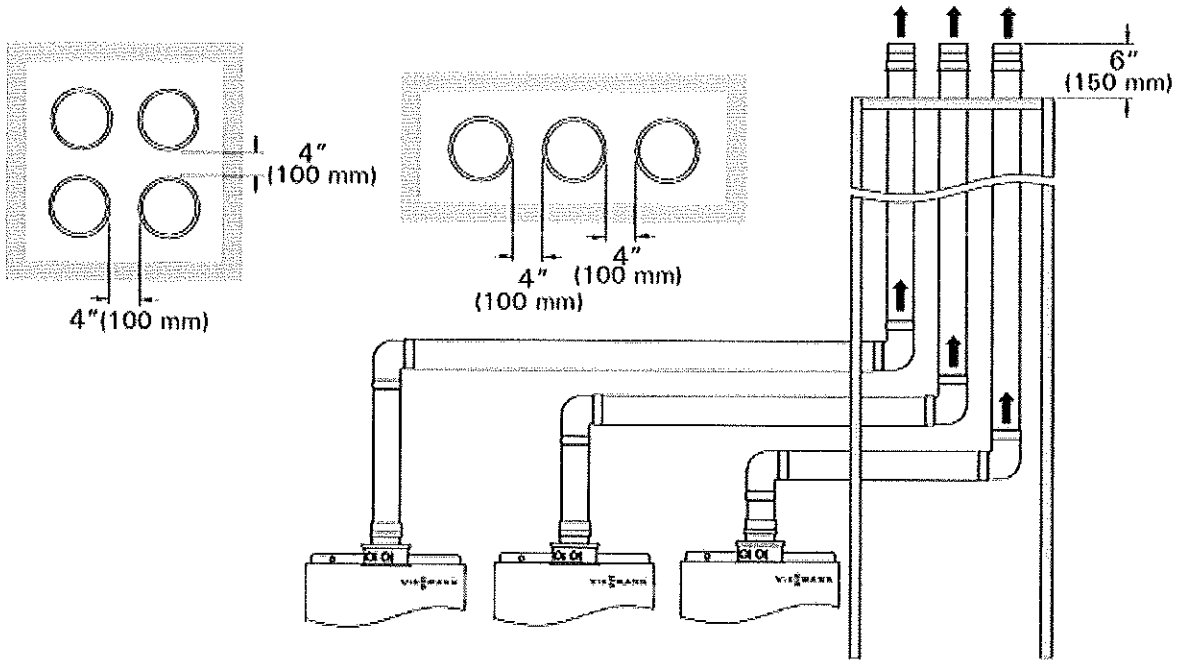


Fig. 89

Multiple boiler installations (horizontal termination with multiple boilers)

When terminating the horizontal vent pipes of multiple Vitodens boilers, a minimum clearance of 12 inches 305 mm) is required between the outside edges of each vent pipe.

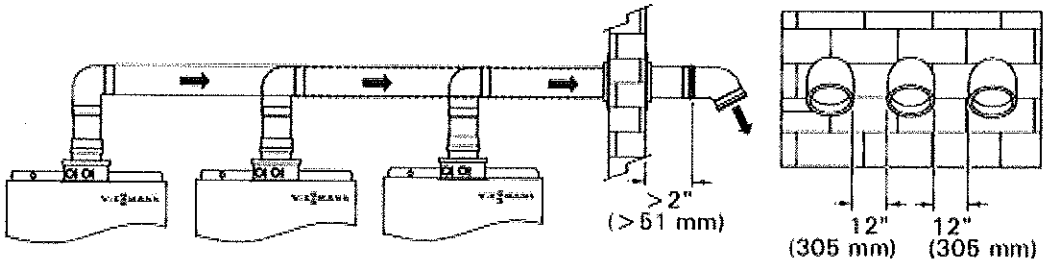
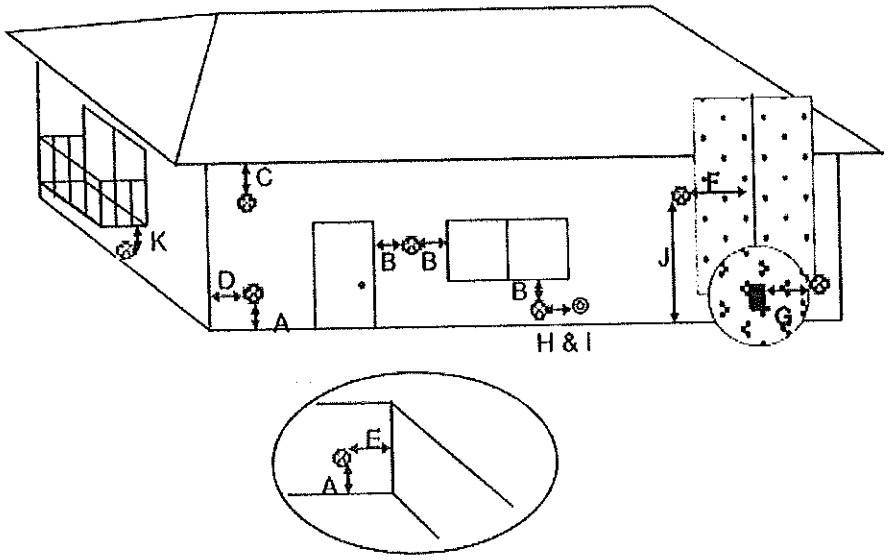


Fig. 90

Note: termination elbows can be 45° or 90°.

5774 552 v1.1



Direct Vent Termination Minimum Clearances	
A = 12"	Clearance above grade, snowline, deck, porch or balcony
B = 12"	Clearance to window or door that may be opened
C = 24"	Vertical clearance to ventilated and unventilated soffit within a 2' distance horizontally from center line of DV termination
D = 12"	Minimum distance to outside corner
E = 18"	Minimum distance to inside corner, included walls and fences.
F = 48"	Not to be installed above a gas meter/regulator within F from the center line of the meter/regulator
G = 48"	Minimum clearance to service regulator vent outlet, gas meter or electrical meter
H = 12"	Clearance to non-mechanical inlet air opening into the building
I = 36"	Clearance to a mechanical air inlet into the building
J = 84"	Minimum distance above a paved sidewalk or driveway located on public property. If terminal is located between two single family residences with a sidewalk or driveway between; the same 84" clearance applies.
K = 24"	Minimum clearance beneath porch, deck, veranda or balcony, only if the area below is completely open on at least two sides.

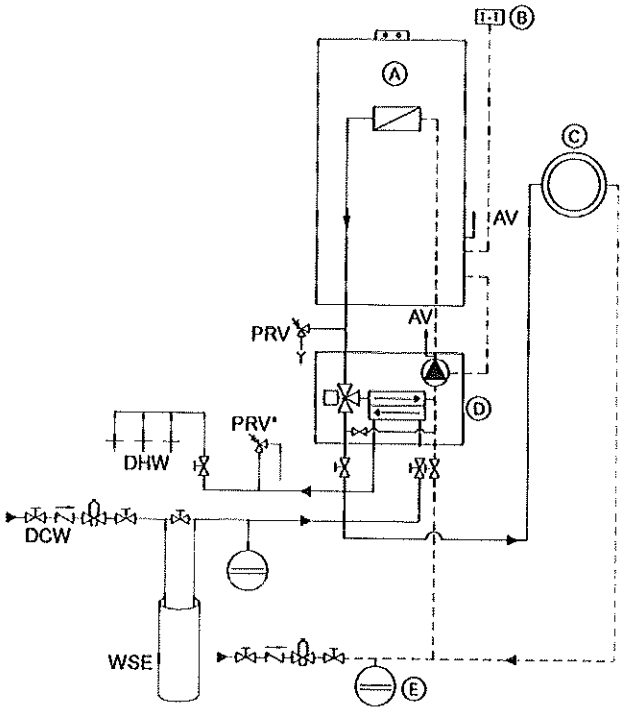
State and local codes may require different clearances, consult the local authority having jurisdiction in each area for details.

The vent hood must be installed on the leeward side of the structure. Avoid installing the vent hood on the side of the structure receiving normal prevailing winds.

The termination shall be located so that flue gasses, or condensate from the flues gasses, are not directed as to jeopardize people, building materials, building construction, siding or soffits. Flue gasses from the termination shall not be allowed to enter any type of structure.

System Layout 4

Vitodens 100-W, WB1B 26, 35 with one heating circuit and the CombiPLUS



Maximum Flow Rates

Model WB1B	26	35
Δ t		
Output Btu/h	83,000	108,000
30° F rise (GPM)	5.5	---
35° F rise (GPM)	4.7	6.2
40° F rise (GPM)	4.2	5.4

Note: The use of a low-loss header is recommended if the water flow rate is less than 1.7 GPM (400 L/h) or more than 6.2 GPM (1400 L/h).
The low-loss header is available as accessory part.

Built-in pump residual head for the heating system side is 7.5 ft. of water column at the boiler maximum flow rate of 6.2 GPM.

Note: Heating circuit C in the examples should be designed to 30° F to 40° F (16.7° C to 22.2° C). For lesser delta T design, system layout designer must use one of the examples (5 or 6) on the following pages.

Legend

AV Air vent
PRV Pressure relief valve (boiler)
PRV* Pressure relief valve (DHW 150 psi)
WSE Water softner equipment
Ⓐ Vitodens 100-W
Ⓑ Room thermostat
Ⓒ Heating circuit
Ⓓ CombiPLUS
Ⓔ Expansion tank