

OneVent Installation Instructions

WARNING

Asphyxiation Hazard. Fire Hazard. Explosion Hazard.

This boiler must be installed, serviced or repaired by a skilled and experienced service technician. Improper installation, adjustment, alteration, service or maintenance can cause severe personal injury, death, or substantial property damage. Read and understand these instructions and entire boiler manual before attempting to install boilers. Up to date boiler manual is posted on manufacturer's website.

Instructions apply to the following accessories:

Accessory Part	Description
112851-01	4 in. (100 mm) OneVent Starter Kit
112849-01	6 in. (150 mm) OneVent Starter Kit
112850-01	4 in. (100 mm) OneVent Extension Kit
112852-01	6 in. (150 mm) OneVent Extension Kit

Common Venting is only usable with these models:

Size (MBH)	Models
120	ALTA-120B, PHTM2120HB, GHE2-120B
150	ALTA-150, PHTM2150H, GHE2-150
180	ALTA-180, PHTM2180H, GHE2-180

WARNING

The following must be followed or boilers will not operate as intended and could result in personal injury, death or substantial property damage:

- Up to 4 boilers can be in one common vent.
- Only 120 MBH, 150 MBH, and 180 MBH Heat Only boilers can be common vented.
- Cannot common vent 80 MBH Heat Only, 136 MBH and 200 MBH Combi boilers.
- Only models of the same size can be common vented together.
- Do not use room air for air intake.
- Common vent only at altitudes of Sea level up to 10,100 ft. (3,079 m)
- Boilers must be piped in same heating system distribution loop. No individual water piping system per boiler.
- Indirect water heater must be primary piped and cannot be boiler piped.
- Only Centrotherm InnoFlue venting may be used.

WARNING

Asphyxiation Hazard.

- Failure to vent this boiler in accordance with these instructions could cause products of combustion and/or carbon monoxide to enter living space, resulting in severe personal injury, death or substantial property damage.
- Vent installations shall be in accordance with provisions of the *National Fuel Gas Code, ANSI Z223.1/NFPA 54*, or *Natural Gas and Propane Installation Code, CAN/CSA B149.1*, or applicable requirements of the local building codes.
- Thoroughly inspect finished vent and air piping to ensure air-tightness and compliance with provided instructions and code requirements.
- Do not mix components from different venting systems.
- Covering non-metallic vent pipe and fittings with thermal insulation is prohibited.
- Follow all local codes for isolation of vent pipe when passing through floors or walls.
- Follow instructions in Section 5, Locating Boiler, in boiler manual when removing a boiler from an existing vent system.
- Failure to comply with any of the above requirements could result in severe personal injury, death or substantial property damage.

WARNING

Asphyxiation Hazard.

Adequate combustion and ventilation air must be provided to assure proper combustion and to prevent damage to boiler components. Provide ventilation openings into boiler room as described in "Air for Ventilation" in boiler manual. Combustion air must be brought to boiler from outdoors using an intake piping system meeting requirements in Section 7 of boiler manual.

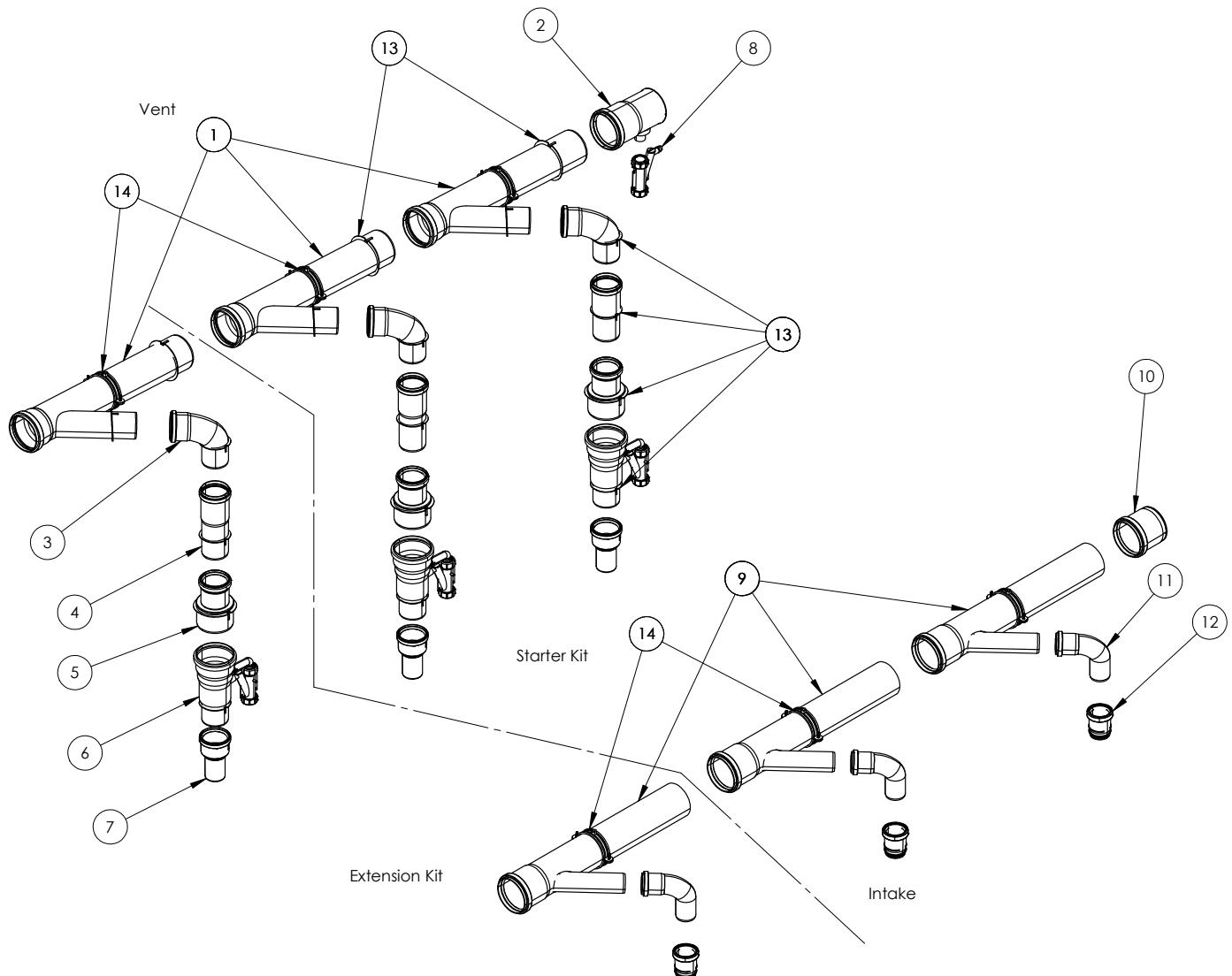


Figure 1 : Common Vent Kit Components

Table 1: Included with these accessories:

Item Number	Description	Centrotherm Part Numbers	Quantity Per Starter Kit	Quantity Per Extension Kit
1	4 in. Branch Tee w/ 3 in. Feeder	ISBT040336	2	1
	6 in. Branch Tee w/ 4 in. Feeder	ISBT060436	2	1
2	4 in. End Cap w/ Drain	ISHDF04	1	0
	6 in. End Cap w/ Drain	ISHDF06		
3	3 in. Elbow	ISELL0387	2	1
	4 in. Elbow	ISELL0487		
4	3 in. x 12 in. Vent Length	ISVL031*	2	1
	4 in. x 12 in Vent Length	ISVL041*		
5	4 in. to 3 in. Reducer	ISRD0403	2 (only in 4 in. kit)	1 (only in 4 in. kit)
6	Non-Return Valve w/ Siphon	ISNRVBVS0304	2	1
7	2 in. to 3 in. Increaser	ISIA0203	2	1
8	Condensate Trap	IASJBVS	1	0
9	4 in. Branch Tee w/ 2 in. Feeder	ISBT040236	2	1
	6 in. Branch Tee w/ 2 in. Feeder	ISBT060236		
10	4 in. End Cap	ISTC04	1	0
	6 in. End Cap	ISTC06		
11	2 in. Elbow	ISELL0287	2	1
12	2 in. Appliance Adapter PVC to PP w/ Gasket	ISAGL0202	2	1
13	3 in. Connector Ring	IANS03	8 (2 for 6 in. kit)	4 (1 for 6 in. kit)
	4 in. Connector Ring	IANS04	4 (6 for 6 in. kit)	2 (3 for 6 in. kit)
	6 in. Connector Ring	IANS06	2 (only in 6 in. kit)	1 (only in 6 in. kit)
14	4 in. Support Clamp w/ 3/8 in. Nut	IASCM04	2	2
	6 in. Support Clamp w/ 3/8 in. Nut	IASCM06		
15	Centrocerin Lubricant	IACE50	1	1

Installation Instructions:

1. To common vent boilers, installers must use manufacturer listed vent kits 112851-01 for 4 in. (102 mm) or 112849-01 for 6 in. (152 mm) vents. If venting more than 2 boilers, each additional boiler requires one extension kit 112850-01 for 4 in. (102 mm) or 112852-01 for 6 in. (152 mm) vents.
2. **NOTICE:** Up to 4 boilers can be in one common vent.
3. Recommended spacing between boilers is 6 in. (152 mm). Branch tees (items 1 and 5) should be cut to 26 3/8 in. (0.67 m) as shown in Figure 2. when using recommended spacing.
4. Risers installed in the outlet of the non-return valves should be cut 1 in. (25 mm) taller then the adjacent boiler to ensure slope and minimizing vertical height.
5. Assemble venting manifold as shown in Figures 1 and 2. When using a 6 in. (152 mm) manifold, 4 in. to 3 in. reducer (item 5) is not used.
6. In addition to instructions outlined in boiler manual, consider the following guidelines when installing termination.
 - a. For sidewall venting, terminate vent pipe using tee.
 - b. Terminate air pipe using 90 degree elbow pointed downward.
 - c. When venting more than 4 boilers, multiple common vent systems can be used. Follow multiple individual boiler venting instructions in section 3 of Extended Features Instructions for spacing between terminations.

⚠ WARNING**Asphyxiation Hazard.**

Concentric and Low-profile vent terminations cannot be used with common venting. Improper terminations could cause products of combustion and/or carbon monoxide to enter the building, resulting in severe personal injury, death or substantial property damage.

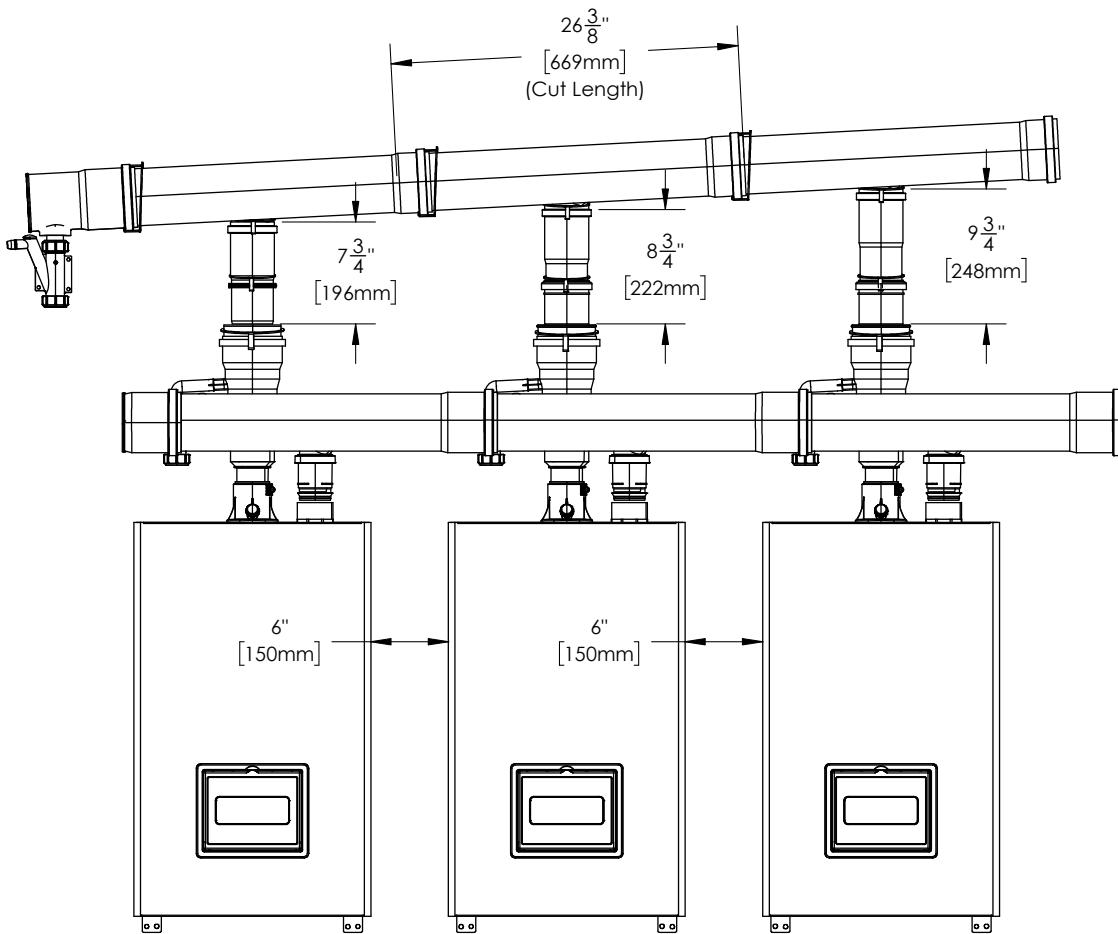


Figure 2 : Assembled Common Venting with Recommended Minimum Spacing Between Boilers

⚠️ WARNING

Asphyxiation Hazard.

All polypropylene vent systems rely on gaskets for sealing. Ensure gaskets are installed in each female end of vent pipe or fitting. Failure to make proper joint connections could cause products of combustion and/or carbon monoxide to enter the building, resulting in severe personal injury, death or substantial property damage.

- Polypropylene vent connections must be secured by vent manufacturer's joint connector.
- Support polypropylene venting per vent manufacturer's instructions.
- Non-Return Valve must be installed to prevent the back flow of flue gases.
- Follow vent manufacturer's instructions supplied with vent system.
- Do not mix vent systems of different types or manufacturers.
- Failure to comply with venting instructions could cause products of combustion and/or carbon monoxide to enter the building, resulting in severe personal injury, death or substantial property damage.

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Ensure boiler front doors are installed during boiler operation. Failure to seal the boiler jacket could cause products of combustion and/or carbon monoxide to enter the building, resulting in severe personal injury, death or substantial property damage.

Vent Lengths:

1. Min and max lengths are calculated separately for air intake and vent. For example, max length 150 ft. (45.7 m) means up to 150 ft. (45.7 m) air intake piping and up to 150 ft. (45.7 m) vent piping.
2. Vent length is calculated from the open female end of vent manifold and does not include branch tees.
3. All 90 degree elbows are an equivalent length of 8 ft. (2.4 m).

Table 2: 120 MBH Boilers Max Equivalent Vent Length

Total System Input BTU/H	Number of Boilers	4 in. (100 mm) Vent Diameter		6 in. (150 mm) Vent Diameter	
		Max Equivalent Vent Length ft. (m)	Approx. Derate at Max. Length (%)	Max Equivalent Vent Length ft. (m)	Approx. Derate at Max. Length (%)
240,000	2	150 (45.7)	5	150 (45.7)	4
360,000	3	150 (45.7)	7	150 (45.7)	4
480,000	4	125 (38.1)	9	150 (45.7)	5

Table 3: 150 MBH Boilers Max Equivalent Vent Length

Total System Input BTU/H	Number of Boilers	4 in. (100 mm) Vent Diameter		6 in. (150 mm) Vent Diameter	
		Max Equivalent Vent Length ft. (m)	Approx. Derate at Max. Length (%)	Max Equivalent Vent Length ft. (m)	Approx. Derate at Max. Length (%)
300,000	2	125 (38.1)	6	150 (45.7)	4
450,000	3	80 (24.4)	12	150 (45.7)	4
600,000	4	50 (15.2)	12	150 (45.7)	5

Table 4: 180 MBH Boilers Max Equivalent Vent Length

Total System Input BTU/H	Number of Boilers	4 in. (100 mm) Vent Diameter		6 in. (150 mm) Vent Diameter	
		Max Equivalent Vent Length ft. (m)	Approx. Derate at Max. Length (%)	Max Equivalent Vent Length ft. (m)	Approx. Derate at Max. Length (%)
360,000	2	125 (38.1)	6	150 (45.7)	4
540,000	3	80 (24.4)	12	150 (45.7)	4
720,000	4	50 (15.2)	12	150 (45.7)	5

Control Setup:

This section covers control features not available via local display. These control features are available via our mobile app, see Extended Features Instructions available on our website or in our App.

1. Set Common Vent Enable Parameter to “Enable” on all boilers. Common Vent Enable must be set with app connected directly to boiler.
2. Set boiler Minimum Modulation based on boiler size and fuel based on Table 5. Minimum Modulation must be set at each boiler’s local display or with app connected directly to boiler.

NOTICE: Common Vent Enable and Minimum Modulation must be set on every networked boiler.

Table 5: Minimum Modulation Adjustments

Boiler Size	NG	LP
120 MBH	6*	8
150 MBH	6	8
180 MBH	6	8

* When venting four 120 MBH in a 4 in. common vent set to 9.

NOTICE: If minimum Modulation is not set correctly boilers may have excessive nuisance shutdowns and cycle excessively. This could lead to premature failure of boiler and its components.