

COMMON VENT SYSTEM (CVENT) SUBMITTAL SHEET



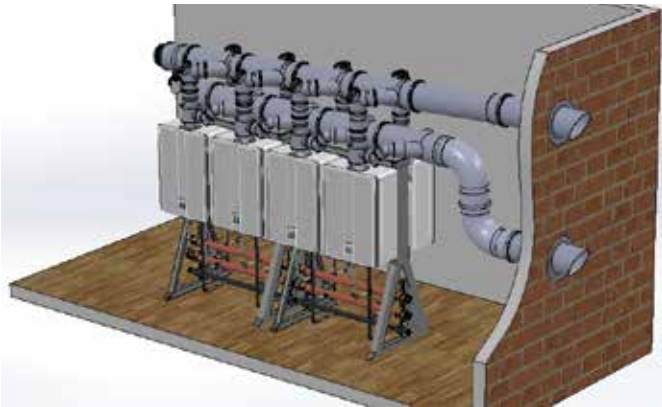
Job Name:		
Location:		
Architect/Engineer:		
Wholesaler:		
Model No.:	Vent Length:	BTU/Hr Input:
Notes:		

FEATURES AND BENEFITS

- The Common Venting System provides for longer vent lengths and fewer wall or roof penetrations than conventional single-unit venting. CVent is the exhaust portion and is made by Ubbink, the same supplier for Rinnai's innovative line of concentric venting. CVent utilizes a CSA-certified and tested polypropylene venting material. The various sections are self locking and sealing and can be pushed together without use of cement or glue. CVent can only be used with Rinnai's RU98 condensing water heaters.
- For intake venting, Rinnai's Common Venting System has been certified to use schedule 40 PVC.
- It can be used with up to 8 water heaters with a 41 foot equivalent vent length, but if used with 7 or fewer units, the maximum equivalent vent length extends to 100 feet.
- Advanced features include a precision-made check valve to prevent exhaust gases from penetrating non-operating water heaters, avoiding negative impacts on combustion and reliability, as well as joint sockets designed to prevent condensate from gathering in gaps and degrading gaskets.
- The current version of CVent is made of polypropylene (PPTI) and is only for U.S. installations.
- Installation is certified only for sea level (0 - 2,000 ft)

OPTIONS

	Horizontal Vent Termination
	Vertical Vent Termination
	In-Line Venting Configuration
	Back-to-Back Venting Configuration



When ordering the CVent exhaust components and the Tankless Rack System (TRS) together, please use the following table and part numbers.

CVent Exhaust headers for the TRS							
Part No.	Configuration	For No. of Water Heaters	In Line Starter Kit 790005	Back to back Starter Kit 790006	In Line Add-on Kit 790007	Back to back Add-on Kit 790008	18" Extension 790020
CV8IL4	in-line	4	1		3		
CV8IL5	in-line	5	1		4		1
CV8IL6	in-line	6	1		5		1
CV8IL7	in-line	7	1		6		1
CV8IL8	in-line	8	1		7		1
CV8BB4	back-to-back	4		1		1	1
CV8BB5	back-to-back	5		1	1	1	
CV8BB6	back-to-back	6		1		2	
CV8BB7	back-to-back	7		1	1	2	1
CV8BB8	back-to-back	8		1		3	1

Key: CV = common vent; 8 = 8 inch diameter; IL/BB= stand alone/back-to-back; 4/5/6/7/8 = no. of water heaters

When ordering the CVent exhaust components on their own, please use the following table and part nos.

Rinnai PN	Description	Ø Diameter	Length/ Other	Qty.
790005	CVent 8-inch STARTER KIT in-line 1 unit			
	KIT COMPONENTS:			
	CVent Collector, 1 connection, D8 x L20	8"	20"	1
	CVent Endpiece + condensate trap + hose + 2 clamps			1
	CVent Extension, D4 x L10	4"	10"	1
	CVent Elbow D4 x 87 degree with cleanout	4"	87°	1
	CVent Elbow D3 x 45 degree for air intake connection	3"	45°	1
	CVent Appliance Adapter and Check Valve	3"-5"/4"+3"		1
	Condensate Tubing Kit			1
	Condensate drain tube, L48		48"	
	2 clamps			
	Centrocerin lubricant			1
790006	CVent 8-in STARTER KIT back2back 2 units			
	KIT COMPONENTS:			
	CVent Collector, 2 connections, D8 x L20	8"	20"	1
	CVent Endpiece + condensate trap + hose + 2 clamps			1
	CVent Extension, D4 x L10 (2 pcs.)	4"	10"	2
	CVent Elbow D4 x 87 degree with cleanout (2 pcs.)	4"	87°	2
	CVent Elbow D3 x 87 degree (4 pcs.) (for intake connections)	3"	87°	4
	CVent Appliance Adapter and Check Valve (2 pcs.)	3"-5"/4"+3"		2
	Condensate Tubing Kit			2
	Condensate drain tube, L48		48"	
	2 clamps			
	Centrocerin lubricant			1

Parts / Kits

Rinnai PN	Description	Ø Diameter	Length/ Other	Qty.
790007	CVent 8-in ADD-ON KIT 1 unit			
	KIT COMPONENTS:			
	CVent Collector, 1 connection, D8 x L20	8"	20"	1
	CVent Elbow D4 x 87 degree with cleanout	4"	45°	1
	CVent Extension, D4 x L18	4"	18"	1
	CVent Elbow D3 x 87 degree (4 pcs.) (for intake connections)	3"	45°	1
	CVent Appliance Adapter and Check Valve (2 pcs.)	3"-5"/4"+3"		1
	Condensate Tubing Kit			1
	Condensate drain tube, L48		48"	
	2 clamps			
	Centrocerin lubricant			1
790008	CVent 8-in ADD ON KIT back2back 2 units			
	KIT COMPONENTS:			
	CVent Collector, 2 connections, D8 x L20	8"	20"	1
	CVent Elbow D4 x 87 degree with cleanout (2 pcs.)	4"		2
	CVent Elbow D3 x 87 degree (4 pcs.) (for intake connections)	3"		4
	CVent Extension, D4 x L18 (2 pcs.)	4"	10"	2
	CVent Appliance Adapter and Check Valve (2 pcs.)	3"-5"/4"+3"		2
	Condensate Tubing Kit			2
	Condensate drain tube, 4'		48"	
	2 clamps			
	Centrocerin lubricant			1
790036	CVent Elbow D3 x 90, short radius, long radius for odd-numbered back-to-back headers	3"	87°	2
790001	CVent 8-in Roof Termination Kit			
	CVent 8-in Roof Termination, basic part	8"		1
	CVent 8-in Roof Termination, top-section including clamp	8"		1
	Centrocerin lubricant			1
790002	CVent 8-in Flat Roof Flashing			
	CVent Flat Roof Flashing	8"		1
790003	CVent 8-in Pitched Roof Flashing			
	CVent Pitched Roof Flashing including storm collar	8"		1
790004	CVent 8-in Wall Termination Kit			
	Wall termination + stainless steel grate + wall plate (2pc)	8"	3'	1
	Centrocerin lubricant			1

Parts / Kits

Rinnai PN	Description	Ø Diameter	Length/Other
790020	CVent Extension, D8 x L18	8"	18"
790021	CVent Extension, D8 x L39	8"	39"
790022	CVent Elbow D8 x 45degree (2 in a box)	8"	45°
790023	CVent Elbow D8 x 90degree	8"	87°
790024	CVent 8-in Brackets	8"	
790025	Centrocerin lubricant		
790026	CVent Elbow D4 x 45degree (2 in a box)	4"	45°
790027	CVent Elbow D4 x 90degree	4"	87°
790035	CVent Extension, D4 x L18	4"	18"
790028	CVent Extension, D4 x L39	4"	39"
790029	CVent Elbow D8 x 90degree Vertical Support	8"	
790030	CVent 8-in Chase Cover	8"	
790031	CVent 8-in Vent Distancer, stainless steel	8"	
790034	CVent 8-in Vent Rain Cap	8"	
790032	Inverter Coupling Kit with condensate trap	8"	

Maximum Equivalent Vent Length

When determining equivalent exhaust and intake vent lengths add:

- 6 feet for each 90° elbow
- 3 feet for each 45° elbow
- 3 feet for the termination

- Add any vent extension lengths which are added within the header due to increased spacing of the water heaters
- Header kits have already been counted and do not need to be added.

Number of water heaters	Minimum Equivalent Vent Length		Maximum Equivalent Vent Length	
	Exhaust*	Intake*	Exhaust*	Intake*
1 to 7	5 ft	15 ft	100 ft	100 ft
8	5 ft	15 ft	41 ft	41 ft

*Approved exhaust and intake diameter is 8 inches.

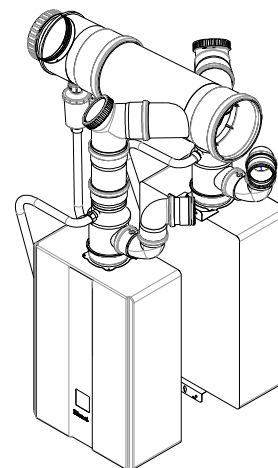
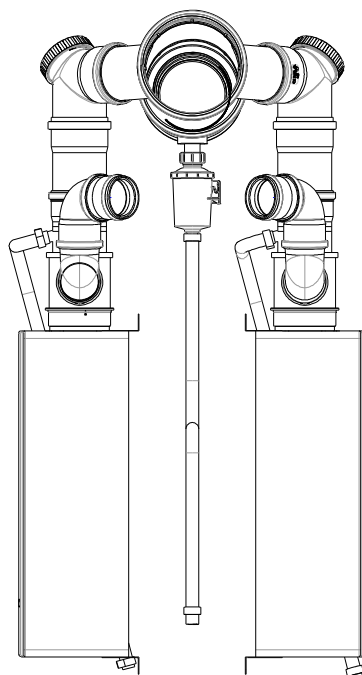
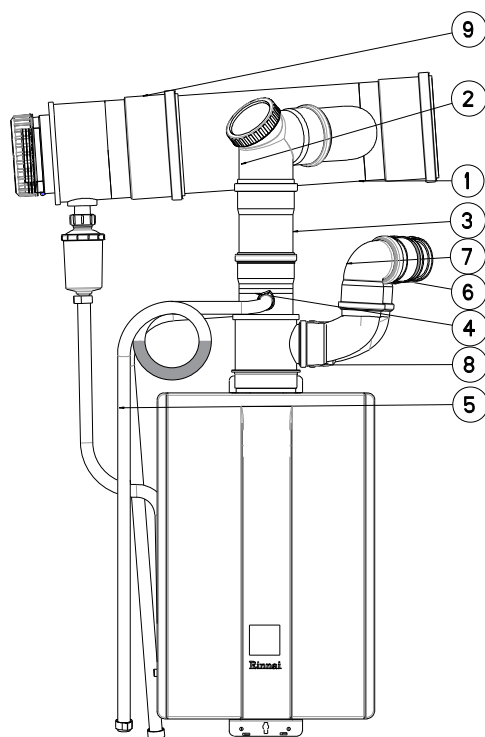
De-Rate

Water heaters using CVent will automatically de-rate according to the table below.

Number of water heaters	Percent De-rated	Total BTU Rate	Manifold Pressure		Btu's at Minimum Rate (without MSB)	Btu's at Minimum Rate (with MSB)
			Maximum Rate "W.C.	Minimum Rate "W.C.		
1	0%	199,000	3.0	0.42	15,200	15,200
2	1%	394,000	3.1	0.42	30,400	
3	1.5%	588,000	3.1	0.42	45,600	
4	2%	780,000	3.1	0.42	60,800	
5	2.5%	970,000	3.2	0.45	76,000	
6	3%	1,158,000	3.2	0.45	91,200	
7	3.5%	1,344,000	3.2	0.45	106,400	
8	4%	1,528,000	3.2	0.45	121,600	

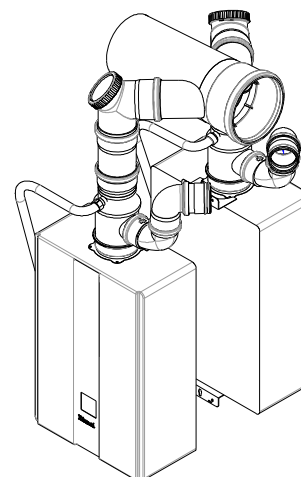
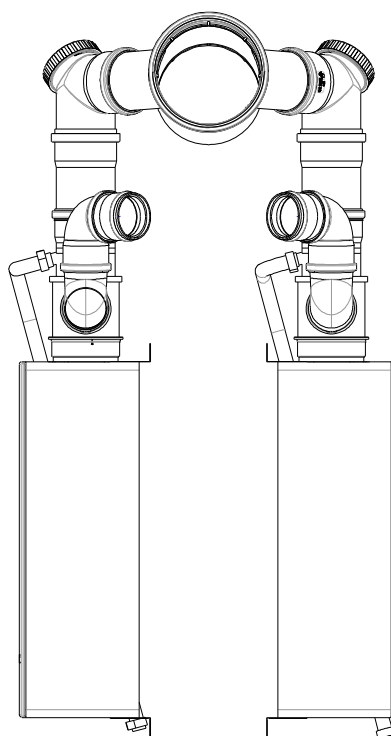
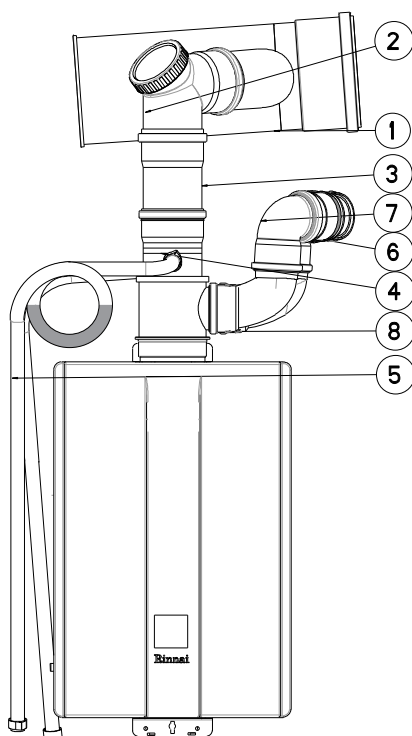
Header, Back to Back Configuration

790006 BACK TO BACK - STARTER KIT



NO	QTY	DESCRIPTION
1	1	CVent Collector, 2 connections, D8 x L20
2	2	CVent Elbow D4 x 87° with cleanout
3	2	CVent Extension, D4 x L10
4	2	CVent Appliance Adapter with Check Valve
5	2	Condensate Tubing Kit 48", 2 clamps
6	2	Adapter D3 x PVC 3 inch
7	2	Elbow D3 x 90° white short curved
8	2	Elbow D3 x 90° PPTl long curved
9	1	CVent Endpiece, condensate trap, hose, 2 clamps
	1	Centrocerin lubricant

790008 BACK TO BACK - ADD ON KIT



NO	QTY	DESCRIPTION
1	1	CVent Collector, 2 connections, D8 x L20
2	2	CVent Elbow D4 x 87° with cleanout
3	2	CVent Extension, D4 x L10
4	2	CVent Appliance Adapter with Check Valve
5	2	Condensate Tubing Kit 48", 2 clamps
6	2	Adapter D3 x PVC 3 inch
7	2	Elbow D3 x 90° white short curved
8	2	Elbow D3 x 90° PPTl long curved
	1	Centrocerin lubricant

Header, In Line Configuration

790005 IN LINE - STARTER KIT

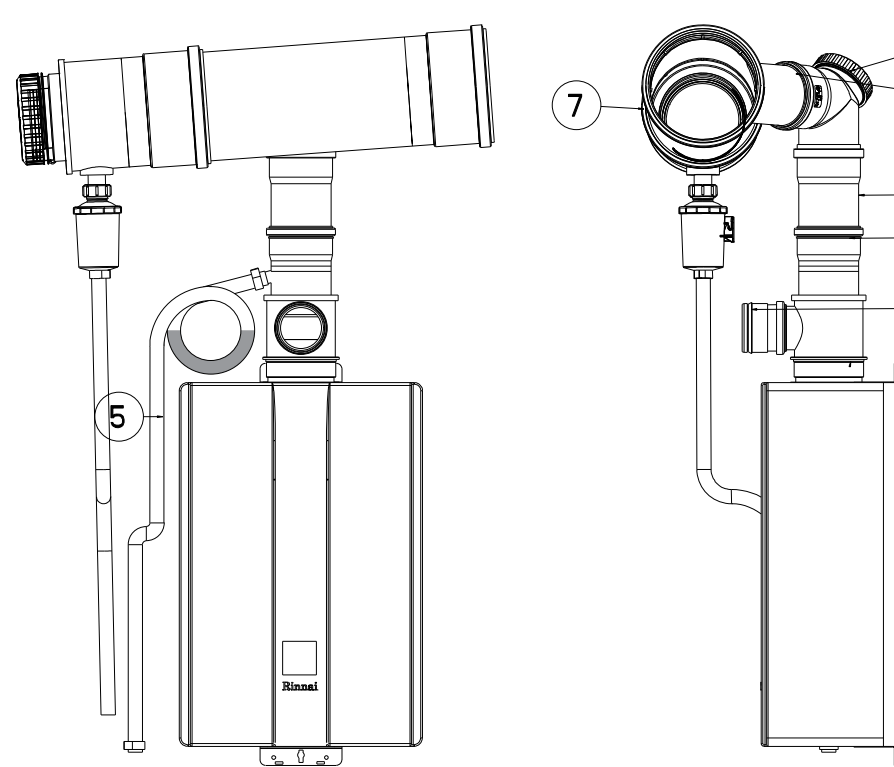


Diagram illustrating the Header, In Line Configuration for the 790005 IN LINE - STARTER KIT. The diagram shows the Rinnai water heater unit with the common vent system components installed. Callouts 1 through 7 identify the parts: 1. CVent Collector, 1 connection, D8 x L20; 2. CVent Elbow D4 x 87° with cleanout; 3. CVent Extension, D4 x L10; 4. CVent Appliance Adapter with Check Valve; 5. Condensate Tubing Kit 48", 2 clamps; 6. Adapter D2 x PVC 3 inch; 7. CVent Endpiece condensate trap, hose, 2 clamps.

NO	QTY	DESCRIPTION
1	1	CVent Collector, 1 connection, D8 x L20
2	1	CVent Elbow D4 x 87° with cleanout
3	1	CVent Extension, D4 x L10
4	1	CVent Appliance Adapter with Check Valve
5	1	Condensate Tubing Kit 48", 2 clamps
6	1	Adapter D2 x PVC 3 inch
7	1	CVent Endpiece condensate trap, hose, 2 clamps
	1	Elbow 3" x 45°
	1	Centrocerin lubricant

790007 ONE UNIT - ADD ON KIT

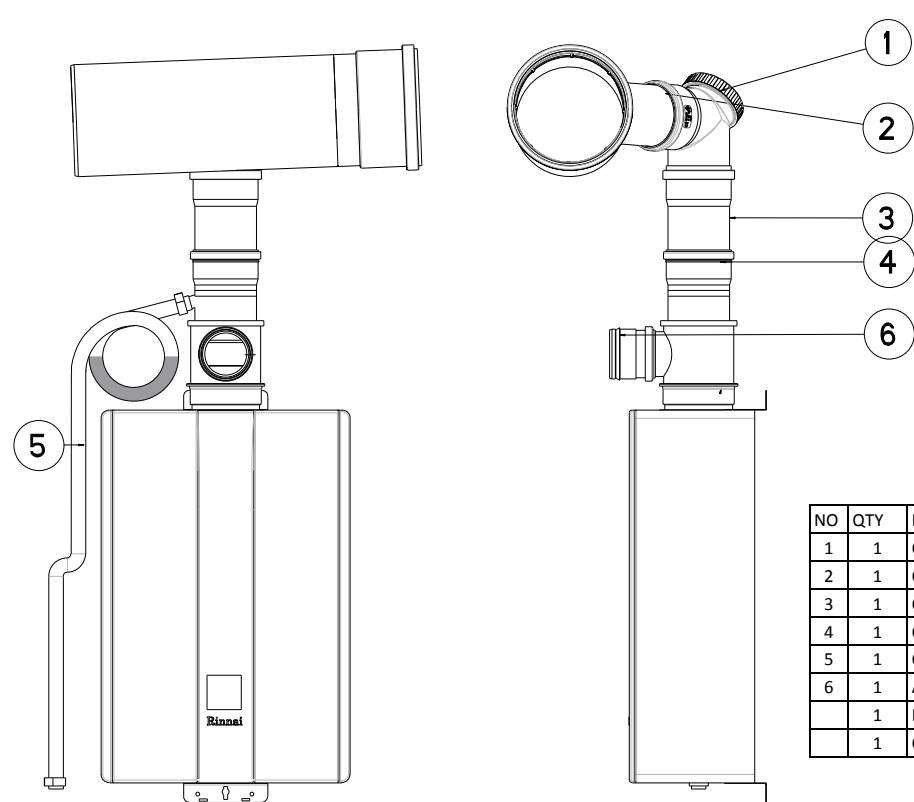


Diagram illustrating the Header, In Line Configuration for the 790007 ONE UNIT - ADD ON KIT. The diagram shows the Rinnai water heater unit with the common vent system components installed. Callouts 1 through 6 identify the parts: 1. CVent Collector, 1 connection, D8 x L20; 2. CVent Elbow D4 x 87° with cleanout; 3. CVent Extension, D4 x L10; 4. CVent Appliance Adapter with Check Valve; 5. Condensate Tubing Kit 48", 2 clamps; 6. Adapter D3 x PVC 3 inch.

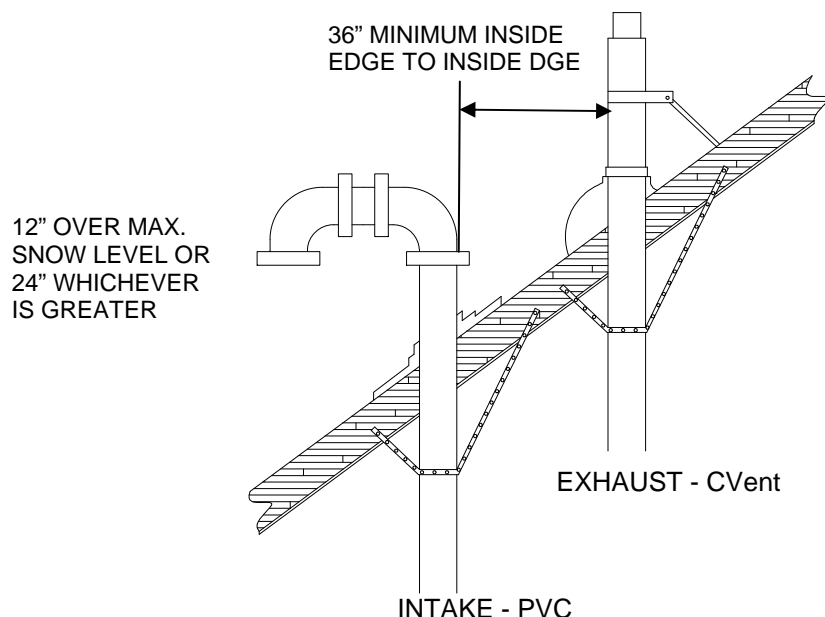
NO	QTY	DESCRIPTION
1	1	CVent Collector, 1 connection, D8 x L20
2	1	CVent Elbow D4 x 87° with cleanout
3	1	CVent Extension, D4 x L10
4	1	CVent Appliance Adapter with Check Valve
5	1	Condensate Tubing Kit 48", 2 clamps
6	1	Adapter D3 x PVC 3 inch
	1	Elbow 3" x 45°
	1	Centrocerin lubricant

Terminations

Common Vent Termination Clearances

Vertical Termination

There should be a minimum of 36 inches between exhaust terminations in multiple common vent installations.



Clearances of Brackets

All supports such as wall brackets on the external façade or spacer blocks in a shaft must be assembled in a maximum distance of 78 in (2 m). Where there is a bend, additional spacer blocks or wall brackets can be planned before and after the bend, depending on the local situation.

Freestanding Components

Components, which are assembled freestanding vertical (roof termination) with a length of more than 59 in (1.5 m), must, depending on the amount of wind and snow level expected, be additionally secured to the building with guide wires or braces.

Intake Material

The materials below can only be used on the intake. These materials cannot be used for the exhaust vent.

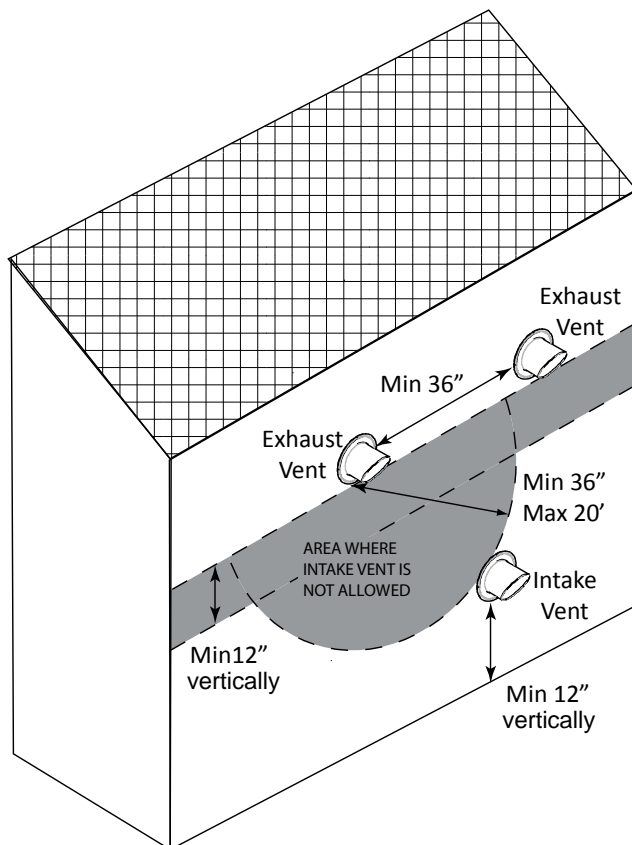
Item Description	Flue Material	Approval Codes for Installation	
		United States	Canada
Plastic Vent and/or air pipes and fittings	PVC Schedule 40	ANSI/ASTM D1785	ULC S636
	PVC - DWV	ANSI/ASTM D2665	
	CPVC Schedule 40	ANSI/ASTM F441	
Plastic pipe cement and primer	PVC	ANSI/ASTM D2564	
	CPVC	ANSI/ASTM F493	

- The appliance adapter has a gasket fitting which accepts a 3" PVC socket. A 45° street elbow for in-line applications or a 90° elbow for back-to-back applications is slip fitted into an 8" collector which may be either a Wye or Tee fitting.
- Fasten and secure all vent materials using manufacturer and industry standards to avoid potential intake air leaks or blockage.

Terminations

This appliance is only certified to use Rinnai terminations and mounted in the orientation shown below.

Horizontal Termination



The exhaust and intake terminations must follow these clearances:

- [1] 12 inch minimum vertically from bottom of exhaust termination to top of intake termination.
- [2] 12 inch minimum vertically from bottom of intake termination to ground or anticipated snow line.
- [3] From edge of exhaust termination to edge of intake termination:
Minimum of 36 inches
Maximum of 20 feet
- [4] 36 inch minimum from multiple exhaust C/Vents

There should be a minimum of 36 inches between exhaust terminations in multiple common vent installations.

The vent (exhaust) termination and air intake must be in the same pressure zone and face the same direction.

NOTE: During colder weather when the exhaust temperature is much hotter than the outside air, the exhaust fumes condense producing water vapor. As a result a plume of water vapor may be seen leaving the exhaust.

