

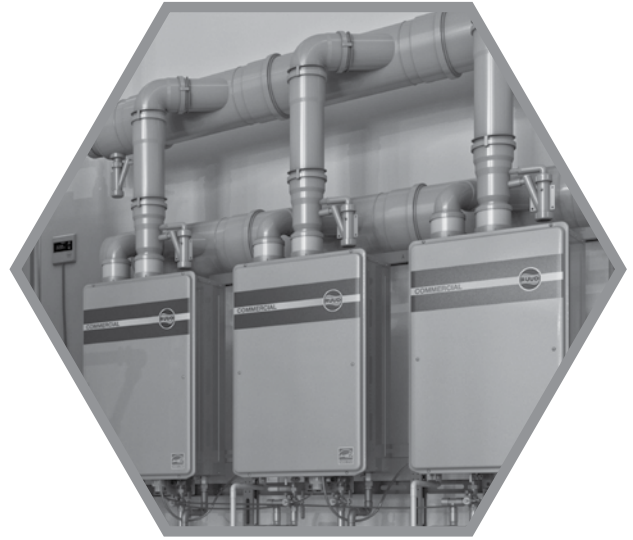
Common Venting For Ruud® Commercial Tankless Natural Gas Water Heaters

Overview

Ruud offers a manufacturer tested and UL/ULC listed common venting system providing longer lengths and fewer wall penetrations than single-unit venting. The system is polypropylene stabilized (PPs) material and Intertek certified for UL -1738 and ULC-S636 and manufactured by CentroTherm EcoSystems in the USA. Venting pieces are self-locking and sealing and can be pushed together without the use of cement or glue.

The common vent system is CSA certified (ANSI Z21.10.3, Gas Water Heaters Standards) for use with up to 10 units of the following Ruud high efficiency, natural gas tankless water heaters; RUTGH-C95DVLN and RUTGH-CM95DVLN.

All common venting configurations tested to 8,400 ft.



Common Vent System Characteristics

PROPERTY:		STANDARD:	RESULTS:
Materials & Construction			
Low Temperature Handling		UL-1738	Pass at -4°F (-20°C)
U.V. Stability		ASTM G23-81	Pass
Water Absorption		UL-1738	.22%
Common Vent Diameter		CE EN-14471	6" (160mm) 8" (200mm) 10" (250mm)
Wall Thickness	10" (250mm) 8" (200mm)	CE EN-14471	Min. Thickness: .1024" (2.6mm) Max. Thickness: .1969" (5.0mm)
	6" (160mm)	CE EN-14471	Min. Thickness: .1024" (2.6mm) Max. Thickness: .1772" (4.5mm)
Deflection Temperature Under Load		ASTM D648-86	302°F (150°C)
Flammability		UL-94	V-0
Performance			
Max. Flue Gas Temperature		UL-1738 & ULC-S636 CE EN-14471	230°F (110°C) 248°F (120°C)
Clearance to Combustibles		UL-1738 & ULC-S636	0" (0mm) at 230°F (110°C)
Leakage		UL-1738	Pass
Pressure		UL-1738	12.5 kPa
Pull		UL-1738 & ULC-S636	Min. 101 lb. force (.45kN)
Flame Spread & Smoke		UL-723, ULC-S102 & ASTM E-84	<25/<50 w/CES recommended wrap
Fire Rating		UL-1479, ULC-S115 & ASTM E-814	2hr Fire Rating w/CES recommended passive fire protection system

Maximum Vent Length (air intake and exhaust) each:

NUMBER OF WATER HEATERS	6" COMMON VENT	8" COMMON VENT	10" COMMON VENT
2	70' (21 m)	100' (30 m)	100' (30 m)
3	50' (15 m)	100' (30 m)	100' (30 m)
4	40' (12 m)	100' (30 m)	100' (30 m)
5	N/A	100' (30 m)	100' (30 m)
6	N/A	78' (24 m)	100' (30 m)
7	N/A	55' (17 m)	100' (30 m)
8	N/A	43' (13 m)	100' (30 m)
9	N/A	N/A	100' (30 m)
10	N/A	N/A	85' (26 m)

Equivalent Vent Length:

	6" COMMON VENT	8" COMMON VENT	10" COMMON VENT
87 Degree Elbow	8.0' (2.4 m)	5.0' (1.5 m)	5.0' (1.5 m)
45 Degree Elbow	4.0' (1.2 m)	2.5' (0.8 m)	2.5' (0.8 m)

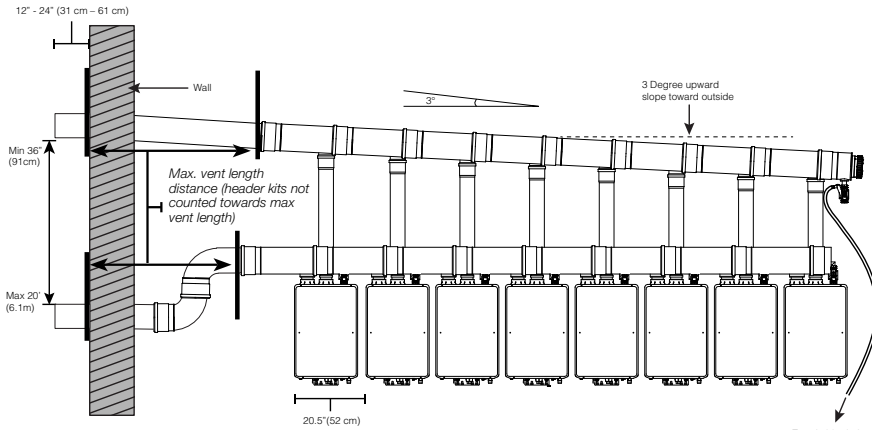
NOTES:

- Tee Termination has same equivalent vent length as 87 Degree Elbow.
- The system may be vented horizontally through a wall or vertically through the roof.
- Header kits have already been counted and do not need to be added.

INLINE COMMON VENTING

The following inline header vent kits can be purchased separately to create **Inline Common Venting** system:

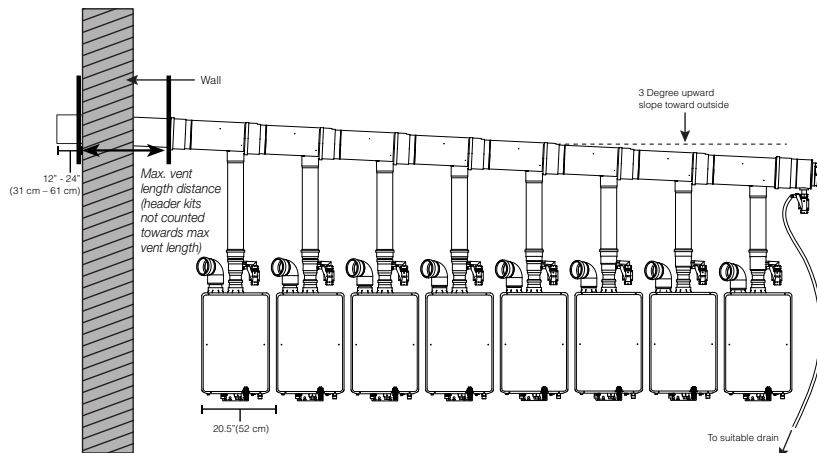
Direct Vent Header Kits



Diagrams illustrate horizontal intake and exhaust, vertical intake and exhaust also available, but not pictured.

RUUD PART NUMBER	TRUNK DIAMETER	NUMBER OF UNITS
SP20906A	6"	2
SP20906B		3
SP20906C		4
SP20908A	8"	2
SP20908B		3
SP20908C		4
SP20908D		5
SP20908E		6
SP20908F		7
SP20908G		8
SP20910A	10"	2
SP20910B		3
SP20910C		4
SP20910D		5
SP20910E		6
SP20910F		7
SP20910G		8
SP20910H		9
SP20910I		10
SP20910J		10

Room Air Intake Header Kits



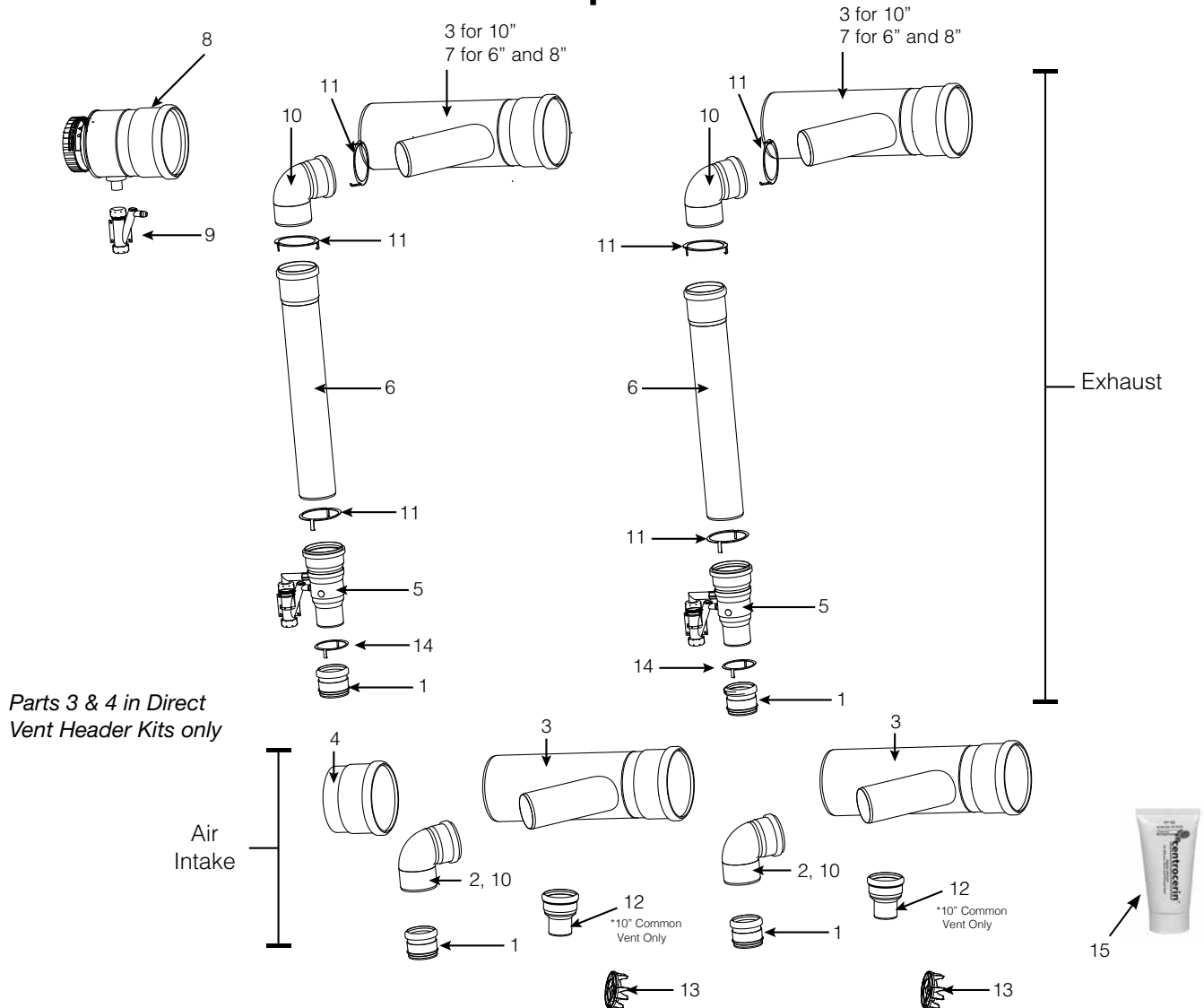
These kits contain only minimum required vent parts to create a common venting trunk line and a connection from the trunk line to water heaters. Vent parts included in these kits **DO NOT** count for equivalent vent length except a 87 degree elbow for the air intake included in a room air kit. Additional vent parts will be required to complete the common venting system. Refer to "Parts List" of this installation instructions for additional information.

RUUD PART NUMBER	TRUNK DIAMETER	NUMBER OF UNITS
SP20907A	6"	2
SP20907B		3
SP20907C		4
SP20909A	8"	2
SP20909B		3
SP20909C		4
SP20909D		5
SP20909E		6
SP20909F		7
SP20909G		8
SP20911A	10"	2
SP20911B		3
SP20911C		4
SP20911D		5
SP20911E		6
SP20911F		7
SP20911G		8
SP20911H		9
SP20911I		10
SP20911J		10

Back to Back Venting Configurations also available, contact Rheem Applications Engineer for more information.

INLINE COMMON VENTING

Inline Common Vent Kit Components



	RUUD PART NUMBER	PART DESCRIPTION
1	SP20918A	3" PVC to PP Adaptor
2	SP20918J	3", 87° Elbow
3	SP20918AD	6" Air Intake Branch Tee
	SP20918L	8" Air Intake Branch Tee
	SP20918AE	10" Exhaust and Air Intake Branch Tee
4	SP20918AH	6" Tee Cap
	SP20918K	8" Tee Cap
	SP20918AK	10" Tee Cap
5	SP20918D	Non-Return Valve (NRV)
6	SP20918G	4" Straight Pipe, 2'

NOTE: All header kit parts available individually for replacement order using part numbers above.

NOTE: For 6" and 8" trunk diameters, exhaust branches are 4", intake branches are 3" diameter, for 10" diameter trunk, both exhaust and intake branches are 3" diameter.

	RUUD PART NUMBER	PART DESCRIPTION
7	SP20918AC	6" Exhaust Branch Tee
	SP20918E	8" Exhaust Branch Tee
8	SP20918AG	6" Horizontal Drain Fitting
	SP20918F	8" Horizontal Drain Fitting
	SP20918AJ	10" Horizontal Drain Fitting
9	SP20918C	Universal Ball Valve Siphon
10	SP20918B	4", 87 Degree Elbow
11	SP20918Y	4" Connector Ring
12	SP20918AL	3" to 4" Increaser
13	SP20918AB	3" Bird Screen
14	SP20918X	3" Connector Ring
15	SP20918H	Centrocirin Lubricant

For Ruud® Commercial Tankless Natural Gas Water Heaters

Vent Run Accessories

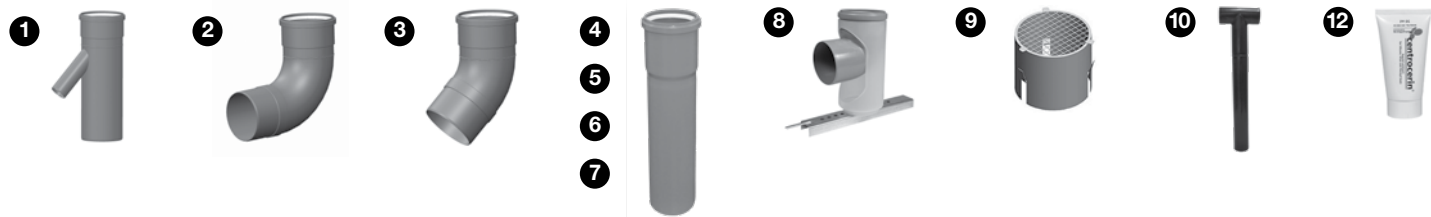


IMAGE NUMBER	PART DESCRIPTION	6"	8"	10"
1	Air Intake Branch Tee	SP20918AD	SP20918L	SP20918AE
2	87 Degree Elbow	SP20918BE	SP20918M	SP20918BM
3	45 Degree Elbow	SP20918BF	SP20918N	SP20918BN
4	Straight Pipe, 1'	SP20918BG	SP20918P	SP20918BP
5	Straight Pipe, 2'	SP20918BH	SP20918R	SP20918BR
6	Straight Pipe, 3'	SP20918BJ	SP20918S	SP20918BS
7	Straight Pipe, 6'	SP20918BK	SP20918T	SP20918BT
8	90 Degree Elbow Vertical Support	SP20918BL	SP20918U	SP20918BU
9	Bird Screen SS	SP20918AY	SP20918V	SP20918AZ
10	Tee Termination	SP20918BA	SP20918W	SP20918BB
11	Support Clamp	SP20918AW	SP20918AA	SP20918AX
12	Centrocerin Lubricant	SP20918H	SP20918H	SP20918H

	CENTROTHERM PPS	PVC	CPVC
Chemical Resistance			
- Aromatic Hydrocarbons	✓	X	X
- Sulfuric Acid	✓	X	X
- Hydrochloric Acid	✓	X	X
UL Listed (0°F to 230°F)	Listed	Not Listed	Not Listed
Actual Working Temperature	32°F (0°C) 248°F (120°C)	50°F (15°C) 149°F (65°C)	50°F (15°C) 194°F (90°C)
Softening Temperatures	302°F (150°C)	176°F (80°C)	200°F (93°C)
Environmentally Friendly Production	✓	X	X
No Chloride Leaching	✓	X	X
Fully Recyclable	✓	X	X

NOTE: Temperature values in table represent exhaust flue temperatures. For approximate max. water set point temperatures, subtract 20 degrees F.

Multiple Unit Controls

RUTGH-CM95DVLN includes manifold control, and does not require other multiple unit controls. RUTGH-C95DVLN requires one of the following optional Multiple Unit controls to manifold two or more water heaters together.

Without the Multiple Unit Control, water heaters operate independently

MULTIPLE UNIT CONTROLS	RUTGH-C95DVLN	RUTGH-CM95DVLN	MAXIMUM NO. OF WATER HEATERS
EZ Link	Optional	Not Required	2
MIC-6	Optional	Not Required	6
MIC-185	Optional	Not Required	6
MIC-185 with MICS-180	Optional	Not Required	20*
Manifold Control	N/A	Included	20*

*Maximum number of water heaters per one common vent system is 10, depending on trunk diameter

Specifications

The Common Vent System shall be manufactured from polypropylene stabilized (PPs). The Common Vent System shall be UL-1738 & ULC-S636 rated for use with maximum flue gas temperatures of 230°F (110°C), and be rated to a maximum vent pressure of 20" of water column.

In keeping with its policy of continuous progress and product improvement, Ruud reserves the right to make changes without notice.