



RCW399AN, RCW500AN, RCW750AN, RCW1000AN RINNAI COMMERCIAL WATER HEATER



RINNAI COMMERCIAL WATER HEATER

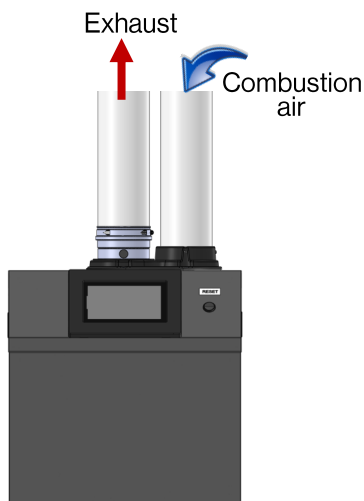
Appliance Type	Condensing, Gas-Fired, Floor-Standing Water Heater
Installation Type	Internal (Indoor) or External (Outdoor) (convertible) Commercial Applications
Model Numbers	RCW399AN, RCW500AN, RCW750AN, RCW1000AN
Gas Types	Natural and Propane. IMPORTANT: Units ship as Natural Gas only. Propane Conversion Kits available as accessory (purchased separately).
Thermal Efficiency	Up to 99%
Certifications	ANSI Z21.10.3, CSA 4.3, ASME
Included with Purchase	• Water Heater • Pressure and Temperature Gauge • Pressure and Temperature Relief Valve: 150 PSI (10.3 bar), 210°F (99°C) • Documentation: Installation and Operation Manual, Warranty Card, CSD-1 Form
Optional Accessories	Condensate Neutralizer, Replacement Media, Scale Cutter, Scale Cutter Refill Cartridge, Air Inlet Filter, Cascade System Sensor, Gas Conversion Kit, BACnet Adapter, BACnet Adapter with Lon Works, Water Temperature High Limit, High and Low Gas Pressure Switches, Low Water Cut-Off, and Outdoor Installation Kit.



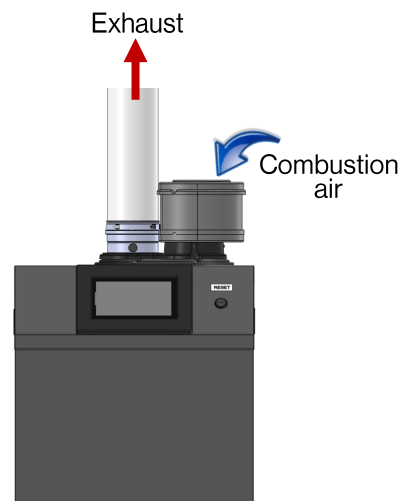
CERTIFIED TO ANSI Z21.10.3 - CSA 4.3

VENTING OPTIONS

Direct Vent



Non-Direct Vent (Room Air)



TECHNICAL SPECIFICATIONS					
Model		RCW399AN	RCW500AN	RCW750AN	RCW1000AN
Installation		Condensing, Gas-Fired, Floor-Standing Water Heater. Internal (Indoor) or External (Outdoor) (convertible with optional accessories).			
Ignition System		Direct Electronic Ignition			
Operating Conditions		Minimum Ambient Temperature: 33°F (1°C)			
Dimensions (Appliance) - In. (mm) - w, h, d		21.75 x 39.5 x 30.75 (550 x 1004 x 781)		28.5 x 44.5 x 51.75 (723 x 1127 x 1312)	
Weight (Appliance)		203 lb (92 kg)	243 lb (110 kg)	525 lb (238 kg)	567 lb (257 kg)
Dimensions (Shipping) - In. (mm) - w, h, d		30 x 48 x 36 (770 x 1220 x 910)		38 x 57 x 60 (970 x 1450 x 1530)	
Weight (Shipping)		227 lb (103 kg)	300 lb (136 kg)	591 lb (268 kg)	633 lb (287 kg)
Heat Exchanger Surface Area		30.7 sq ft	36.8 sq ft	60.9 sq ft	75.4 sq ft
Thermal Efficiency		98%	98%	98%	99%
Gas Consumption (Btu/h)	Minimum	39,900	50,000	75,000	99,900
	Maximum	399,000	500,000	750,000	999,000
Temperature Setting	Water Heater	(Minimum - Maximum) 98°F - 185°F (37°C - 85°C)			
	Storage Tank (DHW)	98°F - 176°F (37°C - 80°C)			
Water Content		2.2 gal (8.3 lt)	2.7 gal (10.1lt)	6.6 gal (24.8 lt)	8.1 gal (30.6 lt)
Water Pressure		Heat Exchanger MAWP: 160 PSI (11 Bar) Pressure and Temperature Relief Valve: 150 PSI (10.3 Bar), 210°F (99°C)			
Sound Level		56 dB(A)	59 dB(A)	63 dB(A)	65 dB(A)
Electrical Data	Normal	210 W	350 W	484 W	605 W
	Standby	10 W			
	Max Current	20 Amps			
	Fuse	Main Controller: 2 x 6.3 Amps Each Pump (total of 3), Fan: 5 Amps			
Gas Supply Pressure¹	Natural Gas	3.5 in. - 10.5 in. wc (0.87 - 2.61 kPa)			
	Propane	8.0 in. - 13.5 in. wc (1.99 - 3.36 kPa)			
Electric Connections		AC 120 Volts, 60 Hz			
Certifications		ANSI Z21.10.3, CSA 4.3, ASME			
Canada CRN		Y6325.2C		R5402.5C	
Warranty		Heat Exchanger: 5 Years. All Other Parts & Components: 1 Year. Reasonable Labor: 1 Year. See the “Rinnai Commercial Water Heater Warranty” for Complete Details			
Venting 45° elbow is equivalent to 3 ft (1 m). 90° elbow is equivalent to 6 ft (2 m).	Options	Direct Vent and Non-Direct Vent (Room Air)			
	Materials	PVC, CPVC, PP and Stainless Steel			
	Vent Size	4 in. PVC/CPVC		6 in. PVC/CPVC	
	Exhaust ²	Vent Run (Min-Max): 10 ft (3 m) - 140 ft (43 m)			
	Intake²	Vent Run (Min-Max): 0 ft (0 m) - 140 ft (43 m)			
Maximum Installation Altitude		10,200 ft (3,109 m)			

¹ Maximum gas supply pressure must not exceed the value specified by the manufacturer.

² **RCW500AN Model ONLY:** For altitudes above 2,000 ft (609 m), vent length is reduced to 110 ft (33 m).
RCW399AN Model ONLY: For altitudes above 2,000 ft (609 m), vent length is reduced to 90 ft (27 m).

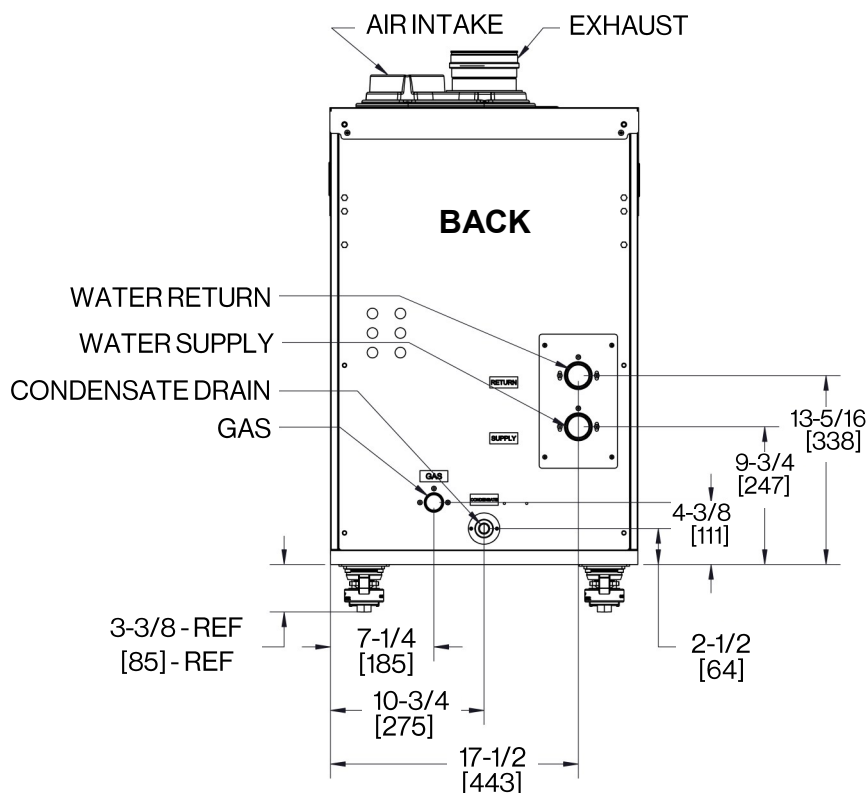
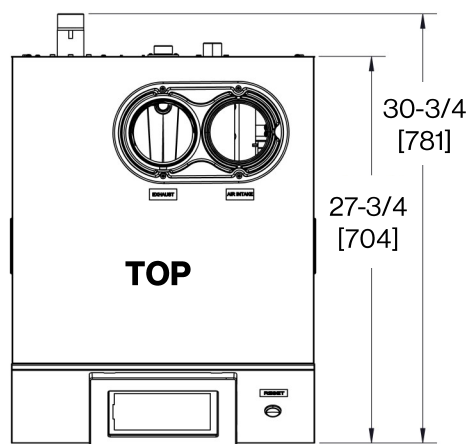
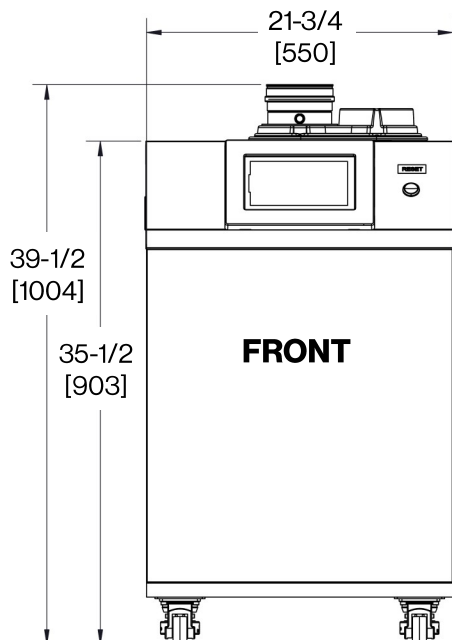
Rinnai products are continually being updated and improved; therefore, specifications are subject to change without prior notice.

Model	U.S. Gallon / HR Liters / HR at Temperature Rise Indicated													
	Tank Size (Gal)	°F	30°F	40°F	50°F	60°F	70°F	80°F	90°F	100°F	110°F	120°F	130°F	140°F
		°C	17°C	22°C	28°C	33°C	39°C	44°C	50°C	56°C	61°C	67°C	72°C	78°C
RCW399AN	80	GPH	1628	1236	1001	844	732	648	583	531	488	452	422	396
	303	LPH	6164	4680	3790	3196	2772	2454	2206	2008	1846	1711	1597	1499
	119	GPH	1658	1266	1030	873	761	677	612	560	517	481	451	425
	450	LPH	6275	4791	3900	3307	2882	2564	2317	2119	1957	1822	1708	1610
	175	GPH	1700	1308	1072	915	803	719	654	602	559	523	493	467
	662	LPH	6434	4950	4059	3465	3041	2723	2476	2278	2116	1981	1867	1769
RCW500AN	119	GPH	2055	1563	1269	1072	932	826	744	679	625	581	543	510
	450	LPH	7778	5918	4802	4058	3527	3128	2818	2570	2367	2198	2055	1932
	175	GPH	2097	1605	1311	1114	974	868	786	721	667	623	585	552
	662	LPH	7937	6077	4961	4217	3686	3287	2977	2729	2526	2357	2214	2091
	238 (2x 119)	GPH	1747	1355	1120	963	851	767	701	649	606	571	540	515
	901	LPH	6613	5129	4238	3644	3220	2902	2655	2457	2295	2160	2046	1948
RCW750AN	175	GPH	3080	2342	1900	1605	1395	1237	1114	1016	935	868	812	763
	662	LPH	11657	8867	7193	6077	5280	4682	4217	3845	3541	3287	3072	2888
	238 (2x 119)	GPH	3127	2390	1947	1653	1442	1284	1161	1063	983	916	859	810
	901	LPH	11836	9046	7372	6256	5459	4861	4396	4024	3719	3466	3251	3067
	357 (3x 119)	GPH	3216	2479	2037	1742	1531	1373	1251	1152	1072	1005	948	900
	1351	LPH	12174	9384	7710	6594	5797	5199	4734	4362	4057	3804	3589	3405
RCW1000AN	238 (2x 119)	GPH	4146	3154	2559	2162	1879	1666	1501	1369	1260	1170	1094	1029
	901	LPH	15693	11939	9686	8184	7112	6307	5681	5181	4771	4430	4141	3894
	357 (3x 119)	GPH	4235	3243	2648	2251	1968	1755	1590	1458	1350	1260	1183	1118
	1351	LPH	16031	12277	10024	8522	7450	6645	6019	5519	5109	4768	4479	4232
	476 (4x 119)	GPH	4324	3332	2737	2341	2057	1845	1679	1547	1439	1349	1272	1207
	1802	LPH	16369	12614	10362	8860	7787	6983	6357	5857	5447	5106	4817	4569

RCW399AN and RCW500AN Models

Dimensions (w, h, d): 21.75 in. x 39.5 in. x 30.75 in. (550 mm x 1004 mm x 781 mm)

Measurements: in. [mm]

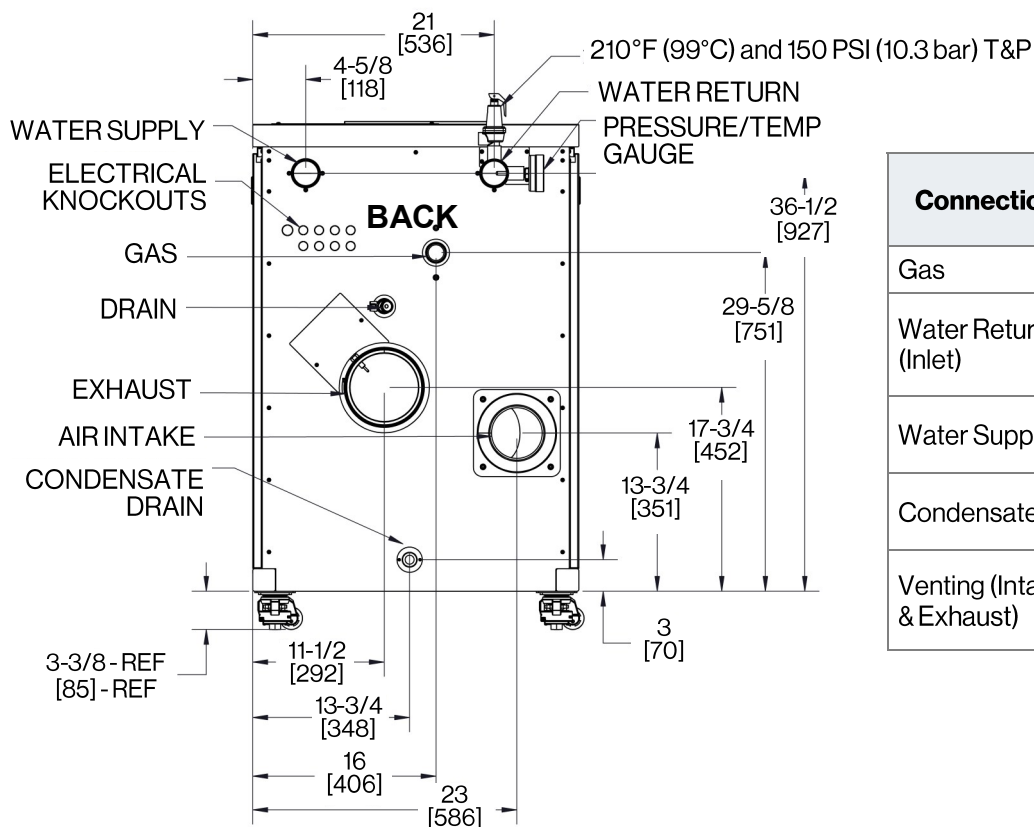
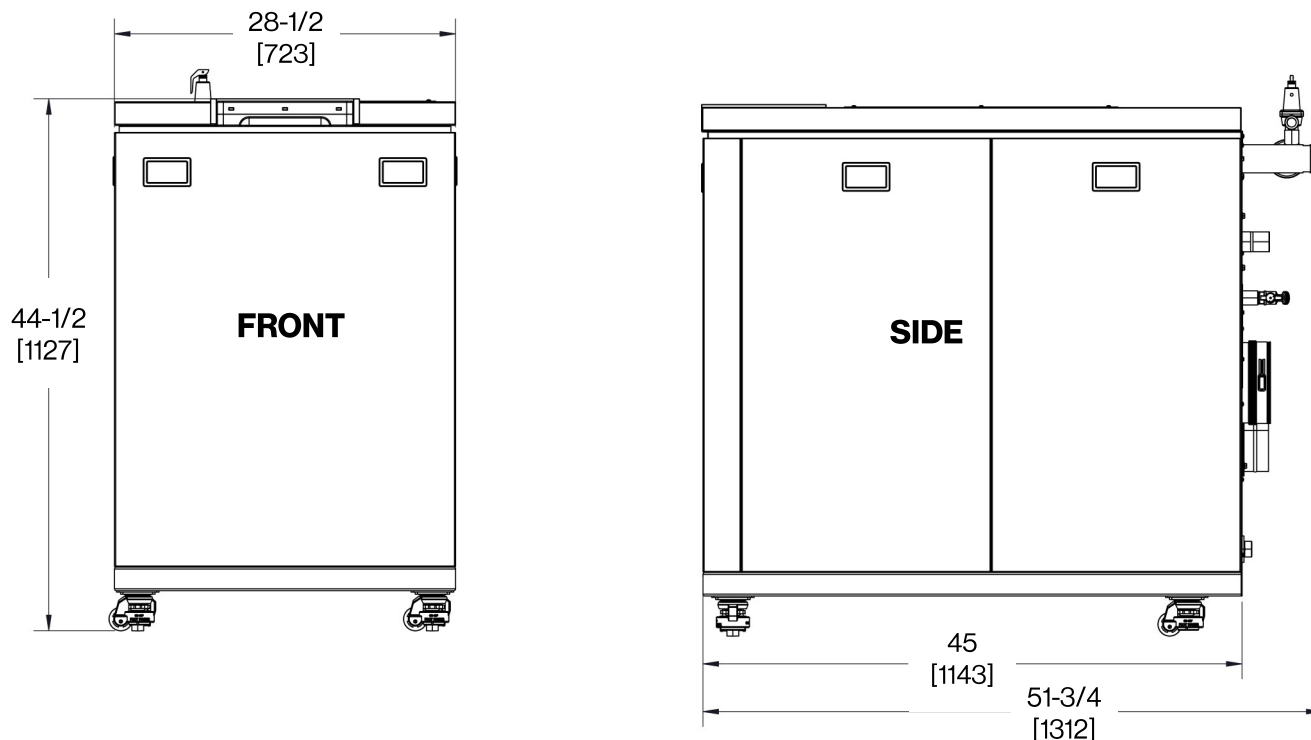


Connection	Connection Size	Minimum Pipe Size
Gas	1 in. NPT	1 in.
Water Supply In (Water Return)	1-1/2 in. NPT	1-1/2 in.
Water Supply Out (Water Supply)	1-1/2 in. NPT	1-1/2 in.
Condensate Drain	1 in. NPT	3/4 in.
Venting (Intake & Exhaust)	4 in. PVC/CPVC	4 in.

RCW750AN and RCW1000AN MODELS

Dimensions (w, h, d): 28.5 in. x 44.5 in. x 51.75 in. (723 mm x 1127 mm x 1312 mm)

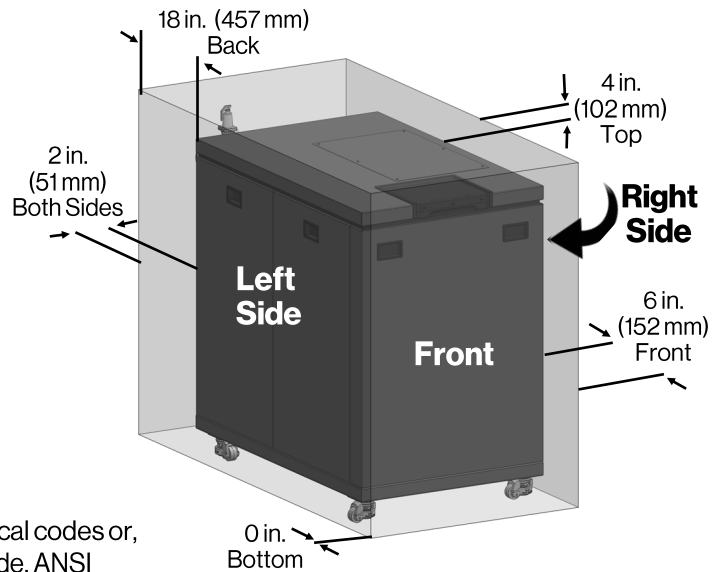
Measurements: in. [mm]



Connection	Connection Size	Minimum Pipe Size
Gas	1-1/4 in. NPT	1-1/4 in.
Water Return (Inlet)	2 in. NPT	2 in.
Water Supply	2 in. NPT	2 in.
Condensate	1 in. NPT	3/4 in.
Venting (Intake & Exhaust)	6 in. PVC/CPVC	6 in.

CLEARANCES

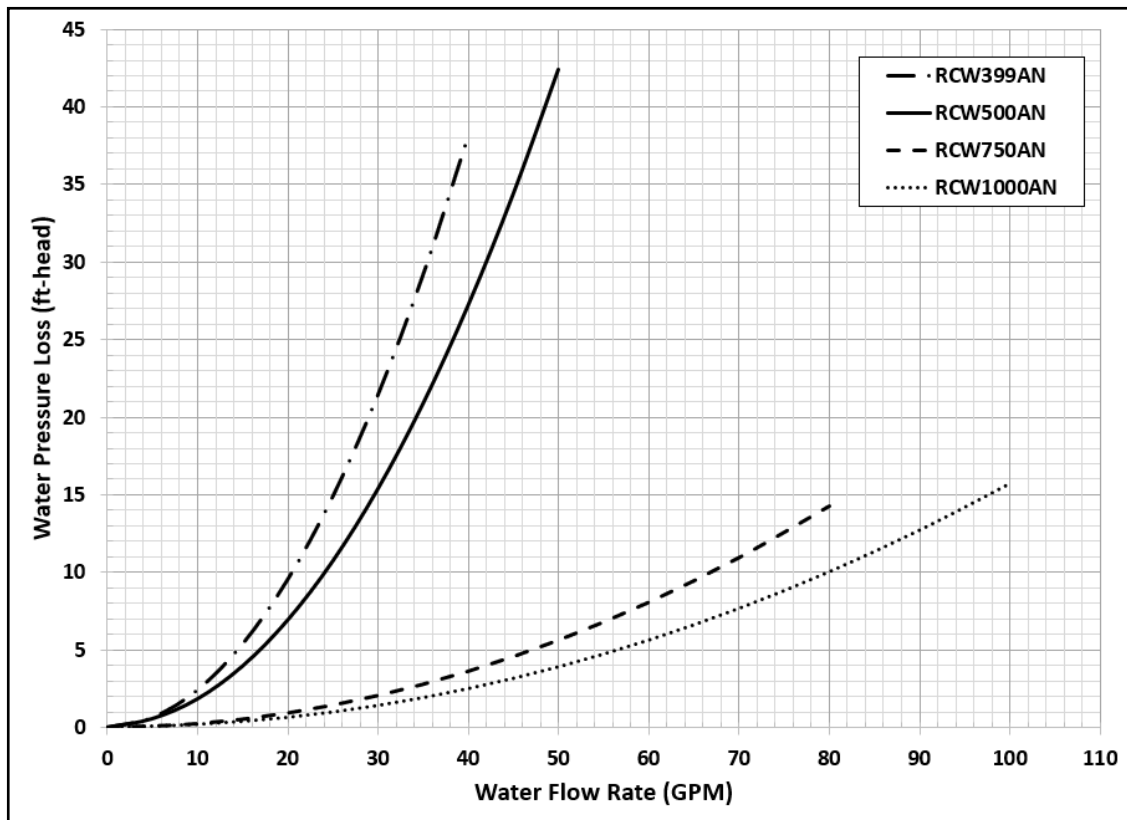
Location	Clearance
Top	4 in. (102 mm) 0 in. from vent components
Bottom (Ground)	0 in. (0 mm)
Front	6 in. (152 mm) Clearance for servicing is 24 in. (610 mm) in front of water heater
Back	18 in. (457 mm)
Sides (Left and Right)	2 in. (51 mm) Clearance for servicing is 12 in. (305 mm) on left side and 24 in. (610 mm) on right side.
Vent	0 in. (0 mm)



United States: Installations in the U.S. must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54.

Canada: Installations in Canada must conform with local codes or, in the absence of local codes, with the Natural Gas and Propane Installation Code, CSA B149.1.

PRESSURE DROP AND WATER FLOW CURVE



The Rinnai Commercial Water Heater does not have an included pump. An external pump must be installed and sized to the flow rate and pressure drop through the water heater, system piping, and system components. The water heater must be connected to a storage tank for proper operation.

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Rinnai Commercial Water Heater Specification Sheet

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