Rinnai®

RCW • SERIES™

Commercial Water Heater

NEW models
RCW399AN, RCW500AN,
RCW750AN, and RCW1000AN

RCW750AN
and RCW1000AN

RCW399AN and RCW500AN

Remarkable Performance Including:

10:1 Turndown Ratio	up to **99%** Thermal Efficiency	**7"** Intuitive LCD Touchscreen

RCW • SERIES™

Commercial Water Heater

Advanced Performance

The **RCW•SERIES**™ water heater offers a complete line of condensing, gas-fired Floor-Standing Volume Water Heaters that act as a primary water heat source in any size commercial application.

Rely on the **RCW•SERIES**™ to deliver reliable, energy saving performance for your building with a ground breaking feature set that outperforms other water heaters in its class.

Intuitive 7" LCD Touchscreen Display

Intuitive Controls for simple start up, maintenance and monitoring.

QR code available on **SERVICE** menu goes directly to manuals.

All **RCW•SERIES**™ models make it easy to program, access and monitor your water heater performance data onsite or with multiple connectivity features.

- **7" LCD Touchscreen** puts total control at your fingertips
- **Simple set-up** lets you adjust and customize parameters to maximize performance
- **Demand Screen** gives you critical information with color coded status messages
- **Standard Integrated Wi-Fi Connectivity** Monitor performance data via Wi-Fi
- **Built-In BMS Capability** 0-10V input for Building Management System (BMS)
- **Built-In Modbus** (optional BACnet and Lon Works)

Features Common to All RCW Models

- **Up to 99% Thermal Efficiency**
- **10:1 Turndown Ratio**
- **316L SS WaterTube Heat Exchanger**
- **2 Pump Controls**
- **No Special Cascade Cables (T-Stat Wire)**
- **Warranty: 5 Year HEX (Non-Prorated) 1-year Parts and Labor**
- **Smart Service Access with 270 degrees of access with removable panels**
- **Transport with ease, fits into freight elevators or through standard doorways**
- **Field Conversion Kit available**
- **ASME Certified, "HLW" stamped and National Board listed**

WARRANTY COVERAGE

5 YEARS on the Heat Exchanger
1 YEAR on Parts
1 YEAR Reasonable Labor

Easy Installation & Service of Floor-Standing Water Heaters

- Roll onto job site with locking casters and leveling feet
- Only 28.5" wide, fits through a standard commercial doorway
- Maximum weight of 567 lbs.
- Secure Access with Service Panel Key
- Common Vent up to 2MM Btu
- Integrated 3 pump relays, up to 5 Amps each

RCW750AN
and RCW1000AN

Service Panel Key
(only on RCW750AN and RCW1000AN)

RCW399AN
and RCW500AN

Technical Specification

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) - Width x Height x Depth		21.75 in. x 39.5 in. x 30.75 in. (550 mm x 1004 mm x 781 mm)		28.5 in. x 44.5 in. x 51.75 in. (723 mm x 1127 mm x 1312 mm)	
Weight (Appliance)		227 lb (110 kg)	300 lb (110 kg)	525 lb (238 kg)	567 lb (257 kg)
Dimensions (Shipping) - Width x Height x Depth		30 in. x 48 in. x 36 in. (770 mm x 1220 mm x 910 mm)		38 in. x 57 in. x 60 in. (970 mm x 1450 mm x 1530 mm)	
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/Hr)	**Minimum**	39,900	50,000	75,000	99,000
	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 l)	2.7 gal (10.1 l)	6.6 gal (24.8 l)	8.1 gal (30.6 l)
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 Pressure[1]	**Natural Gas**	3.5 in. - 10.5 in. W.C. (0.87 - 2.61 kPa)			
	Propane	8.0 in. - 13.5 in. W.C. (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 Boiler Warrant**y for complete details			
Venting 45° elbow is equivalent to 3 ft (1m) 90° elbow is equivalent to 6 ft (2m)	**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)			
	Intake[2]	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.

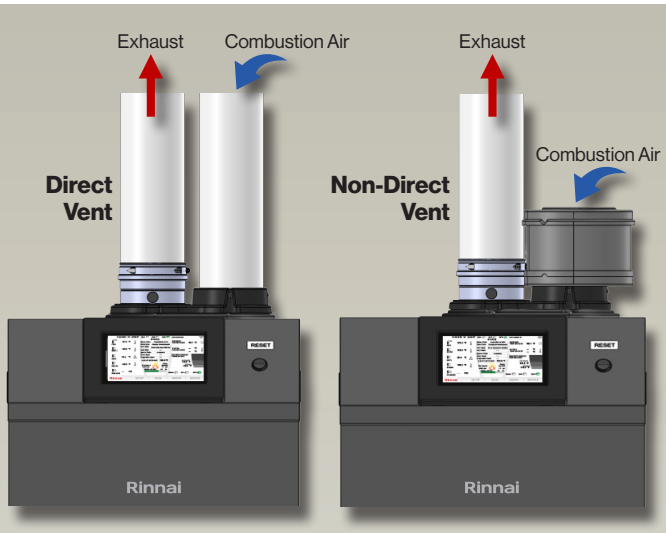
Sizing Chart

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

Integrated Cascade Connection

Multiple water heater configurations are accommodated with our Integrated Cascade Logic that distributes runtimes equally for optimal application diversity.

- **Runtimes are equally distributed on up to 8 units** with interchangeable lead unit
- **Simplifies operation and interchangeability** of units in a system, One SKU for each Btu size
- **No special cables required,** uses industry standard thermostat wire



Venting Options

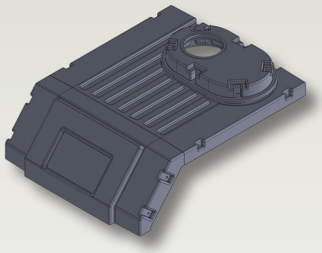
- **Multiple venting options in either twin pipe or room air** allows you to locate units where you want to within the building
- **Concentric side wall or vertical termination configurations optional** to minimize building penetrations
- **Models RCW399AN** and **RCW500AN. Use 4" PVC or PP for maximum vent runs of 140 feet** in both twin pipe and room air applications
- **Models RCW750AN and RCW1000AN. Use 6" PVC or PP for maximum vent runs of 140 feet** in both twin pipe and room air applications
- **Models RCW399AN** and **RCW500AN. Common Vent up to 4 units on 8" PVC or PP**
- **Models RCW750AN and RCW1000AN. Common Vent up to 2 units on 8" PVC or PP**
- **Industry-leading Common Vent runs** (see install manual for details)
- **Vent Material options are PVC, CPVC, PP and Stainless Steel**

Recommended External Pump

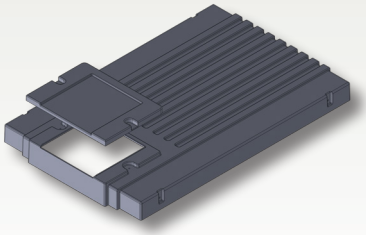
107000762
Magna3 50-180 Stainless Steel (or equivalent)

A stainless steel, high-efficiency, variable-speed circulator pump designed for a wide range of large residential, commercial, and industrial applications. It's known for its ability to adapt to various system demands.

Outdoor Conversion Kits



103000123
Outdoor Conversion Kit 399/500



103000124
Outdoor Conversion Kit 750/1000

RCW • SERIES™

RCW399AN

RCW500AN

RCW750AN

RCW1000AN

Optional Accessories

- Condensate Neutralizer
- Air Inlet Filter
- Cascade System Sensor
- Gas Conversion Kit
- BACnet Adapter
- BACnet Adapter w/ LonWorks
- Water Temperature High Limit ASME CSD-1
- High & Low Gas Pressure Switches ASME CSD-1
- Low Water Cut-Off ASME CSD-1

Included Accessories

- Pressure Relief Valve: 150 PSI (5.2 bar)
- Outdoor Temperature Sensor
- Pressure and Temperature Gauge
- Documentation: Installation & Operation Manual, User Manual, Warranty Card

Rinnai®

Proudly assembling Tankless Water Heaters at our state-of-the-art factory located in Griffin, Georgia, USA

Residential Water Heating Solutions

Electric Water Heating Solutions

Commercial Water Heating & Heating Solutions

Home Heating Solutions

Creating a healthier way of living®

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Learn more about Rinnai high-performance Tankless Water Heaters, Hybrid Water Heating Systems, Boilers, EnergySaver® Direct Vent Wall Heaters, Hydronic Air Handlers, Electric Heat Pump Water Heaters, and Accessories.

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4/2026