

Rinnai Commercial Boiler Submittal Form

Models: RCB301AN, RCB399AN



Project Name:

Date:

Bid Date:

Location:

Model: RCB301AN

RCB399AN

Architect/Engr:

Gas: NG

Propane

Wholesaler/Contr:

Btu/h Input:

Notes:

Standard Features

- 316L stainless steel water tube heat exchanger
- ASME certified, "H" stamped, and National Board Listed
- Fully welded design
- 160 PSI (1,103 kPa) working pressure
- 75 PSI (5.2 bar) pressure relief valve
- Easy access to combustion chamber and burner

Combustion System

- Modulating system with 10:1 turndown ratio
- Direct spark ignition.
- Up to 97% thermal efficiency
- Sealed combustion
- Low NOx emission (SCAQMD certified)
- Flame monitoring (flame rod)

Venting System

- Combustion analyzer test port
- Vertical and horizontal venting options
- Direct vent or power vent up to 140 feet (43 m)
- PVC, CPVC, Polypropylene, and Stainless Steel

Additional Features

- High-limit supply temperature sensor
- Flue temperature high limit
- Water pressure sensor
- Blocked vent and blocked condensate pressure switch
- Condensate trap

Control System

- Built-in Wi-Fi
- Full color 7" touchscreen LCD display
- 0-10 VDC input for Building Management System (BMS)
- Built-in Modbus contacts for BMS
- Cascade up to 8 units with built-in redundancy
- Common venting up to 4 units
- Simple cascade communication wiring (2 wires)
- Three pump control (boiler pump, system pump, and domestic hot water pump)
- Two space heater thermostats
- Password protected
- Customized outdoor reset curve for each thermostat connections
- Data logging (ignition attempts, error history, run hours)
- Custom maintenance reminder with contact information
- Error code and diagnostic information available on home screen



Boiler Highlights:

Condensing. Heat-Only (Solo). Gas-Fired. Indoor only. Wall-Mounted. Commercial Applications

Included with Purchase:

- Boiler
- Wall Mounting Bracket
- Pressure Relief Valve (75 PSI / 5.2 bar)
- Outdoor Temperature Sensor
- Product Documentation

Clearances

Top	4 in. (102 mm). 0 in. from vent components
Bottom	12 in. (305 mm)
Front	6 in. (152 mm). Clearance for servicing: 24 in. (610 mm) in front of boiler.
Back	0 in. (0 mm)
Sides	2 in. (51 mm). Clearance for servicing: 12 in. (305 mm) on sides.
Vent	0 in. (0 mm)

Optional Accessories

	Condensate Neutralizer (804000074)
	Air Inlet Filter (803000050)
	Cascade System Sensor (803000051)
	Gas Conversion Kit: 301 NG (803000053)
	Gas Conversion Kit: 301 Propane (803000048)
	Gas Conversion Kit: 399 NG (803000054)
	Gas Conversion Kit: 399 Propane (803000049)
	Boiler Rack (803000047)
	BACnet Adapter (803000078)
	BACnet Adapter with LonWorks (803000080)

Circulator Sizing

Circulator sizing information based on temperature rises:

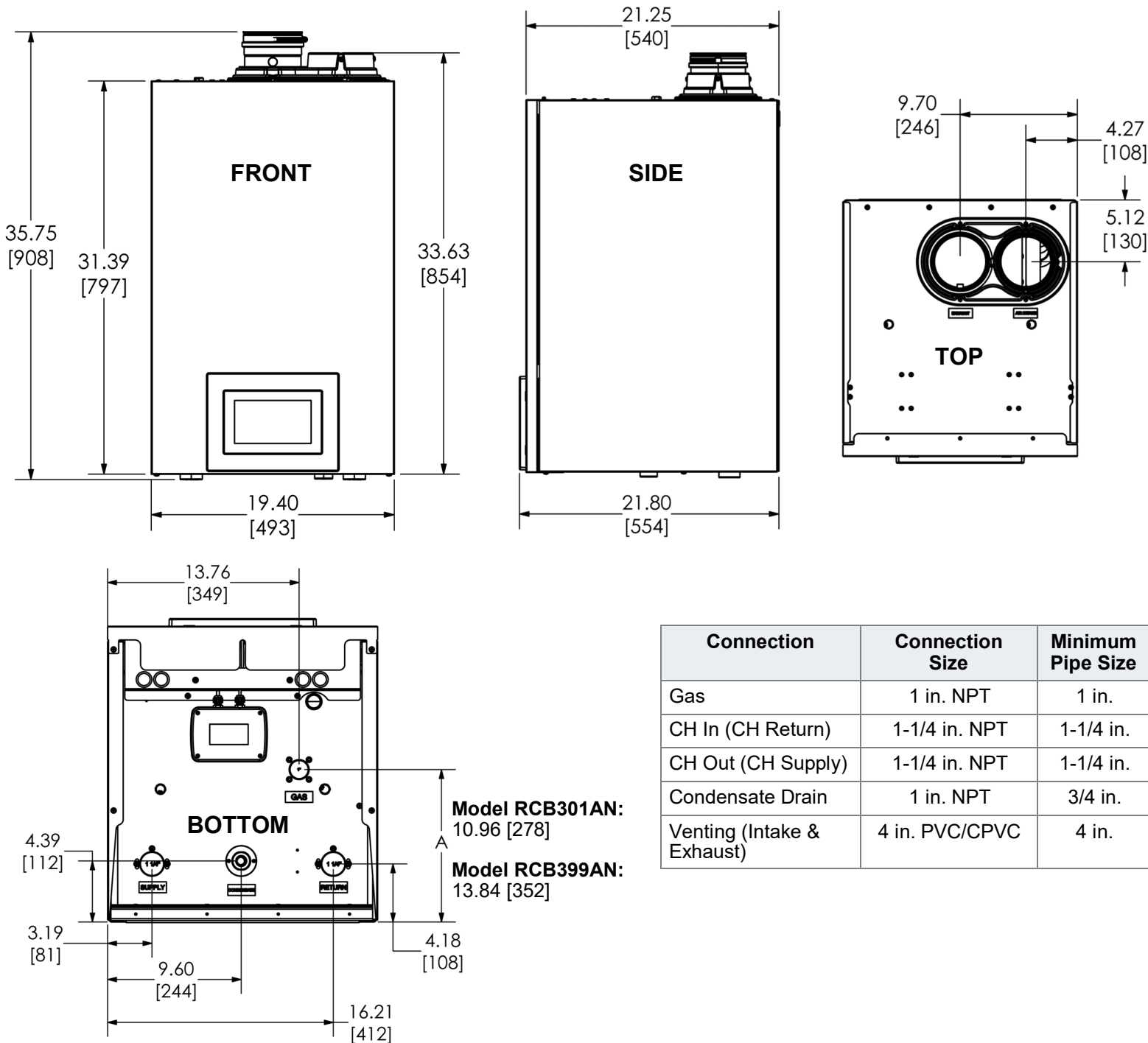
Model	Minimum Pipe Size	20°F		25°F		30°F		35°F	
		GPM	Ft/Hd	GPM	Ft/Hd	GPM	Ft/Hd	GPM	Ft/Hd
RCB301	1-1/4 INCH	30	29	24	20	20	13	17	10
RCB399	1-1/4 INCH	39	27	31	22	26	16	22	12

Model	Fuel	Input MBH (Btu/h)		Turndown Ratio	Gross Output MBH	Net AHRI Rating MBH	Therm Eff %	Water Content	Shipping Weight
		Min	Max						
RCB301AN	NG/LP*	30,100	301,000	10:1	291,970	254	97	1.8 Gal	194 lb (88 kg)
RCB399AN	NG/LP*	39,900	399,000	10:1	387,030	337	97	2.2 Gal	207 lb (94 kg)

*Units ship as Natural Gas ONLY. Propane conversion kits available as accessory (purchased separately).

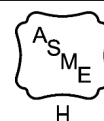
Dimensions (w, h, d): 19.4 in. x 35.75 in. x 21.8 in. (493 mm x 908 mm x 554 mm)

Measurements: in. [mm]



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

Rinnai Commercial Water Heating Services
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 commercialservices@rinnai.us



CSA/ANSI Z21.13 CSA 4.9

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