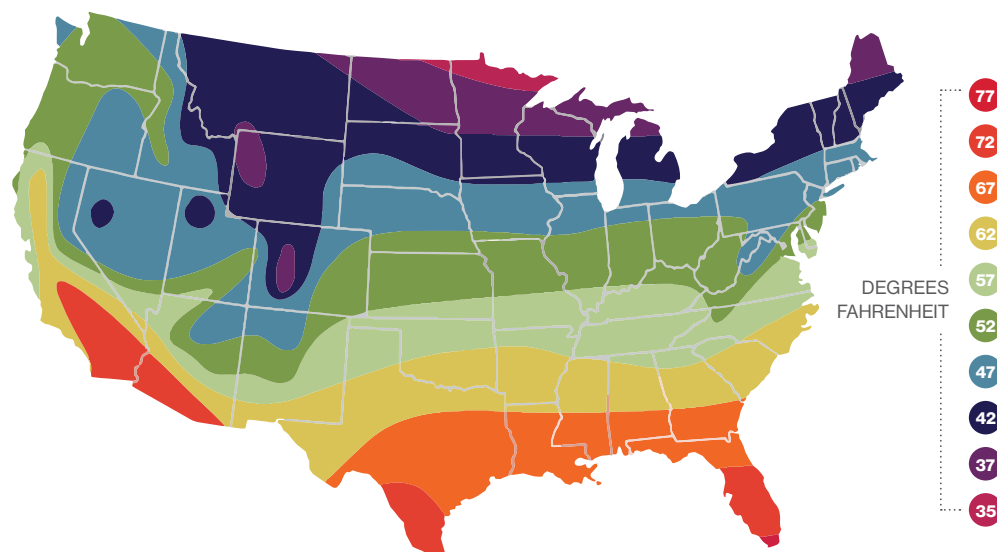


## United States Ground Water Temperature Map

### Residential Use




Use your location on the map to correlate with legend for average ground water temperature in the U.S.

For Hawaii and Puerto Rico, use ground water temperature of 75° F

For Canada and Alaska, use ground water temperature range 35-42° F.

**Average inlet water temperature.**  
These are general temperature zones, actual inlet temperature may be affected by local variations and seasonal changes.

Non-Condensing Model: V53De BTU: 120,000	Ground Water Temperature	Max Flow Rate (GPM)	Simultaneous Shower Use
	35° F	2.3	2 shower heads
	37° F	2.4	2 shower heads
	42° F	2.5	2 shower heads
	47° F	2.7	2 shower heads
	52° F	2.9	2 shower heads
	57° F	3.1	2 shower heads
	62° F	3.4	2 shower heads
	67° F	3.7	3 shower heads
	72° F	4.1	3 shower heads
	77° F	4.6	4 shower heads

**Note:** Simultaneous shower use was rounded to the nearest whole number based on the following data: Tankless set temperature of 120°F, mixed shower temperature of 105°F, ground water temperature as shown in the chart, and shower head flow rate of 2 gpm.

- **Customer has the option of using the following appliances instead of a shower:** Residential grade clothes washing machine, hand sink or dishwasher.
- Shower heads will be as above. If custom shower fixtures i.e. body sprays, high flow rate rain heads are used, please contact Rinnai.

### RESIDENTIAL



### CLEARANCES

	To Combustibles in. (mm)	To Non-Combustibles in. (mm)
Top	12 (305)	2 (51)
Back	0 (zero)	0 (zero)
Front (Panel)	24 (610)	0 (zero)
Front (Exhaust)	24 (610)	24 (610)
Sides	6 (152)	1/8 (3.2)
Bottom	12 (305)	2 (51)

The clearance for servicing is 24 in. (610 mm) in front of the water heater.

### ADDITIONAL FEATURES

- **Safety Devices:** Flame Failure -Flame Rod, Boiling Protection, Combustion Fan RPM Check, Over Current-Glass Fuse, Remaining Flame (OHS), Automatic Frost Protection, and Thermal Fuse
- **Gas Line Compatible:** 1/2 in. (13 mm)
- Complies with South Coast Air Quality Management District 40 ng/J NOx Emission Levels
- **Included with Purchase:** V53De Tankless Water Heater and Wall Mounting Bracket



CERTIFIED TO ANSI Z21.10.3 — CSA 4.3

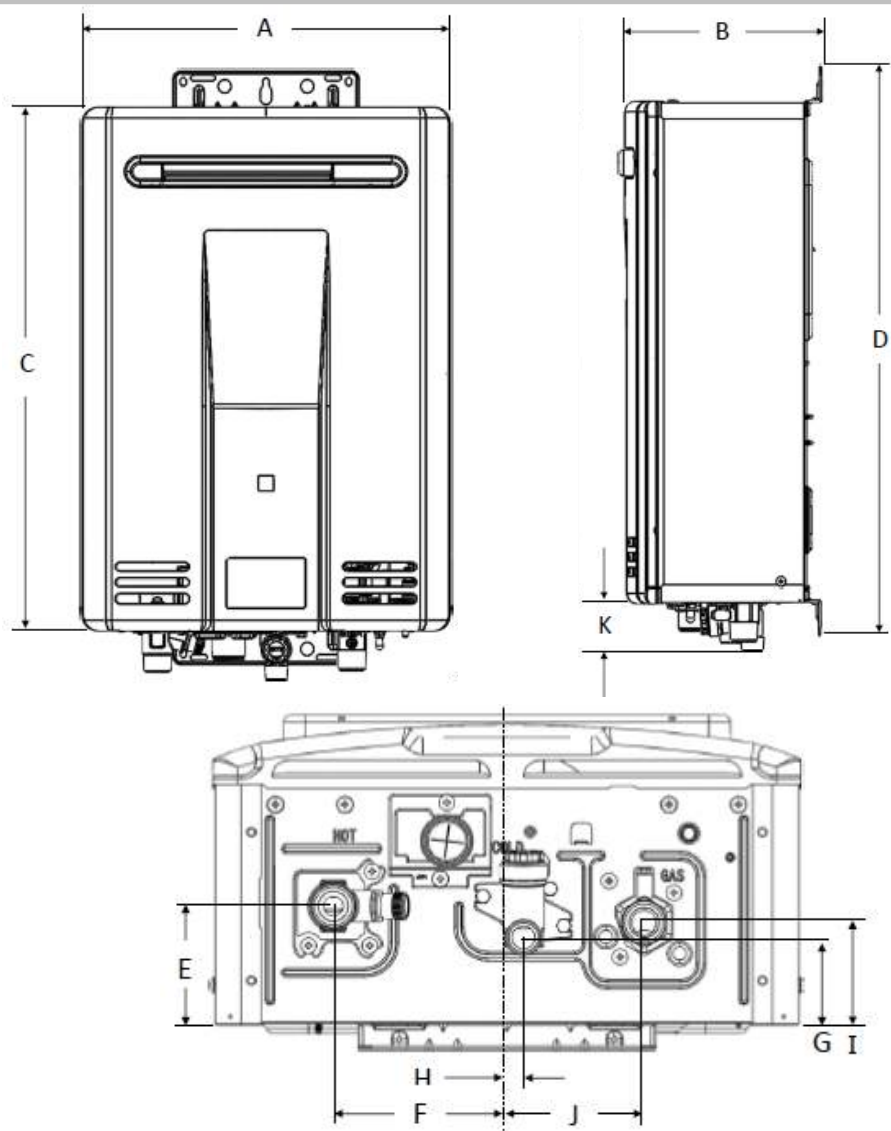
### HIGH-EFFICIENCY (NON-CONDENSING) TANKLESS WATER HEATER

Installation Type		External (Outdoor) Residential Applications. Manufactured (Mobile) Home Certified
Model Number		V53De (REU-AM1620WD-US)
Approved Gas Types		Natural and Propane
Water Flow Control		Water Flow Sensor, Electronic Water Control and Fixed Bypass
Water Temperature Control		Simulation Feed Forward and Feedback
Ignition System		Direct Electronic Ignition
Controller		Standard: Status Monitor Optional: MC-601, MC-91-2US
Certifications		AHRI, ANSI Z21.10.3, CSA 4.3
Uniform Energy Factor (UEF)		0.81
High Altitude Approved		Up to 10,200 Ft (3,109 M)
Minimum Gas Consumption		15,500 Btu/h
Maximum Gas Consumption		120,000 Btu/h
Flow Rate <sup>1</sup> (Min - Max)		0.4 - 5.3 GPM (1.5 - 20.0 L/min)
Dimensions - w, h, d		14.0 in. x 19.8 in. x 7.9 in. (356 mm x 503 mm x 202 mm)
Weight		29.7 lb (13.5 kg)
Sound Level		54 dB
Electrical	Normal	50 W
	Standby	2 W
	Freeze Protection	64 W
	Max Current	1.2 Amps
	Fuse	5 Amps
Temperature		<ul style="list-style-type: none"><li>• Minimum: 115° F (46° C) Default</li><li>• Maximum: 140° F (60° C) Default</li></ul> Without Temperature Controller: 120° F (49° C) Default or 140° F (60° C)
Bypass Flow Control		Fixed
Gas Supply Pressure <sup>2</sup>		<ul style="list-style-type: none"><li>• Natural: 4.5 in. w.c. - 10.5 in. w.c.</li><li>• Propane: 8.0 in. w.c. - 13.5 in. w.c.</li></ul>
Electronic Connections		<ul style="list-style-type: none"><li>• Appliance: AC 120 Volts, 60Hz.</li><li>• Temp. Controller: DC 12 Volts (Digital)</li></ul>
Water Supply Pressure		<ul style="list-style-type: none"><li>• Minimum: 20 PSI (Recommended 30-80 PSI for max performance)</li><li>• Maximum: 150 PSI</li></ul>
Controller Cable		Non-Polarized Two Core Cable (Minimum 22 AWG)
Service Connections		<ul style="list-style-type: none"><li>• Gas Supply: 3/4 in. (19 mm) MNPT</li><li>• Cold Water Inlet: 3/4 in. (19 mm) MNPT</li><li>• Hot Water Outlet: 3/4 in. (19 mm) MNPT</li></ul>

<sup>1</sup> Minimum flow may vary slightly depending on the temperature setting and the inlet water temperature. Minimum activation flow is 0.6 GPM (1.5 L/min).

<sup>2</sup> The maximum inlet gas pressure must not exceed the value specified by the manufacturer. The minimum value listed is for the purpose of input adjustment.

DIMENSIONS



in. (mm)		
A	Width	14.0 (356)
B	Depth	7.9 (202)
C	Height (Unit)	19.8 (503)
D	Height (With Brackets)	22.5 (571)
E	Hot Water Outlet From Wall	3.4 (87)
F	Hot Water Outlet From Center	4.1 (105)
G	Cold Water Inlet From wall	2.7 (68)
H	Cold Water Inlet From Center	0.4 (10)
I	Gas Connection From wall	3.0 (77)
J	Gas Connection From Center	3.3 (83)
K	From Base to Gas Connection	1.6 (40)
	From Base to Cold Connection	2.0 (50)
	From Base to Hot Connection	1.5 (39)

WATER FLOW CURVE

