

## Friedrich® FDTG Series High Efficiency Non-Condensing Tankless Gas Water Heaters

### EASY INSTALLATION

- **Industry Leading!** 43' vent run capability
- Enhanced design up to 10% smaller to fit in even more places than before
- Enhanced design up to 22% lighter making one-person installs even easier

### READY FOR RETROFITS

- **Industry Best!** 1/2" side to side clearance allows you to safely work in spaces the competition can't
- 1/2" Gas line compatibility up to 24 ft (subject to local code)

- Universal Venting Compatibility with UBBINK, Metal Fab, and Rainbow venting for easier tankless to tankless replacements

### KEY FEATURES

- **Exclusive!** Hot-start Programming™ ensures the unit is in a ready state between back-to-back usage, minimizing any cold water bursts
- Built-in Wi-Fi powered by EcoNet® technology for direct control from your device (on select models)
- LeakGuard® - All-inclusive leak detection and prevention system that detects any leak that comes from the unit (on indoor Wi-Fi models)



Indoor DV

Outdoor

### Specifications

Friedrich Model Number	INDOOR			OUTDOOR			
	FDTG-70DVLN-3	FDTG-84DVLN-3	FDTG-95DVLN-3	FDTG-70XLN-3	FDTG-84XLN-3	FDTG-95XLN-3	
Built-in LeakGuard™ Model Number			FDTG-95DVELN-3 (Wi-Fi Model)			FDTG-95XELN-3 (Wi-Fi Model)	
Gas Input Rate (BTU/h)	MAX	160,000	180,000	199,900	160,000	180,000	199,900
	MIN	11,000	11,000	11,000	11,000	11,000	11,000
Uniform Energy Factor (UEF)	0.82						
Hot Water Flow Rate Capacity - Gallons Per Minute (GPM)	MAX (35°F)	7.0	8.4	9.5	7.0	8.4	9.5
	45°F Rise	6.0	6.7	7.4	6.0	6.7	7.4
	67°F Rise	4.1	4.5	5.0	4.1	4.5	5.0
Number of Bathrooms <sup>1</sup>	2-3	3	3-4	2-3	3	3-4	
Temp. Range	100°F - 140°F						
Temp. Setting from Factory	120°F						
High Temp. Upgrade Available	No						
Freeze Protection	-30°F Air Intake <sup>2</sup> , -4°F Ambient						
Heat Exchanger Material	Primary: Copper						
Minimum Activation Flow	0.4 GPM						
Minimum Continuous Flow	0.26 GPM						
Maximum Altitude	7,800 ft.						
Ultra Low NOx	Meets 14 ng/J NOx requirements - SCAQMD Rule 1146.2 compliant						
Warranty	15 Year Heat Exchanger   5-Year Parts   1-Year Labor						
Height	24.2"			20.75"			
Width	13.5"			13.5"			
Depth	10.27"			9.4"			
Weight (Lbs.)	46.5			42			
Venting Diam. Allowed	3" by 5" CONCENTRIC			N/A			
Max. Single Vent Run (straight pipe)	43 ft.			N/A			
Approved Venting Manufacturer	Metal Fab, Rainbow, UBBINK						
Manifold Controls (max. units)	6 Units <sup>3</sup>						
Controls	Built-in digital display			External Remote (Included)			
Power Supply	120V 60Hz						
Max. Power Consumption	85W (Normal use), 0.7 Amps 132W (Antifreeze), 1.1 Amps 3.5W (Standby), 0.03 Amps <sup>4</sup>						
Gas Connection	3/4" NPT						
Hot Water Connection	3/4" NPT						
Cold Water Connection	3/4" NPT						

All models are available in Natural Gas or Propane (LP). For Propane replace the N with P for LP model.

### FDTG Series Models

Indoor & Outdoor Models  
11,000-199,900 BTU/h  
Natural Gas and  
Liquid Propane Models\*

\*Swap P for N in model number for Liquid Propane model

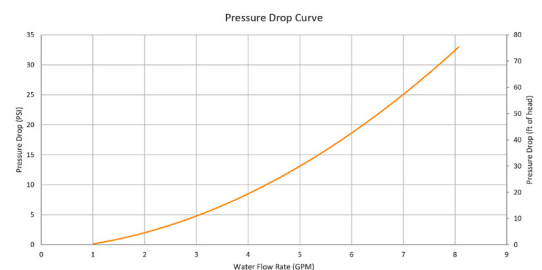


These products meet a stringent set of our internally defined sustainability standards.



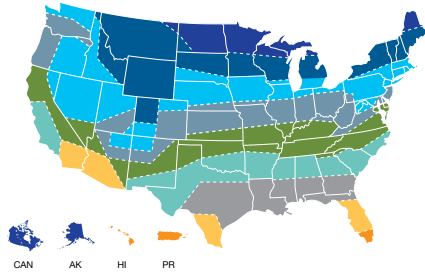
### Clearances

Top / Bottom	12"
Front	1/2" <sup>5</sup>
Sides	1/2"
Back / From Vent Pipe	0"



<sup>1</sup> Based on simultaneous showers using 2.0 GPM flow rate pre-mixed with cold water line. Flow rates vary depending on temperature of incoming cold water and water heater set temperature. Refer to 9 zone ground water temperature map for accurate sizing. <sup>2</sup> For indoor application, this is the temperature of outdoor intake air. <sup>3</sup> Manifolds with standard RJ11 communication cables. <sup>4</sup> If anti freeze is on and combustion is on, total W will be 217W (85+132). <sup>5</sup> Recommended 24" clearance for service.

## U.S. Ground Water Temperature Zone Map



### Average Flow Rates (GPM) by Application

Low Flow Faucet	0.5
Bathroom Faucet	1
Kitchen Faucet	1.5
Shower	2
Dishwasher	2
Washing Machine	3

Flow rates may vary.

## Flow Rate Capacity Table by Zone (Gallons Per Minute - GPM)

Use the U.S. Ground Water Temperature Map to locate your zone. Then use the Flow Rate Capacity Table to determine model flow rate by zone. Flow rates calculated for tankless set temperature of 120°F with a mixed shower temperature of 105°F. Ground water temperatures vary seasonally.

MODEL #	Zone 1 37°F	Zone 2 42°F	Zone 3 47°F	Zone 4 52°F	Zone 5 57°F	Zone 6 62°F	Zone 7 67°F	Zone 8 72°F	Zone 9 77°F
FDTG-95	4.0	4.3	4.6	4.9	5.3	5.7	6.3	6.9	7.7
FDTG-84	3.6	3.8	4.1	4.4	4.8	5.2	5.7	6.3	7.0
FDTG-70	3.2	3.4	3.7	3.9	4.2	4.6	5.0	5.6	6.2

## Venting

SINGLE UNIT: MAX. EQUIVALENT VENT LENGTHS - STRAIGHT PIPE	
Number of 90° Elbows	Max Length 3" / 5" straight pipe
0	43 ft. (13.1 m)
1	41.5 ft. (12.6 m)
2	38.5 ft. (12.2 m)
3	34 ft. (11.7 m)
4	28 ft. (11.3 m)
5	20.5 ft. (10.8 m)
6	11.5 ft. (10.4 m)


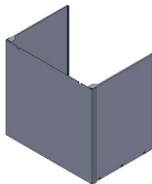

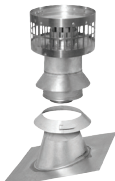



Equivalent Ft. of Elbows	
	3" / 5"
90° Elbow	1.6 ft.
45° Elbow	9 in.

Venting Materials Allowed: 3-in./5-in. (7.6-cm/12.7-cm) UL-approved Category III Stainless Steel vent materials or water heater manufacturer-approved vent material (MetalFab, UBBINK, and Rainbow)

Min. Vent Length Straight Pipe	
Number of 90° Elbows	Min. Length 3" / 5" pipe
1	1.0 ft (0.3 m)

Hanging bracket is included with water heater.

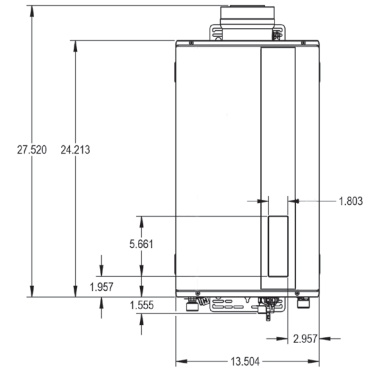
## Parts & Accessories

Recirculation Pump	Pipe Cover	Horizontal Vent Termination Twin Pipe System	Concentric Vent Termination Twin Pipe System	AllClear® Water Treatment System	Isolation Valve Kit	Manifold Cables
AP17920	FDTG20330AJ	FDTG20231-2	FDTG20211	FDTG20251	FDTG20326	RCPN-AMP03-0013111101-0003 (48')
						

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

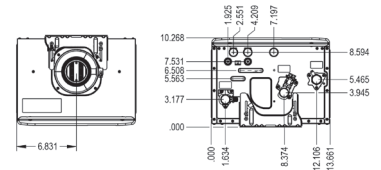
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## INDOOR DIRECT VENT

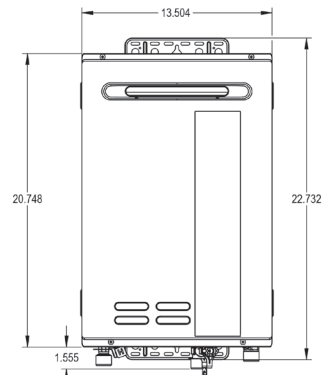


TOP VIEW

BOTTOM VIEW



## OUTDOOR



TOP VIEW

BOTTOM VIEW

