



# FTVN Series II

## High Efficiency Gas-Fired Condensing Boiler

### SUBMITTAL SHEET

I - General Specifications

II - Product Specifications

Project Name		Date	
Location			
Engineer			
Contractor		Rep	

## I - GENERAL SPECIFICATIONS

### Product Features

✓	Certified to ANSI Z21.13 / CSA 4.9 Gas-fired Boiler Standard
✓	SA-240 S43932 Chromium Stainless Steel Fire Tube Heat Exchanger
✓	ASME "H" stamped boiler, designed and constructed in compliance with the ASME Boiler and Pressure Vessel Code Section IV
✓	Maximum operating pressure 50 psi
✓	Wall mounted
✓	Zero clearance to combustibles <i>(clearances required for service)</i>
✓	Modulating burner, 10:1 turndown ratio
✓	Certified as Direct Vent (sealed combustion) or for use with indoor combustion air
✓	Sealed cabinet
✓	High energy ignition transformer <i>(spark ignition)</i>
✓	Built-in water pressure bypass <i>(guarantees minimum water flow)</i>
✓	Low water pressure sensor
✓	Integrated ECM boiler circulator
✓	Integrated 3-way valve <i>(diverts between DHW &amp; CH demands)</i>
✓	Integrated Condensate Trap
✓	Setup Wizard
✓	Two 120 VAC outputs for external circulators <i>(DHW/CH)</i>
✓	DHW zone input <i>(tank thermostat or sensor)</i>
✓	Two dry contact inputs for CH and 2 dry contact outputs for zone control
✓	Wi-Fi remote connectivity embedded
✓	Outdoor temperature sensor input <i>(or access weather via Wi-Fi connection)</i>
✓	Adjustable flue temperature limit

### Control Features

✓	Integral micro processor safety control - flame safeguard and temperature
✓	BURNER TEST Mode - for combustion setup
✓	PURGE cycle - for air purging
✓	AUTO function (outdoor/indoor reset) -resets boiler temperature depending on outdoor and/or room temperature
✓	Adjustable reset curve <i>(slope/parallel shift)</i>
✓	Adjustable reset temperature boost
✓	Summer/Winter changeover <i>(WWSD)</i>
✓	Integrated programmable T-stat x 2 <i>(with optional NTI Room Sensors)</i>
✓	Freeze protection
✓	Factory settings restore option
✓	Cascade up to 8 FTVN/TRX/Compass-series boilers
✓	Adjustable ignition delay timer
✓	Manual mode operation <i>(pump/fan/diverter)</i>
✓	Boiler statistics
✓	Lockout and error history
✓	Optional 0-10V / 4-20mA input clip-in module <i>order code: 3319457</i>
✓	Optional NTI 3-Zone Pump/Valve Controller <i>order code: 3260184</i>
✓	Optional Room Sensor <i>order code: 3319455</i>

### Factory Supplied Items

✓	10K thermistor outdoor sensor
✓	30 psi ASME pressure relief valve
✓	Pressure and temperature gauge
✓	LP conversion kit
✓	Vent screens



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## II - PRODUCT SPECIFICATIONS

Specifications		UNITS	FTVN085	FTVN120	FTVN150	FTVN199	FTVN110C	FTVN150C	FTVN199C
Capacity	Input Rating CH <sup>1</sup>	MBH	8.5-85	11-110	15-150	19.9-199	11-110	15-150	19.9-199
	Input Rating DHW <sup>1</sup>								
	Heating Capacity <sup>1 2</sup>								
	Net AHRI Rating, Water <sup>2</sup>								
	Modulation (turndown)								
Performance	AFUE	%	96	95					
Temp Range	Ambient	°F(°C)	33-104 (0.6-40)						
	Boiler Setpoint		68-179 (20-82)						
	DHW Setpoint (Indirect)		104-149 (40-65)						
	DHW Setpoint (Combi)		97-140 (36-60)						
Pressure	Max Water Central Heating	PSI	50						
	Max Water DHW		N/A				150		
	Heat Exchanger MAWP		50						
	Pressure Relief Valve	30							
	Gas Supply NG	In. W.C.	3.5-10.5						
	Gas Supply LP		8-13						
Heat Exchanger	Material	SA-240 S43932 Chromium Stainless Steel							
	Type	ASME Fire Tube							
DHW Flow	35°F Rise	GPM	N/A				5.8	7.9	10.5
	45°F Rise						4.5	6.1	8.2
	77°F Rise						2.6	3.6	4.8
Connections	Water (Heating)	In	1-1/4" Male NPT						
	Water (DHW)		3/4" Male NPT (return from indirect)				3/4" Male NPT		
	Gas		3/4" Male NPT						
	Vent Connection (from factory)	In	3						
Venting Length <sup>3</sup>	2" Min-Max Exhaust	Ft	6-100						
	2" Min-Max Inlet		0-100						
	3" Min-Max Exhaust		6-150						
	3" Min-Max Inlet		0-150						
Vent System <sup>3</sup>	Type	Cat IV, Sealed Combustion, Direct Vent, Power Vent							
	Materials Allowed <sup>4</sup>	PVC/CPVC/PP							
Electrical	Power Supply	V/hz/ph/a	120/60/1/less than 12						
	Main Controller	Type	Ariston LCD Display & GalEvo2-NA Control						
Volume	Water Content	Gallons	2.1	3.0	3.7	2.2	3.1	3.8	

<sup>1</sup> Listed Input and Output Ratings are at minimum vent lengths at an altitude of 0 - 2000 ft. Numbers will be lower with longer venting and/or altitudes greater than 2000 ft.

<sup>2</sup> Ratings based on standard test procedures prescribed by the US Department of Energy and certified to ANSI Z21.13/CSA 4.9

<sup>3</sup> The FTVN requires a special venting system. Use only the vent materials and methods detailed in these installation instructions.

<sup>4</sup> It is permissible to use SS vent material, however, only PVC/CPVC/PP can be directly inserted into the appliance adapters.





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Specifications		UNITS	FTVN085	FTVN120	FTVN150	FTVN199	FTVN110C	FTVN150C	FTVN199C
Weight	Approx "Full" Boiler	Lbs	107	124	145	108	125	146	
	Shipping		110	120	135	111	121	136	
Dimensions	Width	In	19-3/4						
	Height		38-1/4						
	Depth		18.5						
Min Clearance	Front	In	18						
	Top		14						
	Sides		2						
	Back		0						
	Bottom		12						
System	Ignition	Type	Direct Electronic Spark/Flame Rectification						
	Burner		Premixed Fuel Modulation/Stainless Steel Burner						
	Gas Valve		Air Ratio Valve						
Cabinet	Material		Painted Steel						
	Safety Devices		Flame Rectifier Probe, Temperature Limit Control (190°F), Water Pressure Switch (Min. 8 PSI), Freeze Protection, Condensate Trap, Flue Temperature High Limit Sensor (199°F), Blocked Condensate Pressure Switch, Blocked Vent Pressure Switch						



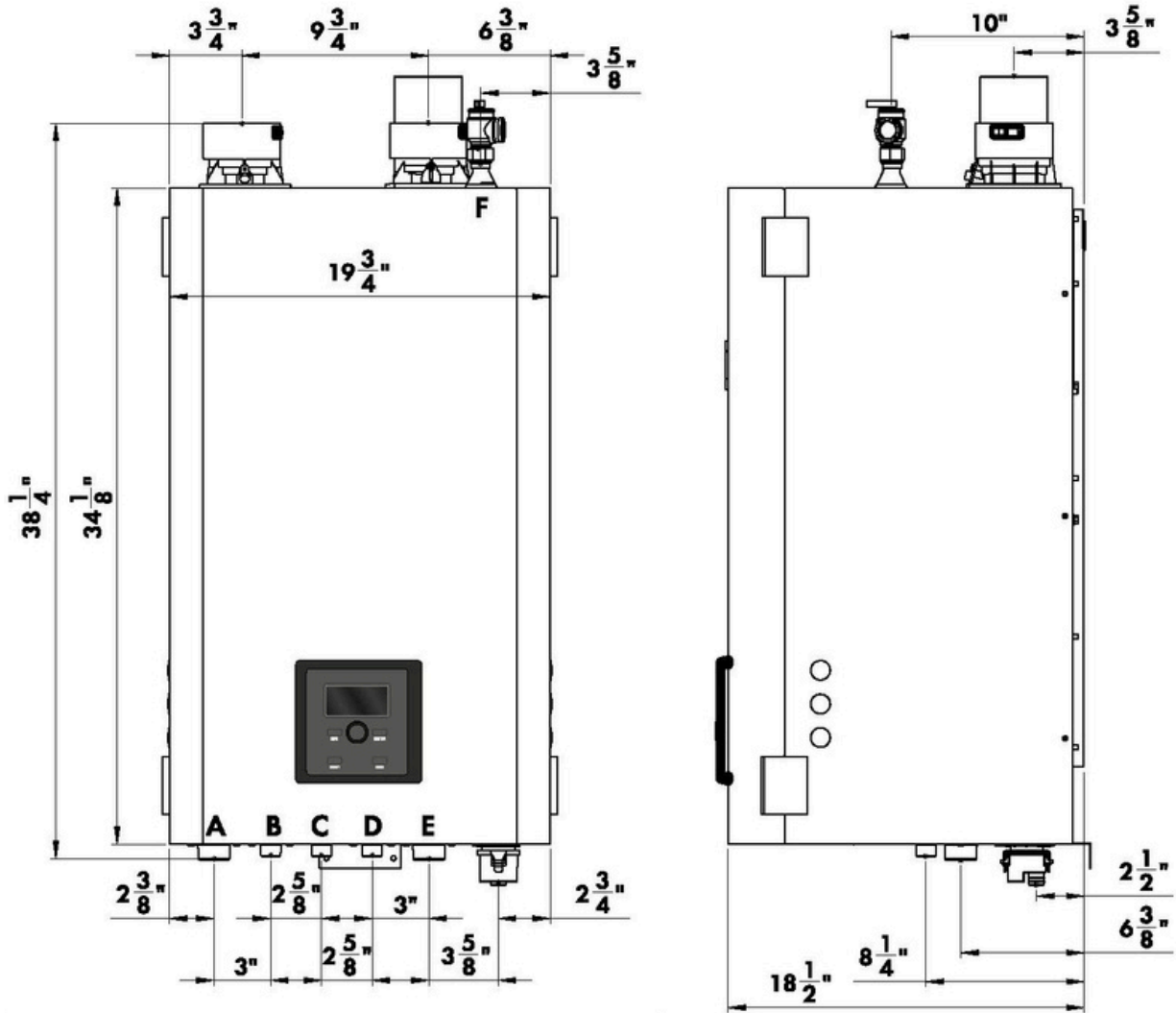
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**II - PRODUCT SPECIFICATIONS** CONT'D...



	Non-Combi Models	Combi Models
A	Central Heating Supply	Central Heating Supply
B	Supply to Indirect Water Heater	Domestic Hot Water Outlet
C	Gas Inlet	Gas Inlet
D	N/A	Domestic Hot Water Inlet
E	Central Heating Return	Central Heating Return
F	Pressure Relief Valve	Pressure Relief Valve