



Product Submittal for XPAK-FT®
Wall-Hung Condensing Boiler
Models 88AR, 108AR, 198AR, 278AR & 398A

Date: _____ Job: _____ Location: _____
Equipment Tags: _____ Engineer: _____ Contractor: _____
Model: _____ Notes: _____
Prepared by: _____ Gas Type: Natural Gas Propane

- Versa IC® controller with LCD display
- Soft Start, electronic modulation, up to 10:1 turndown
- LCD status display with full diagnostics and fault memory
- 3-in-1 Vent adapter (PVC/CPVC - DuraVent® polypro - SS)
- Meets 2012 NOx requirements (< 14 ng/J (< 55 PPM NOx))
- Minimum inlet water temp 50°F (10°C)
- Maximum outlet water temperature: 195°F (90.6°C)
- Maximum system temperature: 190°F (87.8°C)
- Limited 20-year thermal shock warranty
- Limited 10-year closed-loop heat exchanger warranty
- Modbus RTU RS485 port
- Wall-mounted design
- Proudly assembled in the USA



*Configured for PVC vent standard. Maximum inlet temperature of 170°F (76.7°C) for PVC vent.



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Features and Options

Heat Exchanger

Headers

- All stainless steel construction
- Gasketless heat exchanger design
- ASME H-stamped; 80 PSIG MAWP
- National Board registered
- ASME Pressure relief valve 30 PSIG
- T&P Gauge (shipped loose)

Power

- 120V, 60Hz, 1Ø Power supply

Control

- VERSA IC® LCD display
- Outdoor reset with indirect priority
- 0-10 VDC input for BMS
- Cascade up to 8 boilers
- Direct Spark Ignition (DSI)
- Remote flame sensor
- High limit, manual-reset, fixed, 200°F (93.3°C)
- Alarm dry contact connection
- On/off power switch
- Blocked vent pressure switch
- Boiler, DHW & system pump contacts
- Water temperature sensors (4) 10kΩ (2 shipped loose)
- Outdoor air sensor (1) 10kΩ (shipped loose)
- Modbus RTU BMS Port (Up to 115K Baud)
 - B-85 – BMS Gateway – BACnet MS/TP, BACnet IP, N2 Metasys or Modbus TCP
 - B-86 – BMS Gateway – LonWorks

Burner

- Ultra-Low NOx: less than 14 ng/J (<20 ppm)

Gas Train

- Fuel
 - Natural gas
 - Propane (minimum grade HD-5)
- Dual-seat combination valve
- Electronic modulating firing mode (H7)

Construction

- Indoor construction only
- Front controls enclosed
- PolyTuf powder-coat finish
- Bottom connections (gas & water)

- Top connections (combustion air, vent, PRV)
- Design certified ANSI Z21.13/ CSA 4.9
- Condensate trap
- Elevation
 - 0-2,000 feet
 - 5,000-9,999 feet

Venting (all shipped separately)

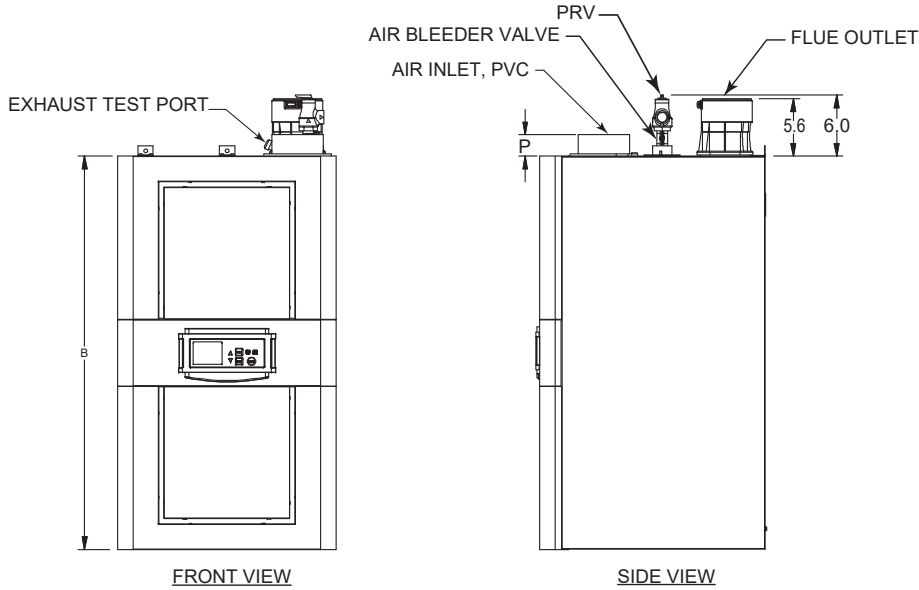
- D-91 Polypro elbow termination
 - Duravent 2" (model 88A only)
 - Duravent 3" (models 88A to 398A)
 - Duravent 4" (model 398A only)
 - Centrotherm 2" (model 88A only)
 - Centrotherm 3" (models 88A to 398A)
 - Centrotherm 4" (model 398A only)
- D-92 - Polypro reducer (88AR & 398A only)
 - Duravent 3" to 2" (model 88A only)
 - Duravent 4" to 3" (model 398A only)
 - Centrotherm 3" to 2" (model 88A only)
 - Centrotherm 4" to 3" (model 398A only)
- D-94 - Horizontal twin pipe polypro
 - Duravent 2" (model 88A only)
 - Duravent 3" (models 88A to 398A)
 - Duravent 4" (model 398A only)
 - Centrotherm 2" (model 88A only)
 - Centrotherm 3" (models 88A to 398A)
- D-95 - Horizontal concentric termination, polypro
 - Duravent 2" (model 88A only)
 - Duravent 3" (models 88A to 398A)
 - Duravent 4" (model 398A only)
 - Centrotherm 2" (model 88A only)
 - Centrotherm 3" (models 88A to 398A)
 - Centrotherm 4" (model 398A only)
- D-96 - Vertical concentric termination, polypro
 - Duravent 2" (model 88A only)
 - Duravent 3" (models 88A to 398A)
 - Duravent 4" (model 398A only)
 - Centrotherm 2" (model 88A only)
 - Centrotherm 3" (models 88A to 398A)
 - Centrotherm 4" (model 398A only)
- D-103 SS vertical/horizontal termination
 - Duravent 3" (models 88A to 398A)
 - Duravent 4" (model 398A only)

- D-104 Bird guard
 - Duravent 2" (model 88A only)
 - Duravent 3" (models 88A to 398A)
 - Duravent 4" (model 398A only)
 - Centrotherm 2" (model 88A only)
 - Centrotherm 3" (models 88A to 398A)
 - Centrotherm 4" (model 398A only)
- D-105 Locking band
 - Duravent 2" (model 88A only)
 - Duravent 3" (models 88A to 398A)
 - Duravent 4" (model 398A only)
 - Centrotherm 2" (model 88A only)
 - Centrotherm 3" (models 88A to 398A)
 - Centrotherm 4" (model 398A only)
- D-107 Appliance adapter
 - Centrotherm 2" (model 88A only)
 - Centrotherm 3" (models 88A to 398A)
 - Centrotherm 4" (model 398A only)

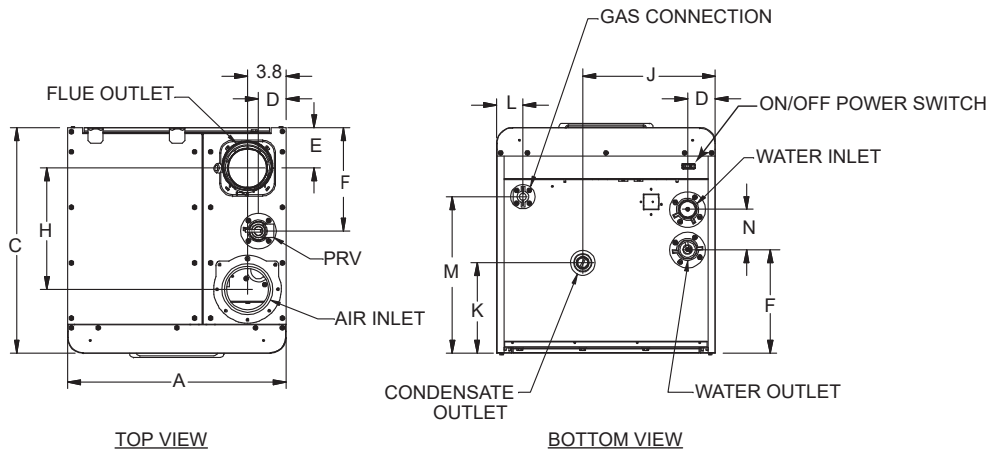
Options

- B-36 Temp-Tracker Mod+ Hybrid (2-4 units)
 - B-37 Temp-Tracker Mod+ Hybrid (5-10 units)
 - B-38 Temp-Tracker Mod+ Hybrid (11-16 units)
 - B-39* EMS 4-20mA remote setpoint interface
 - B-62* BACnet MS/TP interface module

(*Must be used with B-36 to B-38)
 - E-5 Boiler alarm with buzzer
 - F-1 Flow switch – (shipped loose)
 - F-10 Low water cut-off, manual-reset (standard on model 398A)
 - L-1 Propane gas conversion (models 198A-398A only)
 - L-2 Natural gas conversion (models 198A-398A only)
 - P___ Pump: ___ HP, 120V, 1Ø, 60Hz
 - Cast iron
 - Stainless steel
 - S-1/S-2 Gas pressure switch, (low and high) manual-reset
 - Z-12 Condensate neutralizer
- Additional options or accessories**
- _____



For mounting data, see the installation manual.



Dimensions in Inches (mm)																	
Model	A	B	C	D	E	F	H	J	K	L	M	N	P	Vent	Air Inlet	Water Conn. (NPT)	Gas Conn. (NPT)
<input type="checkbox"/> 88AR	16.4 (417)	35.8 (909)	16.5 (419)	2.1 (53)	2.7 (69)	6.3 (160)	7.8 (198)	9.5 (241)	5.5 (140)	1.5 (38)	4.6 (117)	2.8 (71)	2.3 (58)	2 (51)/ 3 (102) (1)	2 (51)/ 3 (102) (1)	1 (25)	1/2 (13)
<input type="checkbox"/> 108AR	16.4 (417)	35.8 (909)	16.5 (419)	2.1 (53)	2.7 (69)	6.3 (160)	7.8 (198)	9.5 (241)	5.5 (140)	1.5 (38)	4.6 (117)	2.8 (71)	2.3 (58)	3 (76)	3 (76)	1 (25)	1/2 (13)
<input type="checkbox"/> 198AR	18.6 (472)	36.2 (919)	19.4 (493)	2 (51)	3.1 (79)	8.2 (208)	10 (254)	11.3 (287)	7.1 (180)	1.7 (43)	11.5 (76.7)	3.6 (91)	2.3 (58)	3 (76)	3 (76)	1-1/4 (32)	3/4 (19)
<input type="checkbox"/> 278AR	18.6 (472)	36.2 (919)	19.4 (493)	2 (51)	3.1 (79)	8.2 (208)	10 (254)	11.3 (287)	7.1 (180)	1.7 (43)	11.5 (76.7)	3.6 (91)	2.3 (58)	3 (76)	3 (76)	1-1/4 (32)	3/4 (19)
<input type="checkbox"/> 398A	21.4 (544)	38.6 (980)	22.1 (561)	2.7 (69)	4 (102)	10.1 (257)	12 (305)	13 (330)	8.9 (226)	2.6 (66)	15.3 (389)	4 (102)	2.1 (53)	3 (76)/ 4 (102) (2)	3 (76)/ 4 (102) (2)	1-1/2 (38)	3/4 (19)

1. Model 88AR collar is 3" standard but can be reduced to 2" with shorter run. See the installation manual.
 2. Model 398A collar is 4" standard but can be reduced to 3" with shorter run. See the installation manual.



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Model	Input MBH (kW)			Minimum Operating Input MBH (kW)	Amps	Operating Weight Lbs. (Kg)
	Min.	Max.	AFUE Rating %			
<input type="checkbox"/> 88AR	17 (5)	85 (25)	95	12 (4)	5	126 (57.1)
<input type="checkbox"/> 108AR	22 (6)	110 (32)	95	13 (4)		128 (58)
<input type="checkbox"/> 198AR	39.8 (12)	199 (58)	95	28.4 (8)		187 (84.8)
<input type="checkbox"/> 278AR	55 (16)	275 (81)	95	36.6 (11)		186 (84.4)
<input type="checkbox"/> 398A	39.9 (12)	399 (117)	96	39.9 (12)		262 (118.8)

RATES OF FLOW AND PRESSURE DROPS												
Model	30°F ΔT		40°F ΔT		50°F ΔT		Minimum Flow			Maximum Flow		
	GPM (L/min)	ΔP ft (m)	GPM (L/min)	ΔP ft (m)	GPM (L/min)	ΔP ft (m)	GPM (L/min)	ΔP ft (m)	ΔT °F (°C)	GPM (L/min)	ΔP ft (m)	ΔT °F (°C)
<input type="checkbox"/> H7-88AR	5.4 (20)	3.3 (1)	4 (15)	2.3 (0.7)	3.2 (12)	1.8 (0.5)	2.7 (10)	1.4 (0.4)	60 (33)	8.1 (31)	1.4 (0.4)	20 (11)
<input type="checkbox"/> H7-108AR	7.0 (27)	4.5 (1.4)	5.2 (20)	3.2 (1)	4.2 (16)	2.4 (0.7)	3.5 (13)	2 (0.6)	60 (33)	10.5 (40)	3 (0.6)	20 (11)
<input type="checkbox"/> H7-198AR	12.6 (48)	6.2 (1.9)	9.5 (36)	4.3 (1.3)	7.6 (29)	3.5 (1.1)	6.3 (24)	3 (0.9)	60 (33)	18.9 (72)	4 (0.9)	20 (11)
<input type="checkbox"/> H7-278AR	17.4 (66)	10.1 (3.1)	13.1 (50)	6.5 (2)	10.5 (40)	4.9 (1.5)	8.7 (33)	4 (1.2)	60 (33)	26.1 (99)	5 (1.2)	20 (11)
<input type="checkbox"/> H7-398A	25.5 (97)	7.4 (2.3)	19.2 (73)	5 (1.5)	15.3 (58)	4 (1.2)	12.8 (49)	3.4 (1)	60 (33)	38.3 (145)	3.4 (1)	20 (11)

Model No.	Standard Boiler Pump *	
	Pump	HP
<input type="checkbox"/> H7-88AR	Taco 007	1/25
<input type="checkbox"/> H7-108AR	Taco 007	1/25
<input type="checkbox"/> H7-198AR	Taco 0010	1/8
<input type="checkbox"/> H7-278AR	Taco 0012	1/8
<input type="checkbox"/> H7-398A	Taco 0012	1/8

*Pump selection based on 30°F ΔT with up to 50 eq. ft. of tubing