



Product Submittal for XFIIRE™ - Type WH
Water Heater
Models 300B-1000B

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

Stainless steel water-tube construction, versatile and adaptive controls. Designed for ease of maintenance.

- Up to 96.5% thermal efficiency at full rate
- 100% factory fire-tested
- VERSA IC® modulating controller with 4.3" color touchscreen display
- Raymote™ remote connectivity - optional
- 7:1 turndown
- Fault history with full diagnostics
- Status display lighting in logo on front panel
- Cascade up to 8 heaters - no external sequencer required
- Modbus RTU BMS port
- Maximum outlet water temperature: 180°F
- Maximum setpoint 160°F
- Zero side clearance to combustibles
- Indoor/outdoor construction - standard
- PVC, CPVC, polypropylene or stainless steel venting certified
- Vent protection with vent temperature sensor
- Limited 5-year heat exchanger warranty
- SCAQMD rule 1146.2 certified ultra-low NOx, < 20 PPM
- Proudly assembled in the USA



Job: _____

Features and Options

Heat Exchanger

- All stainless steel construction with brass connections
- Gasketless heat exchanger design
- ASME H-stamped; 160 PSIG MAWP
- National Board registered
- ASME pressure relief valve (shipped loose)
 - 125 PSIG (standard)
 - ___PSIG (optional)
- T&P gauge (shipped loose)

Power

- 120 VAC, 60 Hz, 1Ø power supply (standard)
- E-16 208 VAC, 60 Hz, 1Ø power supply (optional)

Control

- VERSA IC® with 4.3" color touchscreen display
- C-11 Raymote™ IoT connectivity (optional)
- Ignition module
 - 3-try (standard)
 - C-6 single-try (optional)
- 0-10 VDC input for BMS
- Cascade up to 8 water heaters
- Remote flame sensor
- High limit, manual reset, fixed, 180°F (82°C)
- Alarm dry contact connection
- On/off power switch
- Flow switch (factory mounted)
- F-15 Flow meter and manifold kit (shipped loose)
- Low water cut-off, remote probe
- Blocked vent pressure switch
- Boiler, DHW & system pump contacts
- Vent protection with vent temperature sensor
- Water temperature sensors 10kΩ (2 mtd, 1 loose, 1 well)
- Data logging
- Modbus RTU BMS port
- B-85 BMS Gateway, Modbus RTU to Modbus TCP, N2 Metasys, BACnet IP, or BACnet MS/TP
 - Loose
 - Factory mounted
- B-86 BMS Gateway, Modbus RTU, LonWorks
 - Loose
 - Factory mounted

Burner

- Direct spark ignition (DSI)

Gas Train

- Fuel
 - Natural gas
 - Propane (minimum grade HD-5)
- Dual-seat combination valve
- WH7 electronic modulating firing mode

Construction

- Indoor/outdoor construction
- Enclosed front controls
- PolyTuf powder-coat finish
- Rear connections (water, gas, vent, electrical, combustion air, condensate, and drain)
- Design certified ANSI Z21.10.3/CSA 4.3
- Built-in combustion air filter
- Built-in condensate trap and switch

Venting, cat IV (PVC-CPVC-Polypropylene-Stainless Steel)

- Vent termination
 - D-11 Outdoor flue exhaust termination kit (stainless steel)
 - D-15 Vent termination cap (Cat IV horizontal)
 - Ready to vent with PVC/CPVC
 - Adapter required for polypropylene & stainless steel
 - Extractor fan cascade vent as needed
 - By others
 - Not required
 - Other Options
 - D-18 Flue exhaust boiler adapter
- Truseal™ Air Intake
- D-21 Factory mounted
 - D-22 Loose
 - D-23 Flue exhaust vent support
 - D-33 Polypropylene vent adapter (Centrotherm InnoFlue®)
 - D-37 Motorized combustion air damper

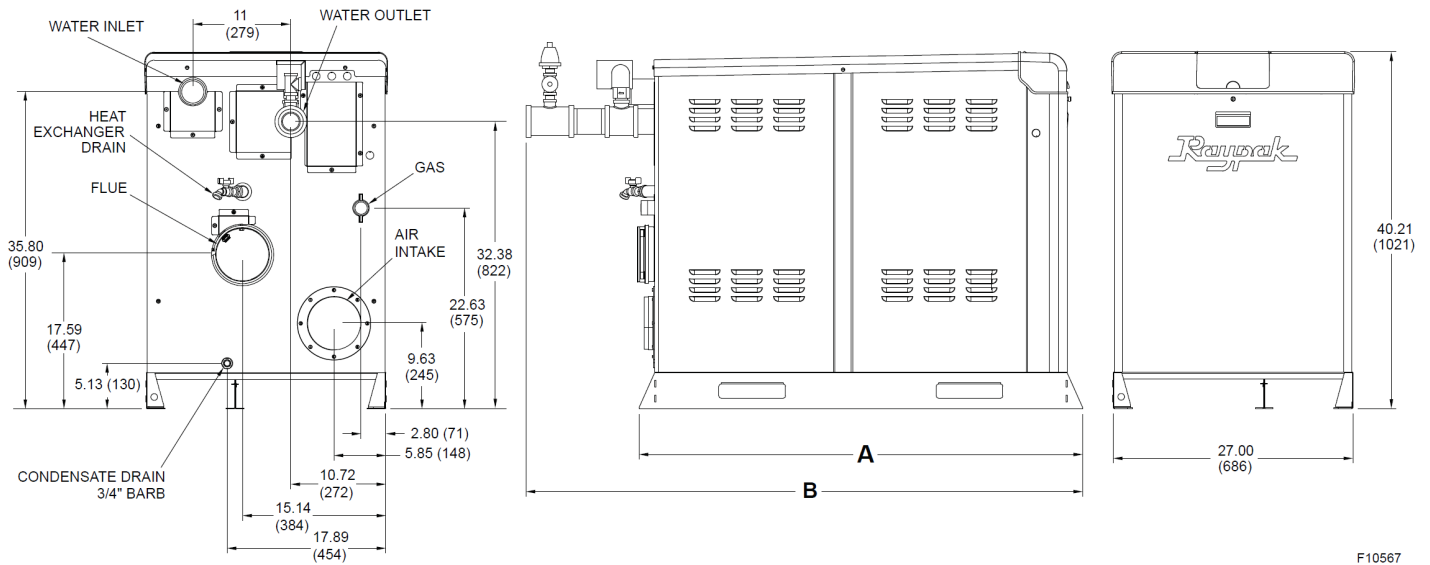
Other Options

- B-31 Tankstat well
- B-32 Outdoor air sensor
- B-36 Controller multiple modulation (temp tracker mod+ hybrid) (up to 4 boilers)
- B-37 Controller multiple modulation (temp tracker mod+ hybrid) (5 to 10 boilers)
- B-38 Controller multiple modulation (temp tracker mod+ hybrid) (11 to 16 boilers)
- B-39 EMS 4-20 mA remote set point interface
- B-62 BACnet interface module
- B-65 Indirect tank aquastat controller

- E-5 Boiler alarm with 4" bell
 - Loose
 - Factory mounted
- E-15 Boiler alarm with buzzer
 - Loose
 - Factory mounted
- I-5 Manual reset, high limit, 200°F (93°C) max
- I-13 Auto reset, high limit, 200°F (93°C) max
- I-14 Auto reset, high limit, 180°F (82°C) max
- I-20 Manual reset, high limit, 180°F (82°C) max
- I-21 Auto reset, high limit, fixed, 200°F (93°C) max
- M-1 Safety valve, motorized
- M-10 Safety valve, solenoid
- M-15 Vent valve (requires M-1 or M-10)
- P-__ Pump: __HP, 120 VAC, 1Ø, 60 Hz, Bronze/SS
- S-1 Low gas pressure switch, manual reset
- S-2 High gas pressure switch, manual reset
- Z-4 T&P relief valve
- Z-12 Condensate treatment kit
- Z-13 Multi-unit mounting

Additional Options or Accessories

Regulatory Agency requirements



F10567

Model WH7-	MBTUH (kWh)		Turn Down	Thermal Efficiency	Dimensions - Inches (mm)						Approx. Shipping Weight lbs. (kg)
	Input	Output			A	B	Water Inlet/Outlet NPT	Flue Ø*	Air Intake Ø	Gas Connection NPT	
<input type="checkbox"/> 300B	300 (88)	289 (85)	7:1	96.5%	36.83 (935)	45.34 (1151)	2 (50)	4 (100)	4 (100)	1 (25)	411 (186)
<input type="checkbox"/> 400B	399 (117)	383 (112)		96.0%	36.83 (935)	45.34 (1151)	2 (50)	4 (100)	4 (100)	1 (25)	411 (186)
<input type="checkbox"/> 500B	500 (147)	480 (141)		96.0%	36.83 (935)	45.34 (1151)	2 (50)	4 (100)	4 (100)	1 (25)	416 (189)
<input type="checkbox"/> 650B	650 (191)	624 (183)		96.0%	45.25 (1149)	54.66 (1388)	2 (50)	6 (150)	6 (150)	1-1/4 (32)	501 (227)
<input type="checkbox"/> 800B	800 (235)	768 (225)		96.0%	45.25 (1149)	54.66 (1388)	2 (50)	6 (150)	6 (150)	1-1/4 (32)	547 (248)
<input type="checkbox"/> 1000B	1000 (294)	960 (281)		96.0%	50 (1270)	62.75 (1593)	2.5 (65)	6 (150)	6 (150)	1-1/4 (32)	627 (284)

* PVC/CPVC Standard

Clearances - Inches (mm)							
	Floor	Rear	Right	Left	Top	Front	Vent
Combustible Minimum	0	24 (610)	0	0	0	Open	1 (25)
Minimum Service	0	24 (610)	0	0	0	30 (762)	1 (25)

RECOVERY RATES - GPH (LPH)									
Model WH7-	Temperature Rise - °F (°C)								
	20 (11)	30 (17)	40 (22)	50 (28)	60 (33)	70 (39)	80 (44)	90 (50)	100 (56)
<input type="checkbox"/> 300B	1727 (6537)	1152 (4360)	864 (3270)	691 (2615)	576 (2180)	494 (1870)	432 (1635)	384 (1453)	349 (1321)
<input type="checkbox"/> 400B	2297 (8694)	1532 (5799)	1149 (4349)	919 (3478)	766 (2899)	656 (2483)	574 (2173)	511 (1934)	464 (1756)
<input type="checkbox"/> 500B	2879 (10897)	1919 (7263)	1439 (5447)	1152 (4360)	960 (3634)	823 (3115)	720 (2725)	640 (2422)	582 (2203)
<input type="checkbox"/> 650B	3742 (14163)	2495 (9444)	1871 (7082)	1497 (5666)	1247 (4720)	1069 (4046)	936 (3543)	832 (3149)	756 (2861)
<input type="checkbox"/> 800B	4604 (17434)	3071 (11624)	2303 (8717)	1842 (6972)	1535 (5810)	1316 (4981)	1152 (4360)	1024 (3876)	931 (3524)
<input type="checkbox"/> 1000B	5758 (21794)	3838 (14527)	2879 (10897)	2303 (8717)	1919 (7263)	1645 (6226)	1439 (5447)	1279 (4841)	1164 (4406)

Model WH7-	Boiler Current Draw*	
	120 VAC	208 VAC**
<input type="checkbox"/> 300B	<7.5 A	<5.0 A
<input type="checkbox"/> 400B	<7.5 A	<5.0 A
<input type="checkbox"/> 500B	<5.0 A	<5.0 A
<input type="checkbox"/> 650B	<5.0 A	<5.0 A
<input type="checkbox"/> 800B	<7.5 A	<7.5 A
<input type="checkbox"/> 1000B	<7.5 A	<7.5 A

* Current draw is for the heater only. Supply breaker must have a delayed trip.
 ** Single phase only.

Flow and Pressure Loss Information

Model WH7-	MBTUH (kW/h)		Up to 15 GPG				Min. Flow			Max. Flow		
	Input	Output	ΔT °F (°C)	GPM (L/min)	ΔP ft.wc. (kPa)	SHL ft.wc. (kPa)	GPM (L/min)	ΔP ft.wc. (kPa)	ΔT °F (°C)	GPM (L/min)	ΔP ft.wc. (kPa)	ΔT °F (°C)
<input type="checkbox"/> 300B	300 (88)	289 (85)	16 (9)	37 (140)	10 (30)	14 (42)	28 (106)	6 (18)	21 (12)	38 (144)	10 (30)	15 (8)
<input type="checkbox"/> 400B	399 (117)	383 (112)	21 (12)	37 (140)	10 (30)	14 (42)	28 (106)	6 (18)	27 (15)	50 (189)	17 (51)	15 (8)
<input type="checkbox"/> 500B	500 (147)	480 (141)	22 (12)	44 (167)	11 (33)	16 (48)	33 (125)	6 (18)	29 (16)	62 (235)	20 (60)	15 (8)
<input type="checkbox"/> 650B	650 (191)	624 (183)	21 (12)	59 (223)	10 (30)	17 (51)	44 (164)	6 (18)	28 (16)	80 (303)	17 (51)	16 (9)
<input type="checkbox"/> 800B	800 (235)	768 (225)	21 (12)	74 (280)	11 (33)	22 (66)	55 (208)	7 (21)	28 (16)	90 (341)	16 (48)	17 (9)
<input type="checkbox"/> 1000B	1000 (294)	960 (281)	22 (12)	88 (333)	12 (36)	24 (72)	66 (250)	7 (21)	29 (16)	90 (341)	12 (36)	21 (12)

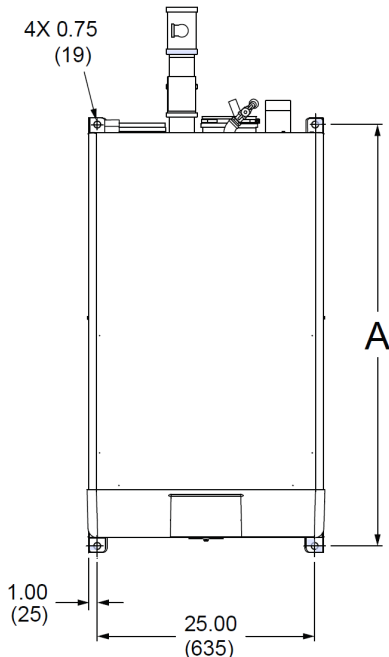
Maximum flow based on 15°F ΔT (8 °C) or 8 ft/s (2.4 m/s) velocity, whichever is less.

SHL = System Head Loss of water heater plus 100 equivalent feet (30 m) of pipe.

When water hardness is higher than 15 GPG, a softener MUST be used.

Footprint and Base Anchor Bolt Pattern

Model WH7-	Dimensions Inches (mm)
	A
<input type="checkbox"/> 300B-500B	35.33 (897)
<input type="checkbox"/> 650B-800B	43.75 (1111)
<input type="checkbox"/> 1000B	48.50 (1231)



Dimensions are shown in inches (mm)

Models	WH7 Soft Water Pump (4-12 GPG)				
	TACO MDL	HP	Amps	GPM/FT. HD.	ΔT °F (°C)
<input type="checkbox"/> 300B	0012	1/8	1.3	30@8.5'	19 (11)
<input type="checkbox"/> 400B	0012	1/8	1.3	30@8.5'	26 (14)
<input type="checkbox"/> 500B	0012	1/8	1.3	32@7.8'	30 (17)
<input type="checkbox"/> 650B	1611	1/4	5.7	55@14'	23 (13)
<input type="checkbox"/> 800B	1611	1/4	5.7	57@13'	27 (15)
<input type="checkbox"/> 1000B	1611	1/4	5.7	65@9.8'	30 (16)

Models	WH7 Medium Water Pump (up to 15 GPG)				
	TACO MDL	HP	Amps	GPM/FT. HD.	ΔT °F (°C)
<input type="checkbox"/> 300B	0012	1/8	1.3	30@8.5'	19 (11)
<input type="checkbox"/> 400B	1611	1/4	5.7	42@15.9'	18 (10)
<input type="checkbox"/> 500B	1630	1/2	7.0	53@20.1'	18 (10)
<input type="checkbox"/> 650B	1630	1/2	7.0	65@19'	19 (11)
<input type="checkbox"/> 800B	1630	1/2	7.0	70@18.9'	22 (12)
<input type="checkbox"/> 1000B	1630	1/2	7.0	85@16'	23 (13)