



**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
- Limited 5-year heat exchanger warranty
- SCAQMD rule 1146.2 certified ultra-low NOx, < 20 PPM
- Proudly assembled in the USA



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
- 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

Cat IV Venting

(PVC-CPVC-Polypropylene-Stainless Steel)

- Vent termination
 - D-11 Outdoor flue exhaust termination kit (stainless steel)
 - D-15 Vent termination cap (Cat IV horizontal)
- 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

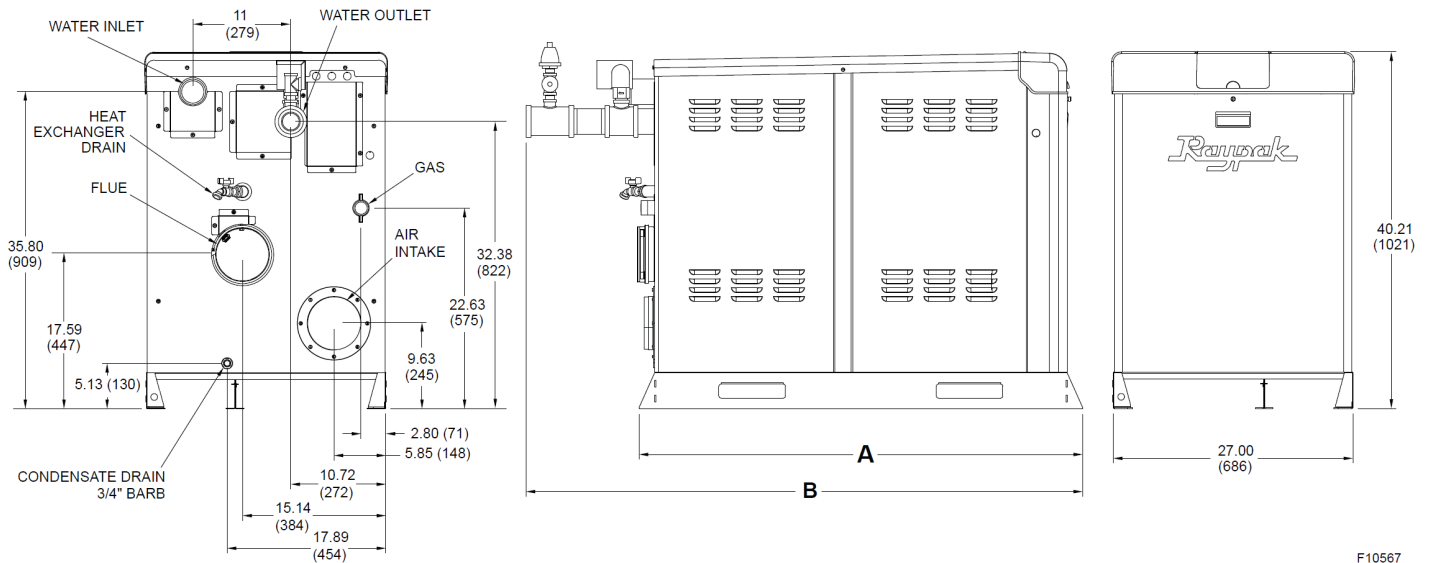
Other Options

- 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) | | | 36.83 (935) | 45.34 (1151) | 2 (50) | 4 (100) | 4 (100) | 1 (25) | 411 (186) |
| <input type="checkbox"/> 500B | 500 (147) | 480 (141) | | | 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) | | | 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) | | | 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) |

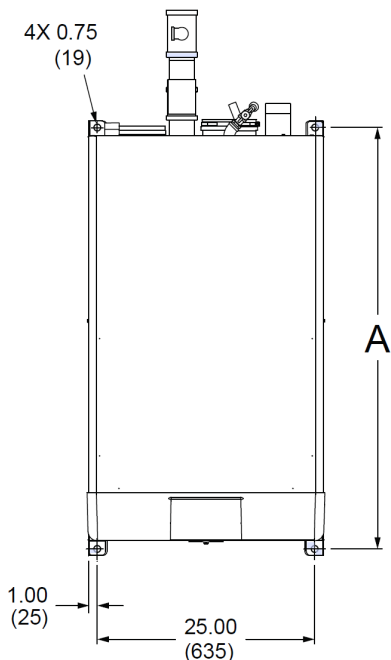
Maximum flow based on 15°F ΔT (8 °C) or 8 ft/s (2.4 m/s) velocity, whichever is less.

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) |