



PRE-RELEASE SUBMITTAL FORM (60%)

All information contained in this document is preliminary and subject to change.

Pre-Release Submittal for XForm™ Water Heater Models: 300C-1500C

Date: \_\_\_\_\_ Job: \_\_\_\_\_ Location: \_\_\_\_\_
Equipment Tags: \_\_\_\_\_ Engineer: \_\_\_\_\_ Contractor: \_\_\_\_\_
Model: \_\_\_\_\_ Notes: \_\_\_\_\_
Prepared by: \_\_\_\_\_ Indoor [ ] Outdoor [ ]

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

- Up to 96.5% thermal efficiency at full-rate
● V15 modulating controller with 4.3" color touchscreen display
● Raymote™ remote connectivity
● 7:1 turndown
● Fault history with full diagnostics
● Status display lighting on front panel
● Cascade up to 24 heaters - no external sequencer required
● Modbus RTU BMS port
● Minimum inlet temperature: 41°F
● Maximum outlet water temperature: 200°F
● Maximum tank setpoint 160°F(1)
● Zero side clearance to combustibles
● Indoor/outdoor construction - standard
● PVC, CPVC, polypropylene or stainless-steel venting certified
● Up to 150 ft. vent length
● Common vent capable
● Vent protection with vent temperature sensor
● Limited 5-year heat exchanger warranty



\*Our product has been certified by a third-party to meet SC-AQMD Rule 1146.2 standards.

\*\*Our products undergo a rigorous verification process that validates the product is ready to leave the factory and is prepared for installation and start-up.

(1) Tank setpoint can be set up to 190°F. For tank setpoints greater than 160°F, the factory must be consulted to ensure system requirements are met.





**Pre-Release Submittal for  
XForm™ Water Heater Models:  
300C-1500C**

**Job:** \_\_\_\_\_

**STANDARD PRODUCT**

MODEL SIZE	ITEM# [WITHOUT PUMP]	ITEM# [WITH PUMP & OUTDOOR COVER]
300C	<input type="checkbox"/> 100-10007290	<input type="checkbox"/> 100-10004652
400C	<input type="checkbox"/> 100-10007291	<input type="checkbox"/> 100-10004653
500C	<input type="checkbox"/> 100-10007292	<input type="checkbox"/> 100-10004654
650C	<input type="checkbox"/> 100-10007293	<input type="checkbox"/> 100-10004655
800C	<input type="checkbox"/> 100-10007294	<input type="checkbox"/> 100-10004656
1000C	<input type="checkbox"/> 100-10007295	<input type="checkbox"/> 100-10004657
1250C	<input type="checkbox"/> 100-10007296	<input type="checkbox"/> 100-10004658
1500C	<input type="checkbox"/> 100-10007297	<input type="checkbox"/> 100-10004659

**NOTE:** See page 5 for pump details.

**Standard Features:**

**Heat Exchanger:**

- All stainless-steel construction with brass connections
- Gasket-less heat exchanger design
- ASME HLW-stamped; 160 PSIG MAWP
- National Board registered
- T&P gauge
- 125 psig Pressure relief valve (PRV)

**Gas Type:**

- Natural gas

**Power:**

- 120 VAC, 60 Hz, 1Ø power supply

**Control:**

- V15 controller with 4.3" color touchscreen display
- Raymote™ IoT remote connectivity
- Remote flame sensor
- 3-try ignition module
- Cascade up to 24 water heaters
- I-13 High limit adjustable, auto-reset, 200°F max
- High limit fixed, manual-reset, 200°F
- S-1 Low gas pressure switch, manual-reset (650C-1500C)
- S-2 High gas pressure switch, manual-reset (650C-1500C)
- General alarm - dry contact

- On/off power switch (breaker-based)
- Flow switch (factory-mounted)
- Low water cut-off, remote probe
- Modbus RTU BMS port
- BMS - Protonode gateway
- Blocked vent pressure switch
- Heater pump contact
- Vent protection with vent temperature sensor
- Water temperature sensors 10kΩ (2 mounted, 1 shipped loose, 1 well)
- Error code logging

**Burner:**

- Direct spark ignition (DSI)

**Construction:**

- Indoor/outdoor construction
- Enclosed front controls
- PolyTuf powder-coat finish
- Connections:  
Rear: (water, gas, vent, combustion air, condensate, drain)  
Front or rear: electrical
- 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):**

- \*Sizes 300C-1000C ready to vent with PVC/CPVC (adapter required for polypropylene or stainless-steel)
- \*Sizes 1250C-1500C ready to vent with stainless-steel
- D-21 Truseal™ air intake

**Pump:**

- See page 5 for pump details



**Commercial**



Job: \_\_\_\_\_

## ACCESSORIES AND ADD-ONS

**NOTE: All accessories and add-ons ship loose and separate for field installation.**

### Gas Train:

- Fuel
  - Propane field conversion kit - PENDING  
*\*SJVAPCD Rule 4308 certified ultra-low NOx,  
< 30PPM for LPG.*

### Control:

- BMS - Protonode gateway
  - B-85 BACnet IP and BACnet MS/TP
  - B-86 LonWorks BMS

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

- Vent termination and adapter kit (options)
  - D-11 Outdoor flue exhaust termination kit  
(stainless-steel)
  - D-18 Vent adapter for stainless-steel flue
  - D-33 Vent adapter for polypropylene flue

### Other Options:

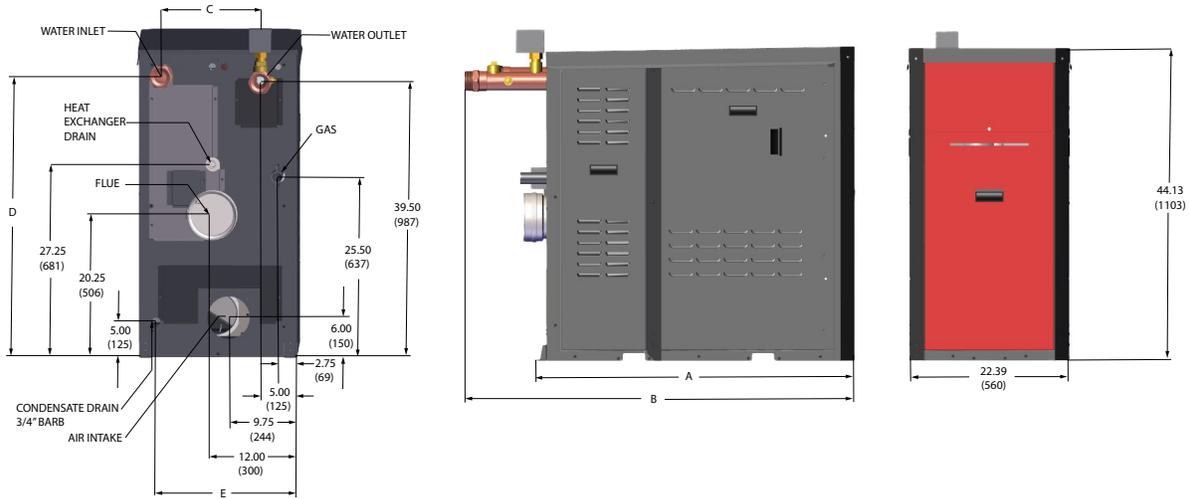
- B-31 Tankstat well
- B-39 EMS 4-20 mA remote setpoint interface
- E-5 alarm with 4" bell
- E-15 alarm with buzzer
- I-5 High limit, adjustable, manual-reset, 200°F
- I-14 High limit, adjustable, auto-reset, 180°F
- I-20 High limit, adjustable, manual-reset, 180°F
- Z-4 T&P relief valve
- Z-12 Condensate treatment kit





Pre-Release Submittal for  
**XForm™ Water Heater Models:**  
**300C-1500C**

Job: \_\_\_\_\_



Model WH7-	MBTUH (kWh)		Turn Down	Thermal Efficiency	Dimensions - Inches (mm)								Approx. Shipping Weight lbs. (kg) (With Pump)	
	Input	Output			A	B	C	D	E	Water Inlet/Outlet NPT	Flue Ø*	Air Intake Ø		Gas Connection NPT
<input type="checkbox"/> 300C	300 (88)	289 (85)	7:1	96.5%	30.75 (769)	41.16 (1029)	12.75 (319)	37.5 (938)	20.0 (500)	2.0 (51)	4 (100)	4 (100)	1 (25)	521 (236)
<input type="checkbox"/> 400C	399 (117)	383 (112)				39.50 (987)								51.0 (1275)
<input type="checkbox"/> 500C	500 (147)	480 (141)			40.25 (1006)	48.0 (1200)	648 (293)							
<input type="checkbox"/> 650C	650 (191)	624 (183)			45.0 (1125)	54.75 (1369)	682 (309)							
<input type="checkbox"/> 800C	800 (235)	768 (225)		96.0%	52.75 (1319)	62.75 (1569)	14.0 (350)	40.0 (1000)	19.25 (481)	2.5 (63)	6 (150)	6 (150)	1-1/2 (32)	758 (343)
<input type="checkbox"/> 1000C	1000 (294)	960 (281)												839 (380)
<input type="checkbox"/> 1250C	1250 (368)	1200 (351)			8 (200)	8 (200)	849 (385)							
<input type="checkbox"/> 1500C	1500 (440)	1440 (422)			96.0%									

\* PVC/CPVC Standard

Clearances - Inches (mm)							
	Floor	Rear	Right	Left	Top	Front	Vent
Combustible Minimum	0	24 (610)	0	0	0	Open	1 (25)
Service Minimum	0	24 (610)	0	0	12 (305)	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"/> 300C	1727 (6537)	1152 (4360)	864 (3270)	691 (2615)	576 (2180)	494 (1870)	432 (1635)	384 (1453)	349 (1321)
<input type="checkbox"/> 400C	2297 (8695)	1532 (5799)	1149 (4349)	919 (3478)	766 (2899)	656 (2483)	574 (2173)	511 (1934)	464 (1756)
<input type="checkbox"/> 500C	2879 (10898)	1919 (7264)	1439 (5447)	1152 (4360)	960 (3633)	823 (3115)	720 (2725)	640 (2422)	582 (2203)
<input type="checkbox"/> 650C	3742 (14165)	2495 (9444)	1871 (7082)	1497 (5666)	1247 (4720)	1069 (4046)	936 (3543)	832 (3149)	756 (2861)
<input type="checkbox"/> 800C	4604 (17428)	3071 (11624)	2303 (8717)	1842 (6972)	1535 (5810)	1316 (4981)	1152 (4360)	1024 (3876)	931 (3524)
<input type="checkbox"/> 1000C	5758 (21796)	3838 (14528)	2879 (10898)	2303 (8717)	1919 (7264)	1645 (6227)	1439 (5447)	1279 (4841)	1164 (4406)
<input type="checkbox"/> 1250C	7197 (27243)	4798 (18162)	3598 (13619)	2879 (10898)	2399 (9081)	2056 (7782)	1799 (6809)	1599 (6052)	1455 (5507)
<input type="checkbox"/> 1500C	8636 (32690)	5758 (21796)	4318 (16345)	3455 (13078)	2897 (10898)	2468 (9342)	2159 (8172)	1919 (7264)	1745 (6605)

Model WH7-	Boiler Current Draw*
	<input type="checkbox"/> 120 VAC
<input type="checkbox"/> 300C	<7.5 A
<input type="checkbox"/> 400C	
<input type="checkbox"/> 500C	<5.0 A
<input type="checkbox"/> 650C	
<input type="checkbox"/> 800C	<7.5 A
<input type="checkbox"/> 1000C	
<input type="checkbox"/> 1250C	
<input type="checkbox"/> 1500C	

\*Current draw is for the heater only.

**NOTE:** Supply breaker must have a delayed trip.



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XForm™ Water Heater Models:  
300C-1500C**

**Job:** \_\_\_\_\_

**Flow and Pressure Loss Information**

Model WH7-	MBTUH (kW/h)		Up to 15 GPG				Min. Flow*				Max. Flow**			
	Input	Output	GPM (L/min)	ΔT °F (°C)	ΔP ft.wc. (kPa)	SHL ft.wc. (kPa)	GPM (L/min)	ΔT °F (°C)	ΔP ft.wc. (kPa)	SHL ft.wc. (kPa)	GPM (L/min)	ΔT °F (°C)	ΔP ft.wc. (kPa)	SHL ft.wc. (kPa)
<input type="checkbox"/> 300C	300 (88)	290 (85)	41 (155)	44 (25)	13 (39)	17 (50)	31 (116)	19 (10)	6.5 (19)	9 (26)	60 (227)	10 (5)	26 (78)	33.9 (101)
<input type="checkbox"/> 400C	399 (117)	383 (112)	41 (155)	59 (33)	13 (39)	17 (50)	31 (116)	25 (14)	6.5 (19)	9 (26)	60 (227)	13 (7)	26 (78)	33.9 (101)
<input type="checkbox"/> 500C	500 (147)	480 (141)	49 (186)	74 (41)	13 (39)	19 (55)	37 (139)	26 (14)	7.3 (22)	11 (33)	70 (265)	14 (8)	26 (78)	36.4 (109)
<input type="checkbox"/> 650C	650 (190)	624 (183)	66 (248)	90 (50)	13.8 (41)	24 (72)	49 (186)	25 (14)	7.3 (22)	13 (38)	80 (303)	16 (9)	20 (60)	32.3 (97)
<input type="checkbox"/> 800C	800 (234)	768 (225)	82 (310)	102 (57)	15.0 (45)	27 (82)	61 (232)	25 (14)	8.3 (25)	16 (48)	90 (341)	17 (9)	18.5 (55)	33.8 (101)
<input type="checkbox"/> 1000C	999 (293)	959 (281)	98 (372)	114 (63)	16.8 (50)	24 (71)	74 (279)	26 (15)	9.0 (27)	13 (39)	115 (435)	17 (9)	21.5 (64)	30.5 (91)
<input type="checkbox"/> 1250C	1250 (366)	1206 (354)	107 (405)	114 (62)	21 (63)	29 (88)	80 (302)	30 (17)	11 (33)	16 (47)	115 (435)	21 (12)	23.5 (70)	32.5 (97)
<input type="checkbox"/> 1500C	1500 (440)	1440 (422)	107 (405)	137 (76)	21 (63)	29 (88)	80 (302)	36 (20)	11 (33)	16 (47)	115 (435)	25 (14)	23.5 (70)	32.5 (97)

Pipe sizing based on not exceeding 8 feet per second velocity.

ΔP = Feet of Head.

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

Max flow may require larger than 3 inch piping to not exceed max velocity.

\* Minimum flow based on less than 12 grains per gallon water hardness (calcium carbonate).

\*\* Maximum flow based on 15°F (8°C) ΔT or 8 feet per second (2.4 m per second) velocity, whichever is less.

**Pump Information**

Models	WH7 Water Pump (up to 15 GPG)					
	TACO MDL	HP	Amps	Impeller Size	GPM/FT. HD.	ΔT °F (°C)
<input type="checkbox"/> 300C	1611	1/4	5.7	4.5"	42@15.9'	14 (8)
<input type="checkbox"/> 400C					42@15.9'	18 (10)
<input type="checkbox"/> 500C					45@14.8'	21 (12)
<input type="checkbox"/> 650C	1630	1/2	7	4.9"	66@19.6'	19 (11)
<input type="checkbox"/> 800C					70@18.9'	22 (12)
<input type="checkbox"/> 1000C					85@15.5'	23 (13)
<input type="checkbox"/> 1250C	1634	1	15.8	6.2"	106@30'	23 (13)
<input type="checkbox"/> 1500C					106@30'	23 (13)

**NOTE:** Pump selection based on heater plus 100 equivalent feet (30m) of pipe.

(TACO MDL 1611 & 1630) outdoor pump cover PN: 000913



**Commercial**

Job: \_\_\_\_\_

**Center of Gravity Information**

Model WH7-	Dimensions - Inches (mm)			Wet Weight lbs. (kg)
	X	Y	Z	
☐ 300C	11.0 (279)	19.6 (498)	22.0 (559)	TBD
☐ 400C	11.0 (279)	19.6 (498)	22.0 (559)	TBD
☐ 500C	11.0 (279)	17.0 (432)	22.0 (559)	TBD
☐ 650C	11.0 (279)	24.5 (622)	22.2 (564)	TBD
☐ 800C	11.0 (279)	23.0 (584)	22.5 (571)	TBD
☐ 1000C	11.0 (279)	24.4 (620)	22.5 (571)	TBD
☐ 1250C	11.0 (279)	29.7 (754)	23.0 (584)	TBD
☐ 1500C	11.0 (279)	29.7 (754)	23.0 (584)	TBD

**Footprint and Base Anchor Bolt Pattern**

Model WH7-	Dimensions- Inches (mm)
	A
☐ 300C-500C	29.83 (757)
☐ 650C-800C	39.25 (996)
☐ 1000C	44.03 (1118)
☐ 1250C-1500C	51.78 (1315)

