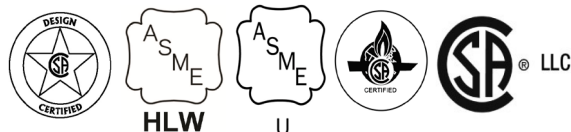


Date: \_\_\_\_\_ Job: \_\_\_\_\_ Location: \_\_\_\_\_  
 Equipment Tags: \_\_\_\_\_ Engineer: \_\_\_\_\_ Contractor: \_\_\_\_\_  
 Model: \_\_\_\_\_ Notes: \_\_\_\_\_  
 Prepared by: \_\_\_\_\_ Indoor  Outdoor  Gas Type: Natural Gas  Propane

**The XTherm combines the proven capability of a finned copper or cupronickel tube heat exchanger with a stainless steel condensing heat exchanger to maximize thermal efficiency and provide long-term reliability.**

- 97% thermal efficiency at full rate
- 100% factory fire-tested
- VERSA IC® modulating controller with 7" color touchscreen display
- Raymote™ IoT connectivity standard
- Full electronic modulation, 60% min fire under normal conditions
- Full safety diagnostics with history
- Status display lights
- Cascade up to 8 heaters - no external sequencer required
- Modbus RTU BMS port
- CSA low-lead certified ≤ .25% lead
- Maximum outlet water temperature: 200°F (93°C)
- Maximum tank set-point temperature: 160°F (71°C)
- Minimum inlet water temperature: 50°F (10°C)
- Limited 25-year thermal shock warranty
- Limited 5-year copper/10-year cupronickel primary heat exchanger warranty
- Limited 10-year stainless steel condensing heat exchanger warranty
- SCAQMD Rule 1146.2 certified, Ultra-Low NOx < 20 PPM
- Must be used in conjunction with a storage tank for proper operation
- Proudly assembled in the USA



**Standard Features**

**Heat Exchanger**

- Headers - bronze
- ASME HLW stamped; 160 PSIG MAWP
- National board registered
- Finned tubing
  - Copper (standard)
  - A-3 cupronickel (optional)
- ASME powder-coated tube sheet
- Silicone high-temp O-rings
- ASME pressure relief valve, shipped loose
  - 125 PSIG (standard)
  - 150 PSIG (optional)
- Air bleed valve, manual (2)
- T&P gauge, shipped loose
- Four-pass primary heat exchanger
- Secondary stainless steel condensing heat exchanger - U stamped
- Stainless steel evaporator plate
- 4-inch grooved copper water connections

**Power supply**

- 240V, 60Hz, 1Ø (standard)
- E-16 208V, 60Hz, 1Ø (optional)
- 240/120V, 60Hz, transformer
- 240/24V, 60Hz, transformer

**Control**

- VERSA IC<sup>®</sup> built-in controller
- 7" (178 mm) color HD touchscreen display
- Raymote™ IoT connectivity
- Cascade up to 8 heaters
- Cascade interstage delay settings
- Ignition module
  - 3-Try (standard)
  - C-6 Single-try (optional)
- Remote flame sensor
- High limit, manual reset, fixed, 180°F
- On/off power switch
- Flow switch
- Blocked vent pressure switch
- Freeze protection
- Alarm dry contact
- High gas pressure switch

- Pump outputs - pilot duty
  - Injector system pump
  - Recirculation pump
- Programmable pump time delays
- Modulating temperature control, 60% min. fire under normal conditions
- Water temperature sensors 10KΩ (2 mtd, 1 loose, 1 well)
- Cold water protection package
- Modbus RTU BMS port (up to 115K baud rate, see Cat. No. 5000.73)
  - B-85 BACnet MS/TP, BACnet IP, Metasys N2 or Modbus TCP (optional)
  - B-86 BMS Gateway, Modbus RTU to LonWorks (optional)

**Burner**

- Hot surface ignition (HSI)
- Radially-fired knitted burner

**Gas Train**

- Fuel
  - Natural gas
  - Propane (minimum grade HD-5)
- Dual-seat combination valve
- Manual shutoff firing valve

**Construction**

- Indoor/outdoor construction
- Enclosed front controls
- PolyTuf powder coat finish
- Rear connections (water, gas, vent, electrical, combustion air, condensate drain)
- Combustion air filter
- Front connection low-voltage wiring
- Design certified ANSI Z21.10.3/CSA 4.3
- CSA Low-lead certified ≤ .25% lead

**Venting, cat IV**

- D-11 Vent termination, outdoor
- D-15 Vent termination, sidewall
- D-19 Adapter, flue termination
- D-22 Truseal<sup>®</sup> air intake/direct vent
- D-23 Flue support brackets
- D-33 Adapter, Centrotherm™ polypro, with 180°F manual-reset limit (shipped loose)
- D-37 Motorized combustion air damper

**Options**

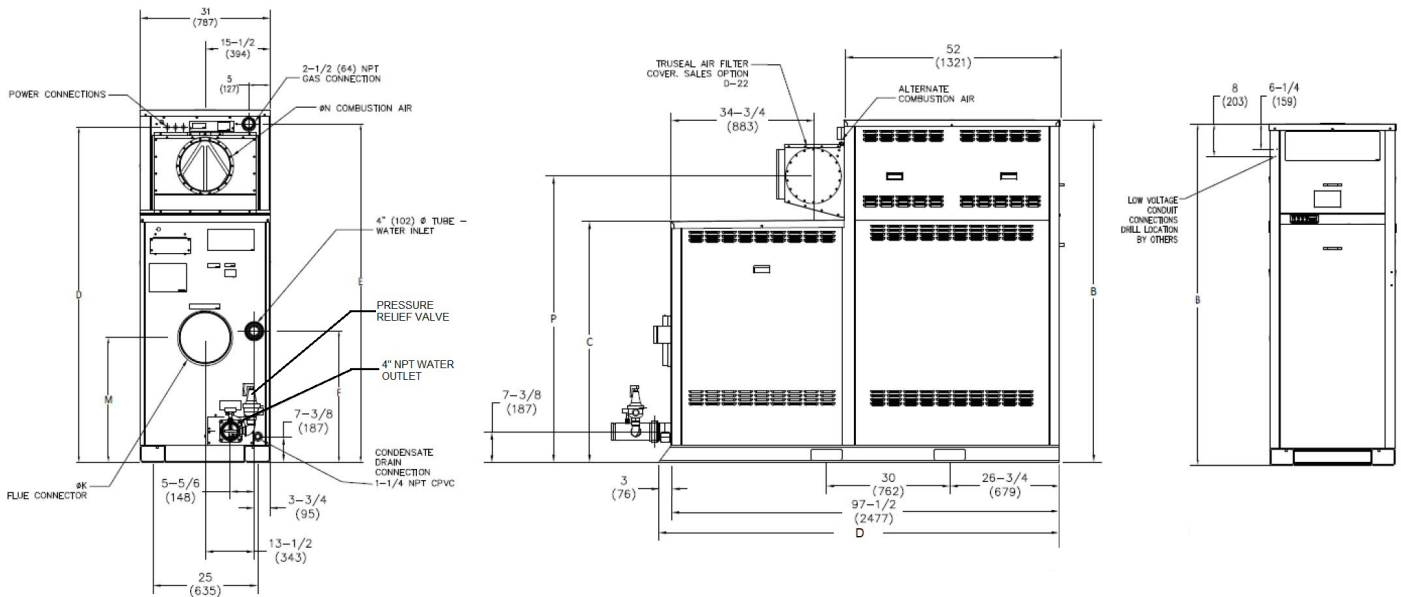
- B-31 Sensor well assembly
- E-15 Alarm with buzzer
- F-10 Low water cut-off, manual reset & test button
- I-5 High limit, adj. manual reset, 200°F max
- I-13 High limit, adj. auto reset, 200°F max
- I-14 High limit, adj. auto reset, 180°F max
- I-20 High limit, adj. manual reset, 180°F max
- M-1 Safety valve, motorized
- M-10 Safety valve, solenoid
- M-15 Safety valve, vent valve (requires M-1 or M-10)
- S-1 Low gas pressure switch, manual reset
- Z-4 T & P relief valve
- Z-12 Condensate treatment kit

**TempTracker Mod+Hybrid multi-heater digital temp controllers (shipped loose)**

- B-36 2-4 heaters
- B-37 5-10 heaters
- B-38 11-16 heaters
- B-39\* EMS 4-20 mA remote setpoint interface
- B-62\* BACnet interface module (\*requires B-36 to B-38)

**Additional options or accessories**

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\* Water connections are grooved copper tube.  
Dimensions are shown in inches (mm).

Model	MBTUH (kW)		Dimensions - inches (mm)									Thermal Efficiency	Shipping Weight lbs. (kg)
	Input	Output	B	C	D	E	F	K Flue	M	N C/A	P		
<input type="checkbox"/> 2505	2501 (733)	2426 (711)	68-1/4 (1733.6)	43-1/2 (1104.9)	64-1/8 (1629)	79-1/4 (2013)	30-7/8 (784.2)	10	29-1/4 (743)	10	70 (1778)	97%	2656 (1204.7)
<input type="checkbox"/> 3005	3000 (879.2)	2910 (852.8)	73-1/4 (1860.6)	48-1/2 (1231.9)	69-1/8 (1756)	74-1/4 (1886)	31-1/8 (790.6)	10	28-1/2 (723.9)	10	65 (1651)		2775 (1258.7)
<input type="checkbox"/> 3505	3500 (1025.7)	3395 (995)	78-1/4 (1987.6)	53-1/2 (1358.9)	74 (1879.6)	69-1/4 (1759)	26-1/8 (663.6)	10	23-1/2 (596.9)	12	60 (1524)		2925 (1326.8)
<input type="checkbox"/> 4005	4000 (1172.3)	3880 (1137.1)	83-1/4 (2114.6)	58-1/2 (1485.9)	79 (2006.6)	64-1/4 (1632)	21-1/8 (536.6)	12	18-1/2 (469.9)	12	55 (1397)		3058 (1387.1)

Clearances - inches (mm)									
Heater Side	Front	Rear	Right	Left	Top	Floor	Vent	Vent Cap (Outdoor)	
Minimum Clearances from Combustible Surfaces in. (mm)	Open	12 (304.8)	1 (25.4)	1 (25.4)	0	0	1 (25.4)	12 (304.8)	
Minimum Service Clearance in. (mm)	30 (762)	36 (914.4)	24 (609.6)	1 (25.4)	10 (254)	0	1 (25.4)	12 (304.8)	

Model WH7-	Internal Boiler Pump						External Injection Pump	
	<input type="checkbox"/> Soft (3-5 GPG)		<input type="checkbox"/> Medium (6-15 GPG)		<input type="checkbox"/> Hard (16-25 GPG)		HP	Amp Draw
	HP	Amp Draw	HP	Amp Draw	HP	Amp Draw		
<input type="checkbox"/> 2505	1.5	8.2	1.5	8.2	1.5	8.2	1.0	7.0
<input type="checkbox"/> 3005	1.5	8.2	3.0	16	3.0	16	1.5	8.2
<input type="checkbox"/> 3505	1.5	8.2	3.0	16	3.0	16	1.5	8.2
<input type="checkbox"/> 4005	3.0	16	3.0	16	3.0	16	1.5	8.2

Model	Boiler Current Draw - Amps	
	<input type="checkbox"/> 208VAC	<input type="checkbox"/> 240VAC
<input type="checkbox"/> 2505	16	12
<input type="checkbox"/> 3005	23	15
<input type="checkbox"/> 3505	26	17
<input type="checkbox"/> 4005	37	20

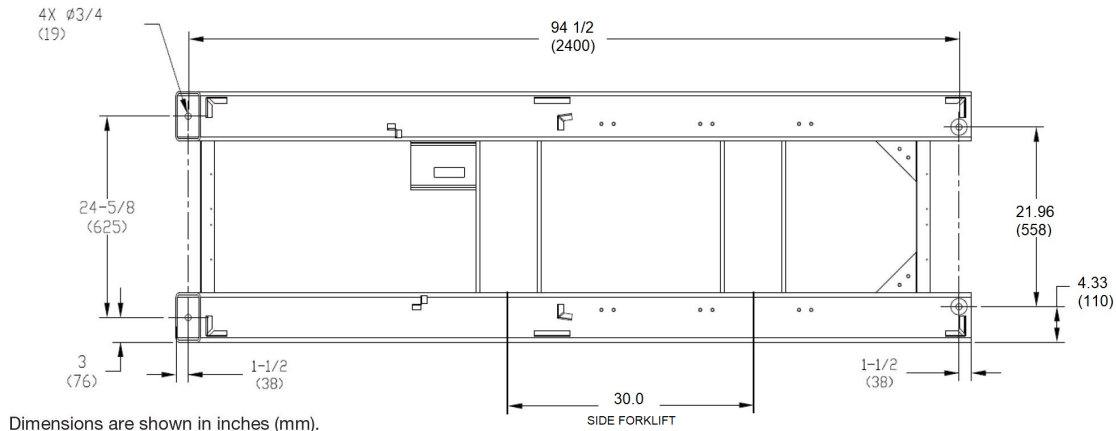
Pumps are 240VAC/1PH/60Hz.  
External injection pump is shipped loose for field installation.

**NOTE: Use in conjunction with a storage tank for proper operation.**

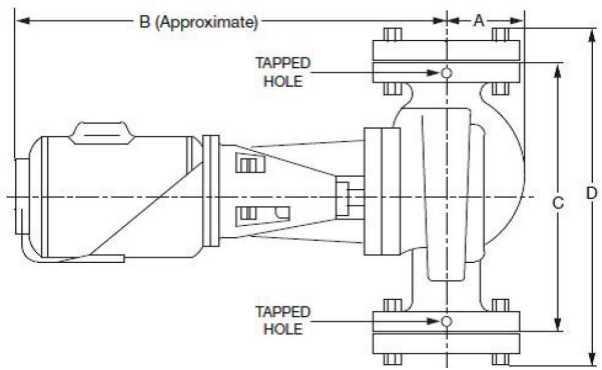
Model	RECOVERY RATES (GPH)									
	Temperature Rise									
	20°F	30°F	40°F	50°F	60°F	70°F	80°F	90°F	100°F	110°F
☐ 2505	14703	9802	7351	5881	4901	4201	3676	3267	2941	2673
☐ 3005	17636	11758	8818	7055	5879	5039	4409	3919	3527	3207
☐ 3505	20576	13717	10288	8230	6859	5879	5144	4572	4115	3741
☐ 4005	23515	15677	11758	9406	7838	6719	5879	5226	4703	4275

Table data applies at full rate.

### Base Anchor Bolt Pattern Models 2505 - 4005

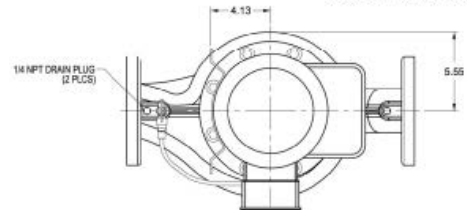
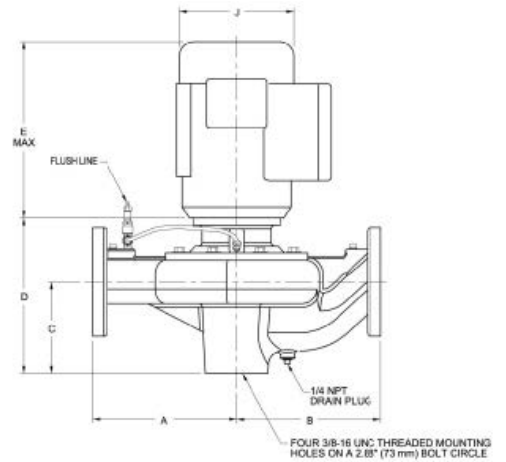


### External Injection Pump - Field Installed



WH7-2505 TO WH7-3005

2-1/2" (64 mm) NPT Flanges Included



WH7-2505 TO WH7-4005

3" (76 mm) ANSI Flange - By Others

Model (WH7-)	Dimensions - inches (mm)									
	A	B	C	D	E	F	G	H	J	
☐ 2505	3-1/2 (88.9)	19 (482.6)	13-1/2 (342.9)	16-1/8 (409.6)	N/A	N/A	N/A	N/A	N/A	
☐ 3005	3-5/8 (92.1)	21 (533.4)	16-1/2 (419.1)	19-1/2 (495.3)	N/A	N/A	N/A	N/A	N/A	
☐ 3505	10 (254)	10 (254)	6-5/16 (160.3)	10-1/2 (266.7)	13-15/16 (354)	5-5/16 (134.9)	6-5/16 (160.3)	1/4 (6.4)	7-7/8 (200)	
☐ 4005										