

Date: _____ Job: _____ Location: _____

Equipment Tag: _____ Engineer: _____ Contractor: _____

Model: _____ Notes: _____

Prepared By: _____ Indoor: _____ Outdoor: _____ Gas type: Natural Gas _____ Propane _____

100% Factory fire-tested

Thermal efficiency: 83.1%

Versa IC® Controller with LCD display

Maximum Set-point: 106°F (104°F Default)

Maximum outlet temperature: 160°F (71°C)

Minimum non-condensing inlet temperature: 105°F (40°C)

Thermal-shock proof heat exchanger

Limited 20-year thermal shock warranty

Limited 5-year heat exchanger warranty

Full safety diagnostics with fault history

PolyTuf powder-coated cabinet

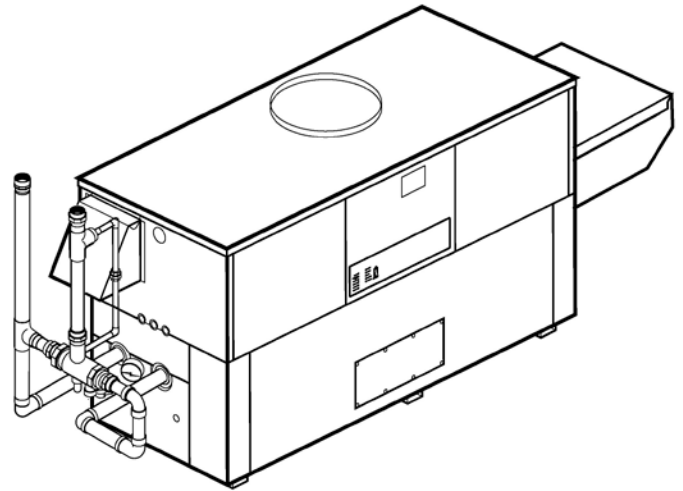
No combustible floor shield required

Fan-Assisted

Patented burner security blanket

SCAQMD Rule 1146.2 certified, Low NOx < 20 ppm

Cascade Up To 8 Heaters – No External Sequencer Needed



H-bypass shown



Heat Exchanger

- Brass headers
- ASME HLW stamped; 160 PSIG MAWP
- National board registered
- Cupronickel finned tubing
- ASME steel tube sheet
- Silicone high-temp. O-rings
- 125 PSIG ASME pressure relief valve
- T&P gauge
- Water connections
 - Left-handed (standard)
 - A-6 – Right-handed
- Bronze Pump, 1/2 HP, 120V, 60Hz
- Non-ferrous pool bypass assembly with Automatic Control

Controls

- 120V, 60Hz, 1Ø, power supply
- 120/24V, 60Hz, Transformer
- Versa IC® Integrated Control
- Cascade up to 8 Heaters
- 100% Shut-off/lockout
- Hot surface ignition (HSI)
- Ignition module
 - 3-Try – Standard
 - C-6 Single-try
- Remote flame sensor
- High limit, manual reset, fixed 240°F
- On/Off power switch
- Flow switch
- Blocked vent pressure switch
- Combustion air proving switch
- Programmable pump time delays
 - Heater
 - System
- Enable/Disable
- LCD display; status, fault and diagnostics

Controls – Cont.

- Cold water protection function
 - CWR variable-speed pump
 - H-Bypass (standard)
- Modbus RTU BMS Port (Up to 115K baud rate, see cat. 5000.73)
 - B-85 – BMS Gateway – BACnet MS/TP, BACnet IP, N2 Metasys or Modbus TCP
 - B-86 – BMS Gateway - LonWorks

Gas Train

- Combination valves
- On/Off firing
- Fuel
 - Natural gas
 - Propane gas (minimum grade HD-5)
 - G-20 4" WC Nat. Supply
- Design Certified ANZI Z21.56/ CSA 4.7

Construction

- Indoor/Outdoor
- Enclosed front controls
- PolyTuf powder coat finish
- CSA Low-lead certified ≤ .25% lead

Venting

- Vent location
 - Top – Standard
 - D-14 Rear exhaust flue tee
- Vent termination
 - D-11 Vent termination, outdoor
 - D-15 Vent termination, sidewall (Cat. III)
 - D-20 Vent termination, vertical (cat I)
- Combustion Air
 - D-12 Barometric damper without thermoswitch
 - D-16 Air intake elbow
 - D-17 In-line filter kit (TruSeal only)
 - D-18 Vent adapter, cat III/IV
 - D-19 Vent termination adapter, cat III/IV
 - D-21 TruSeal^(R) air intake, factory-installed
 - Right-side only (302-902, 2002, 2072, 2342)
 - Left-side (502-902, 992-1802)
 - D-23 Outdoor vent supports
 - D-37 Motorized combustion air damper

Options

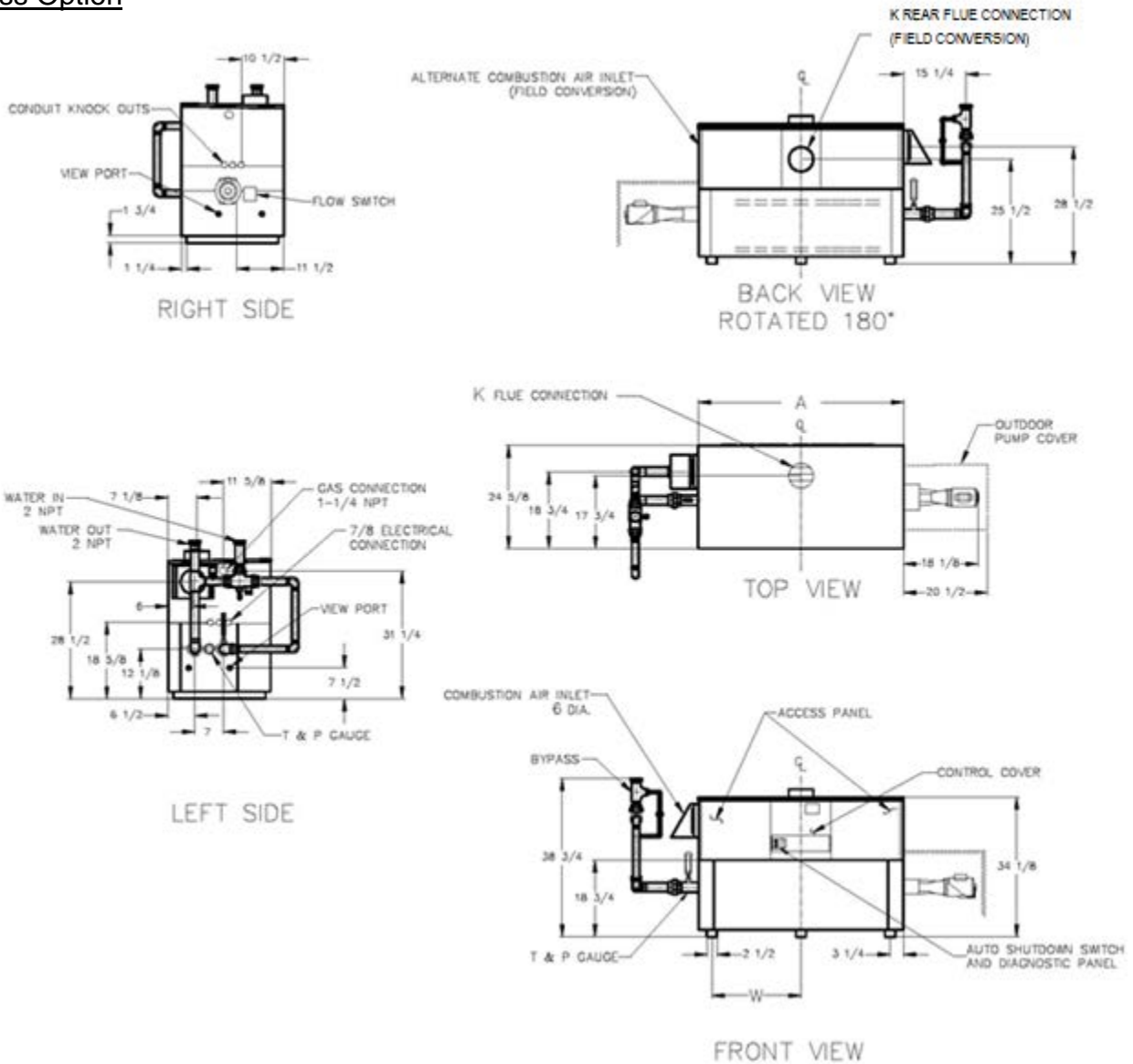
- E-5 Alarm with 4" bell
- F-10 Low water cut-off, remote probe
- G-2 Vent valve combo
- I-14 High limit, auto reset, 180°F max
- I-20 High limit, manual reset, 180°F max
- P-42 CWR controls, mtd
- P-43 CVWR controls, loose
- P-47 injector pump flange kit
- S-1 Low gas pressure switch, manual reset
- S-2 High gas pressure switch, manual reset
- X-1 SureRack® Kit (lower unit requires D-14 and manifold modification)
- X-2 SureRack Add-On (lower unit requires D-14 and manifold modification)
- Z-9 Thermometer

Additional Options or Accessories

Multi-Heater Controllers

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

H-Bypass Option

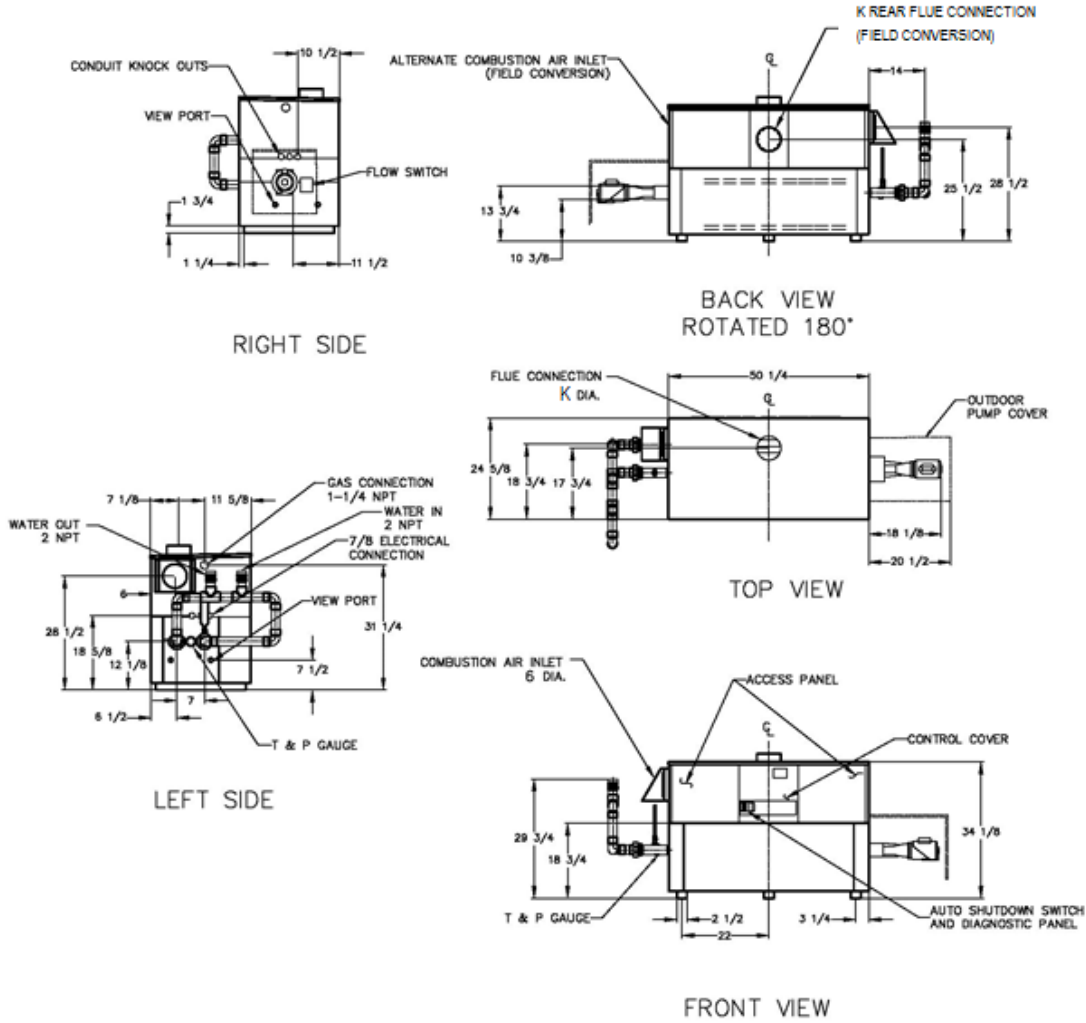


Rate of Heat Exchanger Flow and Pressure and Temperature Drop			
Model	GPM	ΔP (ft.)	ΔT °F (°C)
☐ 502C	90	10.5	10 (5.5)
☐ 652C		10.7	12 (6.6)
☐ 752C		11.0	14 (7.7)
☐ 902C		11.8	17 (9.4)

SPECIFICATIONS						Amp Draw (w/ Pump)	Shipping Weight (Lbs.)
Model	MBTUH (Kw)		Dimensions in. (mm)				
	Input	Output 83.1%	A Width	Flue Collar K	W		
☐ 502C	500 (146)	416 (121)	50 (1270)	6 (152)	22 (558)	13	545
☐ 652C	650 (190)	540 (158)	60.5 (1536)	8 (203)	27-1/4 (692)	13	590
☐ 752C	750 (219)	623 (182)	67.5 (1714)	8 (203)	30-3/4 (781)	13	675
☐ 902C	900 (263)	748 (219)	78 (1982)	8 (203)	36 (914)	14	740

NOTES: 1. Dimensions are in inches.
 2. Rates shown are for natural or propane gas, and elevations up to 4,500 feet. De-rate above 4,500 ft.

Cold Water Run Bypass Option



Rate of Heat Exchanger Flow and Pressure and Temperature Drop				
Model	GPM	ΔP (ft.)	ΔT °F (°C)	Injector Flow (GPM)
☐ 502C	90	10.5	10 (5.5)	22
☐ 652C		10.7	12 (6.6)	28
☐ 752C		11.0	14 (7.7)	32
☐ 902C		11.8	17 (9.4)	38

Model	SPECIFICATIONS					Amp Draw Heater w/ Pump	Injector Pump HP	Shipping Weight (Lbs.)
	MBTUH (Kw)		Dimensions in. (mm)					
	Input	Output 83.1%	A Width	K	W			
☐ 502C	500 (146)	416 (121)	50 (1270)	6 (152)	22 (558)	13	1/4	655
☐ 652C	650 (190)	540 (158)	60.5 (1536)	8 (203)	27-1/4 (692)	13		755
☐ 752C	750 (219)	623 (182)	67.5 (1714)	8 (203)	30-3/4 (781)	13		815
☐ 902C	900 (263)	748 (219)	78 (1982)	8 (203)	36 (914)	14		905

- NOTES:
1. Dimensions are in inches.
 2. Rates shown are for natural or propane gas, and elevations up to 4,500 feet. De-rate above 4,500 ft.
 3. Separate 120 VAC or 240 VAC 1Ø power required for Cold Water Run Option.
 4. Injector pump ships loose for field installation at bypass inlet.