



**Product Submittal for Hi Delta SS®- Type H
Space Heating/Hot Water Boiler
Models HD101-HD401**

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

TruSeal® direct vent

Sealed combustion chamber

100% Factory fire-tested

Efficiency: HD101 - HD301 85% AFUE
HD401 - 84% Thermal

Maximum outlet temperature: 240°F

Minimum non-condensing inlet temperature: 105°F

Thermal-shock proof heat exchanger

Limited twenty-year thermal shock warranty

Limited ten-year closed-system heat exchanger warranty

Status display LED's

PolyTuf powder-coated cabinet

No combustible floor shield required

SCAQMD rule 1146.2 certified fan-assisted – ultra-low NOx < 20 ppm

Patented burner security blanket

Proudly assembled in the USA



Features and Options

Heat Exchanger

- Headers
 - Cast iron, glass-lined (standard)
 - A-1 Bronze (optional)
- ASME H-stamped, 160 PSIG MAWP
- National Board registered
- Silicone high-temp. O-rings
- ASME pressure relief valve
- Copper fin tubing
- ASME steel tube sheet
- Silicone high-temp O-rings
- ASME Pressure relief valve
 - 45 PSIG (standard)
 - _____ PSIG (optional)
- T&P gauge (shipped loose)
- Flow switch - mounted
- Water connections
 - Left-hand water (standard)
 - A-6 Right-hand water (optional)

Power

- 120 VAC, 60 Hz, 1Ø, power supply
- 120/24V, 60 Hz, transformer

Control

- 100% Shutoff / 3-try lockout
- Hot surface ignition (HSI)
- On/Off power switch
- Remote flame sensor
- High limit, manual reset, fixed 200°F
- Blocked vent pressure switch
- Combustion air proving switches (2)
- Economaster-style pump relay
- Electronic outdoor reset controller, 2-stage, setpoint 120-200°F (HD101-HD301 only)

Burner

- Two-stage

Gas Train

- 4" WC minimum pressure
- Combination 2-stage valve
- Firing mode H3 (2-stage)
- Fuel
 - Natural gas
 - Propane gas (minimum grade HD-5)

Construction

- Indoor/outdoor construction
- Slide-out controls tray
- Front controls enclosed
- PolyTuf powder-coat finish
- TruSeal® direct vent
- Design Certified ANSI Z21.13/CSA 4.9
- Integral combustion air filter

Venting

- D-11 Vent termination, outdoor
- D-12 Barometric damper
- D-15 Sidewall vent termination
- D-18 Boiler vent adapter (Cat. III/IV)
- D-19 Vent termination adapter (Cat. III/IV)
- D-20 Vertical vent termination (Cat I)
- Combustion air - ducted
 - D-16 Intake air elbow
- Extractor (optional)
 - By others
 - Not required

Temperature Controls (HD-401 Only)

- B-3 Tank aquastat two-stage controller (shipped loose)
- B-6 Two-stage controller (shipped loose)
- B-20 On/Off mechanical controller, 100-200°F (shipped loose)
- B-21 Four-stage digital controller (shipped loose)
- B-23 Four-stage digital controller with outdoor reset control (shipped loose)
- B-26 Two-stage digital controller
 - Factory-installed
 - Shipped loose
- B-27 Two-stage digital controller, outdoor reset
 - Factory-installed
 - Shipped loose
- B-28 On/off digital controller
 - Factory-installed
 - Shipped loose

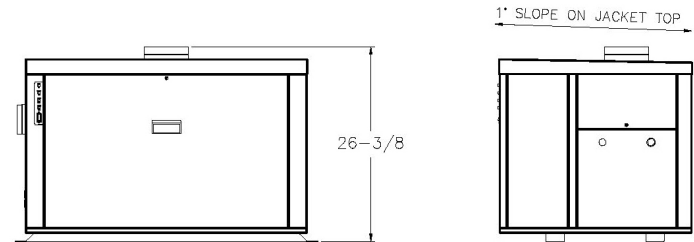
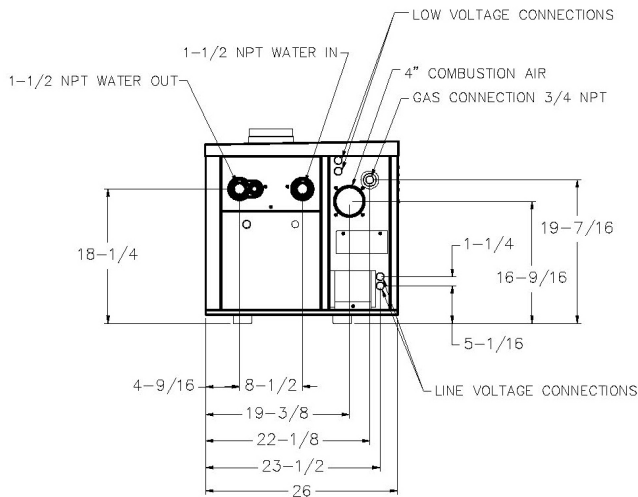
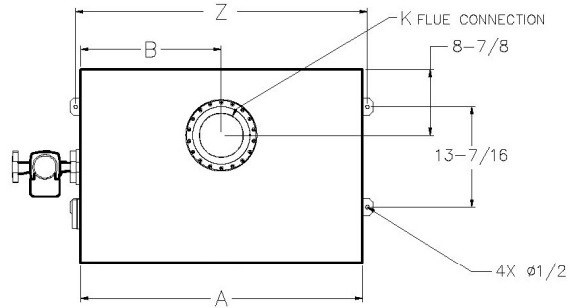
Options

- E-5 Alarm with bell
 - 3" size
 - 4" size
- F-10 Low water cut-off, remote probe
- I-1 High limit, adj. auto reset 240°F max.
- P-___ Pump: ___ HP, 120V, 1Ø, 60Hz
 - Bronze
 - Mounted
 - Cast iron
 - Loose
- P-___ Cold water protection
- S1 & S2 Low and high gas pressure switches, manual
- Z-4 T&P Relief valves
- Z-9 Thermometer

Job: _____

Primary Pump HP - Amps

Model	
H3-	
HD101	0010 1/8 - 1.3
HD151	
HD201	
HD251	
HD301	
HD401	



Model	MBTUH (kW/h)		AFUE %	A Inches (mm)	B Inches (mm)	K Inches (mm)	Z Inches (mm)	Boiler Amps ¹	Approx. Ship Weight Lbs. (Kg)
	Input	Output							
HD101	100 (29)	84 (24)	85	18-9/16 (471)	9-1/4 (235)	4 (102)	19-15/16 (506)	<5	150 (68)
HD151	150 (44)	126 (37)		21-7/8 (555)	10-7/8 (276)	4 (102)	23-3/16 (589)	<5	175 (79)
HD201	199 (58)	167 (49)		25-1/16 (636)	12-1/2 (317)	5 (127)	26-7/16 (672)	<5	200 (91)
HD251	250 (73)	210 (61)		28-5/16 (719)	14-1/8 (359)	5 (127)	29-11/16 (754)	<5	225 (102)
HD301	299 (88)	251 (73)		31-9/16 (802)	15-3/4 (400)	5 (127)	32-15/16 (837)	<5	250 (113)
HD401	399 (117)	335 (98)	84 ²	38-1/16 (967)	19 (483)	6 (152)	39-7/16 (1002)	<5	300 (136)

¹. Amp draw does not include pump.
². Thermal efficiency.



RATES OF FLOW AND PRESSURE DROPS

Model	MBTUH (kW/h)		10°F ΔT		20°F ΔT		30°F ΔT		Min. Flow			Max. Flow		
	Input	Output	GPM (L/min)	ΔP ft. (kPa)	GPM (L/min)	ΔP ft. (kPa)	GPM (L/min)	ΔP ft. (kPa)	GPM (L/min)	ΔP ft. (kPa)	ΔT°F (°C)	GPM (L/min)	ΔP ft. (kPa)	ΔT°F (°C)
HD101	100 (29)	84 (24)	17 (64)	1.2 (3.6)					13 (49)	0.8 (2.4)	13 (7)	44 (166)	8.8 (26)	4 (2)
HD151	150 (44)	126 (37)	25 (95)	2.9 (8.7)	13 (49)	0.8 (2.4)			13 (49)	0.8 (2.4)	20 (11)	44 (166)	8.8 (26)	6 (3)
HD201	199 (58)	167 (49)	33 (125)	5.2 (15.5)	17 (64)	1.3 (3.9)			13 (49)	0.7 (2.0)	27 (15)	44 (166)	8.9 (27)	8 (4)
HD251	250 (73)	210 (61)	44 (166)	9.2 (27.5)	21 (79)	2.1 (6.3)	14 (53)	0.9 (2.7)	13 (49)	0.7 (2.0)	34 (19)	44 (166)	9.2 (27.5)	10 (5.5)
HD301	299 (88)	251 (73)			25 (95)	3.1 (9.3)	17 (64)	1.3 (3.9)	13 (49)	0.7 (2.0)	40 (22)	44 (166)	9.4 (28)	11 (6)
HD401	399 (117)	335 (98)			34 (129)	5.6 (16.7)	22 (83)	2.5 (7.5)	22 (83)	2.5 (7.5)	30 (17)	44 (166)	9.8 (29)	15 (8)

Note: Basis for minimum flow is 13 GPM or 40°F ΔT.

- Notes: 1. Rates shown are for natural or propane gas, and elevations up to 2,000 feet. For installations above 2,000 feet, please contact manufacturer.
 2. Recommended natural gas pressure is 7 – 10.5" WC. Recommended propane gas pressure is 11 - 13" WC.