

Job: _____

Engineer: _____

Contractor: _____

Prepared By: _____ Date: _____

Model: _____ Indoor/Outdoor: _____ MBTUH Input: _____

Delta Limited™ - Type H

Space Heating/Hot Water Boilers Models 399B-899B

100% Factory Fire Tested

Efficiency: 84%

Maximum Outlet Temperature: 230°F

Minimum Non-Condensing Inlet Temperature: 105°F

Thermal Shock Proof Heat Exchanger

Limited Twenty-Year Thermal Shock Warranty

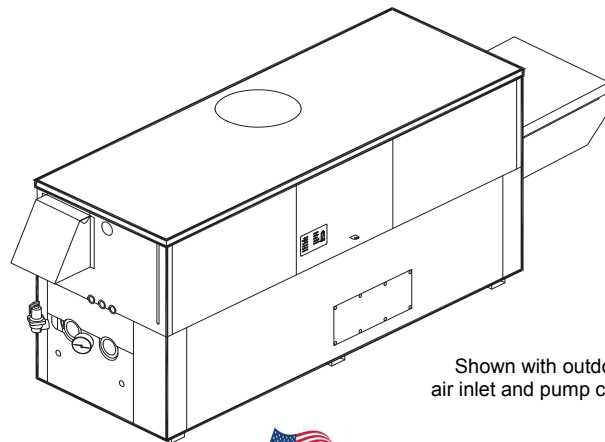
**Limited Ten-Year Closed-System Heat Exchanger
Warranty**

PolyTuf Powder Coated Cabinet

No Combustible Floor Shield Required

Fan-Assisted

Patented Burner Security Blanket



Shown with outdoor
air inlet and pump covers



Proudly Made in the U.S.A

Heat Exchanger

- H Stamp
- Headers
 - Glass-Lined Cast Iron – Standard
 - Bronze – Option A-1
- ASME Inspected and Stamped
160 PSIG Working Pressure
- National Board Approved
- Fin Tubing
 - Copper – Standard
 - Cupro Nickel – Option A-3
- ASME Steel Tube Sheet
- Silicone High Temp O-Rings
- Pressure Relief Valve, ASME
 - 45 PSIG – Standard on Model 399B
 - 60 PSIG – Standard on Models
499B-899B
 - _____ PSIG – Optional
- Temperature and Pressure Gauge
- Water Connections
 - Left – Standard
 - Right – Option A-6

Controls

- 120V, 60Hz, 1 Phase Power Supply
- 120/24V 60Hz Transformer
- 100% Shut-Off/Lockout
- Hot Surface Ignition
- Remote Flame Sensor
- High Limit Control, Manual Reset
- On/Off Power Switch
- Manual Shut-Off, Front-Mounted Switch
- Flow Switch
- Blocked Vent Pressure Switch
- Combustion Air Proving Switch
- Pump Time Delay Relay
- Status Display Lights

Gas Train

- Manual Gas Shut-Off Valve(s)
- Combination Valves
- Firing Mode
 - On/Off: Model 399B
 - 2-Stage: Models
499B-899B
- Fuel
 - Natural Gas
 - Propane Gas
- Design Certified - ANSI
Z21.13/CSA 4.9

Burner

- Ultra-Low NOx: Less than
20 PPM

Construction

- Indoor/Outdoor Construction
- Enclosed Front Controls

Venting

- Vent Location
 - Top, Outdoor – Standard
 - Top, Indoor – Option D-20
 - Rear – Option D-14
- Vent Termination Cap
 - Outdoor D-11
 - Indoor, Horizontal D-15
 - Indoor, Vertical (by others)
- Extractor – Optional
 - By others
 - Not required

Temperature Controls

- B-2 Tankstat, Single-Stage
(100-200°F)
- B-3 Tankstat, 2-Stage (100-200°F)
- B-6 Aquastat, 2-Stage (100-200°F)
- B-__ TempTracker Digital Controller,
2-Stage (Loose)
- B-__ TempTracker Digital Controller,
4-Stage (Loose)

Options

- C-6 Ignition Module, Manual Reset
- F-10 Low Water Cut-Off, Remote Probe
- I-1 High Limit Control, Auto Reset
- P-__ Pump: _____ HP, 120V, 1Ø, 60Hz
Water Hardness: _____ GPG
 - Cast Iron Bronze
 - Mounted Loose
 - Front Rear
- P-26 Cold Water Start (See 2000.48)
- S-1 Low Gas Pressure Switch, Manual
- S-2 High Gas Pressure Switch,
Manual
- X-1 SureRack™ Kit
- X-2 SureRack Add-on

Regulatory Agency Requirements



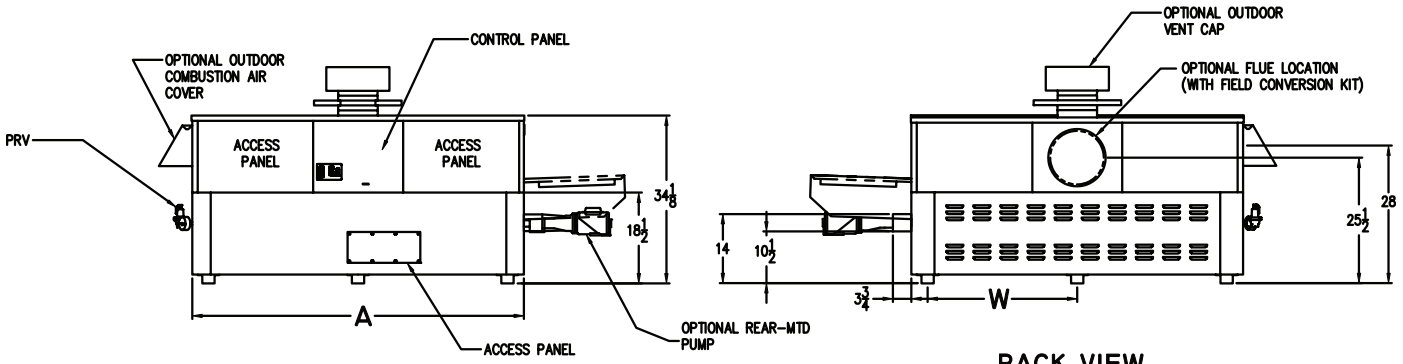
Delta Limited models not approved for use in California

Raypak®

A Rheem® Company

Delta Limited – Type H Models 399B-899B

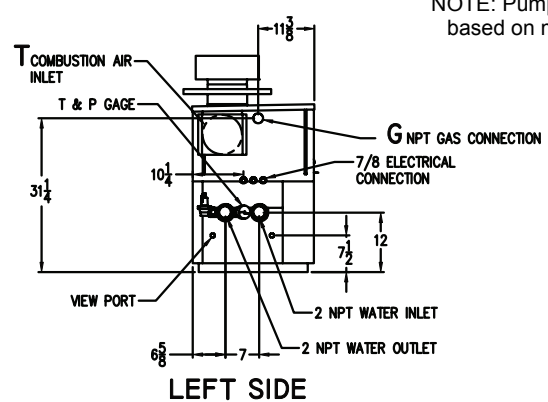
Model _____



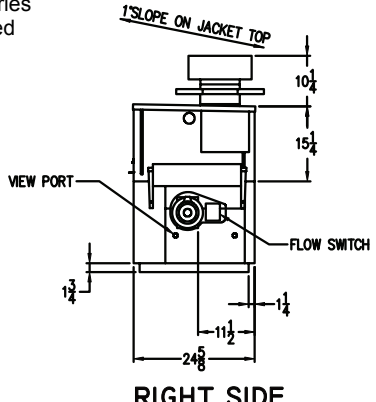
FRONT VIEW

BACK VIEW

NOTE: Pump location varies based on model selected

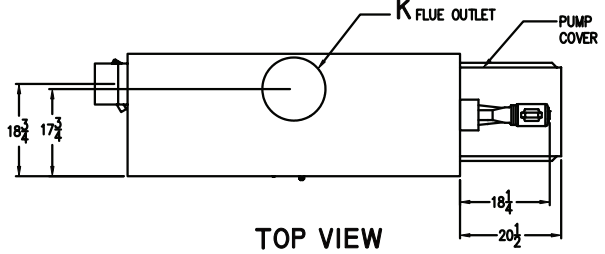


LEFT SIDE



RIGHT SIDE

SPECIFICATIONS



TOP VIEW

Model	MBTUH		A Width	G NPT	H NPT	K	T	W	Amp. Draw*	Approx. Shipping Wt. (Lbs)
	Input	Output								
399B	399	335	43	3/4	2	6	6	18-1/2	< 6	445
499B	500	420	50	1 1/4	2	6	6	22	< 6	545
649B	650	546	60 1/2	1 1/4	2	8	6	27-1/4	< 6	590
749B	750	630	67 1/2	1 1/4	2	8	6	30-3/4	< 6	675
899B	900	756	78	1 1/4	2	8	6	36	< 7	740

* Pump not included

Dimensions are in inches.
 Rates shown are for natural or propane gas, and elevations up to 4,500 feet.
 For installation above 4,500 feet, please contact manufacturer.
 Recommended natural gas supply pressure is 7 – 10.5" WC. Recommended propane gas supply pressure is 11 - 13" WC.

RATES OF FLOW AND PRESSURE DROPS

Model	10°F ΔT		20°F ΔT		30°F ΔT		Min. Flow			Max. Flow		
	GPM	ΔP (ft)	GPM	ΔP (ft)	GPM	ΔP (ft)	GPM	ΔP (ft)	ΔT	GPM	ΔP (ft)	ΔT
399B	68	5.4	34	1.5	22	<1	20	<1	34	90	10.0	7
499B	85	9.2	42	2.3	28	1.1	21	<1	40	90	10.5	9
649B	N/A	N/A	55	4.0	36	1.8	28	1.1	40	90	10.7	12
749B	N/A	N/A	64	5.5	42	2.5	32	1.6	40	90	11.0	14
899B	N/A	N/A	76	8.5	51	3.8	38	2.2	40	90	11.8	16

Basis is 20 GPM or 40°F ΔT for minimum flow, 90 GPM for maximum flow.

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