

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

Engineer: \_\_\_\_\_

Contractor: \_\_\_\_\_

Preparer: \_\_\_\_\_ Date: \_\_\_\_\_

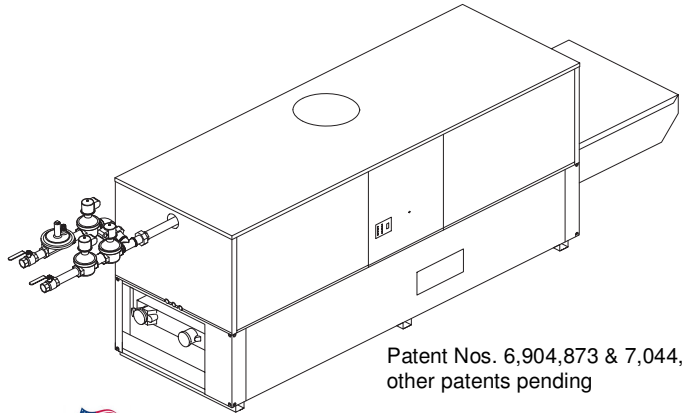
Model: \_\_\_\_\_ Indoor/Outdoor: \_\_\_\_\_

# Hi Delta® FlexGas® - Type H

## Dual-Fuel Hot Water Boilers Models 302BD-902BD

MBTUH Input: \_\_\_\_\_

- Fast, Economical Natural-to-Propane Gas Switchover**
- 100% Factory Fire Tested**
- 84% Efficiency**
- Maximum Outlet Temperature: 230°F**
- Minimum Non-Condensing Inlet Temperature: 105°F**
- Thermal Shock Proof Heat Exchanger**
- Limited Twenty-Year Thermal Shock Warranty**
- Diagnostic Center with Fault History**
- PolyTuf Powder Coated Cabinet**
- No Combustible Floor Shield Required**
- Fan-Assisted Low NOx Burners**
- Patented Burner Security Blanket**



Patent Nos. 6,904,873 & 7,044,124;  
other patents pending



Proudly Assembled in the USA

### 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
- ASME Pressure Relief Valve
  - 45 PSIG – Standard on Models 302BD and 402BD
  - 60 PSIG – Standard on Models 502BD-902BD
  - \_\_\_\_\_ PSIG – Optional
- Temperature and Pressure Gauge
- Water Connections
  - Left – Standard
  - Right – Option A-6

### Controls

- 120V, 60Hz, 1Ø 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
- Flow Switch
- Blocked Vent Pressure Switch
- Combustion Air Proving Switch
- Economaster Pump Time Delay
- Enable/Disable

### Gas Train

- Manual Gas Shut-Off Valve(s)
- Gas Pressure Regulator
- Safety Shut-Off Valve
- Firing Control Valve
- Firing Mode
  - On/Off (H8): Models 302BD, 402BD
  - 2-Stage (H9): Models 302BD-902BD
- Natural/Propane Gas
- Design Certified ANSI Z21.13/CSA 4.9
- Gas Connection
  - Left – Standard
  - Right – Option Z-1

### Construction

- Indoor/Outdoor Construction
- Enclosed Front Controls
- CSA Low Lead Certified ( $\leq .25\%$  Lead)

### Venting

- Vent Location
  - Top – Standard
  - Rear – Option D-14
- Vent Termination Cap
  - Outdoor D-11
  - Indoor, Horizontal D-15
  - Indoor, Vertical (by others)
- Combustion Air
  - In-Line Filter Kit (TruSeal only) D-17
  - Air Intake Elbow D-16
- Extractor – Optional
  - By others
  - Not required

### Burner

- Ultra-Low NOx: Less than 20 PPM (NAT)

### Temperature Controls

- B-6 Aquastat, 2-Stage (100-200°F)
- B-\_\_ TempTracker Digital Controller, 2-Stage
- B-\_\_ TempTracker Digital Controller, 4-Stage
- B-\_\_ TempTracker Mod+ Hybrid (2-16 Boilers)
- B-60 Stage Interface

### Options

- C-6 Ignition Module, Manual Reset
- D-21 TruSeal® Direct Vent
- F-10 Low Water Cut-Off, Remote Probe
- I-1 High Limit Control, Auto Reset
- P-\_\_ Pump: \_\_\_\_\_ HP, 120V, 1Ø, 60Hz
  - Cast Iron  Bronze
  - Mounted  Loose
  - Front  Rear
- P-\_\_ 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

\_\_\_\_\_

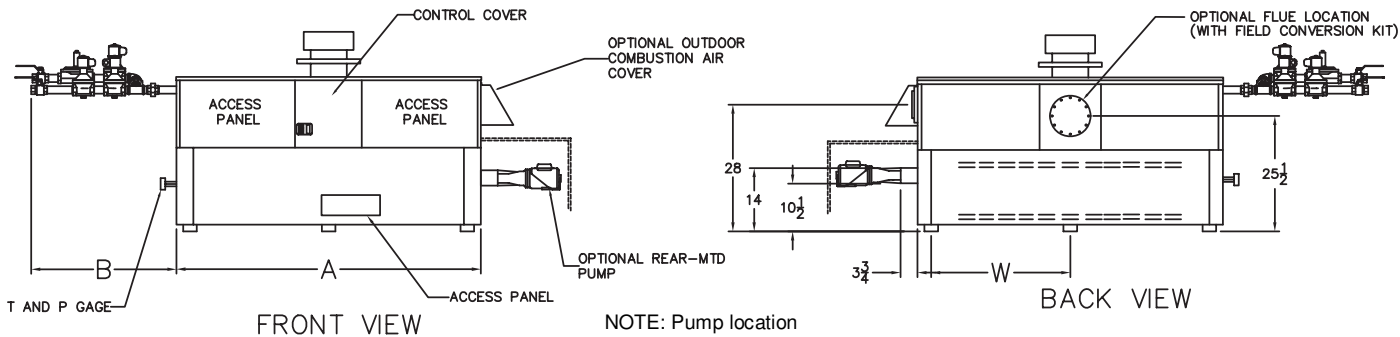


# Raypak®

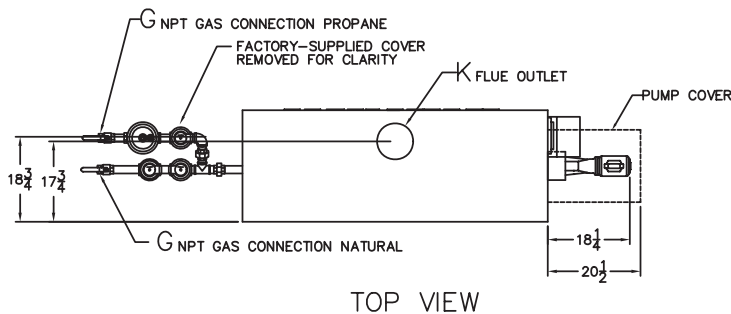
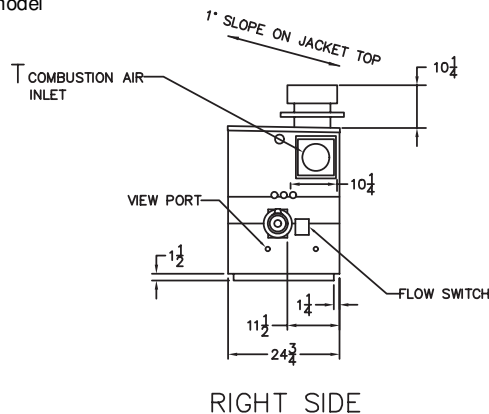
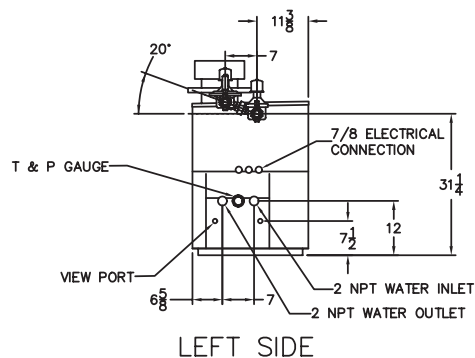
A Rheem® Company

# Hi Delta FlexGas – Type H Models 302BD-902BD

Model \_\_\_\_\_



NOTE: Pump location varies based on model and application



## SPECIFICATIONS

Model	MBTUH		A Width	B	G		H NPT	K	T	W	Amp. Draw*	Approx. Shipping Wt. (Lbs)
	Input	Output			Nat	Pro						
302BD	300	252	36	41	1-1/4	3/4	2	5	6	18	6	405
402BD	399	335	43	41	1-1/4	3/4	2	6	6	18-1/2	6	470
502BD	500	420	50	35-1/2	1-1/4	3/4	2	6	6	22	6	570
652BD	650	546	60-1/2	30-1/2	1-1/4	3/4	2	8	6	27-1/4	6	615
752BD	750	630	67-1/2	27-1/2	1-1/4	1-1/4	2	8	6	30-3/4	6	700
902BD	900	756	78	34-1/2	1-1/4	1-1/4	2	8	6	36	7	765

\* Without pump

## 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
302BD	51	3.2	25	<1.0	N/A	N/A	20	<1	25	90	9.8	6
402BD	68	5.4	34	1.5	22	<1	20	<1	34	90	10.0	7
502BD	85	9.2	42	2.3	28	1.1	21	<1	40	90	10.5	9
652BD	N/A	N/A	55	4.0	36	1.8	28	1.1	40	90	10.7	12
752BD	N/A	N/A	64	5.5	42	2.5	32	1.6	40	90	11.0	14
902BD	N/A	N/A	76	8.5	51	3.8	38	2.2	40	90	11.8	17

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

## NOTES:

- Dimensions are in inches
- Rates shown are for natural or propane gas, and elevations up to 5,000 feet. For installation above 5,000 feet, please contact manufacturer.
- Required natural gas supply pressure is 7 - 10.5" WC. Required propane gas supply pressure is 11 - 13" WC.