

Job: _____

Engineer: _____

Contractor: _____

Preparer: _____ Date: _____

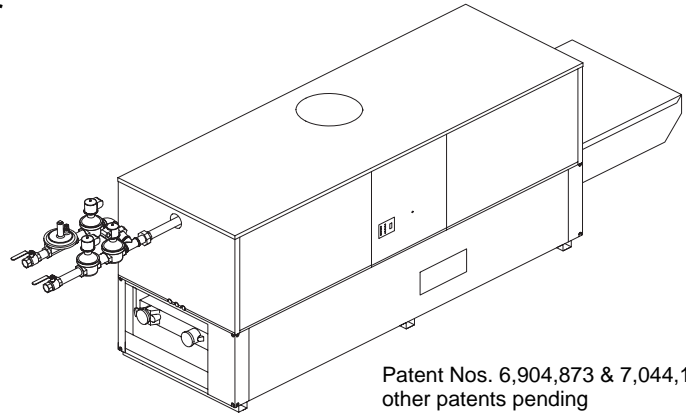
Model: _____ Indoor/Outdoor: _____

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

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

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 30 PPM

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
- B-___ TempTracker Digital Controller, 4-Stage
- Y-241 Electronic Sequencer, 4-Stage
- Y-281 Electronic Sequencer, 8-Stage

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
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

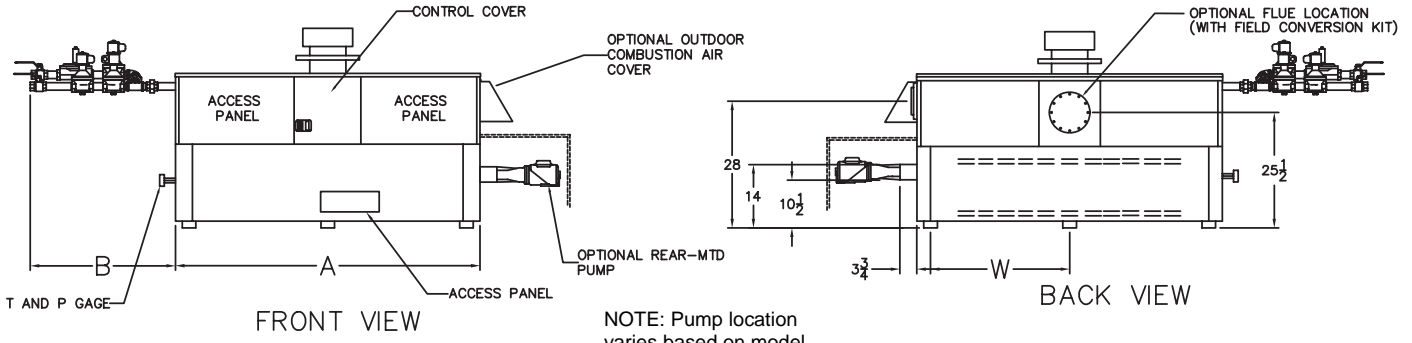
Regulatory Agency Requirements



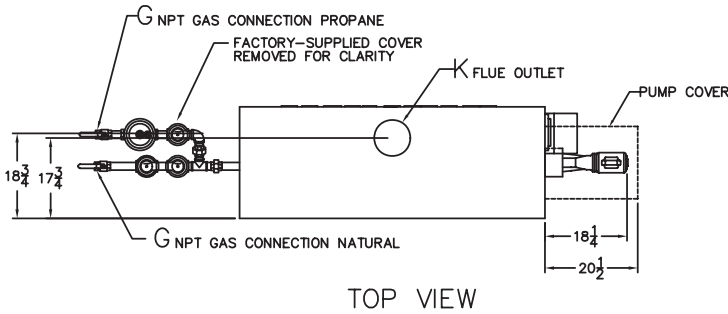
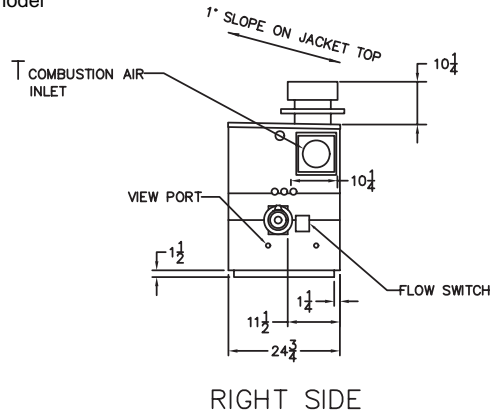
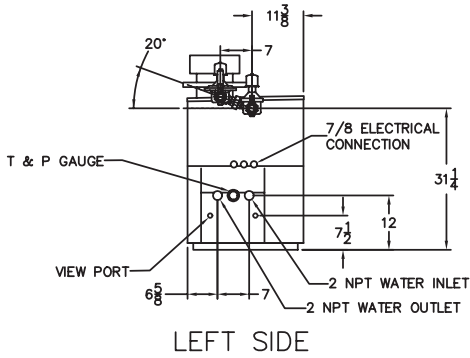
Raypak
A Rheem Company

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.