



**Hi-Delta
HD401 (399 MBH Input - Water
Heater On/Off - Boiler 2-Stage
Burner)**

Tag: RAYWH1HD401NGBRZCNP8

Project: P8 Delta Stock

Quantity: 1

Unit Information

Model Series: **Hi-Delta**
Size: **HD401 (399 MBH Input -
Water Heater On/Off -
Boiler 2-Stage Burner)**
Fuel: **Natural Gas**
Location: **Outdoor**
Altitude: **0** ft

Heating Performance

Input Temp: **55** F
Output Temp: **140** F
Design Capacity: **0** MBTUH
Input Capacity: **300** MBTUH
Output Capacity: **249** MBTUH
Thermal Efficiency: **83.1** %

Water Flow

Design Flow: gpm
Max Flow: **20** gpm
Min Flow: **90** gpm
Pressure Drop: ft. wg

General Unit Data

Unit Weight: **380** lbs.
Unit Length: **25** in.
Unit Width: **36** in.
Unit Height: **34.125** in.



Hi-Delta



Product Data: Type WH Water Heater

Qty	Description
1	Type WH Water Heater

Tag(s): RAYWH1HD401NGBRZCNP8

Selected Options

- Application : Domestic Water Heater
- Location : Outdoor
- Model Size / Input : HD401 (399 MBH Input - Water Heater On/Off - Boiler 2-Stage Burner)
- Fuel Type : Natural Gas
- Efficiency : 83.1 % - Category I or III Venting
- Water Quality / Pump Selection Criteria : Hard (16 to 25 GPG) / P8 (P11 non-ferrous)
- Pump Type : Mounted Pumps
- Pump Material : Bronze \ Stainless Steel
- Header Material : Bronze
- Heat Exchanger Material : A-3 Cupronickel Heat Exchanger
- Pressure Relief Valves : A-15 125 PSIG (Standard for Water Heater)
- Ignition Module : Standard 3-Try Ignition - Auto Reset
- Integral Flue Exhaust Tee : None
- Low Water Cut Off : None
- Codes : G-12 California Code
- 4 inch Supply Gas Pressure Configuration (G-20) : None
- High Limit - Manual Reset : Fixed Manual Reset Limit - Standard
- High Limit - Auto Reset : None
- High Limit - Combination : I-16 Adjustable Auto Limit / Fixed Manual Limit - 200/200 F
- Safety Valves : None
- Vent Valve : None
- Low Gas Pressure Switch : None
- High Gas Pressure Switch : None
- Low and High Gas Pressure Switch : None
- Low Water Pressure Switch : None
- Surerack - Unit Stacking Kit : None
- Mounting Location : Front-Mounted
- Mounted Pumps : P-8 Bronze Mounted Pump (Hard 16 to 25 GPG)
- Cold Water Start Systems : None
- Cold Water Run Pumps : None
- Digital Controllers : None
- Injector Pumps : None
- Flanges : None
- Elevation : Below 2000 ft (0 – 1999 ft)

Selected Accessories

Hi-Delta WH ss Standard Features**Qty: 3 Tags: RAYWH1HD201NGBRZCNP8, RAYWH1HD301NGBRZCNP8, RAYWH1HD401NGBRZCNP8**

Standard Features**Heat Exchanger**

- HLW Stamp
- ASME Inspected and Stamped 160 PSIG Working Pressure
- National Board Approved
- ASME Steel Tube Sheet
- Silicone High Temp O-Rings
- Temperature and Pressure Gauge (shipped loose)

Control

- 120V, 60Hz, 1Ø, Power Supply
- 120/24V 60 Hz transformer
- 100% Shut-Off/Lockout
- Hot Surface Ignition
- Remote flame sensor
- Fixed high limit control, manual reset
- On/Off Power Switch
- Blocked Vent Pressure Switch
- Combustion Air Proving Switches (2)
- Economaster Style Pump Relay

Burner

- Two-stage Capable
- Ultra-Low NOx (<20 PPM Nat.)

Gas Train

- 4" WC Minimum Pressure
- Combination Valve
- Design Certified – ANSI Z21.10.3/CSA 4.3

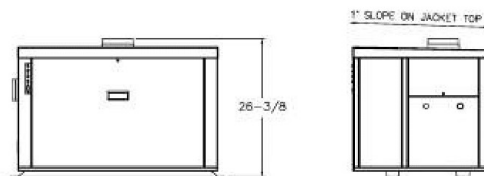
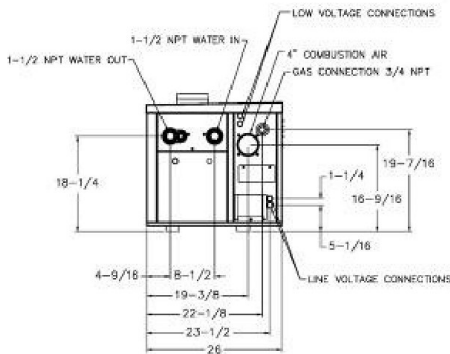
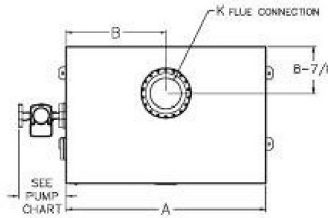
Construction

- Indoor/outdoor construction
- Slide-out Controls Tray
- Enclosed front controls
- TruSeal® Direct Vent
- Integral Combustion Air Filter
- CSA Low Lead ≤ .25% Lead
- Sealed Combustion Chamber
- 100% Factory Fire Tested
- Thermal Shock Proof Heat Exchanger
- Limited Twenty-Year Thermal Shock Warranty
- Limited Five-Year Heat Exchanger Warranty
- Status Display LED's
- PolyTuf Powder Coated Cabinet
- No Combustible Floor Shield Required
- Fan-Assisted – Ultra Low NOx (<20 ppm Nat.)
- Patented Burner Security Blanket
- Proudly Assembled in the USA

Hi-Delta WH Dimensions HD401

Qty: 1 Tags: RAYWH1HD401NGBRZCNP8

Primary Pump HP - Amps			
Model (WH1)	Water Hardness		
	Soft	Medium	Hard
HD401	1/8 - 1.1	1/8 - 1.3	1/4 - 1.6



WATER HEATER RECOVERY RATES (GPH)

MODEL (WH1)	TEMPERATURE RISE IN °F								
	20°	30°	40°	50°	60°	70°	80°	90°	100°
HD401	2036	1357	1018	814	679	582	509	452	407

SPECIFICATIONS

Model	MBTUH		Firing Stages	A	B	K	Heater Amps	Approx. SHIP WT. (LBS)
	INPUT	Output						
HD401	399	339	1*	38-1/16	19	6	<5	300

* 2 Stage optional
Dimensions are in inches

RATES OF FLOW AND PRESSURE DROPS

Model	Input MBTUH	Output MBTUH	Soft (3-4 GPG)					Medium (5-15 GPG)					Hard (16-25 GPG**)				
			ΔT	GPM	ΔP	MTS	SHL	ΔT	GPM	ΔP	MTS	SHL	ΔT	GPM	ΔP	MTS	SHL
HD401	399	339	31	20	2.0	1-1/2	4.8	26	26	3.3	1-1/2	6.6	15	45	10.3	1-1/2	19.1

NOTE: Basis for minimum flow is 13 GPM or 40 °F ΔT.
GPG = Grains Per Gallon

** If over 25 GPG, must use a water softener
SHL includes 50 ft of tubing each way (total 100ft)

- 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.