Job: _____

Engineer: _____

Contractor: _____

Prepared By: _____ Date: _____

Model: _____ Indoor/Outdoor: _____

MVB® - Type H

Heating Boilers
Models 503-2003

87% Thermal Efficiency at Full Rate; Up to 88.4% at Part Load

100% Factory Fire Tested

Maximum Outlet Water Temperature: 220°F

Minimum Acceptable Inlet Water Temperature: 120°F

Full Safety Diagnostics with History

Footprint: Less Than 5-1/2 ft^2

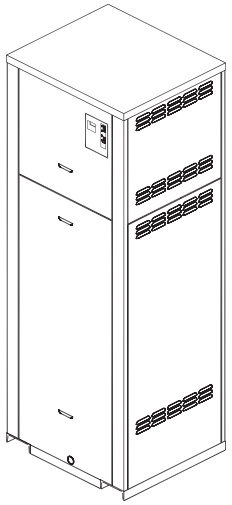
Limited Twenty-Year Thermal Shock Warranty

Limited Ten-Year Heat Exchanger Warranty

Full Electronic Modulation, Constant Ratio 4:1 Turndown

Soft-Start Modulating Controller with LCD Display

Status Display Lights



Heat Exchanger
- Headers
  - ☐ Cast Iron – Standard
  - ☐ Bronze – Option A-1
- ASME H Stamped 160 PSIG Working Pressure
- National Board Approved
- Fin Tubing
  - ☐ Copper – Standard
  - ☐ Cupro Nickel – Option A-3
- ASME Powder-Coated Tube Sheet
- Silicone High Temp O-Rings
- ASME Pressure Relief Valve
  - ☐ 60 PSIG – Standard
  - ☐ ___ PSIG – Optional
- Temperature and Pressure Gauge, Shipped Loose
- Stainless Steel Evaporator Plate

Control
- 120V, 60Hz, 1Ø, Power Supply
- 120/24V 60Hz Transformer
- Ignition Module
  - ☐ 3-Try – Standard
  - ☐ Single-Try – Option C-6
- Hot Surface Ignition (HSI)
- Remote Flame Sensor
- High Limit, Manual Reset, Fixed, 240ºF
- On/Off Power Switch
- Flow Switch
- Blocked Vent Pressure Switch
- Combustion Air Proving Switch

Control (cont.)
- Pump Switch
- Pump Time Delay
- Diagnostics Panel
- Modulating Temperature Control
- Water Temperature Sensors (3)

Burner
- Ultra-Low NOx: Less than 20 PPM

Gas Train
- Fuel
  - ☐ Natural Gas
  - ☐ Propane
- Zero Governor Regulator
- Dual-Seat Combination Valve
- Electronic Modulating Firing Mode (H7)

Construction
- Indoor/Outdoor Construction
- Front Controls Enclosed
- PolyTuf Powder Coat Finish
- Rear Connections (Water, Electrical, Gas, Vent, Combustion Air)
- Design Certified ANSI Z21.13/ CSA 4.9

Venting
- Vent Termination
  - ☐ Outdoor or Indoor, Vertical – Option D-11
  - ☐ Indoor, Horizontal – Option D-15
- Extractor - Optional
  - ☐ By others
  - ☐ Not required

Temperature Controllers

☐ B-36 TempTracker Mod+ Digital Controller, 2-4 Boilers, OA Reset

☐ B-37 TempTracker Mod+ Digital Controller, 5-10 Boilers, OA Reset

☐ B-38 TempTracker Mod+ Digital Controller, 11-16 Boilers, OA Reset

☐ Y-241 Electronic Sequencer, 2-4 Boilers

☐ Y-281 Electronic Sequencer, 5-8 Boilers

Options

☐ A-30 Air Vent, Auto, 150 PSI

☐ F-10 Low Water Cut-Off, Remote Probe

☐ I-1 High Limit, Auto Reset, Adj., 100-240°F

☐ I-2 High Limit, Manual Reset, Adj., 100-240°F

☐ P-__ Pump: _____HP, 120V, 1Ø, 60Hz
Water Hardness: _____ GPG
☐ Cast Iron ☐ Bronze
☐ Loose ☐ Mounted

☐ P-__ Cold Water Start

☐ P-__ Cold Water Run

☐ S-1 Low Gas Pressure Switch, Manual Reset

☐ S-2 High Gas Pressure Switch, Manual Reset

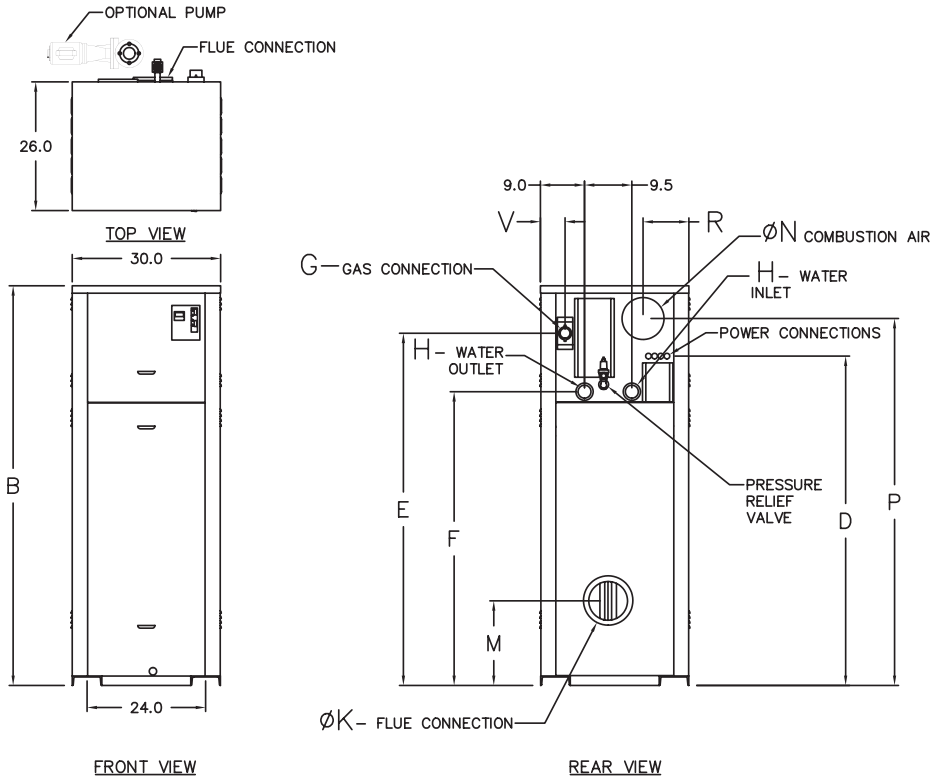
Regulatory Agency Requirements

☐ _____

Raypak® A Rheem® Company

MVB – Type H
Models 503-2003

Model _____



CLEARANCES

	Certified Minimum	Recomm. Service
Front	24”	24”
Rear	12”	24”
Right	1”	--
Left	1”	--
Top	0”	10”
Floor	0”	--
Vent	1”	--

PUMP HP – AMPS*

Model (H7-)	Water Hardness		
	Soft	Medium	Hard
503	1/4 - 6	1/4 - 6	3/4 - 11
753	1/4 - 6	1/2 - 7	3/4 - 11
1003	1/4 - 6	1/2 - 7	1 - 14
1253	1/2 - 7	1 - 14	1 - 14
1503	3/4 - 11	1 - 14	1 - 14
1753	1 - 14	1 1/2 - 15	1 1/2 - 15
2003	1 - 14	1 1/2 - 15	1 1/2 - 15

* Current draw is for pump only

Model (H7-)	MBTUH		Dimensions (in.)												Ship Weight (Lbs.)	Foot-print (Ft^2)	Amps*
	Input	Output	B Height	D	E	F	G NPT	H NPT	K Flue Ø	M	N C/A Ø	P	R	V			
503	500	435	43	32	35	23-3/4	1	2	6	14-1/2	6	35	8	2	600	5.4	12
753	750	653	49	38	41	29-3/4	1	2	6	14-1/2	6	41	8	2	670	5.4	12
1003	999	869	55	44	47	35-3/4	1-1/4	2-1/2	6	14-1/2	6	47	8	2	720	5.4	12
1253	1250	1088	61	50	53	41-3/4	1-1/4	2-1/2	8	17-3/4	8	53	8	2	780	5.4	12
1503	1500	1305	67	56	59	47-3/4	1-1/4	2-1/2	8	17-3/4	8	59	8	2	840	5.4	12
1753	1750	1523	75	62	65	53-3/4	2	2-1/2	8	17-3/4	8	68	9	5	940	5.4	18
2003	1999	1739	81	68	71	59-3/4	2	2-1/2	8	17-3/4	8	74	9	5	1000	5.4	18

- Ratings shown are for elevations up to 4,500 feet. For installations at elevations above 4,500 feet, please consult the factory for additional instructions.
- For direct vent applications, please contact the factory about relocating the pump.

* Current draw is for heater only. (Supply breaker must have delayed trip.)

RATES OF FLOW AND PRESSURE DROPS

Model (H7-)	20°F ΔT		30°F ΔT		40°F ΔT*		Maximum Flow			Minimum Flow*		
	GPM	ΔP (ft.)	GPM	ΔP (ft.)	GPM	ΔP (ft.)	GPM	ΔP (ft.)	ΔT (°F)	GPM	ΔP (ft.)	ΔT (°F)
503	43	2.8	29	1.4	N/A	N/A	100	11.3	9	25	1.1	35
753	65	6.4	43	3.1	33	1.9	100	13.8	13	33	1.9	40
1003	87	12.0	58	6.0	43	3.7	113	18.6	15	43	3.7	40
1253	109	20.9	73	10.2	54	6.2	113	22.2	19	54	6.2	40
1503	N/A	N/A	87	16.0	65	9.5	113	25.5	23	65	9.5	40
1753	N/A	N/A	102	22.5	76	13.4	113	27.2	27	76	13.4	40
2003	N/A	N/A	116	31.9	87	18.9	116	30.2	30	87	18.9	40

* Closed systems only

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