

Job: _____
Engineer: _____
Contractor: _____
Prepared By: _____ Date: _____
Model: _____ Indoor/Outdoor: _____

MVB[®] - Type H

Heating Boilers
Models 504-2004

84% Thermal Efficiency at Full Rate

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 ft²

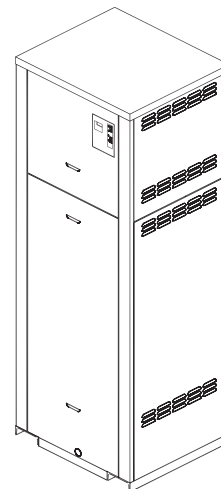
Limited Twenty-Year Thermal Shock Warranty

Limited Ten-Year Heat Exchanger Warranty

Electronic Modulation, Constant Ratio 1.4:1 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,
240°F
- On/Off Power Switch
- Flow Switch
- Blocked Vent Pressure Switch
- Combustion Air Proving Switch
- Pump Switch
- Pump Time Delay

Control (cont.)

- 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

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 - Option D-11
 - ☐ Indoor, Horizontal – Option D-15
 - ☐ Indoor, Vertical (by others)
- Combustion Air
 - ☐ In-Line Filter Kit – Option D-17
 - ☐ Air Intake Elbow – Option D-16
- 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

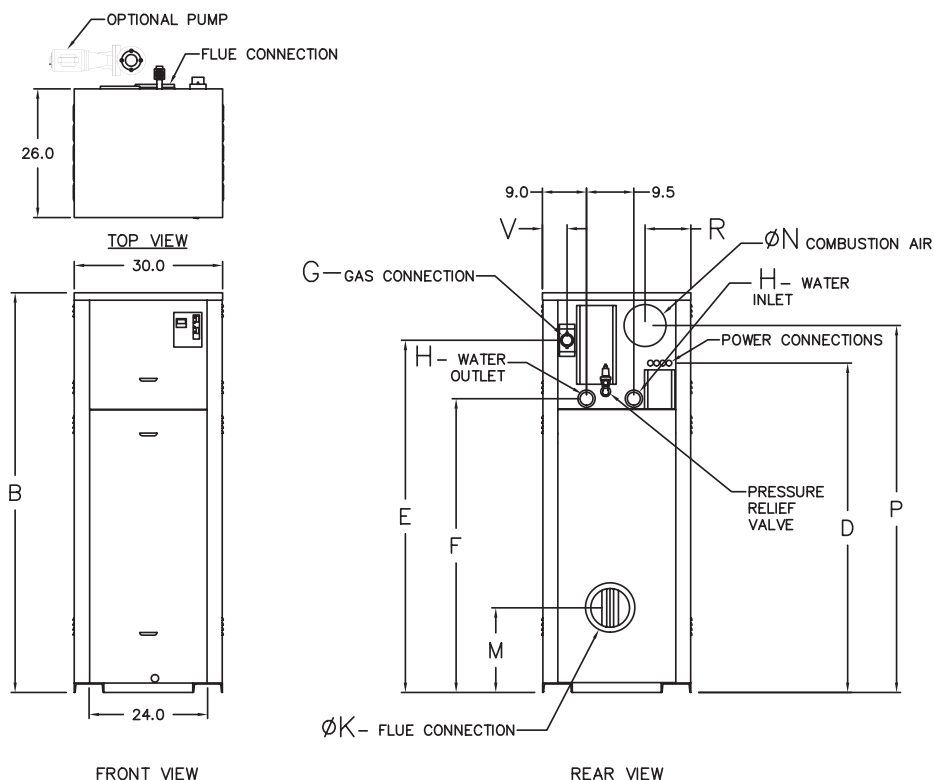
☐ _____



Raypak[®]
A Rheem Company

MVB – Type H Models 504-2004

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
504	1/4 - 6	1/4 - 6	3/4 - 11
754	1/4 - 6	1/2 - 7	3/4 - 11
1104	1/4 - 6	1/2 - 7	1 - 14
1504	1/2 - 7	1 - 14	1 - 14
2004	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 (Ft²)	Amps*
			B Height	D	E	F	G NPT	H NPT	K Flue Ø	M	N C/A Ø	P	R	V			
	Input	Output															
504	500	420	43	30	35	23-3/4	1	2	8	14-1/8	6	36	8	2	600	5.4	12
754	750	630	49	36	41	29-3/4	1	2	10	16	6	42	8	2	670	5.4	12
1104	1100	924	55	43	47	35-3/4	1-1/4	2-1/2	10	16	6	49	8	2	720	5.4	12
1504	1500	1260	61	50	53	41-3/4	1-1/4	2-1/2	12	18-1/8	8	53	8	2	780	5.4	12
2004	1999	1679	75	61	65	53-3/4	2	2-1/2	14	20-1/8	8	69	9	5	940	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)
504	42	2.7	28	1.4	N/A	N/A	100	11.3	8	25	1.1	34
754	63	6.0	42	2.9	32	1.7	100	13.8	13	32	1.7	40
1104	92	13.3	62	6.7	46	4.1	113	18.6	16	46	4.1	40
1504	N/A	N/A	84	13.3	63	8.0	113	22.2	22	63	8.0	40
2004	N/A	N/A	112	26.9	84	16.0	113	27.2	30	84	16.0	40

* Closed systems only