



Unit Heaters

High Efficiency Heating Equipment – Gas, Hydronic & Oil



OPTUM[®]

Condensing Unit Heater

BH Series

Beacon Morris' Optum brings gas-fired unit heaters to unprecedented levels of efficiency. Nexus carries a +95% Certified Thermal Efficiency rating combined with the latest innovations, including a tri-metal stainless steel heat exchanger and a state-of-the-art proprietary combustion control system.

Efficiency matters...not only is the Optum the most energy efficient unit heater available, it is the most environmentally friendly too. Reduced emissions, low fuel utilization and a reduced carbon footprint give Optum our green stamp of approval!



State-of-the-Art Control Platform

- 2-Stage, Modulating Outdoor Reset, Modulating Indoor Reset
- 2-10 VDC/4-20 mA Input for BMS Communication
- Modbus Standard
- LED Diagnostic Lights (External)
- Single Thermostat or Outdoor Sensor Can Control Multiple Units



Application Flexibility

- NG/LP Single Orifice Field Conversion
- PVC/CPVC Vent Compatible
- Separated or Standard Combustion All-In-One
- Multiple Voltage Configurations
- OSHA Fan Guards
- Durable Brushed Stainless Steel Cabinet
- Condensate Float Switch and Trap Standard
- Optional Condensate Pump and Condensate Neutralizer
- Residentially Certified for use as a Utility Heater

Electronically Air/Fuel Coupled

- Proprietary Design for Optimal Efficiency
- Premix Burner Technology
- 3:1 Full Modulation
- Maximum Efficiency through Precision Modulation
- SafeSense Blocked Inlet and Flue Sensing Technology
- Unit Auto-Adjusts for Altitude Requiring No Field Modifications
- Unit Will Maintain Fuel Air Ratio with Partial Blockage Without Decreasing Performance Until Safety Trip

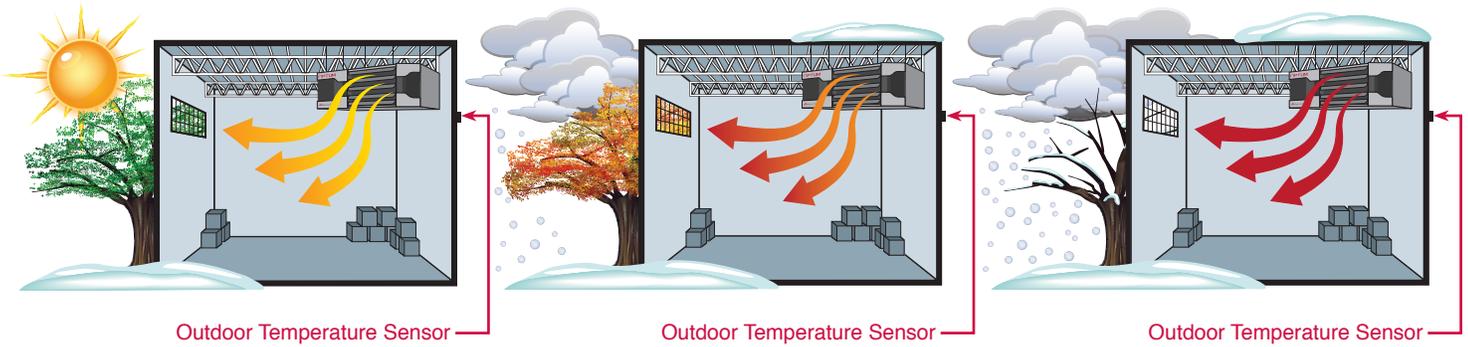
Tri-Metal Hybrid Heat Exchanger

- Full Condensing Efficiencies at all Firing Rates
- +95% Efficiency at Full Input
- All Stainless Steel Tube for Enhanced Corrosion Protection
- Brass and Aluminum Fins for Improved Thermal Heat Transfer



Outdoor Air Reset Modulation

Units automatically vary discharge temperatures based on the outside air temperature providing seamless modulation for optimum efficiencies. By running at lower discharge temperatures subject to the outdoor temperatures, units run longer at higher efficiency resulting in less cycling, lower fuel costs, and increased occupancy comfort. As the outdoor temperature drops, discharge temperatures increase and vice versa. Outdoor air reset is optimal in regions with substantial daily temperature swings.



Specifications

MBH Input	50	100	150	200	300	400
MBH Output	48	96	143	192	285	384
Thermal Efficiency	97%	96%	95%	96%	95%	96%
Air Temp. Rise - °F	57	55	50	55	55	55
Free Air Delivery (CFM)	790	1616	2661	3232	4848	6464
Motor HP (qty)	1/14 (2)	1/2	1/2 (2)	1/2 (2)	1 (2)	1 (2)
Gas Connection Size	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"
Flue Size	2"	2"	2"	3"	4"	4"

NOVUM™

Gas-Fired High Efficiency Unit Heater

BXH Series

The Novum is a high efficiency condensing unit heater, featuring industry leading performance efficiencies of +93%. The perfect solution for light commercial/commercial applications Novum is ideal for more corrosive environments due to its ZM coated steel corrosion resistant cabinet. The Novum unit heaters reduce fuel usage and emissions and provide significant cost savings each heating season. The Novum is available in eight sizes 50,000 - 400,000 BTU/h.

Novum incorporates a tri-metal condensing stainless steel heat exchanger to maximize heat transfer while using the traditional standard efficiency gas controls to minimize cost.

Novum is the most advanced, value-priced, high efficiency condensing unit heater on the market.

Features and Benefits

- +93% Efficiency at Full Input
- 8 Sizes 50,000 - 400,000 BTU/h
- Sizes 50,000 - 150,000 BTU/h Residential Certified
- ZM Coated Steel Corrosion Resistant Cabinet
- Tri-Metal Heat Exchanger for Improved Thermal Heat Transfer
- Separated or Standard Combustion All-In-One Units
- Optional Gas Conversion Kit (NG or LP)
- In-Shot Burners
- Direct Spark Ignition System
- PVC/CPVC Vent Compatible
- Multiple Voltage Options
- Condensate Float Switch and Trap Included
- Optional Condensate Pump and Condensate Neutralizer
- Single Stage Gas Control
- 10-Year Heat Exchanger, Flue Collector and Burner Warranty



Specifications

MBH Input	50	100	150	200	250	300	350	400
MBH Output	48	96	145	191	243	283	328	372
Thermal Efficiency	96%	96%	97%	96%	97%	94%	94%	93%
Air Temp. Rise - °F	64	50	47	50	53	56	51	58
Free Air Delivery (CFM)	691	1830	2869	3567	4154	4675	6087	6124
Motor HP (qty)	1/14 (2)	1/2	1/2 (2)	1/2 (2)	1 (2)	1 (2)	1 (2)	1 (2)
Gas Connection Size	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"	3/4"
Flue Size	2"	2"	3"	4"	4"	4"	4"	4"



Low Profile Unit Heaters

BRT Series

BRUT gas-fired unit heaters combine the latest tubular heat exchanger technologies with a unique single-orifice burner system for superior durability, reliability and performance. BRT propeller units are available in sizes from 30,000 - 120,000 BTU/h and offer industry leading operating efficiencies in a compact low-profile design perfect for applications where space is limited. Units are ready for standard or separated combustion all in one unit. Optional combustion air inlet kits available for concentric venting.

Residential Garage Certified

All BRT units are covered by a limited 10-year heat exchanger warranty and are ETL certified for residential garage installations. Units come standard with LP gas conversion kits and everything needed for applications in dusty or damp environments.

Features and Benefits

- +82% Thermal Efficiency
- Residential Certification: For Use as a Garage Utility Heater
- Standard or Separated Combustion All-In-One Units
- Single Orifice Burner System
- Direct Spark Ignition
- 20-Gauge Tubular Heat Exchangers
- 20-Gauge Jacket Panels with Baked Enamel Finish
- Power Vented
- OSHA Fan Guard
- Terminal Strip Low Voltage Wiring
- LP Gas Conversion Kit Included
- Easy Access Control Panel
- 321 Stainless Steel Burner Box
- 10-Year Heat Exchanger Warranty



Specifications

MBH Input†	30	45	60	75	90	105	120
MBH Output†	24	37	49	61	73	86	98
Free Air Delivery CFM	370	550	740	920	1,100	1,300	1,475
Motor HP	1/20	1/20	1/12	1/12	1/10	1/10	1/10
Flue Size Diameter							
Standard Combustion	4"	4"	4"	4"	4"	4"	4"
Separated Combustion	4"	4"	4"	4"	5"	5"	5"

†Ratings shown are for unit installations at elevations between 0 and 2,000 ft. (0 to 610m). For installations above 2,000 ft. (610m), the unit input must be derated 4% for each 1,000 ft. (305m) above 2,000 ft. refer to local codes, or refer to the latest edition of the National Fuel Gas Code, ANSI Standard Z223.1 (NFPA No. 54).

See unit installation manual for deration information.



Commercial & Light Commercial Unit Heaters

BXF/BXC Series

Beacon Morris BXF (propeller) and BXC (blower) series convertible venting type tubular gas-fired unit heaters offer a highly efficient, extremely durable alternative to the traditional clam shell design. These propeller and blower type units combine the latest tubular heat exchanger and in-shot burner technology with the quality and reliability you have come to know from Beacon Morris. Units are available in sizes 100,000 - 400,000 BTU/h and have been certified by ETL as providing 83% thermal (combustion) efficiency.

Notably, the "BXF/BXC" unit heater is designed so it can be installed in either standard or separated combustion venting configurations without requiring modification to the unit itself. Located on the rear cover panel of each unit, combustion air inlet collars are left open in a standard combustion venting configuration. When set up for separated combustion, combustion air piping is connected to the inlet collars so that the burners, spark ignitor, and flue system are enclosed within the unit, allowing the entire combustion process to remain unaffected by the atmosphere in the space where the heater is located. Separated combustion venting configurations should be used where dusty, dirty or mildly corrosive conditions exist, or where high humidity or slightly negative pressures prevail.

Standard Features and Benefits

- Standard or Separated Combustion All-in-One Units
- 20-Gauge Aluminized Steel Tubular Heat Exchanger
- 83% Thermal Efficiency
- Power Venter
- 20-Gauge Steel Cabinetry with Baked Enamel Finish
- Direct Spark Ignition System
- Redundant Single Stage Gas Valve
- Rear Burner Access for Ease of Service
- Individually Adjustable and Removable Horizontal Louvers
- 10-Year Heat Exchanger, Flue Collector and Burner Warranty

Optional Features and Benefits

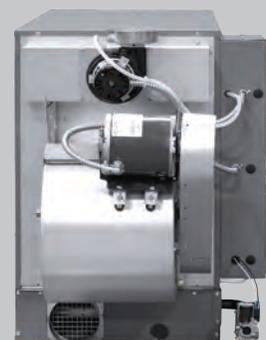
- Stainless Steel Heat Exchanger, Burners, and/or Flue Collector
- Two Stage and Various Electronic Modulation Gas Controls
- Discharge Nozzles (30°, 60° & 90°)
- Combustion Air Inlet Kits (Concentric Vent)
- Supply Voltages: 208 & 230/1/60 AND 208, 230, 460, 575/3/60



Model BXF



Model BXC



Specifications

MBH Input†	100	125	150	175	200	250	300	350	400
MBH Output†	83	103	124	145	166	207	249	290	332
Free Air Delivery CFM BXF	1,600	2,200	2,400	2,850	3,200	3,450	5,000	5,600	5,800
Free Air Delivery CFM BXC	1,181	1,476	1,771	2,067	2,362	2,953	3,501	4,134	4,724
Motor HP (Qty) BXF	1/10	1/4	1/4	1/3	1/3	1/3	1/4 (2)	1/3 (2)	1/3 (2)
Motor HP (Qty) BXC	1/4	1/2	1/2	3/4	3/4	1	1	1-1/2	1-1/2
*Flue Size Diameter	5"	5"	5"	5"	5"	5"	6"	6"	6"

†Ratings shown are for unit installations at elevations between 0 and 2,000 ft. (0 to 610m). For installations above 2,000 ft. (610m), the unit input must be derated 4% for each 1,000 ft. (305m) above 2,000 ft. refer to local codes, or refer to the latest edition of the National Fuel Gas Code, ANSI Standard Z223.1 (NFPA No. 54).

See unit installation manual for deration information.

*Flue collar is factory supplied with unit; to be field installed per included instructions on 150/400 MBH sizes.

Hydronic Unit Heaters

HB Series

Beacon Morris HB Series horizontal unit heaters are available in both serpentine and header type units. Serpentine units offer outputs from 8,030 to 35,900 BTUs and are ideal for hot water installations with limited clearances. Header type horizontal units range from 18,000 to 360,000 BTUs and can operate with either hot water or steam. Both units are furnished with totally enclosed motors as standard equipment, explosion proof motors are optional.

HB Features and Benefits

- Copper Coils w/Aluminum Fins
- 20-Gauge Cabinetry
- 115/1/60 Volt Motor
- Thermal Over Load Protection
- Adjustable Louvers

VB Series

Beacon Morris VB Series vertical unit heaters are designed for installations requiring down flow air delivery. Offered in 15 sizes ranging from 41,300 to 705,000 BTU. Low output (increased airflow) units are available for high ceiling applications, steam or hot water operation.

VB Features and Benefits

- Copper Coils w/Aluminum Fins
- Totally Enclosed Motors
- Standard Units are Field Convertible to Low Output by Removing Air Port Knockouts Located on Top of the Unit
- Thermal Over Load Protection
- 4-Point Suspension



Model HB
Header Type



Model HB
Serpentine Type

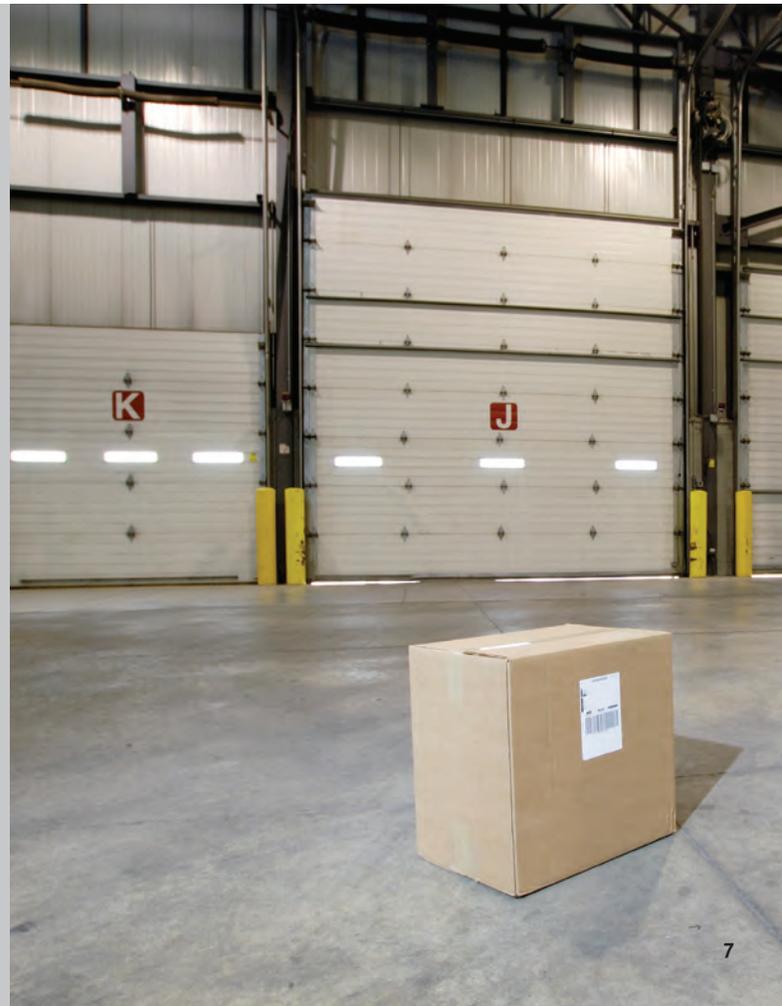


Model VB



Specifications

Model	Type	Motor H.P. Range	Output Range	CFM Range
HB (Serpentine Coil)	Horizontal	1/6-1/20	8,030-35,900	245-850
HB (Header Type Coil)	Horizontal	1/6-1/2	18,000-360,000	395-5,500
VB (Standard Unit)	Vertical	1/40-3	41,300-705,000	598-11,000
VB (Low Output Unit)	Vertical	1/40-3	34,800-620,000	668-11,900



Oil Fired Unit Heaters

BMOF Series

Beacon Morris BMOF Series oil-fired unit heater is designed to operate on number 1 & 2 fuel oils. Available in seven sizes ranging from 70 to 560 MBH (.50 to 4.00 GPH) all units are factory assembled and ready to install.

Features and Benefits

- Heavy Duty 18-Gauge Heat Exchanger
- Energy Efficient Flame Retention Beckett® Burner
- Adjustable Discharge Air Louvers
- Fan/Limit Control
- Four Point Suspension
- CAD Cell Burner Safeguard Control
- 115/1/60

Indoor Duct Furnaces

BMED/BMES Series

The BMED and BMES are power vented indoor duct furnaces. BMED offers bottom burner access while the model BMES offers side access. Both models offer high efficiencies that achieve annual fuel savings of up to 25% over conventional natural vented duct furnaces. Also featured are a factory installed power venter and sealed flue collector that controls combustion and excess air during on cycles. Spark ignition is standard.

BMSD Series

The Beacon Morris BMSD Series separated combustion indoor duct furnace is designed to be installed in mildly hostile environments where dust, dirt, and mild corrosives exist. The BMSD also performs well in atmospheres with humidity or slightly negative pressures. The burners, pilot and flue system are enclosed within the unit. The entire combustion process is literally unaffected by the atmosphere in the space where the unit is located.

Features and Benefits

- 80% Thermal Efficiency
- 100-400 MBH
- Aluminized Steel Heat Exchanger - 20-Gauge
- Optional 409 and 321 Stainless Steel Heat Exchangers
- Single Stage Gas Valve
- Optional 2-Stage and Modulating Gas Valves
- Optional Air Flow Prove Switch
- Spark Ignition
- Natural or LP Gas Available
- Easy Burner Access with Individual Removable Burners
- Factory Test Fired
- 1-Year Warranty

Model BMOF



Specifications

MBH Input	70	105	126	231	312	375	560
MBH Output	56	84	100	184	250	300	450
Firing Rate #2 Fuel Oil (GPH)	0.5	0.75	0.9	1.65	2.25	2.75	4
Free Air Delivery CFM	1,050	1,750	2,000	3,200	3,400	5,000	6,000
Motor HP (Qty)	1/4	1/4	1/4	1/4	1/2	1/2	1/3 (2)
Flue Size Diameter	7"	7"	7"	8"	9"	9"	10"

Model BMED



Specifications

MBH Input†	100	150	200	250	300	350	400
MBH Output†	80	120	160	200	240	280	320
MODEL QVED/QVES							
Min Temp. Rise	30	30	30	30	30	30	30
Max CFM	2,469	3,704	4,938	6,173	7,407	8,642	9,877
Pressure Drop	0.48	0.48	0.48	0.48	0.5	0.48	0.5
Max Temp. Rise	80	80	80	80	80	80	80
Min CFM	929	1,389	1,852	2,315	2,778	3,241	3,704
Pressure Drop	0.12	0.15	0.14	0.14	0.13	0.13	0.14
MODEL QVSD							
Min Temp. Rise	20	20	20	20	20	20	20
Max CFM	3,700	5,550	7,401	9,251	11,101	12,951	14,801
Pressure Drop	2.03	1.81	1.9	1.96	2	2.02	2.05
Max Temp. Rise	90	90	90	90	90	90	90
Min CFM	822	1,233	1,645	2,056	2,467	2,878	3,289
Pressure Drop	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Flue Size Diameter	4"	4"	5"	5"	6"	6"	6"

†Published ratings are shown for elevations up to 2,000 ft. (610m) above sea level. For higher elevations derate 4% for each 1,000 ft. (305m) above sea level. In Canada, derate 10% for altitudes 2,000 to 4,500 ft. (610 to 1372m).

Infrared Heaters

RBW Series – Wind & Rain Resistant Outdoor Patio Heater

RBW Series Infrared Patio heater, with tinted ceramic glass design provides protection from adverse wind and weather conditions, extending the season for your outdoor dining and entertainment areas. Available with 35 and 50 MBH input capacities and optional accessories like a heat shield to reduce overhead clearances and an adjustable mounting bracket.

Features and Benefits

- Wind Resistance up to 45 MPH
- Two Stage Gas Control Options With Either Thermostat, 3 Position Switch, or Wireless Remote Control
- Natural or LP Gas
- Potted (Water Resistant) Direct Spark Ignition Module
- Extremely Quiet Operation
- Horizontal or Angle Mounting up to 60°
- High Efficiency Ceramic Tiles
- 115/1/60 Supply Voltage
- Totally Enclosed Burner Prevents Heat Rollout
- 3-Year Limited Warranty on Burner Assembly, 1-year Limited Warranty on Controls

Model RBW

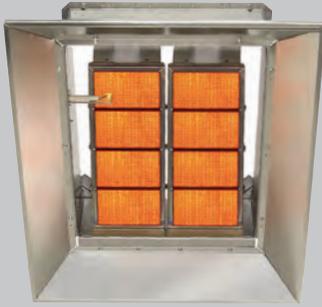


Specifications

Model	Input BTU/hr -High	Input BTU/hr -Low
RSW35	35,000	24,000
RSW50	50,000	34,000



Model RBD



Specifications

Model Number	Gas Type	MBH Input	Model Number	Gas Type	MBH Input
RBD30	Natural	30	RBD80	Natural	80
RBD33	Propane	33	RBD100	Natural	100
RBD35	Natural	35	RBD100	Propane	99
RBD40	Natural	40	RBD120	Natural	120
RBD60	Natural	60	RBD132	Propane	132
RBD66	Propane	66	RBD140	Natural	140
RBD70	Natural	70	RBD160	Natural	160

Model RBG



Specifications

Model Number	MBH Input
RBG025	25
RBG035	35
RBG045	45

Infrared Heaters

RBD Series – High Intensity

The Beacon Morris RBD Series high intensity infrared heaters are available with inputs of 35 to 160 MBH. Units have a special honeycomb tile design for increased radiant output.

Features and Benefits

- Direct Spark Ignition – 100% Shut Off
- Heavy Gauge Aluminized Steel Burner Housing
- Highly Efficient Aluminum Reflectors
- Natural or LP Gas
- 24 Control
- 4-Point Suspension
- 5-Year Burner Warranty

RBG Series – Residential Low Intensity

The RBG Series low intensity infrared heaters are residentially certified and available with inputs of 25 to 40 MBH. All units are field assembled and utilize Beacon Morris' integral tube/reflector hanging system. The burner is of the box type design and is totally enclosed to protect against dust and moisture.

Features and Benefits

Burner Box

- Totally Enclosed Design
- Direct Spark Ignition – 100% Shut Off
- Natural or LP Gas
- Factory Test Fired
- 10-Year Burner Warranty

Radiant Tube

- Heat Treated Aluminized Steel Tube
- Compact Tube Size with Overall Unit Length of 9'2" for Ease of Installation
- U-Tube Design for Even Heat Distribution
- 5-Year Tube Warranty

RBS/RBU Series – Commercial Low Intensity

The Beacon RBS/RBU Series low intensity infrared heaters are available with inputs of 40 to 200 MBH and system lengths of 10 to 70 feet. All units are field assembled and utilize Sterling's integral tube/reflector hanging system. The burner is of the box type design and is totally enclosed to protect against dust and moisture.

Features and Benefits

Burner Box

- Totally Enclosed Design
- Direct Spark Ignition – 100% Shut Off
- Heavy Duty Cast Iron Burner
- Natural or LP Gas
- LED Indicator Light for Ease of Trouble Shooting
- Factory Test Fired
- 10-Year Burner Warranty

Radiant Tube

- Heat Treated Aluminized Steel or Alumitherm Steel on First 10 Feet of Unit
- Hot Rolled Steel on Remainder of Unit
- Optional Complete Heat Treated Aluminized Steel
- Integral Tube Integrity Safety System
- 5-Year Tube Warranty

RBM Series – Millivolt Ceramic Heaters

Features and Benefits

- Capacities from 26,000 to 104,000 Btu/hr
- Millivolt standing pilot operation with 100% gas shut-off safety control
- No electricity required to operate
- Requires 750 mV thermostat (part #42489010) for proper operation
- Aluminized steel construction
- Aluminum reflectors. Optional reflector extensions available
- Suitable for horizontal or angle mount up to 30°
- Indirect vented operation. Requires mechanical or gravity ventilation

Model RBS



Specifications

Model Number	MBH Input	System Length		Flue Size
		Min.	Max.	
RBS/U040	40	10'	20'	4"
RBS/U050	50	20'	40'	4"
RBS/U075	75	20'	40'	4"
RBS/U100	100	30'	50'	4"
RBS/U125	125	30'	60'	4"
RBS/U150	150	40'	60'	4"
RBS/U175	175	50'	70'	4"
RBS/U200	200	50'	70'	4"

Model RBU



Model RBM



Specifications

Model Number	Gas Type	Input Btu/hr
RBM30-N1C	Natural	26,000
RBM30-L1C	Propane	26,000
RBM50-N1C	Natural	52,000
RBM50-L1C	Propane	52,000
RBM100-N1C	Natural	104,000
RBM100-L1C	Propane	104,000



260 North Elm Street | Westfield, MA 01085 | Tel: (413) 562-5423
7555 Tranmere Dr. | Mississauga, Ont. L5S 1L4 Canada | Tel: (905) 670-5888

www.beacon-morris.com

 A MESTEK COMPANY