BEACON-MORRIS MODEL “BRT”
LOW PROFILE TUBULAR DESIGN
GAS FIRED UNIT HEATER

BRTS-6

DESCRIPTION
The Beacon-Morris Model “BRT” Low Profile gas-fired unit heater is a highly efficient, extremely versatile product. These propeller units combine the latest tubular heat exchanger technology with a unique single-orifice burner system. Units are available in sizes ranging from 30 to 120 MBH in a compact, low profile design.

RESIDENTIAL AND COMMERCIAL CERTIFICATIONS
The Beacon-Morris Model “BRT” unit heater conforms with the latest ETL certification standards. Design certified under ANSI Z83.8 for Industrial/Commercial use and the more demanding requirements of CSA .10.96 U.S. (2nd ed.) “Unit Heaters for Residential Installation”, make this low profile unit heater the ideal selection.

TUBULAR HEAT EXCHANGER
The Beacon-Morris tubular heat exchanger has been designed to provide maximum and uniform heat transfer. The low pressure drop associated with the design enables heated air to be evenly distributed to the conditioned space. The curved, non-welded serpentine design experiences low thermal stress making it highly durable for significantly longer service life.

SINGLE ORIFICE BURNER
Beacon-Morris Model “BRT” units are built with a proprietary, single orifice burner system: one burner to service and one orifice to change for gas conversion. The stainless steel burner box provides even heat distribution to all heat exchanger tubes.

DIRECT SPARK IGNITION SYSTEM
Beacon-Morris Model “BRT” units utilize a direct spark pilotless ignition of the burner, providing fast heat delivery. This highly reliable and efficient ignition system incorporates an integrated electronic control board to regulate the system sequence of operation, including an onboard LED indicator for simple troubleshooting.

DUAL VENTING
Beacon-Morris “BRT” units are agency certified for both standard and separated combustion venting. Units are shipped to accommodate either category I or category III horizontal or vertical venting. With the addition of a Sterling concentric vent kit, the unit can be installed as a separated combustion unit.

Model BRT045

Model BRT045

Model BRT120

Model BRT120

Beacon/Morris
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MADE IN THE USA

01/14

PROJECT: _____

UNIT TAG: _____

BRT LOW PROFILE TUBULAR DESIGN
PERFORMANCE AND DIMENSIONAL DATA

Unit Size	30	45	60	75	90	105	120
PERFORMANCE DATA†							
Input - BTU/Hr.	30,000	45,000	60,000	75,000	90,000	105,000	120,000
(kW)	(8.8)	(13.2)	(17.6)	(22.0)	(26.4)	(30.8)	(35.2)
Output - BTU/Hr.	24,900	37,350	49,800	61,500	73,800	86,100	98,400
(kW)	(7.2)	(10.9)	(14.5)	(18.0)	(21.6)	(25.2)	(28.8)
Thermal Efficiency (%)	83	83	83	82	82	82	82
Free Air Delivery - CFM	370	550	740	920	1,100	1,300	1,475
(cu. m/s)	(.175)	(.260)	(.349)	(.434)	(.519)	(.614)	(.696)
Air Temperature Rise - Deg. F	60	60	60	60	60	60	60
(Deg. C)	(15)	(15)	(15)	(15)	(15)	(15)	(15)
Full Load Amps at 120V	3.0	3.0	4.1	4.1	6.4	6.4	6.4
Maximum Circuit Ampacity	3.5	3.5	4.8	4.8	7.5	7.5	7.5
MOTOR DATA: Motor HP	1/20	1/20	1/12	1/12	1/10	1/10	1/10
Motor (kW)	(0.04)	(0.04)	(0.06)	(0.06)	(0.075)	(0.075)	(0.075)
Motor Type ODP††	SP	SP	SP	SP	SP	SP	SP
R.P.M.	1650	1650	1050	1050	1050	1050	1050
Motor Amps @ 115V	1.9	1.9	2.6	2.6	4.2	4.2	4.2
DIMENSIONAL DATA - inches (mm)							
"A" Jacket Height	12-3/8	12-3/8	15-7/8	15-7/8	22-5/8	22-5/8	22-5/8
	(314)	(314)	(403)	(403)	(574)	(574)	(574)
"B" Overall Height	13-1/4	13-1/4	16-13/16	16-13/16	23-9/16	23-9/16	23-9/16
	(337)	(337)	(427)	(427)	(598)	(598)	(598)
"C" Overall Depth	25-7/8	25-7/8	26-3/16	26-3/16	26-3/8	26-3/8	26-3/8
	(632)	(632)	(665)	(665)	(670)	(670)	(670)
"D1" Center Line Height of Flue*	8-1/2	8-1/2	10-3/8	10-3/8	13-5/8	13-5/8	13-5/8
	(216)	(216)	(263)	(263)	(346)	(346)	(346)
"D2" Center Line Height of Air Intake	8-1/2	8-1/2	8	8	8-5/8	8-5/8	8-5/8
	(216)	(216)	(203)	(203)	(219)	(219)	(219)
"E" Fan Diameter	10	10	14	14	16	16	16
	(254)	(254)	(356)	(356)	(406)	(406)	(406)
"F" Discharge Opening Height	10-13/16	10-13/16	14-7/16	14-7/16	21-3/16	21-3/16	21-3/16
	(275)	(275)	(367)	(367)	(538)	(538)	(538)
"G" Vent Connection Diameter	4	4	4	4	4	4	4
	(102)	(102)	(102)	(102)	(102)	(102)	(102)
"H1" Center Line of Flue Connection From Side	7-1/4	7-1/4	7-1/4	7-1/4	7-3/4	7-3/4	7-3/4
	(184)	(184)	(184)	(184)	(197)	(197)	(197)
"H2" Center Line of Air Intake From Side	2-3/4	2-3/4	2-3/4	2-3/4	3-1/2	3-1/2	3-1/2
	(70)	(70)	(70)	(70)	(89)	(89)	(89)
Vent Size Requirements - Standard Combustion							
Category III Horizontal	4	4	4	4	4	4	4
	(102)	(102)	(102)	(102)	(102)	(102)	(102)
Category I & III Vertical	4	4	4	4	4	4	4
	(102)	(102)	(102)	(102)	(102)	(102)	(102)
Vent Size Requirments - Separated Combustion							
Exhaust Diameter**	4	4	4	4	5	5	5
	(102)	(102)	(102)	(102)	(127)	(127)	(127)
Intake Air Diameter	4	4	4	4	5	5	5
	(102)	(102)	(102)	(102)	(127)	(127)	(127)
Unit Weight - lbs.	60	65	80	85	95	105	110
(kgs)	(27)	(29)	(36)	(39)	(43)	(48)	(50)
Shipping Weight - lbs.	70	75	90	95	110	115	120
(kgs)	(32)	(34)	(41)	(43)	(50)	(52)	(54)

*For all installations, the flue collar is included with the unit and should be field installed per the instructions included with the unit.

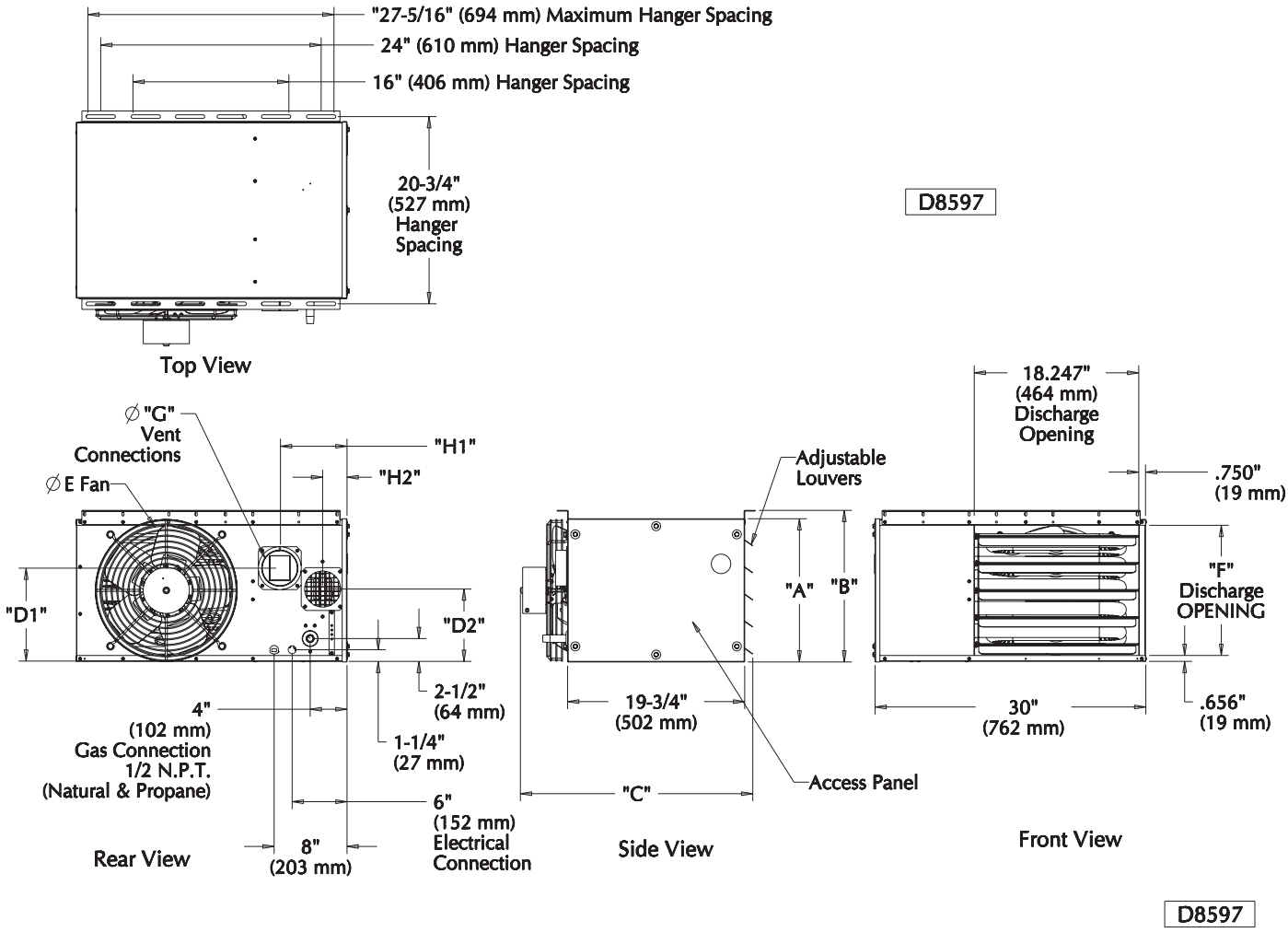
**4-5" reducer supplied where required.

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

For installations in Canada, any reference to deration at altitudes in excess of 2,000 feet (610m) are to be ignored. At altitudes of 2,000 feet to 4,500 feet (610 to 1372m), the unit must be derated and be so marked in accordance with the ETL certification. See unit installation manual for field deration information.

†† LEGEND: ODP = OPEN DRIP PROOF SP = SHADED POLE

BRT LOW PROFILE TUBULAR DESIGN
DIMENSIONAL DATA



DIMENSIONS .XXX STANDARD UNITS
DIMENSIONS IN PARENTHESIS (XXX) MILLIMETERS

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STANDARD FEATURES

- Up to 82%+ Thermal Efficiency
- Redundant Single Stage Gas Valve
- Residential Certification
- 20GA Aluminized Heat Exchanger
- 120/24V Control Transformer
- 115/1/60 Fan Motor with Internal Overload Protection
- Power Vented
- Direct Spark Ignition
- 20GA Baked Enamel Cabinet
- 10 Year Heat Exchanger Warranty
- OSHA Fan Guard
- Right Hand Control Access
  - Field Convertible to Left Hand
- High Limit Switch
- Air Pressure Switch
- Natural or Propane Gas
- Gas Conversion Kit Included
- Field Convertible to Separated Combustion
- Easy Access Control Panel
- 321 Stainless Steel Burner Box

OPTIONAL EQUIPMENT

- 409 Stainless Steel Heat Exchanger
- Two Stage Gas Control (Sizes 60-120 Only)
- Supply Voltage (Field Mounted Transformers):
  - 208/1/60
  - 230/1/60
  - 208/3/60
  - 230/3/60
  - 460/3/60
  - 575/3/60
- Totally Enclosed Motors (Sizes 60-120 Only)
- Stainless Steel Flue Collector
- Pressure Regulator
- Single & Two Stage Mercury Free Thermostats
- Line Volt Thermostat
- Locking Thermostat Cover
- 24V SPST Relay
- Vent Caps
- Combustion Air Inlet Kits
  (For All Separated Combustion Installations)

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