

BEACON/MORRIS HIGH EFFICIENCY GAS FIRED PROPELLER UNIT HEATER



BEPS-5

DESCRIPTION

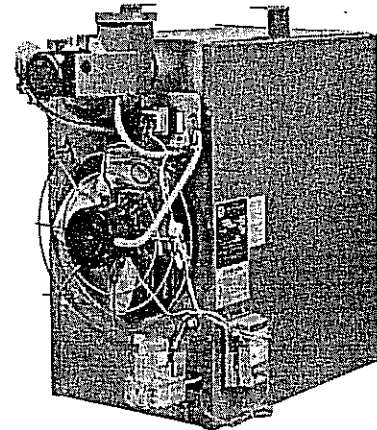
The Beacon/Morris High Efficiency Unit Heaters achieve 80% thermal efficiency and annual fuel savings of 20 to 25% over conventional gravity vented heaters.

Heated air no longer escapes through the draft diverter opening during the off-cycle. Energy saving spark ignition reduces gas losses. The pilot only operates when required.

Horizontal power venting allows side wall venting, smaller openings and single walled vent pipe, reducing heat loss. Higher efficiencies can reduce equipment and material cost as well as installation time.

80% THERMAL EFFICIENCY

The designs are certified by A.G.A and C.G.A. as providing a minimum of 80% combustion efficiency. Approved for use in California.



STANDARD FEATURES

- Spark Ignited Intermittent Safety Pilot With Electronic Flame Supervision
- Power Venter
- 20 ga. Aluminized Steel Heat Exchanger.
- Certified for natural and propane gases.
- Aluminized Steel Burners with Stainless "Burner Shade Port Protector"
- 115 Volt Supply Voltage
- 115 Volt Motors, All Sizes
- High Limit Switch
- Burner Air Shutters, All Sizes
- Transformer, 115/24V
- Combustion Air Pressure Switch
- Redundant Single Stage Combination Gas Valve
- Bottom Access Panel, All Sizes
- Full Protection Fan Guard
- Fan Time Delay-Relay
- Horizontal Individually Adjustable Louvers
- 2 Point Hanger Rod Suspension, All Sizes
- 20 ga. Steel Cabinet with Gray Enamel Finish
- Units are factory tested for operation of motor, control and flame.

OPTIONAL EXTRAS

OPT. NO.	DESCRIPTION
—	Stainless Steel Heat Exchangers (409 or 321 S.S.)
MOJ	409 Stainless Steel Flue Collectors
MOE	409 Stainless Steel Burners
MOV1	Vertical Louvers
EOL	Summer - Winter Toggle Switch
MOH	Pressure Regulator to Reduce Line Pressure to 14 inches W.C. Consult Customer Service for field requirements.
EOQ	Low voltage room thermostat with Intergral Switch for summer fan operation.
MOT2,3,4,5	30°, 45°, 60°, & 90° Downward Discharge Nozzle.
MOT1	Y-Splitter Discharge Nozzle.
KO7	Four to Two Point Hanger Suspension Kit, QVEF 100-400 only.



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PROJECT:
LOCATION:
ARCHITECT:
ENGINEER:
CONTRACTOR:
PO NUMBER:
DATE:

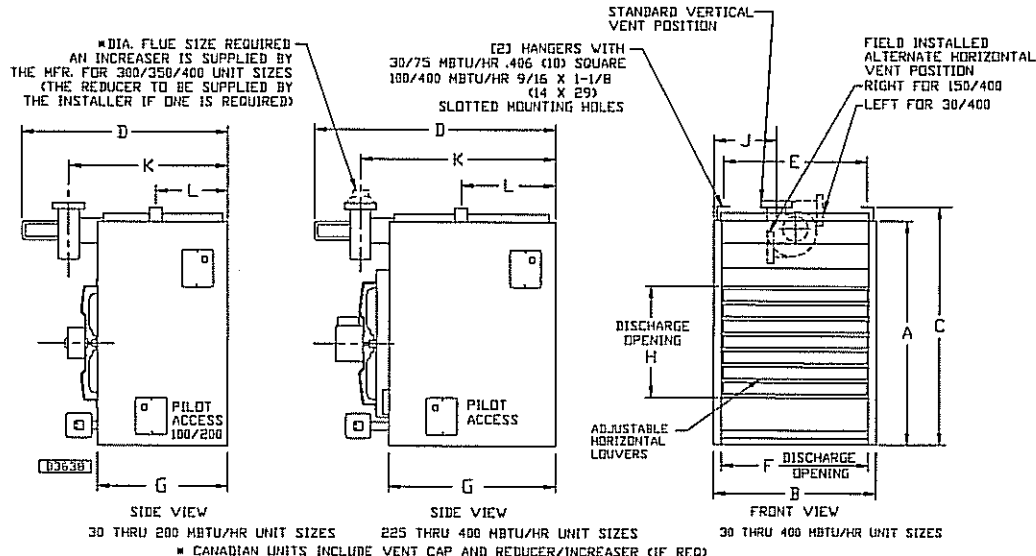
BMEF – PERFORMANCE AND DIMENSIONAL DATA



Model BMEF Unit Size	30	45	60	75	100	125	150	175	200	225	250	300	350	400
PERFORMANCE DATA ‡														
Input BTU/Hr (kW)	30,000 (8.8)	45,000 (13.2)	60,000 (17.6)	75,000 (22.0)	100,000 (29.3)	125,000 (36.6)	150,000 (43.9)	175,000 (51.2)	200,000 (58.6)	225,000 (65.9)	250,000 (73.2)	300,000 (87.8)	350,000 (102.5)	400,000 (117.1)
Output BTU/Hr (kW)	24,000 (7.0)	36,000 (10.5)	48,000 (14.1)	60,000 (17.6)	80,000 (23.4)	100,000 (29.3)	120,000 (35.1)	140,000 (41.0)	160,000 (46.9)	180,000 (52.7)	200,000 (58.6)	240,000 (70.3)	280,000 (82.0)	320,000 (93.7)
Thermal Efficiency (%)	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Free Air Delivery CFM (cu. m/s)	750 (0.354)	800 (0.378)	1,050 (0.496)	1,100 (0.519)	1,480 (0.699)	1,650 (0.779)	2,200 (1.038)	2,530 (1.194)	2,640 (1.246)	2,700 (1.274)	3,100 (1.463)	4,400 (2.077)	5,080 (2.360)	5,300 (2.502)
Air Temperature Rise Deg. F (Deg. C)	34 (17)	42 (23)	42 (23)	50 (28)	50 (28)	56 (31)	56 (31)	58 (31)	56 (31)	61 (34)	60 (33)	50 (28)	52 (29)	56 (31)
Outlet Velocity FPM (m/s)	680 (3.45)	720 (3.66)	610 (3.10)	640 (3.25)	775 (3.94)	910 (4.62)	1,045 (5.31)	1,070 (5.44)	1,010 (5.13)	950 (4.83)	980 (4.98)	1,100 (5.59)	1,150 (5.84)	1,050 (5.33)
Sound Ratings (See Page 24)	II	II	II	II	II	II	II	III	III	III	IV	IV	IV	IV
Full Load Amps at 115V	4.5	4.5	4.5	4.5	5.8	6	7.2	8.2	8.2	8.2	8.2	11.2	13.2	13.2
MOTOR DATA : Motor HP														
	1/30	1/30	1/30	1/30	1/20	1/10	1/4	1/3	1/3	1/3	1/3	1/4	1/3	1/3
Motor (kW)	(0.250)	(0.250)	(0.250)	(0.250)	(0.370)	(0.750)	(0.186)	(0.249)	(0.249)	(0.249)	(0.249)	(0.186)	(0.249)	(0.249)
Motor Type	SP	SP	SP	SP	SP	SP	PSC	PSC	PSC	PSC	PSC	PSC	PSC	PSC
R.P.M.	1,050	1,050	1,050	1,050	1,050	1,050	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140
Amps @ 115V	1.3	1.3	1.3	1.3	2.6	2.8	4.0	4.5	4.5	4.5	4.5	8.0	9.0	9.0
DIMENSIONAL DATA in. (mm)														
"A" Height to Top of Unit	25-3/4 (654)	25-3/4 (654)	25-3/4 (654)	25-3/4 (654)	31-1/4 (794)	31-1/4 (794)	36-1/4 (921)	36-1/4 (921)	36-1/4 (921)	36-1/4 (921)	36-1/4 (921)	36-1/4 (921)	36-1/4 (921)	36-1/4 (921)
"B" Width of Unit	14 (356)	14 (356)	17-1/2 (444)	17-1/2 (444)	17-7/8 (454)	20-5/8 (524)	20-5/8 (524)	23-3/8 (594)	26-1/8 (664)	28-7/8 (733)	31-5/8 (803)	37-1/8 (943)	42-5/8 (1083)	48-1/8 (1222)
"C" Height to Top of Hanger	27-1/2 (698)	27-1/2 (698)	27-1/2 (698)	27-1/2 (698)	34-1/8 (867)	34-1/8 (867)	39-1/8 (994)	39-1/8 (994)	39-1/8 (994)	39-1/8 (994)	39-1/8 (994)	39-1/8 (994)	39-1/8 (994)	39-1/8 (994)
"D" Depth to Rear of Housing	30-3/8 (772)	30-3/8 (772)	30-3/8 (772)	30-3/8 (772)	37-1/2 (952)	37-1/2 (952)	37-1/2 (952)	37-1/2 (952)	37-1/2 (952)	37-1/2 (952)	37-1/2 (952)	37-1/2 (952)	37-1/2 (952)	37-1/2 (952)
"E" Hanging Distance Width	11 (279)	11 (279)	16-1/2 (419)	16-1/2 (419)	14-1/2 (368)	17-1/4 (438)	17-1/4 (438)	20 (508)	22-3/4 (578)	25-1/2 (648)	28-1/4 (718)	33-3/4 (857)	39-1/4 (997)	44-3/4 (1137)
"F" Discharge Opening Width	10 (254)	10 (254)	15-1/2 (394)	15-1/2 (394)	15-3/8 (391)	18-1/8 (460)	18-1/8 (460)	20-7/8 (530)	23-5/8 (600)	26-3/8 (670)	29-1/8 (740)	34-5/8 (879)	40-1/8 (1019)	45-5/8 (1159)
"G" Depth to Unit Side Jacket	19-3/8 (492)	19-3/8 (492)	19-3/8 (492)	19-3/8 (492)	26-3/4 (679)	26-3/4 (679)	26-3/4 (679)	26-3/4 (679)	26-3/4 (679)	26-3/4 (679)	26-3/4 (679)	26-3/4 (679)	26-3/4 (679)	26-3/4 (679)
"H" Discharge Opening Height	16-1/4 (413)	16-1/4 (413)	16-1/4 (413)	16-1/4 (413)	18 (457)	18 (457)	18 (457)	18 (457)	18 (457)	18 (457)	18 (457)	18 (457)	18 (457)	18 (457)
"J" to Centerline of Flue	4 (102)	4 (102)	5-3/4 (146)	5-3/4 (146)	5-7/8 (149)	7-1/4 (184)	7-1/4 (184)	8-5/8 (219)	10 (254)	11-1/4 (286)	12-3/4 (324)	15-1/2 (394)	18-1/4 (464)	21 (533)
"K" Depth to Centerline of Flue	23-5/8 (600)	23-5/8 (600)	23-5/8 (600)	23-5/8 (600)	30-5/8 (778)	30-5/8 (778)	30-5/8 (778)	30-5/8 (778)	30-5/8 (778)	30-5/8 (778)	30-5/8 (778)	30-5/8 (778)	30-5/8 (778)	30-5/8 (778)
"L" Hanger Location	13-3/4 (349)	13-3/4 (349)	13-1/2 (343)	13-1/2 (343)	16-1/4 (413)	16-3/4 (425)	16-3/8 (416)	16-3/8 (416)	16-3/8 (416)	16-3/4 (425)	16-3/4 (425)	16-3/4 (425)	16-3/4 (425)	16-3/4 (425)
Flue Size Dia.-in.* (Dia.-mm)	4 (102)	4 (102)	4 (102)	4 (102)	4 (102)	4 (102)	4 (102)	4 (102)	5 (127)	5 (127)	5 (127)	6 (152)	6 (152)	6 (152)
Fan Diameter-in.	12	12	14	14	14	16	16	18	18	18	18	(2) 16	(2) 18	(2) 18
Gas Inlet-Natural Gas-in.	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4
Gas Inlet-LP Gas-in.	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4
Approx. Shipping Wt lb. (kg)	79 (36)	94 (43)	109 (49)	119 (54)	174 (79)	197 (89)	219 (99)	238 (108)	249 (113)	275 (125)	305 (138)	350 (159)	414 (188)	461 (209)

‡ Published ratings are shown for elevations up to 2000 feet (610M) above sea level. For higher elevations, derate 4% for each 1000 feet (305M) above sea level. In Canada, derate 10% for altitudes 2000 to 4500 feet (610 to 1372M).

LEGEND: SP = SHADED POLE
PSC = PERMANENT SPLIT CAPACITOR



DIMENSIONS XXX STANDARD UNITS
DIMENSIONS IN PARENTHESIS (XXX) MILLIMETERS

30 THRU 200 MBTU/HR UNIT SIZES 225 THRU 400 MBTU/HR UNIT SIZES 30 THRU 400 MBTU/HR UNIT SIZES
* CANADIAN UNITS INCLUDE VENT CAP AND REDUCER/INCREASER (IF REQ)