

DIMENSIONAL DATA

Blower Units - Model BDP

Figure 26.1

Dimensional Drawings

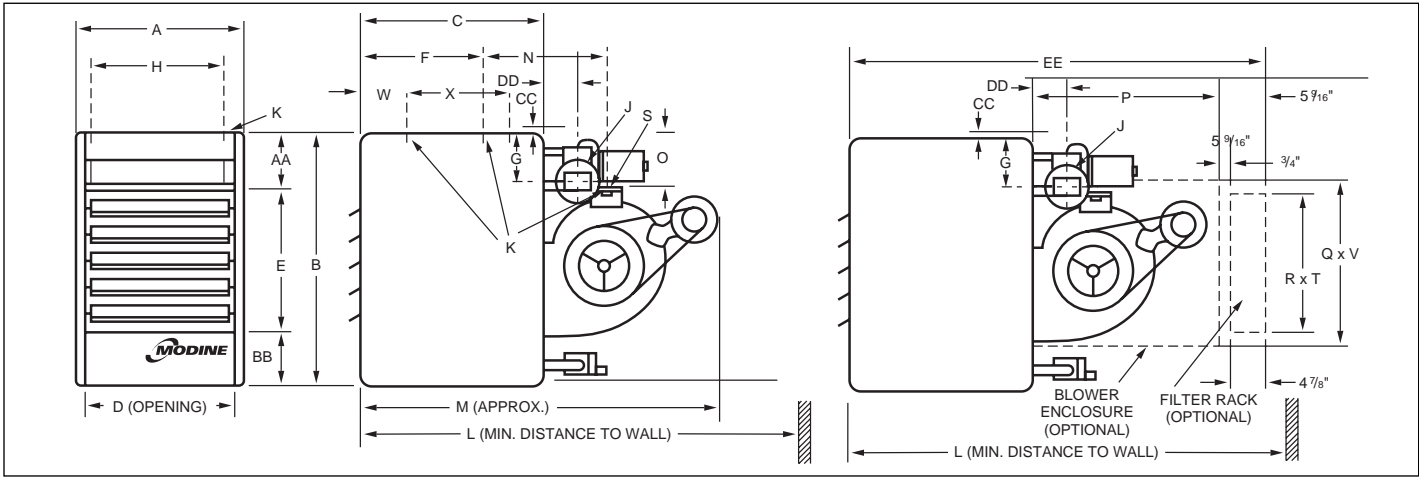


Table 26.1
Dimensions (inches) — BDP

Dimension Symbol	Model Number										
	BDP 50	BDP 75	BDP 100	BDP 125	BDP 150	BDP 175	BDP 200	BDP 250	BDP 300	BDP 350	BDP 400
A	17-1/4	17-1/4	19-1/4	19-1/4	21	23-1/2	25-5/8	25-5/8	28-5/8	33-5/8	40
B	24-1/4	28-3/4	28-3/4	35-1/4	35-1/4	35-1/4	40-1/4	40-1/4	40-1/4	40-1/4	40-1/4
C	14-3/4	20	20	22	22	22	25	25	25	25	25
D	14-13/16	14-13/16	16-13/16	16-13/16	18-9/16	21-1/16	23-3/16	23-3/16	26-3/16	31-3/16	37-1/2
E	13	16	16	20	20	20	24	24	24	24	24
F	9-1/4	11	11	12	12	12	13-1/2	13-1/2	14	—	—
G	5-1/16	5-11/16	5-11/16	7-5/8	6-9/16	6-9/16	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2
H	13-5/8	13-5/8	15-5/8	15-5/8	17-3/8	19-7/8	22	22	25	30	36-3/8
J ①	3 or 4	3 or 4	4	4	5	5	5	6	6	6	6
K Mounting Holes ②	3/8-16	3/8-16	3/8-16	3/8-16	3/8-16	3/8-16	3/8-16	3/8-16	3/8-16	3/8-16	3/8-16
L w/ Blwr Encl & Filt Rk	47-5/8	52-5/8	55-5/8	51-5/8	62-5/8	62-5/8	69-5/8	69-5/8	69-5/8	69-5/8	69-5/8
L w/o Blwr Encl & Filt Rk	38	43-1/8	45-3/4	49-7/8	53-1/8	53-1/8	61	61	61	61	65
M ③	32	37-1/8	39-3/4	43-7/8	47-1/8	47-1/8	55	55	55	55	59
N ④	11-3/4	14-7/8	17-5/8	18-5/8	21-1/2	21-1/2	25-7/16	25-7/16	24-15/16	17-15/16	22
O	4-1/2	5-3/4	5-3/4	7-1/2	7-1/4	7-1/4	8-1/2	8-1/2	8-1/2	8-1/2	8-1/2
P	22	22	25	25	30	30	34	34	34	34	34
Q Blower Encl Ht	14-1/8	17-1/8	17-1/8	21-3/8	21-3/8	21-3/8	25-1/8	25-1/8	25-1/8	25-1/8	25-1/8
R Inlet Duct Height	15-3/4	15-3/4	15-3/4	20	20	20	23-3/4	23-3/4	23-3/4	23-3/4	23-3/4
S Center to Center Blower Mtg. Holes	10-15/16	13-15/16	18-7/16	18-7/16	17-5/16	17-3/8	20-3/8	20-3/8	20-3/8	20-3/8	20-3/8
T Inlet Duct Width	16	16	19-3/4	19-3/4	27-1/2	27-1/2	32-3/4	32-3/4	32-3/4	42-7/8	42-7/8
V Blower Encl Width	17-1/2	17-1/2	21-1/4	21-1/4	29	29	34-1/4	34-1/4	34-1/4	44-3/8	44-3/8
W	—	—	—	—	—	—	—	—	—	5	5
X	—	—	—	—	—	—	—	—	—	16	16
AA	5	6-1/4	6-1/4	8	8	8	9	9	9	9	9
BB	6-1/4	6-1/2	6-1/2	7-1/4	7-1/4	7-1/4	7-1/4	7-1/4	7-1/4	7-1/4	7-1/4
CC	1-1/8	5/8	5/8	—	—	—	—	—	—	—	—
DD	2-5/8	2-9/16	2	2	2-3/4	2-3/4	2-3/4	3-3/8	3-3/8	3-3/8	6-13/16
EE	41-3/8	46-5/8	49-5/8	56-5/8	56-5/8	56-5/8	63-5/8	63-5/8	63-5/8	63-5/8	63-5/8
Gas Connections ⑤	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	3/4	3/4
Std. Mtr. Sheave Dia.	3	3	3	3	3	3	3	3	3	3	4-1/2
Std. Blower Sheave Dia.	8	10	8	7	11	7	14	10	7	6	10
Blower Wheel Diameter	8	8	9	9	13	13	15	15	15	15	15
Approx. Weight	117	152	164	221	152	152	315	315	339	428	498

① Diameter of round vent pipe to fit oval opening.

② BDP 50 thru BDP 300 — 4 holes (2 on blower and 2 on unit). BDP 350 and BDP 400 — 6 holes (2 on blower and 4 on unit). (Listed is the hole diameter and threads per inch to accept threaded rod).

③ This is an approximate dimension for standard motors, allow 3" for sheave and optional motors.

④ Distance between mounting hole in unit casing and mounting hole on blower. On the BDP 350 and BDP 400, the distance is from rear mounting hole in casing to the mounting hole on blower.

⑤ For natural gas; may vary depending on control availability.

GAS-FIRED, POWER-EXHAUSTED HIGH-EFFICIENCY II™ UNIT HEATERS

- 80% Thermal Efficiency • Rotating Power Exhaust • Horizontal or Vertical Venting • Field-Convertible to Propane
- Field-Adjustable Level Hanging • Intermittent Pilot Ignition, 100% Shut-Off with Continuous Retry

HIGH EFFICIENCY II®

The PDP (propeller) and BDP (blower) High Efficiency II gas-fired unit heaters are a generation of products that are inexpensive to install, easy to use, and offer excellent in-service economy.

Each Modine power-exhausted unit heater has been engineered to include the following features:

- 80% thermal efficiency, maximizing seasonal efficiency through the use of a collector box and the power exhauster.
- A power exhaust that can be rotated 180°. The unit can be vented vertically or horizontally.
- A 100% shut-off, intermittent pilot-ignition system with continuous retry, at no extra charge. This ignition system allows for all PDP/BDP units to be field-converted to propane, if desired.
- A safety pressure-switch to assure safe venting conditions.
- Designed to utilize the smallest-diameter vent pipe possible.
- PDP models are designed to operate against 0.5 inches of external static pressure.
- “Wing” screws so that the bottom pan can be dropped without a screwdriver or nut driver.
- A level hanging mechanism for easy field adjustments after adding accessories that may change the unit’s center of gravity.



MODEL PDP



MODEL BDP

Performance Data

	Model Number											
	PDP 30	PDP 50	PDP 75	PDP 100	PDP 125	PDP 150	PDP 175	PDP 200	PDP 250	PDP 300	PDP 350	PDP 400
Btu/Hr Input	30,000	50,000	75,000	100,000	125,000	150,000	175,000	200,000	250,000	300,000	350,000	400,000
Btu/Hr Output	24,000	40,000	60,000	80,000	100,000	120,000	140,000	160,000	200,000	240,000	280,000	320,000
Vent Dia. (In.)	3 or 4	3 or 4	4	4	4	5	5	5	6	6	6	6
CFM @ 70°F	440	740	1100	1460	1850	2180	2550	2870	3700	4460	4870	5440
Air Temp. Rise (°F)	51	50	51	51	50	51	51	52	50	50	53	54
Maximum Mounting Height (Ft)	7	9	12	14	14	16	17	15	19	21	20	19
Heat Throw (Ft) ①	25	33	41	49	51	55	59	51	67	74	70	69
Motor HP	1/40	1/40	1/12	1/12	1/8	1/8	1/6	1/6	1/3	1/2	3/4	3/4

① At 65° ambient temperature and unit fired at full-rated input. Mounting height is measured from floor to bottom of unit.

	Model Number										
	BDP 50	BDP 75	BDP 100	BDP 125	BDP 150	BDP 175	BDP 200	BDP 250	BDP 300	BDP 350	BDP 400
Btu/Hr Input	50,000	75,000	100,000	125,000	150,000	175,000	200,000	250,000	300,000	350,000	400,000
Btu/Hr Output	40,000	60,000	80,000	100,000	120,000	140,000	160,000	200,000	240,000	280,000	320,000
Vent Dia. (In.)	3 or 4	4	4	4	5	5	5	6	6	6	6
Motor HP (Std 115V/60Hz/1Ph)	1/4	1/4	1/4	1/4	1/4	1/3	1/4	1/3	3/4	1	1-1/2
Air Flow CFM Range	529-926	794-1389	1058-1852	1323-2315	1587-2778	1852-3241	2116-3704	2646-4630	3175-5556	3704-6481	4233-7407
Air Temp. Rise Range (°F)	40-70	40-70	40-70	40-70	40-70	40-70	40-70	40-70	40-70	40-70	40-70

Note: Maximum mounting heights and heat throws for BDP models, without ductwork or nozzles, and at a CFM yielding a 55° temperature rise, are the same as those listed for equivalent size PDP units.

DO NOT LOCATE ANY GAS-FIRED UNIT IN AREAS WITH CHLORINATED, HALOGENATED OR ACIDIC VAPORS IN ATMOSPHERE.



Request Catalog 6-189 For Complete Technical Information and Specifications.

MODINE GAS-FIRED UNIT HEATERS Models PD/BD, PDP/BDP, PSH/BSH

PRODUCT FEATURES AND CUSTOMER BENEFITS

Heat Exchanger	20-gauge aluminized or stainless steel for additional strength and corrosion resistance.
Casing	22-gauge cold-rolled steel, with completely-painted outer panels, rounded corners and hidden fasteners for more-attractive appearance.
Paint	Electrostatically-applied, baked-on polyester powder paint for corrosion resistance and durability.
Burner	Burner can be easily removed for fast, efficient service. Available in aluminized or stainless steel.
Level Hanging Adjustment	Maintains level hanging, even if using a variety of field-installed accessories.
Natural & Propane Gas Fuel	Factory-installed or field-conversion kits available.
Combustion Air Inlet	Meters air to assure proper amount and eliminate flame disturbance.
Intermittent Pilot Ignition	Pilot is lit only when heat is called for. Includes a line voltage/25V control transformer. (Not standard on all models)
Six-Terminal Wiring Board	Easy thermostat and accessory wiring connections.
Totally-Enclosed Motors	Offers maximum atmospheric protection. Built-in thermal-overload protection on single-phase motors.
Wing Screws	For easy access to manifold, burner, and heat exchanger
Die-Formed Venturi and Light-weight Fans	Quiet operation.
Safety Fan Guard	360 degrees, formed from heavy rod-stock. Optional finger-proof guards available.
Limit Control	Safety device shuts off gas supply if unit overheats.
Adjustable Air-Deflector Blades . .	Horizontal blades standard; vertical blades optional for maximum air-current control.

OPTIONS AND ACCESSORIES

Deflector Hoods
Vertical Deflector Blades
Summer/Winter Switch
Energy-Saver Kit
Low-Voltage Thermostats and Subbases
Thermostat Guards with Locking Covers
Power Exhauster
Transformers and Relays
High-Pressure Regulators
Propane and Natural-Gas Conversion Kits
Concentric Venting

Propeller Models Only
Finger-Proof Fan Guards

Blower Models Only
Blower and Motor Enclosures
Combination Filter Rack and Duct Connector
Outlet Duct Connectors
Discharge Nozzles
Discharge Polytube Transitions
Belt Guards