

BTC SERIES

Tubular Blower Style Unit Heaters



Industry Leading 83%* Efficient

STANDARD FEATURES

- In-shot burner design
- 20-gauge steel jacket with baked enamel finish
- Main control panel
- 120/1/60 supply voltage
- Power vented - isolated blower type unit
- 115/1/60 volt blower motor with internal overload protection
- 120/24 volt control transformer
- Direct spark ignition
- Individually adjustable and removable louvers
- Redundant single stage gas valve
- 10 year heat exchanger, flue collector and burner warranty

OPTIONAL FEATURES

- 409 Stainless steel heat exchanger
- Stainless steel burners and flue collectors
- Supply voltages: 208 & 230/1/60 and 230, 460, 575/3/60
- Premium efficiency blower motors in ODP and TE types
- Two stage and various electronic modulation gas controls
- Discharge nozzles (30°, 60° & 90°) or duct flange assembly

*Units operate with efficiencies up to 83% depending on unit size and application.

BTC SERIES

DESCRIPTION

The Beacon/Morris "BTC" Series gas-fired unit heater offers a highly efficient, extremely durable alternative to traditional clam shell designs. These 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 to 400 MBH.

Standard energy saving features like the direct spark ignition and power venting reduce standby losses and offer improved seasonal efficiencies. The "BTC" is certified by ETL as providing 83% thermal (combustion) efficiency.

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 this design enables heated air to be evenly distributed to the conditioned space. This curved, non-welded serpentine design experiences less thermally induced stress making it highly durable for significantly longer service life. All standard Beacon/Morris tubular heat exchangers are constructed of heavy duty 20-gauge aluminized steel with an optional 409 stainless steel heat exchanger available for applications in mildly corrosive environments.

DIRECT SPARK IGNITION SYSTEM

Beacon/Morris "BTC" 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.

VENTING

The Beacon/Morris "BTC" unit heater is ETL certified in accordance with categories I and III venting requirements. This certification allows units to be vented both vertically and horizontally using either single wall or double wall venting materials. This venting flexibility of the "BTC" unit heater makes installation easier and more cost effective by allowing the installer to utilize existing venting components.

CONTROL ACCESSIBILITY

Designed with the service person in mind, every component of the Beacon/Morris "BTC" Series is easily accessible. Ignition and fan controls are located in one centrally located control panel. The access door provides control isolation as well as a pleasing exterior appearance.

PERFORMANCE DATA

Unit Size	100	125	150	175	200	250	300	350	400
Input - BTU/Hr.	100,000	125,000	150,000	175,000	200,000	250,000	300,000	350,000	400,000
(kW)	(29.3)	(36.6)	(44.0)	(51.3)	(58.6)	(73.3)	(87.9)	(102.6)	(117.2)
Output - BTU/Hr.	83,000	103,750	124,500	145,250	166,000	207,500	246,000	290,500	332,000
(kW)	(24.3)	(30.4)	(36.5)	(42.6)	(48.6)	(60.8)	(72.1)	(85.1)	(97.3)
Thermal Efficiency - %	83	83	83	83	83	83	82	83	83
Free Air Delivery - CFM	1,181	1,476	1,771	2,067	2,362	2,953	3,501	4,134	4,724
(cu. m/s)	(0.557)	(0.697)	(0.836)	(0.976)	(1.115)	(1.394)	(1.652)	(1.951)	(2.230)
Air Temperature Rise - Deg. F	65	65	65	65	65	65	65	65	65
(Deg. C)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)
Outlet Velocity - FPM	370	463	555	395.0	451.0	564.0	422	498	570
(m/s)	(1.879)	(2.351)	(2.819)	(2.006)	(2.291)	(2.864)	(2.143)	(2.529)	(2.895)
Full Load Amps at 115V	7.4	10.5	10.5	13.8	13.8	15.2	14.4	19.9	19.9
Maximum Circuit Ampacity	8.7	12.6	12.6	17.1	17.1	18.7	18.4	24.7	24.7

DIMENSIONAL DATA

Unit Size	100	125	150	175	200	250	300	350	400
Flue Size Diameter - in	5	5	5	5	5	5	6	6	6
(mm)	(127)	(127)	(127)	(127)	(127)	(127)	(152)	(152)	(152)
Blower Size - inches (Qty)	9	10	10	12	12	12	10 (2)	12 (2)	12 (2)
Gas Inlet, Natural Gas - in	1/2	1/2	1/2	1/2	1/2	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 OR 3/4	1/2 OR 3/4	1/2 OR 3/4	1/2 OR 3/4

MOTOR DATA

Unit Size	100	125	150	175	200	250	300	350	400
Motor HP	1/4	1/2	1/2	3/4	3/4	1	1	1-1/2	1-1/2
Motor kW	0.19	0.37	0.37	0.56	0.56	0.75	0.75	1.11	1.11
Motor Type**	SPH	SPH	SPH	SPH	SPH	Cap. Start	Cap. Start	Cap. Start	Cap. Start
RPM	1,725	1,725	1,725	1,725	1,725	1,725	1,725	1,725	1,725
Amps @ 115V	5.2	8.3	8.3	11.6	11.6	13.0	13.0	18.0	18.0

** SPH = Split Phase CAP. Start = Capacitor Start



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