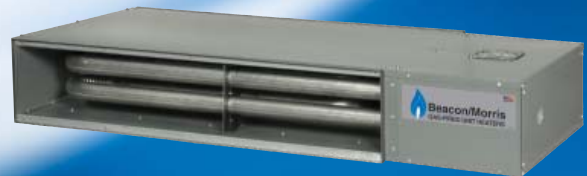


BTD SERIES

Tubular Duct Furnace



BTD-400



BTD-100

Industry Leading 82% Efficient

STANDARD FEATURES

- In-Shot Burner Design
- 20-Gauge Steel Jacket with Baked Enamel Finish
- Double Wall Construction
- 115/1/60 Supply Voltage
- Direct Spark Ignition
- Redundant Single-Stage Gas Valve
- 115/24 Volt Controls transformer
- Power Venter
- 20-Gauge Aluminized Steel Heat Exchanger
- For Natural or Propane Gas
- 10 Year Heat Exchanger, Flue Collector and Burner Warranty
- 82% Thermal Efficiency
- Four Point Suspension
- Easy Access Control Panel
- Left Hand Control Access – Field Convertible to Right Hand

OPTIONAL FEATURES

- 409 Stainless Steel Heat Exchanger and Flue Collector
- Supply Voltages (Field Mounted Transformer): 208 & 230/1/60 and 208, 230, 460, 575/3/60
- Two-Stage and Various Electronic Modulation Gas Controls
- High Pressure regulator 1/2 - 35 PSI
- Single and Two-Stage Mercury Free Ductstats and Thermostats
- Line Voltage Thermostat
- Locking Thermostat Cover
- Low Ambient Control
- Vent Caps
- 24V SPST Relay
- Stainless Steel Drip Pan
- Horizontal and Vertical Louvers
- Air Inlet Kit (For conversion to separated combustion and two roof or wall penetrations. Includes a vent cap for the combustion air inlet pipe)
- Combustion Air Inlet Kit (For conversion to separated combustion and a single roof or wall penetration)



BTD SERIES

DESCRIPTION

The BTD Series duct furnace is the latest addition to the Beacon/Morris tubular product line. Designed for use with existing systems for any ducted air application. Beacon/Morris's indoor tubular duct furnaces are available in 7 sizes (100 – 400 MBH). Beacon/Morris's products are proudly manufactured in the USA.

Standard energy saving features like the direct spark ignition and power venting reduce standby losses and offer improved seasonal efficiencies. The BTD Series is certified by ETL as providing 82% 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 BTD 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 BTD Series is ETL certified in accordance with categories 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 BTD duct furnace makes installation easier and more cost effective by allowing the installer to utilize existing venting components. The BTD duct furnace can be field converted to separated combustion using the "Air Inlet Kit" or the "Combustion Air Inlet Kit". This is recommend for units to be installed in dusty, dirty or mildly corrosive environments or where high humidity or slightly negative pressures exist. All critical components including the burners, direct spark ignition, and controls are fully enclosed within the unit and protected from the elements ensuring clean and efficient combustion.


CONTROL ACCESSIBILITY

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

Unit Capacity MBH	100	150	200	250	300	350	400
Performance Data							
Input - BTU/Hr.	100	150	200	250	300	350	400
(kW)	(29.3)	(43.9)	(58.6)	(73.2)	(87.8)	(102.5)	(117.1)
Output - BTU/Hr.	82	123	164	205	246	287	328
(kW)	(24)	(36)	(48)	(60)	(72)	(84.1)	(96.1)
Thermal Efficiency - %	82%	82%	82%	82%	82%	82%	82%
Minimum CFM	758	1137	1517	1896	2275	2654	3034
(cu. m/s)	(0.357)	(0.536)	(0.715)	(0.894)	(1.074)	(1.252)	(1.431)
Maximum CFM	2528	3792	5057	6321	7585	8849	10114
(cu. m/s)	(1.19)	(1.789)	(2.386)	(2.983)	(3.579)	(4.176)	(4.773)
Minimum Temperature Rise - °F	30	30	30	30	30	30	30
- (°C)	(17)	(17)	(17)	(17)	(17)	(17)	(17)
Maximum Temperature Rise - °F	100	100	100	100	100	100	100
- (°C)	(56)	(56)	(56)	(56)	(56)	(56)	(56)
Dimensional Data -Inches (mm)							
Overall Unit Height	10.3	13.7	17	20.2	23.5	26.7	30
	(262)	(348)	(432)	(513)	(597)	(678)	(762)
Overall Unit Width	65.5	65.5	65.5	65.5	65.5	65.5	65.5
	(1664)	(1664)	(1664)	(1664)	(1664)	(1664)	(1664)
Overall Unit Depth	32.7	32.7	32.7	33.5	33.5	33.5	33.5
	(831)	(831)	(831)	(851)	(851)	(851)	(851)
Gas Inlet, Natural Gas - Inches	1/2	1/2	1/2	3/4	3/4	3/4	3/4
Gas Inlet, LP Gas - Inches	1/2	1/2	1/2	3/4	3/4	3/4	3/4
Approximate Unit Weight - lb	160	221	250	270	296	321	355
- (kg)	(73)	(100)	(113)	(122)	(134)	(146)	(161)
Approximate Ship Weight - lb	270	331	360	403	429	454	488
- (kg)	(122)	(150)	(163)	(183)	(195)	(206)	(221)



260 NORTH ELM STREET, WESTFIELD, MA 01085 • TEL: (413) 562-5423 • FAX: (413) 572-3764
 7555 TRANMERE DRIVE, MISSISSAUGA, ONTARIO L5S 1L4 CANADA • TEL: (905) 670-5888 • FAX: (905) 670-5782

 A MESTEK COMPANY
 www.beacon-morris.com