

TD SERIES

Tubular Duct Furnace



TD-400



TD-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)



DESCRIPTION

The TD duct furnace is the latest addition to the Sterling tubular product line. Designed for use with existing systems for any ducted air application. Sterling's indoor tubular duct furnaces are available in 7 sizes (100 – 400 MBH). Sterling HVAC'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 "TD" is certified by ETL as providing 82% thermal (combustion) efficiency.

TUBULAR HEAT EXCHANGER

The Sterling 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 Sterling 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

Sterling "TD" 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 Sterling "TD" unit heater 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 "TD" unit heater makes installation easier and more cost effective by allowing the installer to utilize existing venting components. The TD 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 Sterling "TD" 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) |

