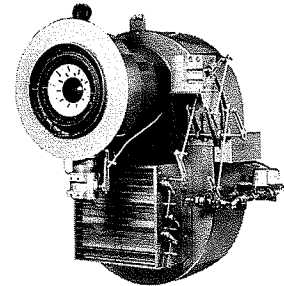


FUELS BURNED AND CONTROL SYSTEMS

- Natural, Propane, Digester or Mixed Gas
- Light No. 2 thru Heavy No. 6 Fuel Oil
Mechanical Pressure, Air or Steam Atomizing
- Modulating Control System – Micro-Modulation or Linkage
Fuel-Air Control by Metering Valves, Air Register
and Venturi. Control Circuit Requires 120-60-1 Voltage

40300 MBH Maximum Input



FUELS INPUT RATINGS

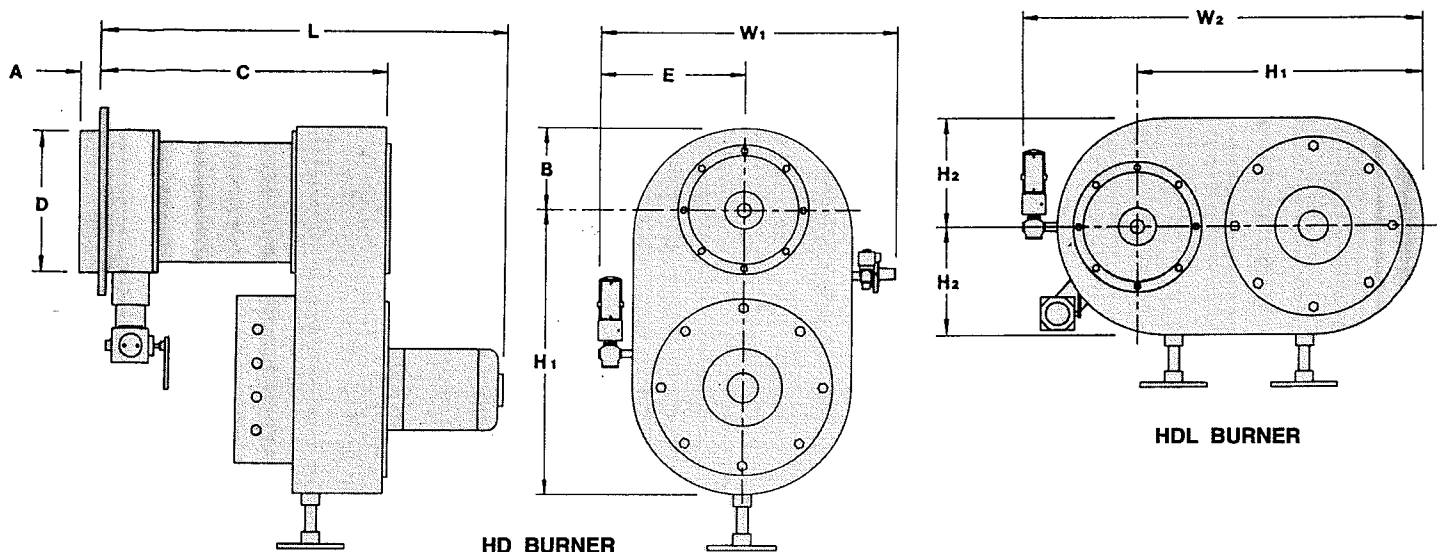
| MODEL NUMBER | FURNACE PRESSURE | | MAXIMUM INPUT RATING | | | COMBUSTION AIR VOLUME | BURNER MOTOR 3450 RPM | | BOILER HP | |
|--------------|------------------|----------|----------------------|-----------|-----------|-----------------------|-----------------------|----------|--------------|------|
| | Negative | Positive | Gas | Light Oil | Heavy Oil | | | | 80% | 84% |
| HD5-50 | —.01 | | 12600 | 90.0 | 84.0 | 2520 | 5 | 240-60-3 | 300 | 316 |
| | | +1.50 | 11340 | 81.0 | 75.6 | | | | 270 | 284 |
| | | +2.50 | 10584 | 75.6 | 70.5 | | | | 252 | 265 |
| HD5-75 | —.01 | | 16800 | 12.00 | 112.0 | 3360 | 7 1/2 | 240-60-3 | 400 | 420 |
| | | +1.50 | 15120 | 108.0 | 100.0 | | | | 360 | 379 |
| | | +2.50 | 14112 | 100.8 | 94.0 | | | | 337 | 354 |
| HD5-100 | —.01 | | 19000 | 136.0 | 126.0 | 3800 | 10 | 240-60-3 | 452 | 470 |
| | | +1.50 | 17290 | 123.0 | 115.0 | | | | 411 | 427 |
| | | +2.50 | 16150 | 115.0 | 107.0 | | | | 384 | 399 |
| HD7-150 | —.01 | | 25800 | 184.3 | 172.0 | 5160 | 15 | 240-60-3 | 614 | 645 |
| | | +1.50 | 23200 | 165.7 | 154.6 | | | | 552 | 580 |
| | | +2.50 | 21400 | 152.8 | 142.7 | | | | 510 | 535 |
| HD7-200 | —.01 | | 30200 | 215.7 | 201.3 | 6040 | 20 | 240-60-3 | 719 | 755 |
| | | +1.50 | 27200 | 194.3 | 181.3 | | | | 648 | 680 |
| | | +2.50 | 25300 | 180.7 | 168.7 | | | | 602 | 633 |
| HD9-250 | —.01 | | 33000 | 235.7 | 220.0 | 6600 | 25 | 480-60-3 | 786 | 825 |
| | | +1.50 | 29700 | 212.1 | 198.0 | | | | 707 | 743 |
| | | +3.00 | 26600 | 190.0 | 177.3 | | | | 633 | 665 |
| HD9-300 | —.01 | | 35600 | 254.2 | 237.3 | 7120 | 30 | 480-60-3 | 848 | 890 |
| | | +1.50 | 32000 | 228.6 | 213.3 | | | | 762 | 800 |
| | | +3.00 | 28500 | 203.6 | 190.0 | | | | 679 | 713 |
| | | +4.50 | 25700 | 183.6 | 171.3 | | | | 612 | 643 |
| HD9-400 | —.01 | | 40300 | 287.8 | 268.6 | 8060 | 40 | 480-60-3 | 960 | 1008 |
| | | +1.50 | 36300 | 259.3 | 242.0 | | | | 864 | 908 |
| HD9-500 | — | +3.00 | 40300 | 287.8 | 268.6 | 8060 | 50 | 480-60-3 | 960 | 1008 |
| HD9-600 | — | +6.00 | 40300 | 287.8 | 268.6 | 8060 | 60 | 480-60-3 | 960 | 1008 |
| | | "W.C. | "W.C. | MBH | GPH | GPH | SCFM | HP | Std. Voltage | |

- Input capacities based upon 1000' above sea level. Capacities decrease 4% for each additional 1000'.
- Gas input ratings based upon 1000 BTU/Cubic Foot and .64 specific gravity.
- Oil input ratings based upon 140,000 BTU/Gallon for No. 2 light oil and 150,000 BTU/Gallon for No. 4-6 oil.
- Positive furnace pressure ratings change 1.5% for each 0.25" W.C. change in furnace pressure. Consult factory on 4-pass boilers and furnace applications with higher draft loss than shown.

WEBSTER Series HD Burners are listed by **Underwriters Laboratories, Inc. (U.L.)**. Also by the State of Massachusetts Fire Marshall, City of New York Board of Standards and Appeals, State of Minnesota, and can be packaged to meet specific requirements of IRI, FM, NFPA, MIL spec or other special insurance or local code requirements.

TYPICAL DIMENSIONS — INCHES

NOTE: DIMENSIONS WILL VARY WITH OPTIONAL CONTROL AND SYSTEM ARRANGEMENTS.



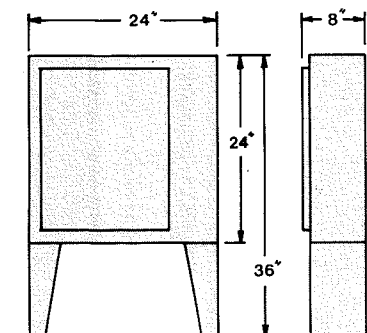
| BURNER SIZE | BURNER INPUT MMBTU/HR | DIMENSIONS — INCHES | | | | | | | | | |
|-------------|-----------------------|---------------------|----|----|------------------|----|----------------|----------------|----|----------------|----------------|
| | | A | B | C | D | E | H ₁ | H ₂ | L | W ₁ | W ₂ |
| HD5-50 | 12.6 | 2 | 9 | 34 | 13 $\frac{1}{8}$ | 26 | 31 | 14 | 45 | 45 | 50 |
| HD5-75 | 16.8 | 2 | 9 | 34 | 13 $\frac{1}{8}$ | 26 | 31 | 14 | 47 | 45 | 50 |
| HD5-100 | 19.0 | 2 | 9 | 34 | 15 $\frac{1}{8}$ | 26 | 31 | 14 | 48 | 45 | 50 |
| HD7-150 | 25.8 | 2 | 11 | 43 | 15 $\frac{1}{8}$ | 29 | 38 | 17 | 56 | 51 | 58 |
| HD7-200 | 30.2 | 2 | 11 | 43 | 17 $\frac{1}{8}$ | 29 | 38 | 17 | 59 | 51 | 58 |
| HD9-250 | 33.0 | 2 | 14 | 47 | 19 $\frac{1}{8}$ | 30 | 47 | 18 | 68 | 54 | 70 |
| HD9-300 | 35.6 | 2 | 14 | 47 | 19 $\frac{1}{8}$ | 30 | 47 | 18 | 68 | 54 | 70 |
| HD9-400 | 40.3 | 2 | 14 | 47 | 19 $\frac{1}{8}$ | 30 | 47 | 18 | 69 | 54 | 70 |
| HD9-500 | 40.3 | 2 | 14 | 53 | 21 $\frac{1}{8}$ | 32 | 52 | 20 | 78 | 58 | 75 |
| HD9-600 | 40.3 | 2 | 14 | 53 | 21 $\frac{1}{8}$ | 32 | 52 | 20 | 79 | 58 | 75 |

The Model HD Forced Draft Burner may be rotated 90° for boilers or other appliances with low center-line furnaces. For this version, an "L" suffix is added to the model number.

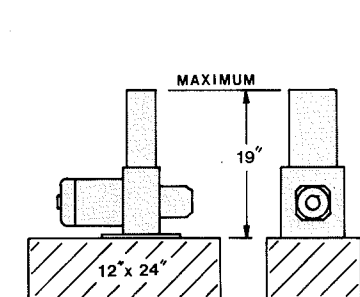
DIMENSIONS OF STANDARD ACCESSORIES

NOTE:

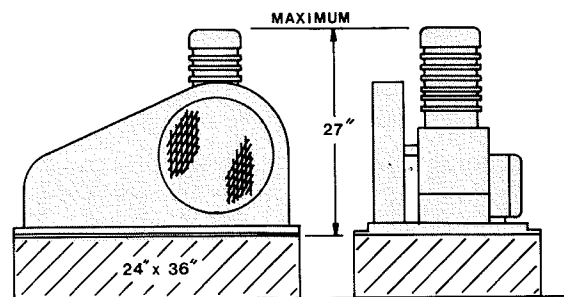
IT IS RECOMMENDED THAT OIL PUMP SETS AND AIR COMPRESSORS BE MOUNTED ON CONCRETE PADS AT LEAST 8 INCHES ABOVE THE WORKING FLOOR LEVEL.



REMOTE CONTROL CABINET



REMOTE OIL PUMP



AIR COMPRESSOR

BURNER MODEL NUMBERING

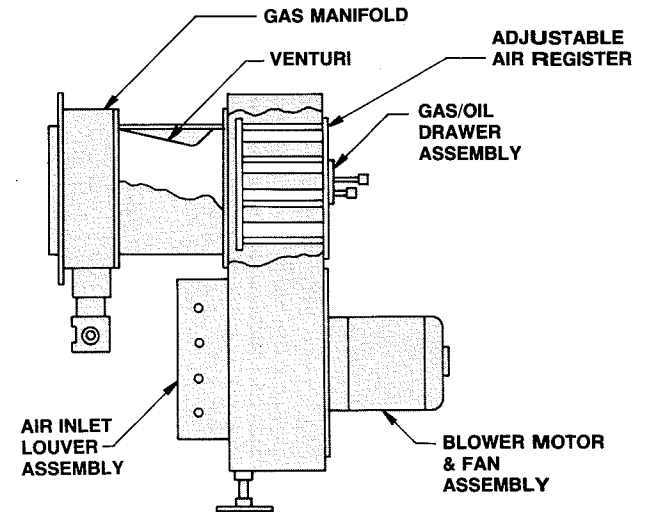
| | | | | | | | | |
|--|---------------------|-----------------------------------|---|-------------------------------------|----------------------------|------------------------------|---|---|
| HD | 7 | C | 100 | XXXXXX | M | M | .40 | MA |
| BASIC MODEL | HOUSING SIZE | FUEL TYPE | BLOWER MOTOR STD. MOTOR HP | PRIMARY FLAME SAFETY CONTROL | M O D U L A T I O N | MODULATING GAS SYSTEM | GAS SYSTEM PIPE SIZE | MODULATING OIL SYSTEM |
| R = Optional Register V = Optional Venturi Throat | 5 7 9 | G = Gas O = Oil C = Gas/Oil | 50 = 5 75 = 7½ 100 = 10 150 = 15 200 = 20 250 = 25 300 = 30 400 = 40 500 = 50 600 = 60 | As Required or Specified | | M = Modulating | .20 = 2" .25 = 2½" .30 = 3" .30L = 3L" .30H = 3H" .40H = 4H" .60 = 6" | MR = Pressure Atomizing, Return Flow Nozzle MA = Air Atomizing MS = Steam Atomizing |

MOUNTING REQUIREMENTS DIMENSIONS — INCHES

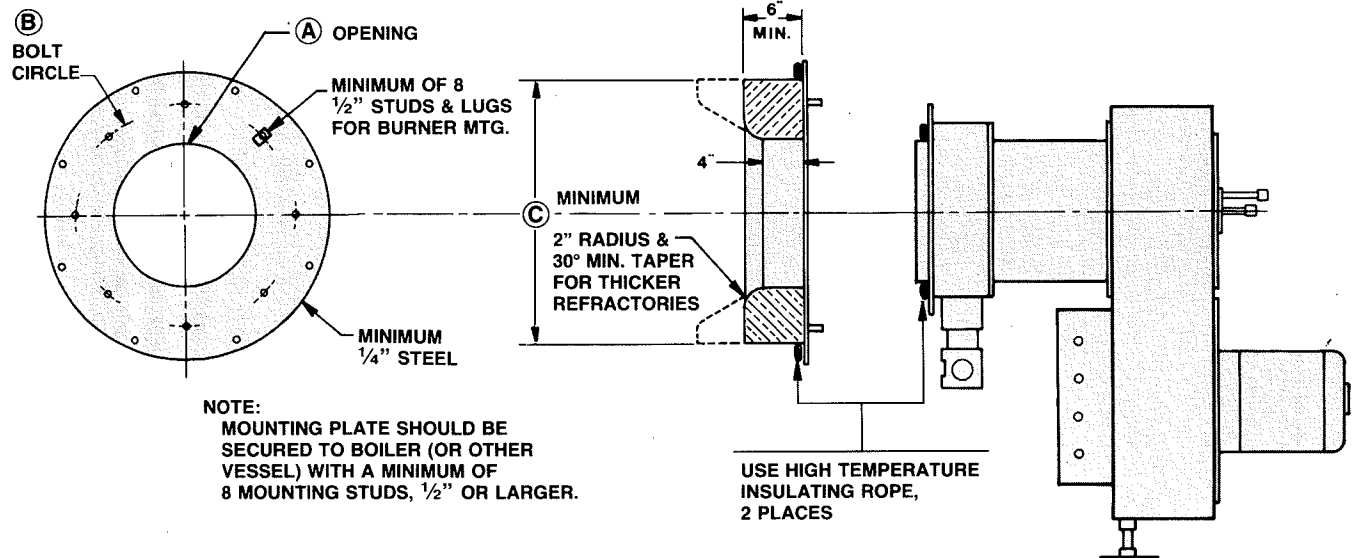
| Model | Head O.D. | Burner Flange O.D. | Dim. (A) | Dim. (B) | Dim. (C) |
|-------|-----------|--------------------|----------|----------|----------|
| HD5 | 13½ | 20 | 13¼ | 21 | 27 |
| | 15½ | 22 | 15¼ | 23 | 27 |
| HD7 | 15½ | 22 | 15¼ | 23 | 30 |
| | 17½ | 24 | 17¼ | 25 | 30 |
| HD9 | 19½ | 27 | 19¼ | 28 | 33 |
| | 21½ | 29 | 21¼ | 30 | 33 |

NOTE: Refractory Mounting Plate Is Required. See Catalog Sheet GEN-D-5A For Additional Details.

MAJOR ASSEMBLIES



NOTE: Refractory Mounting Plate Is Required.



| 1 STANDARD EQUIPMENT & IMPORTANT OPTIONS | | FUELS BURNED 40300 MBH Maximum Input | | | | |
|--|--|---|--------------------|---------------|---------------|---|
| | | GAS | No. 2 Light Oil | | No. 4-6 Oil | |
| | | | Pressure Atomizing | Air Atomizing | Air Atomizing | |
| GENERAL | Motor, Fan and Air Inlet Control | x | x | x | x | |
| | Air Register and Venturi Flame Control | x | x | x | x | |
| | Air Flow Switch | x | x | x | x | |
| | Remote Control Cabinet, Switch and Four Indicator Lights (Power On, Fuel On, Call For Heat and Flame Failure) | x | x | x | x | |
| | Flame Safety Control | x | x | x | x | |
| | Ultra Violet Flame Scanner | x | x | x | x | |
| | Motor Starter w/Overloads | x | x | x | x | |
| | Fuel Selector Switch (dual fuel burners only) | Dual Fuel Burners Only | | | | |
| | IGNITION | Proven Gas Pilot | x | x | x | x |
| | | Pilot Solenoid Valve | x | x | x | x |
| Pilot Regulator and Manual Valve | | x | x | x | x | |
| Pilot Ignition Transformer | | x | x | x | x | |
| GAS | Main Manual Shutoff Valve | x | | | | |
| | Main Safety Shutoff Valve | x | | | | |
| | Second Safety Shutoff Valve | x | | | | |
| | Main Gas Regulator | x | | | | |
| | Gas Checking Valve | x | | | | |
| | High and Low Pressure Switches | x | | | | |
| | Metering Valve | x | | | | |
| | Normally Open Vent Valve | x | | | | |
| OIL | Oil Drawer Assembly with Diffuser | | x | x | x | |
| | Oil Nozzle(s) | | x | x | x | |
| | Remote Oil Pump Set | | x | Opt. | Opt. | |
| | Air Compressor | | | x | x | |
| | Main Safety Shutoff Valve | | x | x | x | |
| | Second Safety Shutoff Valve | | x | x | x | |
| | Oil Pressure Gauge | | x | x | x | |
| | Oil Metering Valve | | x | x | x | |
| | Oil Heater with Integral Thermostat | | | | x | |
| | Low Air Atomizing Switch | | | x | x | |
| Future Gas Combustion Head (optional) | | Opt. | Opt. | Opt. | | |
| OPTIONS | Refractory Mounting Plate (required) | x | x | x | x | |
| | Housing Rotated 90° For Low-Set Furnaces | x | x | x | x | |
| | Fuel Metering CAM-NETIC Positioning | x | x | x | x | |

□ The configuration of each unit will vary with specific job requirements such as, input rating, electrical specifications, and special agency approval codes. The above chart shows those items standard to a basic burner plus those options that may be added or selected.

ESSENTIAL ORDERING INFORMATION AND DATA:

- Power Supply — Confirm 120-60-1 for control circuit and burner motor voltage required.
- Boiler or Heater to be fired — manufacturer, model number, and furnace pressure at full firing rate.
- Firing Rate — MBH for gas and GPH for oil.
- Fuel to be burned — type of gas and/or oil and BTU value.
- Approval Agency — **UL, FM, IRI, NFPA, MIL spec** and local code, if applicable.
- Flame Safety Control required — manufacturer.
- Accessories required — mounting plate, limit controls, etc.