

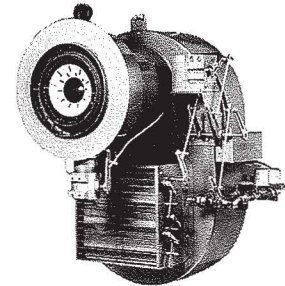
SPECIFICATION DATA

MODEL HDRV FORCED DRAFT BURNERS

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

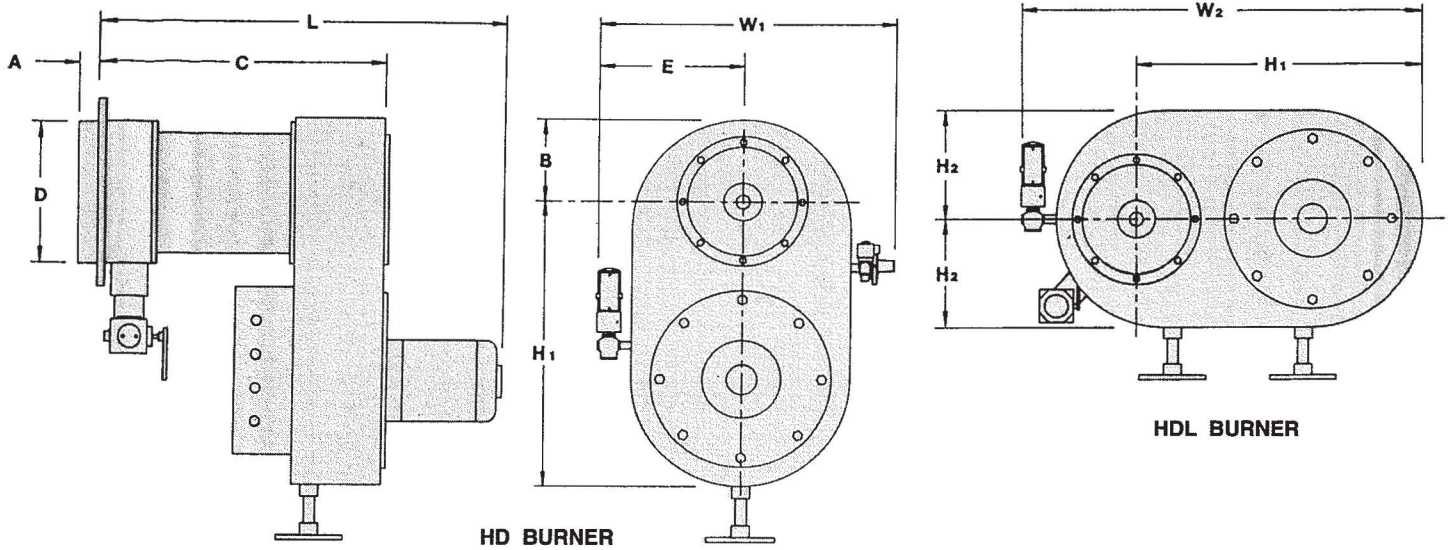
MODEL NUMBER	FURNACE PRESSURE		MAXIMUM INPUT RATING			COMBUSTION AIR VOLUME	BURNER MOTOR 3450 RPM		BOILER HP	
	Negative	Positive	Gas	Light Oil	Heavy Oil				80%	84%
HD5-50	—.01		12600	90.0	84.0	2520	5	240-60-3	300	316
		+1.50	11340	81.0	75.6				270	284
		+2.50	10584	75.6	70.5				252	265
HD5-75	—.01		16800	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				7260	864
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.

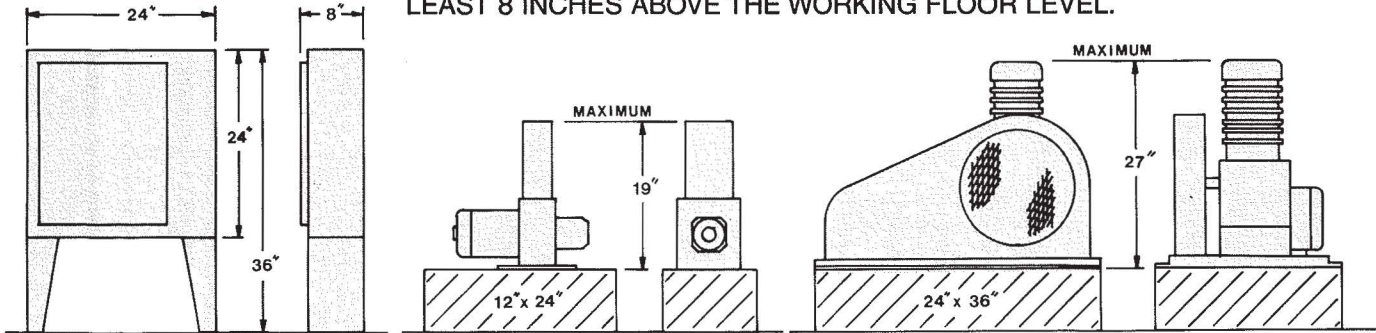


BURNER SIZE	BURNER INPUT MMBTU/HR	DIMENSIONS — INCHES									
		A	B	C	D	E	H ₁	H ₂	L	W ₁	W ₂
HD5-50	12.6	2	9	34	13 ¹ / ₈	26	31	14	45	45	50
HD5-75	16.8	2	9	34	13 ¹ / ₈	26	31	14	47	45	50
HD5-100	19.0	2	9	34	15 ¹ / ₈	26	31	14	48	45	50
HD7-150	25.8	2	11	43	15 ¹ / ₈	29	38	17	56	51	58
HD7-200	30.2	2	11	43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

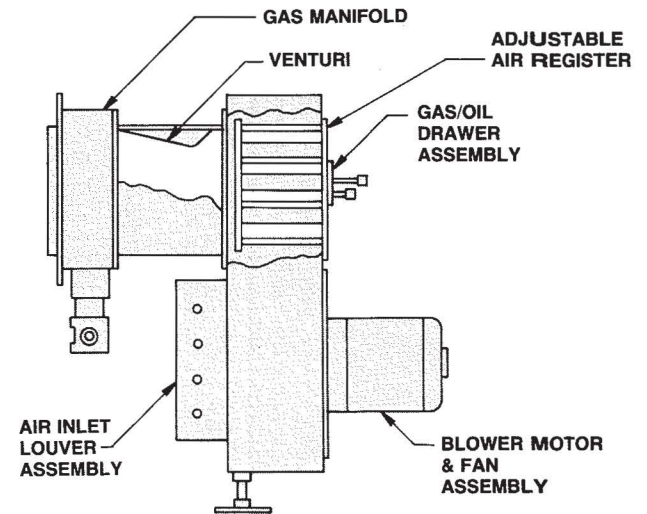
MOUNTING REQUIREMENTS

DIMENSIONS — INCHES

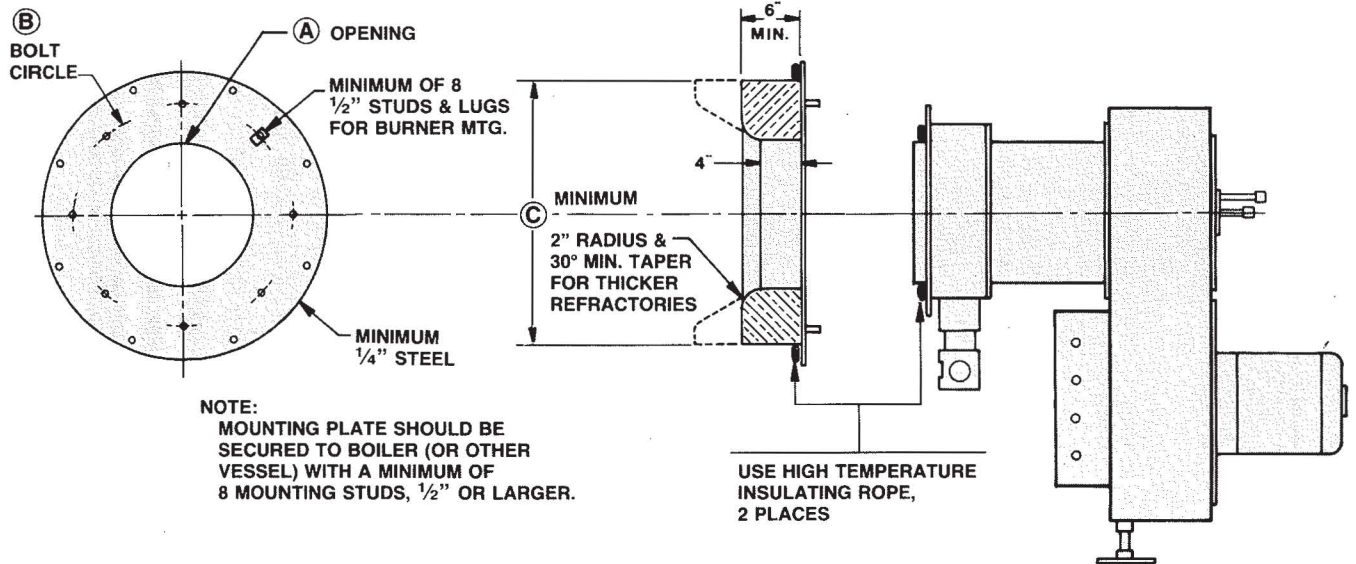
Model	Head O.D.	Burner Flange O.D.	Dim. (A)	Dim. (B)	Dim. (C)
HD5	13½	20	13¼	21	27
	15½	22	15¼	23	27
HD7	15½	22	15¼	23	30
	17½	24	17¼	25	30
HD9	19½	27	19¼	28	33
	21½	29	21¼	30	33

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	

1 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.



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