

HDS Series

The New High Swirl Firing Head Burner



The HDS is a new burner offering from Webster Engineering that offers improved emission performance and higher turndowns (up to 12:1). It is based on the proven HDRV burner with a new firing head and numerous other improvements.

The new firing head places a high spin on the combustion air that improves mixing and flame stability. This allows the burner to operate with higher flue gas recirculation rates, lowering NOx emissions. The firing head is designed to keep the low fire flame off of the burner head, allowing it to operate at lower rates without heat damage to the firing head. The HDS is available for Scotch Marine Firetube only, where the round furnace is used to contain the flame and is an integral part of the combustion process.

The burner is available as a standard gas and / or oil fired burner (model HDS) and as a low NOx burner (HDSX). Both models fire natural gas, LP, and #2 fuel oil, as well as combination gas and oil. The HDS Model is available for heavy (#4 through #6) oil.

Several low NOx options are available using Induced Flue Gas Recirculation (IFGR). The standard offering includes 20, 30, and 60 ppm NOx on natural gas. Low NOx options are available for LP and oil firing as well.

Two different oil systems are available on both models: a pressure atomizing system (to 400 hp) and an air atomizing system (all sizes).

The HDS can be equipped with the new Cam-Netic II linkage controls or the PosiControl linkageless system.

Our UL approval covers 200 to 600 BHP for natural gas and #2 oil fuels.

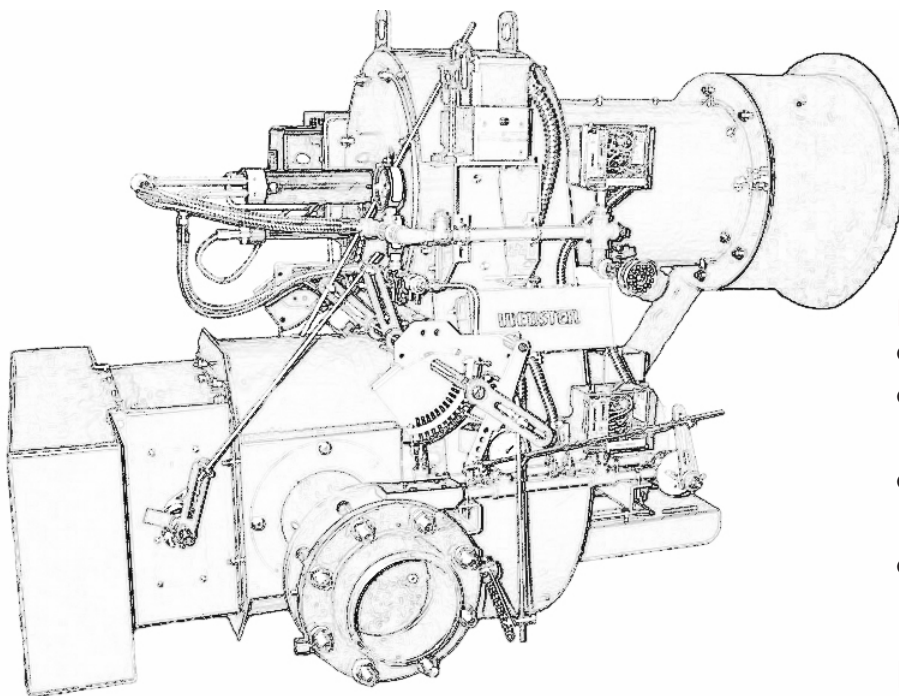


Why **WEBSTER**TM ?

HDS Series

Save Maintenance Costs \$\$

- Access opening on the firing head and FGR inlet for adjustability & inspection
- Easily removable burner drawer assembly with diffuser, pilot, and scanner as one assembly
- Combustion air fan and motor as a single removable assembly
- High turndown reduces thermal cycling, extending vessel and refractory life



Save Operating Costs \$\$

- Low Motor HP / BTU
- Lower Electric Bills

Save Fuel Costs \$\$

- High turndown reduces purge losses
- 13 point cam for better fuel-air ratio control and reduces losses

No Nuisance Tripping

- Purlite pilot ignition system - most reliable pilot available
- Factory tested prior to shipment

High Turndown

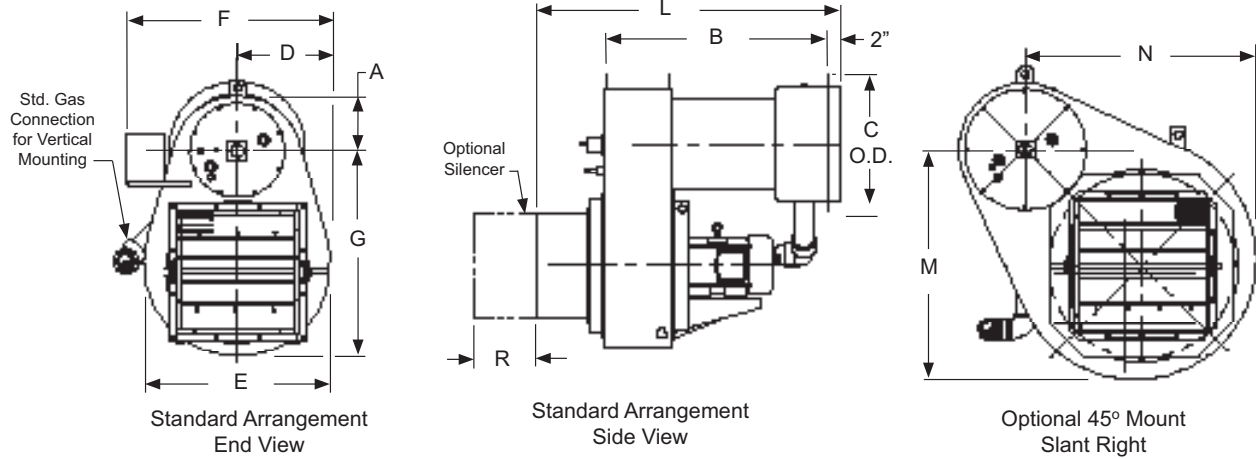
- Turndowns to 12:1 available *
- Keeps boiler on line for fast response
- Reduced equipment failures from rapid on-off cycling
- Improved reliability and up-time

Emission

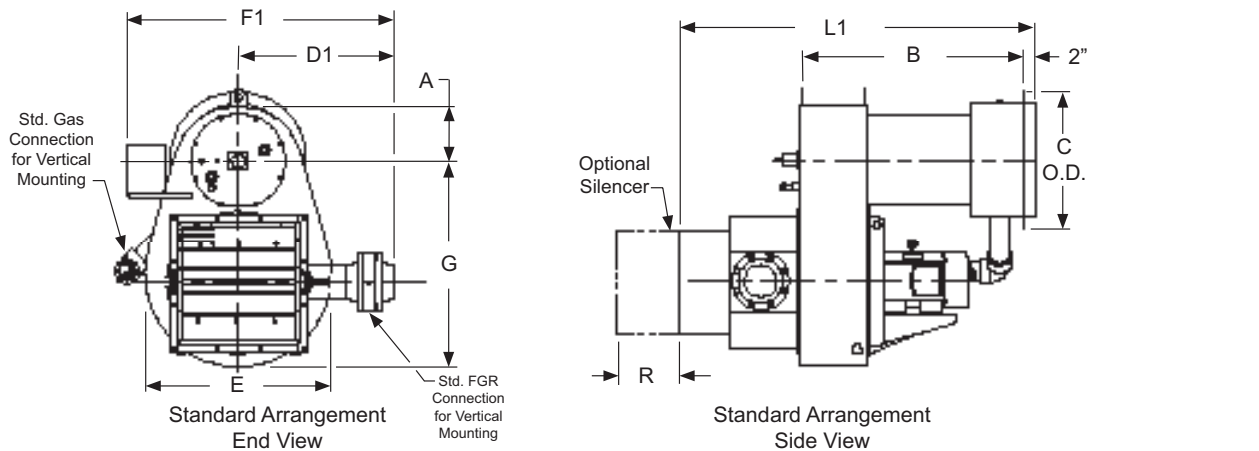
- High swirl flame offers excellent flame stability for very low NOx performance
- NOx to 20 ppm on natural gas. *
- Low NOx emissions on oil
- Induced FGR for simplicity and reliability.

* Some combinations of high turndown and Low NOx may not be available. Contact factory for more information.

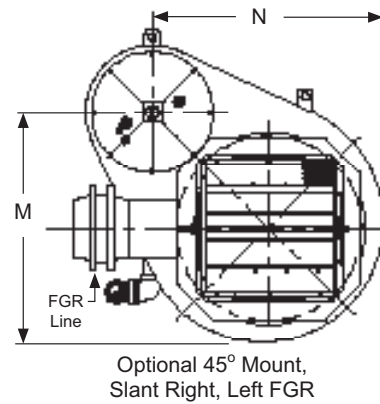
HDS Burners:



HDSX Burners: FGR

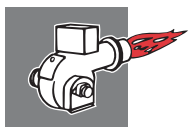


Dim	200 - 350 bhp		400 - 800 bhp			900-1200
	HDS5	HDS7	HDS5	HDS7	HDS9	HDS9
HDS Dimensions (inches)						
A	10.0	10.5	10.0	10.5	12.8	12.8
B	38.0	39.6	36.9	42.4	50.4	54.4
C	22.3	22.3	26.0	26.0	26.0	28.0
D	15.0	17.8	15.0	17.8	22.8	22.8
E	30.0	35.5	30.0	35.5	45.6	45.6
F	35.0	36.0	35.0	37.5	43.3	43.4
G	34.9	39.0	34.9	39.0	52.2	52.2
L	52.8	54.4	51.6	57.1	68.9	72.9
M	NA	32.8	NA	32.8	43.1	43.1
N	NA	32.8	NA	32.8	43.1	43.1
HDSX Dimensions (inches) - (different than HDS)						
D1	25.5	29.0	25.5	29	35.6	35.6
F1	47.4	48.5	47.4	51.0	56.1	56.1
L1	62.8	64.4	61.6	67.1	78.1	85.9



Optional Silencer Dimensions			
BHP	200-300 HP	350-600 HP	700-1200-HP
R	6.5	7.6	12.0

Note: Panel, Oil Piping, Pump and Air Compressor not shown.



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