

# HDS(X) Series Burners

**High Efficiency, Low Excess Air,  
Low Emissions**



Burner Sizes:

200 HP up to 1650 HP HDS

200 HP up to 1500 HP HDSX

## Benefits Of HDS(X) High Swirl Firing

Webster's unique high swirl firing head technology provides superior mixing of fuel and air which allows the HDS burners to operate with low excess air across a wide operating range.

Using less excess air means high fuel efficiency and high turndown means less of the heat loss that occurs from cycling on and off when a burner is continually stopping and starting.

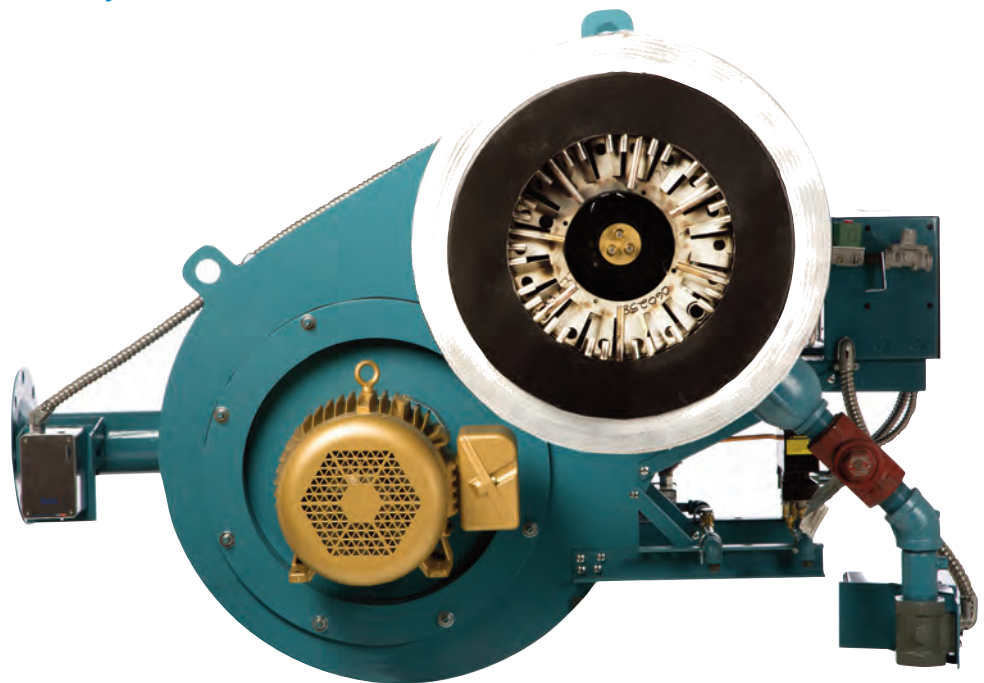
The firing head places a high spin on the combustion air which in turn improves fuel mixing and flame stability. This allows the burner to operate with higher flue gas recirculation rates for lower NOx emissions.



*The high swirl burner head on the HDS(X) mixes fuel and air more efficiently.*

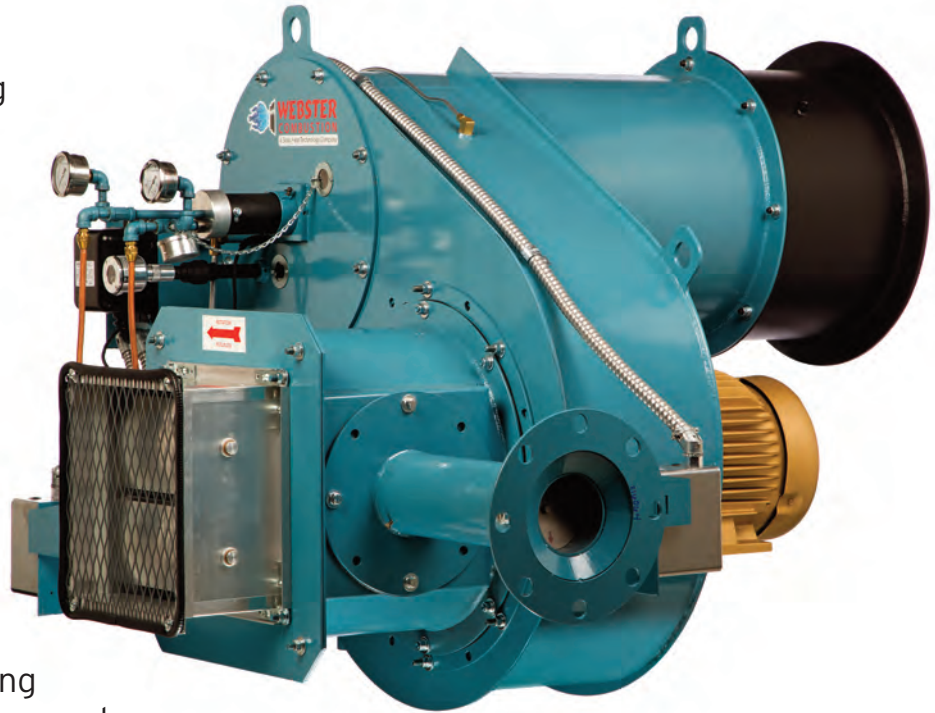
The firing head is designed to keep the low fire flame off of the burner head, allowing it to operate at lower rates without heat damage. HDS(X) burners from Webster are manufactured with the industrial user in mind, using heavy gauge metal and heavy duty components built to last in even the most difficult operating environments.

When combined with Webster's patented air density control system, Temp A Trim™, the HDS(X) burner will maintain low excess air levels as operating conditions change, saving fuel and electricity and lowering maintenance costs. The HDS(X) is available for Scotch-Marine, firetube, watertube, flextube, firebox and other heaters and vessel types.



## HDS(X) Features And Applications

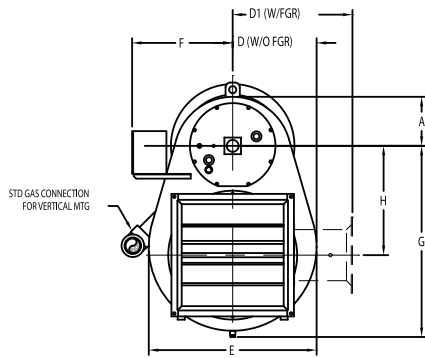
- High turndown rates
  - ✦ Up to 12 to 1 on Gas firing
  - ✦ Up to 10 to 1 on Oil firing
- Excellent flame stability for reliable low NOx performance
- Low excess air for extremely efficient operation
- Fire multiple fuels
  - ✦ Natural, LP or Digester gas
  - ✦ No. 2 through No. 6 oils
- Configurable blower housing to match application requirements
- Field-proven ignition system with an extremely stable pilot
- High efficiency combustion air fans to optimize electrical needs
- IFGR system with a shutoff valve in the flue gas recirculation duct to prevent flue gas from re-entering the burner during the purge cycle
- Easy access to firing head, fan and FGR duct for convenient maintenance
- Improved air damper with adjustable opening speeds for better turndown
- UL/cUL approved up to 600HP for Natural Gas and No. 2 oil applications
- Integral combustion air fan and motor are housed in a single assembly for easy removal and inspection
- Options for both pressure and air atomized oil



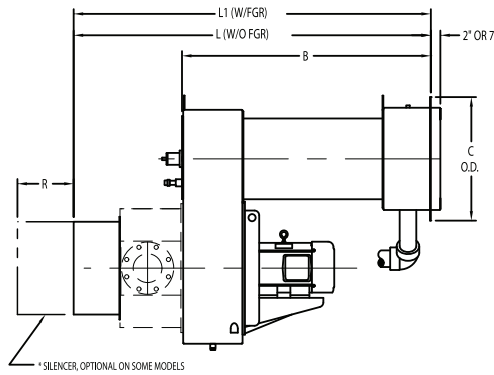
**Webster Combustion has the best lead times in the industry. To configure the perfect HDS(X) burner for your application and obtain current scheduling information, contact Webster or visit [www.webster-engineering.com](http://www.webster-engineering.com) to locate a sales office in your area.**

# HDS(X) Burners

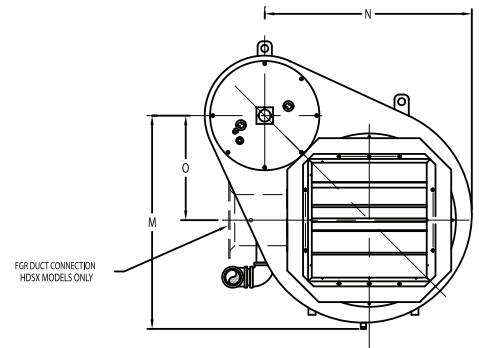
HDS(X) STANDARD ARRANGEMENT END VIEW



HDS(X) STANDARD ARRANGEMENT SIDE VIEW



HDS(X) ALTERNATE 45 ° MOUNTING (SR) SLANT RIGHT



MODEL	Min Req'd Gas Press. (PSIG)	Std Gas Train Size	Max Firing Rate (MBH) STD	Max Firing Rate (MBH) w/FGR	Fan Motor HP	DIMENSIONS														
						A	B	C	D	D1	E	F	G	H	L	L1	M	N	O	R
HDS(X)5*-50A	1	3"	12,600	10,710	5	10.3	41.6	22.3	15.3	27.4	30.5	25	35.8	21.8	51.1	61.1	30.4	29.1	15.4	7.6
HDS(X)5*-75A	1.75	3"	14,700	12,495	7.5	10.3	41.6	22.3	15.3	27.4	30.5	25	35.8	21.8	51.1	61.1	30.4	29.1	15.4	7.6
HDS(X)5*-100A	2	3"	15,000	12,750	10	10.3	41.6	22.3	15.3	27.4	30.5	25	35.8	21.8	51.1	61.1	30.4	29.1	15.4	7.6
HDS(X)5*-150B	2	3"	25,200	21,420	15	10.3	40.5	21.2	15.3	27.4	30.5	25	35.8	21.8	50	60	30.4	29.1	15.4	12.0
HDS(X)7*-200B	2.5	3"	25,200	21,420	20	10.3	42.1	21.2	17.9	29.1	35.8	26	39.8	23	51.6	61.6	32.8	32.8	16.3	12.0
HDS(X)7*-250B	3.25	3"	33,600	28,560	25	10.3	42.1	21.2	17.9	29.1	35.8	26	39.8	23	51.6	61.6	32.8	32.8	16.3	12.0
HDS(X)7*-300B	4	3"	34,000	28,900	30	10.3	42.1	21.2	17.9	29.1	35.8	26	39.8	23	51.6	61.6	32.8	32.8	16.3	12.0
HDS(X)9*-400B	5	3"	35,000	29,750	40	13.8	50.4	21.2	23.9	36.9	57.9*	27	52.5	30.4	76.9*	89.9*	42.3	50.4*	21.5	17.2
HDS(X)9*-500C	5	3"	51,000	43,350	50	13.8	54.4	29.5	23.9	36.9	57.9*	27	52.5	30.4	80.9*	93.9*	42.3	50.4*	21.5	17.2
HDS(X)9*-500H	5	3"	58,800	49,980	50	13.8	50.3	34	23.9	36.9	57.9*	27	52.5	30.4	76.8*	89.8*	42.3	50.4*	21.5	20.0
HDS(X)9*-600H	6	3"	63,000	53,550	60	13.8	50.3	34	23.9	36.9	57.9*	27	52.5	30.4	76.8*	89.8*	42.3	50.4*	21.5	20.0
HDS(X)9*-750H	7	3"	65,000	52,250	75	13.8	50.3	34	23.9	36.9	57.9*	27	52.5	30.4	76.8*	89.8*	42.3	50.4*	21.5	20.0
HDS(X)11*-600H	6	4"	63,000	53,550	60	13.5	65.9	34	28.3	37.3	57.9*	29	61.2	35	93.4*	109.4*	48.8	53.7*	24.7	20.0
HDS(X)11*-750H	7	4"	65,000	55,250	75	13.5	65.9	34	28.3	37.3	57.9*	29	61.2	35	93.4*	109.4*	48.8	53.7*	24.7	20.0
HDS(X)11*-1000H	10	4"	67,000	56,950	100	13.5	65.9	34	28.3	37.3	57.9*	29	61.2	35	93.4*	109.4*	48.8	53.7*	24.7	20.0
HDS(X)11*-1250H	10	4"	69,000	58,650	125	13.5	65.9	34	28.3	37.3	57.9*	29	61.2	35	93.4*	109.4*	48.8	53.7*	24.7	20.0

\* Can be "G" (Gas), "O" (Oil) or "C" (Combination Gas/Oil)

\* Includes silencer which is standard on units with 30 HP and larger motors.



The *Better* Boiler Burner.

Represented By

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