Model JBSX2 Forced Draft Burners

Specification & Dimensional Data

(48 - 131 BHP Input) - High TD, Low NOx Forced Draft

- Turndowns to 10:1 gas, 8:1 oil
- Natural Gas, Propane, Digester, Waste Gas or Mixed Gas Firing
- #2 - #6 Oil Firing (#6 starts at 100 HP)
- Pressure (return flow nozzle) or Air Atomized (Above 80 HP) Oil Firing
- Linkage or Parallel Positioning Controls

Sizing Details

- The JBSX2 size can be estimated from the boiler HP and furnace pressure below.
- Sizing is based on a max air temperature of 90^{O} F, 60 Hz, altitude under 1000 ft.
- Higher altitude can be corrected by adding 1" furnace pressure for each 1500 feet over 1000 feet, up to 5500 ft.
- For furnace pressures higher then shown, altitudes over 5500 ft, 50 Hz or smaller furnaces, contact factory.
- Adding a silencer will reduce the available furnace pressure by about 1/2" on the JBSX2.

The JBSX2 is available with an "S" (9") head and three fan / motor combinations. The chart below shows how these can be applied.

				Standard Turndown			Maximum Turndown			Std Motor		Larger Motor		Larger Motor	
		Rated Input		#2 Oil			#2 Oil			Std Motor HP	Max Furn Press	Larger Motor HP	Max. Furn Press	Larger Motor HP	Max Furn Press
JBS Model #	BHP	Gas MBH	Oil GPH	Gas	Press Atom	Air Atom	Gas	Press Atom	Air Atom						
JBSX2* - S	48	2000	14.3	5.0	3.0	4.8	6	3.0	4.8	2	3.2	3	3.8	NA	NA
	50	2092	14.9	5.0	3.0	5.0	6.2	3.0	5	2	3.1	3	3.7	NA	NA
	60	2511	17.9	5.0	3.0	5.0	7.5	3.0	6.0	2	2.6	3	3.1	NA	NA
	70	2929	20.9	5.0	3.0	5.0	8.7	3.0	7.0	2	2	3	2.5	NA	NA
	72	3000	21.4	5.0	3.0	5.0	8.9	3.0	7.1	2	1.8	3	2.3	5	3.3
	75	3138	22.4	5.0	3.0	5.0	9.3	3.0	7.5	2	1.6	3	2.1	5	3.1
	76	3200	22.9	5.0	3.0	5.0	9.5	3.0	7.6	2	1.5	3	2	5	3
	80	3348	24.0	5.0	3.0	5.0	10.0	3.0	8.0	2	1.2	3	1.6	5	2.7
	84	3500	25.0	5.0	3.0	5.0	10.0	3.0	8.0	3	1.4	5	2.4	NA	NA
	90	3766	26.9	5.0	3.0	5.0	10.0	3.0	8.0	3	1	5	2	NA	NA
	96	4000	28.9	5.0	3.0	5.0	10.0	3.0	8.0	5	1.7	NA	NA	NA	NA
	100	4184	30.0	5.0	3.0	5.0	10.0	3.0	8.0	5	1.4	NA	NA	NA	NA
	108	4500	32.1	5.0	3.0	5.0	10.0	3.0	8.0	5	0.8	NA	NA	NA	NA
	110	4600	32.9	5.0	3.0	5.0	10.0	3.0	8.0	5	0.6	NA	NA	NA	NA

Model Number Designation:

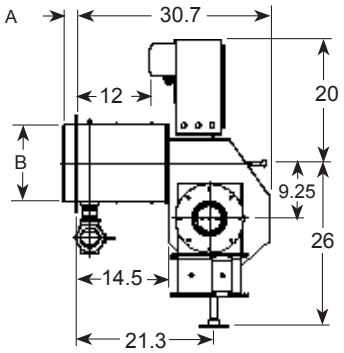
JBSX2 * - S 30

- 30 = Motor HP 20=2HP, 30=3HP, & 50=5HP
- S = 9" Head
- * = G = Gas, O = Oil, C = Combination

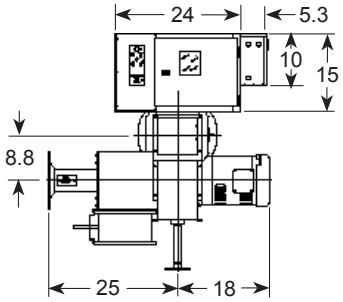
- Gas input based on HHV = 1000, 0.64 specific gravity. Gas Train requirements will vary with insurance and site conditions.
- Oil input based on #2 oil at 140,000 BTU/gal. Heavy oil rates will be lower, based on 150,000 BTU/gal.
- Heavy oil must have <0.5% sulfur to be used on this burner.

Model JBSX2 - Specification Data (335 - 5500 MBH Input)

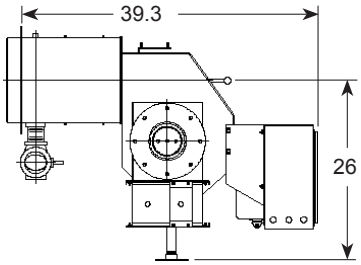
All Dimensions are in Inches



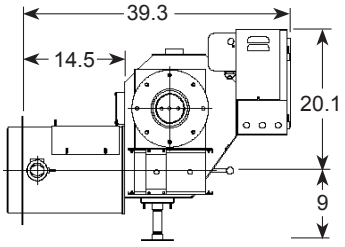
Standard JBSX2 Arrangement Side View



Standard JBSX2 Arrangement End View



JBSX2 Arrangement With Back Mounted Panel



JBSX2 Inverted Arrangement With Back Mounted Panel

	A	B
10.5" Head (T), 2" Insert	2.0	14.5
10.5" Head (T), 7" Insert	7.0	14.5
12" Head (A), 2" Insert	2.0	18.3
12" Head (A), 7" Insert	7.0	18.3

	(1) STANDARD UL EQUIPMENT AND IMPORTANT OPTIONS	Gas	No. 2 Oil	
			Pressure Atomized	Air Atomized
General	Motor, Fan and Air Inlet Control	X	X	X
	Air Flow Switch	X	X	X
	(2) Burner Mounted Control Panel, Switch and Indicator Lights	X	X	X
	Flame Safety Control	X	X	X
	Ultra Violet Scanner	X	X	X
	Motor Controller (single phase voltage)	X	X	X
	Motor Starter w/overloads (3 PH volt)	X	X	X
	Fuel Selector Switch	Duel Fuel Burners Only		
Ignition	Proven Gas Pilot Ignition	X	X	X
	Pilot Solenoid Gas Valve	X	X	X
	Pilot Gas Regulator & Manual Valve	X	X	X
	Pilot Gas Ignition Transformer	X	X	X
Options	Inverted Housing	X	X	X
	Alternate Control Cabinet Positioning	X	X	X
	Remote Control Panel	X	X	X
	Fuel Metering CAM-NETICS II	X	X	X
	Silencer	X	X	X
Gas Fuel	Main Manual Shutoff Valve			
	Main Safety Shutoff Valve	X		
	Second Safety Shutoff Valve	X		
	Main Gas Regulator	X		
	Gas Checking Valve	X		
	High and Low Gas Pressure Switches	X		
	Metering Valve	X		
	Normally Open Vent Valve	Opt.		
	Leak Test Ports (CSD-1)	X		
Oil Fuel	Oil Drawer Assembly with Diffuser		X	X
	Oil Nozzles		X	X
	Remote Oil Pump		X	Opt.
	Two Safety Shutoff Valves		X	X
	Low Air Atomizing Switch			X
	Low Oil Pressure Switch		X	X
	Oil Pressure Gauge		X	X
	Oil Metering Valve		X	X
	Future Gas Combustion Head		Opt.	Opt.
	Air Compressor			X

1. The configuration of each unit will vary with specific job requirements such as input rating, electrical specification and special agency approval codes. The above chart shows those items standard to a basic burner plus a few options that may be added.
2. Indicator lights are "Power On", "Call for Heat", "Fuel On" and "Flame Fail" for hard wired panels. "Alarm", "Low Water", "Power", "Call for Heat", "Ignition On" and "Fuel On" for circuit board light panels.

Essential Ordering Information and Data:

- Power Supply - Confirm 120-60-1 for control circuit and electrical supply for burner motor(s) (voltage, frequency and phase).
- Describe Boiler or Heater to be Fired - Including the manufacturer, model number, furnace pressure and furnace size.
- Firing Rate - Define firing rates in MBH for gas and GPH for oil.
- Fuel to be Burned - Type of gas and/or oil, including the BTU value.
- Approval Agency - UL, FM, IRI (GE GAP), CSD-1, NFPA, Mil spec and local codes, if applicable.
- Flame Safety Control Preferred - Honeywell or Fireye controls. Gas Train Components Preferred - ASCO / ITT, Honeywell or Siemens
- NOx Level Requirements. Required Options - Mounting plate, limit controls, etc.