

Water & Steam Boilers – Series 2

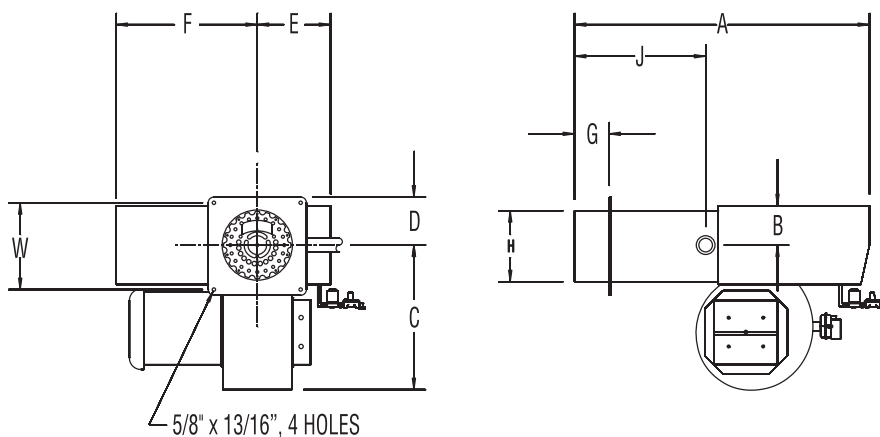
For Gas, Light Oil, & Gas/Light Oil – Fired Burners

Burner Specification & Data Sheet

Power Flame Gas Burners Models WJ30A, WJ50A



Figure 1 Model WJA



Burner Model Number	A	B	C	D	E	F	G	H	J	W
WJ30A	25.25	3.50	12.50	4.63	7.38	11.75	3.50	6.13	11.50	7.25
WJ50A	29.75	4.38	14.00	5.25	8.50	11.75	4.00	8.13	13.63	8.25



Boiler Model Number	Burner Input	Positive Pressure In Firebox	Burner Model Designation	Burner Motor 3450 Rpm H.P.	Standard Motor Voltage	Pressure Drop Thru Gas Train & Orifice Tee	Gas Tee (8) Pressure	Orifice Tee Drill Size	Gas Pressure Required At Gas Control Inlet Inches W.C.*	
	Gas MBH	Inches w.c.				Inches w.c.	Inches w.c.	Inches	Minimum	Maximum
488R	996	0.43	WJ30A-10	1/3	120/60/1	2.20	2.10	—	4.30	14.00
488	1010	0.43	WJ30A-10	1/3	120/60/1	2.30	2.30	—	4.50	14.00
588	1357	0.44	WJ50A-15	1/3	120/60/1	1.80	3.20	13/16	5.00	14.00
688	1703	0.46	WJ50A-15	1/3	120/60/1	2.40	2.30	—	4.70	14.00
788	2049	0.47	WJ50A-15	1/2	120/60/1	2.50	3.10	—	5.60	14.00

* Gas pressures shown are for standard gas train arrangement. Contact Weil-McLain for alternate gas trains to support other pressures.

Standard Gas Control Components and Sizes in Inches									
Boiler Model Number	Manual Hand Valve (Point Of Field Connection)	Low Gas Pressure Switch	Gas Pressure Regulator	Combination Gas Valve And Regulator	Motorized Operating Gas Valve	Motorized Operating Gas Valve (With Proof Of Closure)	Safety Gas Valve	Manual Checking Gas Valve	High Gas Pressure Switch
488R & 488	1	Optional	Optional	1	Optional	Optional	*	1	Optional
588 & 688	1 1/4	Optional	Optional	1 1/4	Optional	Optional	*	1 1/4	Optional
788	1 1/2	Optional	Optional	1 1/2	Optional	Optional	*	1 1/2	Optional

* Combination operating gas valve and regulator also serves as a safety gas valve.

Flame Safeguards Provided with Listed Control Systems by Code																
GAS BURNERS																
Boiler Model Number	UL				FM				CSD-1				IRI			
	OO	LHO	LHL	MOD	OO	LHO	LHL	MOD	OO	LHO	LHL	MOD	OO	LHO	LHL	MOD
488R-688	RM7897A	RM7897A	RM7897A	RM7897A	RM7897A	RM7897A	RM7897A	RM7897A	RM7897A	RM7897A	RM7897A	RM7897A	RM7897C	RM7897C	RM7897C	RM7840L
788	—	RM7897A	RM7897A	RM7897A	—	RM7897A	RM7897A	RM7897A	—	RM7897A	RM7897A	RM7897A	—	RM7897C	RM7897C	RM7840L

Notes

- Standard Flame Safeguard Control is RM7897A with pre-purge and flame rod.
- Electric gas pilot furnished as standard equipment.
- 488R-688 standard gas controls provide on-off operation with fixed combustion air control (OO system). 788 standard gas controls provide on-off operation, low fire start, high fire run and two-position air control, controlled by damper arm on motorized gas valve (LHO system).
- Optional gas controls for all burner sizes; LHL – low-high-low-off firing conditions and two-position air control; MOD – on-off operation, proven low fire start and full modulating firing conditions with modulating combustion air control.
- Burner capacities listed for elevations up to 2,000 feet. For higher elevations, consult local Weil-McLain distributor/agent or sales office.
- Gas ratings based on natural gas with heating value of 1,000 Btu per cubic foot and specific gravity of 0.60. Gas burners for other gases are available. Consult local Weil-McLain distributor/agent or sales office.
- Boiler-burner unit to be adjusted to achieve +0.10 inches W.C. pressure at flue collar, resulting in positive pressure in firebox as listed.
- Minimum gas pressures listed are subject to variations due to job conditions. Gas burners for other gas pressures are available. Consult local Weil-McLain distributor/agent or sales office.
- Gas tee pressures shown are for initial start-up. Final pressure should be determined after checking actual gas flow and combustion readings.



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