



SERIES 3

Power Flame Burner Information

Boiler Size	Burner Model		Motor		Voltage ^[1]	Firing Sequence ^[2]	Standard UL Flame Safeguard			Size ^{[3] [4]}	Gas Train	
	Gas and Gas/#2 Oil	#2 Oil	Gas	#2 Oil and Gas/#2 Oil			Gas	#2 Oil	Gas/#2 Oil		Min. Pres.	Max. Pres.
3-40	C2-15	C2-OA	1/2	3/4	240/60/1	L-H-O	RM7897A/UV	R7284P/CC	RM7897C/UV	1 1/4 / 1	6.7" w.c.	14.0" w.c.
3-50	C2-20A	C2-OB	3/4	1	240/60/1	L-H-O	RM7897A/UV	R7284P/CC	RM7897C/UV	1 1/2 / 1 1/4	5.6" w.c.	14.0" w.c.
3-60	C2-20B	C2-OB	3/4	1	240/60/1	L-H-O	RM7897A/UV	R7284P/CC	RM7897C/UV	2 / 1 1/2	5.0" w.c.	14.0" w.c.
3-70	C3-20	C3-O	1 1/2	2	208-460/60/3	L-H-O	RM7897A/UV	RM7897A/UV	RM7897C/UV	2 / 1 1/2	6.2" w.c.	14.0" w.c.
3-80	C3-20	C3-O	1 1/2	2	208-460/60/3	L-H-O	RM7897A/UV	RM7897A/UV	RM7897C/UV	2 / 1 1/2	7.7" w.c.	14.0" w.c.
3-90	C3-25	C3-O	1 1/2	2	208-460/60/3	L-H-O	RM7897A/UV	RM7897A/UV	RM7897C/UV	2	6.7" w.c.	14.0" w.c.
3-100	C3-25	C3-O	1 1/2	2	208-460/60/3	L-H-O	RM7897A/UV	RM7897A/UV	RM7897C/UV	2	7.5" w.c.	14.0" w.c.
3-125	C4-25	C4-OA	3	5	208-460/60/3	L-H-O	RM7897A/UV	RM7897A/UV	RM7897C/UV	2	9.2" w.c.	14.0" w.c.
3-150	C4-25	C4-OA	3	5	208-460/60/3	L-H-O	RM7897A/UV	RM7897A/UV	RM7897C/UV	2	13.0" w.c.	14.0" w.c.
3-175	C5-30	C5-O	7/2	7/2	208-460/60/3	Full Mod	RM7840L/UV	RM7840L/UV	RM7840L/UV	2 / 2 1/2	14.1" w.c.	28.0" w.c.
3-200	C5-30	C5-O	7/2	7/2	208-460/60/3	Full Mod	RM7840L/UV	RM7840L/UV	RM7840L/UV	2 1/2	14.2" w.c.	28.0" w.c.
3-250	C5-30B	C5-OB	7/2	7/2	208-460/60/3	Full Mod	RM7840L/UV	RM7840L/UV	RM7840L/UV	2 1/2	18.2" w.c.	28.0" w.c.
3-300	C6-30	C6-O	10	10	208-460/60/3	Full Mod	RM7840L/UV	RM7840L/UV	RM7840L/UV	3	40.0" w.c.	10 psi
3-350	CM9A-30	CM9A-O	5	5	208-460/60/3	Full Mod	RM7840L/UV	RM7840L/UV	RM7840L/UV	3	44.0" w.c.	10 psi
3-400	CM9B-30	CM9B-O	7/2	7/2	208-460/60/3	Full Mod	RM7840L/UV	RM7840L/UV	RM7840L/UV	3	40.0" w.c.	10 psi
3-500	CM9B-30	CM9B-O	7/2	7/2	208-460/60/3	Full Mod	RM7840L/UV	RM7840L/UV	RM7840L/UV	3	63.0" w.c.	10 psi
3-600	CM10A-30	CM10A-O	15	15	208-460/60/3	Full Mod	RM7840L/UV	RM7840L/UV	RM7840L/UV	3	94.0" w.c.	10 psi
3-700	CM10B-30	CM10B-O	15	15	208-460/60/3	Full Mod	RM7840L/UV	RM7840L/UV	RM7840L/UV	3	115.0" w.c.	10 psi
3-800	CM10C-30	CM10C-O	20	20	208-460/60/3	Full Mod	RM7840L/UV	RM7840L/UV	RM7840L/UV	3 / 4	120.0" w.c.	10 psi
3-900	CM11-30	CM11-O	25	25	208-460/60/4	Full Mod	RM7840L/UV	RM7840L/UV	RM7840L/UV	3HF	70.0" w.c.	10 psi
3-1000	CM11-30	CM11-O	25	25	208-460/60/4	Full Mod	RM7840L/UV	RM7840L/UV	RM7840L/UV	3HF	77.0" w.c.	10 psi

[1] Motor voltage on gas model 3-40 is supplied with 120/60/1.

[2] Explanation of Firing Sequences:

Gas and Gas Sequence on Combination Gas/Oil Boilers

- L-H-O Low fire start (not proven), high fire run, air control by linkage to motorized gas valve.
- Full Mod Full modulation with proven low fire start, synchronized fuel/air control with modulating motor.

Oil and Oil Sequence on Combination Gas/Oil Boilers

- L-H-O Low fire start (not proven), high fire run, oil cylinder air control (reduced input start) with by-passing type nozzle, oil valve and oil pressure regulating valve.
- Full Mod Full modulation with proven low fire start, synchronized fuel/air control with modulating motor, oil by-passing type nozzle, oil metering valve, oil pressure regulating valve.

[3] Models 3-40, 3-50 and 3-60 - Dual size gas trains: Leak test cock and main gas valve are indicated by the first number; combination gas valve/regulator and main shutoff cock are indicated by the second number.

[4] Models 3-70, 3-80, 3-175 and 3-800 - Dual size gas trains: Leak test cock, main gas valve and auxiliary gas valve are indicated by the first number; gas regulator and main shutoff cock are indicated by the second number.

[5] #2 Oil: Models 40 - 500 boiler hp are pressure atomizing and Models 500 - 1000 boiler hp are air atomizing.



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Power Flame Burner Equipment

Equipment	Fuel	Description
Control Cabinet	Gas, #2 Oil, Gas/#2 Oil	NEMA 1A with hinged door.
Control Voltage Transformer	Gas, #2 Oil, Gas/#2 Oil	Optional.
Motor Starter	Gas, #2 Oil, Gas/#2 Oil	Contactors with single phase motor, magnetic starter with overload protection with 3-phase motor.
Fusing	Gas, #2 Oil, Gas/#2 Oil	Control circuit only.
Ignition	Gas and Gas/#2 Oil	Gas/Electric pilot.
	#2 Oil	Direct spark (3-40 to 3-150). Gas/Electric pilot (3-175 to 3-300).
Signal Lights	Gas, #2 Oil, Gas/#2 Oil	Two [power on and fuel on].
Air Flow Safety Switch	Gas	All models.
	#2 Oil	On models 3-175 to 3-300.
	Gas/#2 Oil	All models, functions with both fuels.
Gas Train	Gas and Gas/#2 Oil	UL gas train for minimum inlet pressure indicated on Burner Information table. Assembled, wired and mounted on unit consisting of the following: <ul style="list-style-type: none"> ● Manual shut-off valve. ● Gas pressure regulator. ● Manual leak test valve. ● <u>Automatic gas valve</u>: Combination gas valve and regulator (3-40 to 3-60). Motorized all others (Proof of closure on 3-125 to 3-300). ● <u>Safety gas valve</u>: Solenoid type on all (except 3-40 to 3-60 which have diaphragm type). ● <u>High and Low gas pressure switches</u>: Models 3-30 to 3-300.
Oil Pump	#2 Oil and Gas/#2 Oil	Two stage, integral with burner (3-40 to 3-150). Separate oil pump set with motor and accessories mounted on boiler skid (3-175 to 3-300).
Pilot Gas Controls	Gas, #2 Oil, Gas/#2 Oil	All models with gas/electric pilot have manual pilot shut-off valve, high gas pressure regulator and solenoid gas valve (3-125 to 3-300 on Gas/#2 Oil models).
Fuel Changeover	Gas/#2 Oil	Manual switch.