

## Water & Steam Boilers – Series 2

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

### Burner Specification & Data Sheet

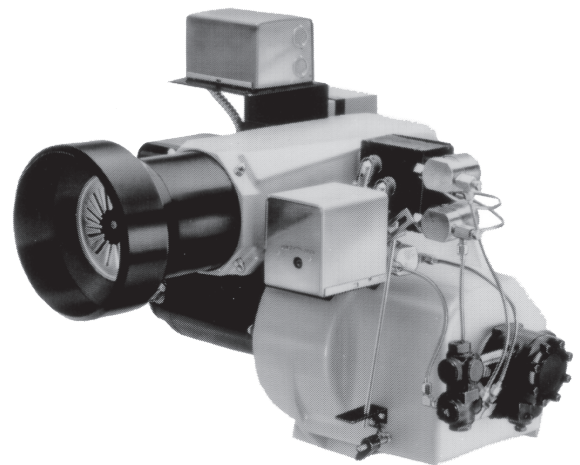
### Beckett Oil Burners

Models CF1400-W, CF2300A-W,  
CF2500-W, CF3500A-W

**Figure 1** Model CF1400-W



**Figure 2** Model CF2300A-W



Dimensions in Inches					
Burner Model Number	Length (From Mounting Flange To Label Area On Burner Front)	Overall Width	Motor Size H.P.	Standard Motor Electrical Characteristics	Optional Motor Electrical Characteristics
CF1400-W	20.75	22.50	1/2	120/60/1	208-240/60/1* 208-240-480/60/3
CF2300A-W	21.25	24.00	3/4	120/60/1	208-240/60/1* 208-240-480/60/3
CF2500-W	23.50	27.00	2	240/60/1	208-240-480/60/3
CF3500A-W	23.50	27.00	2	240/60/1	208-240-480/60/3

\* Optional motor contactor supplied.



# Burner specifications and settings

**Table 1** Burner data

Boiler Model Number	Burner Input (Forced Draft) No. 2 Oil	Low Fire Firing Rate No. 2 Oil	Positive Pressure in Firebox	Standard Burner Model Designation	Becket Part Number for Ordering
	GPH	GPH	Inches W.C.		
488R	6.90	4.90	0.60	CF1400-W	WL 7001
488	7.00	5.00	0.60	CF1400-W	WL 7001
588	9.40	6.8	0.60	CF2300A-W	WL7101
688	11.80	8.51	0.65	CF2300A-W	WL7102
788	14.20	10.41	0.65	CF2300A-W	WL7103
888	16.60	8.30	0.65	CF2500A-W	WL7201
988R	17.20	11.60	0.65	CF2500A-W	WL7202
988	18.80	9.53	0.65	CF2500A-W	WL7202
1088R	20.00	9.54	0.65	CF2500A-W	WL7301
1088	21.50	11.26	0.65	CF2500-W	WL7301
1188	23.50	12.30	0.65	CF2500-W	WL7302
1288	26.00	13.00	0.65	CF3500A-W	WL7401
1388	28.50	15.00	0.70	CF3500A-W	WL7402

Boiler Model Number	Standard Combustion Control	Air Tube Combination	Starting Head Setting	Approximate Air Settings	
				Low Fire	High Fire
488R	Beckett 7505P1515/CC	CF66KD	4	39	54
488	Beckett 7505P1515/CC	CF66KD	4	39	54
588	Beckett 7505P1515/CC	CF66KG	0	34	42
688	Beckett 7505P1515/CC	CF66KG	3	41	51
788	Beckett 7505P1515/CC	CF66KG	6	43	54
888	Beckett 7505P1515/CC	CF66KP	2	25	50
988R	Beckett 7505P1515/CC	CF66KP	4	28	54
988	Beckett 7505P1515/CC	CF66KP	4	27	52
1088R	Honeywell RM7840M	CF66KP	8	29	59
1088	Honeywell RM7840M	CF66KP	8	29	59
1188	Honeywell RM7840M	CF66KP	3	29	44
1288	Honeywell RM7840M	CF80KM	3	31	63
1388	Honeywell RM7840M	CF80KM	6	33	98



# Burner specifications and settings *(continued)*

**Table 2** Burner data, continued

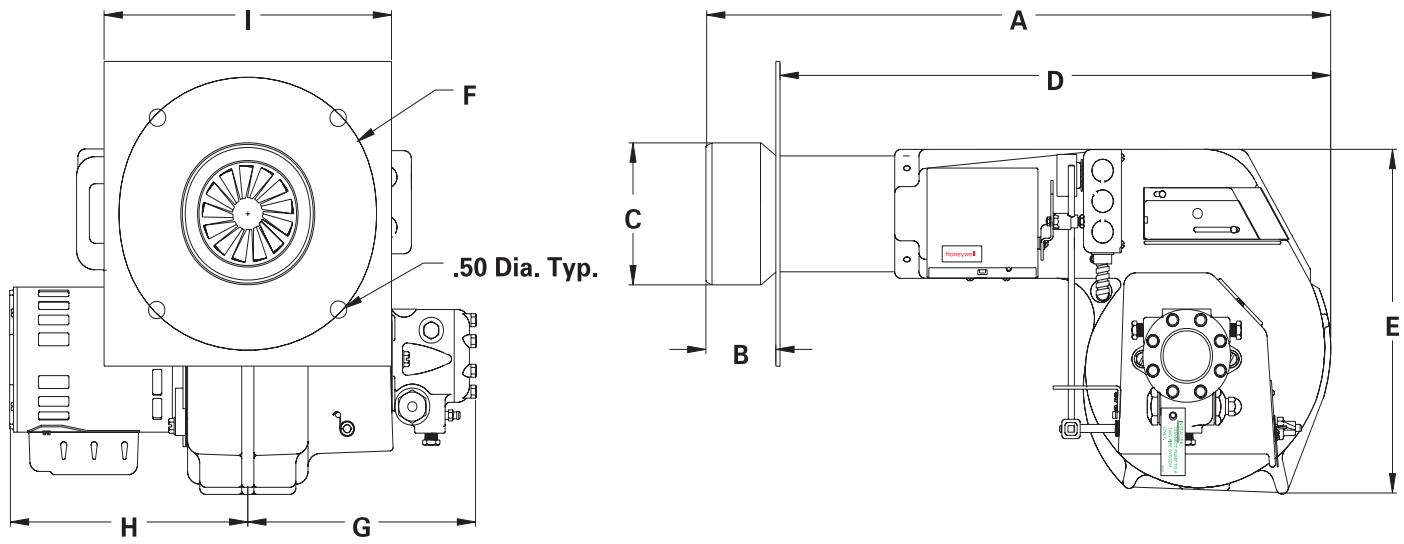
Boiler Model Number	Oil Nozzle(s)										Operating Oil Pressures PSIG		Fuel Unit Burner-Motor Driven 3450 RPM		
	Preferred nozzles					Alternate nozzles									
	Qty.	Size GPH	Brand	Type	Spray Angle	Qty.	Size GPH	Brand	Type	Spray Angle	Low Fire	High Fire	Type (Suntec)	Nozzle Capacity GPH	Gearset Capacity GPH
488R	1	4.00	Delavan	B	70°	None					150	290	B2TA-8851	16	33
488	1	4.00	Delavan	B	70°	None					150	300	B2TA-8851	16	33
588	1	5.50	Hago	P	60°	1	5.50	Delavan	B	60°	150	300	B2TA-8851	16	33
688	1	7.00	Delavan	B	60°	None					150	300	B2GA-8852	23	39
788	1	8.50	Delavan	B	60°	1	8.50	Hago	P	60°	150	300	J4PA-C1050G	30	46
888	2	5.00	Delavan	B	60°	2	5.00	Monarch	PLP	45°	300	300	J4PA-C1050G	30	46
988R	2	5.50	Hago	P	60°	2	5.50	Delavan	B	60°	290	290	J4PA-C1050G	30	46
988	2	5.50	Hago	P	60°	2	5.50	Delavan	B	60°	300	300	J4PA-C1050G	30	46
1088R	2	6.00	Delavan	B	70°	2	6.00	Delavan	B	60°	300	300	J4PA-C1050G	30	46
1088	2	6.50	Delavan	B	70°	2	6.50	Delavan	B	60°	300	300	J4PA-C1050G	30	46
1188	2	7.00	Delavan	B	45°	2	7.00	Delavan	B	60°	300	300	J4PA-C1050G	30	46
1288	2	7.50	Delavan	B	45°	2	7.50	Monarch	PLP	45°	300	300	J4PA-C1050G	30	46
1388	2	8.50	Delavan	B	60°	2	8.50	Hago	P	45°	300	300	J4PA-C1050G	30	46

## Notes for Table 1 and Table 2

- Burner capacities listed for elevations up to 2,000 feet. For higher elevations, consult local Weil-McLain distributor/agent or sales office.
- Light oil ratings based on No. 2 fuel oil with heating value of 140,000 Btu per gallon.
- Boiler-burner unit to be adjusted to achieve +0.10 inches W.C. pressure at the flue collar, resulting in positive pressure in firebox as listed.
- Control Systems:
  - LHO: On-off operation, low fire start, high fire run. Two-position air, two-position oil.
  - LHL: Low-high-low-off firing conditions. Two-position air, two-position oil.
- 120/60/1 control circuit is used for all burners.
- Combustion Controls:
  - Beckett 7505P1515/CC combustion control uses cadmium cell for flame detector to monitor oil burner flame, also furnishes intermittent ignition.
  - RM7840M flame safeguard control monitors the oil burner flame, provides pre-purge and post-purge programming. Timed low fire start is provided by means of timing built into control. Control is used with UL on-off (low fire start) systems. Photocell electronic flame detector is standard with ultraviolet and infrared detector available.
- Burners will be completely assembled and wired.
- Burners listed by Underwriters Laboratories, Inc., Underwriters Laboratory Canada, State of Connecticut, Fire Marshal state of Massachusetts, city of New York MEA, and others.
- Settings shown are for initial set-up. Final settings should be determined after combustion readings.



# Burner dimensions



Dimensions in Inches										
Burner Model Number	Air Tube Combination	A	B	C	D	E	F	G	H	I
		Overall Length	Insertion Depth	Maximum Tube O.D.	Burner Length (External To Appliance)	Overall Height	Bolt Circle	Centerline To Pump	Centerline To Motor	Square Flange Width & Height
CF1400-W	CF66KD	24.75	4.00	5.50	20.63	13.50	10.25	9.50	9.82	12.00
CF2300A-W	CF66KG	25.25	4.00	6.50	21.13	15.60	10.25	10.40	12.00	12.00
CF2500-W	CF66KP	26.25	4.00	6.50	22.13	17.70	10.25	12.70	14.10	12.00
CF3500A-W	CF80KM	27.50	4.50	7.87	23.38	17.70	10.25	12.70	14.10	12.00



Weil-McLain  
 500 Blaine Street  
 Michigan City, IN 46360-2388  
<http://www.weil-mclain.com>