

- Dual Fuel Burner – gas or oil (light only)
- Conventional forward flame pattern
- 8 to 30 million Btu/hr
- Broad stability range
- Chambers up to 2200F
- Includes low pressure fuel oil atomizer



MAGNA-FLAME™ BURNERS FOR LOW PRESSURE AIR ATOMIZATION OF LIGHT OIL. Features heavy-duty, welded steel body, built-in refractory ring, atomizer, observation port, and connections for pilot and flame detector.

These Magna-Flame burners combine the versatility of smaller Forward Flame Burners, the convenience of large capacity burners, and suitability for modern flame monitoring systems. They have been used in many industrial heating operations, including dryers, reverberatory melters, fluidized bed heaters, air heaters, and fume incinerators.

Sizes up to 16" make these burners convenient to use where multiple small burners would be impractical. The oil flame is more luminous than the gas. All sizes burn distillate oil cleanly and efficiently.

ATOMIZER. This burner is equipped with a Series 5654 Low Pressure Air Atomizer. (If high pressure air or steam atomization is desired, see Bulletin 6795.) It requires 14 osi atomizing air pressure for distillate oil. Oil pressure required at the burner is negligible. Main and atomizing air consumption rates are tabulated below.

CONTROL. Minimum air pressure when firing correct air/fuel ratio is approximately 1/4 osi. Magna-Flame burners should be used with automatic air/fuel ratio control—either mass flow control or cross-connected pressure control systems. (Regulator, Regutrol, or Ratiotrol™.) Gas pressure required is approximately 0.6 times air pressure.

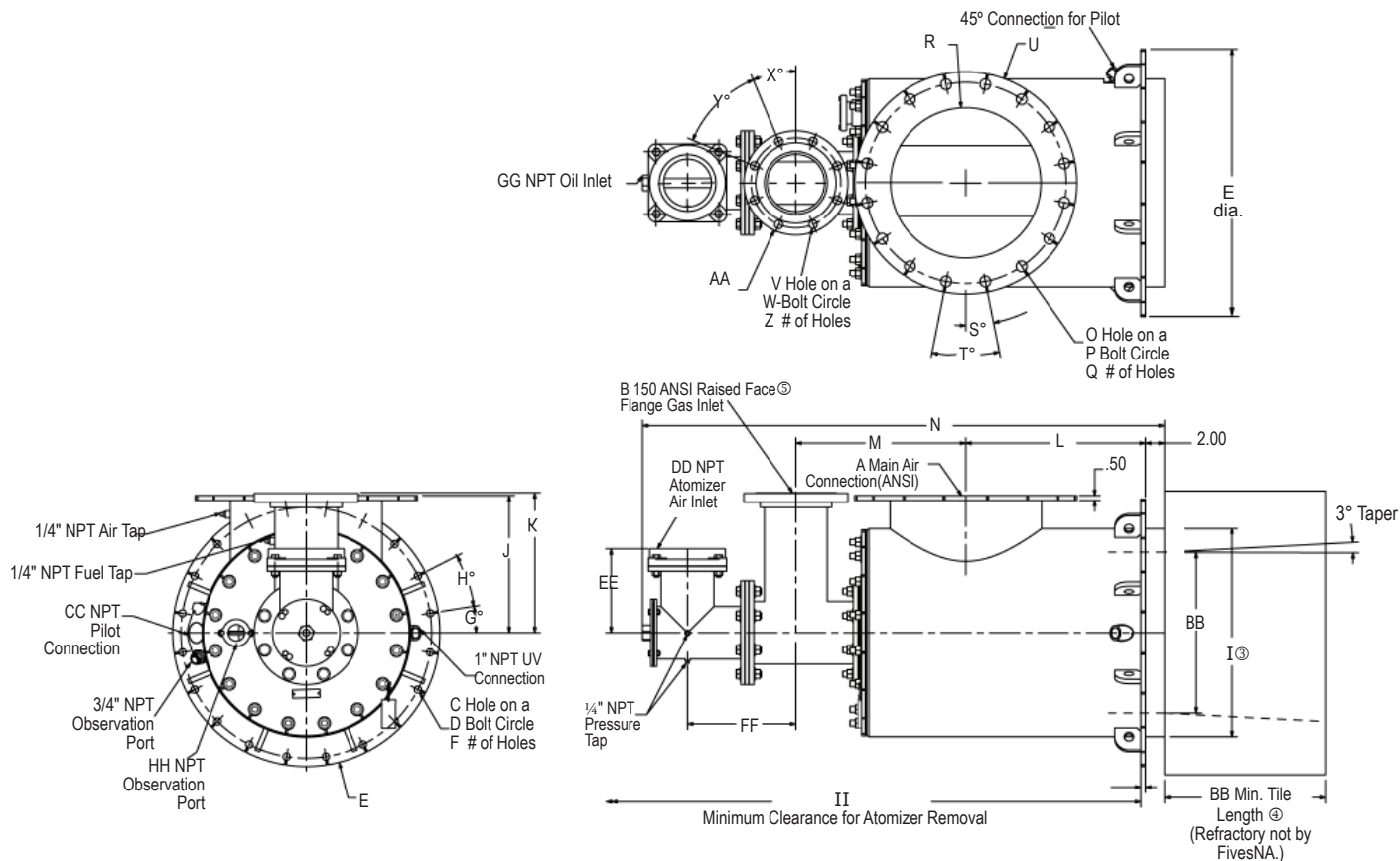
IGNITION and FLAME SUPERVISION. Magna-Flame burners should be pilot ignited ①. Pilot ignition must occur at 1" wc main air pressure or less. Appropriate 4014 gas-boosted pilots are to be used with this burner (sold separately), and are shown on the dimension table. Pilot operation must be interrupted to prevent overheating of the mounting. Self-checking UV scanners (sold separately) are recommended for flame supervision. See Bulletin 8832 for selection of UV adapters. It is possible for a UV scanner mounted on this burner to sight flame(s) of other burners in the same firing chamber. Consult Fives North American for configuration guidance on multiple burner applications.

INSTALLATION. The burner does not include a refractory tile. The shape shown on the dimension drawing (page 2) must be built into the combustion chamber wall. See Supplement DF-M1 for installation recommendations.

Burner Designation	COMBUSTION AIR CAPACITY, (scfh) For Btu/hr, multiply by 100				FLOW RATE of ATOMIZING AIR scfh @ 14 osi	FLAME DIMENSIONS @ 8 osi main air & 10% XSair	
	Air pressure drop across burner, osi					Length	Diameter
	1.0	5.0	6.0	8.0②			
6795-9-A-54	29 000	65 000	71 000	82 000	6 050	9'	3'
6795-9-B-54	36 000	80 500	88 000	102 000	6 050	9'	3'
6795-10-54	47 500	106 000	116 000	134 000	10 600	11'	4'
6795-12-54	70 000	157 000	172 000	198 000	17 200	15'	5'
6795-14-54	95 500	214 000	234 000	270 000	17 200	20'	5'
6795-16-54	121 000	269 000	295 000	340 000	27 200	25'	5'

① Because of positive pressure.
② Maximum recommended pressure.

WARNING: Situations dangerous to personnel and property may exist with the operation and maintenance of any combustion equipment. The presence of fuels, oxidants, hot and cold combustion products, hot surfaces, electrical power in control and ignition circuits, etc., are inherent with any combustion application. Parts of this product may exceed 160F in operation and present a contact hazard. Fives North American urges compliance with National Safety Standards and insurance Underwriters recommendations, and care in operation.



DIMENSIONS SHOWN ARE SUBJECT TO CHANGE. PLEASE OBTAIN CERTIFIED PRINTS FROM FIVES NORTH AMERICAN COMBUSTION, INC. IF SPACE LIMITATIONS OR OTHER CONSIDERATIONS MAKE EXACT DIMENSION(S) CRITICAL.

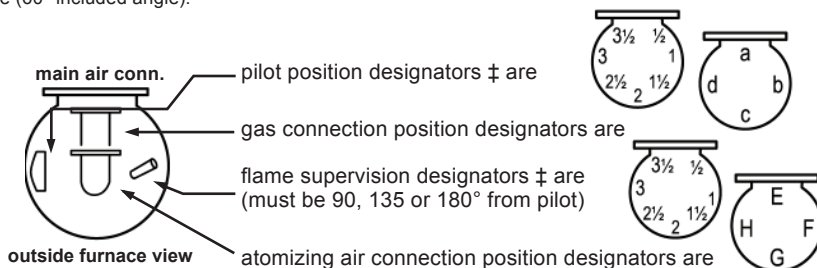
Dimensions in inches and degrees

Size Designation	A	B	C	D	E	F	G°	H°	I [Ⓢ]	J	K	L	M	N	O	P	Q	R
6795-9-A, B-54	8	3	0.75	18.5	20.25	16	11.25	22.5	14	9.5	9.26	11	11.7	35.69	0.88	11.75	8	8.25
6795-10-54	10	4	0.75	20.5	22.25	16	11.25	22.5	16	11	14.76	12.75	13.07	42.5	1	14.25	12	10.25
6795-12-54	12	4	0.75	22.5	24.25	16	11.25	22.5	18	12.5	14.81	15	14.44	46.61	1	17	12	12.25
6795-14-54	14	6	0.75	24.5	26.25	16	11.25	22.5	20	13.5	14.81	18	17.39	52.42	1.125	18.75	12	13.88
6795-16-54	16	6	0.75	26.5	28.5	20	9	18	22	14.5	14.81	19	18.39	57.51	1.125	21.25	16	15.875

Size Designation	S°	T°	U	V	W	X°	Y°	Z	AA	BB	CC	DD	EE	FF	GG	HH	II	Pilot	
																		Assembly	WT
6795-9-A, B-54	22.5	45	13.5	0.75	6	45	90	4	7.5	10	1.25	2.5	2.38	7.74	3/8	3/4	61.50	4014-1-T	220
6795-10-54	15	30	16	0.75	7.5	22.5	45	8	9	11	1.5	3	5.19	8.71	3/8	3/4	70.75	4014-2-T	290
6795-12-54	15	30	19	0.75	7.5	22.5	45	8	9	12.5	1.5	4	7.88	11.96	1/2	3/4	81.75	4014-2-T	310
6795-14-54	15	30	21	0.875	9.5	22.5	45	8	11	14.75	2	4	7.88	11.75	1/2	3/4	92.25	4014-3-T	480
6795-16-54	11.25	22.5	23.5	0.875	9.5	22.5	45	8	11	17	2	6	8.88	11.46	1/2	2	96.75	4014-3-T	540

- ⓈFurnace opening should be 1/2" larger than dimension I.
- ⓈAfter a length of 1.2 X BB, flare out the tile at a 30° angle (60° included angle).
- ⓈFlat face ANSI flange available upon request.

Arrangement Designators are specified relative to the main air connection at 12 o'clock and should be listed for **pilot, gas, flame supervision and atomizing air in that order.**



‡ Good practice dictates that neither the pilot nor the flame detector be below the centerline of a horizontally-mounted burner.

ORDER MUST SPECIFY:(1) Burner designation(such as 6795-16-54); (2) Arrangement designation for pilot, gas connection, flame safety and atomizing air connection positions in that order such as 6795-16-54, arrangement 3a1E (for the arrangement shown above).