

North American Gas Tunnel Burners



4659 Gas Tunnel Burner

- Components: nozzle, mounting plate and tile
- Operate on air-gas mixture
- Prevent air infiltration

Product Overview | 4659 Gas Tunnel Burner

4659 Premix Gas Tunnel Burners consist of a burner nozzle, mounting plate and tile.

These burners operate on an air-gas mixture as supplied by North American 3065 Aspirator Mixers or similar mixing devices. When sealed, they prevent air infiltration and may be used on furnaces requiring controlled atmospheres and positive or negative chamber pressures.

The burner tiles are rated at 3200°F maximum operating temperature. The burner mounting plate includes a slip-fit hole

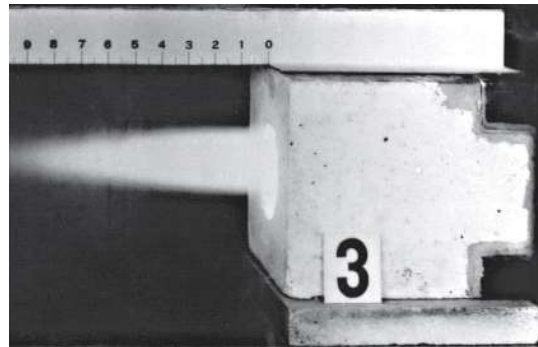
at 12 o'clock for the pilot and 3/4" fpt holes at 1 and 2 o'clock for an observation port and flame detector.

North American strongly recommends the use of interrupted pilots with burners monitored by flame detectors. UV detectors are compatible with these burners. Flame rods require that a ground rod be added to the burner nozzle. This option is available at an extra cost. Contact Fives North American Combustion, Inc. for the proper part number when ordering this option.

Combustion Air Capacities scfh (Btu/h HHV = scfh × 100)

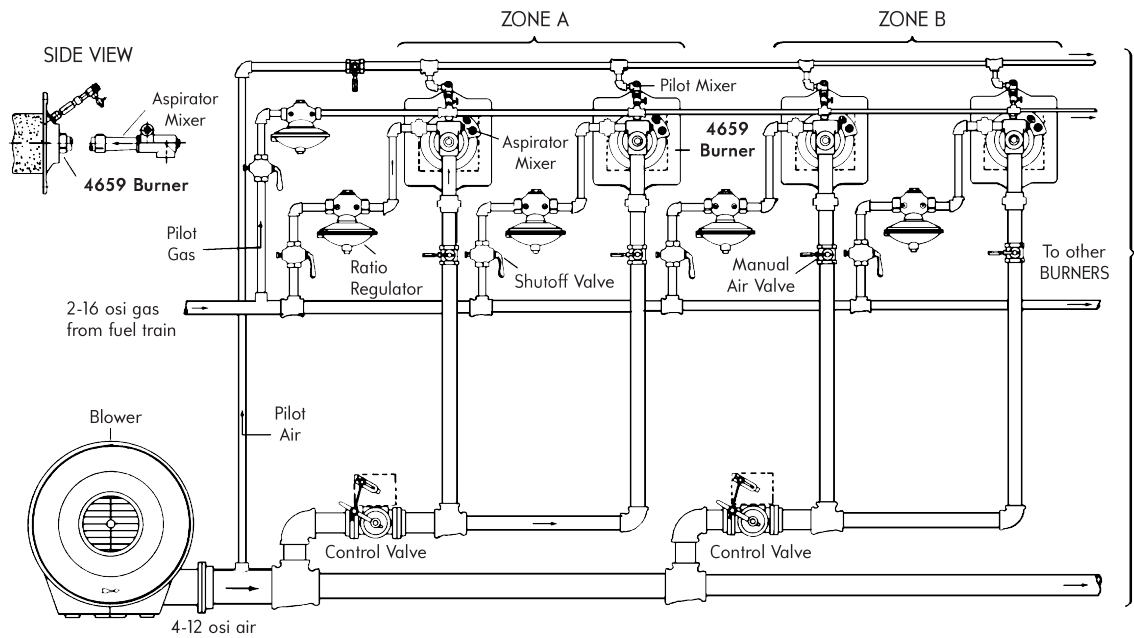
Burner designation	Mixture pressure in inches of water						
	1	1.5	2.5	5	7	8	12
4659-1-A	350	430	560	790	920	990	1210
4659-1-B	440	540	700	990	1160	1240	1520
4659-2-A	560	680	880	1260	1480	1580	1930
4659-2-B	650	800	1030	1460	1720	1840	2240
4659-2-C	780	960	1230	1750	2060	2190	2680
4659-2-D	880	1080	1390	1980	2320	2480	3020
4659-3-A	980	1200	1550	2200	2590	2760	3380
4659-3-B	1200	1460	1900	2690	3170	3380	4120
4659-4-A	1500	1830	2380	3360	3960	4240	5150
4659-4-B	1900	2320	3010	4270	5000	5350	6550
4659-4-C	2050	2500	3240	4610	5400	5800	7050
4659-5-A	2450	3000	3880	5500	6500	6900	8450
4659-5-B	2900	3540	4600	6500	7650	8200	10000
4659-6-A	3200	3910	5050	7200	8450	9000	11000
4659-6-B	3850	4700	6100	8650	10200	10800	13200
4659-6-C	4250	5150	6700	9550	11200	12000	14600
4659-7-A	4750	5800	7500	10600	12600	13400	17000
4659-7-B	6000	7350	9500	13400	15800	16900	20600
4659-7-C	7050	8600	11100	15800	18600	19800	24200

Minimum mixture pressure must be at least 0.25" w.c. above furnace pressure when burning natural gas.



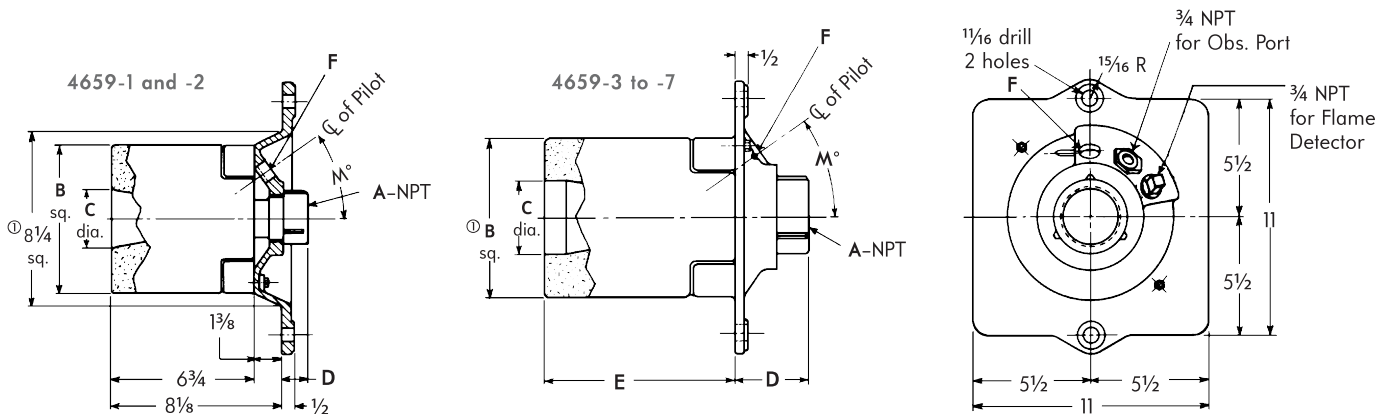
4659-3-B Flame at 300,000 Btu/h HHV.

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. Components in combustion systems may exceed 160°F (71°C) surface temperatures and present hot surface contact hazard. Fives North American Combustion, Inc. suggests the use of combustion systems that are in compliance with all Safety Codes, Standards, Regulations and Directives; and care in operation.



Multiple burner arrangement. (Not a complete system.)

DIMENSIONS inches



Burner designation	dimensions in inches and degrees							Wt, lb	Flame Rod length ^②	Recommended Pilot
	A	B	C	D	E	F (drill)	M°			
4659-1-A, -1-B	1	7	2 ⁹ / ₁₆	1 ³ / ₁₆	-	1 ¹ / ₆₄	35	40	3 ¹ / ₂	4021-13 or 4021-14
4659-2-A, -2-B, -2-C, -2-D	1 ¹ / ₄	7	2 ³ / ₄	1 ⁵ / ₃₂	-	1 ¹ / ₆₄	35	40	3 ¹ / ₂	
4659-3-A, -3-B	1 ¹ / ₂	7 ¹ / ₂	3 ¹ / ₄	2 ⁷ / ₈	9	1 ¹ / ₆₄	35	50	4 ¹ / ₂	
4659-4-A, -4-B, -4-C	2	7 ¹ / ₂	3 ¹ / ₂	3 ⁷ / ₁₆	9	1 ¹ / ₆₄	35	50	4 ¹ / ₂	4021-15 or 4021-16
4659-5-A, -5-B	2 ¹ / ₂	9	3 ³ / ₄	4 ⁷ / ₁₆	9	1 ⁹ / ₆₄	30	75	5 ¹ / ₂	
4659-6-A, -6-B, -6-C	3	9	4	4 ⁵ / ₈	9	1 ⁹ / ₆₄	30	75	5 ¹ / ₂	
4659-7-A, -7-B, -7-C	4	9	5	5 ⁵ / ₁₆	11	1 ⁹ / ₆₄	30	92	6 ¹ / ₂	

① Opening in furnace shell or outer wall must be 1/2" larger than dimension indicated to allow for mounting plate fillet and draft.

② From outer boss of flame rod connection.

To order, specify: 4659-(code for pipe size)- capacity code (A, B, C, or D when applicable) Burner Complete.

Example: 4659-6-C Burner Complete

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.

CONTACT

fna.sales@fivesgroup.com
T +1 800 626 3477 - F +1 216 373 4237

Fives North American Combustion, Inc.
4455 East 71st Street - Cleveland, OH 44105 - USA
www.fivesgroup.com

