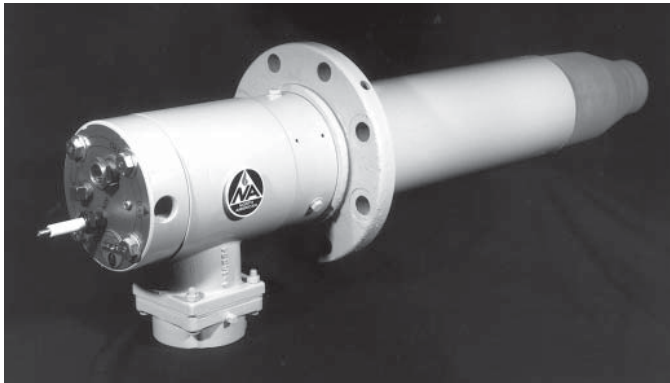


North American TEMPEST® High Velocity Gas Burner

Bulletin 4446



For any furnace wall construction
from 9" to 28"†

High velocity burners improve the performance of many furnaces and kilns by creating recirculation and stirring of furnace gases, which enhances heat transfer and temperature uniformity. High velocity also increases heat penetration into and around loads.

4446 Tempest High Velocity Gas Burners put the burner discharge at the inside face of the kiln wall for maximum effect from burner velocity. Kiln temperature can be as high as 2600 F. Higher temperatures will be considered depending upon how the burner is to be installed and operated.

4446 is available in three models for different wall thicknesses. The -S model has a fixed flange 9" from the burner tip. The two longer models have an adjustable flange that is easily locked in position. See dimension table for minimum/maximum "Z" dimensions.

Due to internal backpressure, individual air/gas ratio regulators are recommended with each burner. (This is true of all high velocity burners.)

SPECIFICATIONS

Fits flush with kiln walls 9" or 10½" to 28" thick.

Maximum chamber temperature is 2600 F. (Consult Fives North American Combustion, Inc. for higher temperatures.)

Spark ignited, no pilot.

Provision for ultraviolet flame detection.

Natural Gas (minimum pressure 10 osi).

4446 Performance Data

Burner designation	Combustion Air Capacities, scfh‡ (for Btu/hr multiply by 100)				Max. % XSAir (stability)*	Max. % XSFuel (stability)*	Approx. Flame length at 16 osi, stoich.	Approx. Flame dia at 16 osi, stoich.
	at 1.0 osi firing stoich.	at 4.0 osi firing stoich.	at 8.0 osi firing stoich.	at 16.0 osi firing stoich.				
4446-5	2,200	4,500	6,300	9,000	400	30	42"	5"
4446-6	3,500	7,200	10,100	14,300	400	30	60"	7"

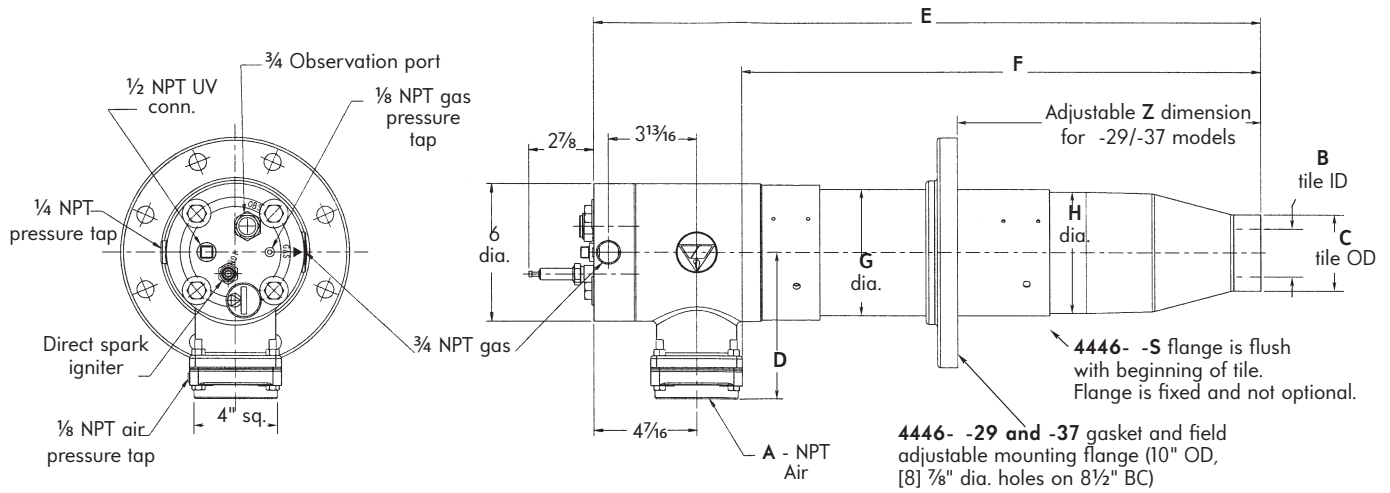
Direct spark ignition (6000 V) is possible at 4 osi air and below, but do not use a 4067B Hot Rod.

† For wall thickness over 28", consult Fives North American Combustion, Inc.

‡ Main air capacities can fluctuate ±10% due to tile temperature effects.

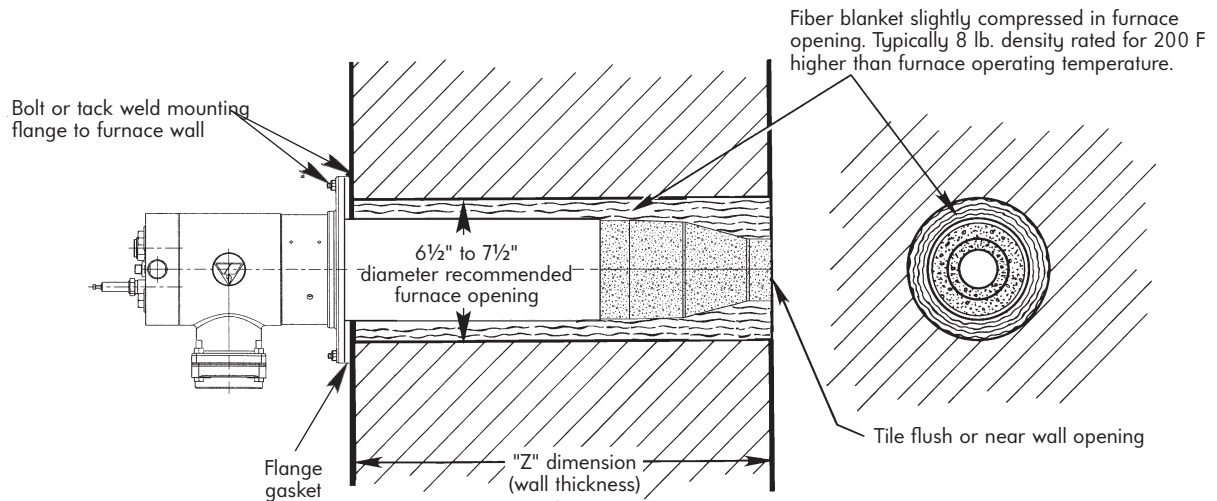
* Same limits apply for UV flame supervision.

DIMENSIONS inches



Burner designation	A				E			F			G		Z max.			Z min.		approx. wt, lb			
	B	C	D	-S	-29	-37	-S	-29	-37	-S	-29,-37	H	-S	-29	-37	-S	-29,-37	-S	-29	-37	
4446-5	2 1/2	2 3/32	3 5/16	6 3/8	18 15/16	31 1/2	39 1/2	12 1/2	25	33	5 7/8	5 1/2	5 9/32	9	20	28	9	10 1/2	30	45	50
4446-6	3	2 5/16	3 5/16	6 11/16	18 15/16	31 1/2	39 1/2	12 1/2	25	33	5 7/8	5 1/2	5 9/32	9	20	28	9	10 1/2	30	45	50

Flange Mounted Installation Recommendations, side or roof fired



To order, specify: 4446_-S, -29 or -37.
Example: 4446-5-29 Burner complete.

Note: If burner tile is used through an existing mounting tile, allow for 1/8" minimum clearance all around burner nozzle. Avoid bumping or hitting tile during installation.

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 Combustion, Inc. urges compliance with National Safety Standards and Insurance Underwriters' recommendations, and care in operation.



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