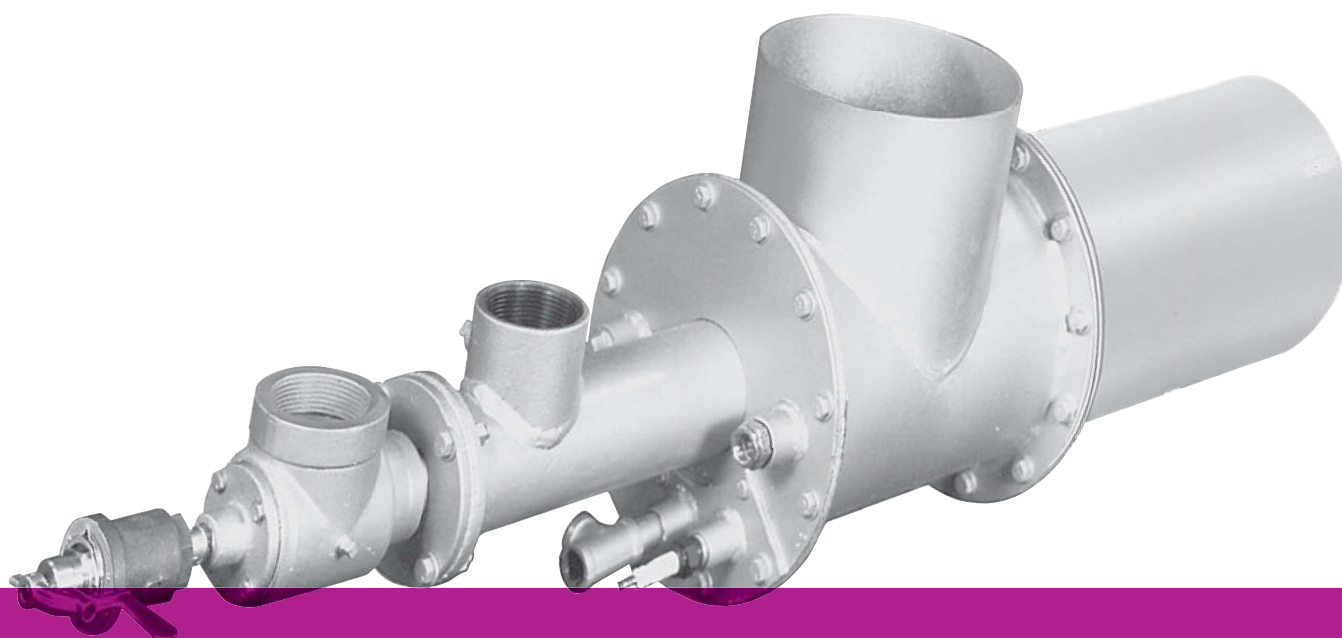


North American HiVAM™ Burner



4570 HiVAM™ Burner

- High velocity
- High excess air capability
- Lightweight all-metal construction
- Portable
- Wide capacity range

Product Overview | 4570 HiVAM™

APPLICATION

HiVAMs are a natural for installations requiring a portable burner to heat large volumes of air.

Their high excess air ratio capabilities and lightweight all-metal construction make them ideal for such applications as drying refractory-lined furnaces and vessels, for permanent or temporary mounting on rotary dryers and calciners, and for other jobs where a self-contained portable burner or air heater avoids need for expensive mounting, installation, sealing, etc.

OPERATION

HiVAM Burners must be operated with at least 50% excess air at all firing rates. For widest stability limits on gas a constant air supply should still be introduced through the atomizing air connection: 14 osi air pressure is required for the 4570-9 and 8 osi air pressure for the 4570-12.

HiVAM Burners are suitable for furnace temperatures up to 1900°F. They can be used with preheated air up to 500°F.

Main air and fuel can be modulated together using cross-connected fuel regulators; or fuel only control (with constant air) can be used for maximum thermal turndown.

Main flame ignition is normally by a 4021-16 spark ignited pilot tip furnished as an integral part of the burner. Customer supplies a 4031 Pilot Mixer, regulator, and shutoff valves.

4570 Gas Burners are available with either direct spark ignition or spark ignited pilot. For widest stability limits on gas a constant air supply should still be introduced through the atomizing air connection: see Table 2 for main and atomizing air capacity and pressure ratings. Gas pressure requirements are 8 osig (or less) for natural gas (0.6 sp gr) at design capacity.

For the dual-fuel HiVAM firing natural gas or light oil, see Bulletin 6570.

FLAME SUPERVISION

4570 Burners equipped with spark ignited pilot use two UV detectors. 4570 Burners equipped with direct spark ignition require only one UV detector. See Sheet 4000-2 for general detail concerning direct spark ignition.

On a 4570 the pilot and pilot scanner must be interrupted after main flame is established, if equipped.

TABLE 1. Main Air Capacities--scfh

Burning with 50% excess air, which is the rich limit. Therefore, for maximum Btu/hr, divide by 1.5 and multiply by 100.

Burner designation	Main air pressure drop across burner in osi				
	0.2	1	4	9	16†
4570-9	9 000	13 500	39 300	59 000	80 000
4570-12	20 100	45 500	81 500	122 000	170 000

† 16 osi air is the maximum firing rate.

TABLE 2. Capacities in scfh not burning (for sizing blowers)

Burner designation	Main Air at 16 osi	Atomizing Air
4570-9	96 000	5600 at 14 osi
4570-12	186 000	4600 at 8 osi

TABLE 3. Maximum Excess Air Percentages (with flame supervision and without pilot)

Burner designation	Main air pressure drop across the burner in osi		
	1	9	16
4570-9	2000	1500	1000
4570-12	1500	1600	1200

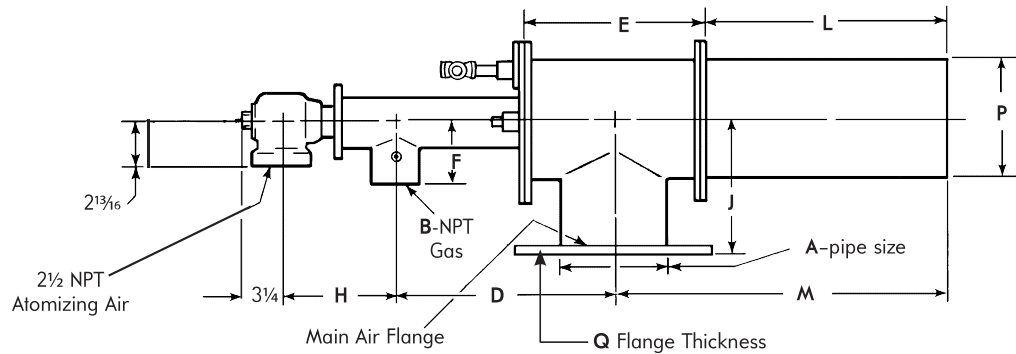
TABLE 4. Flame dimensions with 50% excess air length × diameter

Burner designation	Main air pressure drop across burner, osi		
	1	9	16
4570-9	3½' x 1'	4' x 1'	3½' x 1'
4570-12	7½' x 1½'	8½' x 2'	8' x 2'

Dimensions | 4570 HiVAM™

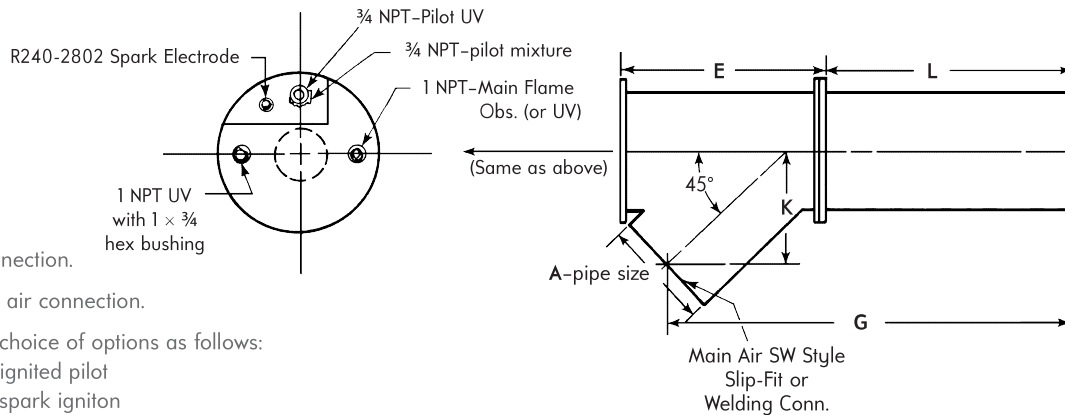
DIMENSIONS in inches

"T" Connection, F Style



Burner Designation	Flange Pattern	Air inlet flange dimensions				Slip-on Air Connection Actual Pipe OD Size
		OD	B.C.	# Holes	Hole Ø	
4570-9	8" ANSI	13.5	11.75	8	0.88	8 5/8
4570-12	12" RPM	16	14.25	12	0.75	12 3/4

"Y" Connection, SW Style



OPTIONS

45° or 90° main air connection.

Flanged or slip-on main air connection.

When ordering, specify choice of options as follows:

- (P) for spark ignited pilot
- (E) for direct spark ignition
- (Y) for 45° air connection
- (T) for 90° air connection
- (F) for flanged air connection
- (SW) slip-on or welding air connection

Example: 4570-9-EYF burner complete with direct spark, 45° air connection and flanged air connection.

4570 HiVAM™s for gas only have the same dimensions and practically the same weights as 6570 HiVAMs since the gas burners also have an "atomizing air" connection for greater flame stability.

Burner designation	dimensions in inches														Approx. lb
	A	B	D	E	F	G	H	J	K	L	M	P	Q		
4570-9	8	2 1/2	16 1/16	15 13/16	3 3/4	29 15/16	7 7/8	8	11 5/16	15 13/16	23 7/8	8 5/8	3/8	125	
4570-12	12	3	19 13/16	21 5/16	4 3/4	42 13/32	8	12	14 27/32	23 13/16	34 5/8	11 3/4	1/2	200	

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.

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.

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



fives
Industry can do it

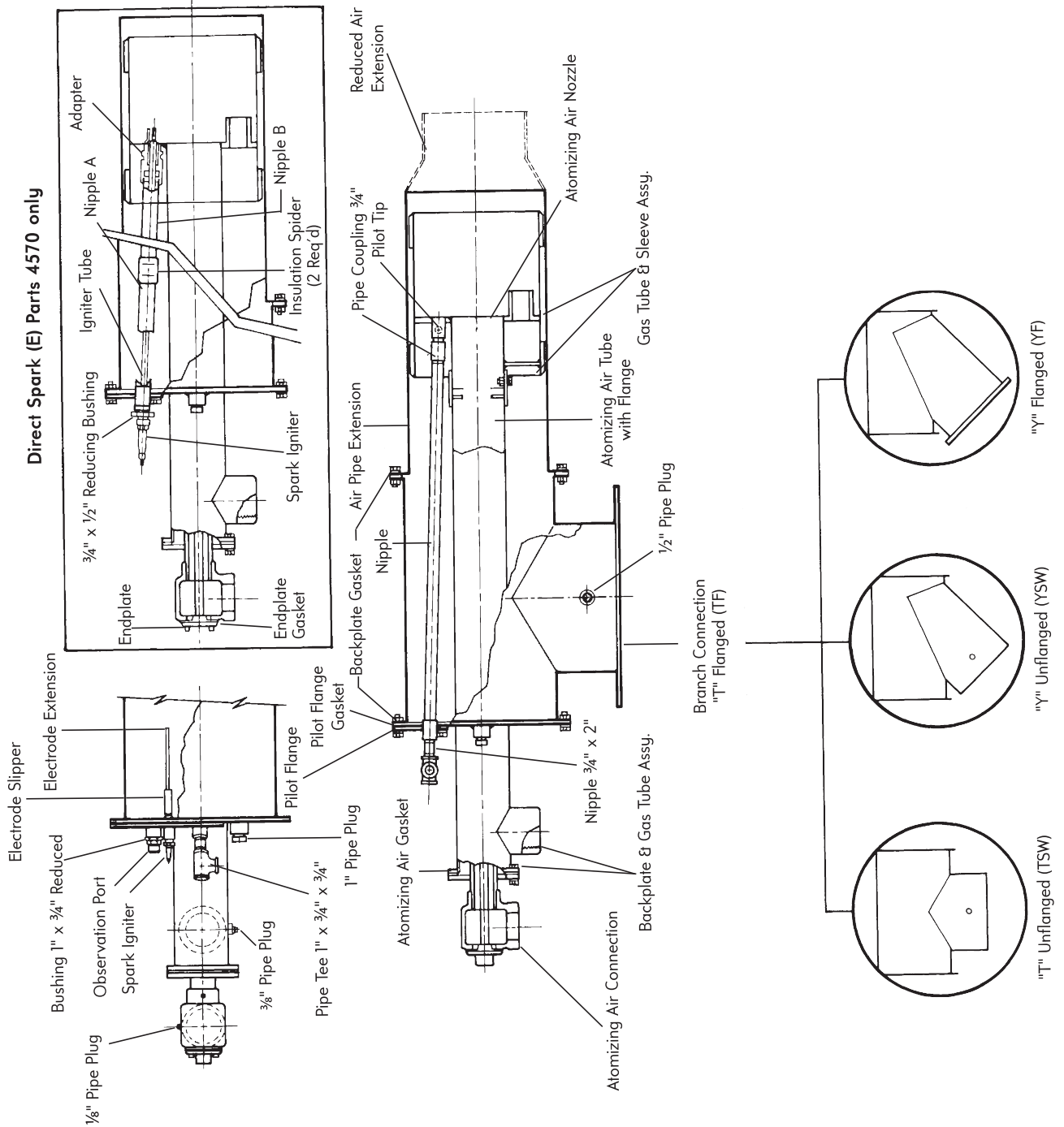


North American Series 4570 HiVam Burners Parts List

Sheet 4570-2

Part Description	4570-9	4570-12
Branch Connection		
"T" Flanged (TF)	3-6296-1	3-6140-1
"T" Unflanged (TSW)	3-6297-1	3-6140-2
"Y" Flanged (YF)	3-6298-1	3-6149-1
"Y" Unflanged (YSW)	3-6299-1	3-5035-3
Backplate Gasket	3-5767-1	3-5422-1
Air Pipe Extension	4-7805-1	3-5036-2
Backplate & Gas Tube Assy.	3-5343-3	3-5225-2
Gas Tube & Sleeve Assy.	3-5755-3	3-6137-2
Atomizing Air Gasket	3-5760-1	3-6135-1
Pilot Flange	3-6300-1	3-5226-2
Pilot Flange Gasket	3-5345-2	3-5227-1
Atomizing Air Connection	OB3-0736-1	OB3-0736-1
Atomizing Air Tube with Flange	3-5775-1	3-6139-1
Atomizing Air Nozzle	3-5772-1	3-1148-1
Endplate	3-5768-1	3-5768-1
Observation Port	8790-0	8790-0
1/8" Pipe Plug	R590-7810	R590-7810
3/8" Pipe Plug	R590-7830	-
1" Pipe Plug	R590-7860†	R590-7860
1/2" Pipe Plug	R590-7840	R590-7840†
Bushing 1" x 3/4" Reduced	R590-0411	R590-0411
Pipe Coupling 3/4"	R590-2149	R590-2149
Oil Connection Gasket (Endplate Gasket)	3-5747-1	3-5747-1
Pilot (P) Parts		
Pilot Tip	4021-16	4021-16
Nipple	R590-6425	3-8345-1
Pipe Tee 1" x 3/4" x 3/4"	R590-8545	R590-8545
Electrode Slipper	3-5766-1	3-5766-1
Electrode Extension	3-5752-1	3-6156-1
Spark Igniter	3-5754-1	3-5754-1
Nipple 3/4" x 2"	R590-6402	R590-6402
Direct Spark (E) Parts		
Spark Igniter	R240-2802	R240-2810
Nipple A	R590-6418	R590-6417
Nipple B	R590-6409	3-8345-2
Insulation Spider	OA4-2013-3	OA4-2013-3
Adapter	4-7344-2	4-7344-2
Igniter Tube	4-7807-1	4-7807-2
3/4" x 1/2" Reducing Bushing	R590-0358	R590-0358
Option		
Reduced Air Extension	Not Available	3-6308-1

† One for "P" models; two for "E" models



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.

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

