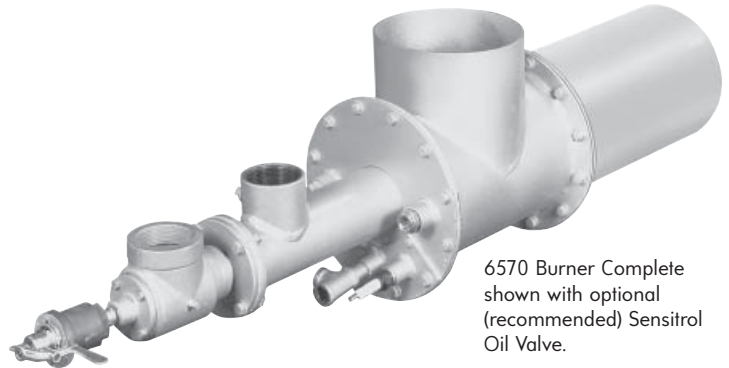


North American HiVAM™ Dual-Fuel™ Burner

Bulletin 6570

- High velocity
- Gas or light oil
- Lightweight all-metal construction
- Wide capacity range
- High excess air capability — Portable



6570 Burner Complete shown with optional (recommended) Sensitrol Oil Valve.

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.

Light oil operation requires a constant 20 osi atomizing air pressure supply at the burner. For widest stability limits on gas a constant air supply should still be introduced through the atomizing air connection: 14 osi air pressure for the 6570-9, and 10 osi air pressure for the 6570-12. Gas pressure requirements are 8 osi (or less) for natural gas (0.6 sp gr) at design capacity for either size of burner. Consult North American for use with fuels other than light oil or natural gas.

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.

6570 Dual-Fuel Burners use the spark ignited pilot. Direct spark ignition is not available for the 6570.

See Bulletin 4570 for "gas only" version.

FLAME SUPERVISION

6570 Dual-Fuel HiVAM Burners use two UV detectors. One sights the pilot through the pilot mixture tube and the other sights the main flame, gas or oil. The pilot and pilot scanner must be interrupted after main flame is established.

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†
6570-9	Gas	9 000	13 500	39 300	59 000	80 000
	Oil	10 300	21 000	42 500	63 500	83 000
6570-12	Gas	20 100	45 500	81 500	122 000	170 000
	Oil	20 400	45 600	87 500	127 000	169 000

† 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 on Gas	Atomizing Air on Oil at 20 osi
6570-9	96 000	2600 at 14 osi	3550
6570-12	186 000	3400 at 10 osi	5650

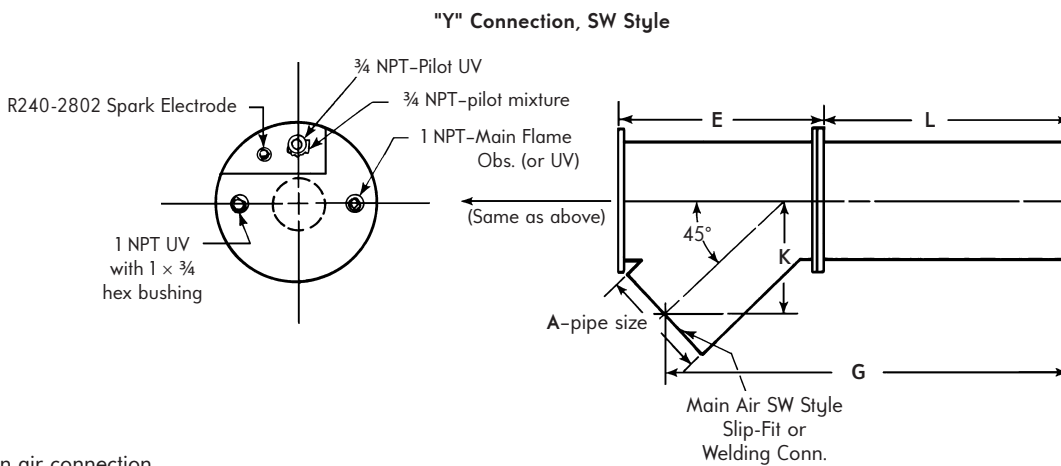
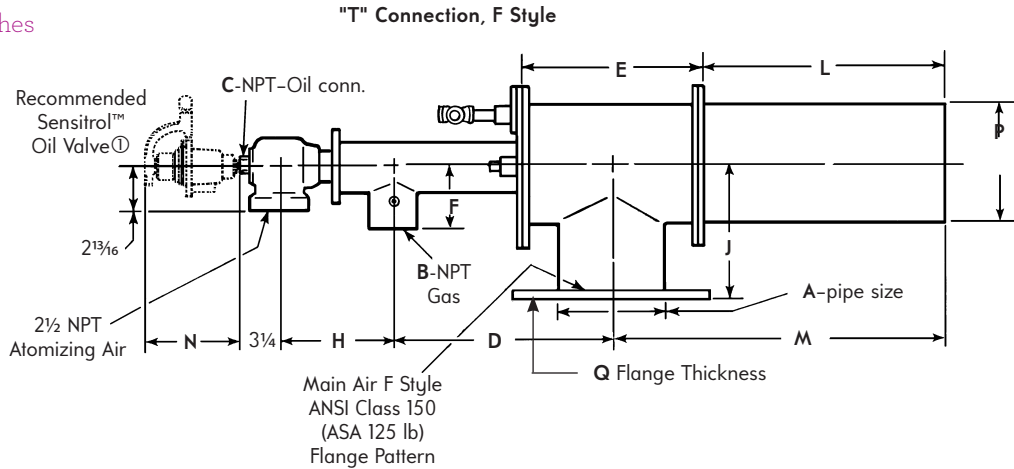
TABLE 3. Maximum Excess Air Percentages (with flame supervision and without pilot)

Burner designation		Main air pressure drop across the burner in osi		
		1	9	16
6570-9	Gas	1000	1200	1000
	Oil	200	1200	850
6570-12	Gas	1000	1300	1500
	Oil	125	850	1300

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

Burner designation		Main air pressure drop across burner, osi		
		1	9	16
6570-9	Gas	3½' x 1'	4' x 1'	3½' x 1'
	Oil	4' x 1'	5½' x 1'	5½' x 1'
6570-12	Gas	7½' x 1½'	8½' x 2'	8' x 2'
	Oil	6' x 1½'	10' x 2'	10½' x 2'

DIMENSIONS in inches



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
- (Y) for 45° air connection
- (T) for 90° air connection
- (F) for flanged air connection
- (SW) slip-on or welding air connection

Example: 6570-12-PTF Burner complete
1813-01 Sensitrol Oil Valve

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.

4570 HiVAM™s for gas only have the same dimensions (except for "N" and "C", which do not apply) 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														Recommended net weight Oil Valve	Approx. lb	
	A	B	C	D	E	F	G	H	J	K	L	M	N	P			Q
6570-9	8	2½	¾	16½/16	15½/16	3¾	29½/16	7⅞	8	11½/16	15½/16	23⅞	4⅞	8⅞	¾	1813-02-D	125
6570-12	12	3	½	19½/16	2½/16	4¾	42½/32	8	12	14½/32	23½/16	34⅞	5½/16	11¾	½	1813-01	200

① Optional (recommended) Sensitrol Oil Valve is not included as part of the burner assembly, and must be ordered separately.

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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