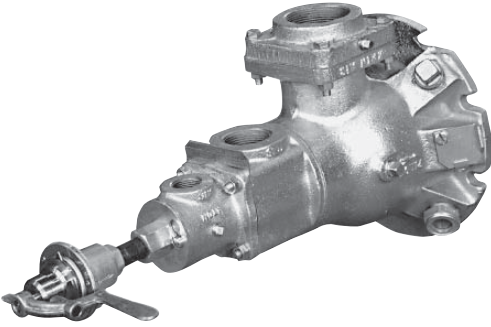


# North American Dual-Fuel Immersion Tube Burners



6758 Dual-Fuel Burners fire immersion tubes reliably with distillate oil or gas. Flames are stable over a wide range of firing rates, and excess air can be used to increase effective turndown.

The **6758-4 Burner** has no mounting plate or tile; it bolts directly to a 6" pipe size immersion tube, which may be reduced to 4" pipe after 3 feet.

The **6758-6** has a steel-jacketed cylindrical tile that is inserted into an 8" pipe size immersion tube--after 3 feet, this may be reduced to 6" pipe size.

See Figure 1 on page 2 for details.

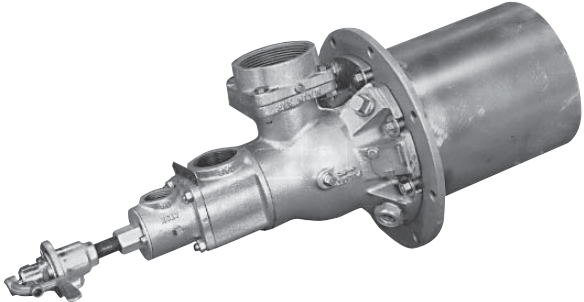
### CONTROL AND OPERATION

For control, use standard cross-connected 7216 Air/Gas Ratio Regulators and 7052 Air/Oil Ratio Controls.

When operating on gas, use 6 osi atomizing air pressure (no more) to keep atomizer cool. Set high fire ratio with an 8697 Metering Orifice in gas line, or by analysis of flue products. 1807 Limiting Orifice Gas Valve must be piped close to the burner, using a close nipple if possible.

For quieter gas operation, 6758-4 should be biased lean below 2 osi main air, the 6758-6 below 4 osi.

On oil, use at least 14 osi atomizing air. Set high fire ratio by starting rich and reducing oil until smoke disappears from tube exhaust. Oil solenoid valve and Sensitrol oil valve must be piped as close to the burner as possible.



Burner designation	MAIN AIR CAPACITY, scfh†						ATOMIZING AIR CAPACITY, scfh†	
	Main air pressure across the burner, osi						Atomizing air pressure, osi	
	1	5	6	8	12	16	6 <sup>①</sup>	14 <sup>②</sup>
<b>6758-4</b>	1450	3240	3550	4 100	5 000	5 800	318	490
<b>6758-6</b>	3700	8300	9100	10 500	12 900	14 800	520	800

†Add main and atomizing air capacities to get total burner capacity. Multiply scfh by 100 to get Btu/hr.

① Required pressure for gas operation.  
 ② Minimum pressure for oil 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.

**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.

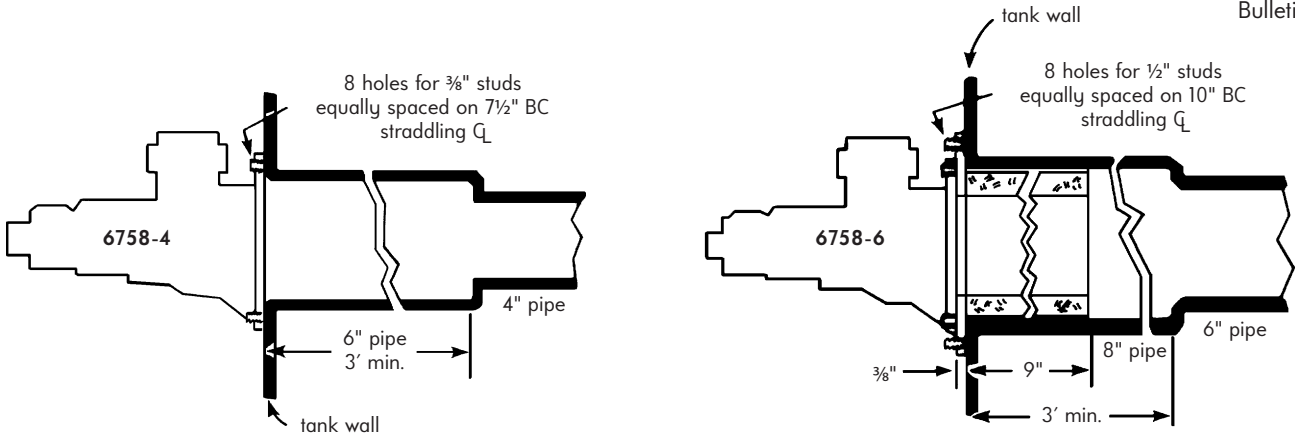


Figure 1. Suggested mounting of 6758 Burners to immersion tubes.

**PILOTS AND FLAME SUPERVISION**

Burners light reliably from a 4021-12 Pilot Tip fed by a 4031 Pilot Mixer. Air pressure to mixer must be about 16 psi, and mixture line should be cross-connected to pilot regulator. An interrupted pilot is essential when flame supervision is used.

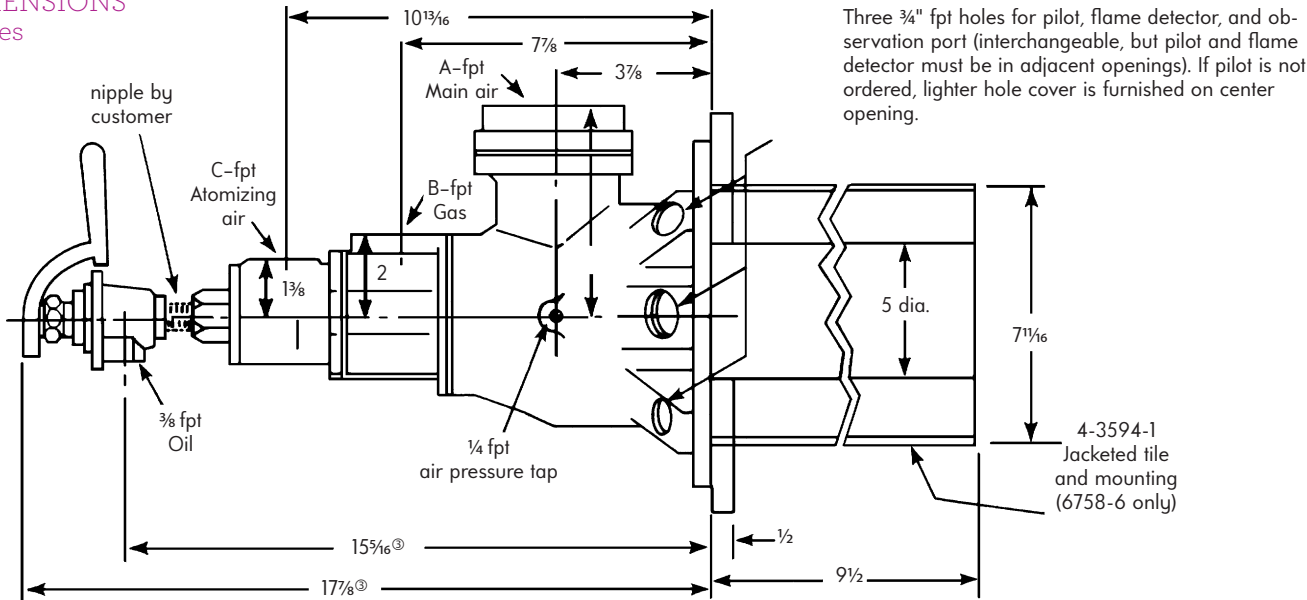
Pilot gas solenoid must be downstream of pilot gas regulator.

Ultraviolet or rod-type flame detectors can be used. Flame rods are not recommended for oil operation. See Bulletin 8832 for flame detector adapters.

Flame rod lengths from outer surface of mounting boss to rod tip are 4 1/2" for 6758-4 and 5" for 6758-6 Burner.

For gas only applications, 4758 Burners can be specified. See also Bulletin 4762.

**DIMENSIONS**  
inches



③ These dimensions assume use of a 3/8" close pipe nipple between burner and Sensitrol Oil Valve.

Burner designation	dimensions in inches				Wt, lb	Sensitrol Oil Valve
	A	B	C	F		
6758-4	2	1 1/4	3/4	5 1/4	33	1813-02-A
6758-6	3	1 1/2	1	5 5/16	68	1813-02-B



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