

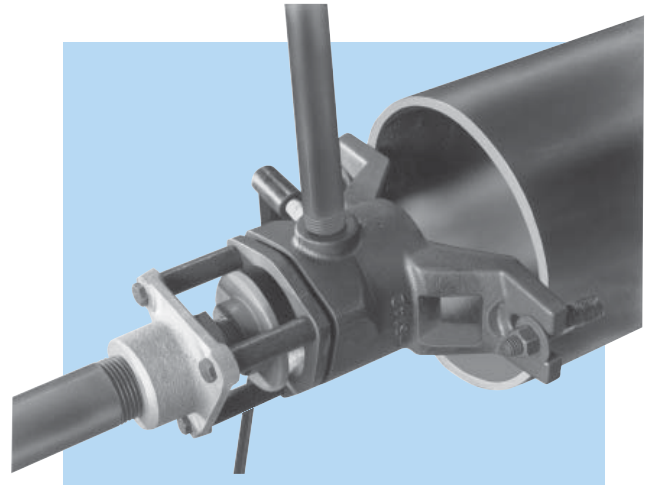
**Series 4727 Radiant Tube Gas Burners** are open fired and feature wide turndown. Inherent is the advantage that a pull-through burner prevents furnace contamination if small tube leaks develop.

A soft, slow burning flame is drawn through the tube by an eductor or fan at the tube exhaust. Because the burner is open, the tube is easily cleaned. Fluctuations in suction or occasional puffs do not affect flame stability with the open burner design.

The annular pilot is an integral part of the burner, allowing its flame to be clearly observed at all firing rates.

**Capacity.** Series 4727 Pull-Thru Burner capacities range from 100,000 to 750,000 Btu/hr depending on tube size used.

**Gas Pressure.** Gas pressure required at the burner is normally 5-8 psi.

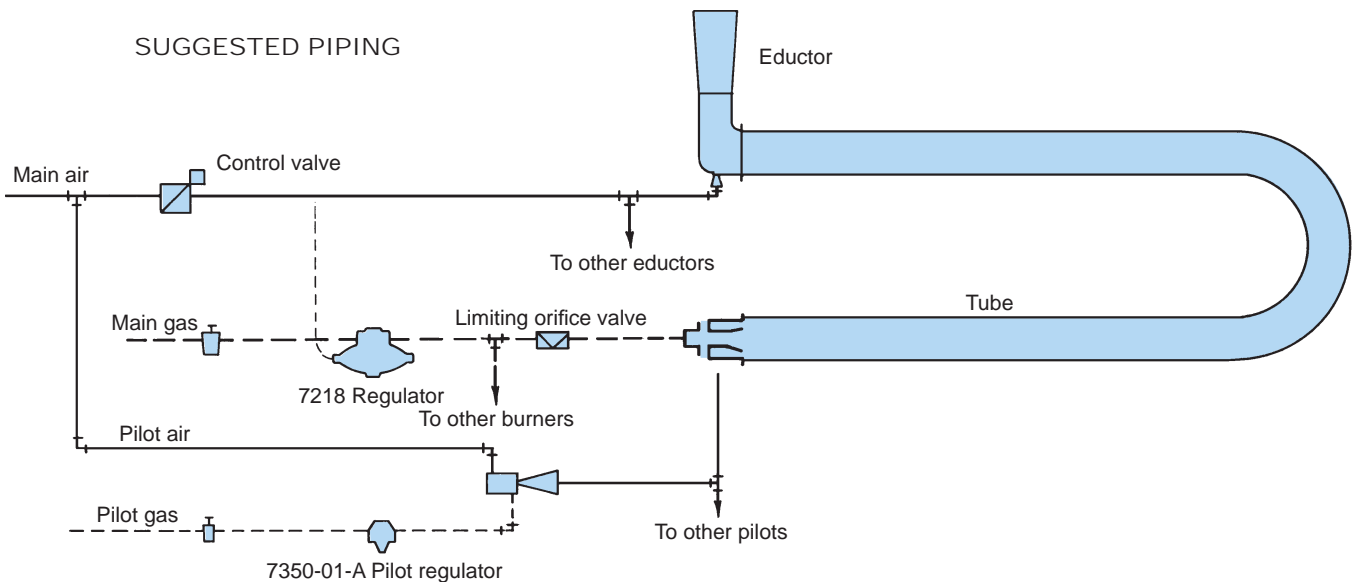


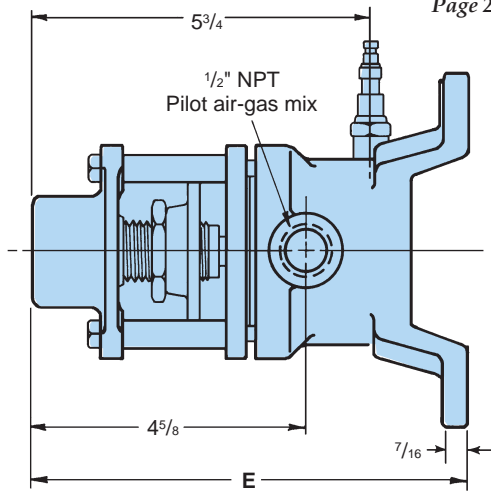
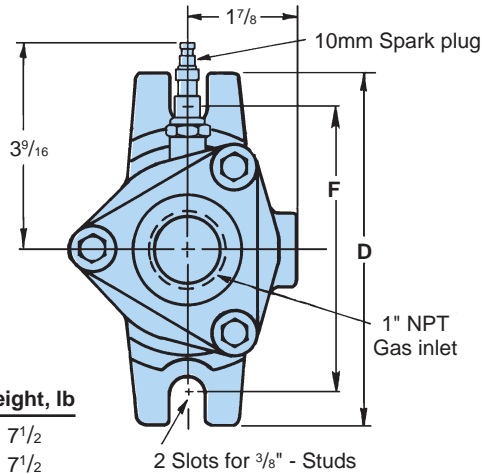
**Model 4727-B:** Tubes ranging from with 5" to 7" ID require two 3/8" studs (mounted on the inside for 6 1/2" or 7" ID tubes).

If the distance from the burner end of the tube to the inside wall of the furnace is greater than 13 1/2" consult North American.

MOUNTING AND TUBE SIZE

**Model 4727-A:** Tubes ranging from 3 1/2" to 4" ID require a flange. Tubes with 4" or 4 1/2" ID require two 3/8" studs mounted on the outside of the tube.





Dimensions in inches

Burner	D	E	F	Weight, lb
4727-A	6	8 <sup>7</sup> / <sub>16</sub> <sup>②</sup>	4 <sup>7</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>2</sub>
4727-B	7 <sup>3</sup> / <sub>4</sub>	7 <sup>11</sup> / <sub>16</sub>	5 <sup>7</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>2</sub>

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.

**PILOT.** The 4727 Burner's annular manual or spark ignited pilot requires 4 osi air. Individual pilot mixers can be used, or multiple pilots in the same control zone can be supplied by a common mixer. Pilot capacity is 25,000 Btu/hr at 2"wc mixture pressure.

**BURNER AND EDUCTOR SELECTION**

Necessary information includes:

1. Btu/hr input.
2. Type of gas and pressure available.
3. ID of tube.
4. Suction available at burner (or length and configuration of tube, suction at exhaust, and furnace operating temperature).
5. Spark or manual<sup>①</sup> ignition.

① Spark plug hole plugged--pilot lit with a torch held at the main nozzle.  
② 7<sup>7</sup>/<sub>16</sub>" on original burners. Use 1" spacers on tube studs if operation at high fire is unsatisfactory.

**TUBE SUCTION.** Suction required is only enough to over-come pressure loss in the tube itself. Pressure drop across the burner is negligible. Tube loss may range from 0.2" to 1.0"wc depending on length, ID, configuration and temperature. Suction should be provided by an eductor or fan at the tube exhaust.

**OPERATION.** Although the most common control for radiant tube burners is on-off, the 4727 Burner works well with high-low-off or modulating control systems. A 7218 Atmospheric Regulator in the burner gas line can be cross-connected to the eductor primary air supply. An alternate method is to control gas only with a solenoid or motorized valve.

Drill designation	Nozzle diameter inches	Natural gas Flow (cfh)		Gas Nozzle part number
		5 osi pressure	8 osi pressure	
-	"Blank"	0	0	OA4-1341-9
#19	0.166	105	130	OA4-1341-10
#10	0.193	145	180	OA4-1341-1
#2	0.221	190	240	OA4-1341-2
#C	0.242	230	290	OA4-1341-14
1/4	0.250	245	310	OA4-1341-3
#1	0.272	295	370	OA4-1341-4
9/32	0.281	315	395	OA4-1341-13
5/16	0.313	375	475	OA4-1341-11
21/64	0.328	435	550	OA4-1341-5
#T	0.358	500	630	OA4-1341-6
3/8	0.375	550	695	OA4-1341-12
13/32	0.406	670	840	OA4-1341-7

SINCE THE GAS FLOW RATE CAN VARY DUE TO VARIATIONS IN THE TUBE PRESURE, USE THIS GAS FLOW CHART ONLY AS A GUIDE. USE AN 8697 METERING ORIFICE TO MEASURE THE ACTUAL FLOW IF HIGHER ACCURACY IS DESIRED.

To order, specify: 4727-Size Code (A or B)-E (with electrode when applicable) and nozzle drill designation from table.

- 4727-A Burner less Electrode with Gas Nozzle #10 drill
- 4727-A-E Burner Complete with Electrode with Gas Nozzle 1/4 drill
- 4727-B Burner less Electrode with Gas Nozzle blank
- 4727-B-E Burner Complete with Electrode with Gas Nozzle #1 drill

**Metric Conversions**

1 Btu/hr	= 0.2522 kcal/h
1 osi	= 43.94 mm H <sub>2</sub> O = 0.004 39 kg/cm <sup>2</sup>
1"	= 25.40 mm
1"wc	= 25.40 mm H <sub>2</sub> O
1 lb	= 0.4536 kg

**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 urges compliance with National Safety Standards and insurance Underwriters recommendations, and care in operation.

Fives North American Combustion, Inc., 4455 East 71st Street, Cleveland, OH 44105 USA, Phone 216.271.6000  
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