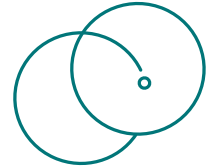




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PROCESS TECHNOLOGIES

Gas Fired North American Flat Flame™ Burners in Cold, Tight Furnaces

Sheet 4833-1

Series 4832/4836 Flat Flame Burners are good performers under excess air conditions for which they were designed thirty-five years ago. Their widespread use attests to that. Now times have changed--since the 1970's, fuel bills are considerably higher and the use of excess air is often restricted. 4832/4836 Burners are not stable in cold, tight furnaces, when operating on stoichiometric ratio, without the aid of constant or intermittent pilot (and that is not our recommendation from the point of view of flame supervision). 4833 (for cold air) and 4828 (for preheated combustion air up to 1000°F) are designed for use in cold, tight furnaces. We will keep 4832/4836 in the line for excess air jobs, since its excess air limits are higher than those for 4833 and 4828.

Burner designation	Air pressure	Natural gas	
		Rich limit	Lean limit
4832-2, -3, -4	16 osi	50-70% Excess <u>Air</u>	—
4832-5	2-16 osit 1 osi	10% Excess Gas 20% Excess <u>Air</u>	500% Excess Air
4832-6	2-16 osit 1 osi	20% Excess <u>Air</u> 70% Excess <u>Air</u>	400% Excess Air
4832-7	all rates	40 to 50% Excess <u>Air</u>	300% Excess Air
St'd 4836-8-A	16 osi	40% Excess <u>Air</u>	—
St'd 4836-8-B	16 osi	40% Excess <u>Air</u>	70% Excess Air at 16 osi to 500% Excess Air at 1 osi
4833-3§	all rates	15% Excess Fuel	80% Excess Air at 16 osi to 250% Excess Air at 0.5 osi
4833-4§	9-1 osi 16-24 osi	15% Excess Fuel 15% Excess Fuel	100% Excess Air 50% Excess Air
4833-5§	30-2 osi	15% Excess Fuel	100% Excess Air at 16-4 osi
4828-5 70°F air	16-0.2 osi	20% Excess Fuel	50% Excess Air‡
4828-6§ 70°F air	20-0.5 osi	20% Excess Fuel	50% Excess Air

Air is underlined for emphasis in those cases where the rich limit is on lean side of stoichiometric.

We have built specials of most sizes of 4832's that will run on-ratio in a cold, tight furnace. The -2, -3, and -4 require a radial gas nozzle. The -8-A uses a secondary air connection. The -8-B stays lit but produces a flame that is 5½ ft. long.

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.

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