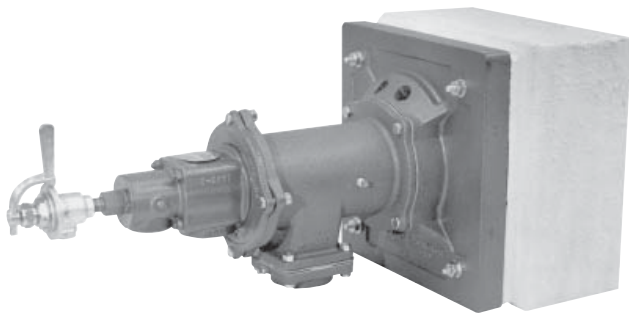


# North American 6833-25 Dual-Fuel™ Flat Flame Burners

Sheet 6833-1



6833 Burner Complete shown with optional (recommended) Sensitrol™ Oil Valve.

6833-25 Dual-Fuel Flat Flame Burners incorporate 5625 Compressed Air Atomizers and main air discs designed for higher turndown, better flame shape, and wider stability limits than available with the former 6832 Burners. They operate on gas or distillate oil.

The atomizer design permits ratio control by a cross-connected 7052 Ratiotrol™. If the atomizer is left in the burner when burning gas, protect it from overheating with 2 psi atomizing air.

**Flame Supervision.** Use a UV Flame Detector and an adapter with a B suffix. Provide 100 cfh of cleaning air at 16 osi from main air, making the connection downstream of the control valve. (An 8699-01 Balancing Orifice with #26 drill will pass about 100 cfh of air at 16 osi.) Cleaning air must be turned down with main air for best flame signal.

**Ignition.** A 4011-12 pilot set is recommended for individual burner ignition. When multiple burners share a single pilot pre-mix header, a 4021-12 pilot tip per burner with an appropriately sized air/gas mixer is recommended.

Standard cast burner tiles are rated for 3000°F furnace temperature. Higher temperature materials are available.

TABLE 1. Main and atomizing air capacities

Burner designation	Main air, cfh				Atomizing air, cfh	
	1 osi	4 osi	9 osi	16 osi	Gas (2 psi)	Oil (8 psi)
6833-3-25	825	1650	2480	3 300	100	200
6833-4-25	1360	2720	4080	5 300	100	200
6833-5-25	2280	4560	6840	9 000	130	260
6833-6-25	—	—	—	14 500	92	350 (at 17 psi)

TABLE 2. Maximum % excess air

Burner designation	Gas, main air at osi				Oil, Main air at osi			
	1	4	9	16	1	4	9	16
6833-3-25	220	130	100	80	5	60	40	30
6833-4-25	100	110	90	60	45	90	60	20
6833-5-25	170	80	70	60	200	250	100	80
6833-6-25	200	—	—	25	50	—	—	50

TABLE 3. Maximum % excess fuel

Burner designation	Gas, main air at osi				Oil, Main air at osi			
	1	4	9	16	1	4	9	16
6833-3-25	5	20	15	10	5	10	10	10
6833-4-25	20	20	20	10	10	10	10	10
6833-5-25	—	—	—	—	—	—	—	10
6833-6-25	20	—	—	15	10	—	—	10