

All Data:.....is based on firing with ambient combustion air.

UA-DA:.....Published data is reasonably accurate between 6.9 and 34.6"w.c. (1.7 and 8.6 kPa) main air pressure (UA) if piped with >5 diameters of straight pipe into burner. Square rooting the UA-DA pressure drops using the published 27.7"w.c. (6.9 kPa) data is reasonably accurate between 6.9-34.6"w.c. (1.7-8.6 kPa) air pressure. Below 6.9"w.c. (1.7 kPa) the UA-DA data is suspect and should not be used for accurate air metering. Square rooting will over-estimate air flow below 6.9"w.c. (1.7 kPa) and underestimate above 34.6"w.c. (8.6 kPa).

UG-DG:.....UG-DG information can be used to approximate fuel gas flow. External gas orifices or O₂ analysis should be used for precise determination of fuel metering and air/fuel ratio.

Max % XSAir, fs
 Max % XSAir, UV
 Max % XSAir, flame rod
 Max % XSFuel, fs

fs - indicates the maximum flame supervisory XSAir or XSFuel using either a UV detector or the specified flame rod listed on the 4441 parts list.

Max % XSAir, ignition
 Max % XSFuel, ignition

ignition - indicates the maximum XSAir or XSFuel at which the integral igniter will light the burner.

DG:.....Tile pressures are average values and are subject to considerable variation (±10%)

NOTE: The capacity of the burners has not changed but static pressure has been transitioned to measuring static pressure in imperial units by inches of water column. Previous versions of the bulletin measured static air pressure in ounces per square inch. Conversion: 1 osi = 1.73"w.c.

NATURAL GAS OPERATION

4441-1 HV Air Pressure UA osi ("w.c.)	0.5 (0.9")	1 (1.7")	4 (6.9")	9 (15.6")	16 (27.7")	20 (34.6")
Air Flow, not burning (scfh)					1650	
Air Flow (scfh)	200	300	580	880	1200	1350
Air Orifice ΔP, UA-DA, (in.w.c.)	0.4	0.6	2.3	5.3	9.8	12.2
Gas Orifice ΔP, UG-DG, (in.w.c.)	0.1	0.3	0.8	1.7	3.2	4
Tile Pressure DG (in.w.c.)	0.55	1	4.4	10	17.3	21.6
Max. % XSAir, fs, ignition	400	600	900	2000	1500	2000
Max. % XSFuel, fs	30	30	30	30	30	30
Max. % XSFuel, ignition	30	30	30	30	30	30
Flame Length (in.)	6	8	7	8	8	9
Flame Diameter (in.)	0.75	1	1	1	1	1

4441-1 MV Air Pressure UA osi ("w.c.)	0.2 (0.3")	1 (1.7")	4 (6.9")	9 (15.6")	16 (27.7")
Air Flow, not burning (scfh)					1800
Air Flow (scfh)	220	400	850	1250	1700
Air Orifice ΔP, UA-DA, (in.w.c.)	0.25	1.3	5.3	12.1	21.6
Gas Orifice ΔP, UG-DG, (in.w.c.)	0.1	0.4	1.7	3.8	6.7
Tile Pressure DG (in.w.c.)	0.07	0.3	1.2	2.8	4.9
Max. % XSAir, fs, ignition	300	600	900	2000	1900
Max. % XSFuel, fs	30	30	30	30	30
Max. % XSFuel, ignition	30	30	30	30	30
Flame Length (in.)	10	10	11	12	12
Flame Diameter (in.)	2	1.5	1.5	1.5	1.5