

Table 1 Burner orifice sizing, air settings and minimum combustion chamber dimensions (see Figure 3)

Input Note 1	Burner orifice drill size Inches		Approximate air settings Notes 1 & 2		Air tube & Head	Minimum chamber dimensions Inches (Notes 3, 4, 5) (VC = min. diam. of vertical cylinder chamber)						UTL Air tube insertion length		
	Btuh	Natural gas	Propane gas	% open		Air shutter	C/L	L1	L2	W	H	VC	Nominal air tube length	UTL min.
401,000	7/16	1 1/32	20	Blank	B	6.0	20	24	15	13.5	17	Welded flange: Burners with welded flange have fixed usable tube length (UTL) set for the appliance application. Verify length is correct for the application. Adjustable flange: Burners with adjustable flange : Usable tube length (UTL) varies with air tube length (see below).		
450,000	15/32	23/64	30	Blank	B	6.5	22	26	16	14.5	19			
500,000	31/64	25/64	35	Blank	B	7.0	23	27	16	15.5	20			
550,000	17/32	27/64	40	Blank	B	7.0	23	27	16	15.5	20			
			20	Center	C									
600,000	35/64	7/16	50	Blank	B	7.5	23	27	17	16.5	20			
			25	Center	C									
650,000	37/64	29/64	60	Blank	B	8.0	24	28	18	17.5	21			
			30	Center	C									
700,000	19/32	15/32	70	Blank	B	8.5	24	30	19	19.5	21			
			35	Center	C									
750,000	5/8	31/64	40	Center	C	8.5	30	36	19	19.5	27			
800,000	21/32	1/2	50	Center	C	8.5	35	41	19	19.5	32			
850,000	11/16	33/64	60	Center	C	9.0	38	44	20	20.0	35			
900,000	23/32	17/32	70	Center	C	9.0	39	45	20	20.0	35			
950,000	25/32	35/64	80	Center	C	9.0	40	46	20	20.0	36			
1,000,000	13/16	9/16	65	None	C	9.5	41	47	21	21.0	37			
1,050,000	15/16	37/64	85	None	C	9.5	41	47	21	21.0	37			
1,100,000	1	19/32	100	None	C	10.0	42	48	21	22.0	38			
Note 1	Ratings: <ul style="list-style-type: none"> The maximum burner inputs at sea level are 700,000 Btuh for the "B" tube/head, 1,100,000 Btuh for the "C" tube/head. Altitude ratings: Reduce maximum capacity by 4% per 1,000 feet above sea level. <ul style="list-style-type: none"> Example: The maximum "B"-tube/head capacity at 5,000 feet altitude is 560,000 Btuh instead of 700,000, a 20% reduction. Positive overfire pressure effects: <ul style="list-style-type: none"> Maximum burner input decreases with increasing overfire pressure. Assume a reduction in maximum burner input of approximately 5% at 0.1 inches w.c. and 10% at 0.2 inches w.c. You will have to increase the air band opening to compensate for the increased pressure. Follow the procedures given in this manual to check combustion with instruments to determine the correct air band setting. Never fire at a higher overfire pressure than recommended by the appliance manufacturer. 													
Note 2	Use this as the starting setting only. Adjust air band setting, if necessary, after performing combustion testing (see page 14).													
Note 3	Some tested appliances may operate satisfactorily with dimensions less than the above.													
Note 4	Horizontal cylindrical chambers — diameter must be no less than column "W" above Horizontal stainless steel cylindrical chambers — diameter at least 1 to 4 inches larger than column "W" above. VC is the minimum diameter for vertical cylindrical chambers (refractory or refractory-lined chambers only).													
Note 5	A corbel may help heat transfer in a larger boiler or furnace, provided it is recommended by the appliance manufacturer.													