

L Series (Page 40-42)

NOTES:

- Table 1 based on up to 4-foot grille length. For longer lengths, correct throw and NC per **Table 2**.
- When using continuous grille lengths with alternate active and inactive sections, a reduction in throw can be obtained by omitting the factors contained in **Table 2**.
- Bar style 30 and 0
Increase **Table 1** NC + 5 NC

- Supply air temperature effect on horizontal throw is shown in Table 3. vertical down-throw at varying supply temperatures is shown in Table 4.
- When spreading the air path with a horizontal deflection of 22° per side in grille lengths up to 4 feet:
 Multiply **Table 1** Throw x .75
 Increase **Table 1** NC + 5 NC
 Multiply **Table 1** P_s x 1.20
 Multiply **Table 5** A_k x .90
- Terminal velocities (V_t) at the minimum and maximum throw (T) values are rated at 125 FPM and 75 FPM respectively with corresponding room velocities (V_r) of 50 FPM and 35 FPM.

Table 1 - Supply Air

CFM/Ft of total Linear length	Listed Width in Inches	Min. P _s in H ₂ O		Face Velocity (V _f) FPM		Throw (T) in Feet		Minimum Ceiling Height in Feet				NC
		Bar Style		Bar Style		Sidewall	Sill/Floor	@ -18F T		@ -25F T		
		00 and 15	30 and 01	00 and 15	30 and 01	Min.-Max.	Min.-Max.					
20	1	.01	.01	500	575	6-9	1-2	8		9	<20	
	2	.03	.04	750	865	7-10	2-3				25	
30	1	.01	.01	475	545	6-9	1-2	9		10	20	
	2	.05	.07	1000	1150	9-13	3-5				30	
40	1	.02	.03	635	730	8-11	2-4	9		11	25	
	2	.01	.01	460	530	7-10	2-3				20	
50	1	.03	.12	1250	1440	11-16	4-9				30	
	2	.03	.04	790	910	10-14	3-7	9		11	25	
	3	.02	.03	575	660	9-13	2-6				20	
60	4	<.01	.01	440	505	8-12	2-5				<20	
	2	.05	.07	950	1090	12-18	5-11				30	
	3	.02	.03	690	795	11-16	4-9	9		12	25	
	4	.01	.01	530	610	10-14	3-7				20	
70	4	<.01	.01	370	425	8-12	2-5				<20	
	2	.06	.08	1110	1275	14-20	7-13				30	
	3	.03	.04	810	935	13-19	6-12	10		12	30	
	4	.02	.03	660	760	11-16	4-9				25	
80	4	<.01	.01	435	500	10-14	3-7				<20	
	2	.08	.10	1275	1450	16-23	9-16				30	
	3	.04	.05	920	1060	15-21	8-14	10		12	30	
	4	.03	.04	700	805	13-18	6-11				25	
90	4	.01	.01	495	570	11-16	4-9				20	
	2	.05	.07	1030	1185	17-24	10-17				30	
	3	.04	.05	785	905	15-21	8-14	11		13	30	
	4	.01	.02	550	635	13-18	6-11				25	
100	5	<.01	.01	450	520	11-16	4-9				20	
	2	.06	.08	1150	1325	19-27	12-20				30	
	3	.04	.05	875	1010	16-23	9-16	11		13	30	
	4	.02	.03	620	715	14-20	7-13				25	
120	5	.01	.01	500	575	12-18	5-11				20	
	3	.06	.08	1050	1210	19-28	11-20				30	
	4	.03	.04	745	855	17-24	9-16	11		13	30	
	5	.02	.03	600	680	15-22	7-14				25	
140	6	<.01	.01	480	550	13-19	5-11				20	
	3	.08	.11	1220	1410	22-32	14-24				35	
	4	.04	.05	870	1000	19-28	11-20				30	
	5	.02	.03	700	810	17-25	9-17	11		14	25	
160	6	.01	.01	560	645	15-22	7-14				20	
	4	.05	.07	990	1140	22-32	13-23				35	
	5	.03	.04	800	925	19-29	10-20	12		15	30	
	6	.02	.03	640	735	18-26	9-17				25	
180	8	.01	.01	460	530	15-22	6-13				20	
	4	.07	.09	1110	1275	25-36	16-27				35	
	5	.04	.05	900	1035	22-33	13-24	12		15	30	
	6	.03	.04	725	835	20-30	11-21				25	
200	8	.02	.03	520	600	17-25	8-16				20	
	4	.08	.11	1240	1425	28-41	-				40	
	5	.05	.07	1000	1150	24-36	-	12		15	35	
	6	.04	.05	800	925	23-33	-				30	
250	8	.02	.03	575	665	20-28	-				25	
	5	.08	.11	1250	1440	30-46	-				40	
	6	.05	.07	1000	1150	27-39	-	13		15	35	
	8	.03	.04	720	830	25-35	-				30	
300	10	.01	.01	550	625	21-32	-				25	
	6	.07	.09	1200	1375	33-48	-				40	
	8	.04	.05	865	1000	29-42	-	13		15	35	
	10	.02	.03	665	765	25-39	-				30	
350	12	.01	.01	545	630	23-33	-				25	
	8	.05	.08	1020	1175	34-48	-				40	
	10	.03	.04	780	900	29-45	-	13		15	35	
	12	.02	.03	640	735	26-38	-				30	
400	8	.08	.11	1170	1350	40-55	-				45	
	10	.04	.05	890	1025	33-50	-	14		16	40	
	12	.02	.03	640	735	26-38	-				30	
	12	.03	.04	730	845	33-44	-				35	

Symbols:

- V_t Terminal Velocity in FPM
- V_r Room Velocity in FPM
- V_k Face Velocity in FPM
- A_k Outlet Area in Square Feet
- A_n Neck Area in Square Feet
- P_s Static Pressure in H₂O
- NC 18dB Room Attenuation
- T Throw in Feet: see Note 6.
- T Temperature Differential

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Table 2 - Continuous Grille Length Factors

Modify Table 1 by listed values for grille lengths above 4 feet.			
Grille Length in Feet	Throw (T)		NC
	Sidewall Min.-Max.	Sill/Floor Min.-Max.	
4-6	No Change		+0
7-20	T x 1.10		+5
21-100	T x 1.15		+10

Table 3 - Supply Air Temperature Factors

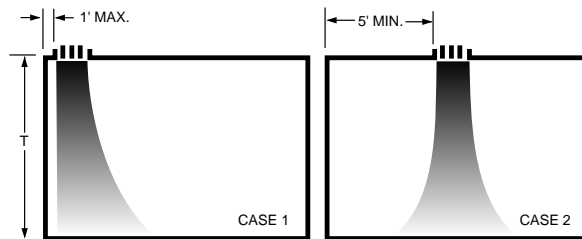
Multiply Throw in Table 1 (or factor in Table 2 if used) by listed value.			
Sidewall Sill/Floor	@-20F	T	@+25F
	T x 1.00		
	@ 0F	T	T x 1.10
	@+25F	T	T x 1.20

Table 4 - Vertical Down-Throw and Supply Air Temperature Factors

Multiply Throw-Sidewall in Table 1 (or factor in Table 2 if used) by listed value.			
Case	@-20F Cooling	@ 0F Ventilating	@+25F Heating
Case 1	T x 1.00	T x .90	T x .60
Case 2	T x .70	T x .60	T x .40

Table 5 - Supply Grille Areas (per foot of length)

Listed Width in Inches	1	2	2	3	4	5	6	8	10	12	14	16	18	20	24	30	36
	A _n	.13	.17	.21	.25	.33	.42	.50	.67	.84	1.00	1.20	1.30	1.50	1.70	2.00	2.50
00 and 15 Bar Styles																	
A _k	.04	.06	.09	.11	.16	.20	.25	.35	.45	.55	.68	.79	.90	1.00	1.30	1.60	2.10
30 and 01 Bar Styles																	
A _k	.03	.05	.08	.09	.14	.17	.21	.30	.38	.47	.58	.67	.77	.85	1.10	1.40	1.80



Return Air CFM per Foot of Length

Listed Width in Inches	A _k Area	Bar Style	NC 20-25 Nonducted		NC 30 Ducted		NC 35-40 Ducted	
			-.02" P _s CFM	-.03" P _s CFM	-.08" P _s CFM	-.10" P _s CFM	-.15" P _s CFM	-.20" P _s CFM
1	.13	00 and 15	20	25	40	45	55	65
		01 and 30	15	20	35	40	45	55
2	.18	00 and 15	30	40	65	70	90	100
		01 and 30	25	35	55	60	75	85
2	.23	00 and 15	45	50	85	95	115	135
		01 and 30	35	45	70	80	100	115
3	.27	00 and 15	55	65	105	120	145	165
		01 and 30	45	55	90	100	120	140
4	.34	00 and 15	75	90	150	165	205	235
		01 and 30	60	75	125	140	170	195
5	.41	00 and 15	95	120	190	215	260	305
		01 and 30	80	100	160	180	220	255
6	.46	00 and 15	120	145	240	265	325	375
		01 and 30	100	120	200	220	270	315
8	.57	00 and 15	160	200	325	360	445	515
		01 and 30	135	165	270	305	370	430
10	.68	00 and 15	210	255	415	465	570	655
		01 and 30	175	215	350	390	475	550
12	.76	00 and 15	255	310	510	565	695	800
		01 and 30	210	260	425	475	580	670
16	.93	00 and 15	350	430	700	785	960	1100
		01 and 30	285	350	570	635	780	900
20	1.10	00 and 15	445	545	885	990	1220	1410
		01 and 30	365	445	730	815	1000	1160
24	1.25	00 and 15	540	660	1080	1210	1475	1710
		01 and 30	440	540	880	985	1200	1390