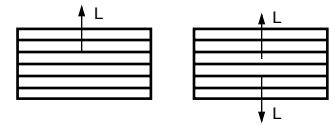


C Series Curved-Blade Diffusers Selection Procedure

1. Determine the diffuser air pattern best suited to the duct layout and room area to be served.
2. Select the air pattern type and CFM per outlet. The tables give the recommended limits of air volume per outlet for various ceiling heights. Choose the correct table for the style diffuser selected. Outlets are assumed to be mounted flush on the ceiling and no obstruction to the air stream.
3. Turn to the proper SIZE SELECTION TABLE for the air pattern desired.
4. Determine the appropriate size based on the CFM, Throw, Pressure Loss, and Face Velocity requirements.

C Series Curved-Blade Diffusers (Page 17-21) One-Way, Two-Way



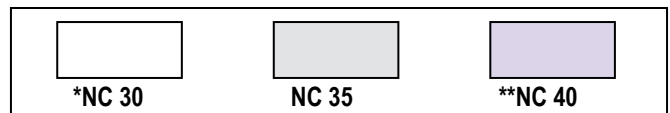
Face Velocity		400	500	600	700	800	900	1000	1100	1200
Pressure Loss		.010	.016	.022	.031	.040	.050	.062	.075	.090
6 x 6	CFM	35	45	55	65	70	80	90	100	110
Ak .090	Throw 1/2	3.5/2.5	5.0/3.5	6.0/4.0	7.0/5.0	7.5/5.5	8.5/6.0	9.5/7.0	11.0/7.5	11.5/8.5
8 x 6	CFM	40	50	60	70	80	90	100	110	120
Ak .100	Throw 1/2	3.5/2.5	4.5/3.0	5.5/4.0	6.5/4.5	7.0/5.0	8.0/6.0	9.0/6.5	10.0/7.0	11.0/7.5
10 x 6	CFM	60	75	90	105	120	135	150	165	180
Ak .150	Throw 1/2	5.0/3.5	6.0/4.5	7.0/5.0	8.5/6.0	9.5/7.0	11.0/7.5	12.0/8.5	13.0/9.5	14.0/10.0
8 x 8	CFM	65	80	95	110	130	145	160	175	190
Ak .160	Throw 1/2	5.0/3.5	6.0/4.5	7.5/5.0	8.5/6.0	10.0/7.0	11.0/8.0	12.0/9.0	14.0/9.5	15.0/10.0
12 x 6	CFM	70	90	110	125	145	160	180	200	215
Ak .180	Throw 1/2	5.0/3.5	6.5/4.5	8.0/5.5	9.0/6.5	11.0/7.5	12.0/8.5	13.0/9.5	15.0/10.0	16.0/11.0
14 x 6	CFM	85	105	125	145	170	190	210	230	250
Ak .210	Throw 1/2	5.5/4.0	7.0/5.0	8.5/6.0	10.0/7.0	11.0/8.0	13.0/9.0	14.0/10.0	16.0/11.0	17.0/12.0
10 x 10	CFM	95	120	145	170	190	215	240	265	290
Ak .240	Throw 1/2	6.0/4.0	7.5/5.0	9.0/6.5	10.0/7.5	12.0/8.0	13.0/9.5	15.0/10.0	16.0/11.0	18.0/13.0
12 x 10	CFM	115	145	175	205	230	260	290	320	350
Ak .290	Throw 1/2	6.5/4.5	8.0/5.5	9.5/7.0	11.0/8.0	13.0/9.0	14.0/10.0	16.0/11.0	18.0/13.0	19.0/14.0
16 x 8	CFM	125	155	185	215	250	280	310	340	370
Ak .310	Throw 1/2	6.5/5.0	8.5/6.0	10.0/7.0	12.0/8.0	13.0/9.5	15.0/11.0	17.0/12.0	18.0/13.0	20.0/14.0
12 x 12	CFM	140	175	210	245	280	315	350	385	420
Ak .350	Throw 1/2	7.0/5.0	9.0/6.0	11.0/7.5	12.0/8.5	14.0/10.0	16.0/11.0	18.0/12.0	19.0/14.0	21.0/15.0
16 x 12	CFM	185	230	275	320	370	415	460	505	550
Ak .460	Throw 1/2	8.0/5.5	10.0/7.5	12.0/9.0	14.0/10.0	16.0/11.0	18.0/13.0	20.0/14.0	22.0/16.0	24.0/17.0
14 x 14	CFM	190	240	290	335	385	430	480	530	575
Ak .480	Throw 1/2	8.0/5.5	10.0/7.5	12.0/9.0	14.0/10.0	17.0/12.0	18.0/13.0	21.0/15.0	23.0/16.0	25.0/17.0
16 x 16	CFM	250	315	380	440	505	565	630	695	755
Ak .630	Throw 1/2	9.5/6.5	12.0/8.5	14.0/10.0	16.0/12.0	19.0/13.0	21.0/15.0	23.0/17.0	26.0/18.0	28.0/20.0
20 x 14	CFM	270	340	410	475	545	610	680	750	815
Ak .680	Throw 1/2	9.5/7.0	12.0/8.5	15.0/10.0	17.0/12.0	19.0/14.0	22.0/15.0	24.0/17.0	27.0/19.0	29.0/21.0
24 x 12	CFM	280	350	420	490	560	630	700	770	840
Ak .700	Throw 1/2	10.0/7.0	12.0/8.5	15.0/10.0	17.0/12.0	20.0/14.0	22.0/16.0	25.0/17.0	27.0/19.0	30.0/21.0
30 x 10	CFM	290	365	440	510	585	655	730	805	875
Ak .730	Throw 1/2	10.0/7.0	13.0/9.0	15.0/11.0	18.0/12.0	20.0/14.0	23.0/16.0	25.0/18.0	28.0/20.0	30.0/21.0
36 x 10	CFM	350	440	530	615	705	790	880	970	1055
Ak .880	Throw 1/2	11.0/8.0	14.0/10.0	17.0/12.0	19.0/14.0	22.0/16.0	25.0/18.0	28.0/20.0	31.0/22.0	33.0/24.0
36 x 12	CFM	420	525	630	735	840	945	1050	1155	1260
Ak 1.050	Throw 1/2	12.0/8.5	15.0/11.0	18.0/13.0	21.0/15.0	24.0/17.0	27.0/19.0	30.0/21.0	33.0/23.0	36.0/25.0
30 x 16	CFM	460	575	690	805	920	1035	1150	1265	1380
Ak 1.150	Throw 1/2	12.0/9.0	16.0/11.0	19.0/13.0	22.0/15.0	25.0/18.0	28.0/20.0	31.0/22.0	34.0/24.0	37.0/26.0
36 x 16	CFM	560	700	840	980	1120	1260	1400	1540	1680
Ak 1.400	Throw 1/2	14.0/9.5	17.0/12.0	21.0/15.0	24.0/17.0	27.0/19.0	31.0/22.0	34.0/24.0	38.0/27.0	41.0/29.0

For sizes not listed and sizing tips see page(s) 76

Terminal Velocity of 75 FPM

Curved-Blade – C Series

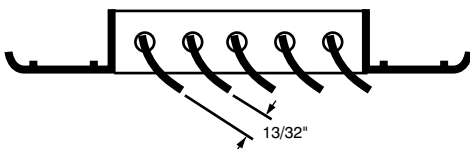
Ceiling Height In Feet	Maximum Cooling Temperature Differential (°F)	Maximum CFM per outlet			
		1 way	2 way	3 way	4 way
7	15°	75	150	225	300
8	18°	100	200	300	400
9	20°	200	400	600	800
10	22°	300	600	900	1200
11	25°	400	800	1200	1600
12	25°	500	1000	1500	2000
14	25°	700	1400	2100	2800
16	25°	900	1800	2700	3600

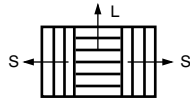


* less than or equal to

** greater than or equal to

The Face Bars on the Curved-Blade Diffuser should be pre-set to the dimension shown below.



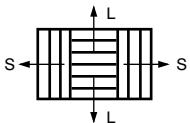


C Series Three-Way

Face Velocity	400	500	600	700	800	900	1000	1100	1200
Pressure Loss									
	.010	.016	.022	.031	.040	.050	.062	.075	.090
6 x 6 Ak .090	Total CFM 9/13	45 11/17	55 15/20	65 17/24	70 18/26	80 22/29	90 24/33	100 26/37	110 30/40
	CFM L/S 2.0/2.0	2.5/3.0	3.0/3.5	3.5/4.0	4.0/4.5	4.5/5.0	5.0/6.0	5.5/6.5	6.0/7.0
	Throw L/S								
8 x 6 Ak .100	Total CFM 18/11	40 24/13	50 28/16	60 32/19	70 36/22	80 42/24	90 46/27	100 50/30	110 56/32
	CFM L/S 2.5/2.0	3.0/2.5	3.5/3.0	4.0/3.5	4.5/4.0	5.0/4.5	5.5/5.0	6.0/5.5	6.5/5.5
	Throw L/S								
10 x 6 Ak .150	Total CFM 22/19	60 27/24	75 32/29	90 39/33	105 44/38	120 49/43	135 54/48	150 61/52	165 66/57
	CFM L/S 3.0/2.5	3.5/3.0	4.0/3.5	4.5/4.0	5.0/4.5	5.5/5.0	6.0/5.5	6.5/6.5	7.0/7.5
	Throw L/S								
8 x 8 Ak .160	Total CFM 31/17	65 36/22	80 43/26	95 50/30	110 60/35	125 67/39	140 74/43	155 81/47	170 88/51
	CFM L/S 3.5/2.5	4.0/3.5	4.5/4.0	5.0/4.5	5.5/5.0	6.0/5.5	6.5/6.5	7.0/7.5	7.5/8.5
	Throw L/S								
12 x 6 Ak .180	Total CFM 20/25	70 44/51	90 53/61	110 62/72	125 70/80	145 78/91	160 88/101	175 96/112	190 106/122
	CFM L/S 2.5/3.0	3.0/4.0	3.5/4.5	4.0/5.0	4.5/5.5	5.0/6.0	5.5/6.5	6.0/7.0	6.5/7.5
	Throw L/S								
14 x 6 Ak .210	Total CFM 21/32	85 105	105 125	125 145	145 170	170 190	190 210	210 230	230 260
	CFM L/S 2.5/3.5	3.5/4.5	4.0/5.0	4.5/5.5	5.0/6.0	5.5/6.5	6.0/7.0	6.5/8.0	7.0/8.5
	Throw L/S								
10 x 10 Ak .240	Total CFM 35/30	95 42/38	120 53/46	145 62/54	170 70/60	190 79/68	215 84/76	240 97/84	265 106/92
	CFM L/S 3.5/3.0	4.5/4.0	5.0/4.5	5.5/5.0	6.0/5.5	6.5/6.5	7.0/7.5	7.5/8.5	8.0/10.0
	Throw L/S								
12 x 10 Ak .290	Total CFM 35/40	115 44/51	145 53/61	175 62/72	205 70/80	230 78/91	260 88/101	290 96/112	320 106/122
	CFM L/S 3.5/4.0	4.5/5.0	5.0/5.5	5.5/6.0	6.0/6.5	6.5/7.0	7.0/7.5	7.5/8.5	8.0/10.0
	Throw L/S								
16 x 8 Ak .310	Total CFM 43/41	125 155	155 185	185 215	215 250	250 280	280 310	310 340	340 370
	CFM L/S 4.0/4.0	5.0/4.5	5.5/5.0	6.0/5.5	6.5/6.5	7.0/7.5	7.5/8.0	8.0/8.5	8.5/10.0
	Throw L/S								
12 x 12 Ak .350	Total CFM 42/49	140 53/61	175 62/74	210 73/86	245 84/98	280 95/110	315 105/123	350 115/135	385 126/147
	CFM L/S 4.0/4.0	5.0/5.0	6.0/6.5	6.5/7.5	7.0/8.5	7.5/9.5	8.0/10.0	8.5/11.0	9.0/13.0
	Throw L/S								
16 x 12 Ak .460	Total CFM 65/60	185 80/75	230 97/89	275 113/104	320 130/120	370 146/134	415 162/149	460 178/164	505 194/178
	CFM L/S 4.5/4.0	6.0/5.5	7.0/7.0	8.0/8.0	9.0/9.0	10.0/10.0	11.0/11.0	12.0/12.0	14.0/14.0
	Throw L/S								
14 x 14 Ak .480	Total CFM 48/71	190 62/89	240 74/108	290 86/125	335 99/143	385 110/160	430 123/179	480 136/197	530 147/214
	CFM L/S 4.0/5.0	5.0/6.5	6.0/7.5	6.5/8.5	7.5/10.0	8.5/11.0	10.0/13.0	12.0/14.0	13.0/15.0
	Throw L/S								
16 x 16 Ak .630	Total CFM 88/81	250 111/102	315 134/123	380 155/143	440 178/164	505 199/183	565 222/204	630 245/225	695 266/245
	CFM L/S 5.5/5.5	7.0/7.0	8.0/8.0	9.0/9.5	10.0/11.0	11.0/12.0	12.0/13.0	13.0/15.0	14.0/16.0
	Throw L/S								
20 x 14 Ak .680	Total CFM 76/97	270 95/122	340 115/148	410 133/171	475 153/196	545 171/220	610 190/245	680 210/270	750 228/293
	CFM L/S 5.0/6.0	6.5/7.0	7.5/9.0	8.5/10.0	9.0/11.0	10.0/12.0	11.0/13.0	12.0/15.0	15.0/17.0
	Throw L/S								
24 x 12 Ak .700	Total CFM 90/95	280 112/119	350 134/143	420 156/167	490 178/191	560 200/215	630 222/239	700 244/263	770 268/286
	CFM L/S 5.5/5.5	7.0/7.0	8.0/8.5	9.0/10.0	10.0/11.0	11.0/12.0	12.0/13.0	13.0/15.0	15.0/17.0
	Throw L/S								
30 x 10 Ak .730	Total CFM 290	365	440	510	585	655	730	805	875
	CFM L/S 9.0/99	117/124	140/150	164/173	187/199	210/223	234/248	258/274	280/298
	Throw L/S	5.5/6.0	7.0/7.5	8.5/9.0	10.0/11.0	11.0/12.0	13.0/13.0	14.0/15.0	16.0/18.0
36 x 10 Ak .880	Total CFM 350	440	530	615	705	790	880	970	1055
	CFM L/S 113/118	143/149	172/179	199/208	228/238	256/267	285/297	314/328	342/357
	Throw L/S	6.5/6.5	8.0/8.0	9.5/9.5	11.0/11.0	13.0/13.0	14.0/14.0	16.0/16.0	19.0/19.0
36 x 12 Ak 1.050	Total CFM 420	525	630	735	840	945	1050	1155	1260
	CFM L/S 135/142	169/178	203/214	237/249	270/285	304/320	338/356	372/392	406/427
	Throw L/S	7.0/7.0	8.5/9.0	10.0/11.0	12.0/12.0	14.0/14.0	15.0/16.0	17.0/18.0	20.0/21.0
30 x 16 Ak 1.150	Total CFM 460	575	690	805	920	1035	1150	1265	1380
	CFM L/S 148/156	183/196	220/235	258/274	294/313	331/352	368/391	405/430	442/469
	Throw L/S	7.0/7.0	9.0/9.0	10.0/11.0	12.0/13.0	14.0/15.0	16.0/16.0	18.0/18.0	21.0/22.0
36 x 16 Ak 1.400	Total CFM 560	700	840	980	1120	1260	1400	1540	1680
	CFM L/S 180/190	226/237	270/285	316/332	360/380	406/427	450/475	496/522	540/570
	Throw L/S	8.0/8.0	10.0/10.0	12.0/12.0	14.0/14.0	16.0/16.0	18.0/18.0	21.0/22.0	23.0/24.0

For sizes not listed and sizing tips see page(s) 76

Terminal Velocity of 75 FPM



C Series Four-Way

Face Velocity	400	500	600	700	800	900	1000	1100	1200
Pressure Loss									
	.010	.016	.022	.031	.040	.050	.062	.075	.090
6 x 6 Ak .090	Total CFM 5/13	35 11/29	45 15/29	55 17/24	65 18/26	70 22/29	75 24/33	85 26/37	95 30/40
	CFM L/S 1.5/2.0	2.5/3.0	3.0/3.5	3.5/4.0	4.0/4.5	4.5/5.0	5.0/6.0	5.5/6.5	6.0/7.0
	Throw L/S								
8 x 6 Ak .100	Total CFM 9/11	40 24/13	50 28/16	60 32/19	70 36/22	80 42/24	90 46/27	100 50/30	110 56/32
	CFM L/S 1.5/1.5	2.5/2.0	3.0/2.5	3.5/3.0	4.0/3.5	4.5/4.0	5.0/5.5	5.5/6.5	6.0/7.0
	Throw L/S								
10 x 6 Ak .150	Total CFM 11/19	60 27/24	75 32/29	90 39/33	105 44/38	120 49/43	135 54/48	150 61/52	165 66/57
	CFM L/S 2.0/2.5	3.0/3.0	3.5/3.5	4.0/4.0	4.5/4.5	5.0/5.0	5.5/6.0	6.0/7.0	6.5/7.5
	Throw L/S								
8 x 8 Ak .160	Total CFM 15/17	65 36/22	80 43/26	95 50/30	110 60/35	125 67/39	140 74/43	155 81/47	170 88/51
	CFM L/S 2.5/2.0	3.0/2.5	3.5/3.0	4.0/3.5	4.5/4.0	5.0/4.5	5.5/6.0	6.0/7.0	6.5/7.5
	Throw L/S								
12 x 6 Ak .180	Total CFM 20/25	70 44/51	90 53/61	110 62/72	125 70/80	145 78/91	160 88/101	175 96/112	190 106/122
	CFM L/S 2.0/3.0	2.5/4.0	3.0/4.5	3.5/5.0	4.0/5.5	4.5/6.0	5.0/6.5	5.5/7.0	6.0/8.0
	Throw L/S								
14 x 6 Ak .210	Total CFM 21/32	85 105	105 125	125 145	145 170	170 190	190 210	210 230	230 260
	CFM L/S 2.0/3.5	2.5/4.5	3.0/5.0	3.5/6.0	4.0/7.0	4.5/8.0	5.0/9.0	5.5/10.0	6.0/12.0
	Throw L/S								
10 x 10 Ak .240	Total CFM 35/30	95 42/38	120 53/46	145 62/54	170 70/60	190 79/68	215 84/76	240 97/84	265 106/92
	CFM L/S 3.5/3.0	4.5/4.0	5.0/4.5	5.5/5.0	6.0/5.5	6.5/6.5	7.0/7.5	7.5/8.5	8.0/10.0
	Throw L/S								
12 x 10 Ak .290	Total CFM 35/40	115 44/51	145 53/61	175 62/72	205 70/80	230 78/91	260 88/101	290 96/112	320 106/122
	CFM L/S 3.5/4.0	4.5/5.0	5.0/5.5	5.5/6.0	6.0/6.5	6.5/7.0	7.0/7.5	7.5/8.5	8.0/11.0
	Throw L/S								
16 x 8 Ak .310	Total CFM 43/41	125 155	155 185	185 215	215 250	250 280	280 310	310 340	340 370
	CFM L/S 4.0/4.0	5.0/4.5	5.5/5.0	6.0/5.5	6.5/6.5	7.0/7.5	7.5/8.0	8.0/8.5	8.5/10.0
	Throw L/S								
12 x 12 Ak .350	Total CFM 42/49	140 53/61	175 62/74	210 73/86	245 84/98	280 95/110	315 105/123	350 115/135	385 126/147
	CFM L/S 4.0/4.0	5.0/5.0	6.0/6.5	6.5/7.5	7.0/8.5	7.5/9.5	8.0/10.0	8.5/11.0	9.0/13.0
	Throw L/S								
16 x 12 Ak .460	Total CFM 65/60	185 80/75	230 97/89	275 113/104	320 130/120	370 146/134	415 162/149	460 178/164	505 194/178
	CFM L/S 4.5/4.0	6.0/5.5	7.0/7.0	8.0/8.0	9.0/9.0	10.0/10.0	11.0/11.0	12.0/12.0	14.0/14.0
	Throw L/S								
14 x 14 Ak .480	Total CFM 48/71	190 62/89	240 74/108	290 86/125	335 99/143	385 110/160	430 123/179	480 136/197	530 147/214
	CFM L/S 4.0/5.0	5.0/6.5	6.0/7.5	6.5/8.5	7.5/10.0	8.5/11.0	10.0/13.0	12.0/14.0	13.0/15.0
	Throw L/S								
16 x 16 Ak .630	Total CFM 88/81	250 111/102	315 134/123	380 155/143	440 178/164	505 199/183	565 222/204	630 245/225	695 266/245
	CFM L/S 5.5/5.5	7.0/7.0	8.0/8.0	9.0/9.5	10.0/11.0	11.0/12.0	12.0/13.0	13.0/15.0	14.0/16.0
	Throw L/S								
20 x 14 Ak .680	Total CFM 76/97	270 95/122	340 115/148	410 133/171	475 153/196	545 171/220	610 190/245	680 210/270	750 228/293
	CFM L/S 5.0/6.0	6.5/7.0	7.5/9.0	8.5/10.0	9.0/11.0	10.0/12.0	11.0/13.0	12.0/15.0	15.0/17.0
	Throw L/S								