

RESIDENTIAL

101 - FLOOR REGISTER	1
102 - FLOOR REGISTER	1
105 - TOE SPACE GRILLE	2
110 - HEAVY GAUGE FLOOR REGISTER	2
115 - FLOOR REGISTER	3
120 - FLOOR RETURN AIR GRILLE	3
150 - BASEBOARD DIFFUSER	5
155 - BASEBOARD RETURN AIR GRILLE	5
165 - BASEBOARD RETURN AIR GRILLE	5
170 - BASEBOARD RETURN AIR GRILLE	5
175 - BASEBOARD REGISTER	5
185 - BASEBOARD RETURN AIR GRILLE	6
190 - BASEBOARD REGISTER	6
195 - BASEBOARD RETURN AIR GRILLE	6
201 - SIDEWALL/CEILING 1-WAY	6
202 - SIDEWALL/CEILING 2-WAY	7
203 - SIDEWALL/CEILING 3-WAY	8
204 - SIDEWALL/CEILING 4-WAY	9
222 - SIDEWALL/CEILING REGISTER 2-WAY	9
230 - ALUMINUM SIDEWALL/CEILING REGISTER 2-WAY	11
261 - SIDEWALL/CEILING REGISTER 1-WAY CURVED BLADE	11
262 - SIDEWALL/CEILING REGISTER 2-WAY CURVED BLADE	11
263 - SIDEWALL/CEILING REGISTER 3-WAY CURVED BLADE	12
264 - SIDEWALL/CEILING REGISTER 4-WAY CURVED BLADE	12
281 - ALUMINUM SIDEWALL/CEILING REGISTER 1-WAY ADJUSTABLE	13
283 - ALUMINUM SIDEWALL/CEILING REGISTER 3-WAY ADJUSTABLE CURVED BLADE	13
284 - ALUMINUM SIDEWALL/CEILING REGISTER 4-WAY ADJUSTABLE CURVED BLADE	14
260 - SIDEWALL/CEILING REGISTER ADJUSTABLE BLADES	15

270 - ALUMINUM SIDEWALL/CEILING REGISTER ADJUSTABLE STRAIGHT FIN	19
300 - ROUND CEILING DIFFUSER	23
500 - RETURN AIR GRILLE	24
510 - ALUMINUM RETURN AIR GRILLE	25
515 - RETURN AIR GRILLE	26
520 - RETURN AIR FILTER	28
525 - RETURN AIR FILTER GRILLE	29

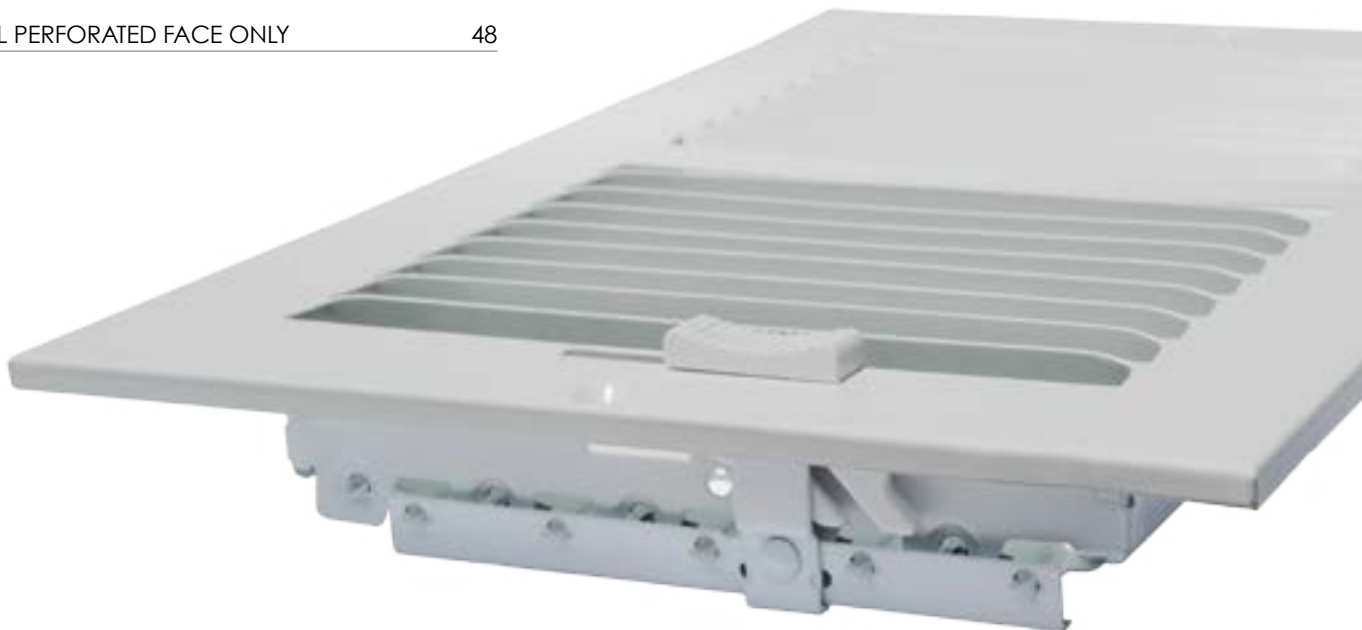
LIGHT COMMERCIAL

481 - ALUMINUM SQUARE CEILING DIFFUSER 1-WAY	31
482 - ALUMINUM SQUARE CEILING DIFFUSER 2-WAY	31
483 - ALUMINUM SQUARE CEILING DIFFUSER 3-WAY	31
484 - ALUMINUM SQUARE CEILING DIFFUSER 4-WAY	32
485 - ALUMINUM SQUARE CEILING DIFFUSER 2-WAY CORNER	32
411 - VERTICAL SINGLE DEFLECTION SUPPLY WITH MULTI-SHUTTER DAMPER	33
422 - HORIZONTAL RETURN GRILLE	37
600 - ALUMINUM HORIZONTAL GRILLE	37
441 - ALUMINUM HORIZONTAL SINGLE DEFLECTION GRILLE	38
451 - ALUMINUM VERTICAL SINGLE DEFLECTION GRILLE	38
444 - ALUMINUM DOUBLE DEFLECTION SUPPLY REGISTER	39
453 - ALUMINUM DOUBLE DEFLECTION SUPPLY REGISTER	39
425 - STEEL FIXED BAR FILTER GRILLE	40

T-BAR

952/952WI - T-BAR STEEL 2-CONE FIXED-PATTERN DIFFUSER WITH COLOR WITH/WITHOUT INSULATION	41
96114WI - T-BAR STEEL 3-CONE FIXED-PATTERN HIGH VOLUME DIFFUSER WITH INSULATION AND 14" FIXED COLLAR	41
961R6 - T-BAR STEEL 3-CONE FIXED-PATTERN HIGH VOLUME DIFFUSER WITH R6 INSULATION	42
962 - T-BAR STEEL 3-CONE FIXED-PATTERN DIFFUSER WITH COLLAR	42
610 - T-BAR ALUMINUM RETURN GRILLE	43

611 - T-BAR ALUMINUM RETURN FILTER GRILLE	43
922 - T-BAR STEEL LANCED RETURN FILTER GRILLE	43
922R6 - T-BAR STEEL LANCED RETURN FILTER GRILLE WITH R6 INSULATION	43
923 - T-BAR STEEL LANCED RETURN FILTER GRILLE	43
923R6 - T-BAR STEEL LANCED RETURN FILTER GRILLE WITH R6 INSULATION	43
964 - STEEL PERFORATED T-BAR RETURN FILTER GRILLE	43
986 - T-BAR ALUMINUM EGG CRATE FILTER GRILLE	43
987 - T-BAR ALUMINUM EGG CRATE FILTER GRILLE	43
944WI - T-BAR STAMPED ALUMINUM 4-WAY PERFORATED DIFFUSER WITH INSULATION	43
955 - T-BAR STEEL CURVED BLADE PERFORATED SUPPLY WITH COLLAR	44
957 - T-BAR SHALLOW BACK PERFORATED SUPPLY	44
958FDWI - T-BAR PERFORATED SUPPLY DIFFUSER WITH FIXED DEFLECTOR AND INSULATION	45
958ADWI - T-BAR PERFORATED SUPPLY DIFFUSER WITH ADJUSTABLE DEFLECTORS AND INSULATION	45
958ADWIFC 14 - T-BAR PERFORATED SUPPLY DIFFUSER WITH ADJUSTABLE DEFLECTORS AND 14" FIXED COLLAR	46
953R6 - T-BAR STEEL PERFORATED SUPPLY DIFFUSER	47
954R6 - T-BAR STEEL PERFORATED RETURN WITH R6 INSULATION	47
956 - T-BAR STEEL PERFORATED RETURN WITH FIXED COLLAR	47
854PF0 - T-BAR STEEL PERFORATED FACE ONLY	48



101 - FLOOR REGISTER									
FACE VELOCITY	300	400	500	600	700	800	900	1000	
PRESSURE LOSS	0.004	0.008	0.016	0.024	0.028	0.040	0.052	0.060	
2 X 10 Ak .094	cfm	28	38	47	56	66	75	85	94
	Spread	3	4	5	6	7	8	9	10
	Throw	4	5	6	7	8	9	10	11
2 X 12 Ak .110	cfm	32	43	54	65	76	86	97	108
	Spread	4	6	6	7	8	9	10	11
	Throw	5	6	7	8	9	10	11	12
2 X 14 Ak .125	cfm	38	50	63	75	88	100	113	125
	Spread	4	6	7	7	8	10	11	12
	Throw	5	7	8	9	10	11	12	13
3 x 10 Ak .137	cfm	41	55	69	82	96	110	123	137
	Spread	4	6	7	8	9	10	11	12
	Throw	6	7	8	9	10	12	13	14
4 x 8 Ak .130	cfm	39	52	65	78	91	104	117	130
	Spread	4	5	7	8	9	10	11	13
	Throw	6	7	8	10	11	12	13	14
4 x 10 Ak .170	cfm	51	68	85	102	119	136	153	170
	Spread	5	6	7	8	10	11	13	15
	Throw	6	7	9	11	12	13	15	17
4 x 12 Ak .20	cfm	60	80	100	120	140	160	180	200
	Spread	6	7	9	11	12	14	15	17
	Throw	5	6	8	9	10	11	13	14
4 x 14 Ak .23	cfm	69	92	115	138	161	184	207	230
	Spread	7	8	10	11	13	16	17	19
	Throw	6	7	8	10	11	13	14	15
6 x 8 Ak .197	cfm	59	79	99	118	138	158	177	197
	Spread	6	7	10	11	13	14	15	17
	Throw	5	6	8	9	11	12	13	15
6 x 10 Ak .247	cfm	74	99	124	148	173	198	222	247
	Spread	6	8	9	12	13	15	17	19
	Throw	5	7	8	10	11	13	14	15
6 x 12 Ak .285	cfm	86	114	143	171	200	228	257	285
	Spread	7	9	10	13	15	17	19	22
	Throw	6	8	9	11	12	15	16	18
6 x 14 Ak .335	cfm	101	134	168	201	235	268	302	335
	Spread	8	9	11	13	16	18	20	22
	Throw	6	8	10	12	13	15	17	18
Terminal Velocity of 50 fpm									

102 - FLOOR REGISTER									
FACE VELOCITY	300	400	500	600	700	800	900	1000	
PRESSURE LOSS	0.004	0.008	0.016	0.024	0.028	0.040	0.052	0.060	
2 X 10 Ak .094	cfm	28	38	47	56	66	75	85	94
	Spread	3	4	5	6	7	8	9	10
	Throw	4	5	6	7	8	9	10	11
2 X 12 Ak .110	cfm	32	43	54	65	76	86	97	108
	Spread	4	6	6	7	8	9	10	11
	Throw	5	6	7	8	9	10	11	12
2 X 14 Ak .125	cfm	38	50	63	75	88	100	113	125
	Spread	4	6	7	7	8	10	11	12
	Throw	5	7	8	9	10	11	12	13
3 x 10 Ak .137	cfm	41	55	69	82	96	110	123	137
	Spread	4	6	7	8	9	10	11	12
	Throw	6	7	8	9	10	12	13	14
4 x 8 Ak .130	cfm	39	52	65	78	91	104	117	130
	Spread	4	5	7	8	9	10	11	13
	Throw	6	7	8	10	11	12	13	14
4 x 10 Ak .170	cfm	51	68	85	102	119	136	153	170
	Spread	5	6	7	8	10	11	13	15
	Throw	6	7	9	11	12	13	15	17
4 x 12 Ak .20	cfm	60	80	100	120	140	160	180	200
	Spread	6	7	9	11	12	14	15	17
	Throw	5	6	8	9	10	11	13	14
4 x 14 Ak .23	cfm	69	92	115	138	161	184	207	230
	Spread	7	8	10	11	13	16	17	19
	Throw	6	7	8	10	11	13	14	15
6 x 8 Ak .197	cfm	59	79	99	118	138	158	177	197
	Spread	6	7	10	11	13	14	15	17
	Throw	5	6	8	9	11	12	13	15
6 x 10 Ak .247	cfm	74	99	124	148	173	198	222	247
	Spread	6	8	9	12	13	15	17	19
	Throw	5	7	8	10	11	13	14	15
6 x 12 Ak .285	cfm	86	114	143	171	200	228	257	285
	Spread	7	9	10	13	15	17	19	22
	Throw	6	8	9	11	12	15	16	18
6 x 14 Ak .335	cfm	101	134	168	201	235	268	302	335
	Spread	8	9	11	13	16	18	20	22
	Throw	6	8	10	12	13	15	17	18
Terminal Velocity of 50 fpm									

105 - TOE SPACE GRILLE									
FACE VELOCITY		300	400	500	600	700	800	900	1000
PRESSURE LOSS		0.004	0.008	0.016	0.024	0.028	0.040	0.052	0.060
2 X 10 Ak .094	cfm	28	38	47	56	66	75	85	94
	Spread	3	4	5	6	7	8	9	10
	Throw	4	5	6	7	8	9	10	11
2 X 12 Ak .110	cfm	32	43	54	65	76	86	97	108
	Spread	4	6	6	7	8	9	10	11
	Throw	5	6	7	8	9	10	11	12
2 X 14 Ak .125	cfm	38	50	63	75	88	100	113	125
	Spread	4	6	7	7	8	10	11	12
	Throw	5	7	8	9	10	11	12	13
3 X 10 Ak .137	cfm	41	55	69	82	96	110	123	137
	Spread	4	6	7	8	9	10	11	12
	Throw	6	7	8	9	10	12	13	14
4 X 8 Ak .130	cfm	39	52	65	78	91	104	117	130
	Spread	4	5	7	8	9	10	11	13
	Throw	6	7	8	10	11	12	13	14
4 X 10 Ak .170	cfm	51	68	85	102	119	136	153	170
	Spread	5	6	7	8	10	11	13	15
	Throw	6	7	9	11	12	13	15	17
4 X 12 Ak .20	cfm	60	80	100	120	140	160	180	200
	Spread	6	7	9	11	12	14	15	17
	Throw	5	6	8	9	10	11	13	14
4 X 14 Ak .23	cfm	69	92	115	138	161	184	207	230
	Spread	7	8	10	11	13	16	17	19
	Throw	6	7	8	10	11	13	14	15
6 X 8 Ak .197	cfm	59	79	99	118	138	158	177	197
	Spread	6	7	10	11	13	14	15	17
	Throw	5	6	8	9	11	12	13	15
6 X 10 Ak .247	cfm	74	99	124	148	173	198	222	247
	Spread	6	8	9	12	13	15	17	19
	Throw	5	7	8	10	11	13	14	15
6 X 12 Ak .285	cfm	86	114	143	171	200	228	257	285
	Spread	7	9	10	13	15	17	19	22
	Throw	6	8	9	11	12	15	16	18
6 X 14 Ak .335	cfm	101	134	168	201	235	268	302	335
	Spread	8	9	11	13	16	18	20	22
	Throw	6	8	10	12	13	15	17	18
Terminal Velocity of 50 fpm									

110 - HEAVY GAUGE FLOOR REGISTER									
FACE VELOCITY		300	400	500	600	700	800	900	1000
PRESSURE LOSS		0.008	0.012	0.016	0.024	0.032	0.040	0.048	0.060
2 X 10 Ak .106	cfm	27	36	45	54	63	72	81	90
	Spread	2	3	4	5	5	6	7	8
	Throw	3	4	6	7	8	10	11	12
2 X 12 Ak .114	cfm	34	45	56	67	78	90	101	112
	Spread	2	4	4	5	6	7	8	8
	Throw	3	5	6	7	9	10	12	13
2 X 14 Ak .142	cfm	40	53	67	80	93	106	120	133
	Spread	3	4	5	5	6	7	8	9
	Throw	4	6	7	8	10	11	12	13
4 X 10 Ak .182	cfm	52	70	87	104	122	139	157	174
	Spread	3	4	5	6	7	8	9	10
	Throw	5	7	8	10	11	13	15	17
4 X 12 Ak .218	cfm	65	86	108	127	148	170	191	212
	Spread	3	4	5	6	8	9	10	11
	Throw	5	7	9	11	12	14	16	18
4 X 14 Ak .257	cfm	76	101	127	152	177	202	228	253
	Spread	6	8	10	12	13	15	18	19
	Throw	4	5	6	7	8	9	11	12
6 X 10 Ak .282	cfm	82	109	136	163	190	218	245	272
	Spread	7	9	10	12	14	16	18	21
	Throw	4	5	6	7	9	10	11	13
6 X 12 Ak .347	cfm	101	135	169	203	237	270	304	338
	Spread	7	9	11	14	15	18	20	22
	Throw	5	6	7	9	10	11	12	14
6 X 14 Ak .396	cfm	117	156	196	235	274	313	352	391
	Spread	8	10	13	14	17	20	22	25
	Throw	5	6	7	9	10	12	13	15
Terminal Velocity of 50 fpm									

115 - FLOOR REGISTER									
FACE VELOCITY		300	400	500	600	700	800	900	1000
PRESSURE LOSS		0.008	0.012	0.016	0.020	0.032	0.044	0.052	0.064
4 x 8 Ak .16	cfm	48	64	80	96	112	128	144	160
	Throw	4	6	8	10	12	13	15	16
4 x 10 Ak .20	cfm	60	80	100	120	140	160	180	200
	Throw	5	7	9	10	13	14	16	17
4 x 12 Ak .23	cfm	69	92	115	138	161	184	207	230
	Throw	5	8	10	11	13	15	17	18
4 x 14 Ak .28	cfm	84	112	140	168	196	224	252	280
	Throw	5	8	10	11	13	15	17	18
6 x 8 Ak .23	cfm	69	92	115	138	161	184	207	230
	Throw	5	8	10	11	13	15	17	19
6 x 10 Ak .33	cfm	99	132	165	198	231	264	297	330
	Throw	5	8	10	12	14	16	17	19
6 x 12 Ak .39	cfm	117	156	195	234	273	312	351	390
	Throw	6	8	11	13	14	17	18	20
6 x 14 Ak .46	cfm	138	184	230	276	322	368	414	460
	Throw	6	9	11	14	15	17	19	20
8 x 10 Ak .44	cfm	132	176	220	264	308	352	396	440
	Throw	6	8	11	13	14	17	18	20
8 x 12 Ak .54	cfm	162	216	270	324	378	432	486	540
	Throw	6	9	11	14	15	17	19	20
8 x 14 Ak .61	cfm	183	244	305	366	427	488	549	610
	Throw	7	10	12	16	17	18	21	22
9 x 12 Ak .59	cfm	177	236	295	354	413	472	531	590
	Throw	7	10	12	15	16	18	20	21
10 x 10 Ak .55	cfm	165	220	275	330	385	440	495	550
	Throw	6	9	11	15	16	17	19	20
10 x 12 Ak .67	cfm	201	268	335	402	469	536	603	670
	Throw	8	11	14	17	19	20	23	25
12 x 12 Ak .81	cfm	243	324	405	486	567	648	729	810
	Throw	10	12	16	19	20	23	25	27
12 x 14 Ak .95	cfm	285	380	475	570	665	760	855	950
	Throw	12	13	18	21	22	24	27	29
Terminal Velocity of 50 fpm									

120 - FLOOR RETURN AIR GRILL								
FACE VELOCITY		400	500	600	700	800	900	1000
4 x 8 Ak .203	cfm	81	102	122	142	162	183	203
	Pt	0.130	0.016	0.023	0.032	0.042	0.052	0.070
4 x 10 Ak .265	cfm	106	133	159	186	212	239	265
	Pt	0.012	0.015	0.023	0.031	0.041	0.051	0.069
4 x 12 Ak .301	cfm	120	151	181	211	241	271	301
	Pt	0.012	0.015	0.022	0.031	0.040	0.051	0.069
4 x 14 Ak .337	cfm	135	169	202	236	270	303	337
	Pt	0.011	0.014	0.021	0.031	0.039	0.050	0.067
4 x 18 Ak .455	cfm	182	228	273	319	364	410	455
	Pt	0.010	0.014	0.020	0.030	0.039	0.048	0.064
4 x 24 Ak .591	cfm	236	296	355	414	473	532	591
	Pt	0.010	0.014	0.018	0.028	0.037	0.047	0.057
4 x 30 Ak .740	cfm	296	370	444	518	592	666	740
	Pt	0.008	0.014	0.017	0.027	0.036	0.043	0.054
6 x 6 Ak .231	cfm	92	116	139	162	185	208	231
	Pt	0.130	0.016	0.023	0.032	0.042	0.051	0.070
6 x 8 Ak .301	cfm	120	151	181	211	241	271	301
	Pt	0.012	0.015	0.022	0.031	0.040	0.051	0.069
6 x 10 Ak .370	cfm	148	185	222	259	296	333	370
	Pt	0.011	0.014	0.020	0.031	0.039	0.049	0.066
6 x 12 Ak .455	cfm	182	228	273	319	364	410	455
	Pt	0.010	0.014	0.020	0.030	0.039	0.048	0.063
6 x 14 Ak .540	cfm	216	270	324	378	432	486	540
	Pt	0.010	0.014	0.019	0.029	0.037	0.047	0.062
6 x 16 Ak .591	cfm	236	296	355	414	473	532	591
	Pt	0.010	0.014	0.018	0.028	0.037	0.047	0.061
6 x 18 Ak .693	cfm	277	347	416	485	554	624	693
	Pt	0.009	0.014	0.017	0.027	0.036	0.045	0.059
6 x 20 Ak .740	cfm	296	370	444	518	592	666	740
	Pt	0.008	0.014	0.017	0.027	0.036	0.043	0.054
6 x 24 Ak .860	cfm	344	430	516	602	688	774	860
	Pt	0.007	0.013	0.017	0.024	0.033	0.041	0.052
6 x 30 Ak 1.05	cfm	420	525	630	735	840	945	1050
	Pt	0.007	0.013	0.017	0.023	0.032	0.041	0.048
6 x 36 Ak 1.24	cfm	496	620	744	868	992	1116	1240
	Pt	0.007	0.012	0.017	0.023	0.030	0.037	0.047
8 x 8 Ak .403	cfm	161	202	242	282	322	363	403
	Pt	0.010	0.014	0.020	0.030	0.039	0.048	0.065
8 x 10 Ak .505	cfm	202	253	303	354	404	455	505
	Pt	0.010	0.014	0.019	0.029	0.037	0.047	0.063
8 x 12 Ak .591	cfm	236	296	355	414	473	532	591
	Pt	0.010	0.014	0.018	0.028	0.037	0.046	0.061

8 x 14 Ak .710	cfm	284	355	426	497	568	639	710
	Pt	0.008	0.014	0.017	0.027	0.036	0.044	0.058
8 x 16 Ak .780	cfm	312	390	468	546	624	702	780
	Pt	0.008	0.014	0.017	0.025	0.033	0.041	0.052
8 x 18 Ak .860	cfm	344	430	516	602	688	774	860
	Pt	0.007	0.013	0.017	0.024	0.033	0.041	0.052
8 x 20 Ak .923	cfm	369	462	554	646	738	831	923
	Pt	0.007	0.013	0.017	0.023	0.033	0.041	0.050
8 x 24 Ak 1.13	cfm	452	565	678	791	904	1017	1130
	Pt	0.007	0.013	0.017	0.023	0.031	0.040	0.048
8 x 30 Ak 1.37	cfm	548	685	822	959	1096	1233	1370
	Pt	0.007	0.012	0.017	0.023	0.029	0.036	0.046
9 x 12 Ak .693	cfm	277	347	416	485	554	624	693
	Pt	0.009	0.014	0.017	0.027	0.036	0.045	0.059
10 x 10 Ak .658	cfm	263	329	395	461	526	592	658
	Pt	0.009	0.014	0.018	0.028	0.037	0.046	0.060
10 x 12 Ak .740	cfm	296	370	444	518	592	666	740
	Pt	0.008	0.014	0.017	0.027	0.036	0.043	0.054
10 x 14 Ak .802	cfm	321	401	481	561	642	722	802
	Pt	0.007	0.013	0.017	0.024	0.033	0.041	0.052
10 x 16 Ak .923	cfm	369	462	554	646	738	831	923
	Pt	0.007	0.013	0.017	0.023	0.033	0.041	0.050
10 x 18 Ak 1.05	cfm	420	525	630	735	840	945	1050
	Pt	0.007	0.013	0.017	0.023	0.032	0.041	0.048
10 x 20 Ak 1.22	cfm	488	610	732	854	976	1098	1220
	Pt	0.007	0.012	0.017	0.023	0.030	0.038	0.047
10 x 24 Ak 1.37	cfm	548	685	822	959	1096	1233	1370
	Pt	0.007	0.012	0.017	0.023	0.029	0.036	0.046
10 x 30 Ak 1.71	cfm	684	855	1026	1197	1368	1539	1710
	Pt	0.007	0.010	0.015	0.022	0.028	0.035	0.044
12 x 12 Ak .860	cfm	344	430	516	602	688	774	860
	Pt	0.007	0.013	0.017	0.024	0.033	0.041	0.052
12 x 14 Ak 1.68	cfm	672	840	1008	1176	1344	1512	1680
	Pt	0.007	0.011	0.016	0.023	0.028	0.035	0.044
12 x 16 Ak 1.13	cfm	452	565	678	791	904	1017	1130
	Pt	0.007	0.013	0.017	0.023	0.031	0.040	0.048
12 x 18 Ak 1.24	cfm	496	620	744	868	992	1116	1240
	Pt	0.007	0.012	0.017	0.023	0.030	0.037	0.047
12 x 20 Ak 1.37	cfm	548	685	822	959	1096	1233	1370
	Pt	0.007	0.012	0.017	0.023	0.03	0.037	0.047
12 x 24 Ak 1.68	cfm	672	840	1008	1176	1344	1512	1680
	Pt	0.007	0.011	0.016	0.023	0.028	0.035	0.044
12 x 30 Ak 2.12	cfm	848	1060	1272	1484	1696	1908	2120
	Pt	0.007	0.010	0.015	0.021	0.026	0.033	0.040

14 x 14 Ak 1.18	cfm	472	590	708	826	944	1062	1180
	Pt	0.007	0.012	0.017	0.023	0.031	0.039	0.048
14 x 16 Ak 1.28	cfm	512	640	768	896	1024	1152	1280
	Pt	0.007	0.012	0.017	0.023	0.029	0.036	0.046
14 x 20 Ak 1.62	cfm	648	810	972	1134	1296	1458	1620
	Pt	0.007	0.011	0.016	0.023	0.028	0.035	0.045
14 x 24 Ak 1.96	cfm	784	980	1176	1372	1568	1764	1960
	Pt	0.007	0.010	0.015	0.021	0.026	0.033	0.040
14 x 30 Ak 2.47	cfm	988	1235	1482	1729	1976	2223	2470
	Pt	0.007	0.010	0.014	0.02	0.025	0.031	0.039
16 x 16 Ak 1.47	cfm	588	735	882	1029	1176	1323	1470
	Pt	0.007	0.012	0.016	0.023	0.290	0.036	0.045
16 x 20 Ak 1.85	cfm	740	925	1110	1295	1480	1665	1850
	Pt	0.007	0.010	0.015	0.022	0.027	0.034	0.041
16 x 24 Ak 2.23	cfm	892	1115	1338	1561	1784	2007	2230
	Pt	0.007	0.010	0.015	0.021	0.026	0.032	0.040
16 x 30 Ak 2.65	cfm	1060	1325	1590	1855	2120	2385	2650
	Pt	0.006	0.010	0.014	0.019	0.024	0.030	0.038
18 x 18 Ak 1.87	cfm	748	935	1122	1309	1496	1683	1870
	Pt	0.007	0.010	0.015	0.022	0.027	0.034	0.041
18 x 24 Ak 2.52	cfm	1008	1260	1512	1764	2016	2268	2520
	Pt	0.007	0.010	0.014	0.02	0.025	0.031	0.038
18 x 30 Ak 3.03	cfm	1212	1515	1818	2121	2424	2727	3030
	Pt	0.006	0.009	0.013	0.018	0.023	0.029	0.036
20 x 20 Ak 2.36	cfm	944	1180	1416	1652	1888	2124	2360
	Pt	0.007	0.010	0.014	0.02	0.025	0.032	0.039
20 x 24 Ak 2.65	cfm	1060	1325	1590	1855	2120	2385	2650
	Pt	0.006	0.009	0.014	0.019	0.024	0.030	0.037
20 x 25 Ak 2.80	cfm	1120	1400	1680	1960	2240	2520	2800
	Pt	0.006	0.009	0.013	0.018	0.024	0.029	0.037
20 x 30 Ak 3.55	cfm	1420	1775	2130	2485	2840	3195	3550
	Pt	0.006	0.009	0.012	0.017	0.023	0.028	0.035
24 x 24 Ak 3.29	cfm	1316	1645	1974	2303	2632	2961	3290
	Pt	0.006	0.009	0.013	0.018	0.023	0.029	0.036
24 x 30 Ak 4.45	cfm	1780	2225	2670	3115	3560	4005	4450
	Pt	0.006	0.009	0.012	0.017	0.022	0.028	0.035
24 x 36 Ak 4.65	cfm	1860	2325	2790	3255	3720	4185	4650
	Pt	0.006	0.009	0.012	0.017	0.022	0.028	0.034
Velocity measured 1" from face								

150 - BASEBOARD DIFFUSER 15"									
FACE VELOCITY		300	400	500	600	700	800	900	1000
15" Ak .162	cfm	48.15	64.2	80.25	96.3	112.35	128.4	144.45	160.5
	Ps	0.004	0.008	0.016	0.02	0.028	0.032	0.044	0.052
Throw	50 fpm	6	7.5	10	11	13	15.5	17	19.5
Spread		6	7	10.5	12.5	14.5	16	18	20
Throw	100 fpm	3	3.75	5	5.5	6.5	7.75	8.5	9.75
Spread		3	3.5	5.25	6.25	7.25	8	9	10
Throw	150 fpm	2	2.5	3	4	4.5	5	6	6.5
Spread		2	2.5	3.5	4	5	5.5	6	6.5

150 - BASEBOARD DIFFUSER 18"									
FACE VELOCITY		300	400	500	600	700	800	900	1000
PRESSURE LOSS		0.012	0.024	0.032	0.048	0.068	0.088	0.108	0.132
18" Ak .271	cfm	78.9	105.2	131	157.2	183.4	210.4	236.7	263
	Spread	5	7	7.5	9	10.5	12	14	16
	Throw	6	7	8	10	11	12	15	16.5

150 - BASEBOARD DIFFUSER 24"									
FACE VELOCITY		300	400	500	600	700	800	900	1000
PRESSURE LOSS		0.028	0.04	0.056	0.076	0.096	0.128	0.152	0.192
24" Ak .462	cfm	138.6	184.8	231	277.2	323.4	369.6	415.8	462
	Spread	5	5.5	6.5	8	9	10.5	11.5	13
	Throw	5.5	6	6.5	8	9.5	11	12	13.5
Terminal Velocity of 50 fpm									

155 - BASEBOARD DIFFUSER 15"									
FACE VELOCITY		300	400	500	600	700	800	900	1000
15" Ak .162	cfm	48.15	64.2	80.25	96.3	112.35	128.4	144.45	160.5
	Ps	0.004	0.008	0.016	0.02	0.028	0.032	0.044	0.052
Throw	50 fpm	6	7.5	10	11	13	15.5	17	19.5
Spread		6	7	10.5	12.5	14.5	16	18	20
Throw	100 fpm	3	3.75	5	5.5	6.5	7.75	8.5	9.75
Spread		3	3.5	5.25	6.25	7.25	8	9	10
Throw	150 fpm	2	2.5	3	4	4.5	5	6	6.5
Spread		2	2.5	3.5	4	5	5.5	6	6.5

155 - BASEBOARD DIFFUSER 18"									
FACE VELOCITY		300	400	500	600	700	800	900	1000
PRESSURE LOSS		0.012	0.024	0.032	0.048	0.068	0.088	0.108	0.132
18" Ak .271	cfm	78.9	105.2	131	157.2	183.4	210.4	236.7	263
	Spread	5	7	7.5	9	10.5	12	14	16
	Throw	6	7	8	10	11	12	15	16.5

155 - BASEBOARD DIFFUSER 24"									
FACE VELOCITY		300	400	500	600	700	800	900	1000
PRESSURE LOSS		0.028	0.04	0.056	0.076	0.096	0.128	0.152	0.192
24" Ak .462	cfm	138.6	184.8	231	277.2	323.4	369.6	415.8	462
	Spread	5	5.5	6.5	8	9	10.5	11.5	13
	Throw	5.5	6	6.5	8	9.5	11	12	13.5
Terminal Velocity of 50 fpm									

165 - BASEBOARD RETURN AIR GRILLE						
FACE VELOCITY		300	400	500	600	700
2' Ak .330	cfm	99	132	165	198	231
	- Ps	0.010	0.027	0.044	0.061	0.086
4' Ak .655	cfm	197	262	328	393	459
	- Ps	0.014	0.025	0.038	0.057	0.074
Velocity measured on the face						

170 - BASEBOARD RETURN AIR GRILLE						
FACE VELOCITY		300	400	500	600	700
PRESSURE LOSS		0.008	0.012	0.016	0.020	0.032
14 x 6 Ak .55	cfm	159	212	265	318	371
	Pt	0.013	0.024	0.036	0.052	0.067
30 x 6 Ak 1.16	cfm	336	448	560	672	784
	Pt	0.012	0.022	0.032	0.042	0.062
Velocity measured 1" from face						

175 - BASEBOARD REGISTER						
FACE VELOCITY		300	400	500	600	700
14 x 6 Ak .55	cfm	159	212	265	318	371
	Pt	0.013	0.024	0.036	0.052	0.067
Terminal Velocity of 75 fpm						

185 - BASEBOARD RETURN AIR GRILLE

FACE VELOCITY		300	400	500	600	700
14 x 6 Ak .42	cfm	117	156	195	234	273
	Ps	0.020	0.032	0.052	0.076	0.108
14 x 8 Ak .54	cfm	156	208	260	312	364
	Ps	0.020	0.032	0.052	0.076	0.104
14 x 10 Ak .64	cfm	192	256	320	384	448
	Pressure Loss	0.020	0.032	0.052	0.072	0.100
16 x 6 Ak .44	cfm	132	176	220	264	308
	Pressure Loss	0.020	0.032	0.052	0.072	0.104
16 x 8 Ak .59	cfm	177	236	295	354	413
	Pressure Loss	0.020	0.032	0.052	0.072	0.104
20 x 6 Ak .55	cfm	165	220	275	330	385
	Pressure Loss	0.020	0.032	0.052	0.072	0.104
20 x 8 Ak .73	cfm	219	292	365	438	511
	Pressure Loss	0.020	0.032	0.052	0.072	0.104
24 x 6 Ak .68	cfm	201	268	335	402	469
	Ps	0.020	0.032	0.052	0.076	0.104
24 x 8 Ak .87	cfm	261	348	435	522	609
	Pressure Loss	0.020	0.032	0.052	0.068	0.100
24 x 10 Ak 1.09	cfm	327	436	545	654	763
	Pressure Loss	0.020	0.032	0.052	0.068	0.100
30 x 6 Ak .83	cfm	249	332	415	498	581
	Ps	0.020	0.032	0.052	0.076	0.100
30 x 8 Ak 1.12	cfm	328	437	547	656	765
	Ps	0.020	0.032	0.052	0.072	0.100
30 x 10 Ak 1.36	cfm	408	544	680	816	952
	Pressure Loss	0.020	0.032	0.052	0.064	0.100
30 x 12 Ak 1.62	cfm	486	648	810	972	1134
	Pressure Loss	0.020	0.032	0.052	0.064	0.096
36 x 6 Ak .98	cfm	294	392	490	588	686
	Pressure Loss	0.020	0.032	0.052	0.072	0.100
36 x 8 Ak 1.30	cfm	390	520	650	780	910
	Pressure Loss	0.020	0.032	0.052	0.072	0.100
Velocity measured 1" from face						

190 - BASEBOARD REGISTER

FACE VELOCITY		300	400	500	600	700	800	900	1000
PRESSURE LOSS		0.008	0.012	0.016	0.024	0.032	0.044	0.052	0.064
10 x 6 Ak .252	cfm	75	100	125	150	175	200	225	250
	Throw	7	9	11	13	16	18	20	22
12 x 6 Ak .309	cfm	91	121	151	181	211	242	272	302
	Throw	7	9	12	14	16	19	21	23
14 x 6 Ak .372	cfm	110	147	184	221	258	294	331	368
	Throw	8	11	13	15	17	20	22	24
Terminal Velocity of 75 fpm									

195 - BASEBOARD RETURN AIR GRILLE

FACE VELOCITY		300	400	500	600	700
10 x 6 Ak .39	cfm	114	152	190	228	266
	Pt	0.013	0.024	0.039	0.054	0.069
12 x 6 Ak .47	cfm	138	184	230	276	322
	Pt	0.013	0.024	0.037	0.053	0.069
14 x 6 Ak .55	cfm	159	212	265	318	371
	Pt	0.013	0.024	0.036	0.052	0.067
14 x 8 Ak .75	cfm	217.5	290	362.5	435	507.5
	Pt	0.013	0.023	0.035	0.049	0.066
24 x 6 Ak .95	cfm	276	368	460	552	644
	Pt	0.012	0.023	0.033	0.047	0.065
24 x 8 Ak 1.32	cfm	336	448	560	672	784
	Pt	0.010	0.020	0.030	0.042	0.058
30 x 6 Ak 1.16	cfm	336	448	560	672	784
	Pt	0.012	0.022	0.032	0.042	0.062
30 x 8 Ak 1.51	cfm	451.5	602	752.5	900	1050
	Pt	0.012	0.020	0.031	0.042	0.059
12 x 8 Ak .63	cfm	189	252	315	378	441
	Pt	0.012	0.024	0.032	0.048	0.064
16 x 8 Ak .84	cfm	252	336	420	504	588
	Pt	0.012	0.020	0.032	0.044	0.064
20 x 8 Ak .92	cfm	276	368	460	552	644
	Pt	0.012	0.020	0.032	0.044	0.060
30 x 10 Ak 1.93	cfm	579	772	965	1158	1351
	Pt	0.012	0.016	0.028	0.040	0.056
Velocity measured 1" from face						

201 - SIDEWALL/CEILING 1-WAY

Face Velocity		300	400	500	600	700	800	900	1000
Pressure Loss		0.008	0.012	0.016	0.024	0.032	0.044	0.052	0.064
8 x 4 Ak .103	cfm	31	41	52	62	72	82	93	103
	Throw	4	5	6	8	9	10	11	13
10 x 6 Ak .197	cfm	59	79	99	118	138	158	177	197
	Throw	6	8	11	13	14	16	18	20
12 x 6 Ak .237	cfm	71	95	119	142	166	190	213	237
	Throw	7	9	13	14	16	17	20	21
14 x 6 Ak .305	cfm	92	122	153	183	214	244	275	305
	Throw	8	10	16	17	19	21	22	26
14 x 8 Ak .412	cfm	124	165	206	247	288	330	371	412
	Throw	9	11	18	19	20	22	24	27
16 x 6 Ak .346	cfm	104	138	173	208	242	277	311	346
	Throw	9	11	17	19	20	22	24	26
Terminal Velocity of 75 fpm									

202 - SIDEWALL/CEILING 2-WAY

Face Velocity		300	400	500	600	700	800	900	1000
Pressure Loss		0.008	0.012	0.016	0.024	0.032	0.044	0.052	0.064
6 x 4 Ak .081	cfm	23	30	38	46	53	61	68	76
	Throw	3	4	5	6	7	8	9	10
6 x 6 Ak .113	cfm	32	42	53	63	74	84	95	105
	Throw	4	5	6	7	8	10	11	12
8 x 4 Ak .110	cfm	28	37	47	56	65	74	84	93
	Throw	3	5	6	7	8	9	10	11
8 x 6 Ak .153	cfm	44	59	74	89	103	118	133	148
	Throw	5	6	7	9	10	11	12	14
8 x 8 Ak .22	cfm	60	80	100	120	140	160	180	200
	Throw	5	6	8	9	10	12	13	15
10 x 4 Ak .125	cfm	36	48	60	72	84	96	108	120
	Throw	4	5	6	7	9	10	12	13
10 x 6 Ak .192	cfm	56	75	94	112	131	150	168	187
	Throw	6	7	9	10	11	13	14	15
10 x 8 Ak .27	cfm	72	96	120	144	168	192	216	240
	Throw	5	6	8	10	12	14	17	19
10 x 10 Ak .318	cfm	94	126	157	188	220	251	283	314
	Throw	6	8	11	12	14	15	18	19
12 x 4 Ak .152	cfm	44	58	73	87	102	116	131	145
	Throw	4	6	7	9	10	12	13	14
12 x 6 Ak .236	cfm	71	94	118	142	165	189	212	236
	Throw	6	8	9	11	13	14	16	17
12 x 8 Ak .327	cfm	97	130	162	194	227	259	292	324
	Throw	7	9	11	12	14	16	18	20
14 x 4 Ak .178	cfm	51	68	86	103	120	137	154	171
	Throw	5	6	8	9	10	12	13	14
14 x 6 Ak .304	cfm	89	118	148	177	207	236	266	295
	Throw	7	8	10	12	13	15	17	19
14 x 8 Ak .405	cfm	119	158	198	237	277	316	356	395
	Throw	7	10	11	13	15	17	19	21
14 x 10 Ak .480	cfm	135	180	225	270	315	360	405	450
	Throw	8	11	13	14	16	19	21	22
16 x 6 Ak .34	cfm	102	136	170	204	238	272	306	340
	Throw	7	9	11	13	15	16	18	20
20 x 6 Ak .430	cfm	126	168	210	252	294	336	378	420
	Throw	7	11	12	14	15	18	20	21
10 x 5 Ak .169	cfm	51	68	85	101	118	135	152	169
	Throw	5	6	7	9	10	11	12	14
12 x 5 Ak .190	cfm	57	76	95	114	133	152	171	190
	Throw	6	7	9	10	11	13	14	15

16 x 8 Ak .443	cfm	133	177	222	266	310	354	399	443
	Throw	7	10	11	13	16	17	20	21
18 x 6 Ak .379	cfm	114	152	190	227	265	303	341	379
	Throw	6	9	11	13	14	16	17	20
Terminal Velocity of 75 fpm									

203 - SIDEWALL/CEILING 3-WAY

FACE VELOCITY		300	400	500	600	700	800	900	1000
PRESSURE LOSS		0.008	0.012	0.016	0.024	0.032	0.044	0.052	0.064
6 x 6 Ak .118	Total cfm	34	45	56	67	78	90	101	112
	cfm L/S	11/11	15/15	18/19	22/23	25/27	29/30	32/34	36/38
	Throw L/S	4/4	5/4	7/6	8/8	8/8	9/9	10/10	11/11
8 x 4 Ak .11	Total cfm	28	37	47	56	65	74	84	93
	cfm L/S	14/7	18/10	25/11	29/13	34/16	39/18	44/20	49/22
	Throw L/S	4/3	6/4	7/5	8/5	9/6	10/7	11/8	12/9
8 x 6 Ak .149	Total cfm	42	56	71	85	99	113	127	141
	cfm L/S	22/10	29/14	37/17	44/20	51/24	59/27	66/30	73/34
	Throw L/S	4/3	6/4	7/5	8/6	10/7	11/8	12/9	14/10
8 x 8 Ak .211	Total cfm	61	81	101	121	141	162	182	202
	cfm L/S	32/15	42/19	53/24	63/29	74/34	84/39	95/44	105/48
	Throw L/S	5/4	7/5	9/7	10/8	12/9	14/10	15/11	17/12
10 x 4 Ak .121	Total cfm	36	48	60	71	83	95	107	119
	cfm L/S	21/7	30/9	38/11	45/13	53/15	60/17	68/20	76/22
	Throw L/S	4/3	7/4	8/5	9/6	10/7	11/7	13/8	15/9
10 x 6 Ak .193	Total cfm	57	76	95	114	133	152	171	190
	cfm L/S	36/10	49/14	61/17	73/21	85/24	97/27	109/31	122/34
	Throw L/S	6/4	8/5	10/6	11/7	13/8	14/9	16/9	18/10
10 x 8 Ak .29	Total cfm	78	104	130	156	182	208	234	260
	cfm L/S	44/17	58/23	73/29	87/34	102/40	116/46	131/51	146/57
	Throw L/S	7/4	9/6	11/7	13/8	15/9	17/10	19/11	21/12
10 x 10 Ak .320	Total cfm	93	124	155	186	217	249	280	311
	cfm L/S	60/17	80/22	99/28	119/34	139/39	159/45	179/50	199/56
	Throw L/S	7/5	10/6	11/7	13/8	16/9	18/11	20/12	22/13
12 x 4 Ak .152	Total cfm	44	58	73	88	102	117	131	146
	cfm L/S	23/11	30/14	38/18	46/21	53/25	61/28	68/32	76/35
	Throw L/S	4/3	6/4	8/5	9/6	10/7	11/8	13/8	14/9
12 x 6 Ak .236	Total cfm	70	93	116	139	162	186	209	232
	cfm L/S	36/17	48/22	60/28	72/33	84/39	97/45	109/50	121/56
	Throw L/S	6/4	8/6	10/7	12/8	13/9	15/10	17/11	18/12
12 x 8 Ak .33	Total cfm	96	128	160	192	224	256	288	320
	cfm L/S	50/23	67/31	83/38	100/46	116/54	133/61	150/69	166/77
	Throw L/S	7/5	9/6	11/7	13/9	14/10	16/11	18/12	19/13
12 x 12 Ak .483	Total cfm	141	188	235	282	330	377	424	471
	cfm L/S	73/34	98/45	122/56	147/68	171/79	196/90	220/102	245/113
	Throw L/S	8/5	10/7	13/8	15/10	17/11	20/13	22/15	25/16
14 x 4 Ak .178	Total cfm	52	70	87	104	122	139	157	174
	cfm L/S	30/11	40/15	50/19	60/22	69/26	79/30	89/34	99/37
	Throw L/S	5/3	6/5	8/5	10/6	11/7	13/8	15/9	16/10
14 x 6 Ak .296	Total cfm	89	118	148	178	207	237	266	296
	cfm L/S	53/18	71/24	89/30	107/36	127/41	142/47	160/53	178/59
	Throw L/S	7/5	9/6	11/7	14/8	16/10	18/11	21/12	23/13

14 x 8 Ak .395	Total cfm	119	158	198	237	277	316	356	395
	cfm L/S	71/24	95/32	119/40	142/47	166/55	190/63	213/71	237/79
	Throw L/S	7/5	10/6	12/8	14/9	17/10	19/11	22/12	25/14
8 x 6 Ak .152	Total cfm	46	61	76	91	106	122	137	152
	cfm L/S	24/11	31/15	40/18	47/22	55/26	63/29	71/33	79/36
	Throw L/S	4/3	6/4	8/5	9/6	10/7	11/8	13/8	14/9
14 x 10 Ak .465	Total cfm	140	186	233	279	326	372	419	465
	cfm L/S	83/28	111/38	139/47	166/56	194/66	222/75	249/85	277/94
	Throw L/S	7/6	10/7	12/9	14/10	17/11	19/13	22/14	25/16
14 x 14 Ak .667	Total cfm	200	267	334	400	467	534	600	667
	cfm L/S	120/40	160/53	200/67	240/80	280/93	320/107	360/120	400/133
	Throw L/S	10/6	13/8	15/10	19/12	21/14	24/15	28/16	30/18
16 x 8 Ak .445	Total cfm	134	178	223	267	312	356	401	445
	cfm L/S	79/27	106/36	132/45	159/54	185/63	212/72	238/81	265/90
	Throw L/S	7/5	10/6	12/8	14/9	17/10	19/12	22/13	25/15
Terminal Velocity of 75 fpm									

204 - SIDEWALL/CEILING 3-WAY									
FACE VELOCITY		300	400	500	600	700	800	900	1000
PRESSURE LOSS		0.008	0.012	0.016	0.024	0.032	0.044	0.052	0.064
6 x 6 Ak .105	Total cfm	34	45	56	67	78	90	101	112
	cfm L/S	5/12	7/16	9/19	11/23	12/27	14/30	17/34	18/38
	Throw L/S	3/4	4/5	5/6	5/7	6/8	6/9	7/9	7/10
8 x 8 Ak .230	Total cfm	63	84	105	126	147	168	189	210
	cfm L/S	16/15	22/20	27/25	33/30	38/35	44/40	49/45	55/50
	Throw L/S	4/4	5/5	6/6	7/7	9/8	10/9	11/10	12/11
10 x 10 Ak .319	Total cfm	95	126	158	189	221	252	284	315
	cfm L/S	30/17	40/23	50/28	60/34	71/40	81/45	91/51	101/57
	Throw L/S	5/4	7/5	8/6	10/8	11/9	13/10	14/11	16/12
12 x 12 Ak .480	Total cfm	143	190	238	285	333	380	428	475
	cfm L/S	37/34	49/46	62/57	74/68	86/80	99/91	111/103	124/114
	Throw L/S	6/5	8/7	9/8	11/10	13/11	14/13	16/15	17/16
14 x 14 Ak .67	Total cfm	195	260	325	390	455	520	585	650
	cfm L/S	59/39	78/52	98/65	117/78	137/91	156/104	176/117	195/130
	Throw L/S	6/5	8/7	11/9	13/10	16/12	18/14	21/15	24/17
Terminal Velocity of 75 fpm									

222 - SIDEWALL/CEILING REGISTER 2-WAY									
FACE VELOCITY		300	400	500	600	700	800	900	1000
PRESSURE LOSS		0.008	0.012	0.016	0.024	0.032	0.044	0.052	0.064
6 x 6 Ak .128	cfm	38	51	64	77	90	102	115	128
	Throw	5	6	8	9	11	13	14	16
8 x 8 Ak .263	cfm	79	105	131	157	183	210	236	262
	Throw	7	9	11	14	16	18	21	23
10 x 4 Ak .156	cfm	45	60	75	90	105	120	135	150
	Throw	5	7	8	10	12	13	15	17
10 x 6 Ak .252	cfm	75	100	125	150	175	200	225	250
	Throw	7	9	11	13	16	18	20	22
12 x 4 Ak .192	cfm	56	74	93	111	130	148	167	185
	Throw	6	7	9	11	13	15	17	19
12 x 6 Ak .309	cfm	91	121	151	181	211	242	272	302
	Throw	7	9	12	14	16	19	21	23
14 x 4 Ak .234	cfm	70	94	117	140	164	187	211	234
	Throw	7	9	11	14	15	17	19	21
14 x 6 Ak .372	cfm	110	147	184	221	258	294	331	368
	Throw	8	11	13	15	17	20	22	24
14 x 8 Ak .524	cfm	156	208	260	312	364	416	468	520
	Throw	8	11	14	17	20	23	26	29
20 x 4 Ak .358	cfm	107	143	179	215	251	286	322	358
	Throw	8	10	13	15	18	20	23	25
20 x 6 Ak .565	cfm	170	226	283	339	396	452	509	565
	Throw	9	12	16	18	21	25	27	31
20 x 8 Ak .772	cfm	232	309	386	463	540	618	695	772
	Throw	11	14	18	20	24	28	30	35
20 x 10 Ak .978	cfm	293	391	489	587	685	782	880	978
	Throw	12	16	19	22	25	30	33	37
22 x 4 Ak .399	cfm	120	160	200	239	279	319	359	399
	Throw	8	11	13	15	18	21	23	25
22 x 6 Ak .627	cfm	188	251	314	376	439	502	564	627
	Throw	9	12	16	19	21	26	27	32
22 x 8 Ak .854	cfm	256	342	427	512	598	683	769	854
	Throw	11	15	18	21	24	29	31	35
22 x 10 Ak 1.08	cfm	324	432	540	648	756	864	972	1080
	Throw	13	16	20	22	26	30	34	38
24 x 4 Ak .441	cfm	132	176	221	265	309	353	397	441
	Throw	8	11	13	16	19	23	24	27
24 x 6 Ak .689	cfm	207	276	345	413	482	551	620	689
	Throw	10	13	17	20	23	26	30	33
24 x 8 Ak .987	cfm	296	395	494	592	691	790	888	987
	Throw	12	15	19	23	26	31	35	38
24 x 10 Ak 1.19	cfm	357	476	595	714	833	952	1071	1190
	Throw	13	17	21	25	30	33	39	43
26 x 4 Ak .482	cfm	145	193	241	289	337	386	434	482
	Throw	8	11	14	16	20	22	25	28

26 x 6 Ak .751	cfm	225	300	376	451	526	601	676	751
	Throw	11	14	18	20	24	28	30	35
26 x 8 Ak 1.02	cfm	306	408	510	612	714	816	918	1020
	Throw	12	17	20	22	25	31	33	37
26 x 10 Ak 1.29	cfm	387	516	645	774	903	1032	1161	1290
	Throw	14	18	22	26	30	34	39	43
28 x 4 Ak .523	cfm	157	209	262	314	366	418	471	523
	Throw	8	12	14	17	20	23	25	28
28 x 6 Ak .813	cfm	244	325	407	488	569	650	732	813
	Throw	11	15	18	21	24	28	31	35
28 x 8 Ak 1.10	cfm	330	440	550	660	770	880	990	1100
	Throw	13	17	20	22	26	31	34	38
28 x 10 Ak 1.39	cfm	417	556	695	834	973	1112	1251	1390
	Throw	16	19	23	27	31	36	41	45
30 x 4 Ak .565	cfm	170	226	283	339	396	452	509	565
	Throw	9	12	16	18	21	25	27	31
30 x 6 Ak .885	cfm	266	354	443	531	620	708	797	885
	Throw	12	15	19	21	25	29	31	36
30 x 8 Ak 1.31	cfm	393	524	655	786	917	1048	1179	1310
	Throw	13	17	21	25	30	33	39	43
30 x 10 Ak 1.50	cfm	450	600	750	900	1050	1200	1350	1500
	Throw	17	20	24	28	32	37	42	46
32 x 4 Ak .606	cfm	182	242	303	364	424	485	545	606
	Throw	9	13	16	19	21	25	28	32
32 x 6 Ak 1.27	cfm	281	375	469	562	656	750	843	937
	Throw	12	15	19	23	26	31	35	38
32 x 8 Ak 1.27	cfm	381	508	635	762	889	1016	1143	1270
	Throw	14	17	22	26	29	34	38	42
32 x 10 Ak 1.60	cfm	480	640	800	960	1120	1280	1440	1600
	Throw	18	21	25	29	33	39	44	48
34 x 4 Ak .647	cfm	194	259	324	388	453	518	582	647
	Throw	10	13	17	19	23	26	29	33
34 x 6 Ak .999	cfm	300	400	500	599	699	799	899	999
	Throw	12	16	19	22	25	30	33	37
34 x 8 Ak 1.35	cfm	405	540	675	810	945	1080	1215	1350
	Throw	15	19	22	27	30	36	39	44
34 x 10 Ak 1.70	cfm	510	680	850	1020	1190	1360	1530	1700
	Throw	19	22	26	30	35	41	46	50
36 x 4 Ak .689	cfm	207	276	345	413	482	551	620	689
	Throw	10	13	17	20	23	26	30	33
36 x 6 Ak 1.06	cfm	318	424	530	636	742	848	954	1060
	Throw	13	15	20	21	26	29	33	37
36 x 8 Ak 1.43	cfm	429	572	715	858	1001	1144	1287	1430
	Throw	16	20	23	28	31	36	42	46
36 x 10 Ak 1.81	cfm	543	724	905	1086	1267	1448	1629	1810
	Throw	17	21	25	29	32	38	44	48
38 x 4 Ak .730	cfm	219	292	365	438	511	584	657	730
	Throw	11	13	18	19	23	27	29	34

38 x 6 Ak 1.12	cfm	336	448	560	672	784	896	1008	1120
	Throw	13	16	21	23	26	31	34	38
38 x 8 Ak 1.52	cfm	456	608	760	912	1064	1216	1368	1520
	Throw	17	20	24	28	32	37	42	46
38 x 10 Ak 1.91	cfm	573	764	955	1146	1337	1528	1719	1910
	Throw	18	22	26	30	35	39	46	50
40 x 4 Ak .772	cfm	232	309	386	463	540	618	695	772
	Throw	11	14	18	20	24	28	30	35
40 x 6 Ak 1.19	cfm	357	476	595	714	833	952	1071	1190
	Throw	13	17	21	25	30	33	39	43
40 x 8 Ak 1.60	cfm	480	640	800	960	1120	1280	1440	1600
	Throw	18	21	25	29	33	39	44	48
40 x 10 Ak 2.01	cfm	603	804	1005	1206	1407	1608	1809	2010
	Throw	19	23	27	31	36	41	48	52
42 x 4 Ak .813	cfm	244	325	407	488	569	650	732	813
	Throw	11	15	18	21	24	29	30	35
42 x 6 Ak 1.25	cfm	375	500	625	750	875	1000	1125	1250
	Throw	14	18	21	26	29	34	38	42
42 x 8 Ak 1.68	cfm	504	672	840	1008	1176	1344	1512	1680
	Throw	19	21	26	29	35	40	46	50
42 x 10 Ak 2.12	cfm	636	848	1060	1272	1484	1696	1908	2120
	Throw	20	24	28	32	37	43	50	53
44 x 4 Ak .854	cfm	256	342	427	512	598	683	769	854
	Throw	12	14	19	20	25	28	31	35
44 x 6 Ak 1.43	cfm	393	524	655	786	917	1048	1179	1310
	Throw	14	19	22	27	30	34	40	43
44 x 8 Ak 1.76	cfm	528	704	880	1056	1232	1408	1584	1760
	Throw	17	20	25	28	32	37	43	47
44 x 10 Ak 2.22	cfm	666	888	1110	1332	1554	1776	1998	2220
	Throw	21	25	29	33	39	45	51	55
46 x 4 Ak .937	cfm	281	375	469	562	656	750	843	937
	Throw	12	15	19	22	25	29	32	36
46 x 6 Ak 1.43	cfm	429	572	715	858	1001	1144	1287	1430
	Throw	15	19	22	27	30	36	40	44
46 x 8 Ak 1.93	cfm	579	772	965	1158	1351	1544	1737	1930
	Throw	17	22	25	30	32	39	45	48
46 x 10 Ak 2.43	cfm	729	972	1215	1458	1701	1944	2187	2430
	Throw	22	26	30	34	39	47	53	57
48 x 4 Ak .896	cfm	269	358	448	538	627	717	806	896
	Throw	12	16	19	22	25	30	31	36
48 x 6 Ak 1.37	cfm	411	548	685	822	959	1096	1233	1370
	Throw	16	20	23	28	31	37	42	46
48 x 8 Ak 1.85	cfm	555	740	925	1110	1295	1480	1665	1850
	Throw	18	22	26	30	35	39	46	50
48 x 10 Ak 2.32	cfm	696	928	1160	1392	1624	1856	2088	2320
	Throw	23	27	31	36	41	49	55	59
Terminal Velocity of 75 fpm									

230 - ALUMINUM SIDEWALL/CEILING REGISTER 2-WAY

FACE VELOCITY		300	400	500	600	700	800	900	1000
PRESSURE LOSS		0.008	0.012	0.016	0.024	0.032	0.044	0.052	0.064
10 x 6 Ak .252	cfm	75	100	125	150	175	200	225	250
	Throw	7	9	11	13	16	18	20	22
12 x 6 Ak .309	cfm	91	121	151	181	211	242	272	302
	Throw	7	9	12	14	16	19	21	23
14 x 6 Ak .372	cfm	110	147	184	221	258	294	331	368
	Throw	8	11	13	15	17	20	22	24
Terminal Velocity of 75 fpm									

261 - SIDEWALL/CEILING REGISTER 1-WAY CURVED BLADE

FACE VELOCITY		300	400	500	600	700	800	900	1000
8 x 4 Ak .13	cfm	35	47	59	70	82	94	105	117
	Ps	0.008	0.012	0.020	0.032	0.044	0.052	0.068	0.080
	Throw	7	9	11	14	15	17	19	22
10 x 4 Ak .16	cfm	36	48	60	72	84	96	108	120
	Ps	0.008	0.012	0.020	0.032	0.040	0.052	0.068	0.084
	Throw	6	9	12	14	17	20	23	25
10 x 6 Ak .16	cfm	42	56	70	84	98	112	126	140
	Ps	0.008	0.012	0.020	0.032	0.044	0.056	0.068	0.084
	Throw	8	10	12	15	17	20	22	25
10 x 8 Ak .22	cfm	57	76	95	114	133	152	171	190
	Ps	0.012	0.016	0.024	0.032	0.048	0.064	0.072	0.088
	Throw	8	12	13	16	19	23	26	30
12 x 6 Ak .20	cfm	57	76	95	114	133	152	171	190
	Ps	0.008	0.016	0.024	0.032	0.048	0.060	0.076	0.100
	Throw	8	10	12	15	17	19	21	24
12 x 8 Ak .24	cfm	66	88	110	132	154	176	198	220
	Ps	0.008	0.016	0.024	0.032	0.044	0.056	0.072	0.092
	Throw	9	12	15	17	19	22	24	27
14 x 6 Ak .24	cfm	66	88	110	132	154	176	198	220
	Ps	0.012	0.016	0.024	0.032	0.044	0.064	0.072	0.088
	Throw	7	10	13	16	18	20	22	26
14 x 8 Ak .25	cfm	72	96	120	144	168	192	216	240
	Ps	0.012	0.016	0.024	0.040	0.048	0.068	0.080	0.092
	Throw	9	12	16	19	23	26	30	34
Terminal Velocity of 75 fpm									

262 - SIDEWALL/CEILING REGISTER 2-WAY CURVED BLADE

FACE VELOCITY		300	400	500	600	700	800	900	1000
8 x 4 Ak .14	cfm	33	44	55	66	77	88	99	110
	Ps	0.012	0.024	0.036	0.048	0.060	0.088	0.108	0.132
	Throw	3	5	6	8	9	10	12	13
10 x 6 Ak .18	cfm	51	68	85	102	119	136	153	170
	Ps	0.012	0.024	0.032	0.048	0.064	0.084	0.104	0.128
	Throw	4	6	7	9	10	12	13	15
12 x 6 Ak .23	cfm	63	84	105	126	147	168	189	210
	Ps	0.012	0.020	0.032	0.048	0.064	0.080	0.100	0.124
	Throw	6	7	9	11	13	14	16	17
12 x 8 Ak .28	cfm	81	108	135	162	189	216	243	270
	Ps	0.012	0.024	0.032	0.044	0.064	0.080	0.100	0.124
	Throw	7	8	10	12	13	15	17	19
14 x 6 Ak .26	cfm	72	96	120	144	168	192	216	240
	Ps	0.012	0.020	0.032	0.044	0.064	0.080	0.104	0.124
	Throw	7	8	10	12	13	15	16	18
Terminal Velocity of 75 fpm									

263 - SIDEWALL/CEILING REGISTER 3-WAY CURVED BLADE

FACE VELOCITY		300	400	500	600	700	800	900	1000
6 x 6 Ak .15	cfm	36	48	60	72	84	96	108	120
	Ps	0.016	0.032	0.044	0.060	0.080	0.104	0.128	0.164
	Throw L	6	8	9	10	12	15	17	20
8 x 4 Ak .12	cfm	35	46	58	69	81	92	104	115
	Ps	0.012	0.024	0.040	0.056	0.076	0.104	0.124	0.164
	Throw L	5	7	9	11	12	14	16	17
8 x 6 Ak .17	cfm	42	56	70	84	98	112	126	140
	Ps	0.020	0.032	0.048	0.064	0.084	0.108	0.136	0.168
	Throw L	6	8	10	12	14	17	18	21
8 x 8 Ak .21	cfm	57	76	95	113	132	151	170	189
	Ps	0.012	0.024	0.032	0.052	0.068	0.088	0.112	0.136
	Throw L	7	9	11	13	16	18	20	22
10 x 6 Ak .18	cfm	53	70	88	106	123	141	158	176
	Ps	0.012	0.024	0.040	0.060	0.080	0.104	0.136	0.168
	Throw L	8	9	11	13	15	18	19	22
10 x 8 Ak .25	cfm	66	88	110	132	154	176	198	220
	Ps	0.012	0.028	0.040	0.056	0.068	0.092	0.112	0.144
	Throw L	7	9	11	14	17	20	23	26
10 x 10 Ak .34	cfm	96	128	160	192	224	256	288	320
	Ps	0.016	0.028	0.044	0.060	0.088	0.120	0.140	0.176
	Throw L	8	11	14	17	20	23	26	28
12 x 6 Ak .24	cfm	66	88	110	132	154	176	198	220
	Ps	0.012	0.024	0.036	0.044	0.068	0.084	0.108	0.132
	Throw L	8	10	12	14	17	19	21	23
12 x 8 Ak .29	cfm	84	112	140	168	196	224	252	280
	Ps	0.008	0.020	0.028	0.040	0.048	0.064	0.080	0.096
	Throw L	9	12	15	17	19	21	24	28
12 x 12 Ak .40	cfm	117	156	195	234	273	312	351	390
	Ps	0.008	0.016	0.024	0.032	0.044	0.056	0.072	0.092
	Throw L	9	13	15	18	22	25	29	32

14 x 6 Ak .23	cfm	63	84	105	126	147	168	189	210
	Ps	0.008	0.016	0.028	0.036	0.052	0.068	0.088	0.104
	Throw L	8	10	12	15	17	19	21	23
14 x 8 Ak .34	cfm	90	120	150	180	210	240	270	300
	Ps	0.008	0.020	0.028	0.040	0.048	0.068	0.084	0.104
	Throw L	8	11	14	17	20	24	27	30
Terminal Velocity of 75 fpm									

264 - SIDEWALL/CEILING REGISTER 4-WAY CURVED BLADE

FACE VELOCITY		300	400	500	600	700	800	900	1000
6 x 6 Ak .17	cfm	50	67	84	100	117	134	150	167
	Ps	0.036	0.068	0.108	0.156	0.204	0.284	0.344	0.440
	Throw L	4	5	6	7	8	8	9	10
8 x 8 Ak .23	cfm	66	88	110	132	154	176	198	220
	Ps	0.020	0.044	0.068	0.092	0.128	0.164	0.212	0.264
	Throw L	5	6	7	8	10	11	12	13
10 x 10 Ak .30	cfm	86	114	143	172	200	229	257	286
	Ps	0.016	0.028	0.048	0.064	0.088	0.116	0.148	0.180
	Throw L	5	6	8	9	11	12	14	15
12 x 12 Ak .41	cfm	122	162	203	243	284	324	365	405
	Ps	0.016	0.024	0.032	0.048	0.068	0.084	0.108	0.132
	Throw L	5	7	9	11	12	14	16	18
14 x 14 Ak .49	cfm	145	194	242	290	339	387	436	484
	Ps	0.008	0.016	0.028	0.040	0.048	0.064	0.080	0.104
	Throw L	6	8	10	12	14	15	17	19
Terminal Velocity of 75 fpm									

281 - ALUMINUM SIDEWALL/CEILING REGISTER 1-WAY ADJUSTABLE

FACE VELOCITY		400	500	600	700	800	900	1000	1100	1200
PRESSURE LOSS		0.012	0.016	0.024	0.032	0.040	0.052	0.064	0.076	0.092
6 x 6 Ak .15	cfm	61	77	92	107	123	138	154	169	184
	Throw	6	8	10	11	12	13	15	17	19
8 x 8 Ak .23	cfm	92	116	139	162	185	208	231	254	277
	Throw	8	10	11	13	16	17	21	22	25
10 x 6 Ak .22	cfm	88	110	132	154	176	198	220	242	264
	Throw	7	9	11	12	15	16	20	21	24
10 x 10 Ak .33	cfm	132	165	198	232	265	298	331	364	397
	Throw	8	11	12	14	16	18	21	23	25
14 x 8 Ak .37	cfm	146	182	218	255	291	328	364	400	437
	Throw	9	12	13	16	18	21	23	25	27
Terminal Velocity of 75fpm										

283 - ALUMINUM SIDEWALL/CEILING REGISTER 3-WAY ADJUSTABLE CURVED BLADE

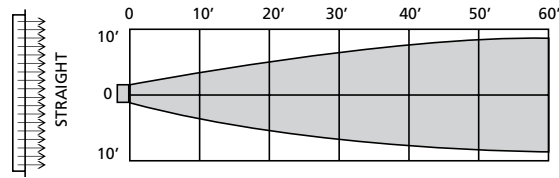
FACE VELOCITY		400	500	600	700	800	900	1000	1100	1200
PRESSURE LOSS		0.012	0.016	0.024	0.032	0.040	0.052	0.064	0.076	0.092
6 x 6 Ak .14	cfm	58	72	87	101	116	130	144	159	173
	cfm L/S	10/15	12/18	16/22	18/25	21/28	22/31	25/36	27/38	31/42
	Throw L/S	3/4	4/5	5/6	6/7	6/8	7/8	8/8	8/9	8/10
8 x 4 Ak .13	cfm	53	66	79	93	106	119	132	145	159
	cfm L/S	10/14	12/18	16/21	18/25	20/28	22/30	25/36	26/38	31/41
	Throw L/S	3/4	4/5	5/6	6/7	6/8	7/8	7/8	8/9	8/9
8 x 8 Ak .23	cfm	92	115	138	161	184	207	230	253	276
	cfm L/S	41/24	51/31	63/36	69/41	78/47	89/55	99/59	109/66	119/72
	Throw L/S	5/4	6/5	8/6	8/7	10/8	11/9	12/10	14/12	15/13
10 x 4 Ak .15	cfm	63	78	94	110	125	141	157	172	188
	cfm L/S	11/15	13/19	17/21	18/26	21/28	22/30	26/36	26/39	32/41
	Throw L/S	3/4	4/5	5/7	6/7	7/8	7/8	8/8	8/10	9/11
10 x 6 Ak .22	cfm	87	109	131	152	174	196	218	240	261
	cfm L/S	29/27	37/33	44/38	50/46	58/51	65/59	72/64	79/72	87/79
	Throw L/S	5/5	5/6	7/6	7/7	8/9	9/9	10/11	12/12	12/13
10 x 10 Ak .34	cfm	136	170	204	238	272	306	340	374	408
	cfm L/S	47/42	59/63	72/64	83/74	95/85	106/94	119/106	131/117	142/126
	Throw L/S	5/5	6/7	8/7	9/9	10/11	11/12	13/12	14/15	15/16
12 x 6 Ak .25	cfm	102	127	153	178	204	229	254	280	305
	cfm L/S	28/34	36/42	42/49	49/59	57/67	63/74	70/83	77/91	84/98
	Throw L/S	4/4	5/6	6/7	7/8	8/8.5	9/9	10/11	11/12	11/12

12 x 8 Ak .32	cfm	131	164	197	229	262	295	328	361	393
	cfm L/S	47/42	59/63	72/64	83/74	95/85	106/94	119/106	131/117	142/126
	Throw L/S	5/5	7/7	8/7	9/8	10/9	11/10	12/12	14/13	15/14
12 x 12 Ak .47	cfm	190	237	285	332	380	427	475	522	569
	cfm L/S	47/56	58/68	68/79	79/89	89/103	99/115	109/127	119/139	121/152
	Throw L/S	9/11	12/12	13/12	14/15	13/14	15/16	16/17	17/18	19/19
14 x 6 Ak .29	cfm	116	146	175	204	233	262	291	320	349
	cfm L/S	44/40	57/61	70/61	80/71	92/81	103/91	116/104	127/113	140/123
	Throw L/S	4/5	6/7	7/8	9/8	10/9	11/10	11/12	12/13	13/14
14 x 8 Ak .37	cfm	151	188	226	264	301	339	377	414	452
	cfm L/S	42/49	53/62	63/74	74/86	84/99	95/111	106/123	116/136	127/148
	Throw L/S	4/5	6/6	7/7	8/8	9/9	10/10	11/11	12/12	14/14
14 x 14 Ak .63	cfm	253	317	380	443	507	570	633	697	760
	cfm L/S	53/68	70/80	80/92	91/102	101/115	103/127	121/139	132/151	133/164
	Throw L/S	17/18	19/18	21/18	19/21	18/22	21/22	22/23	23/24	24/25

284 - ALUMINUM SIDEWALL/CEILING REGISTER 4-WAY ADJUSTABLE CURVED BLADE

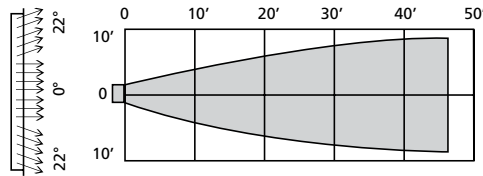
FACE VELOCITY		400	500	600	700	800	900	1000	1100	1200
PRESSURE LOSS		0.012	0.016	0.024	0.032	0.040	0.052	0.064	0.076	0.092
6 x 6 Ak .14	cfm	54	76	89	99	112	132	140	156	176
	cfm L/S	9/18	15/25	23/35	26/38	26/41	27/45	28/48	29/49	31/55
	Throw L/S	3/4	4/5	4/6	5/6	6/7	7/8	7/9	8/11	8/12
8 x 8 Ak .20	cfm	89	120	132	167	189	199	223	235	268
	cfm L/S	19/21	23/28	28/32	33/40	37/43	42/51	47/53	53/61	68/77
	Throw L/S	4/4	4/5	5/6	6/7	6/7	7/8	8/9	9/11	9/10
10 x 10 Ak .28	cfm	132	150	188	213	244	282	321	338	366
	cfm L/S	28/47	38/57	47/68	49/79	49/89	55/96	64/112	68/121	79/134
	Throw L/S	4/5	4/6	6/7	7/8	6/8	8/9	9/11	9/12	12/13
12 x 12 Ak .38	cfm	162	213	248	271	314	352	390	438	476
	cfm L/S	31/64	36/78	47/99	53/117	58/124	64/148	68/169	79/178	88/184
	Throw L/S	4/6	5/7	6/8	7/9	8/9	9/10	9/12	11/13	11/16
14 x 14 Ak .52	cfm	228	288	332	384	446	478	560	592	664
	cfm L/S	49/98	56/112	53/132	69/151	65/169	79/187	89/193	94/243	99/244
	Throw L/S	5/6	6/7	6/9	7/10	7/11	9/13	10/16	12/17	13/18

A DEFLECTION



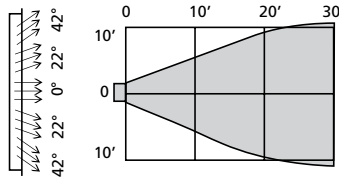
DEFLECTION - A											
260 - SIDEWALL/CEILING REGISTER ADJUSTABLE CURVED-FACED BLADES											
FACE VELOCITY		300	400	500	600	700	800	900	1000	1100	1200
PRESSURE LOSS		0.004	0.008	0.012	0.020	0.028	0.040	0.052	0.064	0.080	0.096
6 x 6 Ak .178	cfm	53	70	88	106	123	141	158	176	194	211
	Throw	6	8	10	11	13	15	16	18	20	21
8 x 4 Ak .162	cfm	47	62	78	94	109	125	140	156	172	187
	Throw	6	8	9	11	12	14	15	17	19	20
8 x 8 Ak .335	cfm	100	134	167	200	234	267	301	334	367	401
	Throw	8	11	13	16	17	20	22	25	27	30
10 x 4 Ak .203	cfm	61	81	102	122	142	162	183	203	223	244
	Throw	6	8	10	12	14	16	18	20	22	24
10 x 6 Ak .332	cfm	99	132	165	198	231	264	297	330	363	396
	Throw	8	10	13	15	17	20	22	24	27	29
10 x 8 Ak .426	cfm	128	170	213	255	298	340	383	425	468	510
	Throw	8	11	14	17	20	23	25	28	30	33
10 x 10 Ak .538	cfm	161	215	269	323	377	430	484	538	592	646
	Throw	10	12	16	19	21	25	28	32	36	39
12 x 4 Ak .240	cfm	72	96	120	144	168	192	216	240	264	288
	Throw	7	9	11	13	16	18	19	21	23	25
12 x 6 Ak .383	cfm	115	153	192	230	268	306	345	383	421	460
	Throw	8	11	14	17	19	22	25	27	29	33
12 x 8 Ak .532	cfm	159	212	265	318	371	424	477	530	583	636
	Throw	9	12	15	19	21	24	28	32	35	38
12 x 12 Ak .789	cfm	236	315	394	472	551	630	708	787	866	944
	Throw	12	15	18	22	26	30	35	37	40	45
14 x 4 Ak .292	cfm	87	116	145	173	202	231	260	289	318	347
	Throw	7	10	13	15	17	19	21	23	25	26
14 x 6 Ak .448	cfm	134	178	223	268	312	357	401	446	491	535
	Throw	9	11	14	18	20	23	26	28	31	34
14 x 8 Ak .630	cfm	186	248	310	372	434	496	558	620	682	744
	Throw	11	14	18	21	24	27	30	33	37	40
16 x 6 Ak .553	cfm	166	221	277	332	387	442	498	553	608	664
	Throw	11	13	15	18	20	24	26	28	34	37

C DEFLECTION



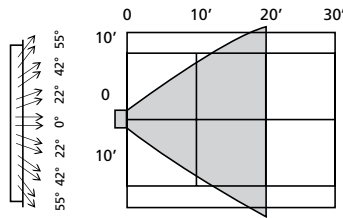
DEFLECTION - C											
260 - SIDEWALL/CEILING REGISTER ADJUSTABLE CURVED-FACED BLADES											
FACE VELOCITY		300	400	500	600	700	800	900	1000	1100	1200
PRESSURE LOSS		0.004	0.008	0.012	0.020	0.028	0.040	0.052	0.064	0.080	0.096
6 x 6 Ak .163	cfm	49	65	82	98	114	130	147	163	179	196
	Throw	4	6	8	10	11	13	14	16	17	19
8 x 4 Ak .146	cfm	42	56	71	85	99	113	127	141	155	169
	Throw	4	6	7	9	10	12	13	15	16	17
8 x 8 Ak .302	cfm	91	121	151	181	211	242	272	302	332	362
	Throw	7	9	12	14	15	18	19	21	23	26
10 x 4 Ak .183	cfm	55	73	91	109	127	146	164	182	200	218
	Throw	4	6	9	10	11	14	15	16	18	19
10 x 6 Ak .299	cfm	87	116	146	175	204	233	262	291	320	349
	Throw	6	8	12	14	15	17	19	20	22	24
10 x 8 Ak .392	cfm	118	157	196	235	274	314	353	392	431	470
	Throw	7	9	12	15	16	19	21	24	26	28
10 x 10 Ak .479	cfm	144	192	240	287	335	383	431	479	527	575
	Throw	9	11	14	17	19	22	25	26	28	33
12 x 4 Ak .219	cfm	66	88	110	131	153	175	197	219	241	263
	Throw	5	7	9	11	13	15	16	17	19	20
12 x 6 Ak .345	cfm	103	138	172	206	241	275	310	344	378	413
	Throw	7	9	12	14	16	19	20	22	24	27
12 x 8 Ak .473	cfm	142	189	237	284	331	378	426	473	520	568
	Throw	8	11	13	16	18	21	24	26	27	31
12 x 12 Ak .702	cfm	211	281	351	421	491	562	632	702	772	842
	Throw	11	13	16	19	22	26	32	34	35	39
14 x 4 Ak .265	cfm	80	106	133	159	186	212	239	265	292	318
	Throw	6	8	11	13	15	16	18	20	21	23
14 x 6 Ak .416	cfm	125	166	208	250	291	333	374	416	458	499
	Throw	8	10	13	15	17	20	23	25	27	29
14 x 8 Ak .557	cfm	167	223	279	334	390	446	501	557	613	668
	Throw	10	12	15	17	20	23	27	28	31	34
16 x 6 Ak .463	cfm	139	185	232	278	324	370	417	463	509	556
	Throw	8	12	13	16	17	21	23	25	26	30

E DEFLECTION



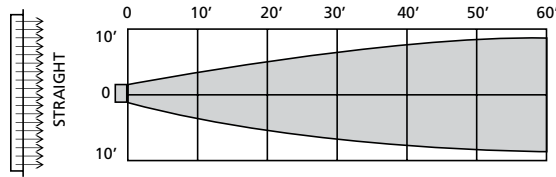
DEFLECTION - C											
260 - SIDEWALL/CEILING REGISTER ADJUSTABLE CURVED-FACED BLADES											
FACE VELOCITY		300	400	500	600	700	800	900	1000	1100	1200
PRESSURE LOSS		0.004	0.008	0.012	0.020	0.028	0.040	0.052	0.064	0.080	0.096
6 x 6 Ak .146	cfm	44	58	73	88	102	117	131	146	161	175
	Throw	3	5	6	8	9	10	11	13	14	16
8 x 4 Ak .134	cfm	38	51	64	76	89	102	114	127	140	152
	Throw	3	5	6	7	8	9	10	11	13	14
8 x 8 Ak .275	cfm	83	110	138	165	193	220	248	275	303	330
	Throw	6	7	10	11	12	15	16	18	20	22
10 x 4 Ak .166	cfm	49	66	82	98	115	131	148	164	180	197
	Throw	3	5	7	8	9	11	12	13	15	16
10 x 6 Ak .272	cfm	80	106	133	159	186	212	239	265	292	318
	Throw	5	6	10	11	12	14	16	18	19	21
10 x 8 Ak .349	cfm	105	140	175	209	244	279	314	349	384	419
	Throw	6	7	10	12	13	15	17	19	21	23
10 x 10 Ak .441	cfm	132	176	221	265	309	353	397	441	485	529
	Throw	7	9	11	14	16	18	20	21	23	25
12 x 4 Ak .197	cfm	59	79	99	118	138	158	177	197	217	236
	Throw	4	5	7	9	10	12	13	14	16	17
12 x 6 Ak .314	cfm	94	125	157	188	219	250	282	313	344	376
	Throw	6	7	10	11	13	15	17	18	20	23
12 x 8 Ak .436	cfm	131	174	218	262	305	349	392	436	480	523
	Throw	6	9	10	13	15	17	19	21	22	25
12 x 12 Ak .647	cfm	194	259	324	388	453	518	582	647	712	776
	Throw	9	11	13	15	19	22	25	28	29	30
14 x 4 Ak .239	cfm	72	96	120	143	167	191	215	239	263	287
	Throw	5	6	9	11	12	14	15	17	18	20
14 x 6 Ak .367	cfm	110	147	184	220	257	294	330	367	404	440
	Throw	6	8	10	12	14	14	18	19	21	23
14 x 8 Ak .517	cfm	155	207	259	310	362	414	465	517	569	620
	Throw	8	10	12	14	16	19	21	22	25	26
16 x 6 Ak .401	cfm	120	160	201	241	281	321	361	401	441	481
	Throw	7	8	9	11	13	15	17	18	19	21

G DEFLECTION



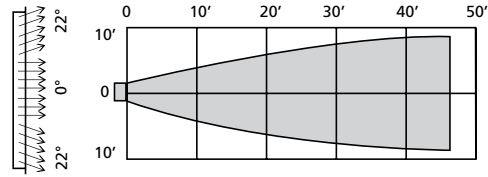
DEFLECTION - G											
260 - SIDEWALL/CEILING REGISTER ADJUSTABLE CURVED-FACED BLADES											
FACE VELOCITY		300	400	500	600	700	800	900	1000	1100	1200
PRESSURE LOSS		0.004	0.008	0.012	0.020	0.028	0.040	0.052	0.064	0.080	0.096
6 x 6 Ak .134	cfm	40	54	67	80	94	107	121	134	147	161
	Throw	2	3	4	6	7	8	8	9	10	12
8 x 4 Ak .123	cfm	35	47	59	71	83	94	106	118	130	142
	Throw	2	3	4	5	6	7	7	8	9	10
8 x 8 Ak .251	cfm	75	100	126	151	176	201	226	251	276	301
	Throw	4	5	7	8	9	11	12	13	15	16
10 x 4 Ak .152	cfm	46	61	76	91	106	122	137	152	167	182
	Throw	2	3	5	6	7	8	9	10	11	12
10 x 6 Ak .249	cfm	72	96	120	144	168	192	216	240	264	288
	Throw	3	4	6	8	9	11	12	13	14	16
10 x 8 Ak .320	cfm	96	128	160	192	224	256	288	320	352	384
	Throw	4	6	7	8	10	11	13	14	15	16
10 x 10 Ak .404	cfm	121	162	202	242	283	323	364	404	444	485
	Throw	6	7	8	9	13	14	15	16	17	18
12 x 4 Ak .180	cfm	54	72	90	108	126	144	162	180	198	216
	Throw	3	4	5	7	8	8	9	11	12	13
12 x 6 Ak .287	cfm	86	115	144	172	201	230	258	287	316	344
	Throw	4	5	7	8	10	11	12	14	15	16
12 x 8 Ak .399	cfm	120	160	200	239	279	319	359	399	439	479
	Throw	5	7	8	9	12	13	14	15	16	18
12 x 12 Ak .592	cfm	178	237	296	355	414	474	533	592	651	710
	Throw	7	9	10	11	15	17	19	21	23	24
14 x 4 Ak .219	cfm	66	88	110	131	153	175	197	219	241	263
	Throw	3	4	6	7	9	10	11	13	14	16
14 x 6 Ak .336	cfm	101	134	168	202	235	269	302	336	370	403
	Throw	5	6	7	8	11	12	13	14	15	16
14 x 8 Ak .463	cfm	139	185	232	278	324	370	417	463	509	556
	Throw	6	7	8	10	13	14	16	17	18	19
16 x 6 Ak .386	cfm	115	153	192	230	268	306	345	383	421	460
	Throw	5	6	7	8	11	13	14	15	16	17
Terminal Velocity of 75 fpm											

A DEFLECTION



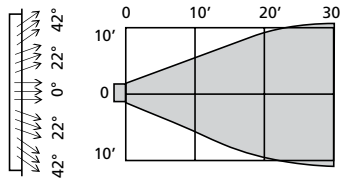
DEFLECTION - A															
270 - ALUMINUM SIDEWALL/CEILING REGISTER ADJUSTABLE STRAIGHT FIN															
FACE VELOCITY		400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000
PRESSURE LOSS		0.012	0.016	0.024	0.032	0.040	0.052	0.064	0.076	0.092	0.108	0.124	0.164	0.204	0.252
6 x 6 Ak .19	cfm	71	89	106	124	142	159	177	195	212	230	248	283	319	354
	Throw	8	10	12	13	15	17	19	20	22	24	26	29	33	37
8 x 4 Ak .17	cfm	63	79	95	111	126	142	158	174	190	205	221	253	284	316
	Throw	7	9	10	13	14	16	17	19	20	23	24	26	30	34
8 x 6 Ak .26	cfm	97	121	145	169	194	218	242	266	290	315	339	387	436	484
	Throw	9	10	13	14	17	19	20	23	26	27	28	34	37	42
8 x 8 Ak .35	cfm	136	170	204	238	272	306	340	374	408	442	476	544	612	680
	Throw	10	12	15	18	20	23	25	28	30	33	35	40	45	50
10 x 4 Ak .21	cfm	80	100	120	140	160	180	200	220	240	260	280	320	360	400
	Throw	8	10	13	14	15	18	20	21	22	25	27	29	34	39
10 x 6 Ak .33	cfm	124	155	186	217	248	279	310	341	372	403	434	496	558	620
	Throw	10	13	14	17	20	22	24	27	28	31	35	38	43	47
10 x 8 Ak .43	cfm	167	209	251	293	334	376	418	460	502	543	585	669	752	836
	Throw	12	13	17	20	23	24	28	31	34	36	39	43	49	55
12 x 4 Ak .26	cfm	96	121	145	169	193	217	241	265	289	313	337	386	434	482
	Throw	8	11	12	15	17	19	22	23	25	27	30	34	38	43
12 x 6 Ak .38	cfm	152	190	228	266	304	342	380	418	456	494	532	608	684	760
	Throw	11	14	15	18	22	23	27	29	31	34	37	41	48	52
12 x 8 Ak .53	cfm	206	257	308	360	411	463	514	565	617	668	720	822	925	1028
	Throw	12	15	18	22	23	26	29	32	35	37	40	46	51	58
12 x 12 Ak .79	cfm	311	389	467	545	622	700	778	856	934	1011	1089	1245	1400	1556
	Throw	17	19	23	27	30	34	38	41	45	49	52	60	67	75
10 x 10 Ak .541	cfm	212	265	318	371	424	477	530	583	636	689	742	848	954	1060
	Throw	13	15	19	22	23	27	31	33	37	39	42	50	56	62
14 x 4 Ak .30	cfm	113	142	170	198	226	255	283	311	340	368	396	453	509	566
	Throw	10	12	13	16	19	22	23	25	27	30	32	36	41	46
14 x 6 Ak .46	cfm	179	224	268	313	358	402	447	492	536	581	626	715	805	894
	Throw	13	15	17	20	23	26	29	31	35	37	40	45	51	55
14 x 8 Ak .60	cfm	236	296	355	414	473	532	591	650	709	768	827	946	1064	1182
	Throw	13	16	20	22	25	30	33	36	40	42	46	53	58	66

C DEFLECTION



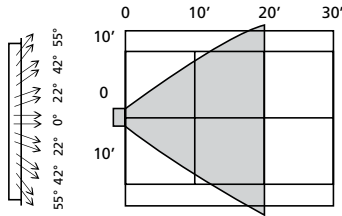
DEFLECTION - C														
270 - ALUMINUM SIDEWALL/CEILING REGISTER ADJUSTABLE STRAIGHT FIN														
FACE VELOCITY	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000
PRESSURE LOSS	0.012	0.016	0.024	0.032	0.040	0.052	0.064	0.076	0.092	0.108	0.124	0.164	0.204	0.252
6 x 6 Ak .17	cfm	64	80	95	111	127	143	159	175	191	207	223	254	318
	Throw	6	7	8	10	11	13	14	16	17	18	20	23	30
8 x 4 Ak .16	cfm	56	71	85	99	113	127	141	155	169	183	197	226	282
	Throw	5	7	8	9	10	12	14	15	16	18	19	21	26
8 x 6 Ak .23	cfm	87	109	130	152	174	195	217	239	260	282	304	347	434
	Throw	7	9	10	12	13	15	17	19	20	21	23	26	33
8 x 8 Ak .35	cfm	134	167	200	234	267	301	334	367	401	434	468	534	668
	Throw	8	10	12	14	15	17	20	21	23	25	27	31	39
10 x 4 Ak .19	cfm	72	90	107	125	143	161	179	197	215	233	251	286	358
	Throw	6	7	9	10	12	14	15	16	19	20	21	24	30
10 x 6 Ak .30	cfm	113	142	170	198	226	255	283	311	340	368	396	453	566
	Throw	8	10	12	13	15	17	19	20	23	24	26	30	37
10 x 8 Ak .39	cfm	151	189	227	265	302	340	378	416	454	491	529	605	756
	Throw	9	12	13	16	18	20	22	23	26	28	30	35	42
12 x 4 Ak .23	cfm	87	109	130	152	174	195	217	239	260	282	304	347	434
	Throw	7	9	10	12	14	15	18	19	20	21	23	26	33
12 x 6 Ak .35	cfm	137	171	205	239	274	308	342	376	410	445	479	547	684
	Throw	9	10	13	14	16	19	21	22	25	27	29	32	42
12 x 8 Ak .48	cfm	185	232	278	324	370	417	463	509	556	602	648	741	926
	Throw	10	12	13	16	19	21	23	25	27	29	33	36	45
12 x 12 Ak .72	cfm	281	351	421	491	562	632	702	772	842	913	983	1123	1404
	Throw	12	15	18	21	24	26	29	32	35	38	41	46	58
10 x 10 Ak .482	cfm	190	238	285	333	380	428	475	523	570	618	665	760	950
	Throw	10	12	15	16	20	22	24	28	30	32	34	40	49
14 x 4 Ak .27	cfm	102	128	153	179	204	230	255	281	306	332	357	408	510
	Throw	8	9	11	13	15	17	18	20	22	23	25	29	35
14 x 6 Ak .43	cfm	166	207	248	290	331	373	414	455	497	538	580	662	828
	Throw	10	12	14	17	19	21	23	25	28	29	32	37	45
14 x 8 Ak .55	cfm	213	266	319	372	426	479	532	585	638	692	745	851	1064
	Throw	10	13	15	18	21	23	26	28	33	34	36	41	51

E DEFLECTION



DEFLECTION - E															
270 - ALUMINUM SIDEWALL/CEILING REGISTER ADJUSTABLE STRAIGHT FIN															
FACE VELOCITY		400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000
PRESSURE LOSS		0.012	0.016	0.024	0.032	0.040	0.052	0.064	0.076	0.092	0.108	0.124	0.164	0.204	0.252
6 x 6 Ak .15	cfm	58	72	86	101	115	130	144	158	173	187	202	230	259	288
	Throw	3	4	5	5	6	7	8	8	9	10	10	12	13	15
8 x 4 Ak .14	cfm	47	59	71	83	94	106	118	130	142	153	165	189	212	236
	Throw	3	4	5	6	7	7	8	8	9	9	10	12	13	15
8 x 6 Ak .21	cfm	79	99	119	139	158	178	198	218	238	257	277	317	356	396
	Throw	5	7	8	9	10	12	13	14	15	16	18	21	23	25
8 x 8 Ak .28	cfm	108	136	163	190	217	244	271	298	325	352	379	434	488	542
	Throw	6	8	9	10	12	13	15	16	18	19	21	24	27	30
10 x 4 Ak .17	cfm	61	76	91	106	122	137	152	167	182	198	213	243	274	304
	Throw	3	4	5	6	7	7	8	9	10	10	11	13	15	16
10 x 6 Ak .27	cfm	104	131	157	183	209	235	261	284	310	335	361	413	464	516
	Throw	6	8	9	10	12	13	15	16	18	19	20	23	26	30
10 x 8 Ak .36	cfm	136	171	205	239	273	307	341	375	412	446	480	549	617	686
	Throw	7	9	10	13	14	15	17	19	20	22	23	27	30	34
12 x 4 Ak .21	cfm	79	99	119	139	158	178	198	218	238	257	277	317	356	396
	Throw	5	7	8	9	11	12	13	15	16	17	19	20	23	26
12 x 6 Ak .32	cfm	125	156	187	218	250	281	312	343	374	406	437	499	562	624
	Throw	7	8	10	12	13	14	16	17	19	21	22	26	29	32
12 x 8 Ak .44	cfm	172	216	259	302	345	388	431	474	517	560	603	690	776	862
	Throw	8	10	12	13	14	18	19	21	22	24	26	29	33	38
12 x 12 Ak .65	cfm	255	319	383	447	510	574	638	702	766	829	893	1021	1148	1276
	Throw	9	12	14	16	18	22	23	25	27	29	32	36	40	45
10 x 10 Ak .477	cfm	188	235	282	329	376	423	470	517	564	611	658	752	846	940
	Throw	9	10	12	14	16	18	19	21	23	25	27	31	34	39
14 x 4 Ak .25	cfm	92	116	139	162	185	208	231	254	277	300	323	370	416	462
	Throw	6	7	9	10	12	13	14	15	18	19	20	22	24	27
14 x 6 Ak .38	cfm	146	183	219	256	292	329	365	402	438	475	511	584	657	730
	Throw	7	9	11	12	15	16	17	19	21	22	24	27	30	35
14 x 8 Ak .49	cfm	192	240	288	336	384	432	480	528	576	624	672	768	864	960
	Throw	8	10	12	14	16	18	20	21	24	25	27	31	35	39

G DEFLECTION



DEFLECTION - G															
270 - ALUMINUM SIDEWALL/CEILING REGISTER ADJUSTABLE STRAIGHT FIN															
FACE VELOCITY		400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000
PRESSURE LOSS		0.012	0.016	0.024	0.032	0.040	0.052	0.064	0.076	0.092	0.108	0.124	0.164	0.204	0.252
6 x 6 Ak .14	cfm	53	67	80	93	106	120	133	146	160	173	186	213	239	266
	Throw	3	4	5	6	6	7	8	8	9	10	11	12	13	15
8 x 4 Ak .13	cfm	47	58	70	81	93	105	116	128	140	151	163	186	210	233
	Throw	3	4	5	6	7	7	8	8	9	10	11	12	13	15
8 x 6 Ak .20	cfm	72	90	108	126	144	162	180	198	216	234	252	288	324	360
	Throw	4	5	6	7	8	9	10	10	11	12	13	15	16	18
8 x 8 Ak .26	cfm	100	126	151	176	201	226	251	276	301	326	351	402	452	502
	Throw	4	5	6	7	8	9	10	11	12	13	14	16	18	20
10 x 4 Ak .16	cfm	61	76	91	106	122	137	152	167	182	198	213	243	274	304
	Throw	3	4	5	6	7	8	9	10	10	11	12	13	15	16
10 x 6 Ak .25	cfm	94	117	140	164	187	211	234	257	281	304	328	374	421	468
	Throw	4	5	6	7	8	9	10	11	12	13	14	16	19	20
10 x 8 Ak .33	cfm	126	158	190	221	253	284	316	348	379	411	442	506	569	632
	Throw	5	6	7	8	10	11	12	13	14	15	16	19	20	23
12 x 4 Ak .20	cfm	73	91	109	127	146	164	182	200	218	237	255	291	328	364
	Throw	4	5	6	7	8	9	10	11	12	13	14	15	16	17
12 x 6 Ak .30	cfm	115	144	172	201	230	258	287	316	344	373	402	459	517	574
	Throw	4	5	7	8	9	10	11	12	13	14	15	19	21	23
12 x 8 Ak .40	cfm	155	194	233	272	310	349	388	427	466	504	543	621	698	776
	Throw	5	6	7	9	10	11	12	13	15	17	18	19	22	25
12 x 12 Ak .60	cfm	235	294	353	412	470	529	588	647	706	764	823	941	1058	1176
	Throw	7	8	10	11	13	15	16	17	19	21	22	25	29	31
10 x 10 Ak .409	cfm	160	200	239	279	319	359	399	439	479	519	559	638	718	798
	Throw	6	7	8	9	10	13	14	15	16	18	19	21	23	26
14 x 4 Ak .23	cfm	85	107	128	149	171	192	213	235	256	277	298	341	384	426
	Throw	4	5	6	7	8	9	10	11	12	14	15	16	17	19
14 x 6 Ak .35	cfm	135	169	202	236	270	303	337	371	404	438	472	539	607	674
	Throw	5	6	7	9	10	11	12	13	14	15	18	19	21	23
14 x 8 Ak .45	cfm	178	223	268	312	357	401	446	491	535	580	624	714	803	892
	Throw	6	7	8	10	11	12	13	15	16	17	19	21	24	27

300 - ROUND CEILING DIFFUSER									
FACE VELOCITY		300	400	500	600	700	800	900	1000
PRESSURE LOSS		0.008	0.012	0.016	0.024	0.032	0.044	0.048	0.064
6" Ak .141	cfm	41	55	69	83	97	110	124	138
	Throw	3	4	5	5	6	6	6	7
8" Ak .232	cfm	69	92	115	138	161	184	207	230
	Throw	3	5	6	6	7	7	7	8
10" Ak .352	cfm	104	138	173	207	242	276	311	345
	Throw	4	6	6	7	7	8	8	9
12" Ak .513	cfm	152	202	253	303	354	404	455	505
	Throw	4	6	7	8	9	9	10	10
14" Ak .637	cfm	191	254	318	381	445	508	572	635
	Throw	4	6	7	8	10	11	12	13
Terminal Velocity of 50 fpm									

500 - RETURN AIR GRILLE						
FACE VELOCITY		300	400	500	600	700
6 x 6 Ak .18	cfm	54	72	90	108	126
	Ps	0.020	0.036	0.052	0.080	0.108
8 x 6 Ak .23	cfm	69	92	115	138	161
	Ps	0.020	0.036	0.052	0.080	0.108
8 x 8 Ak .33	cfm	90	120	150	180	210
	Ps	0.020	0.036	0.052	0.080	0.108
8 x 14 Ak .54	cfm	156	208	260	312	364
	Ps	0.020	0.032	0.052	0.076	0.104
10 x 4 Ak .21	cfm	58	77	96	115	134
	Ps	0.020	0.032	0.052	0.076	0.108
10 x 6 Ak .30	cfm	85	113	142	170	198
	Ps	0.020	0.036	0.052	0.080	0.108
10 x 8 Ak .38	cfm	112	149	187	224	261
	Ps	0.020	0.032	0.052	0.076	0.104
10 x 10 Ak .49	cfm	140	187	234	281	328
	Ps	0.020	0.032	0.052	0.076	0.104
10 x 14 Ak .65	cfm	193	257	322	386	450
	Ps	0.020	0.032	0.052	0.076	0.104
10 x 20 Ak .93	cfm	274	365	456	547	638
	Ps	0.020	0.032	0.052	0.072	0.104
10 x 24 Ak 1.12	cfm	328	437	547	656	765
	Ps	0.020	0.032	0.052	0.072	0.100
12 x 4 Ak .24	cfm	72	96	120	144	168
	Ps	0.020	0.032	0.052	0.076	0.108
12 x 6 Ak .36	cfm	101	134	168	202	235
	Ps	0.020	0.036	0.052	0.076	0.108
12 x 8 Ak .44	cfm	133	177	222	266	310
	Ps	0.020	0.032	0.052	0.076	0.104
12 x 10 Ak .56	cfm	168	224	280	336	392
	Ps	0.020	0.032	0.052	0.076	0.104
12 x 12 Ak .69	cfm	200	267	334	400	467
	Ps	0.020	0.032	0.052	0.076	0.104
12 x 18 Ak 1.01	cfm	302	403	504	605	706
	Ps	0.020	0.032	0.052	0.072	0.100
12 x 20 Ak 1.10	cfm	328	437	547	656	765
	Ps	0.020	0.032	0.052	0.072	0.100
12 x 24 Ak 1.32	cfm	391	522	652	782	913
	Ps	0.020	0.032	0.052	0.072	0.100
12 x 30 Ak 1.64	cfm	489	652	815	978	1141
	Ps	0.016	0.032	0.052	0.072	0.100
14 x 4 Ak .32	cfm	96	128	160	192	224
	Ps	0.020	0.032	0.052	0.072	0.108
14 x 6 Ak .42	cfm	117	156	195	234	273
	Ps	0.020	0.032	0.052	0.076	0.108

14 x 8 Ak .54	cfm	156	208	260	312	364
	Ps	0.020	0.032	0.052	0.076	0.104
14 x 10 Ak .65	cfm	193	257	322	386	450
	Ps	0.020	0.032	0.052	0.076	0.104
14 x 12 Ak .79	cfm	237	316	395	474	553
	Ps	0.020	0.032	0.052	0.076	0.104
14 x 14 Ak .91	cfm	270	360	450	540	630
	Ps	0.020	0.032	0.052	0.076	0.100
14 x 16 Ak 1.04	cfm	312	416	520	624	728
	Ps	0.020	0.032	0.052	0.072	0.100
14 x 20 Ak 1.29	cfm	383	510	638	765	893
	Ps	0.020	0.032	0.052	0.072	0.100
14 x 24 Ak 1.55	cfm	457	610	762	914	1067
	Ps	0.020	0.032	0.052	0.072	0.100
14 x 25 Ak 1.59	cfm	475	634	792	950	1109
	Ps	0.016	0.032	0.052	0.072	0.100
14 x 30 Ak 1.91	cfm	569	758	948	1137	1327
	Ps	0.016	0.032	0.048	0.072	0.096
16 x 6 Ak .45	cfm	133	177	222	266	310
	Ps	0.020	0.032	0.052	0.076	0.104
16 x 8 Ak .62	cfm	179	238	298	358	417
	Ps	0.020	0.032	0.052	0.076	0.104
16 x 10 Ak .75	cfm	225	300	375	450	525
	Ps	0.020	0.032	0.052	0.076	0.104
16 x 12 Ak .89	cfm	267	356	445	534	623
	Ps	0.020	0.032	0.052	0.076	0.100
16 x 14 Ak 1.05	cfm	309	412	515	618	721
	Ps	0.020	0.032	0.052	0.072	0.100
16 x 16 Ak 1.17	cfm	351	468	585	702	819
	Ps	0.020	0.032	0.052	0.072	0.100
16 x 20 1.46	cfm	434	578	723	867	1012
	Ps	0.020	0.032	0.052	0.072	0.100
16 x 24 Ak 1.75	cfm	520	694	867	1040	1214
	Ps	0.016	0.032	0.052	0.068	0.096
16 x 25 Ak 1.81	cfm	541	722	902	1082	1263
	Ps	0.016	0.032	0.052	0.072	0.096
18 x 8 Ak .69	cfm	207	276	345	414	483
	Ps	0.020	0.032	0.052	0.072	0.100
18 x 12 Ak .99	cfm	297	396	495	594	693
	Ps	0.020	0.036	0.052	0.076	0.104
18 x 18 Ak 1.48	cfm	440	587	734	880	1027
	Ps	0.020	0.032	0.052	0.072	0.100
20 x 8 Ak .75	cfm	225	300	375	450	525
	Ps	0.020	0.036	0.052	0.076	0.104
20 x 10 Ak .93	cfm	275	366	458	549	641
	Ps	0.020	0.032	0.052	0.072	0.104

20 x 12 Ak 1.11	cfm	328	438	547	656	766
	Ps	0.020	0.032	0.052	0.072	0.100
20 x 14 Ak 1.28	cfm	382	510	637	764	892
	Ps	0.020	0.032	0.052	0.072	0.100
20 x 16 Ak 1.46	cfm	433	578	722	866	1011
	Ps	0.020	0.032	0.052	0.072	0.100
20 x 20 Ak 1.83	cfm	543	724	905	1086	1267
	Ps	0.016	0.032	0.052	0.072	0.096
20 x 24 Ak 2.17	cfm	649	865	1081	1297	1513
	Ps	0.016	0.032	0.048	0.068	0.096
20 x 25 Ak 2.26	cfm	678	904	1130	1356	1582
	Ps	0.016	0.032	0.052	0.068	0.096
20 x 30 Ak 2.71	cfm	813	1084	1355	1626	1897
	Ps	0.016	0.032	0.048	0.068	0.092
24 x 6 Ak .67	cfm	199	265	332	398	464
	Ps	0.020	0.032	0.052	0.076	0.100
24 x 8 Ak .89	cfm	264	352	440	528	616
	Ps	0.020	0.032	0.052	0.076	0.100
24 x 10 Ak 1.12	cfm	328	437	547	656	765
	Ps	0.020	0.032	0.052	0.072	0.100
24 x 12 Ak 1.32	cfm	392	522	653	783	914
	Ps	0.020	0.032	0.052	0.072	0.100
24 x 14 Ak 1.53	cfm	457	609	762	914	1066
	Ps	0.020	0.032	0.052	0.072	0.100
24 x 16 Ak 1.75	cfm	520	694	867	1040	1214
	Ps	0.016	0.032	0.052	0.068	0.096
24 x 18 Ak 1.96	cfm	588	784	980	1176	1372
	Ps	0.020	0.032	0.052	0.072	0.096
24 x 20 Ak 2.17	cfm	649	865	1081	1297	1513
	Ps	0.016	0.032	0.048	0.068	0.096
24 x 24 Ak 2.59	cfm	775	1033	1292	1550	1808
	Ps	0.016	0.032	0.048	0.068	0.092
24 x 30 Ak 3.22	cfm	966	1288	1610	1932	2254
	Ps	0.016	0.032	0.048	0.064	0.088
25 x 14 Ak 1.59	cfm	475	634	792	950	1109
	Ps	0.016	0.032	0.052	0.072	0.100
25 x 20 Ak 2.26	cfm	678	904	1130	1356	1582
	Ps	0.016	0.032	0.052	0.068	0.096
30 x 6 Ak .83	cfm	249	332	415	498	581
	Ps	0.020	0.032	0.052	0.076	0.100
30 x 8 Ak 1.12	cfm	328	437	547	656	765
	Ps	0.020	0.032	0.052	0.072	0.100
30 x 10 Ak 1.37	cfm	409	546	682	818	955
	Ps	0.020	0.032	0.052	0.072	0.100

30 x 12 Ak 1.64	cfm	489	652	815	978	1141
	Ps	0.016	0.032	0.052	0.072	0.100
30 x 14 Ak 1.91	cfm	569	758	948	1137	1327
	Ps	0.016	0.032	0.048	0.072	0.096
30 x 16 Ak 2.16	cfm	648	864	1080	1296	1512
	Ps	0.020	0.032	0.052	0.068	0.092
30 x 20 Ak 2.71	cfm	807	1076	1345	1614	1883
	Ps	0.016	0.028	0.048	0.064	0.088
30 x 16 Ak 2.18	cfm	654	872	1090	1308	1526
	Ps	0.016	0.032	0.048	0.072	0.096
Velocity measured 1" from face						

510 - ALUMINUM RETURN AIR GRILLE						
FACE VELOCITY		300	400	500	600	700
8 x 8 AK .34	cfm	90	120	150	180	210
	Ps	0.020	0.032	0.052	0.072	0.108
10 x 10 Ak .51	cfm	144	192	240	288	336
	Ps	0.020	0.032	0.052	0.072	0.104
12 x 12 Ak .69	cfm	201	268	335	402	469
	Ps	0.020	0.032	0.052	0.072	0.100
14 x 6 Ak .42	cfm	117	156	195	234	273
	Ps	0.020	0.032	0.052	0.072	0.104
14 x 8 Ak .54	cfm	153	204	255	306	357
	Ps	0.020	0.032	0.052	0.072	0.100
14 x 10 Ak .67	cfm	198	264	330	396	462
	Ps	0.020	0.032	0.052	0.072	0.100
16 x 8 Ak .62	cfm	186	248	310	372	434
	Ps	0.020	0.032	0.052	0.076	0.104
Velocity measured 1" from face						

515 - RETURN AIR GRILLE

FACE VELOCITY		300	400	500	600	700
6 x 4 Ak .109	cfm	33	43	54	65	76
	Ps	0.010	0.018	0.029	0.042	0.056
6 x 6 Ak .169	cfm	51	68	85	101	118
	Ps	0.012	0.020	0.028	0.040	0.056
6 x 14 Ak .399	cfm	120	160	200	239	279
	Ps	0.010	0.018	0.029	0.041	0.056
8 x 6 Ak 0.225	cfm	68	90	113	135	158
	Ps	0.010	0.018	0.029	0.041	0.056
8 x 8 Ak .300	cfm	90	120	150	180	210
	Ps	0.012	0.020	0.028	0.040	0.056
8 x 14 Ak .534	cfm	159	212	266	319	372
	Ps	0.012	0.020	0.028	0.040	0.056
10 x 4 Ak .19	cfm	57	76	95	114	133
	Ps	0.012	0.020	0.028	0.040	0.056
10 x 6 Ak .29	cfm	87	116	145	174	203
	Ps	0.012	0.020	0.028	0.040	0.056
10 x 8 Ak .379	cfm	114	152	190	227	265
	Ps	0.012	0.020	0.028	0.040	0.056
10 x 10 Ak .491	cfm	147	196	246	295	344
	Ps	0.012	0.020	0.028	0.040	0.056
10 x 14 Ak .669	cfm	201	268	335	401	468
	Ps	0.011	0.019	0.029	0.041	0.056
10 x 20 Ak .96	cfm	288	384	480	576	672
	Ps	0.010	0.018	0.029	0.041	0.056
10 x 24 Ak 1.15	cfm	345	460	575	690	805
	Ps	0.010	0.018	0.029	0.041	0.056
12 x 4 Ak .238	cfm	71	95	119	143	167
	Ps	0.012	0.020	0.028	0.040	0.056
12 x 6 Ak .340	cfm	102	136	170	204	238
	Ps	0.012	0.020	0.028	0.040	0.056
12 x 8 Ak .452	cfm	136	181	226	271	316
	Ps	0.012	0.020	0.028	0.040	0.056
12 x 10 Ak .570	cfm	171	228	285	342	399
	Ps	0.012	0.020	0.028	0.040	0.056
12 x 12 Ak .697	cfm	209	279	349	418	488
	Ps	0.012	0.020	0.028	0.044	0.056
12 x 16 Ak .921	cfm	276	368	461	553	645
	Ps	0.012	0.020	0.028	0.043	0.056
12 x 20 Ak 1.15	cfm	345	460	575	690	805
	Ps	0.012	0.020	0.028	0.042	0.056
12 x 24 Ak 1.389	cfm	417	556	695	833	972
	Ps	0.012	0.020	0.028	0.040	0.056

14 x 4 Ak .263	cfm	79	105	132	158	184
	Ps	0.012	0.020	0.028	0.044	0.056
14 x 6 Ak .397	cfm	119	159	199	238	278
	Ps	0.012	0.020	0.028	0.044	0.056
14 x 8 Ak .531	cfm	159	212	266	319	372
	Ps	0.012	0.020	0.028	0.040	0.056
14 x 10 Ak .679	cfm	204	272	340	407	475
	Ps	0.012	0.020	0.028	0.040	0.056
14 x 12 Ak .805	cfm	241	322	402	482	563
	Ps	0.012	0.018	0.028	0.044	0.056
14 x 14 Ak .937	cfm	281	375	469	562	656
	Ps	0.012	0.016	0.028	0.044	0.056
14 x 16 Ak 1.07	cfm	323	430	538	645	753
	Ps	0.012	0.016	0.028	0.044	0.056
14 x 20 Ak 1.340	cfm	402	536	670	804	938
	Ps	0.012	0.016	0.028	0.040	0.056
14 x 24 Ak 1.625	cfm	488	650	813	975	1138
	Ps	0.012	0.016	0.028	0.044	0.056
14 x 25 Ak 1.715	cfm	515	686	858	1029	1201
	Ps	0.012	0.016	0.028	0.044	0.057
14 x 30 Ak 2.02	cfm	606	808	1010	1212	1414
	Ps	0.012	0.016	0.028	0.044	0.057
16 x 4 Ak .302	cfm	91	121	151	181	211
	Ps	0.012	0.016	0.028	0.040	0.056
16 x 6 Ak .457	cfm	137	183	229	274	320
	Ps	0.012	0.016	0.028	0.040	0.056
16 x 8 Ak .617	cfm	185	247	309	370	432
	Ps	0.012	0.016	0.028	0.040	0.056
16 x 10 Ak .764	cfm	229	306	382	485	535
	Ps	0.012	0.016	0.028	0.040	0.056
16 x 12 Ak .921	cfm	276	368	460	552	644
	Ps	0.012	0.016	0.028	0.040	0.056
16 x 14 Ak 1.07	cfm	323	430	538	645	753
	Ps	0.012	0.016	0.028	0.040	0.056
16 x 24 Ak 1.85	cfm	555	740	925	1110	1295
	Ps	0.010	0.016	0.028	0.040	0.057
16 x 25 Ak 1.932	cfm	580	773	966	1159	1352
	Ps	0.012	0.016	0.028	0.040	0.056
18 x 6 Ak .515	cfm	155	206	258	309	361
	Ps	0.012	0.016	0.028	0.040	0.056
18 x 8 Ak .695	cfm	209	278	348	417	487
	Ps	0.012	0.020	0.028	0.040	0.056
18 x 10 Ak .863	cfm	500	667	834	1000	1167
	Ps	0.012	0.016	0.028	0.040	0.056
18 x 12 Ak 1.04	cfm	312	416	520	624	728
	Ps	0.012	0.016	0.028	0.044	0.056

18 x 16 Ak 1.38	cfm	414	552	690	828	966
	Ps	0.012	0.016	0.028	0.044	0.056
18 x 18 Ak 1.562	cfm	469	625	781	937	1093
	Ps	0.012	0.020	0.028	0.040	0.056
18 x 24 Ak 2.08	cfm	624	832	1040	1248	1456
	Ps	0.012	0.020	0.028	0.040	0.056
20 x 6 Ak .58	cfm	174	232	290	348	406
	Ps	0.012	0.020	0.028	0.040	0.056
20 x 8 Ak .760	cfm	228	304	380	456	532
	Ps	0.012	0.016	0.028	0.040	0.056
20 x 10 Ak .951	cfm	285	380	476	571	666
	Ps	0.012	0.016	0.028	0.040	0.056
20 x 12 Ak 1.15	cfm	345	460	575	690	805
	Ps	0.012	0.020	0.028	0.040	0.056
20 x 14 Ak 1.30	cfm	390	520	650	780	910
	Ps	0.012	0.020	0.028	0.040	0.056
20 x 16 Ak 1.543	cfm	463	617	772	926	1080
	Ps	0.012	0.016	0.028	0.040	0.056
20 x 18 Ak 1.73	cfm	519	692	865	1038	1211
	Ps	0.012	0.016	0.028	0.044	0.056
20 x 20 Ak 1.921	cfm	576	768	961	1153	1345
	Ps	0.012	0.016	0.028	0.044	0.060
20 x 24 Ak 2.322	cfm	697	929	1161	1393	1625
	Ps	0.012	0.020	0.028	0.044	0.056
20 x 25 Ak 2.416	cfm	725	966	1208	1450	1691
	Ps	0.012	0.020	0.028	0.044	0.056
20 x 30 Ak 2.89	cfm	867	1156	1445	1734	2023
	Ps	0.012	0.020	0.028	0.044	0.056
24 x 4 Ak .457	cfm	137	183	229	274	320
	Ps	0.012	0.018	0.029	0.044	0.057
24 x 6 Ak .687	cfm	206	275	344	412	481
	Ps	0.012	0.020	0.028	0.044	0.056
24 x 8 Ak .916	cfm	275	366	458	550	641
	Ps	0.012	0.020	0.028	0.044	0.056
24 x 10 Ak 1.16	cfm	348	464	580	696	812
	Ps	0.012	0.020	0.028	0.040	0.056
24 x 12 Ak 1.37	cfm	411	548	685	822	959
	Ps	0.012	0.020	0.028	0.040	0.056
24 x 14 Ak 1.63	cfm	489	652	815	978	1141
	Ps	0.012	0.016	0.028	0.040	0.056
24 x 16 Ak 1.84	cfm	552	736	920	1104	1288
	Ps	0.010	0.018	0.029	0.042	0.057
24 x 18 Ak 2.08	cfm	624	832	1040	1248	1456
	Ps	0.012	0.018	0.028	0.040	0.056
24 x 20 Ak 2.318	cfm	695	927	1159	1391	1623
	Ps	0.012	0.020	0.028	0.040	0.056

24 x 24 Ak 2.78	cfm	834	1112	1390	1668	1946
	Ps	0.012	0.020	0.028	0.040	0.056
24 x 30 Ak 3.492	cfm	1048	1397	1746	2095	2444
	Ps	0.012	0.020	0.028	0.040	0.056
25 x 20 Ak 2.413	cfm	723	964	1205	1445	1686
	Ps	0.012	0.020	0.028	0.044	0.060
30 x 4 Ak.573	cfm	172	229	287	344	401
	Ps	0.012	0.020	0.028	0.040	0.056
30 x 6 Ak .857	cfm	257	343	429	514	600
	Ps	0.012	0.020	0.028	0.040	0.056
30 x 8 Ak 1.146	cfm	344	458	573	688	802
	Ps	0.012	0.020	0.028	0.040	0.056
30 x 10 Ak 1.42	cfm	426	568	710	852	994
	Ps	0.012	0.020	0.028	0.040	0.056
30 x 12 Ak 1.74	cfm	522	696	870	1044	1218
	Ps	0.012	0.016	0.028	0.040	0.056
30 x 14 Ak 2.027	cfm	608	811	1014	1216	1419
	Ps	0.012	0.020	0.028	0.040	0.056
30 x 16 Ak 2.31	cfm	693	924	1155	1386	1617
	Ps	0.011	0.020	0.028	0.040	0.056
30 x 18 Ak 2.60	cfm	780	1040	1300	1560	1820
	Ps	0.010	0.019	0.028	0.040	0.056
30 x 20 Ak 2.89	cfm	868	1157	1447	1736	2025
	Ps	0.010	0.019	0.028	0.040	0.055
30 x 24 Ak 3.47	cfm	1041	1388	1735	2082	2429
	Ps	0.010	0.019	0.028	0.040	0.055
30 x 30 Ak 4.34	cfm	1302	1736	2170	2604	3038
	Ps	0.010	0.019	0.028	0.040	0.055
36 x 6 Ak 1.04	cfm	312	416	520	624	728
	Ps	0.010	0.018	0.029	0.041	0.056
36 x 8 Ak 1.38	cfm	414	552	690	828	966
	Ps	0.010	0.018	0.029	0.041	0.056
36 x 12 Ak 1.73	cfm	519	692	865	1038	1211w
	Ps	0.010	0.018	0.028	0.040	0.056
36 x 36 Ak 6.26	cfm	1878	2504	3130	3756	4382
	Ps	0.010	0.019	0.029	0.042	0.057

Velocity measured 1" from face

520 - RETURN AIR FILTER GRILLE

FACE VELOCITY		300	400	500	600	700
10 x 10 Ak .48	cfm	144	192	240	288	336
	Ps	0.020	0.032	0.052	0.076	0.104
10 x 20 Ak .93	cfm	279	372	465	558	651
	Ps	0.020	0.032	0.052	0.076	0.100
12 x 12 Ak .69	cfm	201	268	335	402	469
	Ps	0.020	0.032	0.052	0.072	0.100
12 x 20 Ak 1.21	cfm	363	484	605	726	847
	Ps	0.020	0.032	0.052	0.072	0.100
12 x 24 Ak 1.30	cfm	390	520	650	780	910
	Ps	0.020	0.032	0.052	0.072	0.100
14 x 14 Ak .91	cfm	269	358	448	537	627
	Ps	0.020	0.032	0.052	0.072	0.100
14 x 20 Ak 1.29	cfm	383	510	638	765	893
	Ps	0.020	0.032	0.052	0.072	0.100
14 x 24 Ak 1.55	cfm	457	610	762	914	1067
	Ps	0.020	0.032	0.052	0.072	0.100
14 x 25 Ak 1.58	cfm	474	632	790	948	1106
	Ps	0.020	0.032	0.052	0.072	0.100
14 x 30 Ak 1.89	cfm	567	756	945	1134	1323
	Ps	0.016	0.032	0.048	0.072	0.096
16 x 16 Ak 1.17	cfm	350	467	584	700	817
	Ps	0.020	0.032	0.052	0.072	0.100
16 x 20 Ak 1.46	cfm	434	578	723	867	1012
	Ps	0.020	0.032	0.052	0.072	0.100
16 x 25 Ak 1.81	cfm	541	722	902	1082	1263
	Ps	0.016	0.032	0.052	0.072	0.096
16 x 30 Ak 2.26	cfm	678	904	1130	1356	1582
	Ps	0.016	0.032	0.048	0.068	0.092
18 x 12 Ak 1.02	cfm	306	408	510	612	714
	Ps	0.020	0.032	0.052	0.076	0.104
18 x 18 Ak 1.48	cfm	440	587	734	880	1027
	Ps	0.020	0.032	0.052	0.072	0.100
18 x 24 Ak 1.96	cfm	588	784	980	1176	1372
	Ps	0.016	0.032	0.052	0.072	0.096
20 x 10 Ak .93	cfm	279	372	465	558	651
	Ps	0.020	0.032	0.052	0.076	0.104
20 x 12 Ak 1.11	cfm	328	437	546	655	764
	Ps	0.020	0.032	0.052	0.072	0.100
20 x 14 Ak 1.28	cfm	382	510	637	764	892
	Ps	0.020	0.032	0.052	0.072	0.100

20 x 16 Ak 1.46	cfm	433	578	722	866	1011
	Ps	0.020	0.032	0.052	0.072	0.100
20 x 20 Ak 1.83	cfm	542	723	904	1084	1265
	Ps	0.016	0.032	0.052	0.072	0.096
20 x 24 Ak 2.19	cfm	651	868	1085	1302	1519
	Ps	0.016	0.032	0.048	0.068	0.096
20 x 25 Ak 2.25	cfm	674	898	1123	1347	1572
	Ps	0.016	0.032	0.048	0.068	0.096
20 x 30 Ak 2.71	cfm	808	1078	1347	1616	1886
	Ps	0.016	0.032	0.048	0.064	0.092
24 x 10 Ak 1.12	cfm	336	448	560	672	784
	Ps	0.020	0.032	0.052	0.072	0.100
24 x 12 Ak 1.32	cfm	392	522	653	783	914
	Ps	0.020	0.032	0.052	0.072	0.100
24 x 14 Ak 1.53	cfm	457	609	762	914	1066
	Ps	0.020	0.032	0.052	0.072	0.100
24 x 16 Ak 1.73	cfm	519	692	865	1038	1211
	Ps	0.016	0.032	0.052	0.072	0.096
24 x 18 Ak 1.94	cfm	582	776	970	1164	1358
	Ps	0.016	0.032	0.048	0.072	0.096
24 x 20 Ak 2.17	cfm	649	865	1081	1297	1513
	Ps	0.016	0.032	0.048	0.068	0.096
24 x 24 Ak 2.59	cfm	777	1036	1295	1554	1813
	Ps	0.016	0.032	0.048	0.068	0.092
24 x 30 Ak 3.23	cfm	969	1292	1615	1938	2261
	Ps	0.016	0.032	0.048	0.064	0.088
25 x 14 Ak 1.59	cfm	475	634	792	950	1109
	Ps	0.016	0.032	0.052	0.072	0.100
25 x 16 Ak 1.80	cfm	540	720	900	1080	1260
	Ps	0.016	0.032	0.052	0.072	0.096
25 x 20 Ak 2.25	cfm	674	898	1123	1347	1572
	Ps	0.016	0.032	0.048	0.068	0.096
25 x 25 Ak 2.81	cfm	843	1124	1405	1686	1967
	Ps	0.016	0.032	0.048	0.068	0.092
25 x 32 Ak 3.58	cfm	1074	1432	1790	2148	2506
	Ps	0.016	0.032	0.048	0.064	0.084
30 x 10 Ak 1.37	cfm	408	544	680	816	952
	Ps	0.020	0.032	0.052	0.072	0.100
30 x 12 Ak 1.64	cfm	492	656	820	984	1148
	Ps	0.016	0.032	0.052	0.072	0.096
30 x 14 Ak 1.91	cfm	569	758	948	1137	1327
	Ps	0.016	0.032	0.048	0.072	0.096
30 x 16 Ak 2.16	cfm	645	860	1075	1290	1505
	Ps	0.016	0.032	0.048	0.068	0.096

30 x 18 Ak 2.46	cfm	728	970	1213	1455	1698
	Ps	0.016	0.032	0.048	0.068	0.092
30 x 20 Ak 2.71	cfm	808	1078	1347	1616	1886
	Ps	0.016	0.032	0.048	0.064	0.092
30 x 24 Ak 3.22	cfm	965	1286	1608	1929	2251
	Ps	0.016	0.032	0.048	0.064	0.088
30 x 30 Ak 4.02	cfm	1206	1608	2010	2412	2814
	Ps	0.016	0.032	0.044	0.060	0.080

Tested without filters. Velocity measured 1" from face

525 - RETURN AIR FILTER GRILLE

FACE VELOCITY		300	400	500	600	700
6 x 4 Ak .109	cfm	33	43	54	65	76
	Ps	0.010	0.018	0.029	0.042	0.056
6 x 6 Ak .169	cfm	51	68	85	101	118
	Ps	0.012	0.020	0.028	0.040	0.056
6 x 14 Ak .399	cfm	120	160	200	239	279
	Ps	0.010	0.018	0.029	0.041	0.056
8 x 6 Ak 0.225	cfm	68	90	113	135	158
	Ps	0.010	0.018	0.029	0.041	0.056
8 x 8 Ak .300	cfm	90	120	150	180	210
	Ps	0.012	0.020	0.028	0.040	0.056
8 x 14 Ak .534	cfm	159	212	266	319	372
	Ps	0.012	0.020	0.028	0.040	0.056
10 x 4 Ak .19	cfm	57	76	95	114	133
	Ps	0.012	0.020	0.028	0.040	0.056
10 x 6 Ak .29	cfm	87	116	145	174	203
	Ps	0.012	0.020	0.028	0.040	0.056
10 x 8 Ak .379	cfm	114	152	190	227	265
	Ps	0.012	0.020	0.028	0.040	0.056
10 x 10 Ak .491	cfm	147	196	246	295	344
	Ps	0.012	0.020	0.028	0.040	0.056
10 x 14 Ak .669	cfm	201	268	335	401	468
	Ps	0.011	0.019	0.029	0.041	0.056
10 x 20 Ak .96	cfm	288	384	480	576	672
	Ps	0.010	0.018	0.029	0.041	0.056
10 x 24 Ak 1.15	cfm	345	460	575	690	805
	Ps	0.010	0.018	0.029	0.041	0.056
12 x 4 Ak .238	cfm	71	95	119	143	167
	Ps	0.012	0.020	0.028	0.040	0.056
12 x 6 Ak .340	cfm	102	136	170	204	238
	Ps	0.012	0.020	0.028	0.040	0.056
12 x 8 Ak .452	cfm	136	181	226	271	316
	Ps	0.012	0.020	0.028	0.040	0.056
12 x 10 Ak .570	cfm	171	228	285	342	399
	Ps	0.012	0.020	0.028	0.040	0.056
12 x 12 Ak .697	cfm	209	279	349	418	488
	Ps	0.012	0.020	0.028	0.044	0.056
12 x 16 Ak .921	cfm	276	368	461	553	645
	Ps	0.012	0.020	0.028	0.043	0.056
12 x 20 Ak 1.15	cfm	345	460	575	690	805
	Ps	0.012	0.020	0.028	0.042	0.056
12 x 24 Ak 1.389	cfm	417	556	695	833	972
	Ps	0.012	0.020	0.028	0.040	0.056

14 x 4 Ak .263	cfm	79	105	132	158	184
	Ps	0.012	0.020	0.028	0.044	0.056
14 x 6 Ak .397	cfm	119	159	199	238	278
	Ps	0.012	0.020	0.028	0.044	0.056
14 x 8 Ak .531	cfm	159	212	266	319	372
	Ps	0.012	0.020	0.028	0.040	0.056
14 x 10 Ak .679	cfm	204	272	340	407	475
	Ps	0.012	0.020	0.028	0.040	0.056
14 x 12 Ak .805	cfm	241	322	402	482	563
	Ps	0.012	0.018	0.028	0.044	0.056
14 x 14 Ak .937	cfm	281	375	469	562	656
	Ps	0.012	0.016	0.028	0.044	0.056
14 x 16 Ak 1.07	cfm	323	430	538	645	753
	Ps	0.012	0.016	0.028	0.044	0.056
14 x 20 Ak 1.340	cfm	402	536	670	804	938
	Ps	0.012	0.016	0.028	0.040	0.056
14 x 24 Ak 1.625	cfm	488	650	813	975	1138
	Ps	0.012	0.016	0.028	0.044	0.056
14 x 25 Ak 1.715	cfm	515	686	858	1029	1201
	Ps	0.012	0.016	0.028	0.044	0.057
14 x 30 Ak 2.02	cfm	606	808	1010	1212	1414
	Ps	0.012	0.016	0.028	0.044	0.057
16 x 4 Ak .302	cfm	91	121	151	181	211
	Ps	0.012	0.016	0.028	0.040	0.056
16 x 6 Ak .457	cfm	137	183	229	274	320
	Ps	0.012	0.016	0.028	0.040	0.056
16 x 8 Ak .617	cfm	185	247	309	370	432
	Ps	0.012	0.016	0.028	0.040	0.056
16 x 10 Ak .764	cfm	229	306	382	485	535
	Ps	0.012	0.016	0.028	0.040	0.056
16 x 12 Ak .921	cfm	276	368	460	552	644
	Ps	0.012	0.016	0.028	0.040	0.056
16 x 14 Ak 1.07	cfm	323	430	538	645	753
	Ps	0.012	0.016	0.028	0.040	0.056
16 x 24 Ak 1.85	cfm	555	740	925	1110	1295
	Ps	0.010	0.016	0.028	0.040	0.057
16 x 25 Ak 1.932	cfm	580	773	966	1159	1352
	Ps	0.012	0.016	0.028	0.040	0.056
18 x 6 Ak .515	cfm	155	206	258	309	361
	Ps	0.012	0.016	0.028	0.040	0.056
18 x 8 Ak .695	cfm	209	278	348	417	487
	Ps	0.012	0.020	0.028	0.040	0.056
18 x 10 Ak .863	cfm	500	667	834	1000	1167
	Ps	0.012	0.016	0.028	0.040	0.056
18 x 12 Ak 1.04	cfm	312	416	520	624	728
	Ps	0.012	0.016	0.028	0.044	0.056

18 x 16 Ak 1.38	cfm	414	552	690	828	966
	Ps	0.012	0.016	0.028	0.044	0.056
18 x 18 Ak 1.562	cfm	469	625	781	937	1093
	Ps	0.012	0.020	0.028	0.040	0.056
18 x 24 Ak 2.08	cfm	624	832	1040	1248	1456
	Ps	0.012	0.020	0.028	0.040	0.056
20 x 6 Ak .58	cfm	174	232	290	348	406
	Ps	0.012	0.020	0.028	0.040	0.056
20 x 8 Ak .760	cfm	228	304	380	456	532
	Ps	0.012	0.016	0.028	0.040	0.056
20 x 10 Ak .951	cfm	285	380	476	571	666
	Ps	0.012	0.016	0.028	0.040	0.056
20 x 12 Ak 1.15	cfm	345	460	575	690	805
	Ps	0.012	0.020	0.028	0.040	0.056
20 x 14 Ak 1.30	cfm	390	520	650	780	910
	Ps	0.012	0.020	0.028	0.040	0.056
20 x 16 Ak 1.543	cfm	463	617	772	926	1080
	Ps	0.012	0.016	0.028	0.040	0.056
20 x 18 Ak 1.73	cfm	519	692	865	1038	1211
	Ps	0.012	0.016	0.028	0.044	0.056
20 x 20 Ak 1.921	cfm	576	768	961	1153	1345
	Ps	0.012	0.016	0.028	0.044	0.060
20 x 24 Ak 2.322	cfm	697	929	1161	1393	1625
	Ps	0.012	0.020	0.028	0.044	0.056
20 x 25 Ak 2.416	cfm	725	966	1208	1450	1691
	Ps	0.012	0.020	0.028	0.044	0.056
20 x 30 Ak 2.89	cfm	867	1156	1445	1734	2023
	Ps	0.012	0.020	0.028	0.044	0.056
24 x 4 Ak .457	cfm	137	183	229	274	320
	Ps	0.012	0.018	0.029	0.044	0.057
24 x 6 Ak .687	cfm	206	275	344	412	481
	Ps	0.012	0.020	0.028	0.044	0.056
24 x 8 Ak .916	cfm	275	366	458	550	641
	Ps	0.012	0.020	0.028	0.044	0.056
24 x 10 Ak 1.16	cfm	348	464	580	696	812
	Ps	0.012	0.020	0.028	0.040	0.056
24 x 12 Ak 1.37	cfm	411	548	685	822	959
	Ps	0.012	0.020	0.028	0.040	0.056
24 x 14 Ak 1.63	cfm	489	652	815	978	1141
	Ps	0.012	0.016	0.028	0.040	0.056
24 x 16 Ak 1.84	cfm	552	736	920	1104	1288
	Ps	0.010	0.018	0.029	0.042	0.057
24 x 18 Ak 2.08	cfm	624	832	1040	1248	1456
	Ps	0.012	0.018	0.028	0.040	0.056
24 x 20 Ak 2.318	cfm	695	927	1159	1391	1623
	Ps	0.012	0.020	0.028	0.040	0.056

24 x 24 Ak 2.78	cfm	834	1112	1390	1668	1946
	Ps	0.012	0.020	0.028	0.040	0.056
24 x 30 Ak 3.492	cfm	1048	1397	1746	2095	2444
	Ps	0.012	0.020	0.028	0.040	0.056
25 x 20 Ak 2.413	cfm	723	964	1205	1445	1686
	Ps	0.012	0.020	0.028	0.044	0.060
30 x 4 Ak.573	cfm	172	229	287	344	401
	Ps	0.012	0.020	0.028	0.040	0.056
30 x 6 Ak .857	cfm	257	343	429	514	600
	Ps	0.012	0.020	0.028	0.040	0.056
30 x 8 Ak 1.146	cfm	344	458	573	688	802
	Ps	0.012	0.020	0.028	0.040	0.056
30 x 10 Ak 1.42	cfm	426	568	710	852	994
	Ps	0.012	0.020	0.028	0.040	0.056
30 x 12 Ak 1.74	cfm	522	696	870	1044	1218
	Ps	0.012	0.016	0.028	0.040	0.056
30 x 14 Ak 2.027	cfm	608	811	1014	1216	1419
	Ps	0.012	0.020	0.028	0.040	0.056
30 x 16 Ak 2.31	cfm	693	924	1155	1386	1617
	Ps	0.011	0.020	0.028	0.040	0.056
30 x 18 Ak 2.60	cfm	780	1040	1300	1560	1820
	Ps	0.010	0.019	0.028	0.040	0.056
30 x 20 Ak 2.89	cfm	868	1157	1447	1736	2025
	Ps	0.010	0.019	0.028	0.040	0.055
30 x 24 Ak 3.47	cfm	1041	1388	1735	2082	2429
	Ps	0.010	0.019	0.028	0.040	0.055
30 x 30 Ak 4.34	cfm	1302	1736	2170	2604	3038
	Ps	0.010	0.019	0.028	0.040	0.055
36 x 6 Ak 1.04	cfm	312	416	520	624	728
	Ps	0.010	0.018	0.029	0.041	0.056
36 x 8 Ak 1.38	cfm	414	552	690	828	966
	Ps	0.010	0.018	0.029	0.041	0.056
36 x 12 Ak 1.73	cfm	519	692	865	1038	1211w
	Ps	0.010	0.018	0.028	0.040	0.056
36 x 36 Ak 6.26	cfm	1878	2504	3130	3756	4382
	Ps	0.010	0.019	0.029	0.042	0.057

Velocity measured 1" from face

481 - ALUMINUM SQUARE CEILING DIFFUSER 1-WAY

FACE VELOCITY		400	500	600	700	900	1100	1500
PRESSURE LOSS		0.016	0.024	0.040	0.052	0.092	0.144	0.280
6 x 6 Ak .14	cfm	52	65	78	91	117	143	195
	Throw	4	6	7	8	11	13	18
8 x 8 Ak .23	cfm	80	100	120	140	180	220	300
	Throw	6	8	9	10	13	15	20
10 x 10 Ak .30	cfm	116	145	174	203	261	319	435
	Throw	7	9	10	13	15	19	26
12 x 12 Ak .42	cfm	168	210	252	294	378	462	630
	Throw	8	10	13	15	19	23	31
14 x 14 Ak .65	cfm	236	295	354	413	531	649	885
	Throw	11	13	16	19	24	30	38
Terminal Velocity of 75fpm								

482 - ALUMINUM SQUARE CEILING DIFFUSER 2-WAY

FACE VELOCITY		400	500	600	700	900	1100	1500
PRESSURE LOSS		0.016	0.028	0.048	0.072	0.112	0.148	0.280
6 x 6 Ak .14	cfm	52	65	78	91	117	143	195
	Throw	3	4	5	6	8	9	11
8 x 8 Ak .23	cfm	80	100	120	140	180	220	300
	Throw	4	5	6	7	9	11	15
10 x 10 Ak .30	cfm	116	145	174	203	261	319	435
	Throw	5	6	8	10	13	15	20
12 x 12 Ak .42	cfm	168	210	252	294	378	462	630
	Throw	6	7	9	10	13	16	24
14 x 14 Ak .65	cfm	236	295	354	413	531	649	885
	Throw	8	10	11	13	15	18	23
Terminal Velocity of 75fpm								

483 - ALUMINUM SQUARE CEILING DIFFUSER 3-WAY

FACE VELOCITY		400	500	600	700	900	1100	1500
PRESSURE LOSS		0.016	0.028	0.052	0.072	0.112	0.144	0.280
6 x 6 Ak .14	cfm	52	65	78	91	117	143	195
	Throw	4/3	5/4	5/4	6/5	7/6	8/7	11/8
8 x 8 Ak .23	cfm	80	100	120	140	180	220	300
	Throw	4/2	5/3	6/3	7/4	10/5	12/6	15/9
10 x 10 Ak .30	cfm	116	145	174	203	261	319	435
	Throw	6/3	8/4	9/5	10/5	12/7	14/8	18/10
12 x 12 Ak .42	cfm	168	210	252	294	378	462	630
	Throw	6/4	8/5	10/6	12/7	16/9	20/11	24/16
14 x 14 Ak .65	cfm	236	295	354	413	531	649	885
	Throw	9/4	10/6	12/7	14/8	17/10	20/13	26/18
Terminal Velocity of 75fpm								

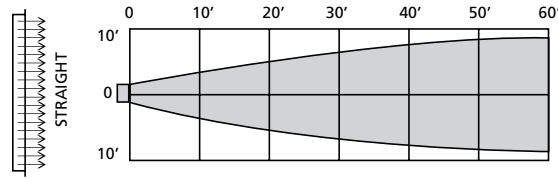
484 - ALUMINUM SQUARE CEILING DIFFUSER 4-WAY

FACE VELOCITY		400	500	600	700	900	1100	1500
PRESSURE LOSS		0.016	0.028	0.052	0.072	0.116	0.152	0.280
6 x 6 Ak .14	cfm	52	65	78	91	117	143	195
	Throw	3	4	4	5	6	7	10
8 x 8 Ak .23	cfm	80	100	120	140	180	220	300
	Throw	4	5	6	6	8	10	14
10 x 10 Ak .30	cfm	116	145	174	203	261	319	435
	Throw	4	5	7	9	10	11	16
12 x 12 Ak .42	cfm	168	210	252	294	378	462	630
	Throw	6	7	8	9	11	13	17
14 x 14 Ak .65	cfm	236	295	354	413	531	649	885
	Throw	6	8	9	10	13	16	22
Terminal Velocity of 75fpm								

485 - ALUMINUM SQUARE CEILING DIFFUSER 2-WAY CORNER

FACE VELOCITY		400	500	600	700	900	1100	1500
PRESSURE LOSS		0.016	0.028	0.048	0.064	0.120	0.144	0.280
6 x 6 Ak .14	cfm	52	65	78	91	117	143	195
	Throw	3	4	5	6	8	10	13
8 x 8 Ak .23	cfm	80	100	120	140	180	220	300
	Throw	5	6	7	8	10	12	15
10 x 10 Ak .30	cfm	116	145	174	203	261	319	435
	Throw	6	8	10	11	12	14	19
12 x 12 Ak .42	cfm	168	210	252	294	378	462	630
	Throw	7	9	10	12	15	17	23
14 x 14 Ak .65	cfm	236	295	354	413	531	649	885
	Throw	7	9	10	12	16	20	28
Terminal Velocity of 75fpm								

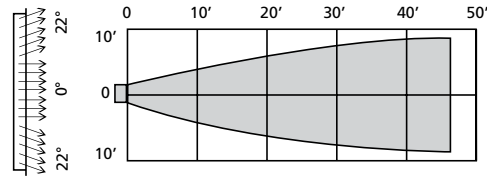
A DEFLECTION



DEFLECTION A
411 - VERTICAL SINGLE DEFLECTION SUPPLY WITH MULTI-SHUTTER DAMPER

FACE VELOCITY		400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000
PRESSURE LOSS		0.012	0.016	0.024	0.032	0.040	0.052	0.064	0.076	0.092	0.108	0.124	0.164	0.204	0.252
8 x 4 Ak .162	cfm	65	81	97	113	130	146	162	178	194	211	227	259	292	324
	Throw	7	9	10	11	14	15	16	19	20	22	24	26	30	33
8 x 6 Ak .245	cfm	99	124	149	174	198	223	248	273	298	322	347	397	446	496
	Throw	8	11	13	14	16	19	20	23	24	27	29	33	37	41
10 x 6 Ak .315	cfm	126	157.5	189	220.5	252	283.5	315	346.5	378	409.5	441	504	567	630
	Throw	9	11	14	16	18	22	23	25	28	30	33	36	41	46
10 x 10 Ak .528	cfm	211	264	317	370	422	475	528	581	634	686	739	845	950	1056
	Throw	12	15	19	21	23	27	29	33	35	38	41	48	53	60
14 x 6 Ak .445	cfm	179	224	269	314	358	403	448	493	538	582	627	717	806	896
	Throw	11	13	16	19	23	24	27	30	33	35	39	43	50	54
14 x 8 Ak .591	cfm	236	296	355	414	473	532	591	650	709	768	827	946	1064	1182
	Throw	12	15	19	22	25	28	30	33	37	40	44	50	56	63
14 x 10 Ak .749	cfm	300	375	449	524	599	674	749	824	899	974	1049	1198	1348	1498
	Throw	14	17	20	24	27	31	34	38	41	45	48	55	62	69
14 x 14 Ak 1.071	cfm	428	536	643	750	857	964	1071	1178	1285	1392	1499	1714	1928	2142
	Throw	18	22	26	30	34	38	42	47	51	55	59	67	75	84
16 x 6 Ak .512	cfm	205	257	308	359	410	462	513	564	616	667	718	821	923	1026
	Throw	12	15	17	21	23	26	30	32	35	39	41	47	53	59
16 x 8 Ak .684	cfm	274	342	410	479	547	616	684	752	821	889	958	1094	1231	1368
	Throw	14	17	20	24	27	30	33	37	41	43	47	43	59	66
16 x 16 Ak 1.405	cfm	562	703	843	984	1124	1265	1405	1546	1686	1827	1967	2248	2529	2810
	Throw	19	24	29	34	39	45	50	54	59	64	68	77	86	95
18 x 6 Ak .570	cfm	228	285	342	399	456	513	570	627	684	741	798	912	1026	1140
	Throw	12	15	18	22	24	28	30	33	37	39	43	49	55	61
24 x 6 Ak .773	cfm	309	387	464	541	619	696	774	851	928	1006	1083	1238	1392	1547
	Throw	14	18	22	25	29	32	35	40	43	46	51	58	64	72
24 x 8 Ak 1.047	cfm	419	524	628	733	838	942	1047	1152	1256	1361	1466	1675	1885	2094
	Throw	17	21	25	30	33	37	42	46	50	54	59	66	75	83

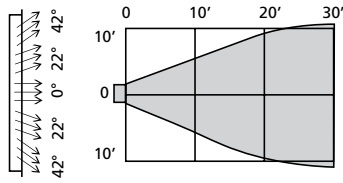
C DEFLECTION



DEFLECTION C
411 - VERTICAL SINGLE DEFLECTION SUPPLY WITH MULTI-SHUTTER DAMPER

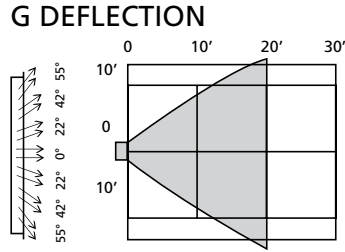
FACE VELOCITY	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	
PRESSURE LOSS	0.012	0.016	0.024	0.032	0.040	0.052	0.064	0.076	0.092	0.108	0.124	0.164	0.204	0.252	
8 x 4 Ak .412	cfm	57	71	85	99	114	128	142	156	170	185	199	227	256	284
	Throw	5	6	8	9	10	11	13	14	15	17	18	20	22	25
8 x 6 Ak .216	cfm	86	108	130	151	173	194	216	238	259	281	302	346	389	432
	Throw	6	8	10	11	13	14	15	17	18	21	22	24	28	30
10 x 6 Ak .277	cfm	111	139	166	194	222	249	277	305	332	360	388	443	499	554
	Throw	7	9	10	12	14	16	17	19	22	22	24	27	32	34
10 x 10 Ak .465	cfm	186	233	279	326	372	419	465	512	558	605	651	744	837	930
	Throw	9	11	14	16	18	20	22	26	27	29	32	36	40	45
14 x 6 Ak .393	cfm	157	197	236	275	314	354	393	432	472	511	550	629	707	786
	Throw	8	10	13	14	17	19	20	24	25	27	30	33	38	42
14 x 8 Ak .519	cfm	208	260	311	363	415	467	519	571	623	675	727	830	934	1038
	Throw	10	12	14	17	19	21	23	26	29	31	34	39	43	47
14 x 10 Ak .676	cfm	270	338	406	473	541	608	676	744	811	879	946	1082	1217	1352
	Throw	11	14	16	19	21	24	27	29	31	34	38	42	49	54
14 x 14 Ak .901	cfm	360	450	540	630	720	810	901	991	1081	1171	1261	1441	1621	1801
	Throw	14	16	20	23	26	29	33	37	39	42	46	52	59	65
16 x 6 Ak .450	cfm	180	225	270	315	360	405	450	495	540	585	630	720	810	900
	Throw	9	11	13	16	18	21	22	24	27	28	32	36	39	45
16 x 8 Ak .684	cfm	274	342	410	479	547	616	684	752	821	889	958	1094	1231	1368
	Throw	10	12	15	18	20	23	26	28	31	34	37	42	48	53
16 x 16 Ak 1.178	cfm	471	589	707	825	942	1060	1178	1296	1414	1531	1649	1885	2120	2356
	Throw	17	19	21	26	28	33	36	39	43	47	50	57	64	73
18 x 6 Ak .493	cfm	197	247	296	345	395	444	494	543	592	642	691	790	888	987
	Throw	9	11	14	17	18	22	24	26	29	31	32	38	42	47
24 x 6 Ak .66	cfm	264	330	396	462	528	594	660	726	792	858	924	1056	1188	1320
	Throw	12	15	16	20	21	25	27	31	32	35	39	43	50	55
24 x 8 Ak .882	cfm	353	441	529	617	706	794	882	970	1058	1147	1235	1411	1588	1764
	Throw	15	17	19	23	25	29	31	36	39	41	44	51	57	64

E DEFLECTION



DEFLECTION E
411 - VERTICAL SINGLE DEFLECTION SUPPLY WITH MULTI-SHUTTER DAMPER

FACE VELOCITY	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	
PRESSURE LOSS	0.012	0.016	0.024	0.032	0.040	0.052	0.064	0.076	0.092	0.108	0.124	0.164	0.204	0.252	
8 x 4 Ak .125	cfm	50	63	75	88	100	113	125	138	150	163	175	200	225	250
	Throw	4	5	6	7	8	9	10	11	12	13	14	16	17	19
8 x 6 Ak .191	cfm	76	96	115	134	153	172	191	210	229	248	267	306	344	382
	Throw	5	6	7	8	10	11	12	13	14	15	16	18	20	23
10 x 6 Ak .246	cfm	98	123	148	172	197	221	246	271	295	320	344	394	443	492
	Throw	5	7	8	10	11	12	13	14	16	17	19	20	24	26
10 x 10 Ak .410	cfm	164	205	246	287	328	369	410	451	492	533	574	656	738	820
	Throw	7	9	10	11	14	15	17	19	20	22	23	27	31	34
14 x 6 Ak .347	cfm	139	174	208	243	278	312	347	382	416	451	486	555	625	694
	Throw	7	8	9	12	13	14	15	17	19	21	22	25	29	31
14 x 8 Ak .459	cfm	184	230	275	321	367	413	459	505	551	597	643	734	826	918
	Throw	7	9	11	12	14	16	18	19	21	22	25	28	32	35
14 x 10 Ak .581	cfm	232	291	349	407	465	523	581	639	697	755	813	930	1046	1162
	Throw	8	10	12	14	16	18	20	22	24	26	28	31	35	40
14 x 14 Ak .832	cfm	333	416	499	582	666	749	832	915	998	1082	1165	1331	1498	1664
	Throw	11	13	17	20	22	26	28	30	33	36	38	44	50	55
16 x 6 Ak .398	cfm	159	199	239	279	318	358	398	438	478	517	557	637	716	796
	Throw	7	8	10	12	13	15	17	18	19	22	23	27	30	32
16 x 8 Ak .531	cfm	212	266	319	372	425	478	531	584	637	690	743	850	956	1062
	Throw	8	10	12	14	16	18	20	22	23	25	27	31	35	40
16 x 16 Ak .091	cfm	436	546	655	764	873	982	1091	1200	1309	1418	1527	1746	1964	2182
	Throw	11	14	17	19	22	25	27	31	33	36	38	45	50	56
18 x 6 Ak .443	cfm	177	222	266	310	354	399	443	487	532	576	620	709	797	886
	Throw	7	9	10	12	14	15	18	21	22	23	24	29	31	35
24 x 6 Ak .599	cfm	240	300	359	419	479	539	599	659	719	779	839	958	1078	1198
	Throw	9	10	12	14	16	19	21	22	24	27	28	32	37	41
24 x 8 Ak .813	cfm	325	407	488	569	650	732	813	894	976	1057	1138	1301	1463	1626
	Throw	10	12	14	17	19	21	24	25	28	30	33	38	42	47



DEFLECTION G
411 - VERTICAL SINGLE DEFLECTION SUPPLY WITH MULTI-SHUTTER DAMPER

FACE VELOCITY		400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000
PRESSURE LOSS		0.012	0.016	0.024	0.032	0.040	0.052	0.064	0.076	0.092	0.108	0.124	0.164	0.204	0.252
8 x 4 Ak .120	cfm	48	60	72	84	96	108	120	132	144	156	168	192	216	240
	Throw	3	4	5	5	6	7	7	8	9	10	10	11	13	14
8 x 6 Ak .175	cfm	70	88	105	123	140	158	175	193	210	228	245	280	315	350
	Throw	3	4	5	6	7	8	8	9	10	11	12	13	14	16
10 x 6 Ak .224	cfm	90	112	134	157	179	202	224	246	269	291	314	358	403	448
	Throw	4	5	6	7	8	8	9	10	11	12	13	14	16	17
10 x 10 Ak .374	cfm	150	187	224	262	299	337	374	411	449	486	524	598	673	748
	Throw	5	6	7	8	9	10	11	13	14	15	16	18	21	23
14 x 6 Ak .323	cfm	127	159	191	223	254	286	318	350	382	413	445	509	572	636
	Throw	5	6	7	8	9	10	11	12	13	14	15	16	19	20
14 x 8 Ak .419	cfm	168	210	251	293	335	377	419	461	503	545	587	670	754	838
	Throw	5	7	7	8	10	11	12	13	14	15	16	19	21	23
14 x 10 Ak .530	cfm	212	265	318	371	424	477	530	583	636	689	742	848	954	1060
	Throw	5	7	8	9	11	12	13	15	16	18	19	21	24	27
14 x 14 Ak 768	cfm	307	384	460	537	614	690	767	844	920	997	1074	1227	1381	1534
	Throw	7	8	9	2	13	15	16	18	19	21	22	26	29	31
16 x 6 Ak 362	cfm	145	181	217	253	290	326	362	398	434	471	507	579	652	724
	Throw	5	6	7	8	9	10	12	13	14	15	16	17	20	23
16 x 8 Ak .485	cfm	194	243	291	340	388	437	485	534	582	631	679	776	873	970
	Throw	5	6	8	9	10	11	12	15	16	17	19	21	23	26
16 x 16 Ak .990	cfm	396	495	594	693	792	891	990	1089	1188	1287	1386	1584	1782	1980
	Throw	7	9	12	13	15	17	19	20	22	24	26	30	34	37
18 x 6 Ak .403	cfm	161	202	242	282	322	363	403	443	484	524	564	645	725	806
	Throw	5	6	7	8	9	10	11	13	14	15	17	18	22	24
24 x 6 Ak .547	cfm	219	274	328	383	438	492	547	602	656	711	766	875	985	1094
	Throw	6	7	8	10	11	12	14	15	17	18	20	21	25	27
24 x 8 Ak .741	cfm	296	371	445	519	593	667	741	815	889	963	1037	1186	1334	1482
	Throw	7	8	10	11	14	15	16	18	19	20	23	26	28	32

Terminal Velocity of 75fpm

422 - HORIZONTAL RETURN GRILLE

FACE VELOCITY		300	400	500	600	700	800	900	1000
6 x 6 Ak .17	cfm	46	61	77	92	107	122	138	153
	Throw	0.012	0.020	0.028	0.048	0.060	0.076	0.100	0.132
8 x 8 Ak .29	cfm	85	113	141	169	197	226	254	282
	Throw	0.012	0.020	0.028	0.048	0.060	0.076	0.100	0.132
10 x 10 Ak .47	cfm	137	182	228	273	319	364	410	455
	Throw	0.012	0.020	0.032	0.044	0.060	0.072	0.096	0.120
12 x 6 Ak .34	cfm	98	130	163	195	228	260	293	325
	Throw	0.012	0.020	0.032	0.048	0.060	0.076	0.100	0.128
12 x 12 Ak .68	cfm	199	266	332	398	465	531	598	664
	Throw	0.012	0.020	0.032	0.044	0.056	0.072	0.092	0.108
14 x 8 Ak .52	cfm	151	201	251	301	351	402	452	502
	Throw	0.012	0.020	0.032	0.044	0.056	0.072	0.096	0.116
14 x 10 Ak .65	cfm	190	254	317	380	444	507	571	634
	Throw	0.012	0.020	0.032	0.040	0.056	0.072	0.092	0.112
16 x 16 Ak 1.20	cfm	335	447	559	671	783	895	1006	1118
	Throw	0.012	0.020	0.032	0.044	0.060	0.080	0.096	0.116
20 x 10 Ak .93	cfm	274	365	457	548	639	730	822	913
	Throw	0.012	0.020	0.032	0.040	0.056	0.076	0.092	0.112
20 x 12 Ak 1.14	cfm	337	449	562	674	786	898	1011	1123
	Throw	0.012	0.020	0.032	0.044	0.056	0.080	0.096	0.116
20 x 14 Ak 1.31	cfm	388	517	647	776	905	1034	1164	1293
	Throw	0.012	0.020	0.032	0.044	0.060	0.084	0.096	0.116
24 x 8 Ak .91	cfm	268	357	446	535	624	714	803	892
	Throw	0.012	0.020	0.032	0.040	0.056	0.076	0.092	0.112
24 x 10 Ak 1.13	cfm	337	449	561	673	785	898	1010	1122
	Throw	0.012	0.020	0.032	0.044	0.056	0.080	0.096	0.116
24 x 12 Ak 1.36	cfm	403	537	671	805	939	1074	1208	1342
	Throw	0.012	0.020	0.032	0.044	0.060	0.084	0.096	0.120
24 x 14 Ak 1.60	cfm	475	633	791	949	1107	1266	1424	1582
	Throw	0.012	0.020	0.032	0.044	0.060	0.084	0.100	0.120

600 - ALUMINUM HORIZONTAL GRILLE

Face Velocity		400	500	600	700	800	900	1000
6 x 6 Ak 0.11	cfm	40	60	70	80	90	100	110
	Ps	0.037	0.058	0.083	0.113	0.148	0.189	0.232
36 x 18 Ak 3.02	cfm	1200	1500	1800	2100	2400	2700	3000
	Ps	0.023	0.035	0.051	0.069	0.092	0.116	0.137

441 - ALUMINUM SINGLE DEFLECTION RETURN GRILLE

FACE VELOCITY		400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000
PRESSURE LOSS		0.008	0.012	0.024	0.028	0.040	0.044	0.068	0.076	0.084	0.112	0.128	0.152	0.204	0.240
10 x 10 Ak .543	cfm	217	272	326	380	434	489	543	597	652	706	760	869	977	1086
14 x 5 Ak .310	cfm	124	155	186	217	248	279	310	341	372	403	434	496	558	620
14 x 6 Ak .419	cfm	168	210	251	293	335	377	419	461	503	545	587	670	754	838
14 x 7 Ak .527	cfm	211	264	316	369	422	475	527	580	633	686	738	844	949	1055
14 x 8 Ak .636	cfm	254	318	382	445	509	572	636	700	763	827	890	1018	1145	1272
16 x 4 Ak .263	cfm	105	132	158	184	210	237	263	289	316	342	368	421	473	526
16 x 6 Ak .512	cfm	205	256	307	358	410	461	512	563	614	666	717	819	922	1024
16 x 8 Ak .761	cfm	304	381	457	533	609	685	761	837	913	989	1065	1218	1370	1522
16 x 10 Ak 1.01	cfm	404	505	606	707	808	909	1010	1111	1212	1313	1414	1616	1818	2020

451 - ALUMINUM SINGLE DEFLECTION RETURN GRILLE

FACE VELOCITY		400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000
PRESSURE LOSS		0.008	0.012	0.024	0.028	0.040	0.044	0.068	0.076	0.084	0.112	0.128	0.152	0.204	0.24
10 x 10 Ak .516	cfm	206	258	310	361	413	464	516	568	619	671	722	826	929	1032
14 x 5 Ak .294	cfm	118	147	176	206	235	265	294	323	353	382	412	470	529	588
14 x 6 Ak .398	cfm	159	199	239	279	318	358	398	438	478	517	557	637	716	796
14 x 7 Ak .501	cfm	200	251	301	351	401	451	501	551	601	652	702	802	902	1002
14 x 8 Ak .605	cfm	242	303	363	424	484	545	605	666	726	787	847	968	1089	1210
16 x 4 Ak .250	cfm	100	125	150	175	200	225	250	275	300	325	350	400	450	500
16 x 6 Ak .487	cfm	195	244	292	341	390	438	487	536	584	633	682	779	877	974
16 x 8 Ak .723	cfm	289	362	434	506	578	651	723	795	868	940	1012	1157	1301	1446
16 x 10 Ak .959	cfm	384	480	575	671	767	863	959	1055	1151	1247	1343	1534	1726	1918

444 - ALUMINUM DOUBLE DEFLECTION SUPPLY REGISTER

FACE VELOCITY		400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000
PRESSURE LOSS		0.008	0.016	0.024	0.032	0.040	0.048	0.068	0.076	0.092	0.112	0.128	0.160	0.204	0.248
10 x 10 Ak .450	cfm	180	225	270	315	360	405	450	495	540	585	630	720	810	900
	Throw	12	15	18	20	23	26	28	31	34	37	39	45	50	55
14 x 5 Ak .256	cfm	102	128	154	179	205	230	256	282	307	333	358	410	461	512
	Throw	10	12	15	17	19	22	24	26	28	31	33	37	42	46
14 x 6 Ak .346	cfm	138	173	208	242	277	311	346	381	415	450	484	554	623	692
	Throw	11	14	16	19	21	24	26	29	31	33	36	41	46	50
14 x 7 Ak .437	cfm	175	219	262	306	350	393	437	481	524	568	612	699	787	874
	Throw	12	15	17	20	22	26	29	31	35	37	39	45	51	56
14 x 8 Ak .527	cfm	211	264	316	369	422	474	527	580	632	685	738	843	949	1054
	Throw	13	16	19	21	24	27	30	33	36	39	41	47	53	58
16 x 4 Ak .217	cfm	87	109	130	152	174	195	217	239	260	282	304	347	391	434
	Throw	10	12	14	16	18	21	23	25	27	29	31	36	40	44
16 x 6 Ak .424	cfm	170	212	254	297	339	382	424	466	509	551	594	678	763	848
	Throw	12	14	17	20	23	25	28	31	33	36	38	44	49	54
16 x 8 Ak .631	cfm	252	316	379	442	505	568	631	694	757	820	883	1010	1136	1262
	Throw	13	17	20	23	26	29	32	35	38	41	44	50	56	62

453 - ALUMINUM DOUBLE DEFLECTION SUPPLY REGISTER

FACE VELOCITY		400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000
PRESSURE LOSS		0.008	0.016	0.024	0.032	0.040	0.048	0.068	0.076	0.092	0.112	0.128	0.160	0.204	0.248
10 x 10 Ak .456	cfm	182	228	274	319	365	410	456	502	547	593	638	730	821	912
	Throw	13	16	19	22	25	28	30	33	36	39	42	48	54	59
14 x 5 Ak .260	cfm	104	130	156	182	208	234	260	286	312	338	364	416	468	520
	Throw	11	13	16	18	21	23	25	28	30	33	35	40	45	50
14 x 6 Ak .351	cfm	140	176	211	246	281	316	351	386	421	456	491	562	632	702
	Throw	12	14	17	20	23	25	28	31	33	36	39	44	49	54
14 x 7 Ak .437	cfm	175	219	262	306	350	393	437	481	524	568	612	699	787	874
	Throw	12	15	18	21	24	27	30	32	37	39	42	48	55	61
14 x 8 Ak .535	cfm	214	268	321	375	428	482	535	589	642	696	749	856	963	1070
	Throw	13	17	20	23	26	29	32	35	38	41	45	51	57	63
16 x 4 Ak .220	cfm	88	110	132	154	176	198	220	242	264	286	308	352	396	440
	Throw	10	13	15	17	20	22	24	27	29	31	34	38	43	47
16 x 6 Ak .430	cfm	172	215	258	301	344	387	430	473	516	559	602	688	774	860
	Throw	12	15	18	21	24	27	30	33	36	38	41	47	52	58
16 x 8 Ak .640	cfm	256	320	384	448	512	576	640	704	768	832	896	1024	1152	1280
	Throw	14	18	21	24	28	31	34	38	41	44	48	54	61	67

425 - STEEL FIXED BAR FILTER GRILLE

FACE VELOCITY		300	400	500	600	700	800	900	1000
6 x 6 Ak .17	cfm	46	61	77	92	107	122	138	153
	Ps	0.012	0.020	0.028	0.048	0.060	0.076	0.100	0.132
8 x 8 Ak .29	cfm	85	113	141	169	197	226	254	282
	Ps	0.012	0.020	0.028	0.048	0.060	0.076	0.100	0.132
10 x 10 Ak .47	cfm	137	182	228	273	319	364	410	455
	Ps	0.012	0.020	0.032	0.044	0.060	0.072	0.096	0.120
12 x 6 Ak .34	cfm	98	130	163	195	228	260	293	325
	Ps	0.012	0.020	0.032	0.048	0.060	0.076	0.100	0.128
12 x 12 Ak .68	cfm	199	266	332	398	465	531	598	664
	Ps	0.012	0.020	0.032	0.044	0.056	0.072	0.092	0.108
14 x 8 Ak .52	cfm	151	201	251	301	351	402	452	502
	Ps	0.012	0.020	0.032	0.044	0.056	0.072	0.096	0.116
14 x 10 Ak .65	cfm	190	254	317	380	444	507	571	634
	Ps	0.012	0.020	0.032	0.040	0.056	0.072	0.092	0.112
16 x 16 Ak 1.20	cfm	335	447	559	671	783	895	1006	1118
	Ps	0.012	0.020	0.032	0.044	0.060	0.080	0.096	0.116
20 x 10 Ak .93	cfm	274	365	457	548	639	730	822	913
	Ps	0.012	0.020	0.032	0.040	0.056	0.076	0.092	0.112
20 x 12 Ak 1.14	cfm	337	449	562	674	786	898	1011	1123
	Ps	0.012	0.020	0.032	0.044	0.056	0.080	0.096	0.116
20 x 14 Ak 1.31	cfm	388	517	647	776	905	1034	1164	1293
	Ps	0.012	0.020	0.032	0.044	0.060	0.084	0.096	0.116
24 x 8 Ak .91	cfm	268	357	446	535	624	714	803	892
	Ps	0.012	0.020	0.032	0.040	0.056	0.076	0.092	0.112
24 x 10 Ak 1.13	cfm	337	449	561	673	785	898	1010	1122
	Ps	0.012	0.020	0.032	0.044	0.056	0.080	0.096	0.116
24 x 12 Ak 1.36	cfm	403	537	671	805	939	1074	1208	1342
	Ps	0.012	0.020	0.032	0.044	0.060	0.084	0.096	0.120
24 x 14 Ak 1.60	cfm	475	633	791	949	1107	1266	1424	1582
	Ps	0.012	0.020	0.032	0.044	0.060	0.084	0.100	0.120

952/952WI - T-BAR STEEL 2-CONE FIXED-PATTERN DIFFUSER WITH COLLAR

FACE VELOCITY		400	500	600	700	800	900	1000	1200	1400	1600
6" An.20 Ak0.76(fully retracted) Ak0.80(fully extended)	cfm	80	100	120	140	160	180	200	240	280	320
	ps(fully retracted)	0.024	0.040	0.056	0.072	0.100	0.116	0.144	0.220	0.296	0.400
	ps(fully extended)	0.008	0.016	0.024	0.032	0.048	0.06	0.076	0.116	0.156	0.208
	Throw(fully retracted)	2	3	3	4	5	6	6	8	10	12
	Throw(fully extended)	2	3	4	4	5	6	7	9	11	13
8" An.35 Ak0.88(fully retracted) Ak0.94(fully extended)	cfm	140	175	210	245	280	315	350	420	490	560
	ps(fully retracted)	0.028	0.044	0.064	0.088	0.120	0.152	0.188	0.272	0.396	0.500
	ps(fully extended)	0.016	0.024	0.036	0.048	0.072	0.092	0.108	0.16	0.232	0.32
	Throw(fully retracted)	4	5	6	7	8	9	10	12	14	16
	Throw(fully extended)	4	5	6	8	9	10	12	14	17	20
10" An.54 Ak1.16(fully retracted) Ak1.22(fully extended)	cfm	216	270	324	378	432	486	540	648	756	864
	ps(fully retracted)	0.044	0.076	0.096	0.128	0.172	0.224	0.260	0.368	0.500	0.640
	ps(fully extended)	0.028	0.044	0.06	0.084	0.112	0.136	0.168	0.224	0.284	0.46
	Throw(fully retracted)	6	7	9	10	12	13	15	17	20	23
	Throw(fully extended)	6	8	9	11	13	15	17	21	25	29
12" An0.79 Ak1.61(fully retracted) Ak1.67(fully extended)	cfm	312	390	468	546	624	702	780	936	1092	1248
	ps(fully retracted)	0.056	0.084	0.124	0.168	0.220	0.280	0.336	0.476	0.648	0.808
	ps(fully extended)	0.04	0.06	0.088	0.112	0.136	0.176	0.212	0.308	0.416	0.528
	Throw(fully retracted)	6	8	9	11	12	14	15	18	21	24
	Throw(fully extended)	7	9	11	13	15	16	18	22	26	30
14" An1.07 Ak2.03(fully retracted) Ak2.09(fully extended)	cfm	428	535	642	749	856	963	1070	1284	1498	1712
	Ps(fully retracted)	0.080	0.128	0.172	0.228	0.276	0.340	0.464	0.644	0.812	1.004
	Ps(fully extended)	0.064	0.084	0.116	0.136	0.180	0.212	0.300	0.408	0.524	0.696
	Throw(fully retracted)	8	9	12	13	15	16	18	22	25	28
	Throw(fully extended)	10	11	13	15	17	19	22	26	29	32

Terminal Velocity of 75fpm
 An=Neck Area in Sq.Ft.
 NC=Noise Criteria based on 10dB room absorption(Re:10-12 watts.)

96114WI - T-BAR STEEL 3-CONE FIXED-PATTERN HIGH VOLUME DIFFUSER WITH INSULATION AND 14" FIXED COLLAR

NECK VELOCITY		400	500	600	700	800	900	1000	1200	1400	1600
14" AN 1.070 Ak 2.060	cfm	430	535	640	750	855	960	1070	1285	1500	1700
	Ps	0.023	0.036	0.051	0.071	0.093	0.115	0.14	0.25	0.277	0.35
	NC	<20	<20	20	25	30	35	40	40	45	45
	Throw	6.5	8	9.5	11.5	13	14.5	16	19	22.5	25

961R6 - T-BAR STEEL 3-CONE FIXED-PATTERN HIGH VOLUME DIFFUSER WITH R6 INSULATION											
NECK VELOCITY		400	500	600	700	800	900	1000	1200	1400	1600
6"	cfm	80	100	120	135	155	175	195	235	275	315
	Ps	0.008	0.012	0.017	0.021	0.028	0.035	0.043	0.063	0.086	0.112
	NC	<20	<20	<20	<20	<20	<20	20	25	30	35
	Throw	2	3	3	3.5	4	4.5	5	6	7	8
8"	cfm	140	175	210	245	280	315	350	420	490	560
	Ps	0.01	0.015	0.022	0.029	0.038	0.049	0.06	0.086	0.117	0.15
	NC	<20	<20	<20	<20	20	25	30	35	35	40
	Throw	3.5	4.5	5.5	6.5	7	8	9	10.5	12.5	14.5
10"	cfm	220	270	325	380	435	490	545	655	765	870
	Ps	0.014	0.021	0.03	0.041	0.054	0.068	0.084	0.122	0.167	0.212
	NC	<20	<20	<20	20	25	30	35	35	40	45
	Throw	5.5	7	8.5	10	11	12.5	14	17	19.5	22
12"	cfm	315	390	470	550	630	705	785	940	1100	1255
	Ps	0.015	0.023	0.033	0.045	0.06	0.072	0.094	0.132	0.18	0.23
	NC	<20	<20	20	25	30	35	35	40	45	45
	Throw	6	7.5	9	10.5	12	13.5	15	18	21	24

962 - T-BAR STEEL 3-CONE FIXED-PATTERN DIFFUSER WITH COLLAR												
FACE VELOCITY		400	500	600	700	800	900	1000	1200	1400	1600	
6" An.20 Ak0.78(fully retracted) Ak0.82(fully extended)	cfm	80	100	120	140	160	180	200	240	280	320	
	ps(fully retracted)	0.012	0.020	0.024	0.036	0.048	0.060	0.076	0.112	0.160	0.216	
	ps(fully extended)	0.008	0.012	0.016	0.024	0.032	0.040	0.048	0.072	0.104	0.140	
	Throw(fully retracted)	2	3	3	4	5	6	6	8	9	11	
	Throw(fully extended)	2	3	4	5	5	6	7	9	11	13	
8" An.35 Ak0.90(fully retracted) Ak0.97(fully extended)	cfm	140	175	210	245	280	315	350	420	490	560	
	ps(fully retracted)	0.016	0.028	0.044	0.060	0.080	0.108	0.132	0.200	0.288	0.348	
	ps(fully extended)	0.008	0.016	0.024	0.032	0.044	0.056	0.076	0.120	0.168	0.212	
	Throw(fully retracted)	4	5	6	6	7	8	9	11	12	14	
	Throw(fully extended)	4	5	6	7	8	9	11	12	14	16	
10" An.54 Ak1.19(fully retracted) Ak1.24(fully extended)	cfm	216	270	324	378	432	486	540	648	756	864	
	ps(fully retracted)	0.024	0.040	0.064	0.092	0.120	0.164	0.200	0.244	0.340	0.492	
	ps(fully extended)	0.012	0.020	0.032	0.044	0.064	0.080	0.100	0.120	0.164	0.220	
	Throw(fully retracted)	5	6	7	8	10	12	14	17	19	21	
	Throw(fully extended)	6	8	9	11	13	14	16	18	22	24	
12" An.79 Ak1.63(fully retracted) Ak1.69(fully extended)	cfm	312	390	468	546	624	702	780	936	1092	1248	
	ps(fully retracted)	0.052	0.080	0.116	0.152	0.180	0.220	0.276	0.404	0.544	0.644	
	ps(fully extended)	0.040	0.052	0.076	0.096	0.124	0.144	0.192	0.272	0.368	0.476	
	Throw(fully retracted)	6	7	8	10	11	13	14	17	20	22	
	Throw(fully extended)	6	8	9	11	13	14	16	19	23	26	
14" An.1.07 Ak2.05(fully retracted) Ak2.11(fully extended)	cfm	428	535	642	749	856	963	1070	1284	1498	1712	
	Ps(fully retracted)	0.076	0.112	0.156	0.172	0.224	0.280	0.412	0.540	0.636	0.792	
	Ps(fully extended)	0.056	0.080	0.100	0.128	0.140	0.196	0.272	0.368	0.472	0.584	
	Throw(fully retracted)	7	10	11	13	14	18	20	23	27	29	
	Throw(fully extended)	9	11	13	15	16	19	22	26	30	31	

Terminal Velocity of 75fpm
An=Neck Area in Sq.Ft.
NC=Noise Criteria based on 10dB room absorption(Re:10-120 watts.)

610 - T-BAR ALUMINUM HORIZONTAL BAR RETURN GRILLE									
Face Velocity		300	400	500	600	700	800	900	1000
22 x 22 Ak 2.62	cfm	780	1040	1300	1560	1820	2080	2340	2600
	-Ps	0.014	0.029	0.038	0.059	0.080	0.114	0.133	0.162

923 - T-BAR STEEL LANCED RETURN FILTER GRILLE					
FACE VELOCITY		300	400	500	600
Ak 2.440	cfm	730	975	1220	1465
	-Ps	.017	.030	.047	.067

611 - T-BAR ALUMINUM HORIZONTAL BAR RETURN FILTER GRILLE								
Face Velocity		400	500	600	700	800	900	1000
20 x 20 Ak 1.85	cfm	740	925	1110	1295	1480	1665	1850
	Ps	0.023	0.038	0.054	0.073	0.096	0.123	0.146

923R6 - T-BAR STEEL LANCED RETURN FILTER GRILLE							
Face Velocity		300	400	500	600	700	800
12" Collar Ak 2.24	cfm	672	896	1120	1344	1568	1792
	Ps	0.082	0.144	0.225	0.323	0.441	0.578
14" Collar Ak 2.28	cfm	684	912	1140	1368	1596	1824
	Ps	0.059	0.103	0.162	0.235	0.323	0.412
16" Collar Ak 2.34	cfm	702	936	1170	1404	1638	1872
	Ps	0.038	0.067	0.104	0.152	0.206	0.270

922 - T-BAR STEEL LANCED RETURN FILTER GRILLE							
Face Velocity		300	400	500	600	700	800
12" Collar Ak 2.32	cfm	696	928	1160	1392	1624	1856
	Ps	0.098	0.170	0.265	0.380	0.520	0.680
14" Collar Ak 2.59	cfm	777	1036	1295	1554	1813	2072
	Ps	0.076	0.125	0.200	0.283	0.390	0.510
16" Collar Ak 2.630	cfm	789	1052	1315	1578	1841	2104
	Ps	0.055	0.094	0.145	0.210	0.285	0.350

964 - STEEL PERFORATED RETURN FILTER GRILLE					
FACE VELOCITY		300	400	500	600
Ak 2.740	cfm	820	1095	1370	1645
	-Ps	.028	.050	.078	.113

922R6 - T-BAR STEEL LANCED RETURN FILTER GRILLE WITH R6 INSULATION							
Face Velocity		300	400	500	600	700	800
12" Collar Ak 2.32	cfm	696	928	1160	1392	1624	1856
	Ps	0.098	0.170	0.265	0.380	0.520	0.680
14" Collar Ak 2.59	cfm	777	1036	1295	1554	1813	2072
	Ps	0.076	0.125	0.200	0.283	0.390	0.510
16" Collar Ak 2.630	cfm	789	1052	1315	1578	1841	2104
	Ps	0.055	0.094	0.145	0.210	0.285	0.350

986 - T-BAR ALUMINUM EGG CRATE FILTER GRILLE									
Face Velocity		300	400	500	600	700	800	900	1000
20 x 20 Ak 2.00	cfm	600	800	1000	1200	1400	1600	1800	2000
	Ps	0.003	0.006	0.010	0.014	0.019	0.024	0.030	0.037

987 - T-BAR ALUMINUM EGG CRATE RETURN GRILLE									
FACE VELOCITY		300	400	500	600	700	800	900	1000
24"x24" Ak 2.42	cfm	725	970	1210	1450	1695	1935	2180	2420
	-Ps	0.004	0.006	0.01	0.014	0.02	0.025	0.031	0.04

944WI - T-BAR STAMPED ALUMINUM 4-WAY PERFORATED DIFFUSER WITH INSULATION										
FACE VELOCITY		300	400	500	600	700	800	900	1000	1100
6" An 0.20 Ak 0.87	cfm	60	80	100	120	140	160	180	200	220
	Ps	0.004	0.008	0.012	0.016	0.024	0.032	0.040	0.048	0.056
	Throw	3	4	5	6	7	8	9	10	12
8" An .35 Ak 1.11	cfm	105	140	175	210	245	280	315	350	385
	Ps	0.008	0.016	0.024	0.032	0.044	0.060	0.076	0.096	0.128
	Throw	5	7	9	11	12	14	16	17	20
10" An 0.54 Ak 1.39	cfm	162	216	270	324	378	432	486	540	594
	Ps	0.012	0.020	0.032	0.052	0.068	0.088	0.116	0.140	0.200
	Throw	8	11	13	16	20	22	25	28	32
12" An 0.78 Ak 1.80	cfm	240	320	400	480	560	640	720	800	880
	Ps	0.016	0.028	0.044	0.068	0.092	0.120	0.152	0.188	0.264
	Throw	12	16	21	25	30	34	39	44	51

955 - T-BAR STEEL CURVED BLADE PERFORATED SUPPLY

NECK SIZE		300	400	500	600	700	800	1000	1200
6"	cfm	60	80	100	120	140	160	200	240
	Ps	<.01	0.01	0.02	0.03	0.04	0.05	0.08	0.12
	Throw	1.5-2.5	1.5-2.5-3	2-3-4	2.5-3.5-4.5	3-4.5-5.5	3.5-5-6	4-6-7	5-7.5-9
	NC	<20	<20	<20	<20	21	24	32	38
8"	cfm	105	140	175	210	245	280	350	420
	Ps	<.01	0.01	0.02	0.03	0.04	0.06	0.09	0.12
	Throw	1.5-2.5-3	2-3-4	2.5-4-5	3.5-5-6	4-5.5-7	4.5-6.5-8	5.5-8-10	6.5-9.5-11.5
	NC	<20	<20	<20	<20	25	31	37	42
10"	cfm	165	220	275	325	380	435	545	650
	Ps	0.01	0.02	0.03	0.04	0.06	0.07	0.11	0.16
	Throw	3-4-5	3.5-5.5-6.5	4.5-6.5-8	5.5-8-10	6-9-11	7-10.5-12.5	9-13-15.5	10.5-15.5-18.5
	NC	<20	<20	<20	21	27	32	39	44
12"	cfm	235	315	395	470	550	630	790	940
	Ps	0.01	0.02	0.03	0.04	0.06	0.08	0.12	0.17
	Throw	2.5-3.5-4	3-4.5-5.5	3.5-5.5-6.5	4.5-7-8.5	5.5-8-9.5	6-7-11	7.5-11.5-14	9-13.5-16
	NC	<20	<20	20	26	32	37	42	>45
14"	cfm	325	430	535	640	750	860	1075	1275
	Ps	0.01	0.02	0.03	0.05	0.06	0.08	0.13	0.18
	Throw	2-3-3.5	2.5-4-5	3.5-5-6	4-6-7	4.5-7-8.5	5.5-8-10	6.5-10-12	7.5-11.5-14
	NC	<20	<20	<20	24	30	35	42	>45

957 - T-BAR SHALLOW BACK PERFORATED SUPPLY

FACE VELOCITY		300	400	500	600	700	800	900	1000	1200	1400
Velocity Pressure		0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062	0.090	0.122
6" Collar Ak 0.2	cfm	60	80	100	120	140	160	180	200	240	280
	Ps	0.005	0.008	0.013	0.025	0.025	0.032	0.041	0.050	0.077	0.098
	Short Throw	2-1-1	2-1-1	3-1-1	3-2-1	4-2-1	4-2-1	5-2-2	5-3-2	6-3-2	7-4-2
	Long Throw	3-1-1	4-2-1	5-2-2	6-3-2	7-3-2	8-4-3	9-4-3	10-5-3	12-6-4	14-7-5
8" Collar Ak 0.35	cfm	105	140	175	210	245	280	315	350	420	490
	Ps	0.009	0.015	0.024	0.034	0.046	0.061	0.077	0.095	0.136	0.185
	Short Throw	3-1-1	4-2-1	5-2-2	6-4-3	7-3-2	8-4-3	9-4-2	10-5-3	12-6-4	14-7-5
	Long Throw	5-3-2	7-4-2	9-5-3	11-5-4	13-6-4	15-7-5	16-8-5	18-9-6	22-11-7	25-13-8
10" Collar Ak 0.58	cfm	165	220	275	330	385	440	495	550	660	770
	Ps	0.013	0.023	0.036	0.052	0.071	0.092	0.117	0.144	0.208	0.283
	Short Throw	5-2-2	6-3-2	8-4-3	10-5-3	11-6-4	13-6-4	14-7-5	16-8-5	19-10-6	23-11-8
	Long Throw	9-5-3	12-6-4	15-8-5	18-9-6	21-11-7	24-12-8	27-14-9	30-15-10	36-18-12	42-21-14
12" Collar Ak 0.81	cfm	243	324	405	486	567	648	729	810	972	1134
	Ps	0.170	0.030	0.047	0.068	0.093	0.121	0.153	0.189	0.273	0.371
	Short Throw	7-4-2	10-5-3	12-6-4	15-7-5	17-9-6	20-10-7	22-11-7	25-12-8	30-15-10	35-17-12
	Long Throw	14-7-5	19-9-6	23-12-8	28-14-9	33-16-11	37-19-12	42-21-14	47-23-16	56-28-19	65-33-22
14" Collar Ak 1.15	cfm	345	460	575	690	805	920	1035	1150	1380	1610
	Ps	0.020	0.036	0.057	0.081	0.111	0.145	0.183	0.226	0.326	0.443
	Throw	11-6-4	15-7-5	18-9-6	22-11-7	26-13-9	29-15-10	33-17-11	37-18-12	44-22-15	52-26-17
	Long Throw	21-10-7	28-14-9	34-17-11	41-21-14	48-24-16	55-28-18	62-31-21	69-34-23	83-41-28	97-48-32

958FDWI - T-BAR PERFORATED SUPPLY DIFFUSER WITH FIXED DEFLECTOR AND INSULATION

FACE VELOCITY		300	400	500	600	700	800	900	1000	1100
6" Diameter Ak 0.20	cfm	60	80	100	120	140	160	180	200	220
	Ps	0.008	0.011	0.017	0.024	0.032	0.042	0.054	0.066	0.080
	Throw	1	2	3	3	4	4	5	5	6
8" Diameter Ak 0.35	cfm	105	140	175	210	245	280	315	350	385
	Ps	0.008	0.011	0.017	0.024	0.034	0.043	0.054	0.068	0.083
	Throw	2	3	4	4	5	6	7	8	8.5
10" Diameter Ak 0.58	cfm	174	232	290	348	406	464	522	580	638
	Ps	0.008	0.012	0.017	0.024	0.034	0.043	0.054	0.068	0.083
	Throw	2	3	4	5	5	6	7	8	9
12" Diameter Ak 0.81	cfm	243	324	405	486	567	648	729	810	891
	Ps	0.009	0.015	0.024	0.034	0.046	0.061	0.077	0.095	0.120
	Throw	3	4	5	6	7	8	9	10	11
14" Diameter Ak 1.10	cfm	330	440	550	660	770	880	990	1100	1210
	Ps	0.009	0.015	0.026	0.037	0.051	0.067	0.085	0.105	0.145
	Throw	3	5	6	7	8	9	10	11	12

958ADWI - T-BAR PERFORATED SUPPLY DIFFUSER WITH ADJUSTABLE DEFLECTORS AND INSULATION

Neck Velocity	FPM	300	400	500	600	700	800	900	1000	1200
6" An 0.20	cfm	60	80	100	120	140	160	180	200	240
	Ps	0.007	0.014	0.022	0.030	0.040	0.050	0.065	0.079	0.115
	1 way Throw	4	5	7	8	9.5	11	12	13	16
	2-3 way Throw	3.5	5	6	7	8.5	10	11	12	14
	4 way Throw	2.5	3	4	5	6	7	7.5	8.5	10
8" An 0.35	cfm	105	140	175	210	245	280	315	350	420
	Ps	0.011	0.022	0.035	0.047	0.064	0.079	0.103	0.125	0.182
	1 way Throw	6	8	10	12	14	16	18	20	23
	2-3 way Throw	5	7	8	10	12	13	15	17	20
	4 way Throw	4	5	7	8	9	11	12	13	15
10" An 0.58	cfm	165	220	275	330	385	440	495	550	660
	Ps	0.015	0.031	0.049	0.066	0.090	0.111	0.144	0.175	0.255
	1 way Throw	8	11	14	16	19	23	26	28	31
	2-3 way Throw	7.5	10	12.5	15	17	20	23	25	28
	4 way Throw	5	7	8	10	12	13	15	17	20
12" An 0.81	cfm	243	324	405	486	567	648	729	810	972
	Ps	0.170	0.030	0.047	0.068	0.093	0.121	0.153	0.189	0.273
	1 way Throw	10	13	16.5	20	23	26	28	31	35
	2-3 way Throw	8	11	14	17	20	22	25	27	30
	4 way Throw	6	8	10	12	14	16	18	20	24

14" An 1.10	cfm	330	440	550	660	770	880	990	1100	1320
	Ps	0.022	0.039	0.061	0.088	0.121	0.157	0.199	0.246	0.355
	1 way Throw	11	15	19	23	25	28	32	36	40
	2-3 way Throw	10	14	18	21	23	27	30	32	36
	4 way Throw	7	10	12	14	17	19	21	24	28

958ADWFC14 - T-BAR PERFORATED SUPPLY DIFFUSER WITH ADJUSTABLE DEFLECTORS AND 14" FIXED COLLAR										
Neck Velocity	FPM	300	400	500	600	700	800	900	1000	1200
6" An 0.20	cfm	60	80	100	120	140	160	180	200	240
	Ps	0.007	0.014	0.022	0.030	0.040	0.050	0.065	0.079	0.115
	1 way Throw	4	5	7	8	9.5	11	12	13	16
	2-3 way Throw	3.5	5	6	7	8.5	10	11	12	14
	4 way Throw	2.5	3	4	5	6	7	7.5	8.5	10
8" An 0.35	cfm	105	140	175	210	245	280	315	350	420
	Ps	0.011	0.022	0.035	0.047	0.064	0.079	0.103	0.125	0.182
	1 way Throw	6	8	10	12	14	16	18	20	23
	2-3 way Throw	5	7	8	10	12	13	15	17	20
	4 way Throw	4	5	7	8	9	11	12	13	15
10" An 0.58	cfm	165	220	275	330	385	440	495	550	660
	Ps	0.015	0.031	0.049	0.066	0.090	0.111	0.144	0.175	0.255
	1 way Throw	8	11	14	16	19	23	26	28	31
	2-3 way Throw	7.5	10	12.5	15	17	20	23	25	28
	4 way Throw	5	7	8	10	12	13	15	17	20
12" An 0.81	cfm	243	324	405	486	567	648	729	810	972
	Ps	0.170	0.030	0.047	0.068	0.093	0.121	0.153	0.189	0.273
	1 way Throw	10	13	16.5	20	23	26	28	31	35
	2-3 way Throw	8	11	14	17	20	22	25	27	30
	4 way Throw	6	8	10	12	14	16	18	20	24
14" An 1.10	cfm	330	440	550	660	770	880	990	1100	1320
	Ps	0.022	0.039	0.061	0.088	0.121	0.157	0.199	0.246	0.355
	1 way Throw	11	15	19	23	25	28	32	36	40
	2-3 way Throw	10	14	18	21	23	27	30	32	36
	4 way Throw	7	10	12	14	17	19	21	24	28

953R6 - T-BAR STEEL PERFORATED SUPPLY DIFFUSER

FACE VELOCITY		300	400	500	600	700	800	900	1000	1100
6" An 0.20 Ak 0.99	cfm	60	80	100	120	140	160	180	200	220
	Ps	0.004	0.004	0.008	0.012	0.016	0.024	0.032	0.040	0.048
	Throw	1	2	3	3	4	6	7	8	9
8" An .35 Ak 1.11	cfm	105	140	175	210	245	280	315	350	385
	Ps	0.004	0.008	0.012	0.016	0.020	0.024	0.028	0.036	0.044
	Throw	2	3	4	5	6	7	9	10	11
10" An 0.54 Ak 1.58	cfm	162	216	270	324	378	432	486	540	594
	Ps	0.008	0.012	0.016	0.020	0.028	0.036	0.048	0.060	0.068
	Throw	2	3	4	6	7	8	9	10	12
12" An 0.78 Ak 2.04	cfm	234	312	390	468	546	624	702	780	858
	Ps	0.008	0.012	0.020	0.028	0.036	0.044	0.056	0.064	0.076
	Throw	3	4	5	7	8	10	11	13	15
Terminal Velocity of 75fpm An=Neck Area in Sq. Ft. NC=Noise Criteria based on 10dB room absorption(Re:10-12 watts.)										

954R6 - T-BAR STEEL PERFORATED RETURN WITH R6 INSULATION

FACE VELOCITY		200	300	400	500	600	700	800
6" An 0.20 Ak 1.02	cfm	40	60	80	100	120	140	160
	Ps	0.004	0.008	0.016	0.020	0.028	0.036	0.048
6" An 0.20 Ak 1.02	cfm	70	105	140	175	210	245	280
	Ps	0.004	0.012	0.020	0.028	0.040	0.052	0.072
6" An 0.20 Ak 1.02	cfm	108	162	216	270	324	378	432
	Ps	0.004	0.012	0.020	0.032	0.044	0.060	0.080
6" An 0.20 Ak 1.02	cfm	156	234	312	390	468	546	624
	Ps	0.008	0.012	0.020	0.032	0.048	0.068	0.084
Terminal Velocity of 75fpm An=Neck Area in Sq.Ft. NC=Noise Criteria based on 10dB room absorption(Re:10-12 watts.)								

956 - T-BAR STEEL PERFORATED RETURN WITH R6 INSULATION

NECK VELOCITY	200	300	400	500	600	700	800
-PS	0.01	0.02	0.03	0.05	0.07	0.1	0.12
6" Dia. CFM	40	60	80	100	120	140	160
8" Dia. CFM	70	105	140	175	210	245	280
10" Dia. CFM	110	165	220	275	330	385	440
12" Dia. CFM	160	240	320	395	475	550	630
14" Dia. CFM	215	320	430	535	640	750	855

854PFO - T-BAR PERFORATED FACE ONLY								
Face Velocity		200	300	400	500	600	700	800
24 x 24	cfm	739	1109	1479	1849	2218	2588	2958
	- Ps	0.008	0.018	0.032	0.050	0.070	0.095	0.130