

420/42I Floor Diffuser (Page 7)

Face Velocity		300	400	500	600	700	800	900	1000
Pressure Loss		.006	.010	.016	.022	.031	.040	.050	.062
2x10 Ak .085	cfm Spread Throw		35 3 4	45 5 4.5	50 5 6	60 6 7	70 7 8	75 8 9	85 9 10
2x12 Ak .100	cfm Spread Throw	30 3 3.5	40 4 4.5	50 4.5 5.5	60 5.5 7	70 6.5 8	80 7 9	90 8 10	100 9 11
2x14 Ak .115	cfm Spread Throw	35 3.5 3.5	45 4 4.5	60 5 6	70 7 8	80 7 8	90 8 9.5	105 9 10.5	115 10 12
4x8 Ak .13	cfm Spread Throw	40 3 4	50 4 4.5	65 5 6	80 6.5 7.5	90 7.5 8.5	105 8.5 10	115 9.5 11	130 11 13
4x10 Ak .170	cfm Spread Throw	50 4.5 4	70 5 6	85 6.5 8	100 7.5 10	120 9 11	135 10 12.5	155 11.5 14	170 13 15.5
4x12 Ak .195	cfm Spread Throw	60 5 4	80 6.5 5.5	100 8 7	120 9.5 8	140 11.5 9.5	160 13 11	175 14.5 12	195 16 13
4x14 Ak .230	cfm Spread Throw	70 5.5 4.5	90 7 5.5	115 8.5 7	140 10 8.5	160 12 10	185 13.5 11.5	205 15.5 12.5	230 17 14
6x10 Ak .24	cfm Spread Throw	70 5.5 4	95 7 5.5	120 8 7	145 10 8.5	170 12 10	190 14 11	215 15 12.5	240 17 14
6x12 Ak .285	cfm Spread Throw	85 6 4.5	115 7.5 6	140 9 7.5	170 11 9	200 13 10	230 15 12	255 17 14	285 19 16
6x14 Ak .33	cfm Spread Throw	100 6.5 4.5	130 8 6.5	165 9 8	200 12 9.5	230 14 11	265 16.5 13	300 18 15	330 20 17

Terminal velocity of 50 fpm.

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Face Velocity		300		400		500		600		700		800		900		1000	
Pressure Loss		.006		.010		.016		.022		.031		.040		.050		.062	
		H	C	H	C	H	C	H	C	H	C	H	C	H	C	H	C
2x10 Ak .055 Heating Ak .060 Cooling	cfm Spread Throw							35 3.5 4	35 4 6	40 4.5 5.5	40 5 7.5	45 5 8.5	50 5.5 9	55 6 10	55 6 10	60 6 10	60
2x12 Ak .067 Heating Ak .074 Cooling	cfm Spread Throw					35 3.5 4	35 4 6	40 4 5	45 4.5 6.5	45 5 7.5	50 5 9	55 5.5 9	60 6 10	65 6 11	65 6 11	75 6 11	75
2x14 Ak .079 Heating Ak .087 Cooling	cfm Spread Throw			30 3 3.5	35 4 4.5	40 4 5	45 5 6	45 4.5 5.5	50 5 7	55 5 8.5	60 5.5 9	65 6 10	70 6 11.5	80 6 12.5	80 6 12.5	85 6 12.5	85
4x10 Ak .115 Heating Ak .125 Cooling	cfm Spread Throw	35 3 3	40 3 4.5	45 3.5 4	50 4 6	55 4.5 5.5	65 5 7.5	70 5.5 6.5	75 6 9.5	80 6 10.5	90 6 11.5	90 6 12.5	100 6 13.5	105 6 14.5	115 6 15.5	115 6 15.5	125
4x12 Ak .140 Heating Ak .160 Cooling	cfm Spread Throw	40 3 3.5	50 3 5	55 4 4.5	65 4 6.5	70 5 8	80 5 8.5	85 5.5 7.5	95 6 10	100 6 11	110 6 11.5	115 6 13	130 6 14	145 6 15.5	145 6 15.5	160 6 17	160
4x14 Ak .165 Heating Ak .180 Cooling	cfm Spread Throw	50 3.5 4	55 4 5.5	65 4.5 5.5	70 5 7	80 5.5 6.5	90 6 9.5	100 6 11	110 6 12.5	115 6 13	125 6 14	130 6 15	145 6 16.5	150 6 17.5	160 6 18.5	165 6 18.5	180
6x10 Ak .190 Heating Ak .205 Cooling	cfm Spread Throw	60 3.5 4.5	60 4 6	75 4.5 5.5	80 5 7.5	95 5.5 7	105 6 9.5	115 6 11	125 6 12.5	135 6 13	145 6 14	150 6 15	165 6 16.5	170 6 17.5	185 6 18.5	190 6 18.5	205
6x12 Ak .225 Heating Ak .250 Cooling	cfm Spread Throw	70 4 5	75 4 6.5	90 5 6	100 5 8.5	115 6 9	125 6 10.5	135 6 12	150 6 13	160 6 14	175 6 15	180 6 16.5	200 6 18.5	205 6 19.5	225 6 21	225 6 21	250
6x14 Ak .265 Heating Ak .300 Cooling	cfm Spread Throw	80 4.5 5	90 5 7	105 5 7	120 5 9.5	135 6 8.5	150 6 11.5	160 6 13.5	180 6 15	185 6 16	210 6 18	210 6 18.5	240 6 21.5	240 6 22.5	270 6 24.5	265 6 24.5	300

The spread shown for the heating mode is for a valve setting of 22° right deflection and 22° left deflection. *The maximum value given for spread for heating is that which occurs at the ceiling height (8 ft.). The cooling spread is a straight vertical column of air and is not shown. Throw and spread values are based on a terminal velocity of 50 fpm.