

2020
PRODUCTS

Product Catalogue

Square Ceiling Diffuser

Type (SCD)



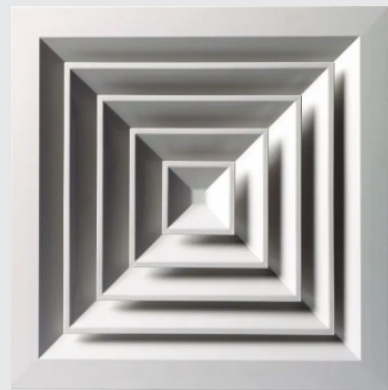
Khedr Trust
ALL AIR PRODUCTS

Square Ceiling Diffuser products are
manufactured by



“ Your comfort is
our priority ”

www.khedr-eg.com





Models

- SCD
- RCD



Finish

- Standard Finish - White



Square Ceiling Diffuser

Model Use

Khedr Model SCD /RCD Diffusers handle large amount of air for a given pressure drop and noise level.

Flow Pattern

Maintains an unbroken horizontal flow pattern from maximum cfm down to minimum.

Model Design

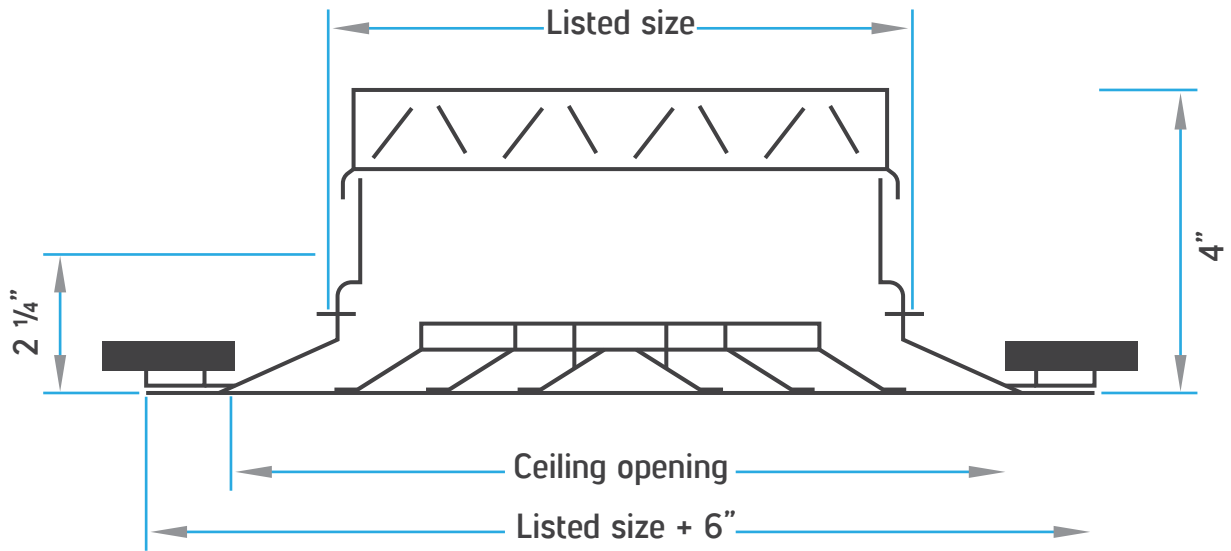
Flexible use with 1-,2-,3- or 4-way horizontal flow.

Appearance

Uniform face appearance with different neck sizes.

- Dimensions

- Nominal Size ϕ 14 - continued



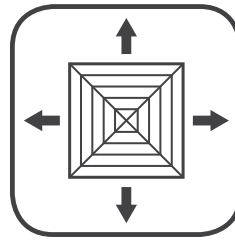
- Core Pattern Options

	1 - Way Discharge	2 - Way Discharge		3 - Way Discharge	4 - Way Discharge
SCD					
Pattern Type	1	21	22	3	4
RCD					
Pattern Type	1	21	22	3	4

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

- Performance data

- SCD / 4-way



	≥ NC 45
	NC 40
	NC 35
	NC 30
	≥ NC 30

Face Size "Inch"/Outlet Area "Inch"			V _K Outlet Velocity "FPM"										
			500	600	700	800	900	1000	1200	1400	1600	1800	2000
			P _T Total Pressure "Inches water"										
			0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12	0.16	0.20	0.25
6 x 6	CFM		50	60	70	80	90	100	120	140	160	180	200
	T	X	2-3	2-3	2-4	2-4	3-5	3-5	4-6	4-8	5-8	5-9	6-11
A _K = 0.10		Y	2-3	2-3	2-4	2-4	3-5	3-5	4-6	4-8	5-8	5-9	6-11
9 x 9	CFM		110	135	155	180	205	225	270	315	360	410	450
	T	X	2-4	2-4	3-5	3-5	4-6	5-8	5-9	6-11	6-12	7-13	8-14
A _K = 0.22		Y	2-4	2-4	3-5	3-5	4-6	5-8	5-9	6-11	6-12	7-13	8-14
12 x 12	CFM		200	240	280	320	360	400	480	560	640	725	800
	T	X	3-5	4-6	4-8	5-8	5-9	6-11	6-12	7-13	8-15	9-17	10-19
A _K = 0.40		Y	3-5	4-6	4-8	5-8	5-9	6-11	6-12	7-13	8-15	9-17	10-19
15 x 15	CFM		310	375	440	500	565	625	750	875	1000	1125	1250
	T	X	4-6	4-8	5-9	6-11	6-11	6-12	8-15	10-18	10-19	12-21	13-23
A _K = 0.62		Y	4-6	4-8	5-9	6-11	6-11	6-12	8-15	10-18	10-19	12-21	13-23
18 x 18	CFM		450	540	630	720	810	900	1080	1260	1440	1620	1800
	T	X	4-8	5-9	5-11	6-12	7-13	8-15	10-17	11-20	13-23	15-27	16-30
A _K = 0.90		Y	4-8	5-9	5-11	6-12	7-13	8-15	10-17	11-20	13-23	15-27	16-30
21 x 21	CFM		615	740	860	985	1110	1230	1475	1725	1970	2220	2460
	T	X	5-9	6-11	7-13	8-14	9-15	9-17	11-21	13-25	15-29	17-31	19-35
A _K = 1.23		Y	5-9	6-11	7-13	8-14	9-15	9-17	11-21	13-25	15-29	17-31	19-35
24 x 24	CFM		800	960	1120	1275	1440	1600	1925	2240	2570	2890	3200
	T	X	5-11	7-13	7-14	8-15	9-17	10-19	12-23	14-29	16-31	18-35	20-39
A _K = 1.60		Y	5-11	7-13	7-14	8-15	9-17	10-19	12-23	14-29	16-31	18-35	20-39

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

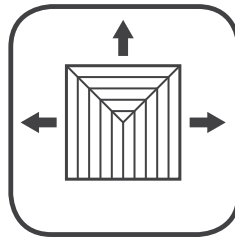
The minimum T Dimensions in feet is based on a V_T of 250 FPM with a V_R of 75 FPM , The Maximum T Dimension In feet is based on a V_T of 150 with a V_R of 45 FPM.

V_T Terminal Velocity "FPM"
 V_K Outlet Velocity "FPM"
 V_R Room Velocity "FPM"

T Throw "Feet"
 A_K Outlet Area "Feet²"
 N_C re 8db room

P_T Total Pressure "Inch Water"
 P_S Static Pressure "Inch Water"

- SCD / 3-way



	≥ NC 45
	NC 40
	NC 35
	NC 30
	≥ NC 30

Face Size "Inch"/Outlet Area "Inch"	CFM	V _k Outlet Velocity "FPM"											
		500	600	700	800	900	1000	1200	1400	1600	1800	2000	
		P _T Total Pressure "Inches water"											
		0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12	0.16	0.20	0.25	
6 x 6 A _k = 0.10	CFM	50	60	70	80	90	100	120	140	160	180	200	
	T	X	2-4	2-4	3-5	3-5	4-7	4-7	5-9	6-10	6-11	6-11	7-13
		Y	1-2	1-2	2-3	2-3	2-4	2-4	3-6	3-6	4-7	4-7	4-8
9 x 9 A _k = 0.22	CFM	110	135	155	180	205	225	270	315	360	410	450	
	T	X	2-4	3-6	4-7	4-8	5-9	5-9	6-12	7-13	9-15	10-18	11-20
		Y	2-3	2-3	2-4	2-4	3-6	3-6	4-7	5-9	6-10	6-11	7-12
12 x 12 A _k = 0.40	CFM	200	240	280	320	360	400	480	560	640	725	800	
	T	X	4-7	5-9	6-10	6-10	6-11	7-13	9-16	12-21	13-22	14-24	16-27
		Y	2-5	3-5	4-7	4-7	4-8	5-9	6-10	7-12	8-13	8-14	9-16
15 x 15 A _k = 0.62	CFM	310	375	440	500	565	625	750	875	1000	1125	1250	
	T	X	4-8	6-11	7-13	8-14	8-15	9-16	11-19	13-23	15-26	17-29	19-33
		Y	2-4	4-7	4-7	4-8	5-9	6-10	7-12	9-15	10-18	11-20	12-21
18 x 18 A _k = 0.90	CFM	450	540	630	720	810	900	1080	1260	1440	1620	1800	
	T	X	4-9	6-11	7-13	9-15	10-18	11-20	13-24	15-26	18-32	20-35	23-40
		Y	3-5	4-7	5-9	6-10	6-11	7-12	9-15	10-18	11-20	12-22	14-25
21 x 21 A _k = 1.23	CFM	615	740	860	985	1110	1230	1475	1725	1970	2220	2460	
	T	X	5-11	7-13	11-19	11-20	12-21	12-23	16-29	19-34	21-39	24-42	27-45
		Y	3-6	4-8	6-11	7-12	8-13	8-14	10-17	11-20	14-23	16-25	18-29
24 x 24 A _k = 1.60	CFM	800	960	1120	1275	1440	1600	1925	2240	2570	2890	3200	
	T	X	7-14	9-16	11-19	13-21	14-24	16-27	17-31	21-35	25-39	28-43	32-47
		Y	5-9	6-11	7-13	8-14	9-15	9-16	11-19	14-24	16-27	18-31	20-33

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

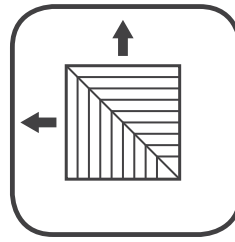
The minimum T Dimensions in feet is based on a VT of 170 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 85 with a VR of 35 FPM .

V_T Terminal Velocity "FPM"
 V_k Outlet Velocity "FPM"
 V_R Room Velocity "FPM"

T Throw "Feet"
 A_k Outlet Area "Feet²"
 N_c re 8db room

P_T Total Pressure "Inch Water"
 P_S Static Pressure "Inch Water"

- SCD / 2-way



	≥ NC 45
	NC 40
	NC 35
	NC 30
	≥ NC 30

Face Size "Inch"/Outlet Area "Inch"			V _k Outlet Velocity "FPM"										
			500	600	700	800	900	1000	1200	1400	1600	1800	2000
			P _T Total Pressure "Inches water"										
			0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12	0.16	0.20	0.25
6 x 6	CFM		45	55	60	70	80	90	105	125	140	160	180
	T	X	1-3	2-5	2-5	3-7	3-7	5-8	5-8	6-11	7-12	8-14	9-14
A _k = 0.10		Y	1-3	2-5	2-5	3-7	3-7	5-8	5-8	6-11	7-12	8-14	9-14
9 x 9	CFM		95	115	135	155	175	195	235	275	315	350	390
	T	X	4-6	4-6	5-7	5-8	6-10	6-11	8-13	9-14	10-16	13-20	14-22
A _k = 0.22		Y	4-6	4-6	5-7	5-8	6-10	6-11	8-13	9-14	10-16	13-20	14-22
12 x 12	CFM		175	210	245	280	315	350	420	480	560	635	700
	T	X	5-7	5-8	6-11	8-13	8-13	9-14	10-16	13-19	14-22	16-26	19-29
A _k = 0.40		Y	5-7	5-8	6-11	8-13	8-13	9-14	10-16	13-19	14-22	16-26	19-29
15 x 15	CFM		275	330	385	440	495	550	660	775	885	995	1100
	T	X	5-9	7-12	8-13	9-14	10-16	11-18	13-21	15-25	19-29	21-33	23-36
A _k = 0.62		Y	5-9	7-12	8-13	9-14	10-16	11-18	13-21	15-25	19-29	21-33	23-36
18 x 18	CFM		390	470	545	625	700	780	935	1090	1250	1410	1560
	T	X	7-12	9-14	10-15	10-16	12-19	14-22	16-25	18-29	21-33	25-38	28-42
A _k = 0.90		Y	7-12	9-14	10-15	10-16	12-19	14-22	16-25	18-29	21-33	25-38	28-42
21 x 21	CFM		540	650	760	865	975	1080	1300	1515	1730	1945	2160
	T	X	8-13	10-15	12-18	13-21	15-23	17-28	20-32	22-35	25-39	29-43	32-47
A _k = 1.23		Y	8-13	10-15	12-18	13-21	15-23	17-28	20-32	22-35	25-39	29-43	32-47
24 x 24	CFM		705	845	990	1130	1270	1410	1690	1950	2250	2540	2820
	T	X	9-16	11-18	13-21	15-24	17-27	19-29	22-34	25-38	29-42	33-47	37-51
A _k = 1.60		Y	9-16	11-18	13-21	15-24	17-27	19-29	22-34	25-38	29-42	33-47	37-51

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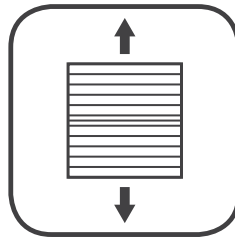
The minimum T Dimensions in feet is based on a VT of 135 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 65 with a VR of 35 FPM .

V_T Terminal Velocity "FPM"
 V_k Outlet Velocity "FPM"
 V_R Room Velocity "FPM"

T Throw "Feet"
 A_k Outlet Area "Feet²"
 N_c re 8db room

P_T Total Pressure "Inch Water"
 P_S Static Pressure "Inch Water"

- SCD / 2-way, continued



	≥ NC 45
	NC 40
	NC 35
	NC 30
	≥ NC 30

Face Size "Inch"/Outlet Area "Inch"			V _k Outlet Velocity "FPM"										
			500	600	700	800	900	1000	1200	1400	1600	1800	2000
			P _T Total Pressure "Inches water"										
			0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12	0.16	0.20	0.25
6 x 6	CFM		45	55	60	70	80	90	105	125	140	160	180
	T	X	—	—	—	—	—	—	—	—	—	—	—
A _k = 0.10		Y	3-5	3-5	4-7	4-7	5-8	5-8	6-9	9-13	10-15	11-17	12-18
9 x 9	CFM		95	115	135	155	175	195	235	275	315	350	390
	T	X	—	—	—	—	—	—	—	—	—	—	—
A _k = 0.22		Y	5-7	6-8	6-8	6-9	8-12	9-13	11-17	12-18	14-20	16-24	18-26
12 x 12	CFM		175	210	245	280	315	350	420	480	560	635	700
	T	X	—	—	—	—	—	—	—	—	—	—	—
A _k = 0.40		Y	4-7	6-9	9-13	10-15	11-17	12-18	14-20	17-23	18-27	21-31	23-35
15 x 15	CFM		275	330	385	440	495	550	660	775	885	995	1100
	T	X	—	—	—	—	—	—	—	—	—	—	—
A _k = 0.62		Y	8-12	10-14	10-15	12-18	14-20	15-23	18-27	22-32	24-36	26-39	29-43
18 x 18	CFM		390	470	545	625	700	780	935	1080	1250	1410	1560
	T	X	—	—	—	—	—	—	—	—	—	—	—
A _k = 0.90		Y	9-15	11-17	12-18	14-20	15-23	18-26	20-30	24-36	27-42	31-45	36-51
21 x 21	CFM		540	650	760	865	975	1080	1300	1515	1730	1945	2160
	T	X	—	—	—	—	—	—	—	—	—	—	—
A _k = 1.23		Y	11-17	14-20	15-23	18-26	19-29	23-35	26-40	29-44	34-49	38-54	43-59
24 x 24	CFM		705	845	990	1130	1270	1410	1690	1950	2250	2540	2820
	T	X	—	—	—	—	—	—	—	—	—	—	—
A _k = 1.60		Y	12-19	14-22	17-25	20-30	21-33	23-35	27-40	34-46	39-51	42-56	46-60

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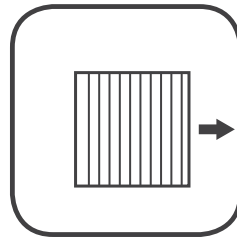
The minimum T Dimensions in feet is based on a VT of 135 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 65 with a VR of 35 FPM .

V_T Terminal Velocity "FPM"
 V_k Outlet Velocity "FPM"
 V_R Room Velocity "FPM"

T Throw "Feet"
 A_k Outlet Area "Feet²"
 N_c re 8db room

P_T Total Pressure "Inch Water"
 P_S Static Pressure "Inch Water"

- SCD / 1-way



	≥ NC 45
	NC 40
	NC 35
	NC 30
	≥ NC 30

Face Size "Inch"/Outlet Area "Inch"			V _k Outlet Velocity "FPM"										
			500	600	700	800	900	1000	1200	1400	1600	1800	2000
			P _T Total Pressure "Inches water"										
			0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12	0.16	0.20	0.25
6 x 6	CFM		45	55	60	70	80	90	105	125	140	160	180
	T	X	3-5	4-7	5-8	6-9	8-10	9-12	10-14	12-18	14-20	15-22	16-24
A _k = 0.10		Y	—	—	—	—	—	—	—	—	—	—	—
9 x 9	CFM		95	115	135	155	175	195	235	275	315	350	390
	T	X	6-9	7-10	9-13	10-14	11-17	13-19	15-21	18-26	19-29	22-33	25-38
A _k = 0.22		Y	—	—	—	—	—	—	—	—	—	—	—
12 x 12	CFM		175	210	245	280	315	350	420	480	560	635	700
	T	X	8-12	10-14	12-18	13-19	15-21	18-26	21-31	24-36	27-40	30-43	33-45
A _k = 0.40		Y	—	—	—	—	—	—	—	—	—	—	—
15 x 15	CFM		275	330	385	440	495	550	660	775	885	995	1100
	T	X	10-16	13-19	14-22	18-26	19-29	21-31	25-37	30-43	35-46	38-50	42-56
A _k = 0.62		Y	—	—	—	—	—	—	—	—	—	—	—
18 x 18	CFM		390	470	545	625	700	780	935	1090	1250	1410	1560
	T	X	13-21	15-23	18-26	19-29	22-33	25-38	29-42	35-46	42-49	44-52	49-56
A _k = 0.90		Y	—	—	—	—	—	—	—	—	—	—	—
21 x 21	CFM		540	650	760	865	975	1080	1300	1515	1730	1945	2160
	T	X	14-23	17-25	21-30	24-36	27-40	30-43	34-48	39-54	44-60	48-64	53-68
A _k = 1.23		Y	—	—	—	—	—	—	—	—	—	—	—
24 x 24	CFM		705	845	990	1130	1270	1410	1690	1950	2250	2540	2820
	T	X	20-29	23-33	24-36	27-40	30-44	35-48	39-54	43-60	48-65	52-69	56-74
A _k = 1.60		Y	—	—	—	—	—	—	—	—	—	—	—

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

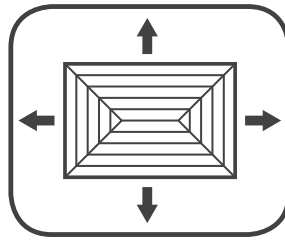
The minimum T Dimensions in feet is based on a VT of 135 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 65 with a VR of 35 FPM .

V_T Terminal Velocity "FPM"
 V_k Outlet Velocity "FPM"
 V_R Room Velocity "FPM"

T Throw "Feet"
 A_k Outlet Area "Feet²"
 N_c re 8db room

P_T Total Pressure "Inch Water"
 P_S Static Pressure "Inch Water"

- RCD / 4-way

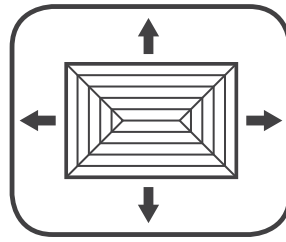


	≥ NC 45
	NC 40
	NC 35
	NC 30
	≥ NC 30

Face Size "Inch"/Outlet Area "Inch"			V _k Outlet Velocity "FPM"										
			500	600	700	800	900	1000	1200	1400	1600	1800	2000
			P _T Total Pressure "Inches water"										
			0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12	0.16	0.20	0.25
9 x 6	CFM		75	90	105	120	135	150	180	210	240	270	300
	T	X	1-3	1-3	2-4	2-4	3-5	3-5	4-6	4-6	4-8	5-9	6-11
A _k = 0.15		Y	2-4	3-5	3-5	4-6	4-6	4-8	5-9	6-11	7-13	8-15	8-15
12 x 6	CFM		100	120	140	160	180	200	240	280	320	360	400
	T	X	1-3	1-3	2-4	2-4	2-4	3-5	4-6	4-8	4-8	5-9	6-11
A _k = 0.20		Y	3-5	4-6	4-8	4-8	5-9	6-11	7-13	8-15	8-15	10-18	11-21
12 x 9	CFM		150	180	210	240	270	300	360	420	480	540	600
	T	X	2-4	2-4	3-5	4-6	4-7	4-8	5-9	6-11	7-13	7-13	8-14
A _k = 0.30		Y	3-5	3-5	4-6	4-8	5-10	6-11	6-12	7-13	9-17	10-18	11-19
15 x 9	CFM		185	225	265	300	340	375	450	525	600	675	750
	T	X	2-4	2-4	3-5	4-6	4-6	4-8	5-9	5-9	6-12	7-13	7-13
A _k = 0.37		Y	4-6	4-6	5-9	6-11	6-12	8-14	8-15	9-17	11-21	13-25	13-25
18 x 9	CFM		225	270	315	360	405	450	540	630	720	810	900
	T	X	2-4	2-4	3-5	4-6	4-6	4-8	5-9	5-10	6-12	8-14	10-17
A _k = 0.45		Y	4-6	5-9	6-11	6-12	8-14	8-15	10-19	11-23	13-25	15-29	17-32
21 x 9	CFM		265	320	370	425	475	530	635	740	850	955	1060
	T	X	2-4	2-4	3-5	4-6	4-8	4-8	5-9	6-17	8-13	9-15	21-38
A _k = 0.53		Y	5-9	6-11	8-14	8-15	10-18	10-19	11-21	13-25	16-31	19-35	21-38
15 x 12	CFM		250	300	350	400	450	500	600	700	800	900	1000
	T	X	3-5	3-5	4-6	4-8	5-9	6-11	6-12	7-13	8-15	10-18	12-21
A _k = 0.50		Y	4-6	4-8	5-9	6-11	6-12	7-13	8-15	10-18	11-21	13-23	14-27
18 x 21	CFM		295	355	415	475	535	595	715	835	950	1070	1190
	T	X	2-4	3-5	4-6	4-8	5-9	6-11	6-12	8-14	9-16	10-18	12-21
A _k = 0.59		Y	4-8	5-9	6-11	7-13	8-14	8-15	10-18	11-21	13-23	15-27	17-31

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

- RCD / 4-way, continued



	≥ NC 45
	NC 40
	NC 35
	NC 30
	≥ NC 30

Face Size "Inch"/Outlet Area "Inch"		V_K Outlet Velocity "FPM"											
		500	600	700	800	900	1000	1200	1400	1600	1800	2000	
		P_T Total Pressure "Inches water"											
		0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12	0.16	0.20	0.25	
21 x 12 $A_K = 0.69$	CFM	345	415	485	555	625	690	830	970	1100	1240	1375	
	T	X	3-5	3-5	4-6	4-8	4-8	5-9	6-11	7-13	8-15	9-17	10-19
		Y	5-9	6-11	7-13	8-14	8-15	10-18	11-21	14-26	16-29	17-31	19-35
24 x 12 $A_K = 0.80$	CFM	400	480	560	640	720	800	960	1140	1280	1440	1600	
	T	X	2-4	4-6	4-6	4-8	4-8	5-9	6-12	5-14	9-17	10-19	10-19
		Y	6-11	7-13	8-14	9-16	10-18	11-21	14-26	15-29	17-31	19-35	21-39
18 x 15 $A_K = 0.75$	CFM	375	450	525	600	675	750	900	1050	1200	1350	1500	
	T	X	4-6	4-8	5-9	6-11	6-12	7-13	8-15	9-17	10-19	12-22	14-25
		Y	4-8	5-9	6-11	6-12	8-14	8-15	10-18	10-19	13-23	15-26	17-29
15 x 15 $A_K = 0.62$	CFM	500	600	700	800	900	1000	1200	1400	1600	1800	2000	
	T	X	4-6	4-8	5-9	6-11	6-12	7-13	8-15	10-18	11-21	13-23	15-27
		Y	6-11	6-12	8-14	9-17	10-18	1-21	13-25	15-29	17-32	20-36	22-39
24 x 18 $A_K = 1.20$	CFM	600	720	840	960	1080	1200	1440	1680	1920	2160	2400	
	T	X	4-8	5-9	6-11	6-12	7-14	8-15	10-18	11-21	13-25	15-30	16-32
		Y	6-11	6-12	7-14	8-15	10-19	11-21	13-23	15-27	18-34	21-37	23-41

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

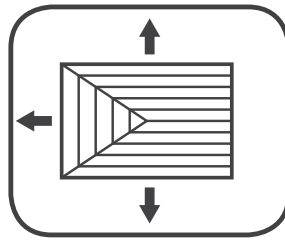
The minimum T Dimensions in feet is based on a VT of 200 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 100 with a VR of 35 FPM .

V_T Terminal Velocity "FPM"
 V_K Outlet Velocity "FPM"
 V_R Room Velocity "FPM"

T Throw "Feet"
 A_K Outlet Area "Feet²"
 N_C re 8db room

P_T Total Pressure "Inch Water"
 P_S Static Pressure "Inch Water"

- RCD / 3-way

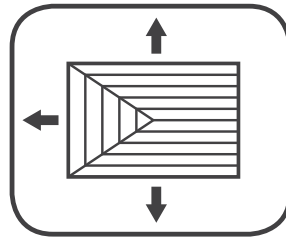


	≥ NC 45
	NC 40
	NC 35
	NC 30
	≥ NC 30

Face Size "Inch"/Outlet Area "Inch"			V _k Outlet Velocity "FPM"										
			500	600	700	800	900	1000	1200	1400	1600	1800	2000
			P _T Total Pressure "Inches water"										
			0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12	0.16	0.20	0.25
9 x 6	CFM		75	90	105	120	135	150	180	210	240	270	300
	T	X	3-5	3-5	3-6	4-8	5-9	6-10	6-11	7-12	9-16	10-18	11-19
A _k = 0.15		Y	1-2	1-2	2-3	2-3	2-4	2-4	2-4	3-6	4-7	4-8	4-8
12 x 6	CFM		100	120	140	160	180	200	240	280	320	360	400
	T	X	3-5	4-7	4-7	5-9	6-10	6-11	8-14	9-16	10-18	11-20	13-23
A _k = 0.20		Y	1-2	1-2	1-2	2-3	2-3	2-4	3-6	4-7	4-7	4-8	5-9
12 x 9	CFM		150	180	210	240	270	300	360	420	480	540	600
	T	X	4-7	4-8	5-9	6-11	7-13	8-14	9-15	10-18	11-20	12-21	14-25
A _k = 0.30		Y	2-3	2-3	2-4	3-6	4-7	4-8	4-8	5-9	6-10	6-11	7-12
15 x 9	CFM		185	225	265	300	340	375	450	525	600	675	750
	T	X	4-8	5-9	6-10	7-12	8-14	9-16	11-19	11-20	14-24	16-28	19-31
A _k = 0.37		Y	2-3	2-4	2-4	2-4	3-6	4-7	4-8	4-8	6-10	6-11	8-13
18 x 9	CFM		225	270	315	360	405	450	540	630	720	810	900
	T	X	4-8	6-10	6-11	7-13	9-15	10-18	11-19	13-23	15-26	18-30	20-35
A _k = 0.45		Y	1-2	2-3	2-4	3-6	3-6	4-7	4-8	5-9	7-11	8-13	9-15
21 x 9	CFM		265	320	370	425	475	530	635	740	850	955	1060
	T	X	5-9	6-11	8-14	9-15	10-16	10-18	12-21	14-24	16-28	20-32	22-36
A _k = 0.53		Y	2-3	2-3	2-4	3-6	4-7	4-7	4-8	4-8	5-10	7-13	8-15
15 x 12	CFM		250	300	350	400	450	500	600	700	800	900	1000
	T	X	5-9	6-10	6-11	7-13	9-15	9-16	11-20	13-23	15-26	17-30	19-33
A _k = 0.50		Y	1-4	3-6	3-6	4-7	4-8	5-9	6-10	6-11	7-13	9-15	9-16
18 x 21	CFM		295	355	415	475	535	595	715	835	950	1070	1190
	T	X	6-10	6-11	7-13	8-14	9-15	11-20	12-22	15-26	17-30	19-33	21-38
A _k = 0.59		Y	2-4	2-4	3-6	3-6	4-7	5-9	6-10	7-12	8-14	9-16	11-19

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

- RCD / 3-way, continued



	≥ NC 45
	NC 40
	NC 35
	NC 30
	≥ NC 30

Face Size "Inch"/Outlet Area "Inch"	V _K Outlet Velocity "FPM"												
	P _T Total Pressure "Inches water"												
	500	600	700	800	900	1000	1200	1400	1600	1800	2000		
	0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12	0.16	0.20	0.25		
18 x 15 A _K = 0.75	CFM	375	459	525	600	675	750	900	1050	1200	1350	1500	
	T	X	6-10	7-12	7-13	9-15	11-19	12-21	7-13	15-26	18-32	21-36	25-40
		Y	3-6	4-7	4-7	5-9	6-10	6-11	7-13	8-14	10-18	11-20	13-23
21 x 15 A _K = 0.87	CFM	435	525	610	695	785	870	1045	1200	1390	1565	1740	
	T	X	6-11	7-13	9-15	10-18	12-21	13-23	15-26	17-31	21-36	24-42	27-47
		Y	3-6	4-7	4-8	5-9	6-10	6-11	7-12	8-14	10-18	11-20	13-24
21 x 18 A _K = 1.05	CFM	525	630	735	840	945	1050	1260	1470	1680	1890	2100	
	T	X	6-11	7-13	9-15	10-18	11-20	13-22	15-26	17-30	19-35	24-42	26-45
		Y	3-6	4-7	4-8	6-10	6-11	7-12	8-14	9-16	10-18	12-21	14-24
24 x 18 A _K = 1.20	CFM	600	720	840	960	1080	1200	1440	1680	1920	2160	2400	
	T	X	7-13	9-15	10-18	13-22	14-24	15-26	19-32	23-37	26-42	28-47	30-51
		Y	4-7	4-8	5-9	6-11	7-12	8-13	10-17	12-20	14-23	15-25	17-27

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

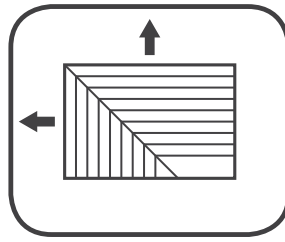
The minimum T Dimensions in feet is based on a VT of 170 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 85 with a VR of 35 FPM .

V_T Terminal Velocity "FPM"
 V_K Outlet Velocity "FPM"
 V_R Room Velocity "FPM"

T Throw "Feet"
 A_K Outlet Area "Feet²"
 N_C re 8db room

P_T Total Pressure "Inch Water"
 P_S Static Pressure "Inch Water"

- RCD / 2-way

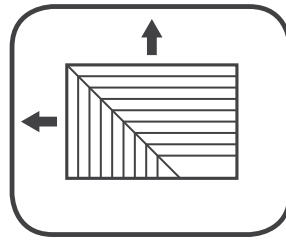


	≥ NC 45
	NC 40
	NC 35
	NC 30
	≥ NC 30

Face Size "Inch"/Outlet Area "Inch"			V _k Outlet Velocity "FPM"										
			500	600	700	800	900	1000	1200	1400	1600	1800	2000
			P _T Total Pressure "Inches water"										
			0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12	0.16	0.20	0.25
9 x 6	CFM		65	80	95	105	120	130	160	185	210	240	260
	T	X	2-4	3-5	4-6	4-6	5-7	5-7	6-9	6-10	7-12	8-13	10-16
A _k = 0.13		Y	3-5	4-7	5-8	5-8	6-11	6-11	8-13	9-14	11-16	13-21	16-25
12 x 6	CFM		90	105	120	140	160	175	210	245	280	315	350
	T	X	2-4	3-5	3-5	4-6	5-7	5-7	5-8	6-11	7-12	8-13	10-15
A _k = 0.17		Y	3-6	5-8	6-11	7-12	8-13	9-14	10-15	13-20	15-24	17-26	19-29
15 x 6	CFM		110	130	155	175	200	220	265	310	350	395	440
	T	X	2-4	3-5	3-5	4-6	5-7	5-8	6-9	6-10	8-12	10-14	11-17
A _k = 0.22		Y	5-8	6-10	7-12	8-13	10-15	11-17	13-20	15-24	17-27	20-30	22-34
12 x 9	CFM		130	155	180	210	235	260	310	365	415	470	520
	T	X	4-6	4-6	5-7	5-8	6-10	6-11	8-13	11-17	12-19	13-20	14-23
A _k = 0.26		Y	5-7	5-8	6-10	6-11	8-12	9-14	10-16	14-21	16-24	17-26	19-30
15 x 9	CFM		165	195	230	260	295	325	390	460	525	590	650
	T	X	4-6	5-7	6-8	6-9	6-11	7-12	9-14	10-15	12-17	13-20	14-22
A _k = 0.32		Y	6-10	6-11	8-12	10-14	10-16	12-19	14-22	16-25	19-29	21-33	23-35
18 x 9	CFM		195	235	275	310	350	390	470	545	625	700	780
	T	X	4-6	5-7	5-7	5-8	6-10	7-12	8-13	9-15	11-17	12-20	14-24
A _k = 0.39		Y	6-11	8-13	9-14	10-15	11-18	13-21	16-25	19-29	22-33	23-35	26-39
21 x 9	CFM		230	275	320	365	410	455	545	635	730	820	910
	T	X	4-6	5-7	6-8	6-9	6-10	6-11	8-13	10-15	12-18	13-21	15-27
A _k = 0.45		Y	8-13	10-15	11-17	12-19	13-21	15-24	18-29	22-34	24-38	26-42	30-47
15 x 12	CFM		220	260	305	350	390	435	525	610	700	785	870
	T	X	5-7	5-8	6-10	7-12	8-13	9-14	11-18	13-20	15-24	16-26	18-29
A _k = 0.43		Y	5-8	6-11	8-13	9-14	10-16	12-19	14-22	16-25	19-29	21-32	24-37

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

- RCD / 2-way, continued



	≥ NC 45
	NC 40
	NC 35
	NC 30
	≥ NC 30

Face Size "Inch"/Outlet Area "Inch"	V _K Outlet Velocity "FPM"												
	P _T Total Pressure "Inches water"												
	500	600	700	800	900	1000	1200	1400	1600	1800	2000		
18 x 12 A _K = 0.52	CFM	260	315	370	420	475	525	630	735	840	945	1050	
	T	X	4-7	5-8	6-10	7-12	9-14	10-15	12-18	14-20	16-24	18-27	21-31
		Y	6-11	8-13	9-14	11-17	13-21	14-22	17-26	21-30	23-34	27-38	29-42
21 x 15 A _K = 0.76	CFM	380	455	530	605	685	760	915	1060	1220	1370	1520	
	T	X	6-10	6-11	8-13	9-14	10-16	12-19	13-21	15-26	18-29	21-33	25-38
		Y	8-13	9-14	11-18	13-20	15-24	16-26	19-29	22-33	25-38	29-44	32-49
24 x 15 A _K = 0.87	CFM	440	525	615	700	790	875	1050	1225	1400	1575	1750	
	T	X	4-9	6-1	8-13	9-14	10-16	12-19	14-22	16-25	19-29	21-32	25-37
		Y	8-14	10-16	13-20	15-24	16-26	19-29	22-34	25-38	29-44	33-48	37-52

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

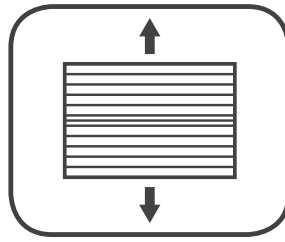
The minimum T Dimensions in feet is based on a VT of 135 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 65 with a VR of 35 FPM .

V_T Terminal Velocity "FPM"
 V_K Outlet Velocity "FPM"
 V_R Room Velocity "FPM"

T Throw "Feet"
 A_K Outlet Area "Feet²"
 N_C re 8db room

P_T Total Pressure "Inch Water"
 P_S Static Pressure "Inch Water"

- RCD / 2-way, continued

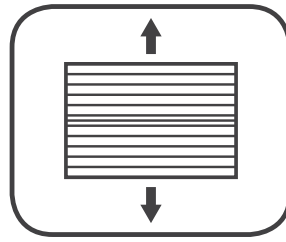


	≥ NC 45
	NC 40
	NC 35
	NC 30
	≥ NC 30

Face Size "Inch"/Outlet Area "Inch"			V _k Outlet Velocity "FPM"										
			500	600	700	800	900	1000	1200	1400	1600	1800	2000
			P _T Total Pressure "Inches water"										
			0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12	0.16	0.20	0.25
9 x 6	CFM		65	80	95	105	120	130	160	185	210	240	260
	T	X	—	—	—	—	—	—	—	—	—	—	—
A _k = 0.13		Y	3-5	3-5	5-7	6-8	7-10	7-10	8-12	10-14	11-17	14-20	16-23
12 x 6	CFM		90	105	120	140	160	175	210	245	280	315	350
	T	X	—	—	—	—	—	—	—	—	—	—	—
A _k = 0.17		Y	3-5	5-7	6-8	6-9	7-10	8-12	10-14	12-18	15-21	16-23	17-25
15 x 6	CFM		110	130	155	175	200	220	265	310	350	395	440
	T	X	—	—	—	—	—	—	—	—	—	—	—
A _k = 0.22		Y	4-6	6-8	6-9	7-10	9-13	10-14	10-15	13-19	15-21	18-26	21-30
12 x 9	CFM		130	155	180	210	235	260	310	365	415	470	520
	T	X	—	—	—	—	—	—	—	—	—	—	—
A _k = 0.26		Y	5-7	6-8	6-9	8-12	10-14	10-14	11-17	14-21	16-24	19-27	20-31
15 x 9	CFM		165	195	230	260	295	325	390	460	525	590	650
	T	X	—	—	—	—	—	—	—	—	—	—	—
A _k = 0.32		Y	6-8	7-10	8-12	9-13	10-15	12-18	14-20	16-24	18-26	21-31	24-35
18 x 9	CFM		195	235	275	310	350	390	470	545	625	700	780
	T	X	—	—	—	—	—	—	—	—	—	—	—
A _k = 0.39		Y	6-9	8-12	9-13	10-14	11-17	13-9	15-21	17-25	19-29	22-33	25-39
21 x 9	CFM		230	275	320	365	410	455	545	635	730	820	910
	T	X	—	—	—	—	—	—	—	—	—	—	—
A _k = 0.45		Y	7-10	8-12	9-13	11-16	12-18	14-20	16-24	19-27	22-32	25-36	29-41
15 x 12	CFM		220	260	305	350	390	435	525	610	700	785	870
	T	X	—	—	—	—	—	—	—	—	—	—	—
A _k = 0.43		Y	6-9	8-12	10-14	10-15	12-18	14-20	15-24	18-27	22-32	24-36	28-41

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

- RCD / 2-way, continued



	≥ NC 45
	NC 40
	NC 35
	NC 30
	≥ NC 30

Face Size "Inch"/Outlet Area "Inch"			V _K Outlet Velocity "FPM"										
			500	600	700	800	900	1000	1200	1400	1600	1800	2000
			P _T Total Pressure "Inches water"										
			0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12	0.16	0.20	0.25
18 x 12	CFM		260	315	370	420	475	525	630	735	840	945	1050
	T	X	—	—	—	—	—	—	—	—	—	—	—
A _K = 0.52		Y	7-11	9-13	11-15	12-18	13-19	15-21	18-26	20-29	23-34	27-39	31-42
21 x 15	CFM		380	455	530	605	685	760	915	1060	1220	1370	1520
	T	X	—	—	—	—	—	—	—	—	—	—	—
A _K = 0.76		Y	9-13	10-15	12-18	14-20	15-23	17-25	20-30	23-34	27-40	31-44	34-48
24 x 15	CFM		440	525	615	700	790	875	1050	1225	1400	1575	1750
	T	X	—	—	—	—	—	—	—	—	—	—	—
A _K = 0.87		Y	8-14	11-16	13-19	15-21	17-25	19-29	22-33	25-38	29-42	33-48	38-54
21 x 18	CFM		460	550	640	735	825	915	1100	1280	1465	1645	1830
	T	X	—	—	—	—	—	—	—	—	—	—	—
A _K = 0.91		Y	10-15	11-17	13-19	16-22	19-25	20-28	23-33	26-38	29-42	34-46	38-51

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

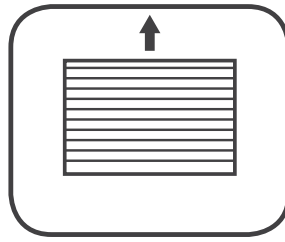
The minimum T Dimensions in feet is based on a VT of 135 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 65 with a VR of 35 FPM .

V_T Terminal Velocity "FPM"
 V_K Outlet Velocity "FPM"
 V_R Room Velocity "FPM"

T Throw "Feet"
 A_K Outlet Area "Feet²"
 N_C re 8db room

P_T Total Pressure "Inch Water"
 P_S Static Pressure "Inch Water"

- RCD / 1-way

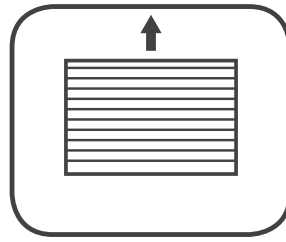


	≥ NC 45
	NC 40
	NC 35
	NC 30
	≥ NC 30

Face Size "Inch"/Outlet Area "Inch"			V _k Outlet Velocity "FPM"										
			500	600	700	800	900	1000	1200	1400	1600	1800	2000
			P _T Total Pressure "Inches water"										
			0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12	0.16	0.20	0.25
9 x 6	CFM		65	80	95	105	120	130	160	185	210	240	265
	T	X	5-8	6-9	7-11	8-12	9-13	10-15	12-18	15-21	16-24	19-29	21-32
A _k = 0.13		Y	—	—	—	—	—	—	—	—	—	—	—
12 x 6	CFM		90	105	120	140	160	175	210	245	280	315	350
	T	X	5-8	6-9	9-13	9-14	10-15	12-18	14-20	17-25	18-27	20-30	23-35
A _k = 0.17		Y	—	—	—	—	—	—	—	—	—	—	—
15 x 6	CFM		110	130	155	175	200	220	265	310	350	395	440
	T	X	5-8	7-10	9-13	10-15	12-18	14-20	16-24	18-27	21-31	24-36	28-41
A _k = 0.22		Y	—	—	—	—	—	—	—	—	—	—	—
12 x 9	CFM		130	155	180	210	235	260	310	365	415	470	520
	T	X	7-10	8-12	10-14	11-17	12-18	14-20	17-25	19-29	22-33	25-37	28-41
A _k = 0.26		Y	—	—	—	—	—	—	—	—	—	—	—
15 x 9	CFM		165	195	230	260	295	325	390	460	525	590	650
	T	X	9-13	10-14	11-17	12-18	15-23	17-25	20-30	22-33	25-37	29-42	32-45
A _k = 0.32		Y	—	—	—	—	—	—	—	—	—	—	—
18 x 9	CFM		195	235	275	310	350	390	470	545	625	700	780
	T	X	9-13	10-15	12-18	14-20	16-24	18-26	20-30	25-37	27-40	31-44	36-48
A _k = 0.39		Y	—	—	—	—	—	—	—	—	—	—	—
15 x 12	CFM		220	260	305	350	390	435	525	610	700	780	870
	T	X	10-14	11-17	13-19	15-23	18-26	19-29	22-32	26-39	30-43	35-48	39-54
A _k = 0.43		Y	—	—	—	—	—	—	—	—	—	—	—

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

- RCD / 1-way, continued



	≥ NC 45
	NC 40
	NC 35
	NC 30
	≥ NC 30

Face Size "Inch"/Outlet Area "Inch"	V_K Outlet Velocity "FPM"											
	500 600 700 800 900 1000 1200 1400 1600 1800 2000											
	P_T Total Pressure "Inches water"											
	0.02 0.02 0.03 0.04 0.05 0.06 0.09 0.12 0.16 0.20 .25											
18 x 12 $A_K = 0.52$	CFM	260	315	370	420	475	525	630	735	840	945	1050
	T	X	10-15	12-18	14-20	17-25	19-27	21-30	25-36	28-41	32-45	36-49
		Y	—	—	—	—	—	—	—	—	—	—
21 x 15 $A_K = 0.76$	CFM	380	455	530	605	685	760	915	1060	1220	1370	1520
	T	X	13-19	15-21	18-26	19-29	22-34	25-38	29-42	34-46	38-51	43-56
		Y	—	—	—	—	—	—	—	—	—	—
24 x 15 $A_K = 0.87$	CFM	440	525	615	700	790	875	1050	1225	1400	1575	1750
	T	X	14-22	16-24	18-27	21-31	24-36	27-40	30-43	35-47	41-52	46-57
		Y	—	—	—	—	—	—	—	—	—	—
21 x 18 $A_K = 0.91$	CFM	460	550	640	735	825	915	1100	1280	1465	1645	1830
	T	X	14-20	16-24	19-29	22-32	24-36	26-39	30-43	35-47	41-51	45-56
		Y	—	—	—	—	—	—	—	—	—	—

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The minimum T Dimensions in feet is based on a VT of 135 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 65 with a VR of 35 FPM .

V_T Terminal Velocity "FPM"
 V_K Outlet Velocity "FPM"
 V_R Room Velocity "FPM"

T Throw "Feet"
 A_K Outlet Area "Feet²"
 N_C re 8db room

P_T Total Pressure "Inch Water"
 P_S Static Pressure "Inch Water"

- Selection Procedure

1. Determine the required CFM per each outlet as per cooling Load Calculation.
2. Determine the type of pattern from table in page (3).
Example : "4-way, 2-way-21,...etc. "
3. Determine the recommended Outlet Velocity V_K according to application as per following Table.
4. Select the suitable size that give the required CFM at recommended outlet velocity from performance data tables.

Application	V_K Outlet Velocity "FPM"
Broadcast Studios	300-500
Residences	500-750
Apartments	500-750
Mosques , Churches	500-750
Hotel Bedrooms	500-750
Theaters	500-750
Private Offices, Acoustically Treated	500-750
Private Offices, not Treated	500-800
General Offices	1000-1250
Dept. Stores	1500

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Table (1) – Recommended Outlet Velocity *

- Selection Procedure Example

1. Required 250 CFM as per cooling load calculations.
2. Required 4-way pattern type.
3. The recommended outlet velocity ranges from 500 – 750 FPM.
4. The size of air outlet can 12 X 12 at 700 FPM or 15 X 15 at 500 FPM velocity.

* Table 20—Carrier Handbook – Part 2. Air Distribution – Chapter 3. Room Air Distribution—p.72

Face Size "Inch"/Outlet Area "Inch"			V _k Outlet Velocity "FPM"			
			500	600	700	800
			P _T Total Pressure "Inches water"			
			0.02	0.02	0.03	0.04
6 x 6	CFM		50	60	70	80
	T	X	2-3	2-3	2-4	2-4
A _k = 0.10		Y	2-3	2-3	2-4	2-4
9 x 9	CFM		110	135	155	180
	T	X	2-4	2-4	3-5	3-5
A _k = 0.22		Y	2-4	2-4	3-5	3-5
12 x 12	CFM		200	240	280	320
	T	X	3-5	4-6	4-8	5-8
A _k = 0.40		Y	3-5	4-6	4-8	5-8
15 x 15	CFM		310	375	440	500
	T	X	4-6	4-8	5-9	6-11
A _k = 0.62		Y	4-6	4-8	5-9	6-11

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- How to order

Type	SCD	SCD Square Ceiling Diffuser RCD Rectangular Ceiling Diffuser
Pattern	4	Pattern Type at page (3)
Size	24 x 24	L X W " Inch"
Finish	1	0 Aluminum 1 White Color 2 Other Colors
Damper	0	0 Without Damper 1 With Damper

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

Other Products are provided by Khedr Trust Co.

Diffusers & Grills

Slot Linear Diffuser
Eye Ball Diffuser
Circular Ceiling Diffuser
Swirl Diffuser
Perforated Ceiling Diffuser
Jet Diffuser
Square Ceiling Diffuser
Disc Valve Diffuser
Linear Bar Grill
Supply / Return Grill
Door Grill

Louvers

Aluminum Louver
Sand Trap Louver

Dampers

Volume Damper
Fire Damper
Smoke Motorized Damper
Shutter Damper
Pressure Relief Damper

Special Parts

Sound Attenuator
Plenum Box

Duct Works

Galvanized Steel Duct
Black Steel Duct
Stainless Steel Duct
Spiral Duct
Flexible Duct
Canvas
Flanges
Flexible Duct Connector



Khedr Trust

ALL AIR PRODUCTS



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