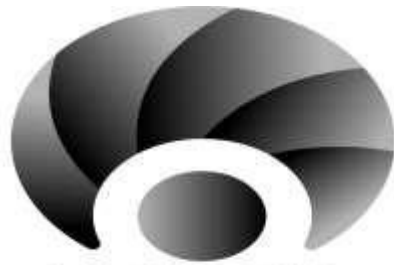


Product Catalogue
Square Ceiling Diffuser



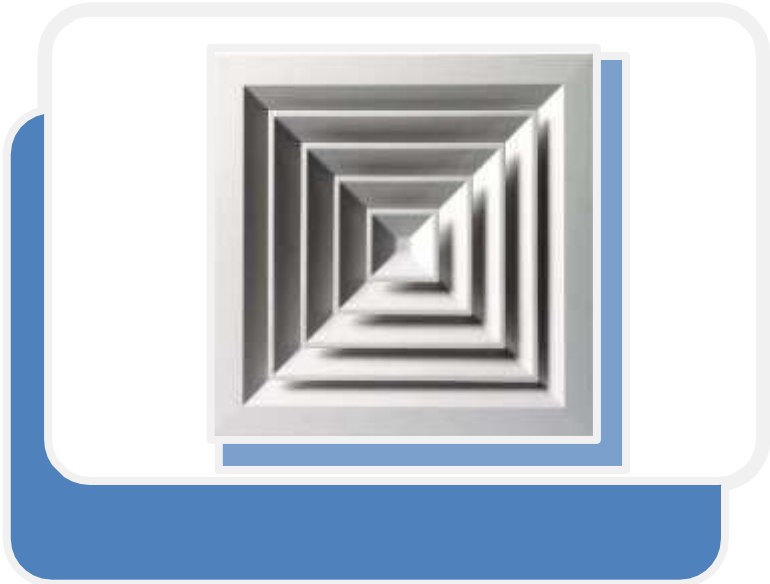
ELHAMD

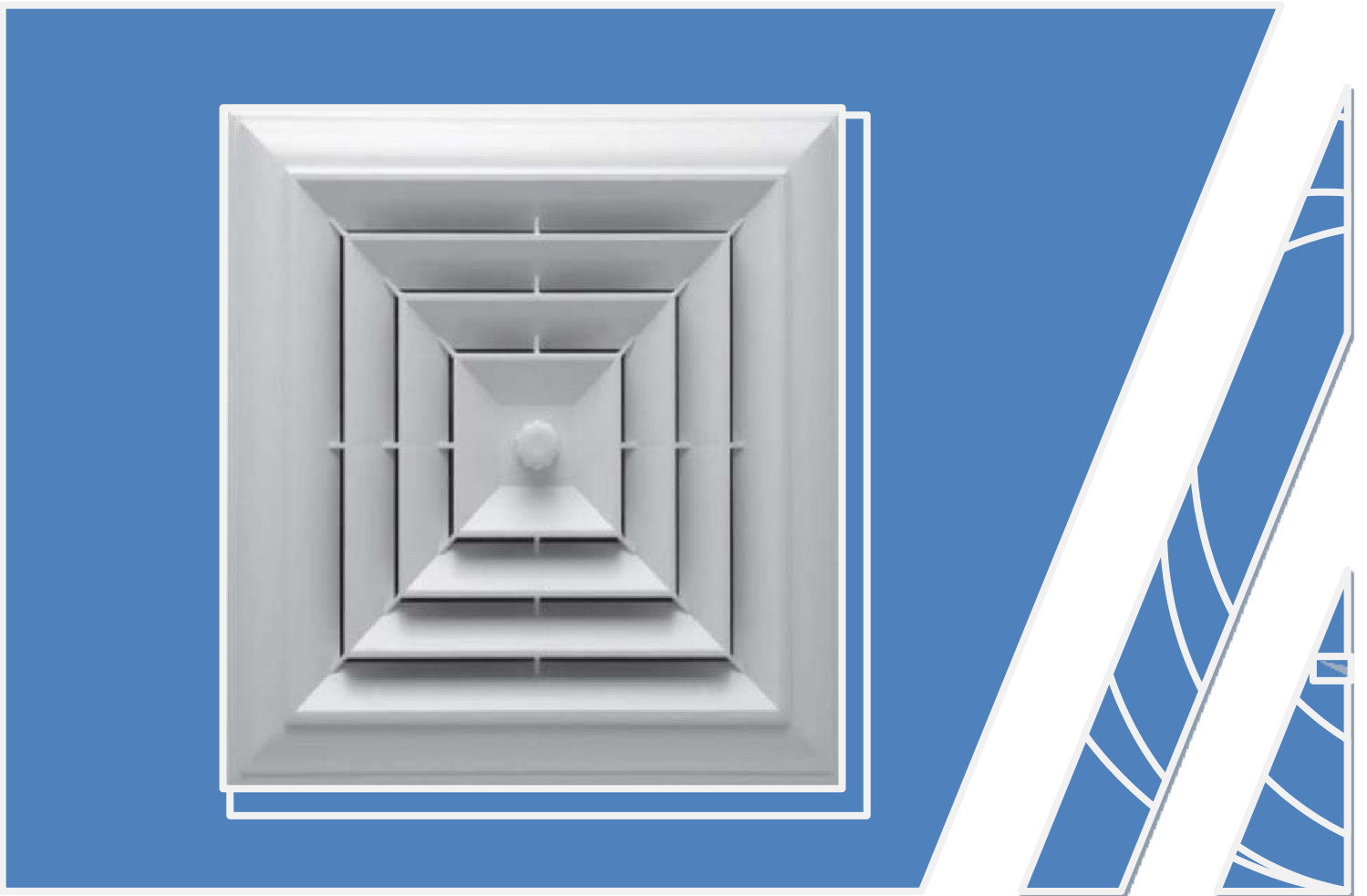
Central Air Conditioning System

Your
comfort is

ELHAMD

Manufactured by





Finish

- Standard Finish - White



Models

SCD
RCD

Model Use

Model SCD /RCD Diffusers handle large amountof 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

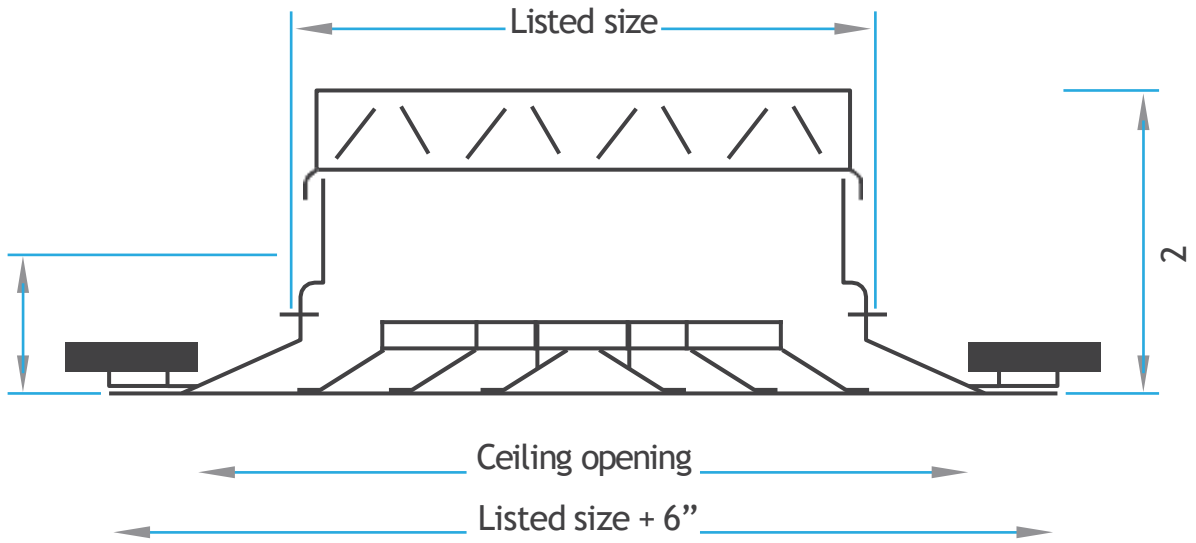
Flexible use with 1-,2-,3- or 4-way horizontal flow.

Appearance

Uniform face appearance with different neck sizes.

- Dimensions

- Nominal Size \varnothing 14 - continued

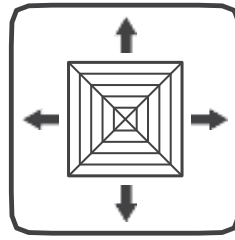


- Core Pattern Options

	2 -	3			
Pattern					
Pattern					
		3			
		3			

- Performanceh

- SCD / 4-way



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

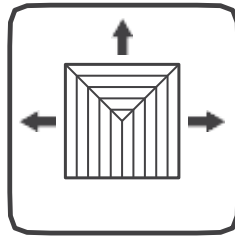
The minimum T Dimensions in feet is based on a VT of 200 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 100 with a VR of 35 FPM .

VT Terminal Velocity "FPM"
VK Outlet Velocity "FPM"
VR Room Velocity "FPM"

T Throw "Feet"
AK Outlet Area "Feet2"
NC re 8db room

PT Total Pressure "Inch Water"
PS Static Pressure "Inch Water"

- SCD / 3-way



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

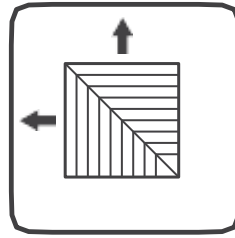
The minimum T Dimensions in feet is based on a VT of 170 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 85 with a VR of 35 FPM .

VT Terminal Velocity "FPM"
 VK Outlet Velocity "FPM"
 VR Room Velocity "FPM"

T Throw "Feet"
 AK Outlet Area "Feet²"
 NC re 8db room

PT Total Pressure "Inch Water"
 PS Static Pressure "Inch Water"

- SCD / 2-way



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

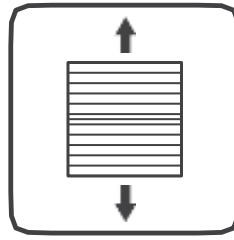
The minimum T Dimensions in feet is based on a VT of 135 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 65 with a VR of 35 FPM .

VT Terminal Velocity "FPM"
VK Outlet Velocity "FPM"
VR Room Velocity "FPM"

T Throw "Feet"
AK Outlet Area "Feet²"
NC re 8db room

PT Total Pressure "Inch Water"
PS Static Pressure "Inch Water"

- SCD / 2-way, continued



Face Size "Inch"/Out let Area "Inch"		V _k Outlet Velocity "FPM"							
		500	600	700	800	900	1000	1200	1400
		P _T Total Pressure "Inches water"							
		0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12
6 x 6	CFM	45	55	60	70	80	90	105	125
	T	X	—	—	—	—	—	—	—
A _k = 0.10		Y	3-5	3-5	4-7	4-7	5-8	5-8	6-9
9 x 9	CFM	95	115	135	155	175	195	235	275
	T	X	—	—	—	—	—	—	—
A _k = 0.22		Y	5-7	6-8	6-8	6-9	8-12	9-13	11-17
12 x 12	CFM	175	210	245	280	315	350	420	480
	T	X	—	—	—	—	—	—	—
A _k = 0.40		Y	4-7	6-9	9-13	10-15	11-17	12-18	14-20
15 x 15	CFM	275	330	385	440	495	550	660	775
	T	X	—	—	—	—	—	—	—
A _k = 0.62		Y	8-12	10-14	10-15	12-18	14-20	15-23	18-27
18 x 18	CFM	390	470	545	625	700	780	935	1080
	T	X	—	—	—	—	—	—	—
A _k = 0.90		Y	9-15	11-17	12-18	14-20	15-23	18-26	20-30
21 x 21	CFM	540	650	760	865	975	1080	1300	1515
	T	X	—	—	—	—	—	—	—
A _k = 1.23		Y	11-17	14-20	15-23	18-26	19-29	23-35	26-40
24 x 24	CFM	705	845	990	1130	1270	1410	1690	1950
	T	X	—	—	—	—	—	—	—
A _k = 1.60		Y	12-19	14-22	17-25	20-30	21-33	23-35	27-40

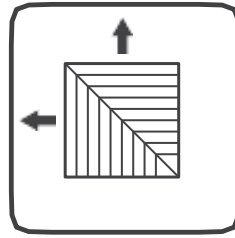
The minimum T Dimensions in feet is based on a VT of 135 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 65 with a VR of 35 FPM .

VT Terminal Velocity "FPM"
VK Outlet Velocity "FPM"
VR Room Velocity "FPM"

T Throw "Feet"
AK Outlet Area "Feet²"
NC re 8db room

PT Total Pressure "Inch Water"
PS Static Pressure "Inch Water"

- SCD / 2-way



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

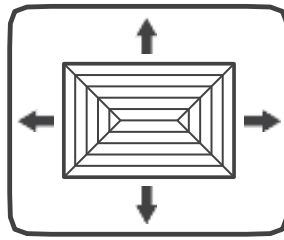
The minimum T Dimensions in feet is based on a VT of 135 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 65 with a VR of 35 FPM .

VT Terminal Velocity "FPM"
 VK Outlet Velocity "FPM"
 VR Room Velocity "FPM"

T Throw "Feet"
 AK Outlet Area "Feet²"
 NC re 8db room

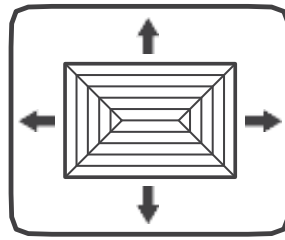
PT Total Pressure "Inch Water"
 PS Static Pressure "Inch Water"

- RCD / 2-way



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

- RCD / 3-way, continued



Face Size "Inch" / Out let Area "Inch"			V _k Outlet Velocity "FPM"											
			500	600	700	800	900	1000	1200	1400				
			P _T Total Pressure "Inches water"							0.02	0.02	0.03	0.04	0.05
21 x 12	CFM		345	415	485	555	625	690	830	970				
	T	X	3-5	3-5	4-6	4-8	4-8	5-9	6-11	7-13				
A _k = 0.69		Y	5-9	6-11	7-13	8-14	8-15	10-18	11-21	14-26				
24 x 12	CFM		400	480	560	640	720	800	960	1140				
	T	X	2-4	4-6	4-6	4-8	4-8	5-9	6-12	5-14				
A _k = 0.80		Y	6-11	7-13	8-14	9-16	10-18	11-21	14-26	15-29				
18 x 15	CFM		375	450	525	600	675	750	900	1050				
	T	X	4-6	4-8	5-9	6-11	6-12	7-13	8-15	9-17				
A _k = 0.75		Y	4-8	5-9	6-11	6-12	8-14	8-15	10-18	10-19				
15 x 15	CFM		500	600	700	800	900	1000	1200	1400				
	T	X	4-6	4-8	5-9	6-11	6-12	7-13	8-15	10-18				
A _k = 0.62		Y	6-11	6-12	8-14	9-17	10-18	1-21	13-25	15-29				
24 x 18	CFM		600	720	840	960	1080	1200	1440	1680				
	T	X	4-8	5-9	6-11	6-12	7-14	8-15	10-18	11-21				
A _k = 1.20		Y	6-11	6-12	7-14	8-15	10-19	11-21	13-23	15-27				

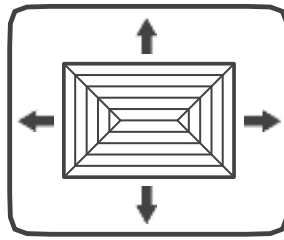
The minimum T Dimensions in feet is based on a VT of 200 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 100 with a VR of 35 FPM .

VT Terminal Velocity "FPM"
 VK Outlet Velocity "FPM"
 VR Room Velocity "FPM"

T Throw "Feet"
 AK Outlet Area "Feet²"
 NC re 8db room

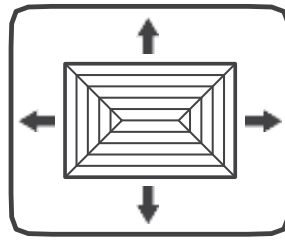
PT Total Pressure "Inch Water"
 PS Static Pressure "Inch Water"

- RCD / 2-way



Face Size "Inch" / Out let Area "Inch"			V _k Outlet Velocity "FPM"											
			500	600	700	800	900	1000	1200	1400				
			P _T Total Pressure "Inches water"							0.02	0.02	0.03	0.04	0.05
9 x 6	CFM		75	90	105	120	135	150	180	210				
	T	X	3-5	3-5	3-6	4-8	5-9	6-10	6-11	7-12				
A _k = 0.15		Y	1-2	1-2	2-3	2-3	2-4	2-4	2-4	3-6				
12 x 6	CFM		100	120	140	160	180	200	240	280				
	T	X	3-5	4-7	4-7	5-9	6-10	6-11	8-14	9-16				
A _k = 0.20		Y	1-2	1-2	1-2	2-3	2-3	2-4	3-6	4-7				
12 x 9	CFM		150	180	210	240	270	300	360	420				
	T	X	4-7	4-8	5-9	6-11	7-13	8-14	9-15	10-18				
A _k = 0.30		Y	2-3	2-3	2-4	3-6	4-7	4-8	4-8	5-9				
15 x 9	CFM		185	225	265	300	340	375	450	525				
	T	X	4-8	5-9	6-10	7-12	8-14	9-16	11-19	11-20				
A _k = 0.37		Y	2-3	2-4	2-4	2-4	3-6	4-7	4-8	4-8				
18 x 9	CFM		225	270	315	360	405	450	540	630				
	T	X	4-8	6-10	6-11	7-13	9-15	10-18	11-19	13-23				
A _k = 0.45		Y	1-2	2-3	2-4	3-6	3-6	4-7	4-8	5-9				
21 x 9	CFM		265	320	370	425	475	530	635	740				
	T	X	5-9	6-11	8-14	9-15	10-16	10-18	12-21	14-24				
A _k = 0.53		Y	2-3	2-3	2-4	3-6	4-7	4-7	4-8	4-8				
15 x 12	CFM		250	300	350	400	450	500	600	700				
	T	X	5-9	6-10	6-11	7-13	9-15	9-16	11-20	13-23				
A _k = 0.50		Y	1-4	3-6	3-6	4-7	4-8	5-9	6-10	6-11				
18 x 21	CFM		295	355	415	475	535	595	715	835				
	T	X	6-10	6-11	7-13	8-14	9-15	11-20	12-22	15-26				
A _k = 0.59		Y	2-4	2-4	3-6	3-6	4-7	5-9	6-10	7-12				

- RCD / 3-way, continued



Face Size "Inch" / Out let Area "Inch"		V _k Outlet Velocity "FPM"							
		500	600	700	800	900	1000	1200	1400
		P _T Total Pressure "Inches water"							
		0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12
18 x 15	CFM	375	459	525	600	675	750	900	1050
	T	X	6-10	7-12	7-13	9-15	11-19	12-21	7-13
A _k = 0.75		Y	3-6	4-7	4-7	5-9	6-10	6-11	7-13
21 x 15	CFM	435	525	610	695	785	870	1045	1200
	T	X	6-11	7-13	9-15	10-18	12-21	13-23	15-26
A _k = 0.87		Y	3-6	4-7	4-8	5-9	6-10	6-11	7-12
21 x 18	CFM	525	630	735	840	945	1050	1260	1470
	T	X	6-11	7-13	9-15	10-18	11-20	13-22	15-26
A _k = 1.05		Y	3-6	4-7	4-8	6-10	6-11	7-12	8-14
24 x 18	CFM	600	720	840	960	1080	1200	1440	1680
	T	X	7-13	9-15	10-18	13-22	14-24	15-26	19-32
A _k = 1.20		Y	4-7	4-8	5-9	6-11	7-12	8-13	10-17

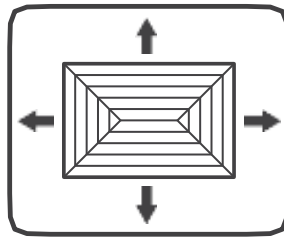
The minimum T Dimensions in feet is based on a VT of 170 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 85 with a VR of 35 FPM .

VT Terminal Velocity "FPM"
 VK Outlet Velocity "FPM"
 VR Room Velocity "FPM"

T Throw "Feet"
 AK Outlet Area "Feet²"
 NC re 8db room

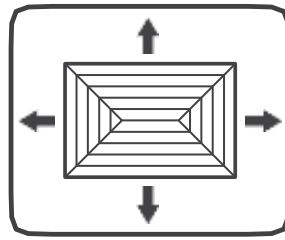
PT Total Pressure "Inch Water"
 PS Static Pressure "Inch Water"

- RCD / 2-way



		V _k Outlet Velocity "FPM"							
		500	600	700	800	900	1000	1200	1400
		P _T Total Pressure "Inches water"							
		0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12
9 x 6	CFM	65	80	95	105	120	130	160	185
	T	X	2-4	3-5	4-6	4-6	5-7	5-7	6-9
A _k = 0.13	Y	3-5	4-7	5-8	5-8	6-11	6-11	8-13	9-14
12 x 6	CFM	90	105	120	140	160	175	210	245
	T	X	2-4	3-5	3-5	4-6	5-7	5-7	5-8
15 x 6	CFM	110	130	155	175	200	220	265	310
	T	X	2-4	3-5	3-5	4-6	5-7	5-8	6-9
A _k = 0.22	Y	5-8	6-10	7-12	8-13	10-15	11-17	13-20	15-24
12 x 9	CFM	130	155	180	210	235	260	310	365
	T	X	4-6	4-6	5-7	5-8	6-10	6-11	8-13
A _k = 0.26	Y	5-7	5-8	6-10	6-11	8-12	9-14	10-16	14-21
15 x 9	CFM	165	195	230	260	295	325	390	460
	T	X	4-6	5-7	6-8	6-9	6-11	7-12	9-14
A _k = 0.32	Y	6-10	6-11	8-12	10-14	10-16	12-19	14-22	16-25
18 x 9	CFM	195	235	275	310	350	390	470	545
	T	X	4-6	5-7	5-7	5-8	6-10	7-12	8-13
A _k = 0.39	Y	6-11	8-13	9-14	10-15	11-18	13-21	16-25	19-29
21 x 9	CFM	230	275	320	365	410	455	545	635
	T	X	4-6	5-7	6-8	6-9	6-10	6-11	8-13
A _k = 0.45	Y	8-13	10-15	11-17	12-19	13-21	15-24	18-29	22-34
15 x 12	CFM	220	260	305	350	390	435	525	610
	T	X	5-7	5-8	6-10	7-12	8-13	9-14	11-18
A _k = 0.43	Y	5-8	6-11	8-13	9-14	10-16	12-19	14-22	16-25

- RCD / 3-way, continued



		V _k Outlet Velocity "FPM"							
		500	600	700	800	900	1000	1200	1400
		P _T Total Pressure "Inches water"							
		0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12
18 x 12	CFM	260	315	370	420	475	525	630	735
	T	X	4-7	5-8	6-10	7-12	9-14	10-15	12-18
A _k = 0.52		Y	6-11	8-13	9-14	11-17	13-21	14-22	17-26
21 x 15	CFM	380	455	530	605	685	760	915	1060
	T	X	6-10	6-11	8-13	9-14	10-16	12-19	13-21
A _k = 0.76		Y	8-13	9-14	11-18	13-20	15-24	16-26	19-29
24 x 15	CFM	440	525	615	700	790	875	1050	1225
	T	X	4-9	6-11	8-13	9-14	10-16	12-19	14-22
A _k = 0.87		Y	8-14	10-16	13-20	15-24	16-26	19-29	22-34

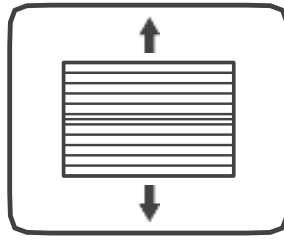
The minimum T Dimensions in feet is based on a VT of 135 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 65 with a VR of 35 FPM .

VT Terminal Velocity
"FPM" **V_k** Outlet
Velocity "FPM" **VR** Room
Velocity "FPM"

T Throw "Feet"
AK Outlet Area "Feet²"
NC re 8db room

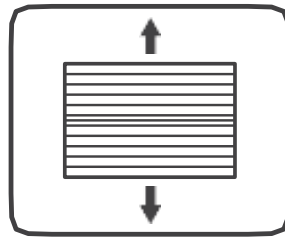
PT Total Pressure "Inch Water"
PS Static Pressure "Inch Water"

- RCD / 2-way, continued



Face Size "Inch" / Out let Area "Inch"			V _k Outlet Velocity "FPM"							
			500	600	700	800	900	1000	1200	1400
			P _T Total Pressure "Inches water"							
		0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12	
9 x 6	CFM		65	80	95	105	120	130	160	185
	T	X	—	—	—	—	—	—	—	—
A _k = 0.13		Y	3-5	3-5	5-7	6-8	7-10	7-10	8-12	10-14
12 x 6	CFM		90	105	120	140	160	175	210	245
	T	X	—	—	—	—	—	—	—	—
A _k = 0.17		Y	3-5	5-7	6-8	6-9	7-10	8-12	10-14	12-18
15 x 6	CFM		110	130	155	175	200	220	265	310
	T	X	—	—	—	—	—	—	—	—
A _k = 0.22		Y	4-6	6-8	6-9	7-10	9-13	10-14	10-15	13-19
12 x 9	CFM		130	155	180	210	235	260	310	365
	T	X	—	—	—	—	—	—	—	—
A _k = 0.26		Y	5-7	6-8	6-9	8-12	10-14	10-14	11-17	14-21
15 x 9	CFM		165	195	230	260	295	325	390	460
	T	X	—	—	—	—	—	—	—	—
A _k = 0.32		Y	6-8	7-10	8-12	9-13	10-15	12-18	14-20	16-24
18 x 9	CFM		195	235	275	310	350	390	470	545
	T	X	—	—	—	—	—	—	—	—
A _k = 0.39		Y	6-9	8-12	9-13	10-14	11-17	13-9	15-21	17-25
21 x 9	CFM		230	275	320	365	410	455	545	635
	T	X	—	—	—	—	—	—	—	—
A _k = 0.45		Y	7-10	8-12	9-13	11-16	12-18	14-20	16-24	19-27
15 x 12	CFM		220	260	305	350	390	435	525	610
	T	X	—	—	—	—	—	—	—	—
A _k = 0.43		Y	6-9	8-12	10-14	10-15	12-18	14-20	15-24	18-27

- RCD / 2-way, continued



		V _k Outlet Velocity "FPM"							
		500	600	700	800	900	1000	1200	1400
		P _T Total Pressure "Inches water"							
		0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12
18 x 12	CFM	260	315	370	420	475	525	630	735
	T	X	—	—	—	—	—	—	—
A _k = 0.52		Y	7-11	9-13	11-15	12-18	13-19	15-21	18-26
21 x 15	CFM	380	455	530	605	685	760	915	1060
	T	X	—	—	—	—	—	—	—
A _k = 0.76		Y	9-13	10-15	12-18	14-20	15-23	17-25	20-30
24 x 15	CFM	440	525	615	700	790	875	1050	1225
	T	X	—	—	—	—	—	—	—
A _k = 0.87		Y	8-14	11-16	13-19	15-21	17-25	19-29	22-33
21 x 18	CFM	460	550	640	735	825	915	1100	1280
	T	X	—	—	—	—	—	—	—
A _k = 0.91		Y	10-15	11-17	13-19	16-22	19-25	20-28	23-33

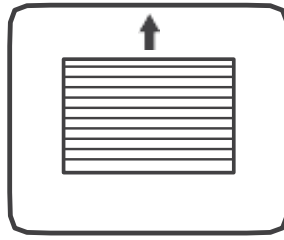
The minimum T Dimensions in feet is based on a VT of 135 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 65 with a VR of 35 FPM .

VT Terminal Velocity "FPM"
 VK Outlet Velocity "FPM"
 VR Room Velocity "FPM"

T Throw "Feet"
 AK Outlet Area "Feet²"
 NC re 8db room

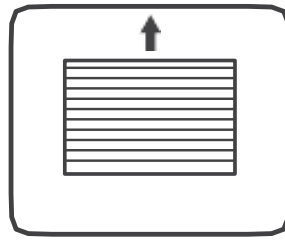
PT Total Pressure "Inch Water"
 PS Static Pressure "Inch Water"

- RCD / 1-way



Face Size "Inch" / Out let Area "Inch"			V _k Outlet Velocity "FPM"							
			500	600	700	800	900	1000	1200	1400
			P _T Total Pressure "Inches water"							
		0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12	
9 x 6	CFM		65	80	95	105	120	130	160	185
	T	X	5-8	6-9	7-11	8-12	9-13	10-15	12-18	15-21
A _k = 0.13		Y	—	—	—	—	—	—	—	—
12 x 6	CFM		90	105	120	140	160	175	210	245
	T	X	5-8	6-9	9-13	9-14	10-15	12-18	14-20	17-25
A _k = 0.17		Y	—	—	—	—	—	—	—	—
15 x 6	CFM		110	130	155	175	200	220	265	310
	T	X	5-8	7-10	9-13	10-15	12-18	14-20	16-24	18-27
A _k = 0.22		Y	—	—	—	—	—	—	—	—
12 x 9	CFM		130	155	180	210	235	260	310	365
	T	X	7-10	8-12	10-14	11-17	12-18	14-20	17-25	19-29
A _k = 0.26		Y	—	—	—	—	—	—	—	—
15 x 9	CFM		165	195	230	260	295	325	390	460
	T	X	9-13	10-14	11-17	12-18	15-23	17-25	20-30	22-33
A _k = 0.32		Y	—	—	—	—	—	—	—	—
18 x 9	CFM		195	235	275	310	350	390	470	545
	T	X	9-13	10-15	12-18	14-20	16-24	18-26	20-30	25-37
A _k = 0.39		Y	—	—	—	—	—	—	—	—
21 x 9	CFM		230	275	320	365	410	455	545	635
	T	X	10-14	11-17	13-19	15-23	18-26	19-29	22-32	26-39
A _k = 0.45		Y	—	—	—	—	—	—	—	—
15 x 12	CFM		220	260	305	350	390	435	525	610
	T	X	10-14	11-17	13-19	15-23	18-26	19-29	22-32	26-39
A _k = 0.43		Y	—	—	—	—	—	—	—	—

- RCD / 1-way, continued



		V _k Outlet Velocity "FPM"							
		500	600	700	800	900	1000	1200	1400
		P _T Total Pressure "Inches water"							
		0.02	0.02	0.03	0.04	0.05	0.06	0.09	0.12
18 x 12	CFM	260	315	370	420	475	525	630	735
	T	X	10-15	12-18	14-20	17-25	19-27	21-30	25-36
A _k = 0.52		Y	—	—	—	—	—	—	—
21 x 15	CFM	380	455	530	605	685	760	915	1060
	T	X	13-19	15-21	18-26	19-29	22-34	25-38	29-42
A _k = 0.76		Y	—	—	—	—	—	—	—
24 x 15	CFM	440	525	615	700	790	875	1050	1225
	T	X	14-22	16-24	18-27	21-31	24-36	27-40	30-43
A _k = 0.87		Y	—	—	—	—	—	—	—
21 x 18	CFM	460	550	640	735	825	915	1100	1280
	T	X	14-20	16-24	19-29	22-32	24-36	26-39	30-43
A _k = 0.91		Y	—	—	—	—	—	—	—

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 .

VT Terminal Velocity "FPM"
 VK Outlet Velocity "FPM"
 VR Room Velocity "FPM"

T Throw "Feet"
 AK Outlet Area "Feet²"
 NC re 8db room

PT Total Pressure "Inch Water"
 PS 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

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

- How to order

Type	SCD	SCD Square Ceiling Diffuser RCD Rectangular Ceiling Diffuser
Pattern	4	Pattern Type page (3) at
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

Other Products are provided by ELHAMD. Co.

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

Diffusers & Grills

- . Aluminum Louvers
- . Sand Trap Louvers

Louvers

- . Volume Damper
- . Fire Damper
- . Smoke Motorized Damper
- . Shutter Damper

Dampers

- . Sound Attenuator
- . Plenum Box
- . Galvanized Steel Duct
- . Black Steel Duct
- . Stainless Steel Duct
- . Spiral Duct
- . Flexible Duct
- . Canvas
- . Flanges



ALL AIR PRODUCTS



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**Alqanater Alkhairia roads,Industrial Area, Behind
Cocacola Co., Cairo, Egypt Mailing Address : P.O.Box
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Mob : +01150713317 / 01068912223

E- Mail : info@ELHAMD -eg.com

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