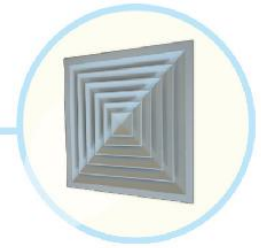


OUR PRODUCTS

SELECTION GUIDE



1 - SQUARE CEILING DIFFUSER

- 2- ROUND CEILING DIFFUSER
- 3- SWIRL DIFFUSER
- 4- PERFORATED CEILING DIFFUSER
- 5- LINEAR SLOT DIFFUSER
- 6- LINEAR CEILING DIFFUSER
- 7- LINEAR BAR GRILL
- 8- REGISTER
- 9- FLOOR & PERFORATED FLOOR GRILL
- 10- TRANSFER GRILL
- 11- ACCESS PANEL
- 12- LOUVER
- 13- SAND TRAP LOUVER
- 14- JET NOZZLE
- 15- BALL JET NOZZLE
- 16- DRUM JET NOZZLE
- 17- DISC VALVE
- 18- NON RETURN DAMPER (SHUTTER)
- 19- VOLUME DAMPER
- 20- FIRE DAMPER
- 21- SMOKE DAMPER
- 22- DUCT ACCESS DOOR

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Air Outlet

Andalasia

INTERTEK

INTRODUCTION

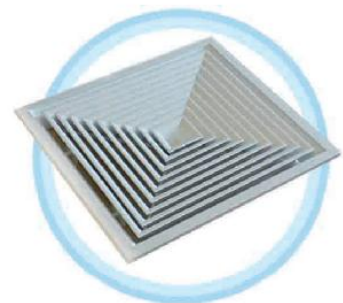
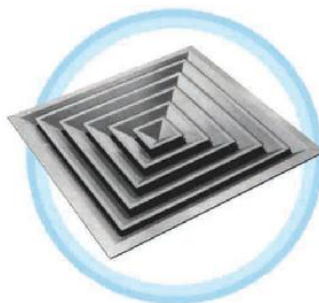
The diffusers are designed for ceiling applications. They can be used for supply or extract air, together with the accessories required for various demands.

PROPERTIES

The diffusers have fixed and straight blades. For supply air purposes, they are characteristically suitable for horizontal air throws. Where "Coanda effect" is required, they should be installed close to the ceiling. These diffusers are recommended for use with ceiling heights up to 4 m., with a supply air temperature difference of (+/-) 10°C. The diffuser is made of a frame and a central blade block. The blade block is fixed to the frame by the aid of spring pins and can easily be removed / installed. The standard sizes start from 150 x 150 mm, and go up to 600 x 600 mm with increments of 75 mm. One, two, three and four way throwing types are available.

SURFACE TREATMENT

The surfaces of the diffusers are first cleaned, then treated with chromating process; after which, are painted electrostatically, with 20% gloss RAL 9010 (white) as standard. Other colours are also available upon request.



TYPES

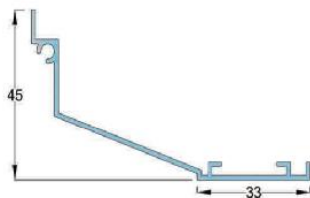
“SQURE DIFFUSER 33-45

This type is used as 4 way diffuser only

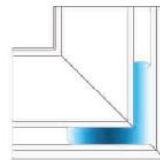
SPECIFICATIONS

FRAME

made from extruded aluminum alloy (6063) profile supported by metal strip and welded joints to get rigid construction .

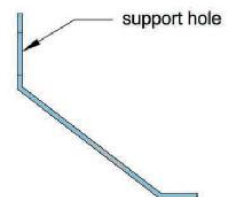


Square Diffuser Frame Profile



BLADE

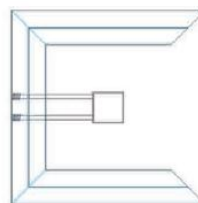
Stamped aluminum blade formed from aluminum sheet .



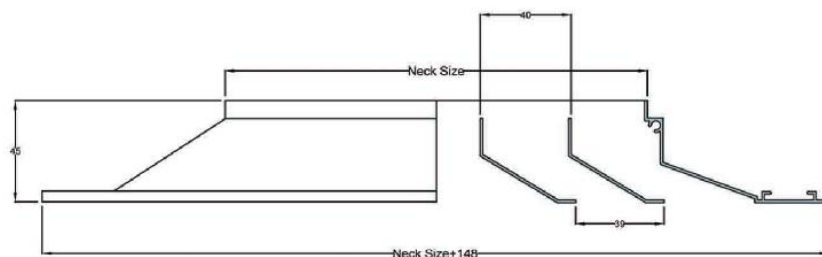
Stamped Blade

FIXING SUPPORT

blades are connected together by a linkage support to make the inner core . the inner core is fixed to the fram by a mean of pin ang spring which make it easy to remove the inner core



Size (mm)
150 * 150
225 * 225
300 * 300
375 * 375
450 * 450
525 * 525
600 * 600



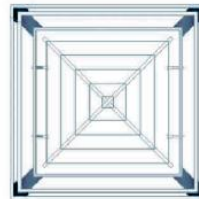
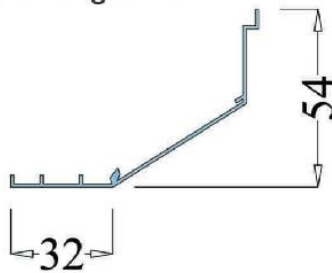
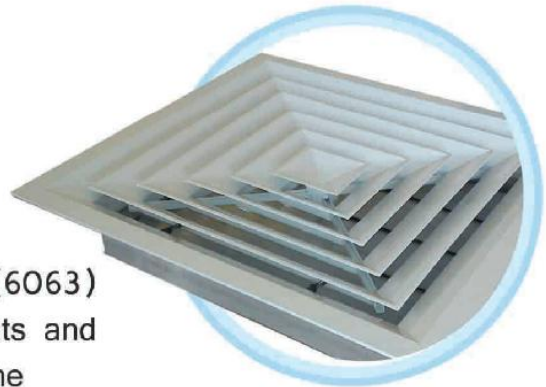
“SQURE DIFFUSER 32-54

this type is used in different application of air diffusing direction one ,two , three and four way .

SPECIFICATIONS

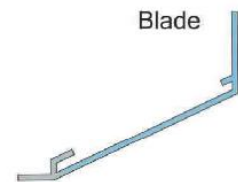
FRAME

frame : made from extruded aluminum alloy (6063) profile supported by metal strip and welded joints and Metal strip to connect the higher side of the Frame as shown in the figure .



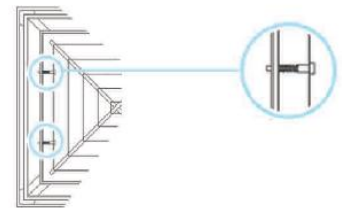
BLADE

Formed from extruded aluminum alloy (6063) profile .

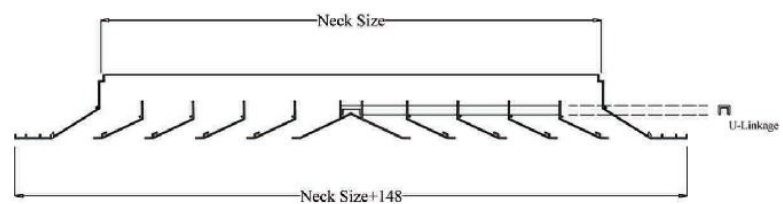


FIXING SUPPORT

blades are connected together by a linkage support to make the inner core . the inner core is fixed to the frame by a mean of pin ang spring which make it easy to remove the inner core .



A	B		
150	150	300	300
	225		375
	300		450
	375		525
	450		600
	525		600
225	225	375	375
	300		450
	375		525
	450		600
	525		600
	600		600



U-Linkage connecting Blades by a mean of welded joints

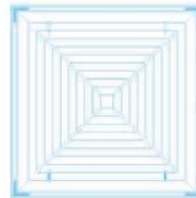
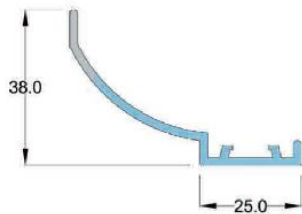
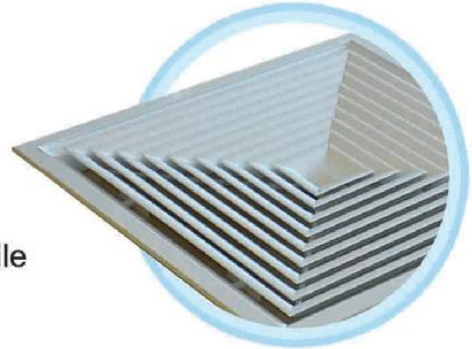
"SQURE DIFFUSER 28-38

this type is used in different application of air diffusing direction one ,two , three and four way .

SPECIFICATIONS

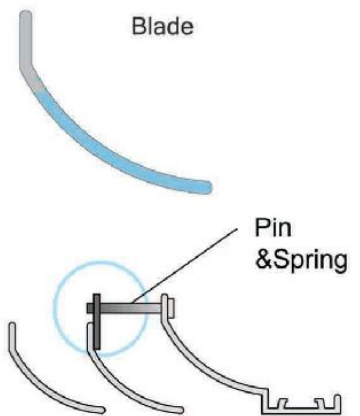
FRAME

Made from extruded aluminum alloy (6063) profile supported by metal strip and welded joints .



BLADE

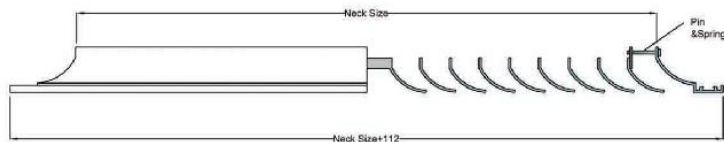
Formed from extruded aluminum alloy (6063) profile .



FIXING SUPPORT

blades are connected together by a linkage support to make the inner core . the inner core is fixed to the fram by a mean of pin ang spring which make it easy to remove the inner core .

A	B		
150	150	300	300
	225		375
	300		450
	375		525
	450		600
	525		600
225	225	375	375
	300		450
	375		525
	450		600
	525		600
	600		600



the inner core is fixed to the Frame by a mean of Pin and Spring

ACCESSORIES

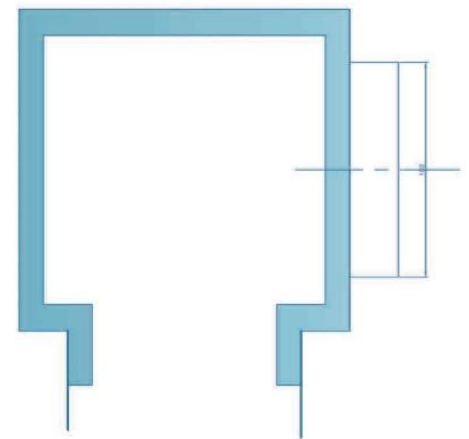
Damper With Opposed Blades

Depending on application characteristics, an opposed blade damper can be installed on the back side of the diffuser. This damper is a separate item which can be operated by its special tool from the face of the diffuser. Opposed blade dampers are manufactured from ETIAL-60 norm aluminium extruded profiles. To prevent reflection, they are painted RAL 9005 (matt black) as standard.

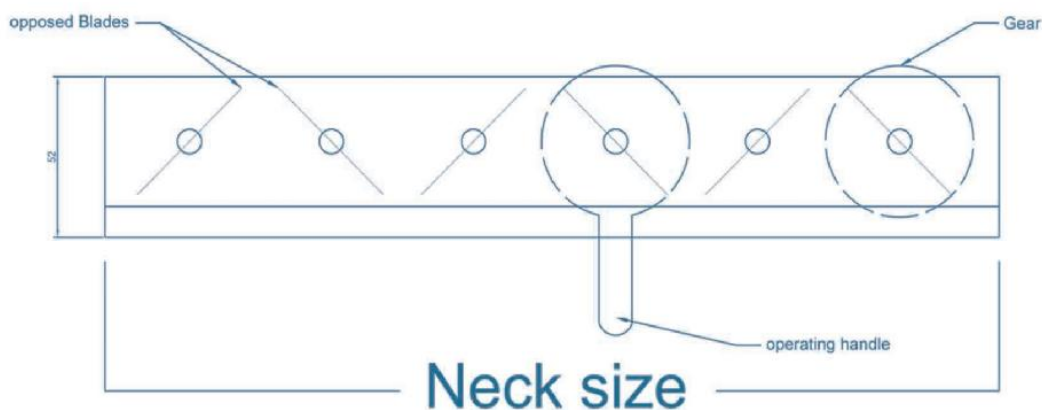
Flap Damper With Rectifier

This type of damper is used in high velocity ducts. The rectifier is made of ETIAL-60 norm aluminium profiles and the flap damper part is formed from steel sheets. To prevent reflection, they are painted RAL 9005 (matt black) as standard

Plenum Box

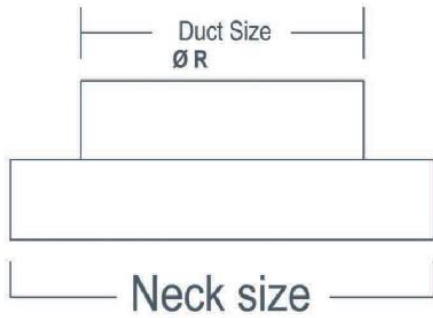


listed neck size



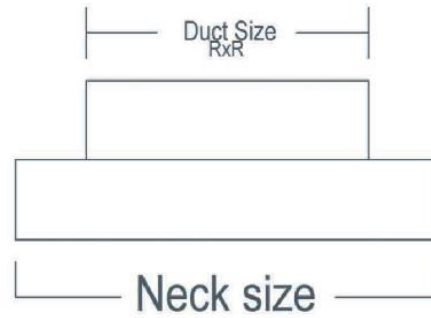
Adaptor

Round



Square To Round

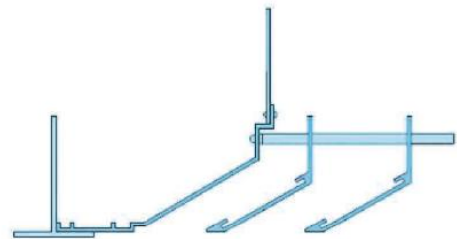
Rectangle



Square To Square

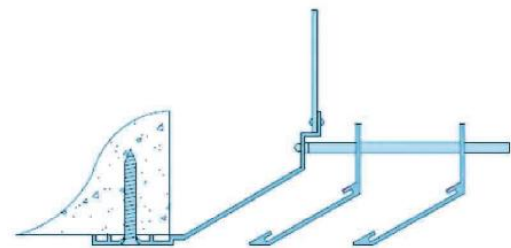
Fitting

Lay in: The method to use with using T bar ceiling systems. The diffuser is simply laid into the prepared T bar grid and connected to ductwork.



Surface mounted: The diffuser is supplied with pre-punched countersunk fixing holes and philips type screws in the same finish as the diffuser.

Fitting then simply involves screwing the diffuser into the supporting structure, and connecting it to ductwork.



“SQURE DIFFUSER 33-45 & 32-54

*IMPERIAL UNITS

CEILING DIFFUSERS PERFORMANCE DATA - SUPPLY

SIZE	An	Ak	Vn	200	250	300	350	400	500	600	700	800
6 X 6	0.250	0.096	CFM	50	63	75	88	100	125	150	175	200
			Pt	0.013	0.020	0.028	0.039	0.051	0.079	0.144	0.156	0.198
			Th	3-4-8	4-6-11	4-7-12	5-8-13	6-9-14	7-11-16	9-12-17	10-13-18	11-14-19
			NC	<15	<15	<15	<15	<15	19	24	29	33
9 X 6	0.375	0.146	CFM	75	93	112	131	150	187	225	262	300
			Pt	0.013	0.020	0.028	0.039	0.051	0.080	0.144	0.196	0.256
			Th	4-6-11	5-7-13	6-8-14	7-10-16	8-11-17	10-13-20	12-15-22	14-17-24	15-18-25
			NC	<15	<15	<15	<15	<15	20	26	30	34
12 X 6	0.500	0.192	CFM	100	125	150	175	200	250	300	350	400
			Pt	0.013	0.020	0.029	0.040	0.052	0.081	0.144	0.196	0.256
			Th	5-7-14	6-9-15	7-10-16	8-11-18	9-12-19	11-14-22	13-16-24	15-18-26	17-20-28
			NC	<15	<15	<15	<15	<15	21	27	31	35
9 X 9	0.563	0.210	CFM	110	140	170	195	225	280	335	395	450
			Pt	0.013	0.020	0.029	0.040	0.052	0.081	0.117	0.160	0.208
			Th	5-7-14	6-9-16	7-11-18	8-12-20	10-14-21	11-16-23	14-18-26	16-20-28	17-21-31
			NC	<15	<15	<15	<15	16	22	28	33	37
15 X 6	0.625	0.239	CFM	125	156	188	219	250	312	375	438	500
			Pt	0.016	0.024	0.036	0.047	0.065	0.099	0.144	0.196	0.256
			Th	5-8-14	6-9-16	7-11-19	9-13-21	11-15-23	13-17-25	15-19-27	17-21-29	20-24-33
			NC	<15	<15	<15	<15	15	22	28	32	36

"SQURE DIFFUSER 33-45 & 32-54

CEILING DIFFUSERS PERFORMANCE DATA - SUPPLY

*IMPERIAL UNITS

SIZE	An	Ak	Vn	200	250	300	350	400	500	600	700	800
18 X 6	0.750	0.284	CFM	150	188	225	263	300	375	450	525	600
			Pt	0.016	0.024	0.036	0.047	0.065	0.099	0.144	0.196	0.256
			Th	6-9-15	7-11-19	8-12-20	10-14-22	12-16-25	14-18-27	16-20-30	18-23-33	21-26-37
			NC	<15	<15	<15	<15	16	23	29	33	37
12 X 9	0.750	0.284	CFM	150	188	225	263	300	375	450	525	600
			Pt	0.016	0.024	0.036	0.047	0.065	0.099	0.144	0.196	0.256
			Th	6-9-15	7-11-19	8-12-20	10-14-22	12-16-25	14-18-27	16-20-30	18-23-33	21-26-37
			NC	<15	<15	<15	<15	16	23	29	33	37
21 X 6	0.875	0.330	CFM	175	218	262	306	350	437	525	612	700
			Pt	0.016	0.024	0.036	0.047	0.065	0.099	0.144	0.196	0.256
			Th	6-9-16	7-11-20	10-13-23	11-15-25	12-16-27	14-18-29	17-20-31	19-23-34	21-26-37
			NC	<15	<15	<15	<15	16	23	29	33	37
15 X 9	0.938	0.353	CFM	188	235	281	328	375	469	563	657	750
			Pt	0.016	0.024	0.036	0.047	0.065	0.099	0.144	0.196	0.256
			Th	6-9-15	8-10-19	9-13-23	11-15-24	12-17-26	14-19-29	17-21-32	19-23-35	22-26-38
			NC	<15	15	17	20	24	30	34	38	42
12 X 12	1.000	0.353	CFM	200	250	300	350	400	500	600	700	800
			Pt	0.014	0.021	0.031	0.042	0.055	0.085	0.124	0.167	0.219
			Th	6-9-18	7-11-21	9-13-24	11-16-26	12-18-27	15-21-30	18-24-33	21-26-36	23-27-38
			NC	<15	<15	<15	16	19	25	32	36	40

“SQURE DIFFUSER 33-45 & 32-54

*IMPERIAL UNITS

CEILING DIFFUSERS PERFORMANCE DATA - SUPPLY

SIZE	An	Ak	Vn	200	250	300	350	400	500	600	700	800
18 x 12	1.500	0.555	CFM	305	380	458	530	600	750	900	1050	1200
			Pt	0.016	0.024	0.036	0.047	0.065	0.099	0.144	0.196	0.256
			Th	8-10-20	9-13-22	11-16-24	12-18-26	14-19-28	17-22-30	20-24-33	23-28-36	24-29-41
			NC	<15	<15	<15	15	20	27	33	37	41
15 x 15	1.563	0.577	CFM	310	390	470	545	625	780	940	1090	1250
			Pt	0.014	0.022	0.032	0.043	0.056	0.087	0.126	0.172	0.225
			Th	8-12-23	10-14-27	12-17-30	13-19-33	16-23-34	19-27-38	23-30-43	26-32-46	28-34-50
			NC	<15	<15	17	23	28	35	41	45	49
21 x 12	1.750	0.644	CFM	350	438	525	613	700	875	1050	1225	1400
			Pt	0.016	0.024	0.036	0.047	0.065	0.099	0.144	0.196	0.256
			Th	8-12-25	10-15-28	12-18-31	15-22-32	17-25-35	21-28-41	25-31-44	27-33-48	30-36-52
			NC	<15	<15	<15	15	20	27	33	37	41
18 x 15	1.875	0.688	CFM	375	468	562	656	750	937	1125	1312	1500
			Pt	0.016	0.024	0.036	0.047	0.065	0.099	0.144	0.196	0.256
			Th	8-11-24	10-16-29	13-19-31	15-23-33	17-24-34	22-29-42	25-31-45	28-34-50	31-37-54
			NC	<15	<15	<15	17	21	28	34	38	42
24 x 12	2.000	0.732	CFM	400	500	600	700	800	1000	1200	1400	1600
			Pt	0.016	0.024	0.036	0.047	0.065	0.099	0.144	0.196	0.256
			Th	8-11-24	11-16-29	13-20-31	15-23-33	19-26-38	23-29-43	26-32-47	28-35-51	30-38-56
			NC	<15	<15	<15	17	21	28	34	38	42

"SQUARE DIFFUSER 33-45 & 32-54

CEILING DIFFUSERS SAD,RAD PERFORMANCE DATA - SUPPLY

*IMPERIAL UNITS

SIZE	An	Ak	Vn	200	250	300	350	400	500	600	700	800
24 X 6	1.000	0.358	CFM	200	250	300	350	400	500	600	700	800
			Pt	0.016	0.024	0.036	0.047	0.065	0.099	0.144	0.196	0.256
			Th	7-10-19	9-12-22	10-14-25	12-16-27	13-19-28	16-22-31	19-25-34	22-27-37	24-28-39
			NC	<15	<15	<15	<15	17	24	30	34	38
18 X 9	1.125	0.420	CFM	226	282	337	393	450	562	675	768	900
			Pt	0.016	0.024	0.036	0.047	0.065	0.099	0.144	0.196	0.256
			Th	8-11-20	9-12-23	10-14-25	12-17-26	14-20-30	17-24-32	20-25-35	22-27-37	24-29-40
			NC	<15	<15	<15	15	18	25	31	35	39
15 X 12	1.250	0.465	CFM	250	313	375	438	500	625	750	875	1000
			Pt	0.016	0.024	0.036	0.047	0.065	0.099	0.144	0.196	0.256
			Th	8-12-22	19-13-23	10-15-25	12-18-27	15-21-30	18-23-33	21-26-35	23-28-37	25-31-42
			NC	<15	<15	<15	15	19	26	32	36	40
21 X 9	1.313	0.488	CFM	262	327	393	458	524	655	786	917	1050
			Pt	0.016	0.024	0.036	0.047	0.065	0.099	0.144	0.196	0.256
			Th	8-10-20	9-12-22	10-16-25	12-19-27	14-20-29	17-22-31	20-25-33	23-28-37	24-30-43
			NC	<15	<15	<15	15	18	25	31	35	39
24 X 9	1.500	0.555	CFM	300	375	450	525	600	750	900	1050	1200
			Pt	0.016	0.024	0.036	0.047	0.065	0.099	0.144	0.196	0.256
			Th	8-10-20	9-14-23	11-17-25	13-19-27	15-20-29	18-23-31	21-25-34	23-29-37	25-30-43
			NC	<15	<15	<15	15	19	26	32	36	40

**CEILING DIFFUSERS SAD,RAD "SQURE DIFFUSER 33-45
& 32-54
PERFORMANCE DATA - SUPPLY *IMPERIAL UNITS**

SIZE	An	Ak	Vn	200	250	300	350	400	500	600	700	800
21 X 15	2.188	0.799	CFM	436	546	655	765	875	1092	1312	1532	1750
			Pt	0.016	0.024	0.036	0.047	0.065	0.099	0.144	0.196	0.256
			Th	9-10-26	11-17-29	13-12-31	16-24-35	20-27-40	24-30-44	26-33-48	28-36-53	31-39-59
			NC	<15	<15	<15	17	21	28	34	38	42
18 X 18	2.250	0.785	CFM	450	560	675	785	900	1125	1350	1575	1800
			Pt	0.015	0.023	0.033	0.045	0.058	0.091	0.132	0.178	0.235
			Th	9-12-27	11-17-32	14-20-35	16-23-39	19-27-41	22-32-45	27-35-51	31-38--54	41-54-59
			NC	<15	18	22	27	34	39	44	48	53
24 X 15	2.500	0.908	CFM	500	625	750	875	1000	1250	1500	1750	2000
			Pt	0.016	0.024	0.036	0.047	0.065	0.099	0.144	0.196	0.256
			Th	9-15-29	12-18-33	14-12-36	18-26-39	20-29-42	24-33-47	30-37-53	40-52-57	43-55-61
			NC	<15	<15	<15	18	22	29	35	39	43
21 X 18	2.625	b	CFM	526	657	787	918	1050	1310	1570	1830	2090
			Pt	0.016	0.024	0.036	0.047	0.065	0.099	0.144	0.196	0.256
			Th	8-14-26	12-18-33	14-12-35	18-27-40	19-28-42	23-31-45	29-36-50	40-51-57	45-56-63
			NC	<15	<15	<15	18	22	29	36	39	43
24 X 18	3.000	1.083	CFM	600	750	900	1050	1200	1500	1800	2100	2400
			Pt	0.016	0.024	0.036	0.047	0.065	0.099	0.144	0.196	0.256
			Th	11-16-31	13-20-36	16-24-41	19-27-45	33-32-47	28-37-52	33-42-59	38-46-61	41-49-68
			NC	<15	<15	<15	19	23	30	36	40	44

"SQUARE DIFFUSER 33-45 & 32-54

CEILING DIFFUSERS

PERFORMANCE DATA - SUPPLY

*IMPERIAL UNITS

SIZE	An	Ak	Vn	200	250	300	350	400	500	600	700	800
21 X 21	3.063	1.065	CFM	610	765	920	1070	1225	1530	1835	2140	2450
			Pt	0.015	0.024	0.034	0.046	0.060	0.095	0.036	0.186	0.241
			Th	11-16-31	13-20-37	16-24-41	19-27-45	22-32-47	26-37-53	32-41-59	36-44-63	39-47-69
			NC	16	20	25	31	37	42	47	51	55
24 X 21	3.500	1.256	CFM	700	875	1050	1225	1400	1750	2100	2450	2800
			Pt	0.016	0.024	0.036	0.047	0.065	0.099	0.144	0.196	0.256
			Th	11-17-33	14-22-39	18-26-42	21-30-45	23-34-49	29-39-56	35-42-60	38-45-66	41-49-72
			NC	<15	<15	15	18	24	31	37	41	45
24 X 24	4.000	1.400	CFM	800	1000	1200	1400	1600	2000	2400	2800	3200
			Pt	0.015	0.024	0.035	0.047	0.061	0.095	0.038	0.188	0.245
			Th	12-19-36	15-23-43	18-27-47	21-31-52	25-37-54	30-43-60	37-47-67	41-51-72	45-54-79
			NC	18	23	29	34	40	45	50	53	57
SYMBOLS												
CFM	: Air Volume in cubic foot per minute.											
Ak	: Effective area in square foot.											
An	: Neck area in square foot.											
Vn	: Neck velocity in foot per minute.											
Pt	: Total pressure in inches water gauge.											
Th	: Throw in feet.											
NC	: Noise Criteria											
CONDITIONS				* Supply. * Damper is fully open * Noise Criteria values are based on (10 dB) room attenuation.								
NOTES				* The large throw values are based on the minimum terminal velocity of 50 fpm. * The middle throw values are based on the middle terminal velocity of 100 fpm. * The small throw values are based on the maximum terminal velocity of 150fpm. * For Rectangular Diffusers- throw values mentioned are for the longer side of the diffuser- for shorter sides throw values are 0.7-0.75 of the mentioned ones.								
CORRECTION FOR 1-2 AND 3 WAY				Criteria : No correction required. * Pressure : No correction required. * Throw : 3 way - increase from 10 - 20% : 2 way - increase from 20 - 30% : 1 way - increase from 40 - 50% * Drop : No correction required.								

“SQURE DIFFUSER 33-45 & 32-54

CEILING DIFFUSERS PERFORMANCE DATA - RETURN

* IMPERIAL UNITS

SIZE	An	Vn	300	400	500	600	700	800
6 x 6	0.250	CFM	75	100	125	150	175	200
		Ps	0.050	0.080	0.130	0.180	0.250	0.320
		NC	<15	17	25	31	36	41
9 x 6	0.375	CFM	113	150	188	225	263	300
		Ps	0.060	0.100	0.150	0.220	0.300	0.390
		NC	<15	19	28	33	38	44
12 x 6	0.500	CFM	150	200	250	300	350	400
		Ps	0.060	0.100	0.150	0.220	0.300	0.390
		NC	<15	21	29	34	40	45
9 x 9	0.563	CFM	168	224	280	336	392	448
		Ps	1.060	0.100	0.150	0.220	0.300	0.390
		NC	<15	22	30	36	41	46
15 x 6	0.625	CFM	188	250	313	375	438	500
		Ps	0.060	0.103	0.157	0.227	0.310	0.404
		NC	<15	23	31	36	42	46
18 x 6	0.750	CFM	225	300	375	450	525	600
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	15	24	32	37	43	47
12 x 9	0.750	CFM	225	300	375	450	525	600
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	15	24	32	37	43	47
21 x 6	0.875	CFM	263	350	438	525	613	700
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	16	25	33	38	44	48
15 x 9	0.938	CFM	281	375	469	563	657	750
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	16	26	33	38	45	48
12 x 12	1.000	CFM	300	400	500	600	700	800
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	16	26	33	39	45	49
24 x 6	1.000	CFM	300	400	500	600	700	800
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	16	26	33	39	45	49
18 x 9	1.125	CFM	338	450	563	675	788	900
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	17	27	34	40	46	50
15 x 12	1.250	CFM	375	500	625	750	875	1000
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	17	27	34	40	46	50
21 x 9	1.313	CFM	394	525	657	788	919	1050
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	18	27	35	41	46	51
24 x 9	1.500	CFM	450	600	750	900	1050	1200
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	19	28	36	42	47	52
18 x 12	1.500	CFM	450	600	750	900	1050	1200
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	19	28	36	42	47	52
15 x 15	1.563	CFM	468	624	780	936	1092	1248
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	19	28	36	42	47	52

"SQURE DIFFUSER 33-45 & 32-54

CEILING DIFFUSERS PERFORMANCE DATA - RETURN

*IMPERIAL UNITS

SIZE	An	Vn	300	400	500	600	700	800
21 X 12	1.750	CFM	525	700	875	1050	1225	1400
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	20	29	37	42	48	53
18 X 15	1.875	CFM	563	750	938	1125	1313	1500
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	20	29	37	43	49	53
24 X 12	2.000	CFM	600	800	1000	1200	1400	1600
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	21	30	37	43	49	53
21 X 15	2.188	CFM	656	875	1094	1313	1532	1750
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	21	31	38	44	50	54
18 X 18	2.250	CFM	675	900	1125	1350	1575	1800
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	21	31	38	44	50	54
24 X 15	2.500	CFM	750	1000	1250	1500	1750	2000
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	22	32	39	45	51	55
21 X 18	2.625	CFM	788	1050	1313	1575	1838	2100
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	22	32	39	45	51	55
24 X 18	3.000	CFM	900	1200	1500	1800	2100	2400
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	23	33	40	46	52	56
21 X 21	3.063	CFM	918	1224	1530	1836	2142	2448
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	23	33	40	46	52	56
24 X 21	3.500	CFM	1050	1400	1750	2100	2450	2800
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	24	34	40	47	53	57
24 X 24	4.000	CFM	1200	1600	2000	2400	2800	3200
		Ps	0.060	0.110	0.170	0.240	0.330	0.430
		NC	24	34	42	48	53	58

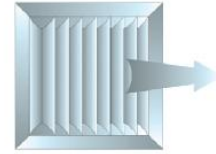
SYMBOLS

- *CFM: Air volume in cubic feet per minute
- *An: Neck area in foot squared
- *Vn: Neck velocity in foot per minute
- *Ps: Negative static pressure in inch water gauge
- *NC: Noise Criteria

CONDITIONS

- *Return
- *Damper is fully open.
- *Noise Criteria is based on (10dB) room attenuation

"SQURE DIFFUSER 28-38 ONE WAY

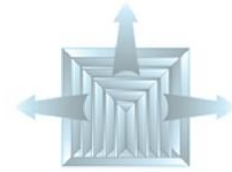


Size (mm) E x B	Flow Rate V (m³/h)	Throw, L (m)		Pressure Loss ΔP (Pa)	Sound Power Level S (dB(A))
		v _L =0,25 m/s	v _L =0,10 m/s		
150 x 150	80	1,62	4,50	4,8	<20
	110	2,33	6,53	9	25
	140	3,10	8,54	14	30
	170	3,73	10,41	21	35
	200	4,35	11,99	28	40
200 x 200	160	2,47	6,56	5,5	<20
	210	3,37	9,29	9	25
	260	4,29	11,44	14	30
	310	5,10	13,69	21	35
	360	5,84	15,64	28	40
250 x 250	210	2,55	6,56	4,7	<20
	300	3,37	8,81	8	24
	390	4,29	11,14	13	29
	480	5,37	13,88	19	34
	570	6,38	16,42	26	37
300 x 300	290	3,07	8,61	2,9	<20
	380	4,03	10,61	7,5	22
	470	5,28	13,22	11	26
	560	6,13	15,92	16	32
	650	7,00	17,82	22	37
350 x 350	350	3,74	9,22	4	<20
	450	4,60	11,36	7,5	22
	550	5,75	14,70	12	28
	650	6,62	16,56	18	34
	750	7,67	19,40	24	37
400 x 400	440	4,22	10,38	4	<20
	580	5,37	13,52	7	22
	720	6,62	16,66	12	26
	860	7,77	19,40	17	34
	1000	9,21	22,73	24	37
450 x 450	580	4,92	12,23	2,2	<20
	760	6,28	15,69	2,7	<20
	940	7,92	19,73	4	<20
	1120	9,47	23,87	7,5	22
	1300	11,30	28,61	12	27
500 x 500	750	4,23	7,89	4,5	<20
	950	5,49	12,72	8	23
	1150	6,67	15,61	12	28
	1350	8,03	19,31	18	34
	1550	9,30	22,53	25	37

"SQUIRE DIFFUSER 28-38 TWO WAYS

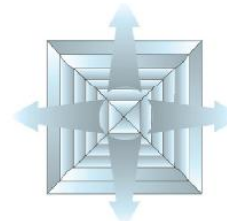


Size (mm) E x B	Flow Rate V (m ³ /h)	Throw, L (m)		Pressure Loss ΔP (Pa)	Sound Power Level S (dB(A))
		$v_1=0,25$ m/s	$v_1=0,10$ m/s		
150 x 150	80	1,12	3,19	4,8	<20
	110	1,61	4,63	9	25
	140	2,14	6,06	14	30
	170	2,57	7,38	21	35
	200	3,00	8,50	28	40
200 x 200	160	1,8	4,46	5,5	<20
	210	2,46	6,32	9	25
	260	3,13	7,78	14	30
	310	3,72	9,31	21	35
	360	4,26	10,64	28	40
250 x 250	210	1,86	4,46	4,7	<20
	300	2,46	5,99	8	24
	390	3,13	7,58	13	29
	480	3,92	9,44	19	34
	570	4,66	11,17	26	37
300 x 300	290	2,19	6,06	4,2	<20
	380	2,88	7,47	7,5	22
	470	3,77	9,31	11	26
	560	4,38	11,21	16	32
	650	5,00	12,55	22	37
350 x 350	350	2,73	6,49	4	<20
	450	3,36	8,00	7,5	22
	500	4,20	10,35	12	28
	650	4,83	11,66	18	34
	750	5,60	13,66	24	37
400 x 400	440	3,08	7,31	4	<20
	580	3,92	9,52	7	22
	720	4,83	11,73	12	26
	860	5,67	13,66	17	34
	1000	6,72	16,01	24	37
450 x 450	580	3,44	8,93	2,2	<20
	760	4,39	11,45	2,7	<20
	940	5,54	14,40	4	<20
	1120	6,62	17,42	7,5	22
	1300	7,90	20,88	12	27
500 x 500	750	3,33	6,52	4,5	<20
	950	4,32	10,51	8	23
	1150	5,25	12,90	12	28
	1350	6,32	15,96	18	34
	1550	7,32	18,62	25	37



"SQURE DIFFUSER 28-38 THREE WAYS

Size (mm) E x B	Flow Rate V (m ³ /h)	Throw, L (m)		Pressure Loss ΔP (Pa)	Sound Power Level S (dB(A))
		v _L =0,25 m/s	v _L =0,10 m/s		
150 x 150	80	1,08	3,19	1,1	<20
	110	1,55	4,63	1,9	21
	140	2,06	6,06	3	29
	170	2,47	7,38	4,4	36
	200	2,88	8,50	6,7	41
200 x 200	160	1,77	4,39	2	21
	210	2,42	6,22	3,4	29
	260	3,08	7,66	5,6	37
	310	3,67	9,17	7,3	28
	360	4,19	10,48	10,1	33
250 x 250	210	1,90	4,59	1,9	<20
	300	2,52	6,17	3,8	<20
	390	3,20	7,81	6,4	22
	480	4,01	9,73	9,6	29
	570	4,76	11,51	12,6	34
300 x 300	290	2,19	6,06	2,4	<20
	380	2,88	7,47	4,2	<20
	470	3,77	9,31	6,6	<20
	560	4,38	11,21	9	29
	650	5,00	12,55	12,5	35
350 x 350	350	2,73	6,58	2,1	<20
	450	3,36	8,12	3,3	<20
	550	4,20	10,50	4,4	<20
	650	4,83	11,83	6,2	25
	750	5,60	13,86	8,1	29
400 x 400	440	2,97	7,47	1,9	<20
	580	3,78	9,73	2,8	<20
	720	4,66	11,99	4,2	<20
	860	5,47	13,96	6,1	25
	1000	6,48	16,36	8	29
450 x 450	580	3,44	8,74	2	<20
	760	4,39	11,21	3,2	<20
	940	5,54	14,10	4,7	21
	1120	6,62	17,06	6,7	27
	1300	7,90	20,45	8,7	32
500 x 500	750	3,28	6,42	2	<20
	950	4,26	10,35	3,1	<20
	1150	5,17	12,71	4,9	23
	1350	6,22	15,72	6,5	27
	1550	7,21	18,34	8,6	32



"SQURE DIFFUSER 28-38

FOUR WAYS

Size (mm) E x B	Flow Rate V (m ³ /h)	Throw, L (m)		Pressure Loss ΔP (Pa)	Sound Power Level S (dB(A))
		$v_L=0,25$ m/s	$v_L=0,10$ m/s		
150 x 150	80	1,05	2,55	2,5	<20
	110	1,50	3,70	4,2	<20
	140	2,00	4,85	6,7	<20
	170	2,40	5,90	10	23
	200	2,80	6,80	15	31
200 x 200	160	1,35	3,35	3,6	<20
	210	1,85	4,75	6	<20
	260	2,35	5,85	10	22
	310	2,80	7,00	13	27
	360	3,20	8,00	18	32
250 x 250	210	1,40	3,35	3	<20
	300	1,85	4,50	6	<20
	390	2,35	5,70	10	21
	480	2,95	7,10	15	28
	570	3,50	8,40	20	33
300 x 300	290	1,60	4,30	3,5	<20
	380	2,10	5,30	6	<20
	470	2,75	6,60	9,5	23
	560	3,20	7,95	13	28
	650	3,65	8,90	18	34
350 x 350	350	1,95	4,70	2,8	<20
	450	2,40	5,80	4,5	<20
	550	3,00	7,50	6	<20
	650	3,45	8,45	8,5	24
	750	4,00	9,90	11	28
400 x 400	440	2,20	5,30	2,5	<20
	580	2,80	6,90	3,6	<20
	720	3,45	8,50	5,5	<20
	860	4,05	9,90	8	24
	1000	4,80	11,60	10,5	28
450 x 450	580	2,55	6,20	2,5	<20
	760	3,25	7,95	4	<20
	940	4,10	10,00	6	20
	1120	4,90	12,10	8,5	26
	1300	5,85	14,50	11	31
500 x 500	750	2,50	4,90	2,5	<20
	950	3,25	7,90	3,8	20
	1150	3,95	9,70	6	22
	1350	4,75	12,00	8	26
	1550	5,50	14,00	11	31

Intertek

Performance Test Certificate

Issued To

**AL ANDALOSIA FOR AIR OUTLETS
KAMEL YOUNES PIECE NO. 30 ST. TRANSFORMERS
INDUSTRIAL ZONE KILO 26 ALEXANDRIA DESERT ROAD
ABU RAWASH , CAIRO , EGYPT**

Intertek has tested a representative sample of
Al Andalosia For Air Outlets
Square Ceiling Diffuser

A Square Ceiling Diffuser MODEL AND-GI-SD1- 18" BY 18" was tested
in accordance with the standards listed below and was found
to perform in a manner appropriate to the dictates of the standards.

STANDARDS

ASHRAE 70-2006 "Method of Testing for Rating
the Performance of Air Outlets and Inlets"

ADC 1062: GRD-84 "Test Code for Grilles, Registers and Diffusers"

SCOPE OF TESTING

The diffuser was tested for the following performance characteristics:
"Reference Intertek Report Number 100710113CRT-001d April 30, 2012"

- A) Sound Power Level ((NC)
- B) Air Velocity versus Static Pressure
- C) Area Factor
- D) Throw Pattern

Date: April 30, 2012

James R. Kline

James R. Kline
Intertek
Engineer / Quality Supervisor

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