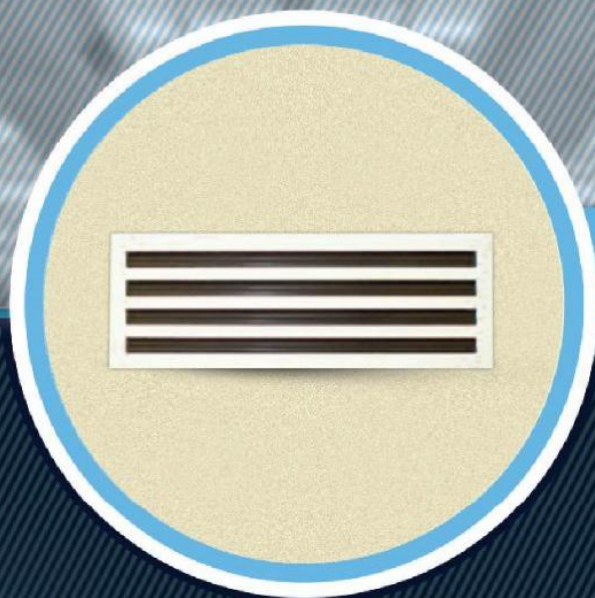


ALANDALOSIA

FOR AIR OUTLET



CATALOGUE **NO 5**

LINEAR SLOT DIFFUSER



Air Outlet

Andalosalosia

OUR PRODUCTS

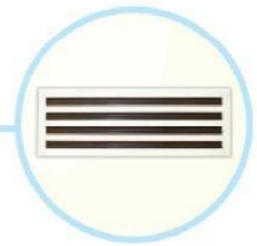
SELECTION GUIDE

- 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

....



Air Outlet

Andalousia

INTERTEK



Air Outlet

Andalosa



INTRODUCTION

The And 002 Model Slot is designed to combine a high air change rate capacity with maximum flexibility in air pattern and volume control, suitable for either ceiling or sidewall applications.

Linear slot diffusers offer unobtrusive good looks together with functional efficiency.

Linear slot diffusers are particularly suited to large open plan offices, where changing occupancy layouts demand an air distribution system that includes built in adaptability to suit the relocation of internal partitioning. Other applications include restaurants, meeting / conference rooms, atriums etc

“ INTERTEK

SPECIFICATION

Material

Extruded aluminium, architectural anodising quality complying with BS EN 755-92001 6063T6

Finishes Standard

Matt white RAL 9010 30% gloss frame with black aluminium blades.

Optional Frame Finishes

Anodised finish and other colours available to special order.

Blades

Standard black blades.
White blades optional.



End Flanges Single Units

Supplied fitted both ends, standard mechanical fixing with welded option.

Linear Runs

Supplied fitted one end only for both end units and make-up pieces without ends.

Fixing Standard

Sliding fit alignment strips, are supplied as standard with all linear diffuser modules for continuous appearance.

Optional

'U' bracket fixing to hemmed plenum flat foot for plaster ceilings without plenums.

Size Width

1 – 8 slots in 20mm or 25mm spacing. Larger to special order if required.

Length

Standard lengths up to 2400mm nominal opening size.

Linear runs will be supplied, as standard, in 2400mm long sections with end flanges as necessary. The exact length of the run will be made up with intermediate make-up sections.



Where exact lengths are difficult to ascertain, we recommend that make-up sections include 200mm of solid mullion at one end for site trimming. e.g.1000mm make-up section cut at 1100mm with 200mm solid mullion.

Option

Linear run made up of equal sections.

Extract Applications

Unless specially requested otherwise, diffusers for use in extract mode will be supplied with pattern control blades fitted to match the appearance of supply units.

Mitred Corners

These are provided as 90° composite sections (refer to tables).

Special Order

Other angles can be supplied, a template or drawing will be required. This should always be as viewed from above.

Ordering

Diffusers should be ordered by the length of the opening into which they are fitted (nominal length). Specify slot 20 or slot 25. Alternatively specify overall flange dimensions.

“ SLOT 50

CONSTRUCTION

FRAME AND INTERMEDIATE SECTION

Extruded aluminum profile .

DEFLECTOR BLADES

Special deflector blades to get the require pattern made from extruded aluminum profile .

SLOT WIDTH

½ “ , ¾ “ ,1” upon request

DAMPER

Black steel sheet of .5 mm thickness hit and miss damper with free area about 50 % . onle

OPTIONAL ACCESSORIES

Plenum box either un-lined,internally insulated or externally insulated.

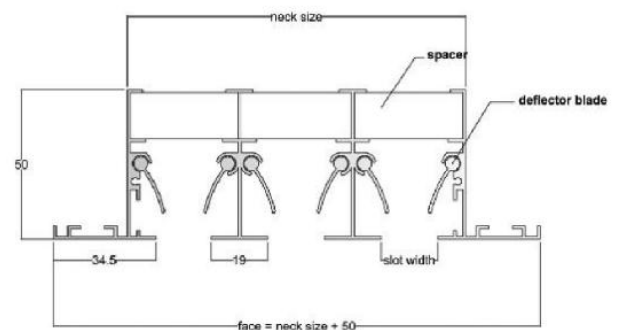
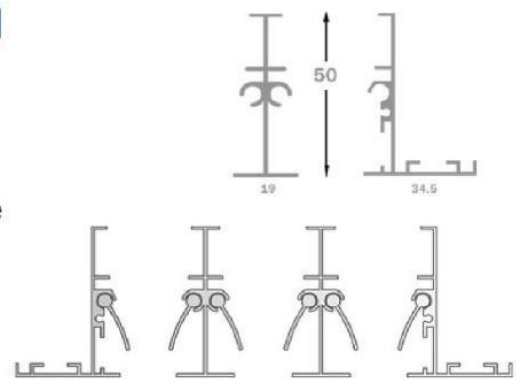
SIZE

Maximum 2800 mm length as single unit .

Above this size linear runs are supplied in multiple units for butt joining

FINISH

Standard mill finish or powder coated



“ SLOT 80

CONSTRUCTION

FRAME

High quality extruded aluminium alloy (6063) profiles.

DEFLECTOR BLADES

Special deflector blades to get the require pattern made from extruded aluminum profile .

SLOT WIDTH

½ “ , ¾ “ ,1” upon request

DAMPER

Black steel sheet of .5 mm thickness hit and miss damper with free area about 50 % . onle

OPTIONAL ACCESSORIES

Plenum box either un-lined,internally insulated or externally insulated.

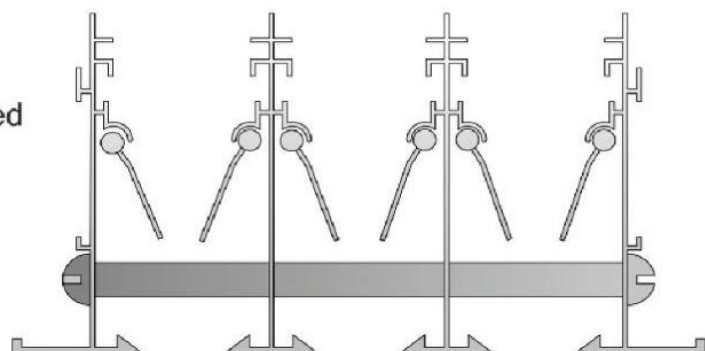
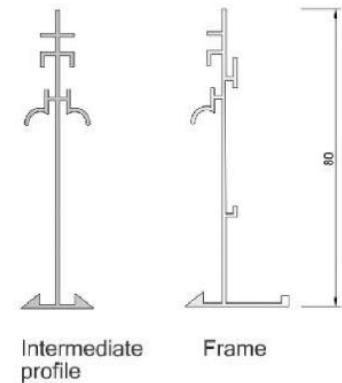
SIZE

Maximum 2800 mm length as single unit .

Above this size linear runs are supplied in multiple units for butt joining

FINISH

Standard mill finish or powder coated



- According to air distribution and decoration style linear slot diffuser can be divided into :

STRAIGHT LINEAR SLOT

- Slot diffusers with hit & miss dampers.
- Special deflector blades to adjust the air pattern.
- Foam Gasket all around the rear flange.
- C – clamps for fixing



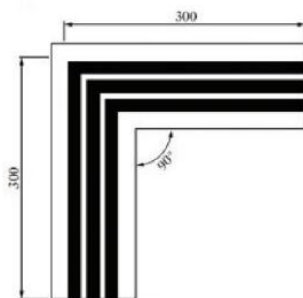
CURVED LINEAR SLOT

- Without hit & miss dampers & deflector blades.
- For similar appearance deflector blades or hit & miss dampers as optional.
- C – clamps for fixing



90° MITRED CORNER

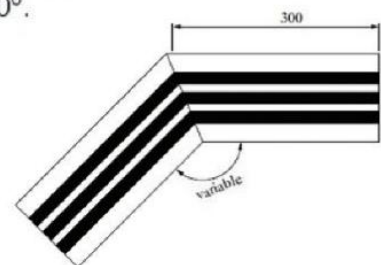
- Standard 90° horizontal mitered corners available for sill and ceiling applications.



90° Mitered corner

VARIABLE MITRED CORNER

- Special horizontal mitered corners selection available for sill and ceiling applications includes an angle greater than 90° and less than 180°.



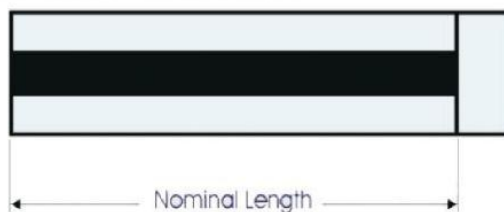
Variable mitered corner

END CAP ARRANGEMENTS

WITHOUT END CAPS



END CAP - RIGHT END



END CAP - BOTH ENDS

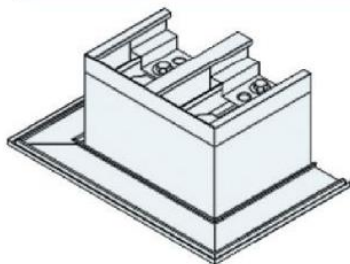
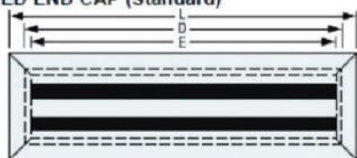


END CAP - LEFT END

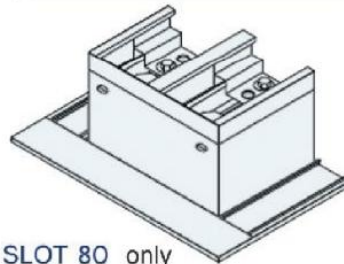


END CAP CONFIGURATIONS FOR VARIOUS MOUNTINGS

MITERED END CAP (Standard)

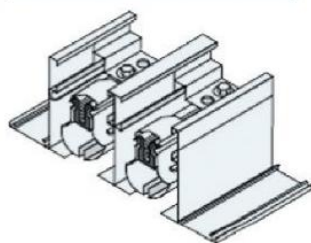


FLANGED END CAP

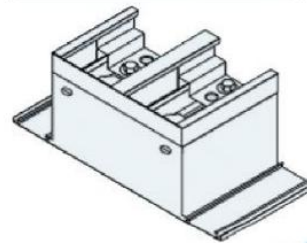


Used for SLOT 80 only

OPEN END



FLAT END CAP



PLENIUM BOX

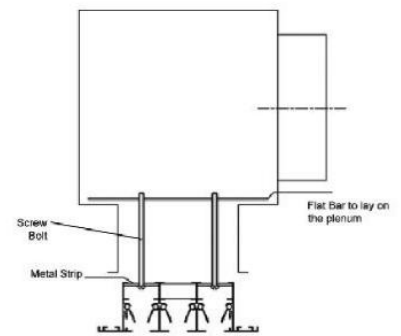
They are designed to ensure even air distribution along the associated linear slot diffuser, and therefore maintaining correct performance characteristics.

Plenum Boxes are available with or without internal lining of thermal and acoustic insulation which contributes to the sound attenuation inside the Box, and are available for single or continuous installations.

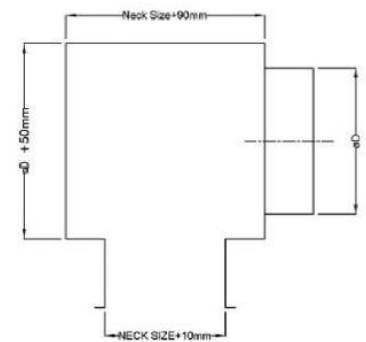
All joints are sealed for a perfect tightness They are delivered with or without spigot inlet damper.

MATERIAL

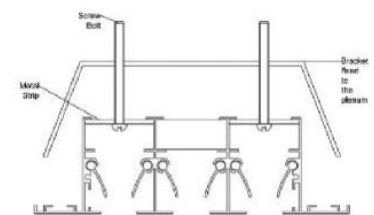
- Plenum box casing of galvanized steel Ga24. (0.7 mm) as standard or any other specified Gauge upon request.
- Insulation of fiber glass 1" thickness (25 mm) and of density 24 kg/m³ or polyurethane acoustic absorption foam which offering excellent sound absorbing qualities over a wide range of frequencies, and of different thicknesses starting from 3mm up to 20mm or any other specified thickness upon request.



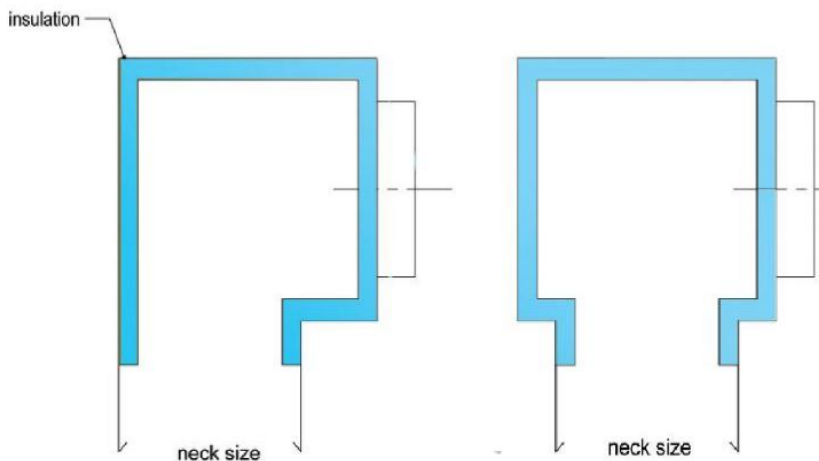
Fixing a linear slot diffuser to a plenum Box by a mean of flat Bar with screw bolt



standard plenum Box dimensions
Any other specified dimensions can be manufactured



for tapered plenum box



PERFORMANCE DATA FOR SLOT 50 "

SUPPLY VERTICAL DISCHARGE

SLOTS	CMF Per Foot	3/5"				4/5"				1"			
		Ak	Pt	Th	NC	Ak	Pt	Th	NC	AK	Pt	Th	NC
1	15	0.020	0.036	8	<15	0.025	0.023	7	<15	0.031	0.010	7	<15
	23		0.081	10	16		0.052	9	<15		0.023	8	<15
	30		0.144	14	23		0.092	12	18		0.041	11	<15
	38		0.225	19	29		0.144	18	23		0.061	17	18
	45		0.328	25	36		0.210	23	29		0.086	21	23
	53		0.455		40		0.285		32		0.113		26
	60		0.589		46		0.377		37		0.150		30
2	15	0.053	0.013	8	<15	0.066	0.008	7	<15	0.818	0.006	5	<15
	30		0.047	17	17		0.030	15	<15		0.012	11	<15
	45		0.105	21	23		0.067	19	18		0.039	15	17
	60		0.188	28	35		0.120	25	28		0.082	21	22
	75		0.292	33	41		0.187	30	33		0.126	26	26
	90		0.422		49		0.270		39		0.194		31
	105		0.578		54		0.370		43		0.266		34
30	0.022	10	<15	0.014	9	<15	0.009	7	<15				
3	45	0.077	0.048	17	17	0.096	0.031	15	<15	1.190	0.024	14	<15
	60		0.086	22	23		0.055	20	18		0.038	18	16
	75		0.134	29	31		0.086	26	25		0.049	23	20
	90		0.194	34	38		0.124	31	30		0.081	28	24
	105		0.263		43		0.168		34		0.109		27
	120		0.344		48		0.220		38		0.142		30
4	45	0.097	0.030	15	<15	0.121	0.019	13	<15	1.500	0.009	11	<15
	60		0.052	18	17		0.033	16	<15		0.020	14	<15
	75		0.081	22	23		0.052	19	18		0.036	16	<15
	90		0.117	28	28		0.075	25	22		0.043	22	18
	105		0.159	34	34		0.102	31	27		0.077	28	22
	120		0.208		36		0.133		29		0.102		23
	135		0.266		41		0.170		33		0.121		26
5	60	0.118	0.034	16	<15	0.147	0.022	14	<15	1.823	0.013	13	<15
	75		0.053	19	16		0.034	17	<15		0.021	15	<15
	90		0.077	23	20		0.049	21	16		0.039	19	15
	105		0.105	29	26		0.067	26	21		0.051	23	17
	120		0.136	33	30		0.087	30	24		0.069	27	19
	135		0.172		34		0.110		27		0.074		22
	150		0.213		39		0.136		31		0.111		25
	75		0.038	15	<15		0.024	14	<15		0.017	13	<15
6	90	0.138	0.055	19	16	0.173	0.035	17	<15	2.145	0.026	15	<15
	105		0.075	23	19		0.048	21	<15		0.033	19	<15
	120		0.097	30	23		0.062	27	18		0.048	24	16
	135		0.123	34	26		0.079	32	21		0.058	29	17
	150		0.153		29		0.098		23		0.067		18
	180		0.219		39		0.140		31		0.106		25

SYMBOLS

CFM : Air volume in cubic feet per minute.
 Ak : Effective face area in meter square feet per foot.
 Pt : Total pressure in inches water gauge.
 Th : Throw in feet.
 NC : Noise Criteria.

CONDITIONS

* Supply
 * Vertical discharge flow pattern.
 * Noise Criteria values are based on (10 db) room attenuation.
 * Damper is fully open.
 * Throw values are based on terminal velocity of 75 fpm
 * The tested specimens were 3ft length

SUPPLY HORIZONTAL DISCHARGE

SLOTS	CFM Per Foot	3/5"				4/5"				1"			
		Ak	Pt	Th	NC	Ak	Pt	Th	NC	Ak	Pt	Th	NC
1	15	0.014	0.048	1-4-8	17	0.018	0.031	1-4-8	<15	0.023	0.020	1-3-7	<15
	23		0.109	4-7-11	26		0.070	3-6-10	21		0.045	3-5-9	17
	30		0.195	6-10-15	36		0.125	5-9-14	29		0.080	5-8-13	23
	38		0.305	9-15-23	43		0.195	8-13-21	34		0.125	7-12-19	27
	45		0.438	14-19-29	49		0.280	12-17-26	39		0.179	10-15-23	31
2	15	0.036	0.016	3-6-9	18	0.045	0.010	3-5-8	<15	0.056	0.006	3-5-7	<15
	30		0.063	5-11-19	20		0.040	4-10-17	16		0.026	3-9-15	<15
	45		0.141	6-13-25	34		0.090	5-12-22	27		0.058	4-11-20	22
	60		0.247	10-20-30	45		0.158	8-18-28	36		0.101	7-16-25	29
	75		0.391	14-25-35	51		0.250	12-23-33	41		0.160	10-21-30	33
3	30	0.058	0.031	4-6-12	16	0.072	0.020	3-5-11	<15	0.090	0.013	3-5-10	<15
	45		0.069	6-10-20	24		0.044	5-9-18	19		0.028	4-8-15	15
	60		0.122	7-15-25	34		0.078	6-13-23	27		0.050	5-12-21	22
	75		0.191	10-20-32	43		0.122	9-18-29	34		0.078	8-16-26	27
	90		0.291	15-24-36	48		0.186	13-22-34	38		0.119	12-20-31	30
4	45	0.078	0.039	5-7-17	19	0.097	0.025	4-6-15	15	0.121	0.016	3-5-13	<15
	60		0.069	6-11-19	26		0.044	5-10-18	21		0.028	4-9-16	17
	75		0.108	7-15-24	33		0.069	6-13-22	26		0.044	5-11-20	21
	90		0.156	10-20-30	39		0.100	9-18-28	31		0.064	8-16-25	25
	105		0.211	14-25-37	45		0.135	12-23-34	36		0.086	10-21-31	29
5	60	0.098	0.053	6-8-18	21	0.123	0.034	5-7-16	17	0.154	0.022	4-6-14	<15
	75		0.081	8-13-22	28		0.052	7-11-20	22		0.033	6-10-18	18
	90		0.117	10-16-25	33		0.075	9-14-23	26		0.048	8-12-21	21
	105		0.159	13-21-32	38		0.102	11-19-29	30		0.065	10-17-26	24
	120		0.209	15-25-36	44		0.134	13-23-33	35		0.086	11-21-30	28
6	75	0.118	0.063	6-10-18	23	0.148	0.040	5-8-16	18	0.185	0.026	4-7-14	<15
	90		0.089	8-12-23	30		0.057	7-11-20	24		0.036	6-10-18	19
	105		0.122	10-17-27	34		0.078	9-15-24	27		0.050	8-13-21	22
	120		0.159	11-21-33	39		0.102	10-19-30	31		0.065	9-17-27	25
	135		0.203	13-25-37	43		0.130	12-23-34	34		0.083	11-21-31	27

SYMBOLS

CFM	: Air volume in cubic feet per minute.
Ak	: Effective face area in meter Square feet per foot.
Pt.	: Total pressure in inches water gauge.
Th.	: Throw in feet.
NC	: Noise Criteria.

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 75 fpm.
- * The small throw values are based on the maximum terminal velocity of 150 fpm.

CONDITIONS

- * Supply
- * Horizontal Discharge flow pattern
- * Noise Criteria values are based on (10 db) room attenuation.
- * Damper is fully open.
- * The tested specimens were of 3ft length

SURFACE AND NECK SIZE FOR SLOT 50 "

3/5"

No. of Slots	1 Slot	2 Slot	3 Slot	4 Slot	5 Slot	6 Slot
Neck Size: (mm)	32	64	93	128	160	192
Flange Size: (mm)	82	114	143	178	210	242

4/5"

No. of Slots	1 Slot	2 Slot	3 Slot	4 Slot	5 Slot	6 Slot
Neck Size: (mm)	45	85	125	165	205	245
Flange Size: (mm)	95	135	175	215	255	295

1"

No. of Slots	1 Slot	2 Slot	3 Slot	4 Slot	5 Slot	6 Slot
Neck Size: (mm)	50	100	140	185	230	275
Flange Size: (mm)	100	150	190	225	280	325

SURFACE = NECK SIZE +50

PERFORMANCE DATA FOR SLOT 80 "

Parallel Discharge

1/2" SLOT WIDTH

No. of Slots	Total press. Inches of H ₂ O	0.008	0.017	0.029	0.044	0.061	0.11	0.16	0.24
1	CFM	10	15	20	25	30	35	40	50
	THROW ft	4-7	5-10	7-13	9-17	11-20	12-23	14-26	18-33
2	CFM	20	30	40	50	60	70	80	100
	THROW ft	5-8	6-12	8-16	11-20	13-24	14-27	17-31	22-39
3	CFM	30	45	60	75	90	105	120	
	THROW ft	6-10	7-14	10-19	13-24	16-28	17-32	20-37	
4	CFM	40	60	80	100	120	140		
	THROW ft	7-12	8-16	12-22	16-28	20-33	21-38		
5	CFM	50	75	100	125	150	175		
	THROW ft	9-15	10-19	14-26	19-33	24-40	25-45		
6	CFM	60	90	120	150	180			
	THROW ft	11-18	12-23	17-31	23-39	29-48			

Perpendicular Discharge

No. of Slots	Total press. Inches of H ₂ O	0.015	0.03	0.053	0.083	0.113	0.15	0.20	0.30
1	CFM	10	15	20	25	30	35	40	50
	THROW ft	5	7	10	12	14	17	19	24
2	CFM	20	30	40	50	60	70	80	100
	THROW ft	6	9	12	15	17	21	23	29
3	CFM	30	45	60	75	90	105	120	150
	THROW ft	7	11	15	18	21	25	28	34
4	CFM	40	60	80	100	120	140	160	
	THROW ft	9	13	18	22	25	30	33	
5	CFM	50	75	100	125	150	175	200	
	THROW ft	11	16	22	27	30	36	39	
6	CFM	60	90	120	150	180	210	240	
	THROW ft	14	19	27	32	36	43	45	





Note: all performance notes are the same as published

On 3/4" slot linear diffuser catalogue

Throw data is based on all slots discharge

Air in the same direction. For two way pattern select through

On basis of CFM /ft per number of slots blowing in each direction.

NC LEVEL LESS THAN 20DB	
NC LEVEL LESS THAN 30 DB	
NC LEVEL LESS THAN 40 DB	
NC LEVEL MORE THAN 40 DB	

Parallel Discharge $\frac{3}{4}$ " SLOT WIDTH

No. of Slots	Total press. Inches of H ₂ O	0.009	0.019	0.032	0.048	0.068	0.12	0.18	0.25
1	CFM THROW ft	10 2-5	15 3-10	20 5-16	25 7-19	30 11-24	40 16-28	50 20-29	60 25-36
2	CFM THROW ft	20 3-9	30 7-17	40 11-22	50 14-26	60 19-30	80 23-35	100 28-40	120 33-43
3	CFM THROW ft	30 3-13	45 10-20	60 16-27	75 21-32	90 23-35	120 32-42	150 32-44	180 38-49
4	CFM THROW ft	40 5-16	60 13-25	80 18-30	100 23-34	120 25-37	160 33-43	200 35-47	240 41-53
5	CFM THROW ft	50 5-17	75 14-26	100 18-31	125 24-35	150 26-37	200 34-45	250 36-48	300 41-53
6	CFM THROW ft	60 6-18	90 14-27	120 19-33	150 24-37	180 27-39	240 34-46	300 37-50	360 42-54
7	CFM THROW ft	70 8-20	105 16-30	140 21-34	175 26-38	210 28-40	280 35-48	350 37-52	420 42-55
8	CFM THROW ft	80 10-23	120 17-31	160 22-34	200 27-39	240 30-24	320 35-49	400 38-53	480 43-57

Perpendicular Discharge

No. of Slots	Total press. Inches of H ₂ O	0.007	0.015	0.026	0.038	0.054	0.96	0.144	0.20
1	CFM THROW ft	10 4	15 9	20 13	25 16	30 20	40 24	50 25	60 30
2	CFM THROW ft	20 7	30 14	40 19	50 22	60 25	80 30	100 34	120 36
3	CFM THROW ft	30 11	45 17	60 23	75 27	90 29	120 35	150 37	180 41
4	CFM THROW ft	40 14	60 21	80 25	100 29	120 32	160 36	200 40	240 45
5	CFM THROW ft	50 15	75 22	100 27	125 30	150 34	200 37	250 41	300 46
6	CFM THROW ft	60 17	90 23	120 28	150 31	180 35	240 39	300 43	360 47
7	CFM THROW ft	70 19	105 25	140 30	175 33	210 37	280 40	350 45	420 49
8	CFM THROW ft	80 21	120 27	160 31	200 35	240 38	320 42	400 46	480 50

Parallel Discharge

1" SLOT WIDTH

No. of Slots	Total press. Inches of H2O	0.008	0.017	0.029	0.044	0.061	0.11	0.16	0.24
1	CFM	10	15	20	25	30	40	50	60
	THROW ft	4-7	6-10	9-14	11-17	13-20	17-27	21-34	25-40
2	CFM	20	30	40	50	60	80	100	120
	THROW ft	5-9	7-12	11-17	13-20	16-24	20-32	25-40	30-45
3	CFM	30	45	60	75	90	120	150	180
	THROW ft	6-11	8-14	13-20	16-24	19-28	24-38	30-45	36-50
4	CFM	40	60	80	100	120	160	200	
	THROW ft	7-13	10-17	16-24	19-28	22-33	28-45	35-50	
5	CFM	50	75	100	125	150	200	250	
	THROW ft	9-15	12-20	19-28	23-33	26-39	33-50	40-55	
6	CFM	60	90	120	150	180	240	300	
	THROW ft	11-18	14-24	22-33	28-39	31-46	39-55	45-58	

Perpendicular Discharge

No. of Slots	Total press. Inches of H2O	0.006	0.013	0.022	0.033	0.046	0.038	0.12	0.18
1	CFM	10	15	20	25	30	40	50	60
	THROW ft	5	7	9	12	14	19	23	28
2	CFM	20	30	40	50	60	80	100	120
	THROW ft	6	8	10	14	16	22	27	33
3	CFM	30	45	60	75	90	120	150	180
	THROW ft	7	10	12	16	19	26	32	38
4	CFM	40	60	80	100	120	160	200	
	THROW ft	8	12	14	19	22	31	35	
5	CFM	50	75	100	125	150	200	250	
	THROW ft	10	14	16	22	26	37	38	
6	CFM	60	90	120	150	180	240	300	
	THROW ft	12	17	19	20	31	40	45	

Note: all performance notes are the same as published

On 3/4" slot linear diffuser catalogue

Throw data is based on all slots discharge

Air in the same direction. For two way pattern select through

On basis of CFM /ft per number of slots blowing in each direction.

PERFORMANCE NOTES

THROW:

Is the distance measured in ft. That travels from outlet at a given terminal velocity. The throw is based on a 6 ft. length of diffuser. For ceiling higher than

9 ft. in height, reduce the given throw by 1 ft. for every 1 ft. increase in height. It is also based on the slot where the air has been discharged in the same direction.

PARALLEL THROWS:

Values based on one direction, and based on a maximum terminal velocity of 100 fpm.

PERPENDICULAR THROWS:

Is to terminal velocity of 50 fpm.

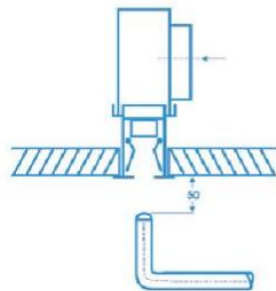
SOUND DATA:

Noise criteria (NC), db, based on 8 db room attenuation and a 4 ft. long unit,
re: ¹² 10 watt.

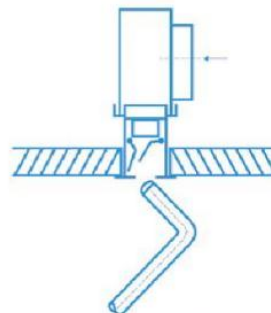
FIELD TESTING

1. Air velocity measurement can be determined from the branch duct to calculate the CFM. If it is not possible, air flow rate can be determined from the effective velocity measured from several readings along the slot lengths of the diffuser using a pitot tube. Take the mean value of the effective velocity (VK).
2. Calculate CFM.

Air Flow (Q) = Net Area (A_k) x Effective Velocity



PERPENDICULAR DISCHARGE



PARALLEL DISCHARGE