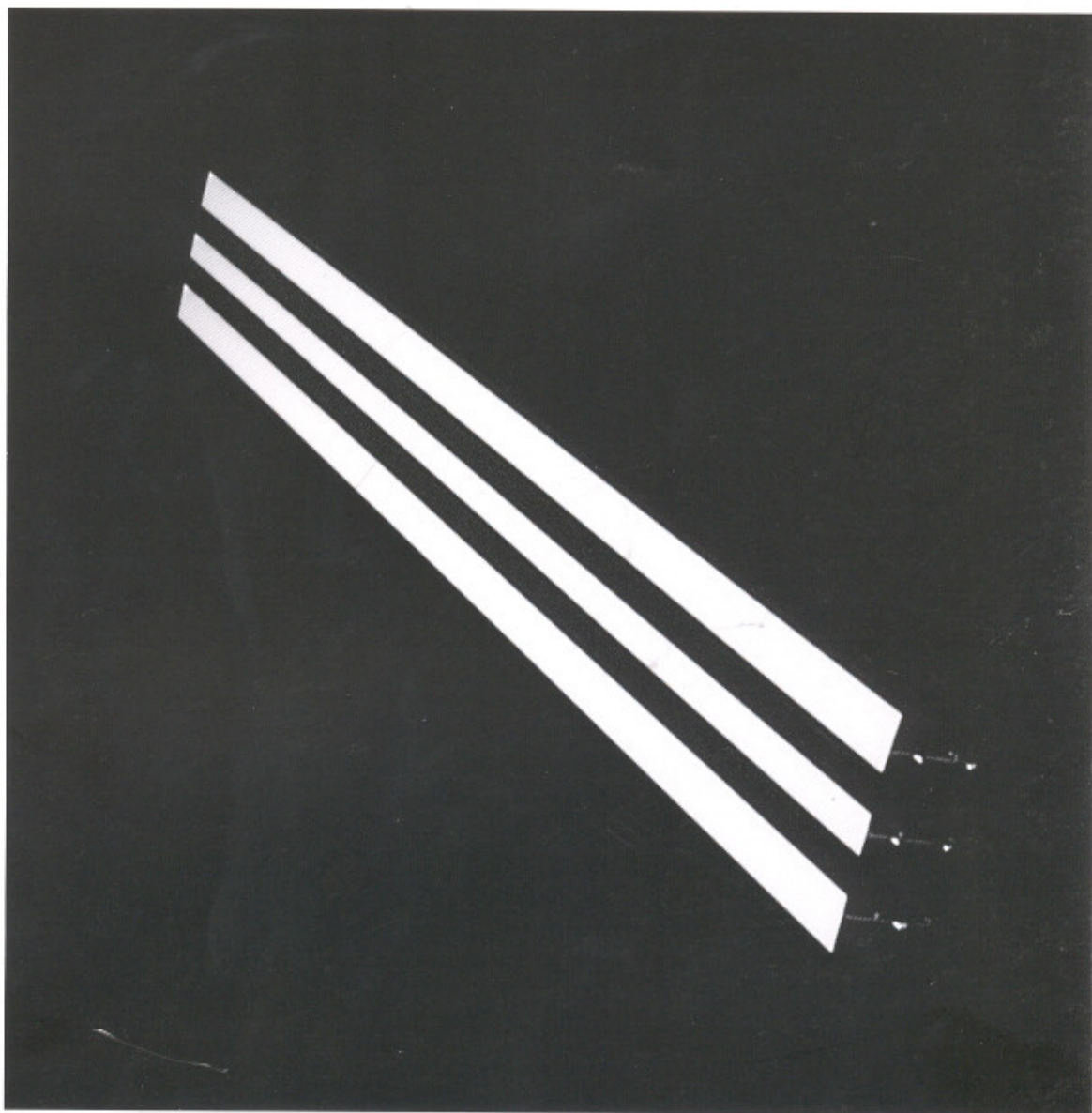


AIR GRILLES

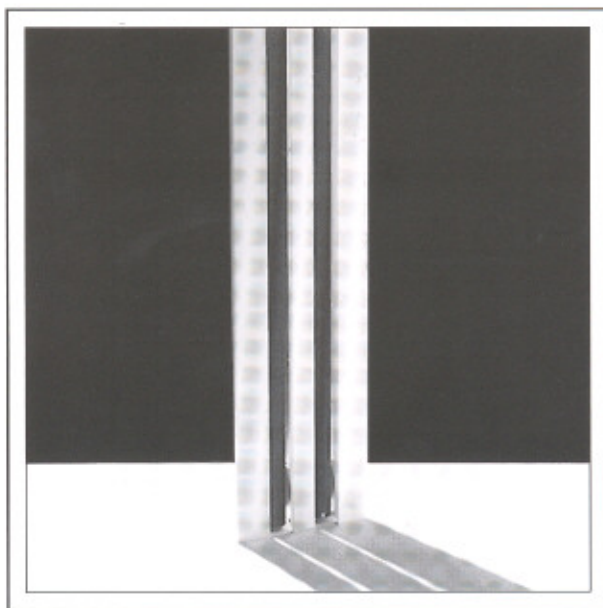
LINEAR DIFFUSERS



EXTRUDED ALUMINIUM



SUPPLY AIR LINEAR DIFFUSER



MODEL: ALD

Model ALD series Linear diffusers are constructed from highly corrosion resistant extruded aluminium. The Linear Diffuser is designed to withstand rough handling without distortion. It is enamel coated and oven-baked for scratch resistant.

ALD Linear Diffuser is a very popular choice for many cooling, heating and ventilating application, and it is designed to handle large volumes of air with good throw patterns, acceptable pressure drops and sound levels. With a superior horizontal air pattern, it produces the maximum entrainment of room air, generating the air motion required to provide the optimum comfort conditions throughout the occupied zone.

- AIR GRILLES linear diffusers are specially designed to suit modern architectural and interior decoration requirements.
- Stylish, scratch resistant and non-yellowing.
- Pattern vanes permits 180 degrees adjustable air pattern, complete flow rate control, including blank-off.
- Flow patterns can be easily adjusted even after diffusers are installed.
- Available with 1 through 8 slots (one piece).
- Standard slot width of 20mm and 25mm.
- Suitable for mounting on virtually all types of ceiling.
- For continuous runs, made up of individual lengths, the extruded shapes are specially designed to include alignment pins and slugs.
- All Diffusers are enamel coated and oven baked for scratch resistant.
- Units of grilles have been tested at an independent N.A.T.A. accredited test laboratory in Australia.

SELECTION OF DIFFUSERS

AIR QUANTITY AND NOISE REQUIREMENTS

The total volume of air (ℓ/s) transmitted into a given area to be conditioned is a function of the overall system design (i.e. Total ℓ/s = Number of outlets x ℓ/s per outlet).

The permissible Noise Level of the conditioned area is directly related to the intended use of conditioned area (Please refer to the table on Recommended Sound Levels in page 10).

AIR DISTRIBUTION PATTERN

Given the shape of the space to be conditioned, the pattern requirement is determined by the number of outlets in it and the incidence of any exposed beams or light fittings below the ceiling line that may affect the dispersement of air.

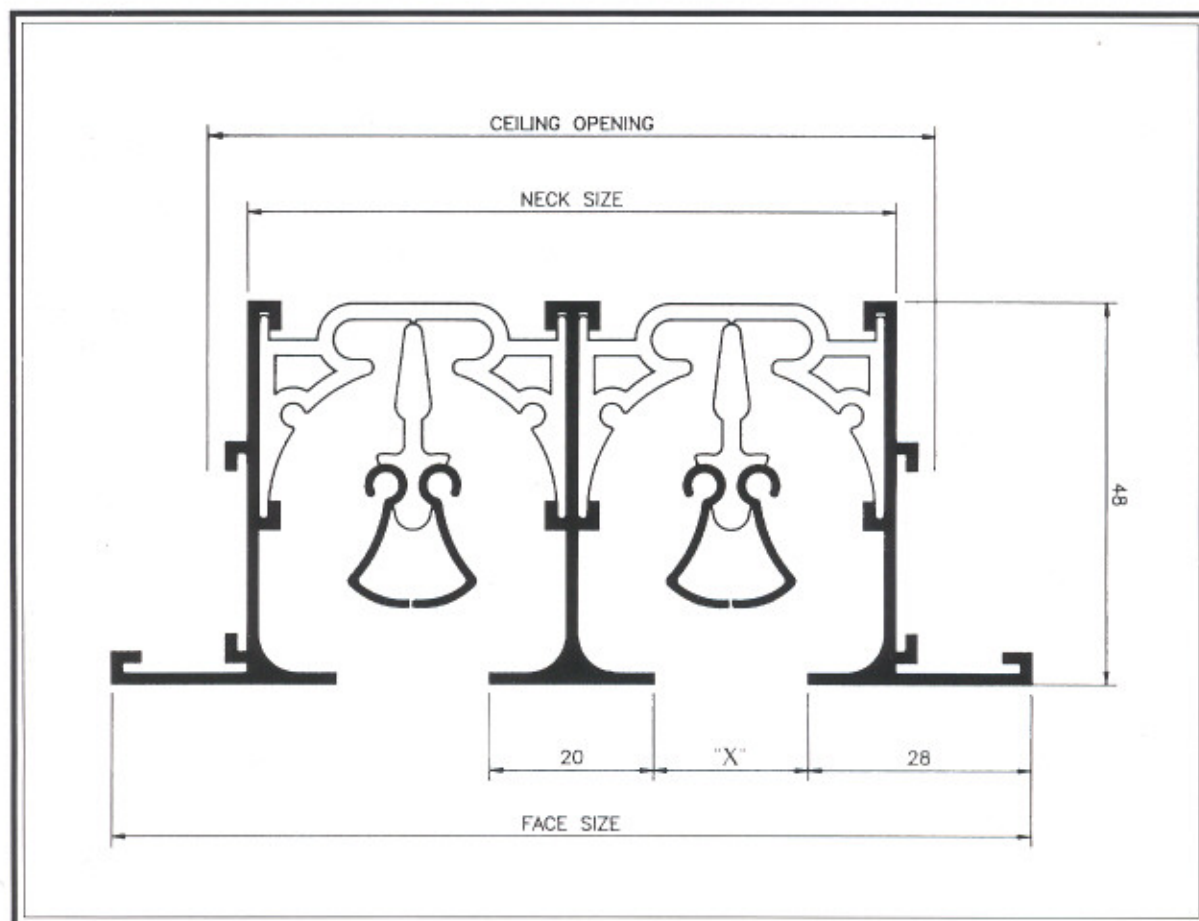
THROW REQUIREMENT

The required throw is usually the distance from the nearest enclosing wall or partition or to the point of intersection with the airstream of an adjacent outlet. For high ceiling areas, the throw requirement may be specified as the horizontal distance described above plus the vertical distance from the outlet to the occupied zone. This vertical distance is commonly measured to extend to the 1500mm level in the room. Generally, the specified throw should not exceed 1.5 times the diffuser mounting height.

GENERAL SELECTION

Model ALD Linear Diffusers are available in lengths of up to 3000mm. Any diffusers of longer lengths are joined together using alignment pins/plates. Plenum boxes are also available in lengths of up to 2000mm.

MODEL ALD DIMENSIONS



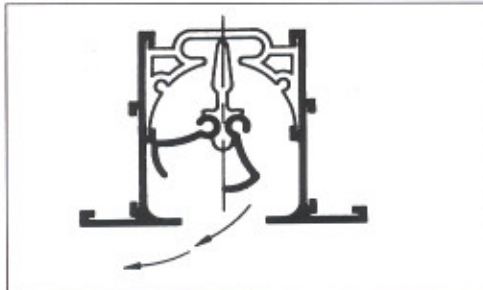
NO. OF SLOT	20mm SLOT WIDTH (X)			25mm SLOT WIDTH (X)		
	FACE SIZE	NECK SIZE	CEILING OPENING	FACE SIZE	NECK SIZE	CEILING OPENING
1	76	44	54	81	49	59
2	116	84	94	126	94	104
3	156	124	134	171	139	149
4	196	164	174	216	184	194
5	236	204	214	261	229	239
6	276	244	254	306	274	284
7	316	284	294	351	319	329
8	356	324	334	396	364	374

ALL DIMENSIONS IN MILLIMETRES (mm)

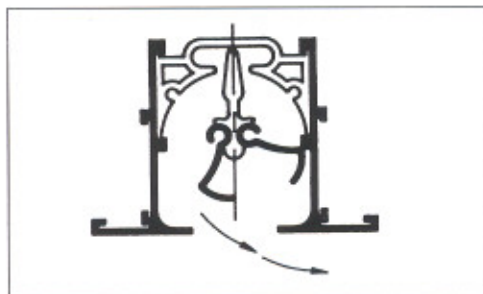
PATTERN ADJUSTMENT

Contoured vanes permit full 180 degrees adjustable air pattern, complete flow rate control, including blank-off.

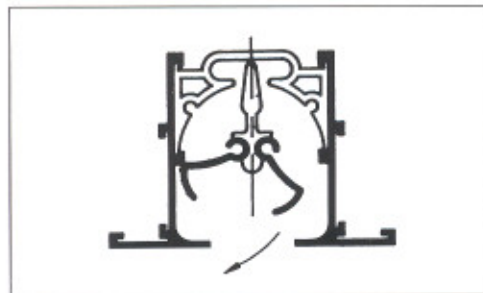
ONE SLOT



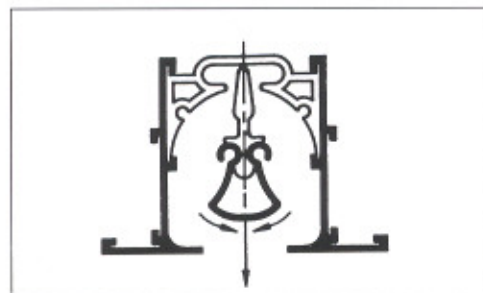
Horizontal Left



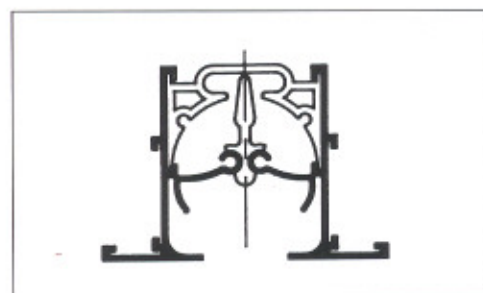
Horizontal Right



Dampered Horizontal Left

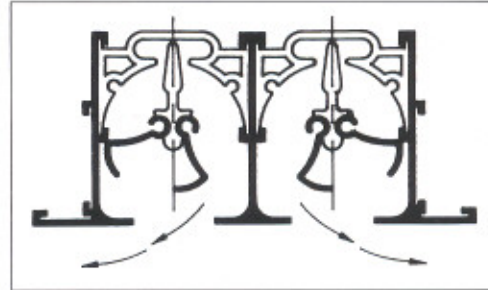


Vertical

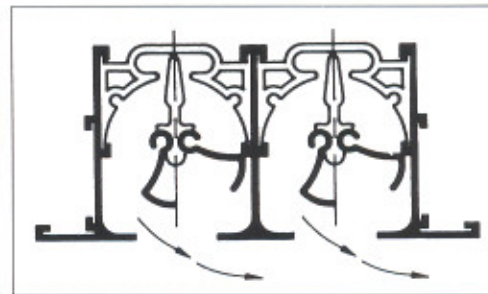


Fully Dampered

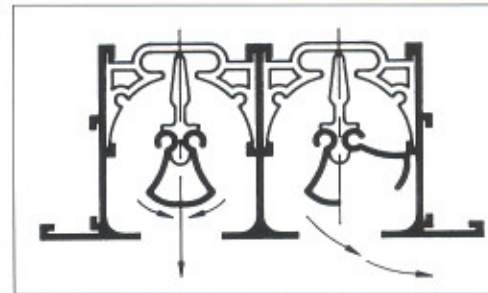
TWO SLOT



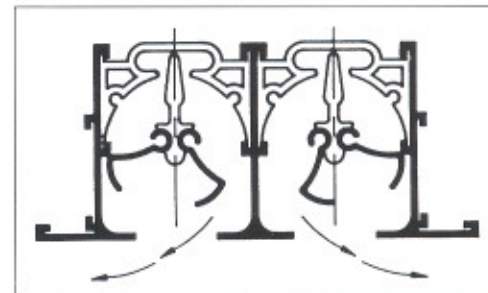
Opposed



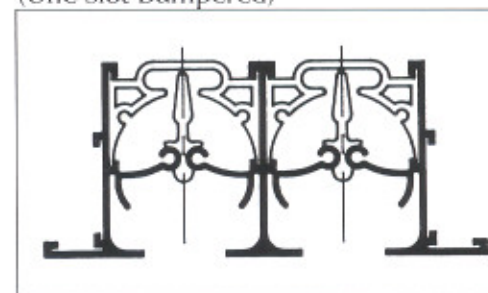
One-way



Vertical & Horizontal



Opposed Unequal flow
(One slot Dampered)



Fully Dampered

ACCOUSTIC AND AIRFLOW PERFORMANCE DATA
for 1200mm length x 20mm slot Width
SUPPLY AIR LINEAR DIFFUSER

Model ALD

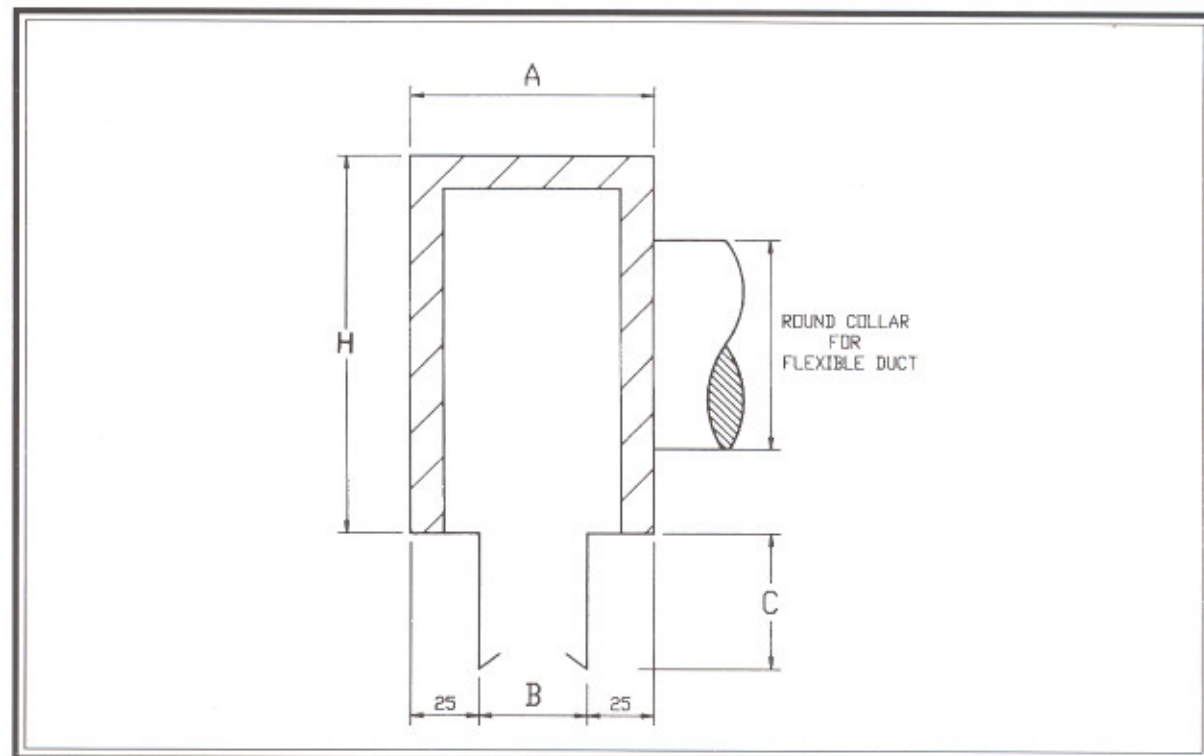
No of Slots	Qs (l/s)	25	30	40	50	60	70	80	90	100	150	200	250	300	400	500	600	700	800	900	1000
1	SP	4	5	7	9	11	13	15	20	24	51	90									
	NR	6	7	9.5	12	14	16	20	24	28	42	56									
	T(m)	1.1	1.3	1.7	2.2	2.6	9	10	11	12	>14	>14									
2	SP			4.5	6	8.5	11.5	15	18.5	22.5	49.5	81	101	121	161						
	NR			6	8	13	15	19	23	26	36	46	58	70	93						
	T(m)			1.2	1.5	2	6	7	9	10	12	>14	>14	>14	>14						
3	SP				5	7.5	9	10	12.5	15	33.5	56	76	96.5	140	175					
	NR				7	10	12	14	17	24	31	42	52	61	77	96					
	T(m)				1.5	1.8	6	7	8	9.5	12	>14	>14	>14	>14	>14					
4	SP					4	4.5	5.5	6.5	8	17.5	31	51.5	72	119	149	179	209			
	NR					7	8	9	11	21	26	38	46	51	60	75	90	105			
	T(m)					1.7	4.8	7	7	9	12	>14	>14	>14	>14	>14	>14	>14			
5	SP							5	6	7	15	26	40	56	95	125	151	176	201	226	251
	NR							8	10	19	24	32	40	46	54	66	79	92	105	118	131
	T(m)							5.6	6.3	7	9	12	13	>14	>14	>14	>14	>14	>14	>14	>14
6	SP									6	13	20	28	40.5	70	102	122	142	163	183	203
	NR									18	21	25	34	41	48	57	68	79	90	101	112
	T(m)									5	6.5	8	10	>14	>14	>14	>14	>14	>14	>14	>14

- * SP - Static Pressure (Pa)
- * NR - Noise rating number based upon room absorption of 10dB
- * T - Throw in meters to a Terminal Velocity of 0.25 m/sec (as per ADC 1062 - R3)
- * Qs - Primary Air Flow Rate (l/s)

RESULT OF PERFORMANCE IS TESTED UNDER NATA (AUSTRALIA)

PLENUM BOX FOR ALD SERIES

Plenum box shall be constructed of 24 gauge galvanised sheet, internally insulated with 12mm thick fibreglass of 48kg/m³ density.



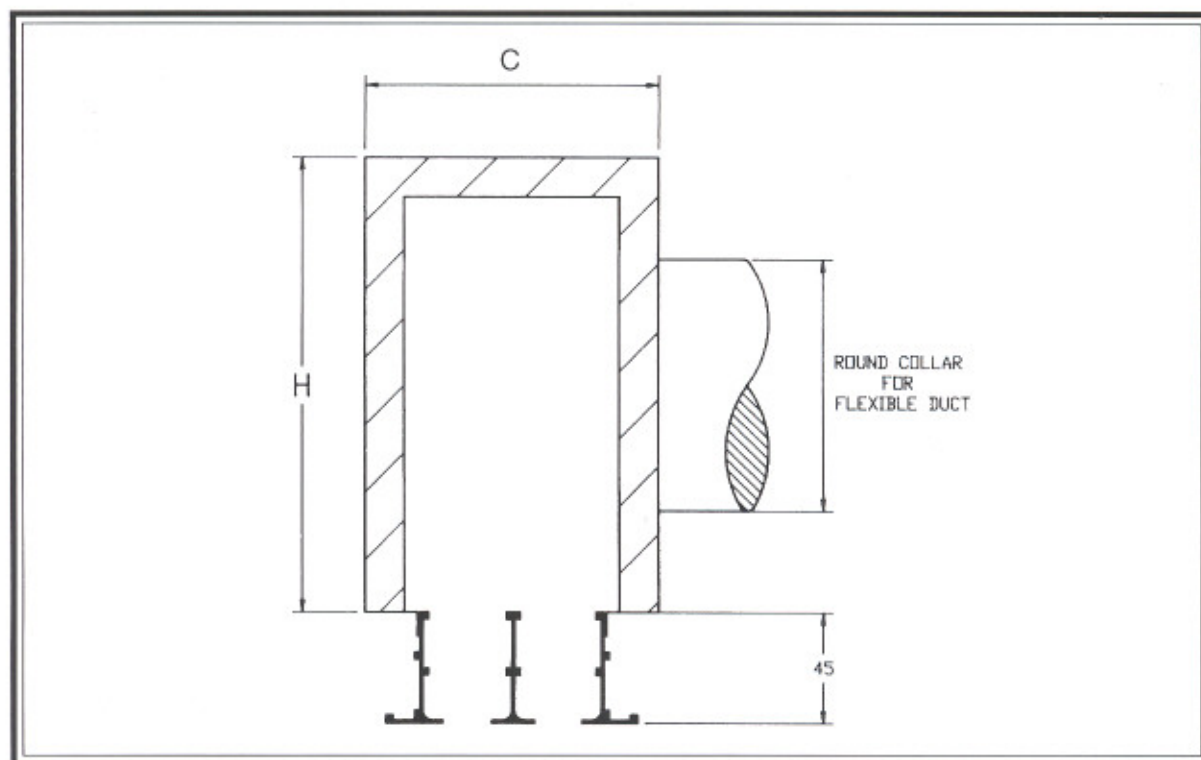
CONCEALED (PLASTER) CEILING TYPE

ROUND COLLAR SIZE	1 SLOT				2 SLOT				3 SLOT				4 SLOT			
	H	A	B	C	H	A	B	C	H	A	B	C	H	A	B	C
Ø 100 mm	125	109	59	57	125	149	99	57								
Ø 150 mm	175	109	59	57	175	149	99	57	175	189	139	57	175	229	179	57
Ø 200 mm					225	149	99	57	225	189	139	57	225	229	179	57
Ø 250 mm					275	149	99	57	275	189	139	57	275	229	179	57
Ø 300 mm									325	189	139	57	325	229	179	57

ALL DIMENSIONS IN MILLIMETRES (mm)

PLENUM BOX FOR ALD SERIES

Plenum box shall be constructed of 24 gauge galvanised sheet, internally insulated with 12mm thick fibreglass of 48kg/m³ density.

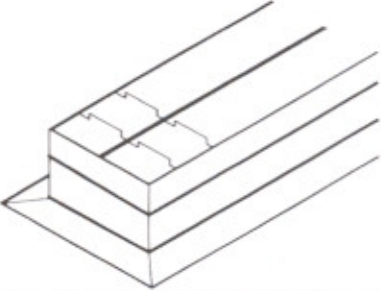
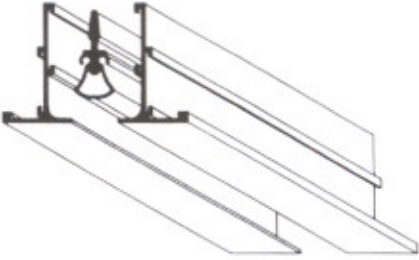
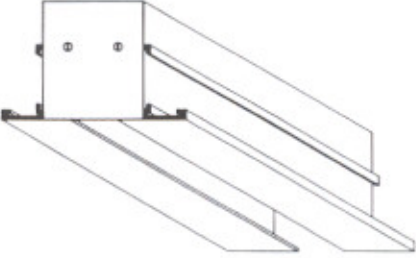
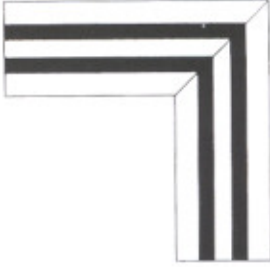


T-BAR CEILING TYPE

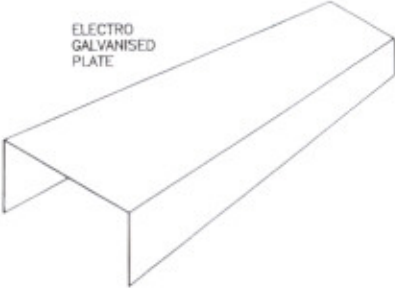
ROUND COLLAR SIZE	1 SLOT			2 SLOT			3 SLOT			4 SLOT		
	H	H+45	C	H	H+45	C	H	H+45	C	H	H+45	C
Ø 100 mm	125	170	94	125	170	134						
Ø 150 mm	175	220	94	175	220	134	175	220	174	175	220	214
Ø 200 mm				225	270	134	225	270	174	225	270	214
Ø 250 mm				275	320	134	275	320	174	275	320	214
Ø 300 mm							325	370	174	325	370	214

ALL DIMENSIONS IN MILLIMETRES (mm)

ALD DIFFUSERS END DETAILS

<p>TYPE "M" is for use where end of Linear Diffuser terminates away from wall.</p>	
<p>TYPE "O" is for use where Linear Diffuser is to be butted with another Linear Diffuser.</p>	
<p>TYPE "E" is for use where Linear Diffuser terminates at a wall or partition.</p>	
<p>TYPE "MC" Mitred corners.</p>	

ACCESSORIES

<p>BLANK OFF Used to cover inactive sections of Linear Diffuser. Shipped loose for field cutting and installation.</p>	<p>ELECTRO GALVANISED PLATE</p> 
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RECOMMENDED SOUND LEVELS

LOCATION	SPACE	NC CRITERIA	SUGGESTED FACE VELOCITY (m/s)
Auditoriums	Concert Halls, Studios, Movie Theatres, Lecture Halls, TV Audience Studios.	20 - 25	2.5
		25 - 30	2.5 - 3.75
Churches and Schools	Sanctuaries Libraries, Classrooms	20 - 30	2.5 - 3.75
		30 - 40	2.5 - 5.0
Offices	Boardrooms	20 - 30	2.5 - 3.75
	Conference Rooms	25 - 35	2.5 - 3.75
	Executive Rooms	30 - 40	2.5 - 5.0
	General Open Offices	35 - 50	2.5 - 6.5
Hospital	Intensive Care Wards		
	Private Room	25 - 35	2.5 - 3.75
	Operating Room	30 - 40	2.5 - 5.0
	Wards	30 - 40	2.5 - 5.0
Hotel	Individual Rooms, Suites, Halls, Corridors, Lobbies, Ball Rooms	30 - 40	2.5 - 5.0
		35 - 40	2.5 - 5.0

WARRANTY

AIR GRILLES MANUFACTURING PTE LTD (the "company") warrants that all goods in this catalogue that have been manufactured by the company will be defects free in quality or material under normal use and service for a period of one year after goods are sold. The company have the right to make improved changes to the products at any time. The company is obligated under this warranty, only to replace any product which is defective in quality or material under normal use and service within such period. Component parts or accessories which are covered by the warranty of the manufacturer will not be covered under this warranty. Any improper use of the product, after defective or worn parts have been discovered, or any modification or repair by others which the company claims that it will materially and adversely affects the products, neglect, substitution of parts not approved by the company will void this warranty.

No person is authorised to assume any liability with respect to any goods sold, for the company. No representatives or employee is authorised to change this warranty or give any other warranty, unless it is authorised by an officer of the company at its home office in writing. In any event of payment of incidental or consequential damages, including without limitation, delay cost or damages for property or injury to persons, the company shall have no liabilities whatsoever.

Claims under this warranty, if not submitted, in writing and received by the company within thirty (30) days of the dated to which each claim relates, is discovered or should have discovered, will be deemed waived.



AIR GRILLES MANUFACTURING PTE LTD

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