LINEAR SLOT DIFFUSER

BALAJI AIRVENT
PRODUCTS

Model No. AVLSD

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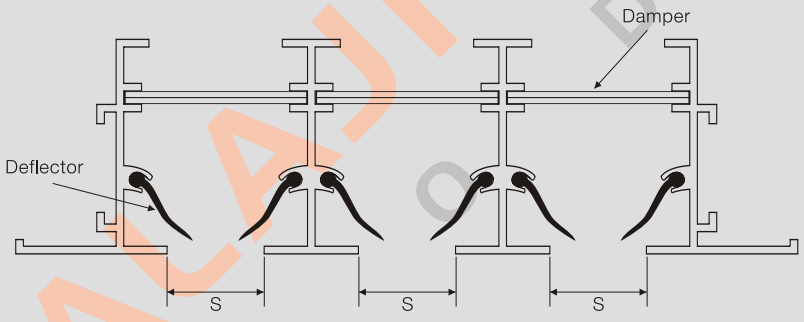
A ceiling diffuser specially designed to provide supply or return air in heating, air conditioning and ventilation systems. It can be used in rooms with heights from approximately 2.60 to 4.00 m for supply or extract air.

Supply Linear Slot Diffuser (LSD) provides a stable air discharge and can be used for constant or variable volume air flow. It can be set in horizontal or vertical direction by adjustment of air deflection blades. For stable horizontal discharge a continuous flat ceiling is normally required.
Supply Linear Slot Diffuser (LSD) are equipped with volume control damper adjustable from the diffuser face to permit complete control of flow rate without disturbing the selected air direction.
Linear Slot Diffuser (LSD) are available in 3 Slot widths (16, 20 and 25 mm) and can be joined from 1 through 8 slots.

Standard Models:

LSD is a supply linear diffuser (1) with integral hit & miss volume control damper (2) fully adjustable from the face of the diffuser and air straightening deflectors (3)

LRD is a return or extract linear slot diffuser (1) and air straightening deflectors (3)



Both models LSD and LRD are available with the following slot widths.
a - 16 mm slot width - Type (LSD16)
b - 20 mm slot width - Type (LSD20)
c - 25 mm slot width - Type (LSD25)

Features:

- Section length could be supplied in one piece till 1.83 m.
- Face alignment of individual slot sections is achieved by fitting alignment pins.

Air Flow Rate	No. of Slots	Slot Width		Throw (m)	Pressure Drop	Sound Level
m^3/h.m	.No	(mm)	min	max	(pa)	NC
100	1	16	2.9	6.25	16	17
	1	20	2.6	5.7	14	16
	1	25	2	4.5	11	14
150	1	16	6	10.5	40	36
	2	16	4	9.25	11	20
	1	20	4.8	8.5	31	23
	2	20	3.4	7.5	9	15
	1	25	4	7	26	25
	2	25	2.8	6.5	7	15
200	2	16	6	12.5	20	24
	3	16	4.6	11	9	21
	2	20	5	10.5	16	20
	3	20	4	9	8	16
	2	25	4	8.5	13	17
	2	25	3	6.5	6	15
300	2	16	8.25	16.5	44	36
	3	16	6.75	15	20	25
	4	16	5	14.2	12	21
	2	20	6.8	13.5	35	32
	3	20	5.5	12	16	21
	4	20	4.3	11.5	10	16
	2	25	5.5	11	28	29
	3	25	4.5	8.8	13	18
	4	25	3.7	8	8	15
400	3	16	8.5	18	35	33
	4	16	8	17	20	27
	5	16	6.5	16.5	15	21
	3	20	7.5	15.5	29	30
	4	20	7	15	18	23
	5	20	5.3	14.5	12	17
	3	25	5.8	12.2	22	26
	4	25	5.5	12	14	20
	5	25	4	11.5	9	15

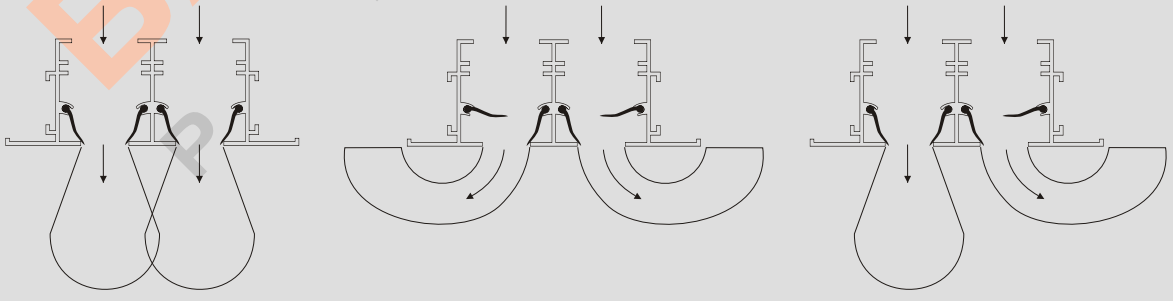
Air Flow Rate	No. of Slots	Slot Width		Throw (m)	Pressure Drop	Sound Level
m^3/h.m	.No	(mm)	min	max	(pa)	NC
500	4	16	9.5	20	34	35
	5	16	7.5	19	23	28
	6	16	7	18	16	23
	4	20	8.2	16.4	28	34
	5	20	6.5	16	18	24
	6	20	6	15	14	19
	4	25	6.5	13.8	23	28
	5	25	5.8	13	16	21
	6	25	4.5	12.5	10	16
600	5	16	10.5	22	33	35
	6	16	9.5	21	23	30
	7	16	7.7	20	18	24
	5	20	9.3	19.3	28	31
	6	20	7.8	17.3	18	23
	7	20	6.3	16.5	14	20
	5	25	7.2	15	22	28
	6	25	6.5	14.5	15	21
	7	25	4.4	13	10	13
800	7	16	12.5	25	31	32
	8	16	12	24	25	29
	6	20	10	18.5	29	32
	7	20	9.5	18	25	29
	8	20	9	17.5	20	25
	6	25	8.9	16.8	26	30
	7	25	8.5	16.5	20	26
	8	25	7.3	14.5	15	21
1000	8	16	11.5	21.5	38	37
	7	20	9.9	18.5	39	36
	8	20	9.5	18	30	33
	6	25	8.3	15.3	40	37
	7	25	8	15.2	32	33
	8	25	7.2	13.8	23	30
1200	7	25	12	23	48	43
	8	25	9.7	18.5	31	40

Air induction:

In ceiling application, the air induction ratio for slot diffusers without any blade setting is low, compared to air induction with ceiling diffusers.

Air induction increases very rapidly with the adjustment of the deflection should be applied with false ceiling height of more than 4.00 meter.

For low ceiling the deflection becomes necessary and throw must be adapted accordingly.



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Linear Slot Diffuser (LSD)

Correction factors for other length

Length (m)	1	2	3-5	6-10
Throw (m)	x!	x1.06	x1.12	x1.17
Noise (Nr)	+0	+2	+5	+9

Sound level:

Due to the reduced sound level of the Linear Slot Diffuser (LSD) air passing through a properly selected outlet will not add any appreciable noise to the sound level of the general air condition system. The sound level of the Linear Slot Diffuser (LSD) is in direct ratio to the velocity of the air passing through it.

Adjustment of the deflection blades does not add any complementary sound. When integrated damper is partially closed for balancing purposes noise level can slightly increase.

Final sound attenuation in the distributing system can be obtained by inside sound insulation in the plenum boxes.

X			D	H	B	No. of Slots
LSD16	LSD20	LSD25				
50	55	60	127	220	120	1
85	90	100	150	220	160	2
115	130	145	200	250	190	3
150	165	185	200	250	220	4
185	205	230	250	300	250	5
215	240	270	300	350	290	6
250	280	315	300	350	320	7
280	315	360	350	400	360	8
Non-inside sound insulation plenum boxes						

X			D	H	B	No. of Slots
LSD16	LSD20	LSD25				
50	55	60	127	240	155	1
85	90	100	150	240	190	2
115	130	145	200	290	225	3
150	165	185	200	290	265	4
185	205	230	250	330	300	5
215	240	270	300	370	335	6
250	280	315	300	370	370	7
280	315	360	350	400	410	8
Inside sound insulation plenum boxes						

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