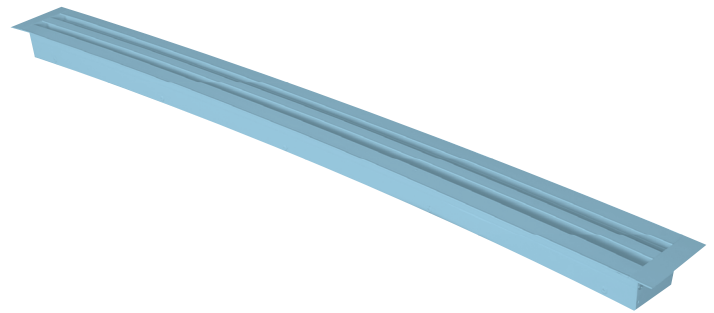
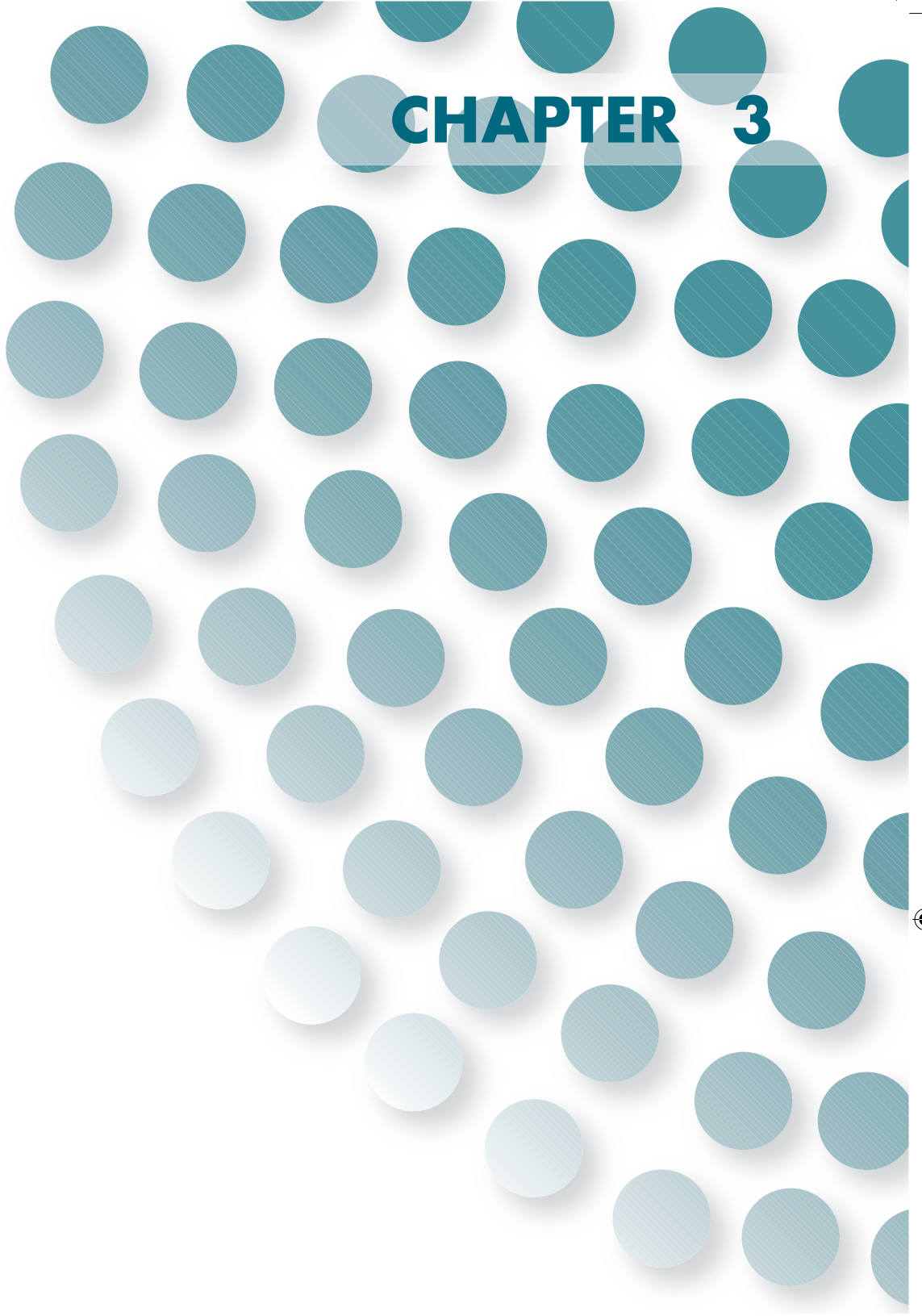


CHAPTER 3



LINEAR SLOT DIFFUSERS

CONTENTS

Introduction, Features & Characteristics.

Operating Range, Multi Sections, End Cap / Flange Arrangements.

Mitered Corners, Linear Slot Diffusers in Curved Shape.

Single and Multiple Slot Pattern Adjustment, Construction and Dimensional Details.

Available Models.

Mounting Instructions.

Selection Diagrams, Vertical Discharge.

Selection Diagrams, Horizontal Discharge.

Throw and Wall Effect for Vertical Discharge, Using Selection Diagrams, Illustrative Examples.

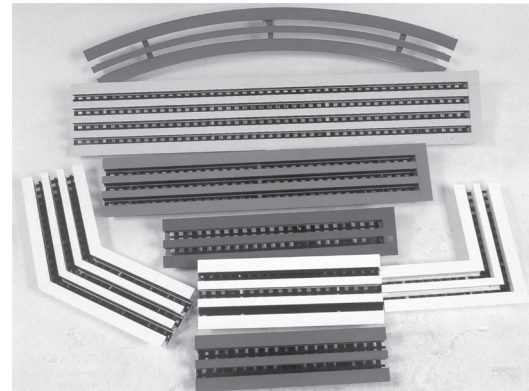
Performances at Selected Values of Air Flow Rate.

Ordering Data.

LINEAR SLOT DIFFUSERS

BCI Linear Slot Diffusers have been designed to satisfy architectural concepts that require continuous length applications without compromising air distribution performance. A combination of engineering excellence and architectural appeal in a single product is provided in this type of units.

Linear Slot Diffusers for supply air applications are usually installed in ceilings or high side wall locations, the design of these units features an adjustable supply air pattern and makes them particularly suitable for open office perimeter zones, main floor entrance foyers and lobbies, elevator lobbies, conference rooms, mall atriums and theatres.



Features & Characteristics :

- Construction : Frame, Core & Deflection Blades are made of high quality Extruded Aluminium Profiles of 6063 Alloy.
- Hit - and - Miss Damper Material : made of Prepainted Aluminium coils of 3005 Alloy in matt black color finish.
- Frame Flange Width : 28 mm .
- Available in 1 to 8 Numbers of Slots.
- Available in three different slot widths (openings) :
 - 20 mm (3/4 ") as standard.
 - 16 and 25 mm (5/8 " and 1") as option.
- The design of linear slot diffusers provides a full flexibility in volume and air pattern control.
- The Volume Control Damper (Hit - and - Miss Damper) installed in the rear part of the linear slot diffuser consists of two Aluminium strips, the rear one is fixed and the other one is sliding.
- Both the Hit and Miss strips are having 10 x 10 mm square holes. Adjacent holes are spaced in 10 mm distances also.
- Manually and from the slot face opening, the air flow rate can be adjusted by moving the sliding part of the Hit - and - Miss damper left or right.
- The Volume Control Damper (Hit - and - Miss Damper) is designed in a unique way that it can be used as an equalizing grid.
- Air pattern can be directed vertically or horizontally by means of Deflection Blades in fully 180 ° range without changing the air flow rate. These blades can be manually adjusted from slot face opening.
- The Adjustable Deflection Blades allow for the air pattern to be directed along the ceiling , straight down or at some intermediate setting.
- To maintain perfect and unbroken appearance for continuous runs, alignment joining strips are provided in proper lengths and quantities with no extra cost.
- Also, End Cap pieces to be provided in proper sizes as requested with no extra cost.
- Mounting Instructions : see page No. LD - 06.
- Surface Finishes : see page No. LD - 17.

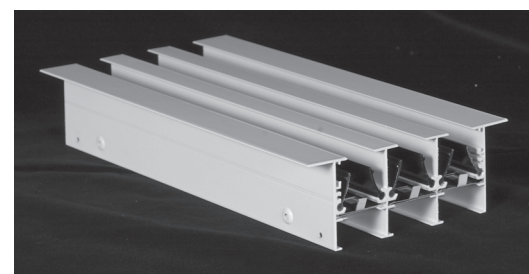
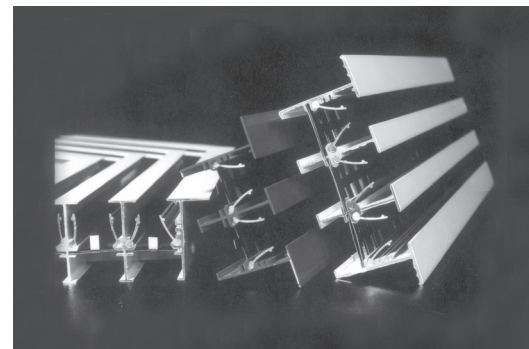


TABLE LD - 01

OPERATING RANGE AND QUICK SELECTION TABLE FOR LINEAR SLOT DIFFUSERS								
SLOT OPENING = 16 mm			SLOT OPENING = 20 mm (Standard)			SLOT OPENING = 25 mm		
No. of Slots	CFM Range		No. of Slots	CFM Range		No. of Slots	CFM Range	
1	50	74	1	70	95	1	85	127
2	95	136	2	119	170	2	155	229
3	125	191	3	165	248	3	252	318
4	163	254	4	212	316	4	265	413
5	201	290	5	259	371	5	345	519
6	248	339	6	314	424	6	403	583
7	271	381	7	350	519	7	473	678
8	297	424	8	386	562	8	530	742

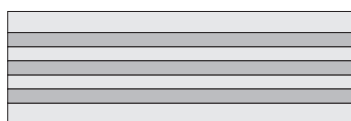
- CFM Values are based on :
 - Length of one metre.
 - Noise Level ranging from 15-25 (dB).
 - Vertical Discharge without wall effect.

TABLE LD - 02

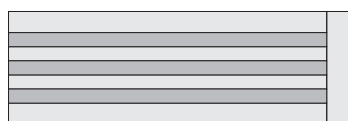
NO. OF SECTIONS PER RUNNING UNIT			
No. of Slots	ONE SECTION	TWO SECTIONS	MULTI SECTIONS
1	≤ 4.0	> 4.0	> 6.0
2	≤ 4.0	> 4.0	> 6.0
3	≤ 4.0	> 4.0	> 6.0
4	≤ 4.0	> 4.0	> 6.0
5	≤ 3.5	> 3.5	> 6.0
6	≤ 3.5	> 3.5	> 6.0
7	≤ 3.5	> 3.5	> 6.0
8	≤ 3.5	> 3.5	> 6.0

- Above arrangements are approximate and subject to change according to order / site conditions.

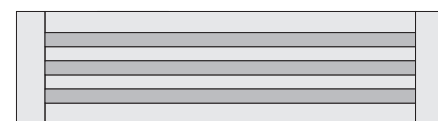
End Cap / Flange Arrangements



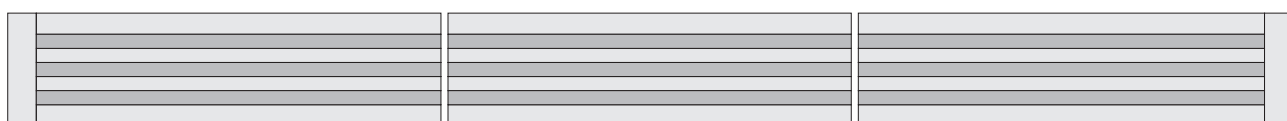
Open Ends



End Cap at One Side



End Cap at Both Sides



End Cap at Both Terminal Sides (Multi Sections)

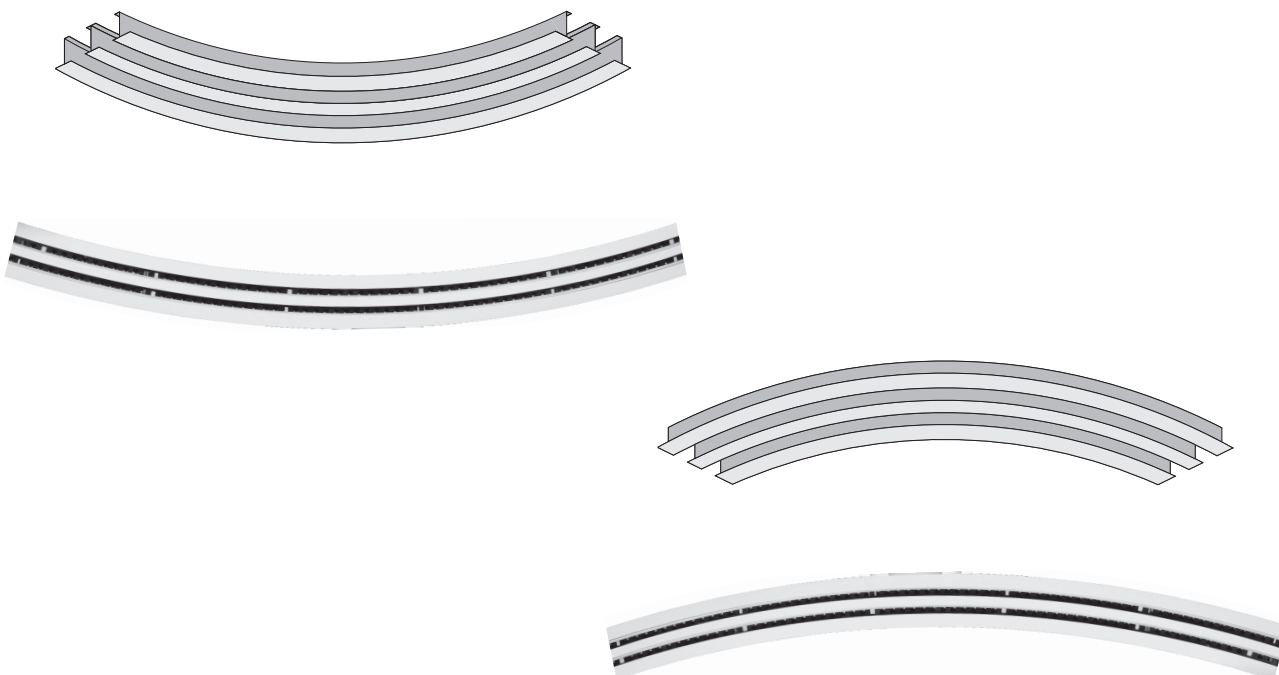
MITERED CORNERS

TABLE LD - 03

Ceiling Mounted Corners		Wall Mounted Corners	
<p>90 ° Corner Standard</p>	<p>Variable Angle Corner Optional</p>	<p>Inside 90 ° Corner Optional</p>	<p>Outside 90 ° Corner Optional</p>

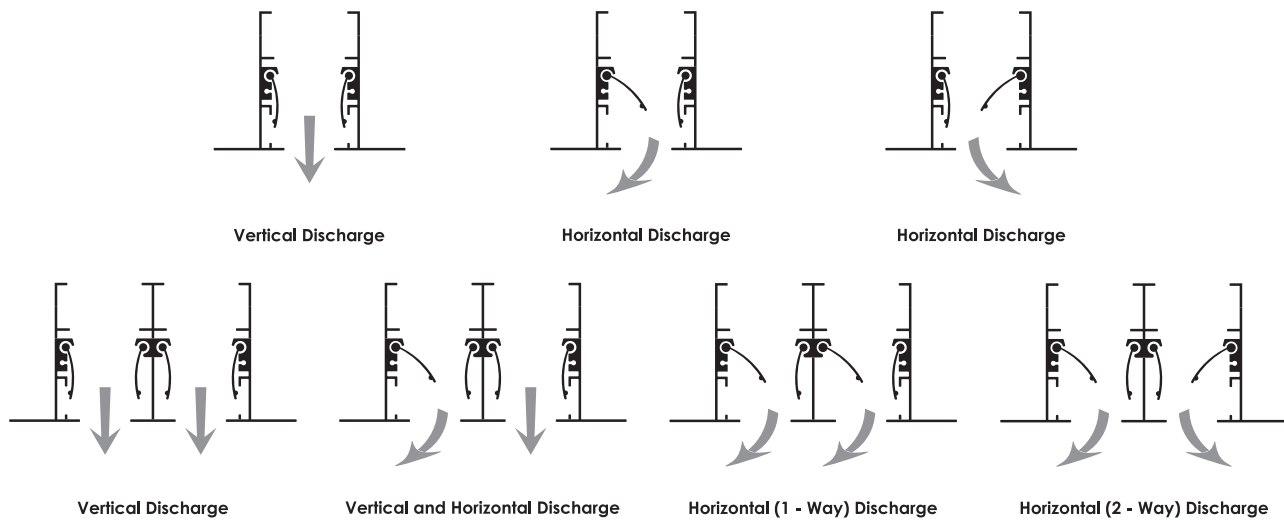
- Corners are always supplied in 300 mm adjacent sides as standard unless otherwise specified or required.

Linear Slot Diffusers In Curved Shape



- Curves can be fabricated in minimum curvature radius = 1 mtr.
- Curve applications are not possible for side wall installations.

Single and Multiple Slot Pattern Adjustment



- Two deflectors per slot provide an adjustable air pattern of fully 180°.

Construction and Dimensional Details

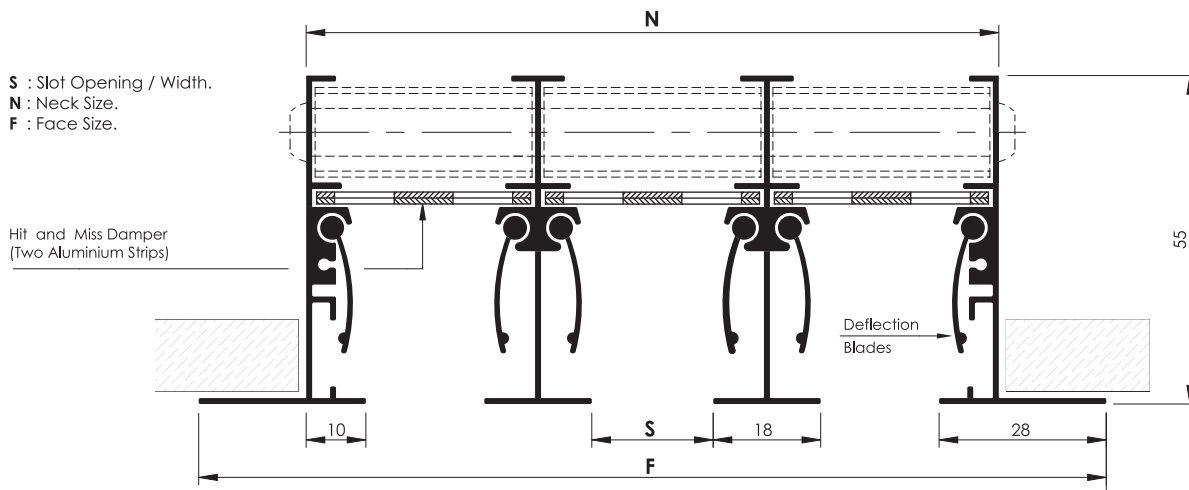


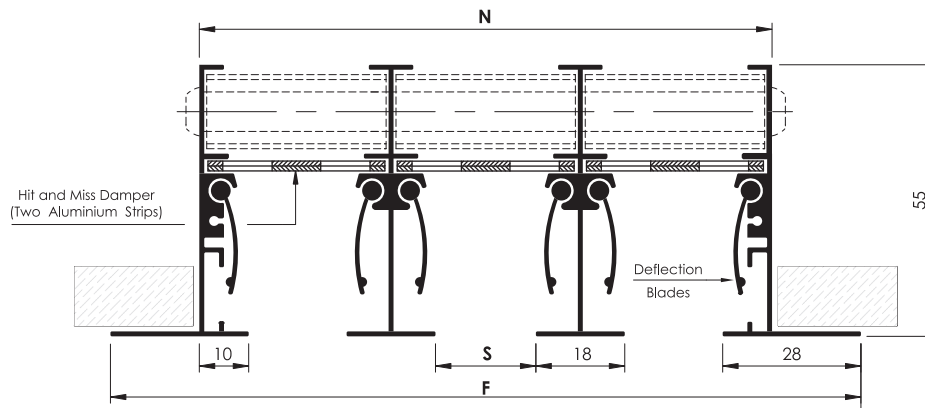
TABLE LD - 04

NECK & OVERALL DIMENSIONS FOR LINEAR SLOT DIFFUSERS						
No. of Slots	S = 16 mm		S = 20 mm (Standard)		S = 25 mm	
	N	F	N	F	N	F
1	36	72	40	76	46	82
2	70	106	78	114	90	126
3	104	140	116	152	134	170
4	138	174	154	188	178	214
5	172	208	192	228	222	258
6	206	242	230	266	266	302
7	240	276	268	304	310	346
8	274	310	306	342	354	390

- All dimensions are in mm and subject to ± 1 mm tolerance.

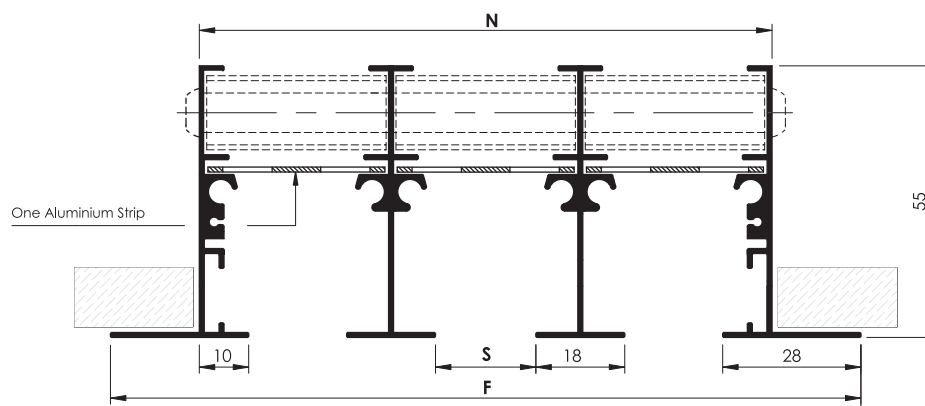
Available Models Construction and Dimensional Details

Model SLD



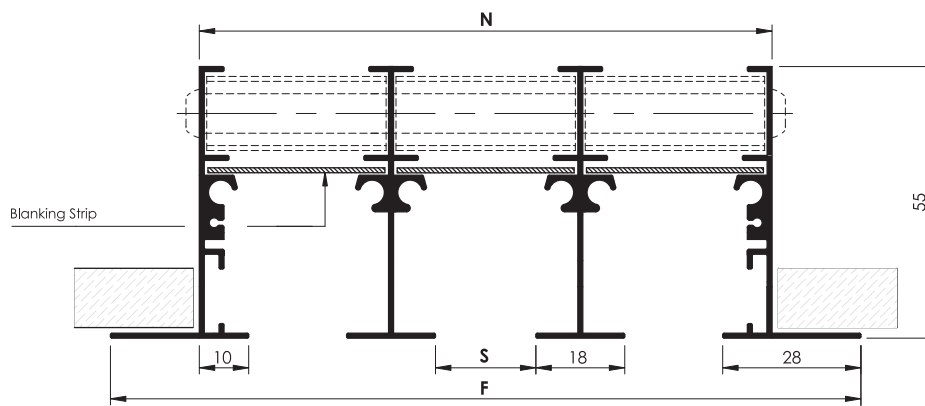
- **SLD** : is Supply Air Linear Slot Diffuser c/w Deflection Blades & Hit and Miss Damper.

Model RLD



- **RLD** : is Return / Extract Air Linear Slot Diffuser w/o Deflection Blades & Hit and Miss Damper.

Model DLD



- **DLD** : is Dummy (Non Active) Linear Slot Diffuser supplied with blanking strip replacing the Hit and Miss Damper.

S : Slot Opening / Width.

N : Neck Size.

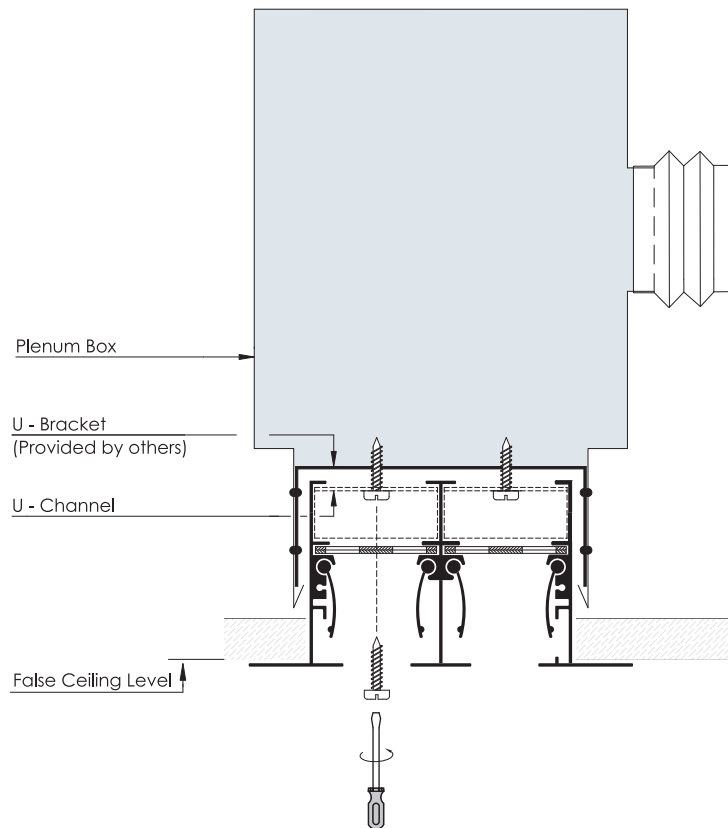
F : Face Size.

- All dimensions are in mm and subject to ± 1 mm tolerance.

Mounting Instructions

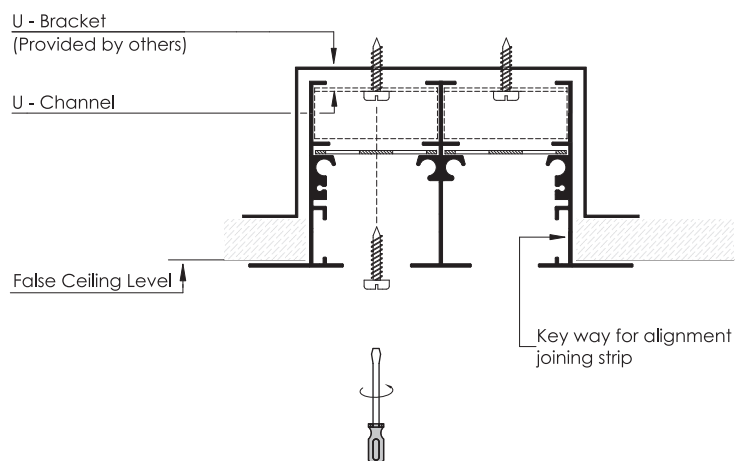
With Plenum Box (provided by others) :

Fix the plenum to the ceiling. The plenum has a border in the lower part by which the upper part of the diffuser can be inserted into it. Your diffuser is provided with ceiling mounting fixing U - Channels. These channels are inserted into the keyway and should be slid into the final position corresponding to the opposite fixing point previously prepared on the U - Bracket as shown (plenums usually supplied with these brackets). The two elements (diffuser and plenum) can be attached together using self tapping screws and screw driver. The diffuser should be made level using a water level and by adjusting the screws positions (left, right, up and down) as shown.



Without Plenum Box :

In this case the diffuser can be attached to U - Shape bracket (provided by others) and rest directly on the ceiling as shown.



Diffusers in Continuous Running :

Normal installations as described above but, besides apply the provided joining key strips between the diffuser adjoining sections. After insertion and alignment of the joined sections set diffusers in the final position.

Engineering and Performance Data

Vertical Discharge

Slot Opening / Width = 16 mm

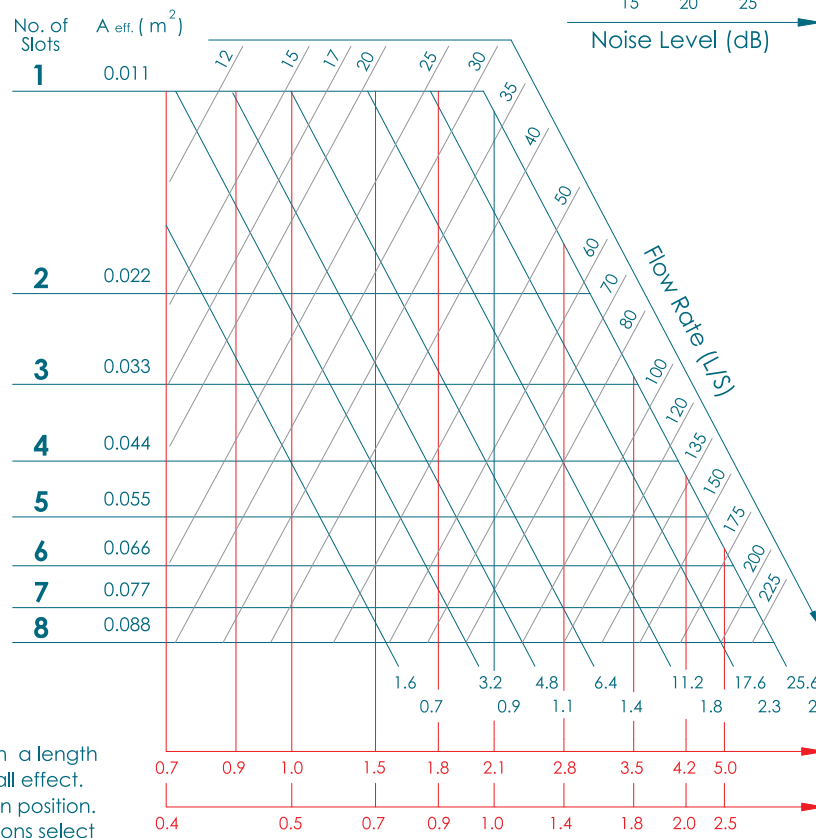
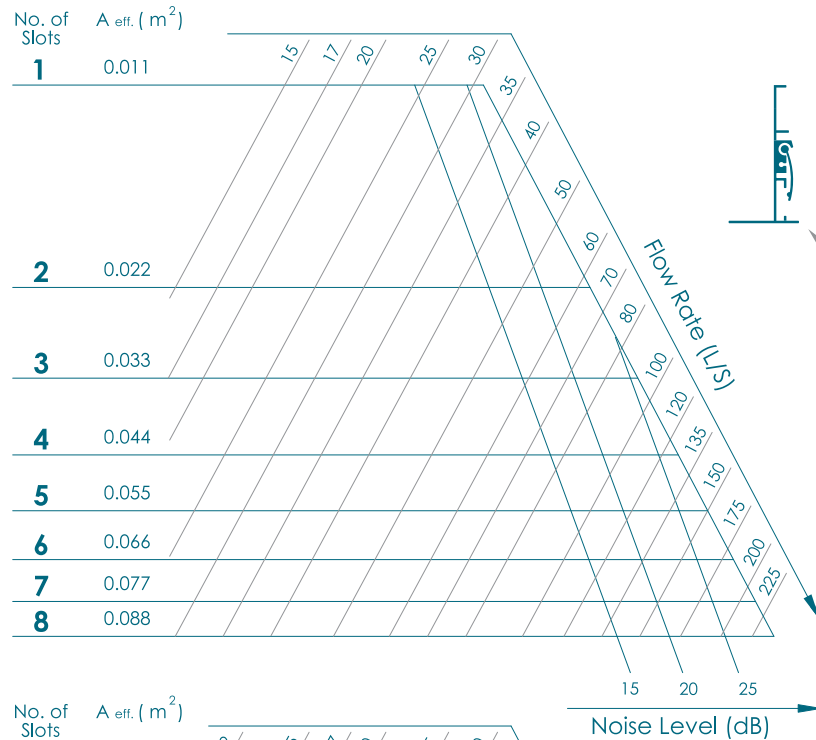
Correction table for other Lengths :

Length (m)	Noise Level	Throw (m)
1.0	0	x 1.00
1.5	+ 2	x 1.05
2.0	+ 3	x 1.10
2.5	+ 4	
3.0	+ 5	
4.0	+ 6	
5.0	+ 7	x 1.15
6.0	+ 8	
8.0	+ 9	
10.0	+ 10	

Correction table for Return/Extract applications :

V _{eff.} (m/s)	x 0.45
Δ Pt (Pa)	x 0.65
NC	- 10

- Performances are based on a length of one metre and with no wall effect.
- Hit - Miss Damper at full open position.
- For Return / Extract applications select performance data using above charts and correction table after ignoring throw values.
- Noise Level values are based on 10 dB room attenuation.



Pressure Drop
 Δ Pt (Pa)
 V_{eff.} (m/s)
 Th. (m)
 (@ Vt = 0.25 m/s)
 Th. (m)
 (@ Vt = 0.50 m/s)

Engineering and Performance Data

Vertical Discharge

Slot Opening / Width = 20 mm (Standard)

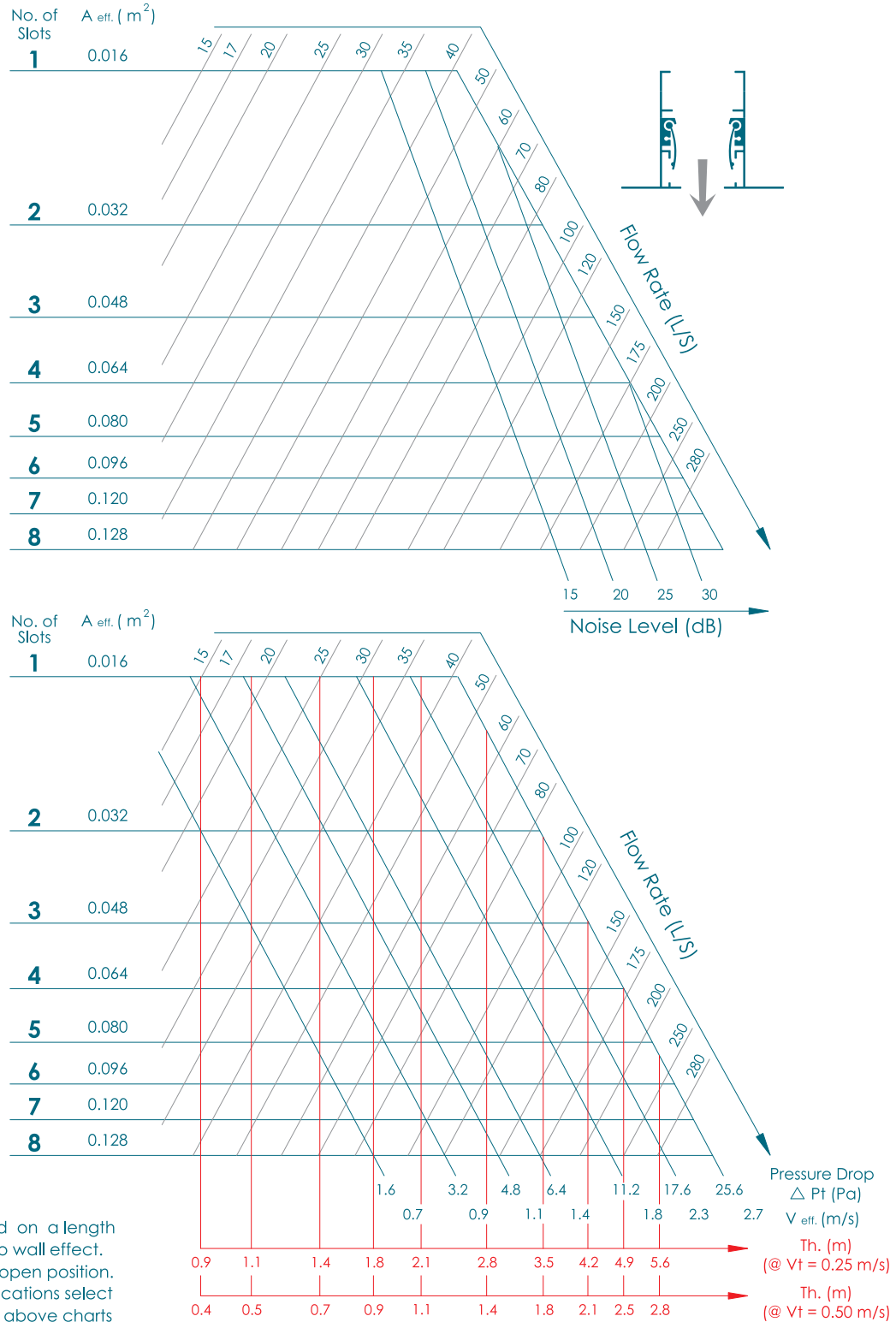
Correction table for other Lengths :

Length (m)	Noise Level	Throw (m)
1.0	0	x 1.00
1.5	+2	x 1.05
2.0	+3	x 1.10
2.5	+4	
3.0	+5	
4.0	+6	
5.0	+7	x 1.15
6.0	+8	
8.0	+9	
10.0	+10	

Correction table for Return/Extract applications :

V _{eff.} (m/s)	x 0.45
Δ Pt (Pa)	x 0.65
NC	- 10

- Performances are based on a length of one metre and with no wall effect.
- Hit - Miss Damper at full open position.
- For Return / Extract applications select performance data using above charts and correction table after ignoring throw values.
- Noise Level values are based on 10 dB room attenuation.



Engineering and Performance Data

Vertical Discharge

Slot Opening / Width = 25 mm

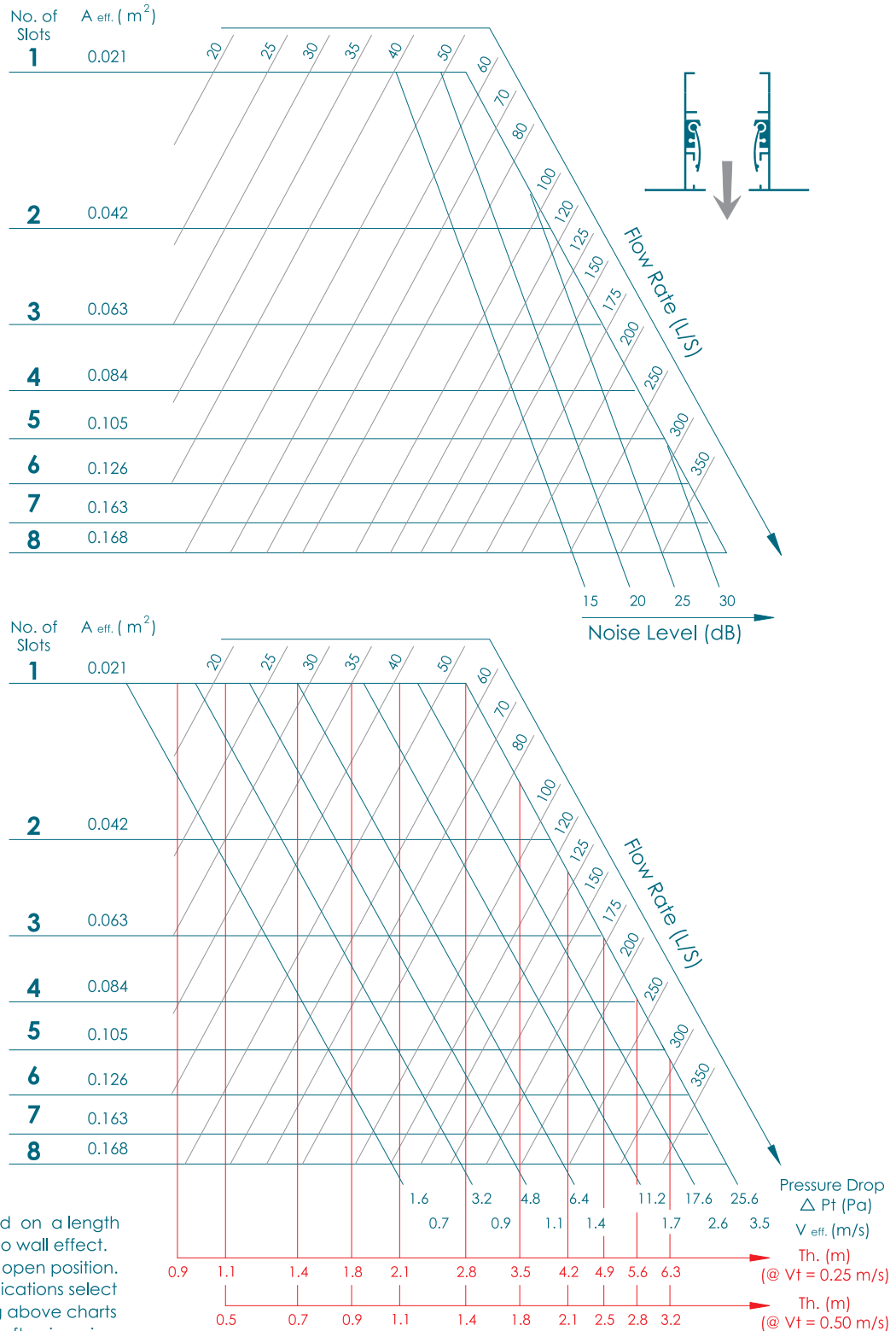
Correction table for other Lengths :

Length (m)	Noise Level	Throw (m)
1.0	0	x 1.00
1.5	+ 2	x 1.05
2.0	+ 3	x 1.10
2.5	+ 4	
3.0	+ 5	
4.0	+ 6	
5.0	+ 7	x 1.15
6.0	+ 8	
8.0	+ 9	
10.0	+ 10	

Correction table for Return/Extract applications :

$V_{eff.}$ (m/s)	x 0.45
ΔPt (Pa)	x 0.65
NC	- 10

- Performances are based on a length of one metre and with no wall effect.
- Hit - Miss Damper at full open position.
- For Return / Extract applications select performance data using above charts and correction table after ignoring throw values.
- Noise Level values are based on 10 dB room attenuation.



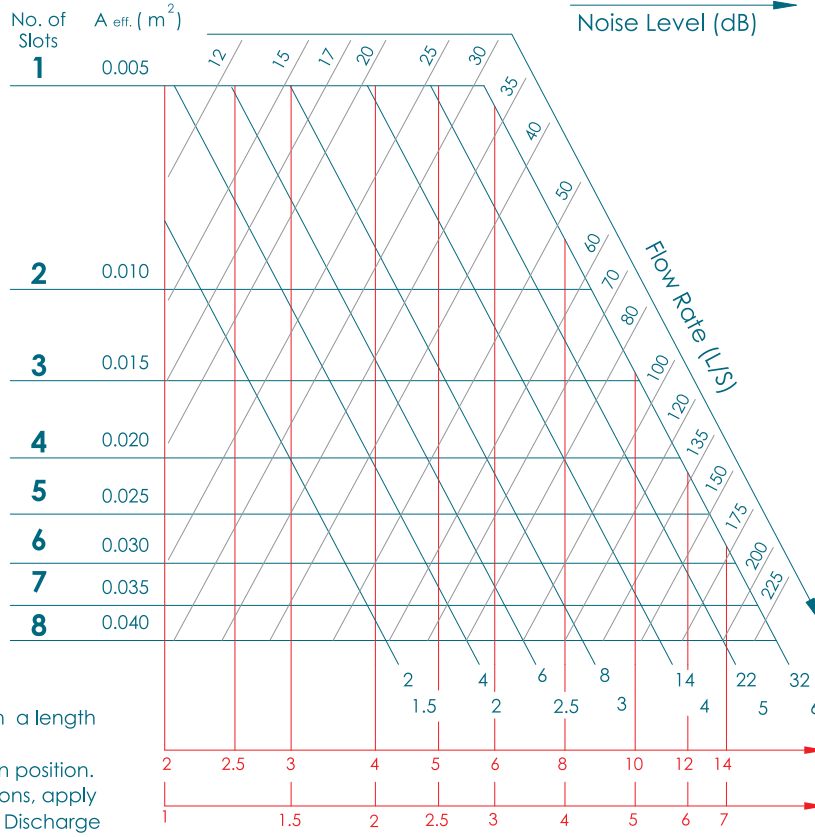
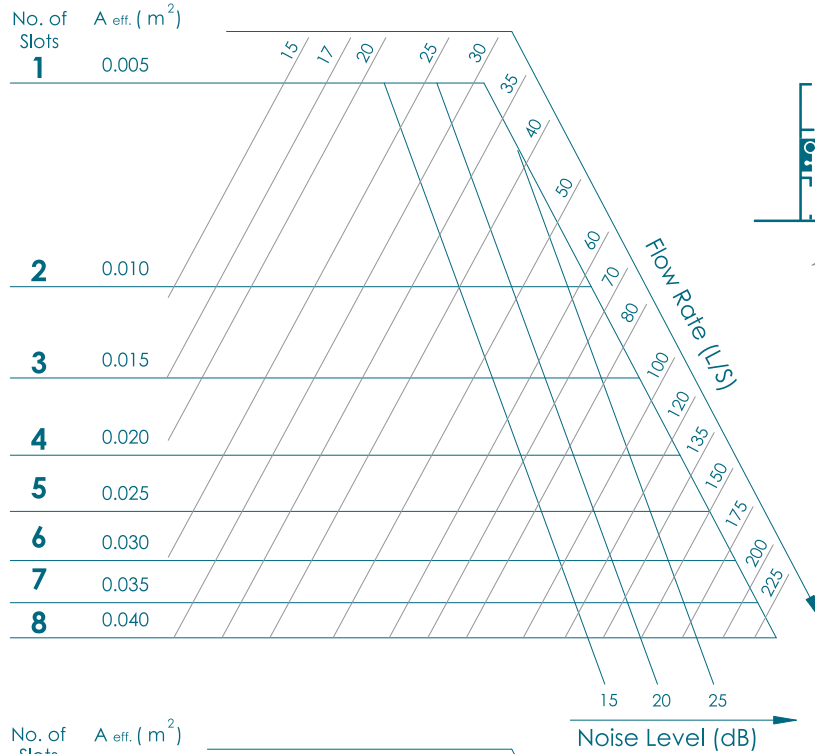
Engineering and Performance Data

Horizontal Discharge

Slot Opening / Width = 16 mm

Correction table for other Lengths :

Length (m)	Noise Level	Throw (m)
1.0	0	x 1.00
1.5	+2	x 1.05
2.0	+3	x 1.10
2.5	+4	
3.0	+5	
4.0	+6	
5.0	+7	x 1.15
6.0	+8	
8.0	+9	
10.0	+10	



- Performances are based on a length of one metre.
- Hit - Miss Damper at full open position.
- For Return / Extract applications, apply the same data on Vertical Discharge charts (page No. LD - 07) and use correction table.
- Noise Level values are based on 10 dB room attenuation.

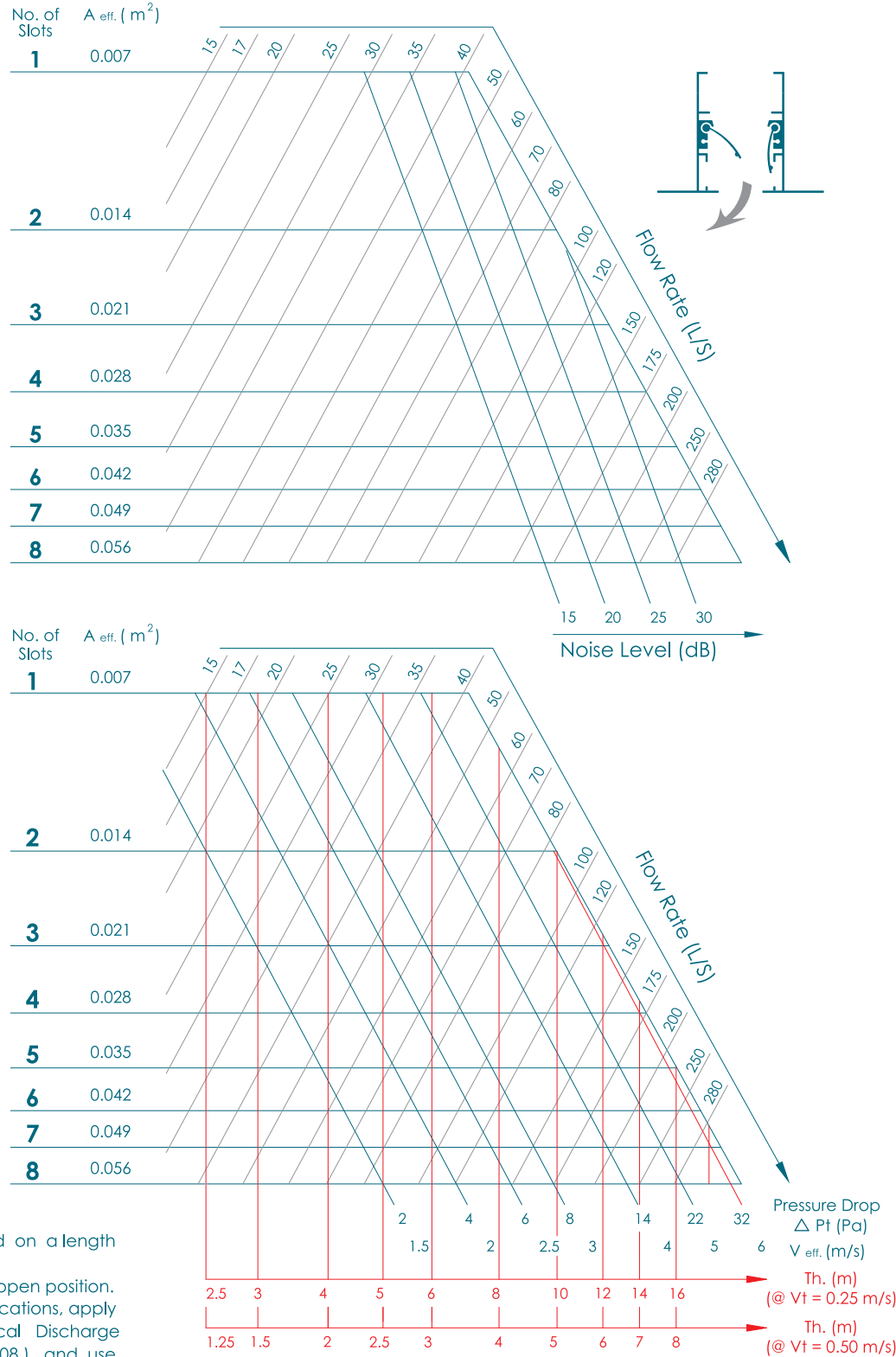
Engineering and Performance Data

Horizontal Discharge

Slot Opening / Width = 20 mm (Standard)

Correction table for other Lengths :

Length (m)	Noise Level	Throw (m)
1.0	0	x 1.00
1.5	+ 2	x 1.05
2.0	+ 3	x 1.10
2.5	+ 4	
3.0	+ 5	
4.0	+ 6	
5.0	+ 7	x 1.15
6.0	+ 8	
8.0	+ 9	
10.0	+ 10	



- Performances are based on a length of one metre.
- Hit - Miss Damper at full open position.
- For Return / Extract applications, apply the same data on Vertical Discharge charts (page No. LD - 08) and use correction table.
- Noise Level values are based on 10 dB room attenuation.

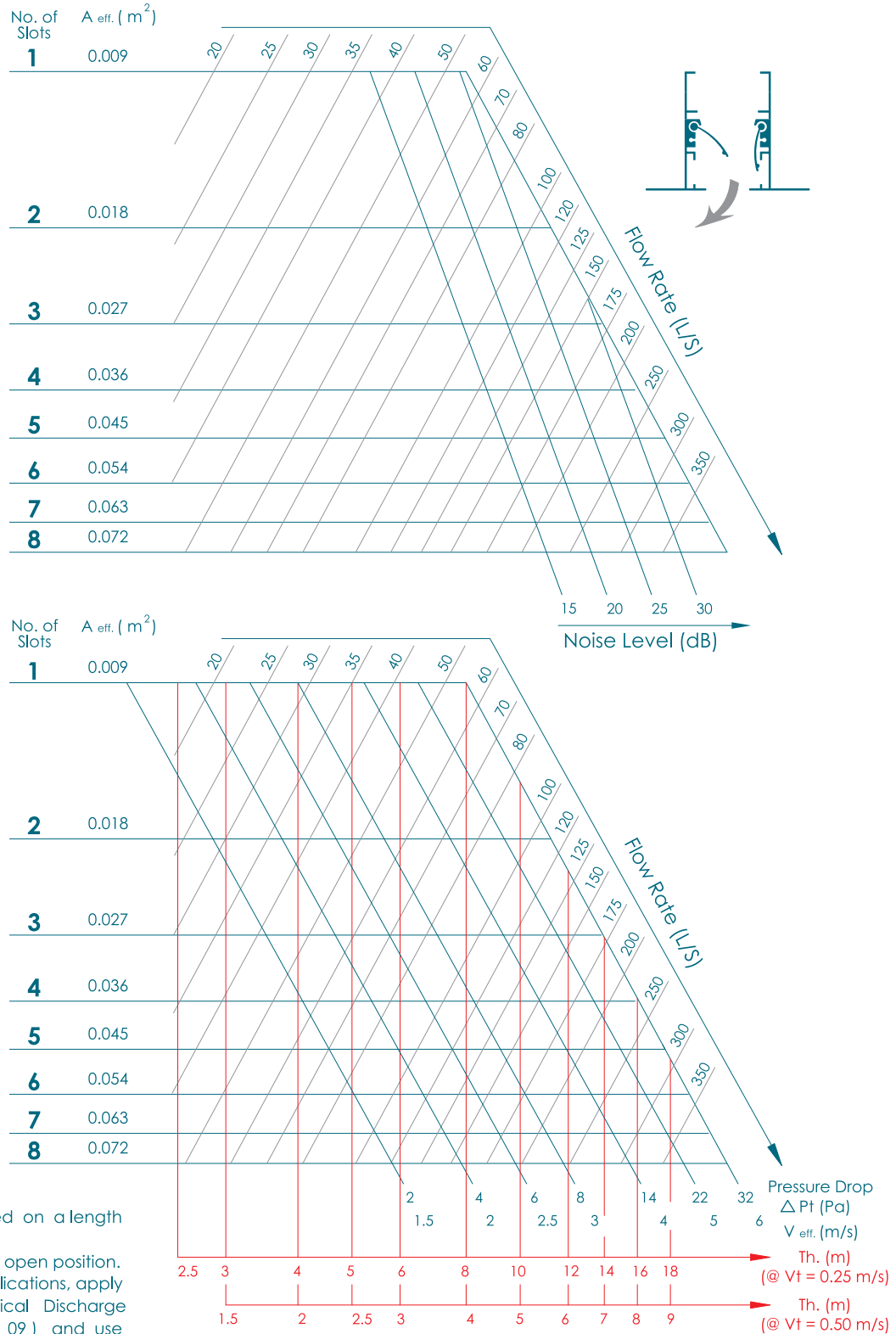
Engineering and Performance Data

Horizontal Discharge

Slot Opening / Width = 25 mm

Correction table for other Lengths :

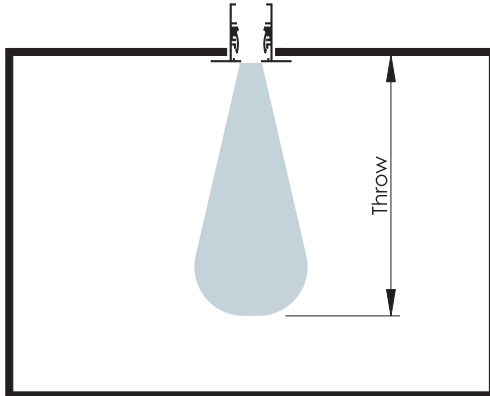
Length (m)	Noise Level	Throw (m)
1.0	0	x 1.00
1.5	+2	x 1.05
2.0	+3	x 1.10
2.5	+4	
3.0	+5	
4.0	+6	
5.0	+7	x 1.15
6.0	+8	
8.0	+9	
10.0	+10	



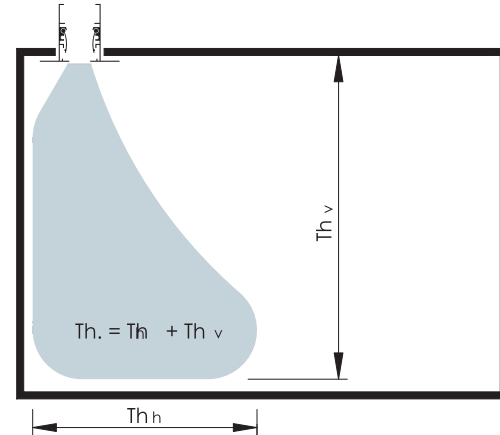
- Performances are based on a length of one metre.
- Hit - Miss Damper at full open position.
- For Return / Extract applications, apply the same data on Vertical Discharge charts (page No. LD - 09) and use correction table.
- Noise Level values are based on 10 dB room attenuation.

Engineering and Performance Data

Throw and Wall Effect for Vertical Discharge



Vertical Discharge without wall effect



Vertical Discharge with wall effect

Note : In case of wall effect, all performance data will remain the same except that throw values to be multiplied by **1.43**

Linear Slot Diffusers Selection Procedure

I. Vertical Discharge (without wall effect) : (Illustrative Example)

Given Data :

No. of Slots = 3

Slot Opening / Width = 20 mm (Standard).

Length = 2.5 m.

Air Flow Rate = 530 CFM = 250 (L/S).

Per one metre length 250 (L/S) / 2.5 m = 100 (L/S)/m.

Refer to page No. LD - 08 for Vertical Discharge and 20 mm slot opening and find out that :

$A_{eff.} = 0.048 \text{ m}^2$.

Noise Level = 22 + 4 = 26 dB (value as read from the chart and corrected by the correction table for other lengths @ 2.5 m).

$V_{eff.} = 2.2 \text{ m/s}$.

$\Delta Pt = 16.8 \text{ Pa}$.

Th. @ $V_t = 0.25 \text{ m/s} = 3.4 \times 1.1 = 3.7 \text{ m}$ (value as read from the chart and corrected by the correction table for other lengths @ 2.5 m).

Ditto, but @ 0.5 m/s = $1.7 \times 1.1 = 1.9 \text{ m}$.

In case of wall effect as shown above, only correct the throw values to be :

Th. @ $V_t = 0.25 \text{ m/s} = 3.7 \times 1.43 = 5.3 \text{ m}$.

Ditto, but @ 0.5 m/s = $1.9 \times 1.43 = 2.7 \text{ m}$.

For Return / Extract data (if required) ignore throw values and read others as followings :-

Noise Level = 26 - 10 = 16 dB (see correction table).

$V_{eff.} = 2.2 \times 0.45 = 1.0 \text{ m/s}$ (see correction table).

$\Delta Pt = 16.8 \times 0.65 = 10.9 \text{ Pa}$ (see correction table).

II. Horizontal Discharge : (Illustrative Example)

Given Data :

No. of Slots = 4

Slot Opening / Width = 25 mm.

Length = 5.0 m.

Air Flow Rate = 1430 CFM = 675 (L/S).

Per one metre length 675 (L/S) / 5.0 m = 135 (L/S)/m.

Refer to page No. LD - 12 for Horizontal Discharge and 25 mm slot opening and find out that :

$A_{eff.} = 0.036 \text{ m}^2$.

Noise Level = 19 + 7 = 26 dB (value as read from the chart and corrected by the correction table for other lengths @ 5 m).

$V_{eff.} = 3.8 \text{ m/s}$.

$\Delta Pt = 12.5 \text{ Pa}$.

Th. @ $V_t = 0.25 \text{ m/s} = 10 \times 1.1 = 11 \text{ m}$ (value as read from the chart and corrected by the correction table for other lengths @ 5.0 m).

Ditto, but @ 0.5 m/s = $5 \times 1.1 = 5.5 \text{ m}$.

For Return / Extract data (if required) ignore throw values and read others after applying the same given data again but on Vertical Discharge charts (page No. LD - 09) as followings :-

Noise Level = 17 - 10 = 7 < 15 dB (see correction table).

$V_{eff.} = 5.6 \times 0.45 = 2.5 \text{ m/s}$ (see correction table).

$\Delta Pt = 10 \times 0.65 = 6.5 \text{ Pa}$ (see correction table).

Engineering and Performance Data

Performances at Selected Values of Air Flow Rate (S = 16 mm)

TABLE LD - 05

No. of Slots	Flow Rate (L/S)	Vertical Discharge						Horizontal Discharge				
		A _{eff.} (m ²)	ΔP _t (Pa)	V _{eff.} (m/s)	Noise Level	Th. (m)		A _{eff.} (m ²)	ΔP _t (Pa)	V _{eff.} (m/s)	Noise Level	Th. (m)
						w/o Wall Effect	with Wall Effect					
1	15	0.011	6.4	1.4	< 15	0.5 - 1.0	0.7 - 1.5	0.005	8.0	3.0	< 15	1.5-2.9
	20		11.2	1.8	< 15	0.7 - 1.3	1.0 - 1.9		14.0	4.0	< 15	1.9-3.8
	25		17.6	2.3	16	0.8 - 1.7	1.2-2.4		21.0	5.0	19	2.4-4.8
	27		22.4	2.4	18	0.9 - 1.8	1.3-2.6		28.0	5.3	21	2.6-5.2
	30		24.0	2.6	21	1.0 - 2.0	1.4-2.8		30.0	5.8	24	2.8-5.6
	35		30.4	2.9	25	1.2 - 2.4	1.7-3.4		38.0	6.5	28	3.4-6.8
	40		33.6	3.5	29	1.4 - 2.8	2.0-4.0		42.0	7.0	32	4.0-8.0
2	30	0.022	5.6	1.2	< 15	0.7 - 1.3	1.0 - 1.9	0.010	7.0	2.7	< 15	1.9-3.8
	35		7.2	1.5	< 15	0.8 - 1.6	1.1-2.3		9.0	3.3	< 15	2.3-4.5
	40		10.4	1.8	< 15	0.9 - 1.9	1.4-2.7		13.0	3.9	15	2.7-5.4
	45		14.4	1.9	15	1.1 - 2.1	1.5-3.0		18.0	4.4	18	3.0-6.0
	50		16.0	2.2	18	1.2 - 2.4	1.7-3.4		20.0	4.8	21	3.4-6.8
	60		24.0	2.6	23	1.5 - 2.9	2.1-4.2		30.0	5.8	26	4.2-8.4
	70		30.4	3.1	25	1.7 - 3.3	2.4-4.8		38.0	6.8	28	4.5-9.0
3	40	0.033	5.2	1.2	< 15	0.8 - 1.6	1.2-2.3	0.015	6.5	2.7	< 15	2.3-4.6
	50		8.0	1.5	< 15	1.0 - 2.0	1.4-2.8		10.0	3.4	< 15	2.8-5.6
	60		12.0	1.8	16	1.2 - 2.5	1.8-3.5		15.0	4.0	19	3.5-7.0
	70		16.0	2.2	19	1.4 - 2.8	2.0-4.1		20.0	4.8	22	4.1-8.1
	80		20.8	2.4	23	1.6 - 3.2	2.3-4.6		26.0	5.3	26	4.6-9.2
	90		25.6	2.7	25	1.8 - 3.5	2.5-5.0		32.0	6.0	28	5.0-10
	100		29.6	2.9	28	1.9 - 3.9	2.8-5.5		37.0	6.5	31	5.5- 11
4	50	0.044	4.8	1.1	< 15	0.9 - 1.7	1.2-2.5	0.020	6.0	2.5	< 15	2.5-4.9
	60		6.4	1.4	< 15	1.0 - 2.1	1.5-3.0		8.0	3.0	< 15	3.0-5.9
	70		7.2	1.6	< 15	1.2 - 2.5	1.8-3.5		9.0	3.5	15	3.5-7.0
	80		11.2	1.8	16	1.4 - 2.8	2.0-4.0		14.0	4.0	19	4.0-8.0
	100		17.6	2.3	22	1.7 - 3.4	2.4-4.8		22.0	5.0	25	4.8-9.6
	120		23.2	2.6	25	1.9 - 3.9	2.8-5.5		29.0	5.8	28	5.5 - 11
	135		29.6	2.8	29	2.2 - 4.4	3.2-6.4		37.0	6.3	32	6.4- 12
5	70	0.055	6.0	1.3	< 15	1.1 - 2.1	1.5-3.0	0.025	7.5	2.8	< 15	3.0-6.0
	80		7.6	1.5	< 15	1.3 - 2.5	1.8-3.6		9.5	3.3	15	3.6-7.2
	90		8.8	1.7	< 15	1.4 - 2.8	2.0-4.0		11.0	3.8	17	4.0-8.0
	100		11.2	1.8	17	1.5 - 3.1	2.2-4.4		14.0	4.0	20	4.4-8.8
	120		15.2	2.2	21	1.8 - 3.5	2.5-5.0		19.0	4.8	24	5.0- 10
	135		17.6	2.4	24	2.0 - 4.0	2.9-5.7		22.0	5.3	27	6.0-11.4
	150		25.6	2.7	29	2.3 - 4.6	3.3-6.5		32.0	6.0	32	6.5- 13
6	80	0.066	5.6	1.2	< 15	1.1 - 2.2	1.6-3.2	0.030	7.0	2.7	< 15	3.2-6.4
	90		6.4	1.3	< 15	1.3 - 2.6	1.9-3.7		8.0	2.9	< 15	3.7-7.4
	100		8.0	1.5	< 15	1.4 - 2.8	2.0-4.0		10.0	3.3	16	4.0-8.0
	120		10.4	1.8	17	1.6 - 3.2	2.3-4.6		13.0	3.9	20	4.6-9.2
	135		14.4	2.0	20	1.8 - 3.6	2.6-5.2		18.0	4.5	23	5.0-10.4
	150		17.6	2.3	24	2.4 - 4.8	3.5-6.9		22.0	5.0	27	7.0-13.8
	175		24.0	2.7	27	2.5 - 4.9	3.5-7.0		30.0	5.9	30	7.0- 14
7	90	0.077	5.2	1.2	< 15	1.2 - 2.3	1.7-3.3	0.035	6.5	2.7	< 15	3.3-6.6
	100		5.6	1.3	< 15	1.3 - 2.6	1.9-3.7		7.0	2.8	< 15	3.7-7.4
	120		8.0	1.5	< 15	1.5 - 3.0	2.1-4.3		10.0	3.3	16	4.3-8.5
	135		9.6	1.8	16	1.7 - 3.4	2.4-4.8		12.0	3.9	19	4.8-9.6
	150		12.8	1.9	20	1.9 - 3.9	2.8-5.5		16.0	4.3	23	5.5- 11
	175		17.6	2.3	24	2.2 - 4.4	3.1-6.3		22.0	5.0	27	6.3- 12
	200		23.2	2.7	27	2.6 - 5.3	3.8-7.5		29.0	5.9	30	7.5- 15
8	100	0.088	4.8	1.1	< 15	1.2 - 2.4	1.7-3.4	0.040	6.0	2.5	< 15	3.4-6.8
	120		6.0	1.2	< 15	1.4 - 2.8	2.0-4.0		7.5	2.7	< 15	4.0-8.0
	135		8.0	1.5	< 15	1.6 - 3.2	2.3-4.5		10.0	3.4	16	4.5-9.0
	150		10.4	1.8	17	1.8 - 3.6	2.6-5.1		13.0	3.9	20	5.1- 10
	175		13.6	1.9	21	2.1 - 4.1	3.0-5.9		17.0	4.4	24	5.9- 12
	200		17.6	2.3	25	2.3 - 4.6	3.3-6.5		22.0	5.0	28	6.5- 13
	225		23.2	2.6	27	2.8 - 5.6	4.0-8.0		29.0	5.8	30	8.0- 16

- Performances are based on a length of one meter.
- Throw distance measured at V_t = 0.5 & 0.25 m/s respectively.
- Damper at full open position.

Engineering and Performance Data Performances at Selected Values of Air Flow Rate (S = 20 mm Standard)

TABLE LD - 06

No. of Slots	Flow Rate (L/S)	Vertical Discharge						Horizontal Discharge				
		A _{eff.} (m ²)	ΔP _t (Pa)	V _{eff.} (m/s)	Noise Level	Th. (m)		A _{eff.} (m ²)	ΔP _t (Pa)	V _{eff.} (m/s)	Noise Level	Th. (m)
						w/o Wall Effect	with Wall Effect					
1	15	0.016	3.6	0.9	< 15	0.4-0.9	0.6-1.3	0.007	4.5	2.1	< 15	1.3-2.5
	20		5.6	1.2	< 15	0.6-1.1	0.8-1.6		7.0	2.7	< 15	1.6-3.2
	25		8.8	1.5	< 15	0.7-1.4	1.0-2.0		11.0	3.4	< 15	2.0-4.0
	27		10.4	1.6	< 15	0.8-1.5	1.1-2.2		13.0	3.6	< 15	2.2-4.4
	30		12.0	1.8	< 15	0.9-1.7	1.2-2.4		15.0	4.0	16	2.4-4.8
	35		16.8	2.3	17	1.0-2.0	1.4-2.8		21.0	5.0	20	2.8-5.6
	40		24.8	2.7	23	1.2-2.5	1.8-3.5		31.0	6.0	26	3.5-7.0
2	30	0.032	3.4	0.9	< 15	0.6-1.2	0.9-1.7	0.014	4.3	2.0	< 15	1.7-3.4
	35		4.8	1.1	< 15	0.7-1.4	1.0-2.0		6.0	2.5	< 15	2.0-4.0
	40		6.4	1.4	< 15	0.8-1.7	1.2-2.5		8.0	3.0	< 15	2.5-4.9
	45		8.0	1.5	< 15	0.9-1.9	1.4-2.7		10.0	3.4	< 15	2.7-5.4
	50		9.6	1.6	< 15	1.0-2.0	1.5-2.9		12.0	3.6	15	2.9-5.8
	60		13.6	1.9	17	1.2-2.5	1.8-3.5		17.0	4.3	20	3.5-7.0
	70		17.6	2.3	21	1.4-2.9	2.1-4.1		22.0	5.0	24	4.1-8.2
3	40	0.048	3.2	0.9	< 15	0.7-1.4	1.0-2.0	0.021	4.0	2.0	< 15	2.0-4.0
	50		4.4	1.1	< 15	0.8-1.7	1.2-2.4		5.5	2.4	< 15	2.4-4.8
	60		6.0	1.3	< 15	1.0-2.0	1.4-2.9		7.5	2.8	< 15	2.9-5.7
	70		8.0	1.5	< 15	1.2-2.3	1.7-3.4		10.0	3.4	15	3.4-6.7
	80		10.4	1.8	16	1.4-2.7	2.0-3.9		13.0	4.0	19	3.4-7.8
	90		13.6	2.0	19	1.5-3.1	2.2-4.4		17.0	4.5	22	4.4-8.8
	100		16.8	2.2	22	1.7-3.4	2.4-4.8		21.0	4.9	25	4.8-9.6
4	50	0.064	2.8	0.8	< 15	0.7-1.5	1.1-2.1	0.028	3.5	1.8	< 15	2.1-4.2
	60		3.6	1.0	< 15	0.9-1.8	1.3-2.5		4.5	2.2	< 15	2.5-5.0
	70		4.8	1.1	< 15	1.0-2.0	1.5-2.9		6.0	2.5	< 15	2.9-5.8
	80		6.4	1.4	< 15	1.2-2.3	1.7-3.4		8.0	3.0	< 15	3.4-6.7
	100		9.6	1.7	15	1.5-2.9	2.1-4.2		12.0	3.8	18	4.2-8.4
	120		12.8	1.9	20	1.7-3.4	2.4-4.8		16.0	4.2	23	4.8-9.6
	135		16.0	2.2	25	1.9-3.9	2.8-5.5		20.0	4.9	28	5.5-11
5	70	0.080	3.2	0.9	< 15	0.9-1.8	1.3-2.6	0.035	4.0	2.0	< 15	2.6-5.2
	80		4.4	1.0	< 15	1.0-2.1	1.5-3.0		5.5	2.3	< 15	3.0-5.9
	90		5.2	1.1	< 15	1.2-2.3	1.7-3.3		6.5	2.5	< 15	3.3-6.6
	100		6.0	1.3	< 15	1.3-2.6	1.9-3.8		7.5	2.9	< 15	3.8-7.5
	120		8.0	1.5	< 15	1.5-3.0	2.2-4.3		10.0	3.3	17	4.3-8.6
	135		10.0	1.7	17	1.7-3.4	2.4-4.8		12.5	3.7	20	4.8-9.6
	150		12.4	1.8	20	1.9-3.7	2.7-5.4		15.5	4.1	23	5.5-11
6	80	0.096	2.8	0.9	< 15	0.9-1.9	1.4-2.7	0.042	3.5	1.9	< 15	2.7-5.4
	90		3.6	1.0	< 15	1.1-2.1	1.5-3.0		4.5	2.2	< 15	3.0-6.0
	100		4.4	1.1	< 15	1.2-2.4	1.7-3.4		5.5	2.4	< 15	3.4-6.8
	120		5.6	1.3	< 15	1.4-2.8	2.0-4.0		7.0	2.8	< 15	4.0-7.9
	135		7.2	1.4	< 15	1.6-3.2	2.3-4.5		9.0	3.2	15	4.5-9.0
	150		8.8	1.6	16	1.7-3.4	2.5-4.9		11.0	3.5	19	4.9-9.8
7	90	0.120	2.6	0.8	< 15	1.0-2.0	1.4-2.8	0.049	3.3	1.8	< 15	2.8-5.6
	100		3.2	0.9	< 15	1.1-2.2	1.6-3.1		4.0	2.0	< 15	3.1-6.2
	120		4.4	1.1	< 15	1.3-2.6	1.8-3.7		5.5	2.4	< 15	3.7-7.3
	135		5.2	1.2	< 15	1.4-2.9	2.1-4.1		6.5	2.6	< 15	4.1-8.2
	150		6.4	1.4	< 15	1.6-3.2	2.3-4.6		8.0	3.0	15	4.6-9.2
	175		8.8	1.6	17	1.9-3.7	2.7-5.4		11.0	3.5	20	5-10.7
	200		12.0	1.8	21	2.2-4.4	3.1-6.3		15.0	4.0	24	6-12.5
8	100	0.128	2.4	0.8	< 15	1.0-2.0	1.5-2.9	0.056	3.0	1.7	< 15	2.9-5.8
	120		3.2	0.9	< 15	1.2-2.3	1.7-3.4		4.0	2.0	< 15	3.4-6.7
	135		4.0	1.0	< 15	1.3-2.6	1.9-3.7		5.0	2.3	< 15	3.7-7.4
	150		4.8	1.1	< 15	1.5-2.9	2.1-4.2		6.0	2.5	< 15	4.2-8.4
	175		6.4	1.4	< 15	1.7-3.4	2.5-4.9		8.0	3.0	16	4.9-9.8
	200		9.2	1.7	18	2.0-4.0	2.9-5.8		11.5	3.7	21	6-11.5
	225		10.8	1.8	21	2.3-4.6	3.3-6.5		13.5	4.0	24	6.5-13

- Performances are based on a length of one meter.
- Throw distance measured at V_t = 0.5 & 0.25 m/s respectively.
- Damper at full open position.

Engineering and Performance Data Performances at Selected Values of Air Flow Rate (S = 25 mm)

TABLE LD - 07

No. of Slots	Flow Rate (L/S)	Vertical Discharge						Horizontal Discharge				
		A _{eff.} (m ²)	ΔP _t (Pa)	V _{eff.} (m/s)	Noise Level	Th. (m)		A _{eff.} (m ²)	ΔP _t (Pa)	V _{eff.} (m/s)	Noise Level	Th. (m)
						w/o Wall Effect	with Wall Effect					
1	15	0.021	2.4	0.8	< 15	0.3-0.5	0.4-0.8	0.009	3.0	1.7	< 15	0.8-1.5
	20		3.6	1.0	< 15	0.5-1.0	0.7-1.5		4.5	2.2	< 15	1.5-2.9
	25		5.2	1.2	< 15	0.6-1.3	0.9-1.8		6.5	2.7	< 15	1.8-3.6
	27		6.0	1.3	< 15	0.7-1.3	1.0-1.9		7.5	2.8	< 15	1.9-3.8
	30		7.2	1.4	< 15	0.7-1.5	1.1-2.1		9.0	3.1	< 15	2.1-4.2
	35		10.4	1.7	< 15	0.9-1.8	1.3-2.5		13.0	3.8	< 15	2.5-5.0
	40		14.8	2.0	15	1.0-2.1	1.5-3.0		18.5	4.5	18	3.0-5.9
2	30	0.042	2.0	0.7	< 15	0.5-1.1	0.8-1.5	0.018	2.5	1.6	< 15	1.5-3.0
	35		2.8	0.9	< 15	0.6-1.3	0.9-1.8		3.5	1.9	< 15	1.8-3.6
	40		4.0	1.0	< 15	0.7-1.5	1.1-2.1		5.0	2.3	< 15	2.1-4.2
	45		4.8	1.1	< 15	0.8-1.6	1.2-2.3		6.0	2.6	< 15	2.3-4.6
	50		5.6	1.2	< 15	0.9-1.8	1.3-2.6		7.0	2.7	< 15	2.6-5.2
	60		8.0	1.5	< 15	1.1-2.2	1.6-3.1		10.0	3.4	< 15	3.1-6.2
	70		10.4	1.8	< 15	1.3-2.6	1.8-3.7		13	4.0	17	3.7-7.3
3	40	0.063	1.4	0.7	< 15	0.6-1.2	0.9-1.7	0.027	1.8	1.5	< 15	1.7-3.4
	50		2.6	0.8	< 15	0.7-1.5	1.1-2.1		3.3	1.8	< 15	2.1-4.2
	60		3.8	1.0	< 15	0.9-1.8	1.3-2.5		4.8	2.3	< 15	2.5-5.0
	70		4.8	1.1	< 15	1.0-2.0	1.5-2.9		6.0	2.5	< 15	2.9-5.8
	80		6.4	1.3	< 15	1.2-2.4	1.7-3.4		8.0	2.9	< 15	3.4-6.8
	90		7.6	1.5	< 15	1.3-2.6	1.9-3.7		9.5	3.4	< 15	3.7-7.4
	100		9.6	1.7	< 15	1.5-3.0	2.1-4.3		12.0	3.8	17	4.3-8.5
4	50	0.084	1.2	0.6	< 15	0.6-1.3	0.9-1.8	0.036	1.5	1.4	< 15	1.8-3.6
	60		2.0	0.7	< 15	0.8-1.5	1.1-2.2		2.5	1.6	< 15	2.2-4.4
	70		2.8	0.8	< 15	0.9-1.8	1.3-2.5		3.5	1.9	< 15	2.5-5.0
	80		3.6	0.9	< 15	1.0-2.0	1.5-2.9		4.5	2.2	< 15	2.9-5.8
	100		5.2	1.2	< 15	1.3-2.6	1.9-3.7		6.5	2.7	< 15	3.7-7.4
	120		6.6	1.4	< 15	1.5-3.0	2.1-4.3		8.3	3.0	< 15	4.3-8.5
	135		10.0	1.5	16	1.8-3.5	2.5-5.0		12.5	3.3	19	5.0-10
5	70	0.105	1.6	0.7	< 15	0.8-1.6	1.2-2.3	0.045	2.0	1.5	< 15	2.3-4.6
	80		2.4	0.8	< 15	0.9-1.9	1.3-2.7		3.0	1.7	< 15	2.7-5.3
	90		3.0	0.9	< 15	1.1-2.2	1.6-3.2		3.8	2.0	< 15	3.2-6.4
	100		3.8	1.0	< 15	1.3-2.6	1.8-3.7		4.8	2.3	< 15	3.7-7.3
	120		4.8	1.1	< 15	1.5-3.0	2.1-4.3		6.0	2.5	< 15	4.3-8.5
	135		6.4	1.3	< 15	1.6-3.3	2.3-4.7		8.0	3.0	< 15	4.7-9.3
	150		7.2	1.4	< 15	1.7-3.4	2.4-4.9		9.0	3.1	17	4.9-9.7
6	80	0.126	1.2	0.6	< 15	0.8-1.7	1.2-2.4	0.054	1.5	1.4	< 15	2.4-4.8
	90		2.0	0.7	< 15	0.9-1.9	1.4-2.7		2.5	1.7	< 15	2.7-5.4
	100		2.6	0.8	< 15	1.0-2.0	1.5-2.9		3.3	1.8	< 15	2.9-5.8
	120		3.4	0.9	< 15	1.2-2.4	1.7-3.4		4.3	2.0	< 15	3.4-6.8
	135		4.8	1.1	< 15	1.5-2.9	2.1-4.2		6.0	2.5	< 15	4.2-8.3
	150		5.2	1.2	< 15	1.5-3.0	2.2-4.4		6.5	2.6	< 15	4.4-8.7
	175		6.4	1.4	< 15	1.8-3.6	2.6-5.2		8.0	3.0	16	5.0-10
7	90	0.163	0.8	0.6	< 15	0.8-1.7	1.2-2.5	0.063	1.0	1.3	< 15	2.5-4.9
	100		1.6	0.7	< 15	0.9-1.9	1.4-2.7		2.0	1.5	< 15	2.7-5.4
	120		2.4	0.8	< 15	1.1-2.2	1.6-3.1		3.0	1.7	< 15	3.1-6.2
	135		2.8	0.9	< 15	1.3-2.6	1.9-3.8		3.5	1.9	< 15	3.8-7.5
	150		4.0	1.0	< 15	1.4-2.8	2.0-4.0		5.0	2.0	< 15	4.0-8.0
	175		5.0	1.1	< 15	1.5-3.0	2.1-4.3		6.3	2.5	< 15	4.3-8.5
	200		6.0	1.4	< 15	1.9-3.7	2.7-5.4		7.5	3.0	15	5.0-10.7
8	100	0.168	0.6	0.6	< 15	0.9-1.8	1.3-2.5	0.072	0.8	1.3	< 15	2.5-5.0
	120		1.6	0.7	< 15	1.0-2.0	1.5-2.9		2.0	1.5	< 15	2.9-5.8
	135		2.0	0.8	< 15	1.2-2.4	1.7-3.4		2.5	1.8	< 15	3.4-6.8
	150		3.0	0.9	< 15	1.3-2.7	1.9-3.8		3.8	2.0	< 15	3.8-7.6
	175		4.0	1.0	< 15	1.5-3.0	2.2-4.4		5.0	2.3	< 15	4.4-8.7
	200		5.2	1.2	< 15	1.8-3.5	2.5-5.0		6.5	2.6	< 15	5.0-10
	225		6.0	1.3	< 15	1.9-3.9	2.8-5.5		7.5	2.8	16	5.5-11

- Performances are based on a length of one meter.
- Throw distance measured at V_t = 0.5 & 0.25 m/s respectively.
- Damper at full open position.

Ordering Data

• Available Surface Finishes For Linear Slot Diffusers :

- Natural / Matt Silver Anodized .
- Powder Coating (Standard Colors are white RAL 9010/ 9016, other optional colors if required to be provided in RAL-No. only and charged extra).
- Aluminium in Mill Finish.
- Other Special Finishes (on request if available).

• Available Surface Finishes For Hit - and - Miss Damper & Deflection Blades :

- Matt Black Powder Coating only as standard.

• Ordering Specifications :

Specify :

1. Linear Slot Diffuser Description (Supply, Return, Extract, Dummy,..... etc.).
2. No. of Slots.
3. Linear Slot Diffuser Length.
4. Quantity.
5. Linear Slot Diffuser Surface Finish.
6. RAL - No.(only mention if powder coating surface finish is required).
7. Curve (only mention if required in curved shape).
8. End Caps (to be mentioned as required).
9. Slot opening / width (only indicate if not standard, i.e. for 16 or 25 mm only).

Example 1 :

1	2	3	4	5	6	7	8	9
SLD	3	1000 mm	30	Powder Coating	9016	-	End Cap at both Sides	-

Example 2 :

1	2	3	4	5	6	7	8	9
RLD	6	2.85 m	15	Silver Anodized	-	Curve	-	25 mm

Example 3 :

1	2	3	4	5	6	7	8	9
DLD	4	120 "	10	Powder Coating	1013 (Optional)	-	End Cap at one Side	16 mm

