Linear Slot Diffuser
SD323

DESCRIPTION:

The SD323 linear slot diffuser is designed to satisfy architectural applications that require continuous lengths without compromising air distribution performance. These linear slot diffusers feature fully adjustable, aerodynamic pattern controllers fabricated from extruded aluminum, and are available in a large selection of frame styles. The SD323 provides the ideal combination of engineering excellence and architectural appeal.

MATERIAL :

Extruded aluminium frame and deflector

FUNCTION :

Custom Flow Architectural slot diffusers are uniquely designed for curving and long continuous installations. The custom Flow offers a large range of airflow flexibility with one or two slot arrangements, various slot widths, and vertical or horizontal pattern adjustment.

It is designed for installation in the ceiling or sidewall is available from 1 to 4 slots. Each slot is individually adjustable and equipped with 2 deflector vanes of a special design to minimize the internal turbulences. Also one can obtain an ideal air supply pattern adjustable over 180°. All lengths are available so that the diffuser fits ideally in every ceiling system.

FINISHING :

- Standard finishing is natural anodized. Electrostatic powder coating is optional.
- Standard colors are RAL 9010 and RAL 9016 . Other colors are available with enamel paint.

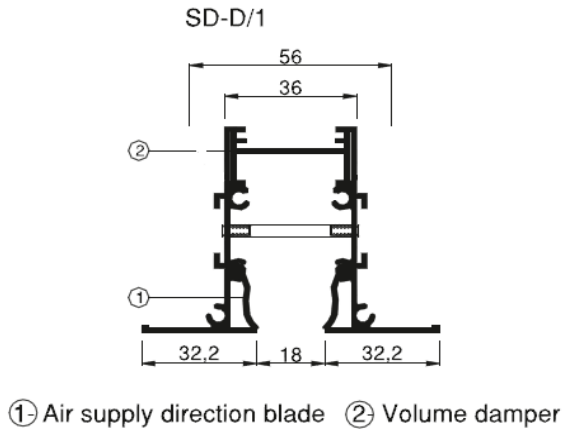
INSTALLATION :

- Bridge (standart)

ACCESSORIES:

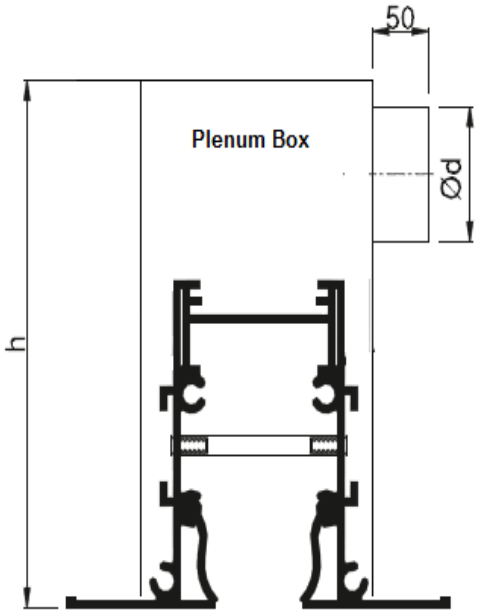
- Plenum box

STANDARD SIZES (mm):

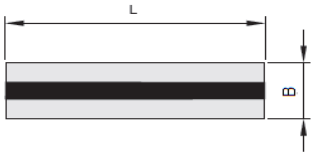


Number of Slots	1S	2S	3S	4S
H (mm)	18mm	52,4mm	86,8mm	121,2mm
A (mm)	36mm	71mm	105mm	137mm
Box Neck Size (mm)	56mm	91mm	125mm	157mm

Plenum Box Dimensions (mm):

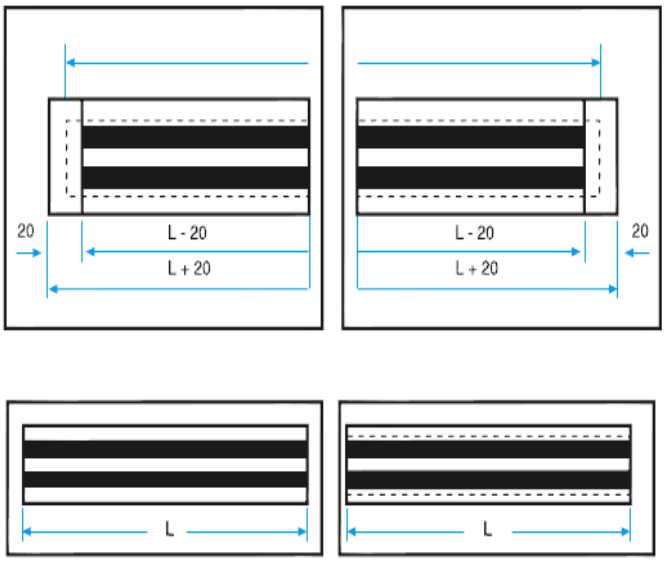


L(mm)		1	2	3	4
600 700 800 900 1000	d h	138 273	198 297	218 350	248 350
1100 1200 1300 1400 1500	d h	138 273	198 297	218 350	248 400
1600 1700 1800 1900 2000	d h	138 273	198 341	218 400	248 487

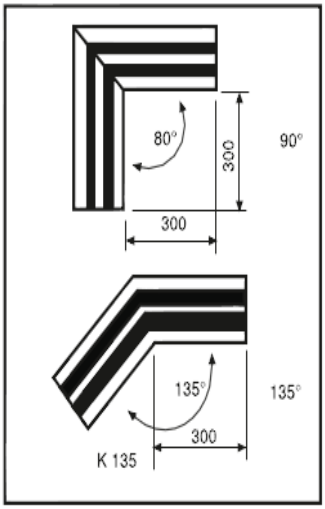


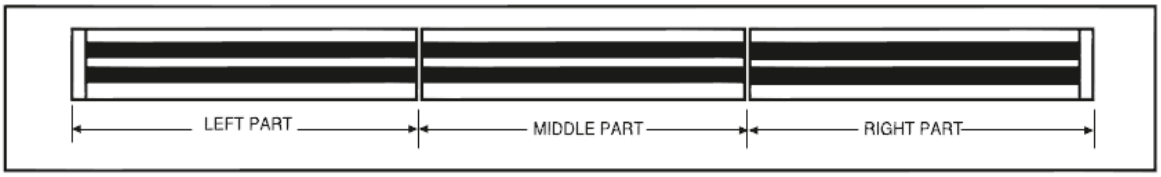
INSTALLATION COMBINATION

END CAB COMBINATIONS

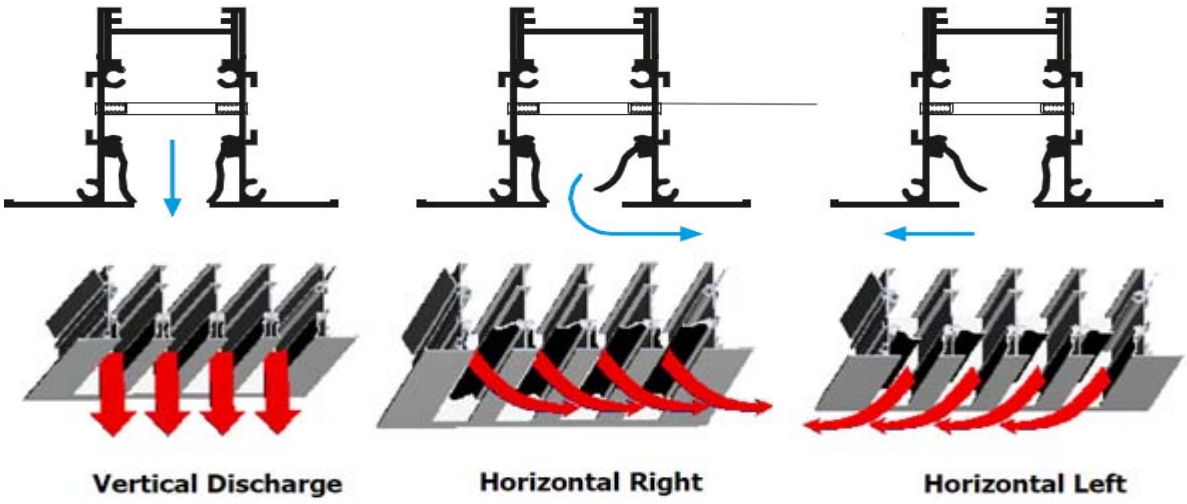


CORNER PIECES



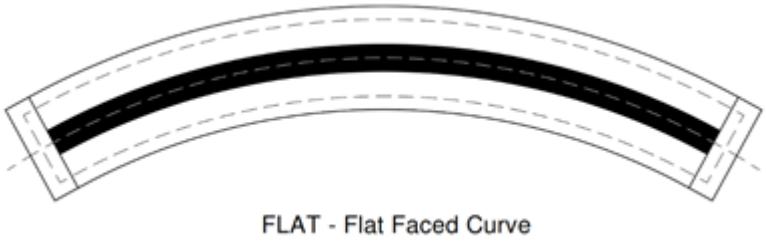


AIR DEFLECTION TYPES



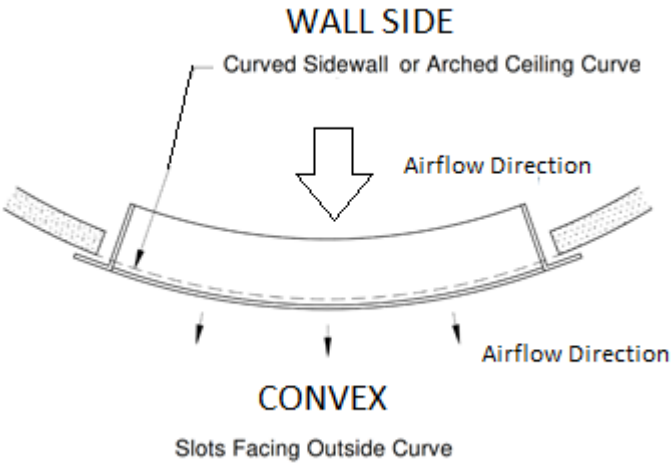
SLOT DIFFUSERS SELECTION:

323 – Flat Faced Curved

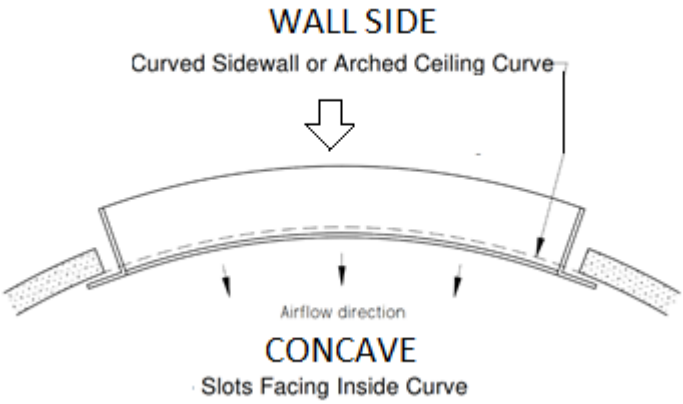


FLAT - Flat Faced Curve

324 – Convex



325- Concave



SUPPLY SLOT DIFFUSERS QUICK SELECTION TABLE:

Qv(m³/h)	MODEL	1 SLOT	2 SLOT	3 SLOT	4 SLOT
	A (m2)	0,007	0,014	0,021	0,028
80	Lt (m)	3,7			
	NR	<20			
	Pt (Pa)	9,2			
	Vk (m/s)	3,2			
100	Lt (m)	4,6			
	NR	24			
	Pt (Pa)	14,0			
	Vk (m/s)	4,0			
125	Lt (m)	5,7	4,0		
	NR	30	<20		
	Pt (Pa)	22,0	6,0		
	Vk (m/s)	5,0	2,5		
150	Lt (m)	7,0	4,9		
	NR	35	20		
	Pt (Pa)	32,0	8,0		
	Vk (m/s)	6,0	3,0		
200	Lt (m)		6,6	5,4	
	NR		27	<20	
	Pt (Pa)		14,0	6,4	
	Vk (m/s)		4,0	2,6	
250	Lt (m)		8,2	6,6	5,8
	NR		33	24	<20
	Pt (Pa)		22,0	9,8	6,0
	Vk (m/s)		5,0	3,3	2,5
300	Lt (m)		9,8	8,0	7,0
	NR		38	29	23
	Pt (Pa)		32,0	14,0	8,0
	Vk (m/s)		6,0	4,0	3,0
400	Lt (m)			10,6	9,2
	NR			36	30
	Pt (Pa)			25,0	14,0
	Vk (m/s)			5,3	4,0
500	Lt (m)				11,4
	NR				36
	Pt (Pa)				22,0
	Vk (m/s)				5,0
600	Lt (m)				14,0
	NR				41
	Pt (Pa)				32,0
	Vk (m/s)				6,0

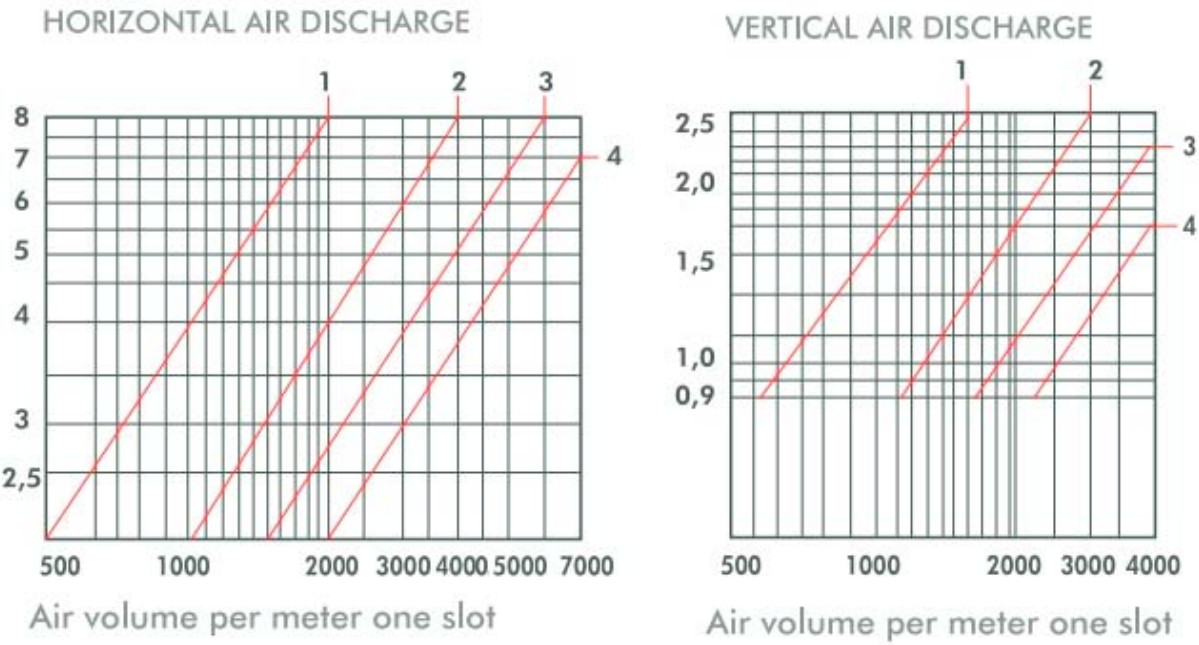
SELECTION CRITERIAS

H= 3 ± 0,5 mt (Ceiling height)
Vt: 0.25 m/s

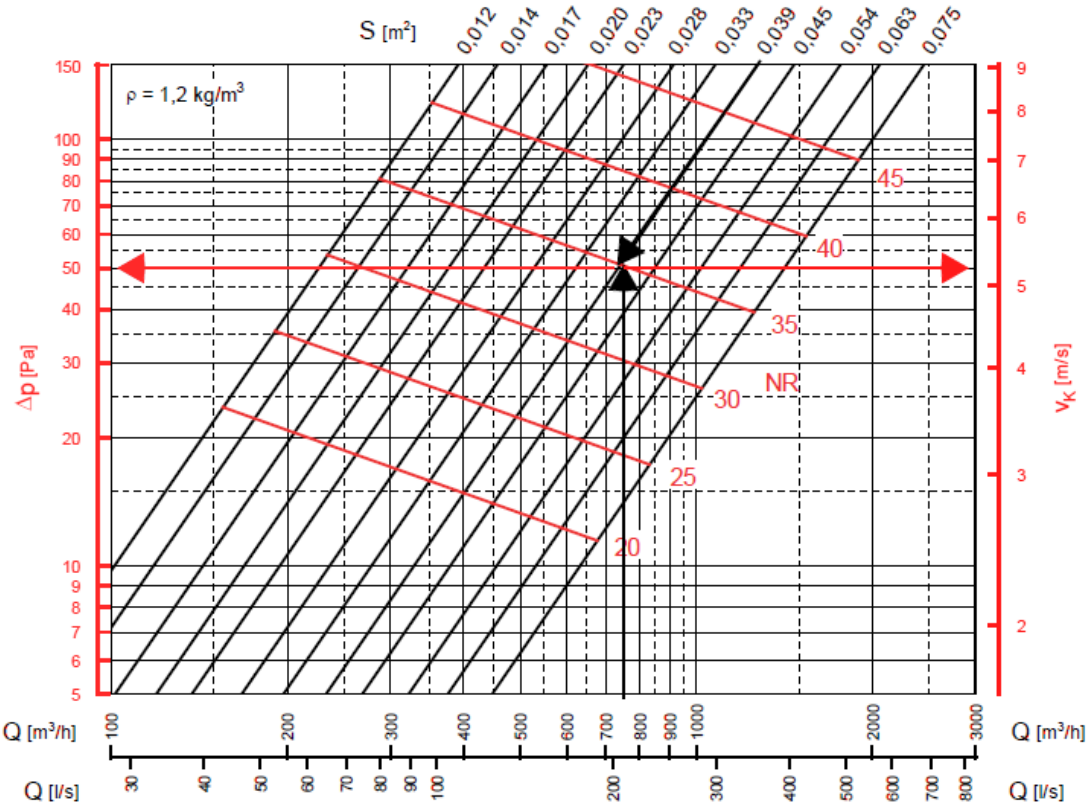
Lt(m) : Throw Distance
NR : Sound Level
Pt(Pa) : Pressure Drop
Vk(m/s): Slot Output Speed

DATA DIAGRAMS

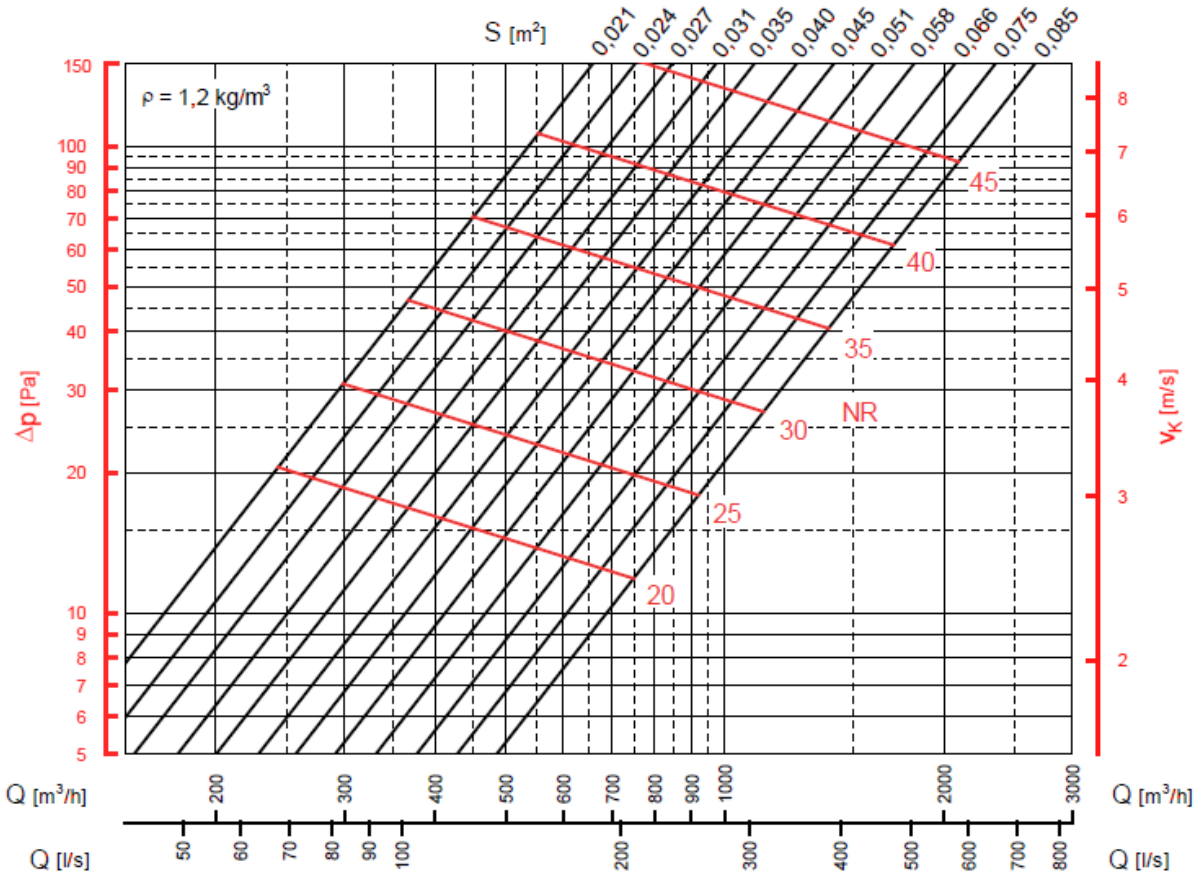
EFFECTIVE JET VELOCITY (m/s)



PRESSURE DROP AND NOISE LEVELS (for 1/2 slots)



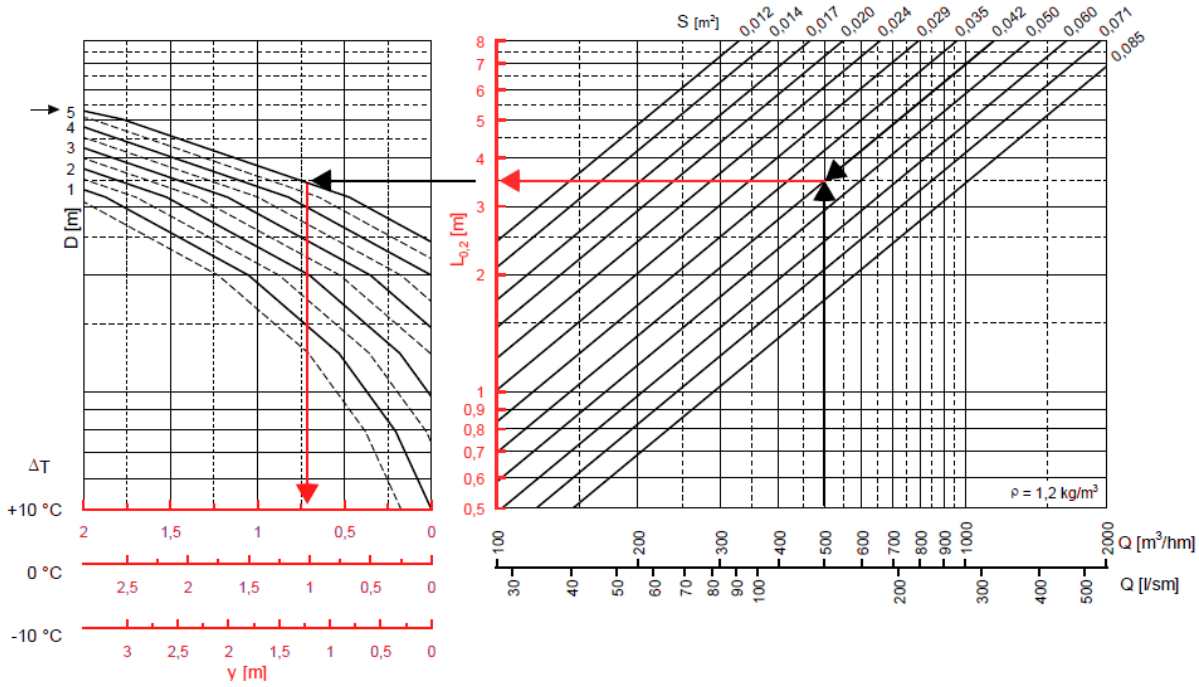
PRESSURE DROP AND NOISE LEVELS (for 3/4 slots)



Q [m³/hm]	supply air flow rate
v_k [m/s]	velocity relating to the effective outlet area S
Δp [Pa]	total pressure loss
NR	noise rating (ISO standard, in relation to 10^{-12} W) taking no account of the attenuation of the room

Correction of values Δp and NR with SS damper fully open, Δp= Δp x 1,3, NR= NR + 3

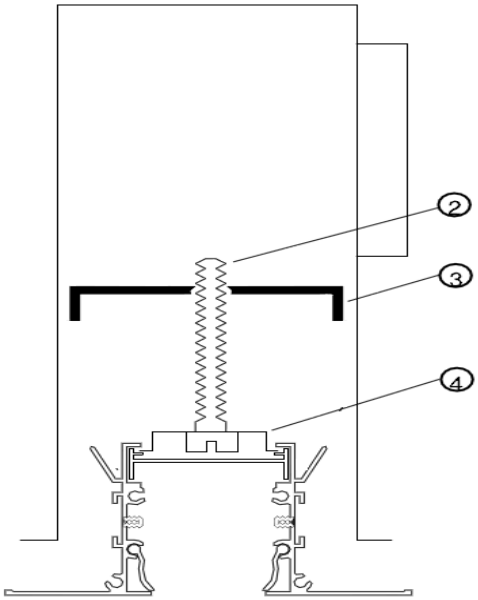
THROW DISTANCES (m)



Q [m³/h] o [l/s]	supply air flow rate
S [m²]	diffuser effective outlet area
v_m [m/s]	average velocity of the throw at distance L
L [m]	diffusion radius (= x + y)
x [m]	horizontal dimension of the throw
y [m]	vertical dimension of the throw
$L_{0,2}$ [m]	throw with terminal velocity of 0.2 m/s
D [m]	distance between two diffusers
ΔT [°C]	difference between supply air and ambient temperature

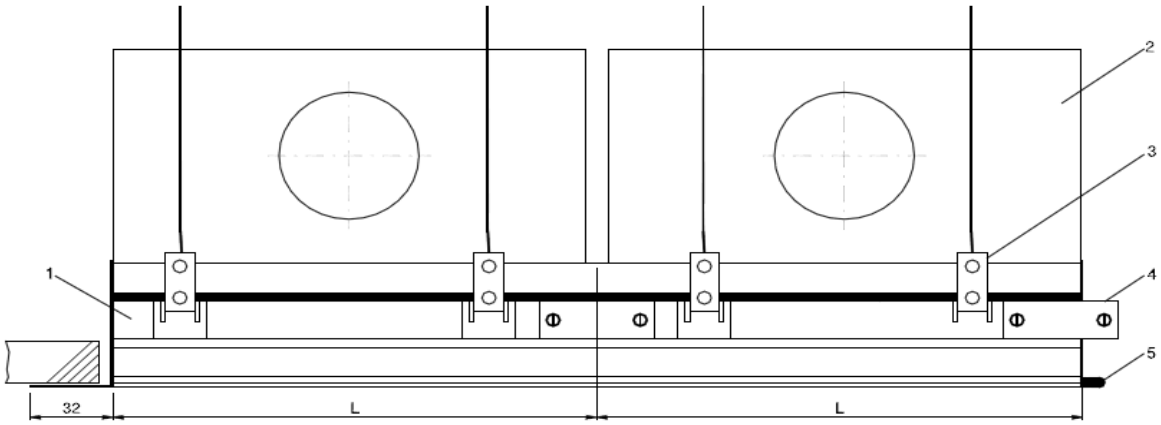
MOUNTING DETAILS :

Bridged Mounting



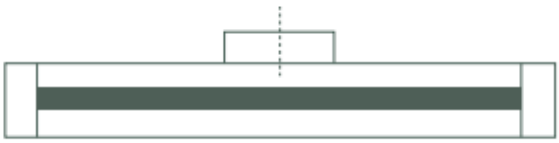
1 - Hanger
2 - Slot Diffuser Bridge bolt
3 - Plenum Box Bridge piece
4 - Slot Diffusers Bridge Piece

Continuous Assembly



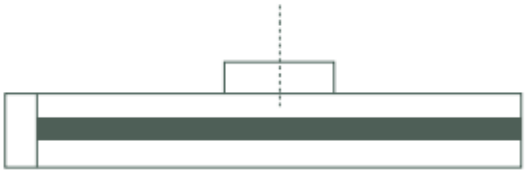
1 - Slot Diffusers
2 - Plenum Box
3 - Hanger
4 - Combination Piece
5 - Combination Pin

END CAP ARRANGEMENTS



End caps - both ends (A)

End cap on right (B)



End cap on left (C)

Without end cap(O)

ORDER CODES

SD323	PL	06	PFD	RAL9010	BM	L 1000	S1
SD323: Flat Curve **SD324:** Convex **SD325:** Concave	00: No Plenum Box PL: With Plenum Box	00: PL Non-insulated 06: PL insulated (6mm) 09: PL insulated (9mm)	000: PL-Without Damper PFD: PL-Perforated Damper	00: No coating EX: Eloxal Coating RAL----: Oven Drying Coating	00: No Mounting BM: Bridge Mounting	L: Length	NUMBER OF DIFFUSER SLOTS (Between 1to 4)