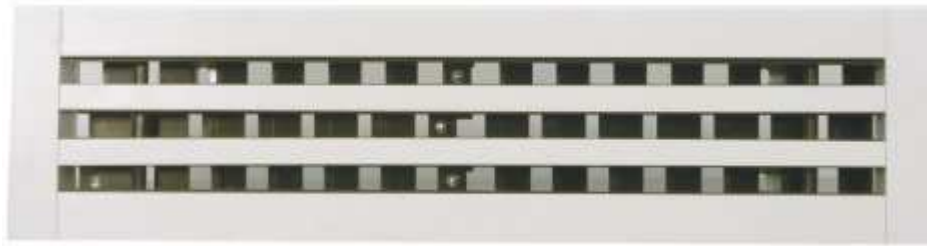




## Linear Slot Diffuser SD123

**DESCRIPTION:**

The SD123 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 SD123 provides the ideal combination of engineering excellence and architectural appeal.

**MATERIAL :**

Extruded aluminium frame and deflector

**FUNCTION :**

The slot diffuser, type SD123 is used for the supply and return of cooled and heated air in facilities such as offices, shops, meeting rooms. 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.

SD123: Supply slot diffuser with damper and deflector blades

SD124 : Return slot diffuser with damper

SD125: Curved Supply / Return

SD126 : 4-way Slot Diffuser

**FINISHING :**

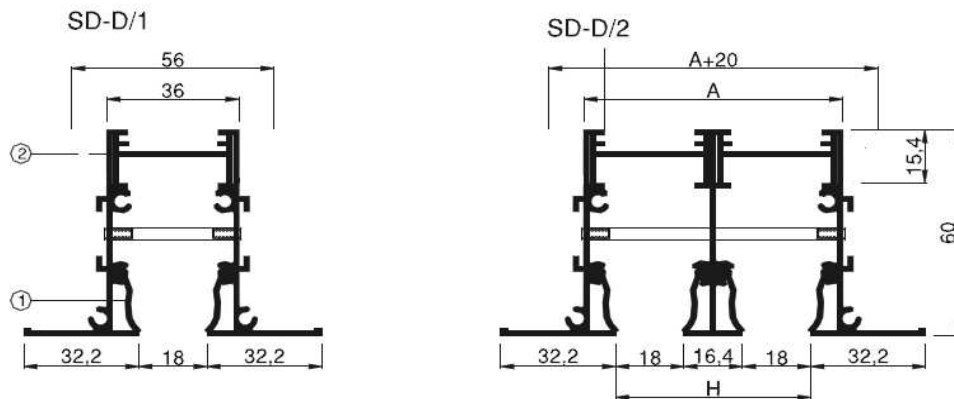
- Standard finishing is natural anodized. Electrostatic powder coating is optional.
- Standard colours are RAL 9010 and RAL 9016 . Other colours are available with enamel paint.

**INSTALLATION :**

- Bridge (standart)

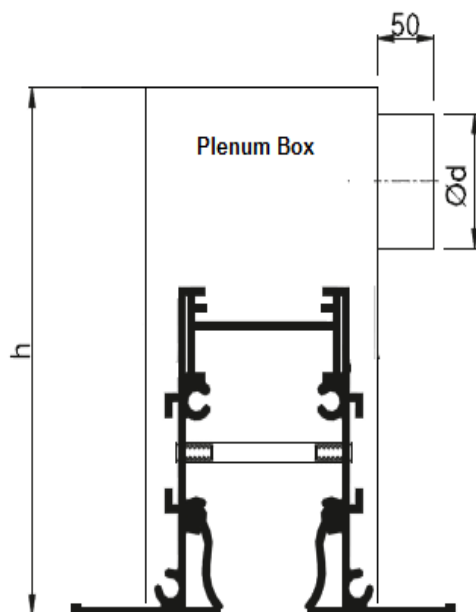
**ACCESSORIES:**

- Plenum box

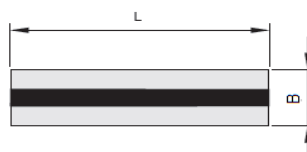
**STANDARD SIZES (mm):**

① Air supply direction blade ② Volume damper

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

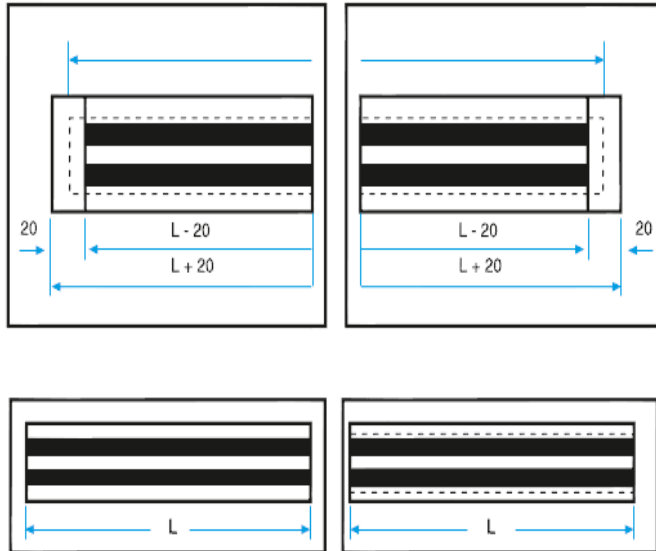
**Plenum Box Dimensions (mm):**

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

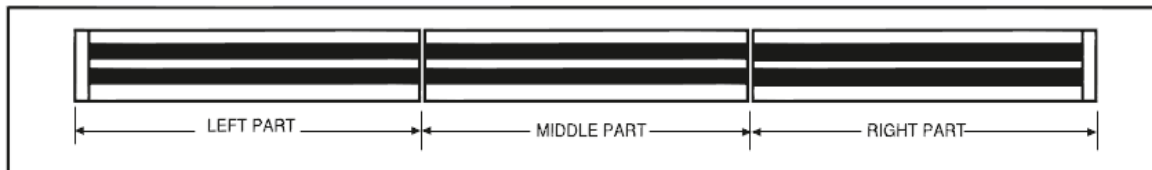
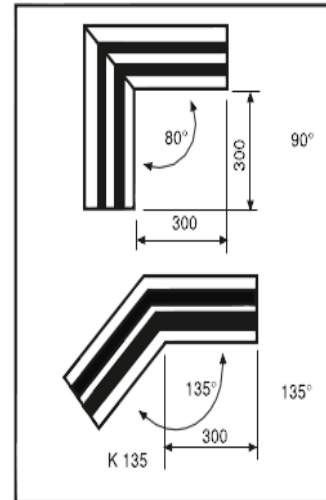


## INSTALLATION COMBINATION

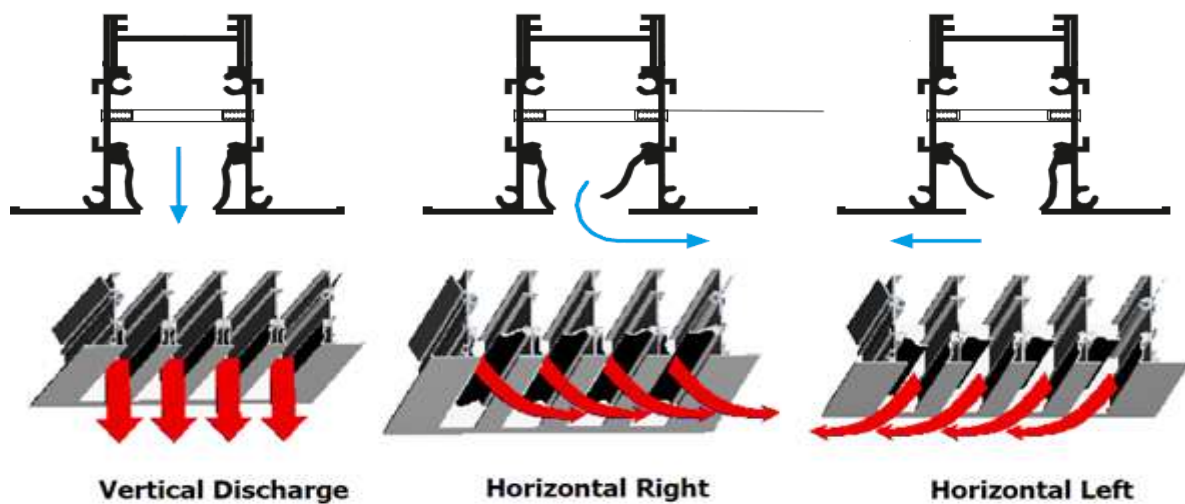
### END CAB COMBINATIONS



### CORNER PIECES



### AIR DEFLECTION TYPES





## 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

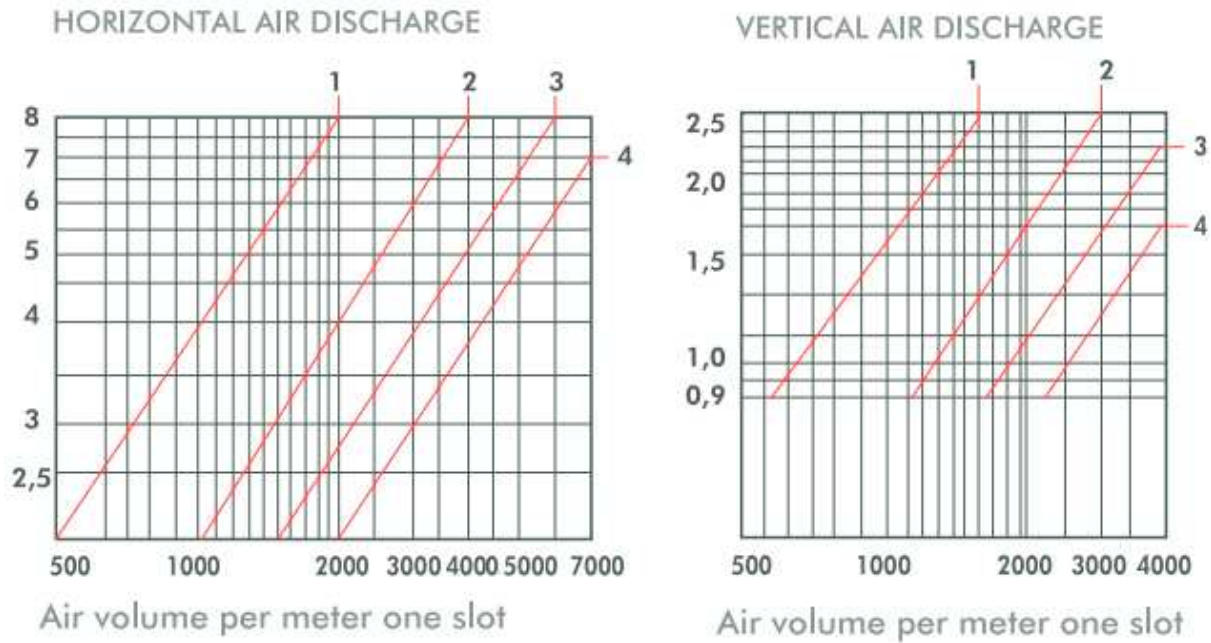
H= 3 ± 0,5 mt (Ceiling height)  
Vt: 0.25 m/s

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

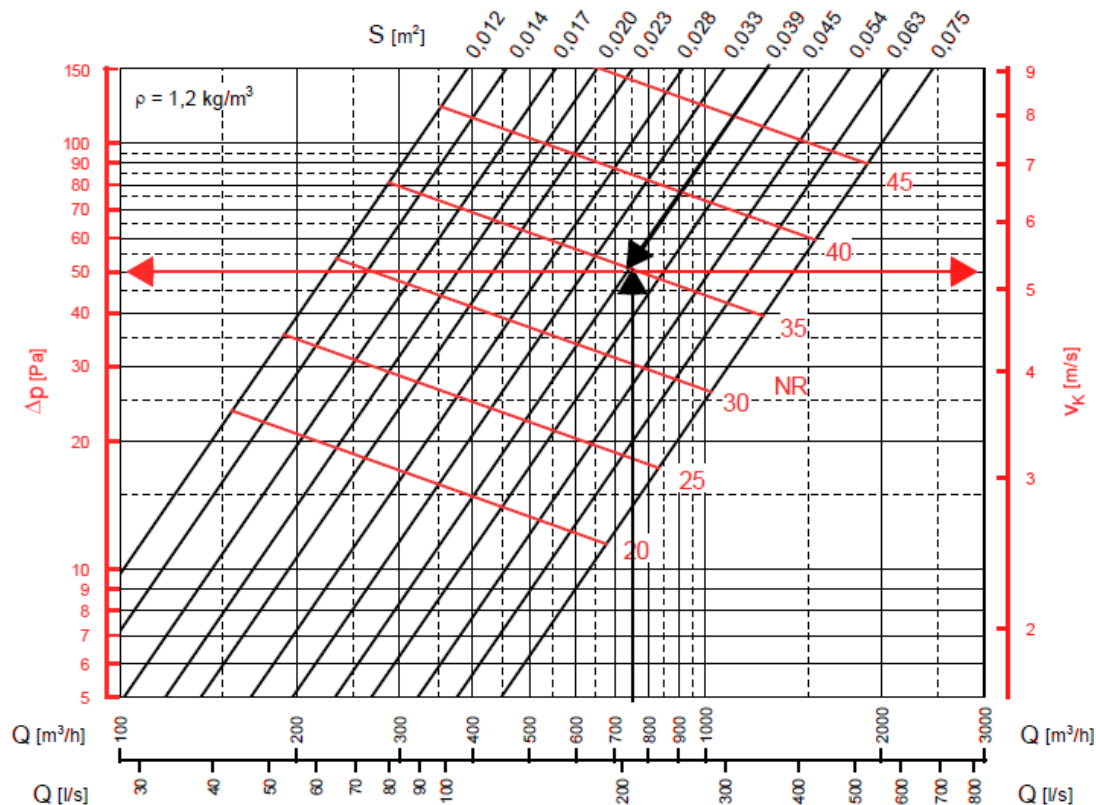


## DATA DIAGRAMS

## EFFECTIVE JET VELOCITY (m/s)

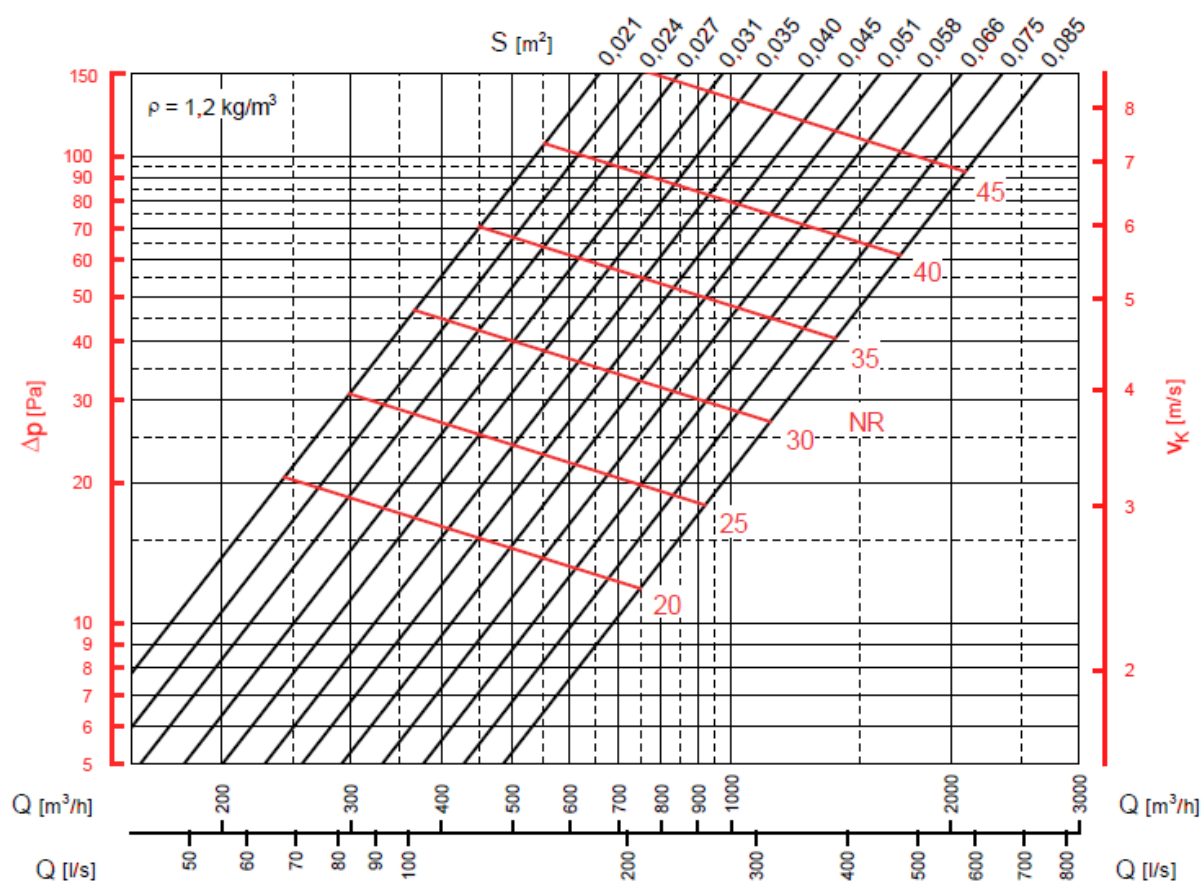


## PRESSURE DROP AND NOISE LEVELS (for 1/2 slots)





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



$Q$  [m<sup>3</sup>/h] supply air flow rate

$v_k$  [m/s] velocity relating to the effective outlet area  $S$

$\Delta p$  [Pa] total pressure loss

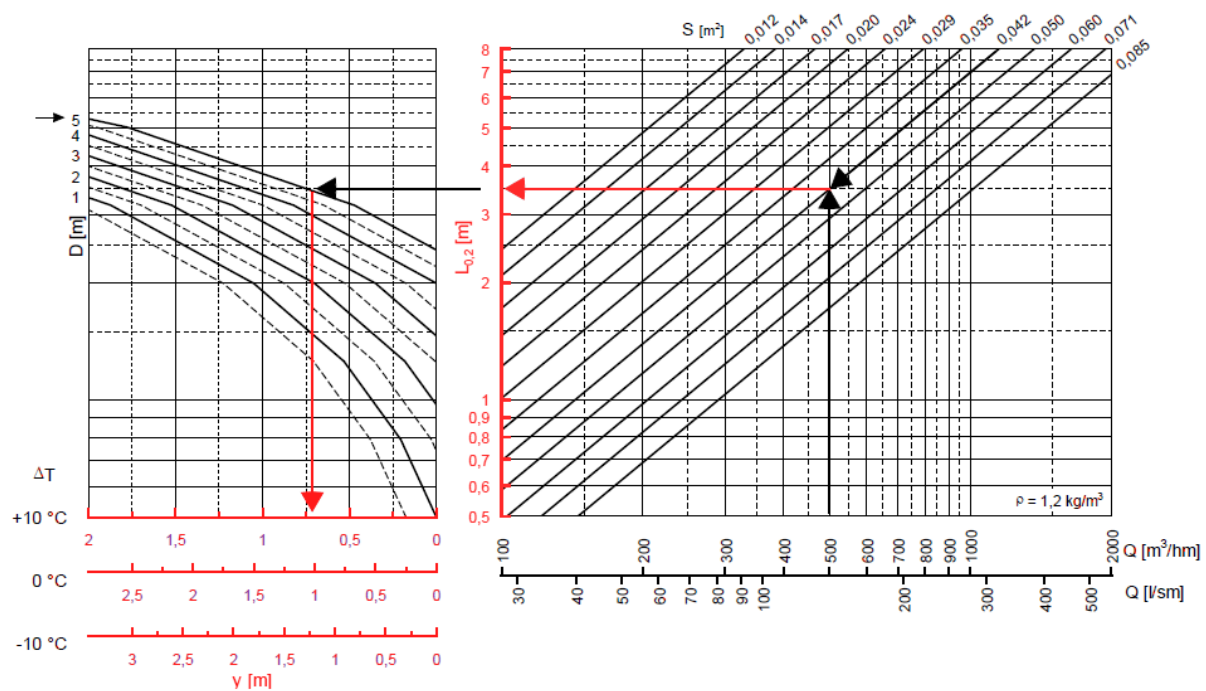
NR noise rating (ISO standard, in relation to  $10^{-12}$  W) taking no account of the attenuation of the room

Correction of values  $\Delta p$  and NR with SS damper fully open,  $\Delta p = \Delta p \times 1,3$ ,  $NR = NR + 3$





## 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

$\Delta T$  [°C]

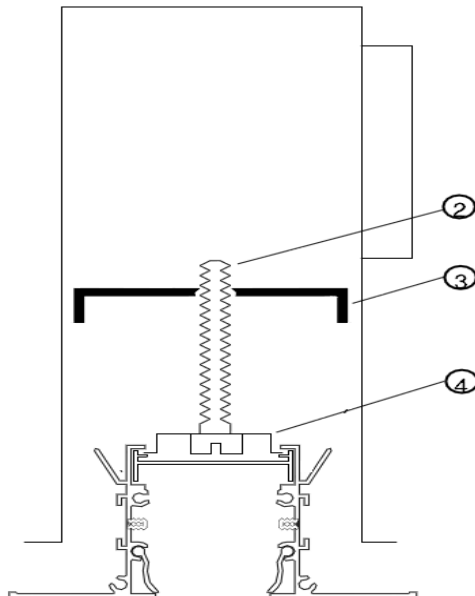
difference between supply air and ambient temperature





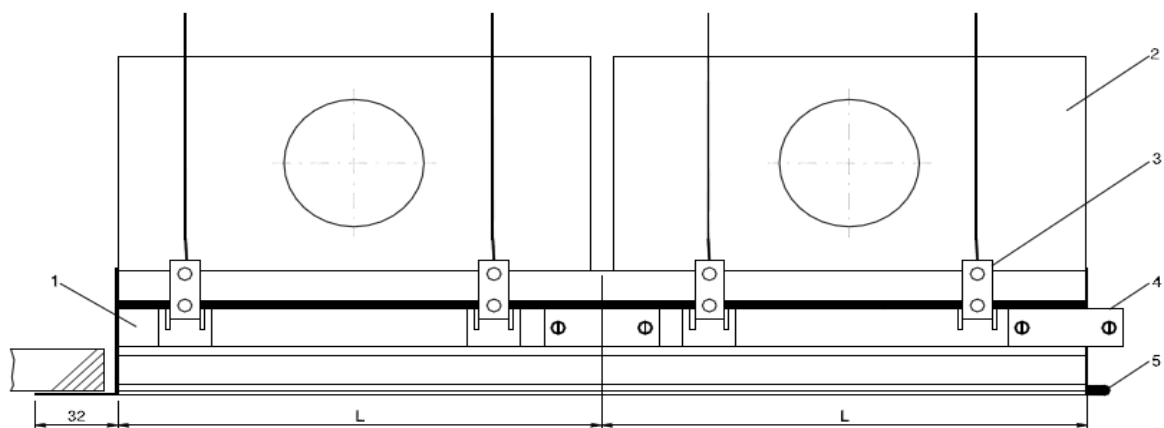
## MOUNTING DETAILS :

### Bridged Mounting



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

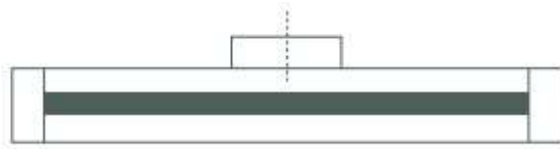
### Continuous Assembly



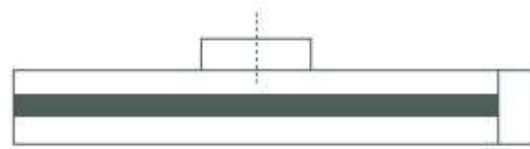
- 1 - Slot Diffusers
- 2 - Plenum Box
- 3 - Hanger
- 4 - Combination Piece
- 5 - Combination Pin



## END CAP ARRANGEMENTS



End caps - both ends (A)



End cap on right (B)



End cap on left (C)



Without end cap(O)



## ORDER CODES

SD123-D	PL	06	PFD	RAL9010	BM	L 1000	S1
<b>SD123:</b> Supply slot diffuser with damper and deflector blades <b>SD124:</b> Return slot diffuser with damper <b>SD125:</b> Curved Supply / Return <b>SD126:</b> 4-way Slot Diffuser							
						L: Length	NUMBER OF DIFFUSER SLOTS (Between 1to 4)
<b>00:</b> No Plenum Box <b>PL:</b> With Plenum Box							NUMBER OF DIFFUSER SLOTS (Between 1to 4)
<b>00:</b> PL Non-insulated <b>06:</b> PL insulated (6mm) <b>09:</b> PL insulated (9mm)					<b>00:</b> No Mounting <b>BM:</b> Bridge Mounting		
<b>000:</b> PL-Without Damper <b>PFD:</b> PL-Perforated Damper					<b>00:</b> No coating <b>EX:</b> Eloxal Coating <b>RAL-----:</b> Oven Drying Coating		