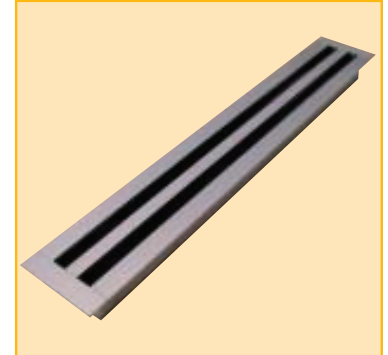
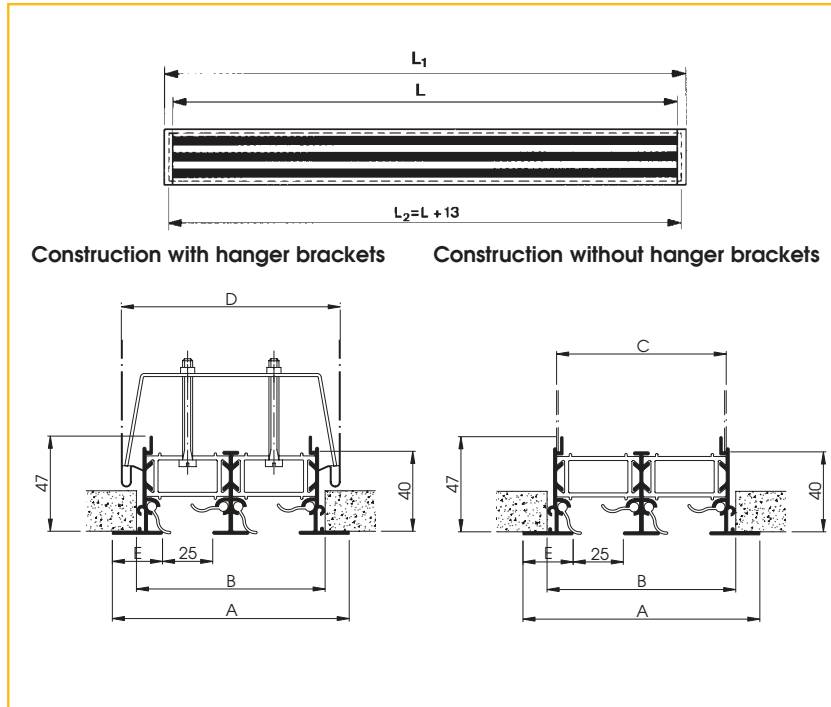


ADJUSTABLE SLOT DIFFUSER

TYPE: SE800

Installation dimensions



Application

The slot diffuser, type SE800 is used for the supply of cooled and heated air in facilities such as offices, shops, meeting rooms, ...

It is designed for installation in the ceiling or sidewall and is available from 1 to 8 slots. Each slot is individually adjustable and equipped with 2 deflector vanes of a special design to minimise 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.

	Number of slots							
	1	2	3	4	5	6	7	8
A (SE)	75	118	161	204	247	290	333	376
B	54	97	140	183	226	269	312	355
C	41	84	127	170	213	256	299	342
D	64	107	150	193	236	279	322	365

L = slot length
L₂, B = minimum ceiling opening

SE : L₁ = L + 50
E = 25

All dimensions in mm.

Technical information

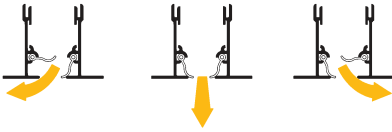
Characteristics

- available up to 8 slots
- all lengths available (in steps of 1 mm): from 300 mm up to 2000 mm in one piece; larger lengths with intermediate pieces (length = 1500 mm) and end pieces
- margin width of 25 mm
- none operational parts or dummy diffusers; slots are closed by black PVC strips (S-850)
- exhaust: without deflectors
- supply: horizontal or vertical air supply pattern possible by

ADJUSTABLE SLOT DIFFUSER

TYPE: SE800

Adjustment possibilities:

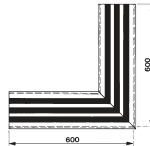


- corner sections: for types S-800 and S-850 of slot diffusers corner sections in one piece are available in the dimensions as indicated. No plenum available for corner sections. Standard construction with corner of 90°, fitting in a ceiling opening of 600 mm.
O/all dimension = 614 mm

- available with plenum:
 - with or without damper in the inlet
 - up to a length of 1600 mm supplied with one circular inlet spigot, over 1600 mm: two circular inlet spigots

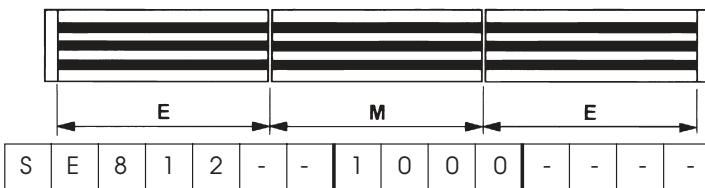
Construction:

- natural tone anodised aluminium, with deflectors in black extruded aluminium
- construction with deflectors in white extruded aluminium, diffuser standard satin anodised
- galvanised steel sheet plenum, optional insulation



How to order

SE800 with 2 slots and black aluminium deflectors, slot length 1000 mm.



slot length (mm)

- : slot diffuser in one piece with end caps on both sides
- E: end pieces, with one end cap
- M: intermediate piece, without end caps
- C: corner section 90° (600 x 600 mm)
- number of slots
- 0: exhaust, no deflectors
- 1: supply, with **black** aluminium deflectors
- 2: supply, with **white** aluminium deflectors
- 5: dummy diffuser

E: frame width 25 mm

Fixing

- concealed fixing
- either by a direct and fixed mounting of the diffuser on the plenum (mounting by Grada upon request)
- or by mounting brackets so that the diffuser can be removed from the plenum
- provided with mounting eyes (ø 7 mm), mounting straps available upon request

Specifications description

Example:

Aluminium linear diffuser with 2 supply slots and adjustable deflectors. Complete with fixed mounted plenum, insulated at the inside, with circular side inlet spigot and damper. Diffuser natural tone anodised, black aluminium deflectors.

Type: **SE812 + SP832 G**
L = ... mm

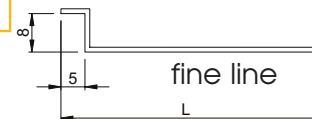
Accessories

BOBSE: blanking off baffle; made out of steel sheet, painted black RAL 9005

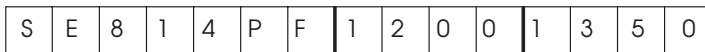
SE mounting brackets for ceiling application: direct mounting when no plenum is provided.

Insertpat: for diffuser mounting on different plenum lengths.

(see Assembly drawing SP800)



Slot diffuser in a panel



slot length (mm) panel length

- F: painted in RAL-colors
- P: with panell, with rebord of 10 mm on all sides*
- Z: with panel, with fine line 5/8 ont het two shortest sides**
- 4: number of slots
- 1: black deflectors
- 2: white deflectors

* All panels have a width of 300 mm and a flange of 10 mm at all sides.

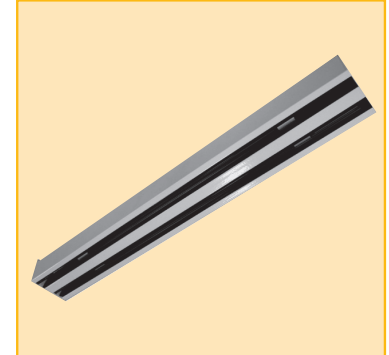
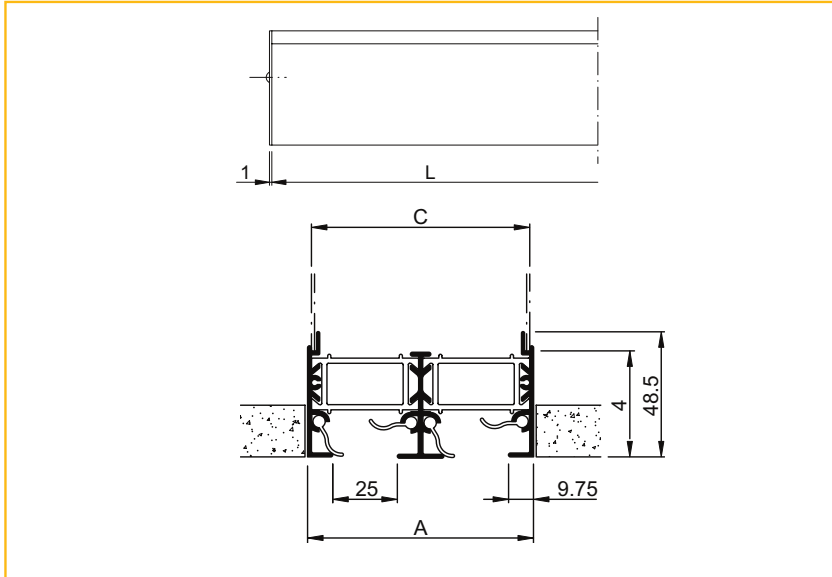
** All panels have a width of 300 mm and a flange of 10 mm at the longest side. The length of the panel, is the total length, fine line included

Remarque: The length of the panel must be 55 mm (at the minimum) longer than the nominal length of the diffuser.

ADJUSTABLE SLOT DIFFUSER

TYPE: SB800

Installation dimensions



Application

The slot diffuser, type SB800 is used for the supply of cooled and heated air in facilities such as offices, shops, meeting rooms, ...

It is designed for ceiling or sidewall mounting and is available with 1 to 5 slots. Each slot is individually adjustable and equipped with 2 specially designed deflector vanes to minimise the internal turbulences. An ideal air supply pattern adjustable over 180° can be obtained.

All lengths are available for an ideal fit in every ceiling system.

	Number of slots				
	1	2	3	4	5
A	44,5	87,5	130,5	173,5	216,5
C	41	84	127	170	213

L = slot length
All dimensions in mm

Technical information

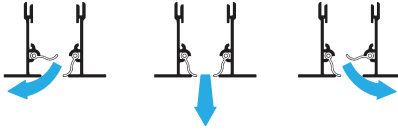
Characteristics

- available up to 5 slots
- all lengths available (in steps of 1 mm): from 300 mm up to 2000 mm in one piece
- none operational parts or dummy diffusers; slots are blanked off by black PVC strips (SB850)
- exhaust: without deflectors
- supply: horizontal or vertical air supply pattern possible by adjustable deflectors

ADJUSTABLE SLOT DIFFUSER

TYPE: SB800

Adjustment possibilities:



available with plenum:

- with or without damper in the inlet
- up to a length of 1600 mm supplied with one circular inlet spigot, over 1600 mm: two circular inlet spigots

Construction

- sl natural tone anodised aluminium, with deflectors in black extruded aluminium
- construction with deflectors in white extruded aluminium, diffuser standard satin anodised
- plenum out of galvanised steel sheet, optional insulation

Fixing

- concealed fixing
- direct and fixed mounting of the diffuser on the plenum (mountin Grada upon request)
- provided with mounting eyes (ø 7 mm), mounting straps available upon request
- only possible with plenum SP 820/830

Specifications description

Example:

Aluminium linear diffuser with 2 supply slots and adjustable deflectors. Complete with fixed mounted plenum, insulated at the inside, with circular side inlet spigot and damper. Diffuser natural tone anodised, black aluminium deflectors.

Type: SB812 + SP832 G
L = ... mm

Accessories

BOBSE: blanking off baffle; made out of steel sheet, painted black (RAL 9005)

How to order

SB800 with 2 slots and black aluminium deflectors, slot length 1000 mm

S	B	8	1	2	-	-	1	0	0	0	-	-	-	-
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

slot length (mm)

-: slot diffuser in one piece with end caps on both sides

E: end pieces, with one end cap

M: intermediate piece, without end caps

number of slots

0: exhaust, no deflectors

1: supply, with **black** aluminium deflectors

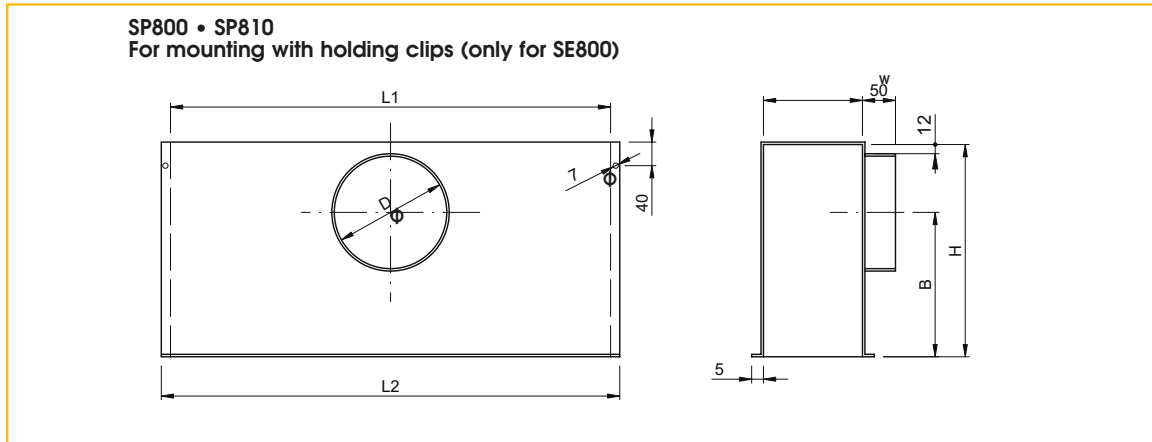
2: supply, with **white** aluminium deflectors

5: dummy diffuser

ADJUSTABLE SLOT DIFFUSER

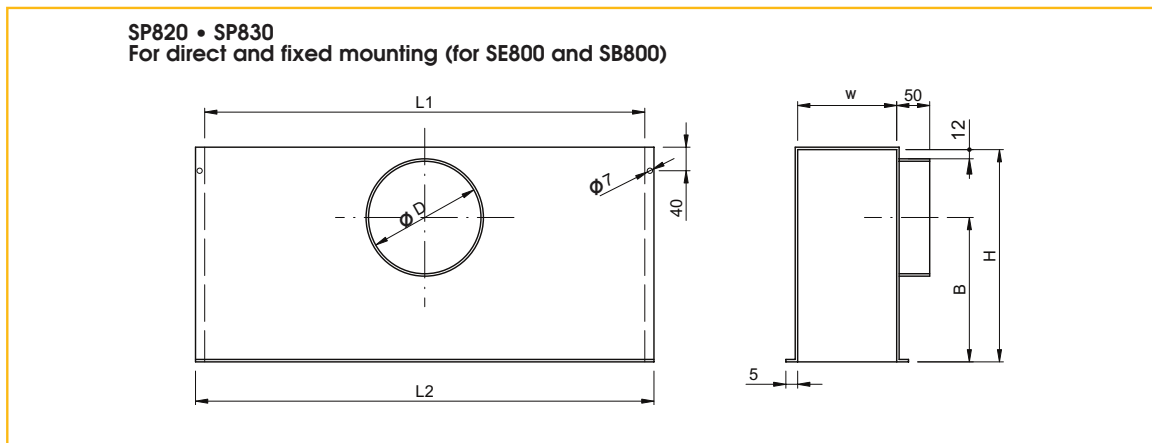
TYPE: SP800

Installation dimensions



	Number of slots							
	1	2	3	4	5	6	7	8
Ø D	125	158	198	198	248	248	313	313
B	125	158	188	238	263	263	280	280
H	200	250	300	350	400	400	450	450
W	51	94	137	180	223	266	309	352

SP800 • SP810: $L_1 = L + 11$ $L_2 = L + 35$
 SP00L&R • SP810L&R: $L_1 = L + 6$ $L_2 = L + 18$
 SP800M • SP810M: $L_1 = L - 22$ $L_2 = L$



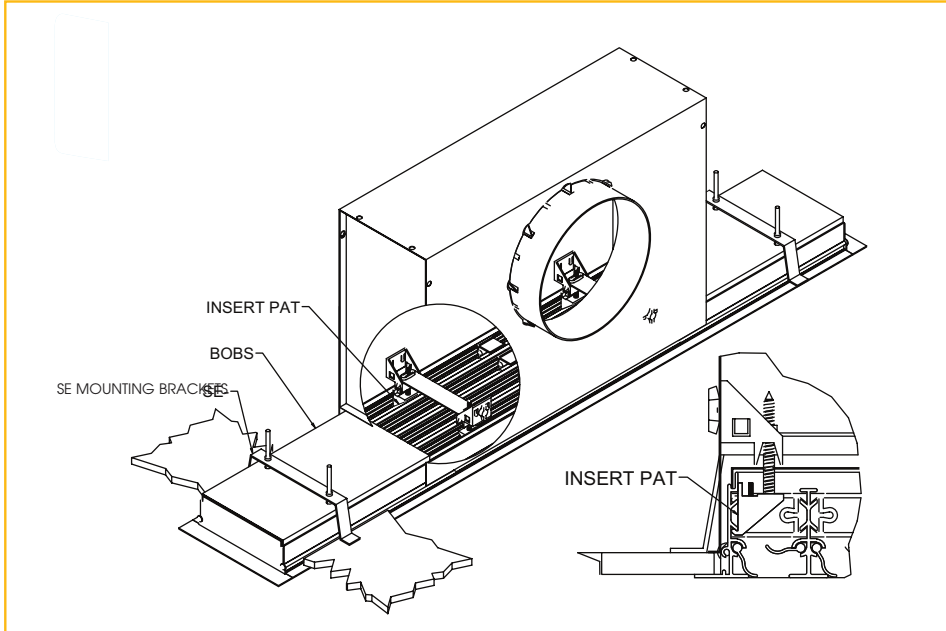
	Number of slots							
	1	2	3	4	5	6	7	8
Ø D	125	158	198	198	248	248	313	313
B	125	158	188	238	263	263	280	280
H	200	250	300	350	400	400	450	450
W	41	84	127	170	213	256	299	342

* NOTE: L (Left) and R (Right) looking at plenum front
 L = slot length
 All dimensions in mm

ADJUSTABLE SLOT DIFFUSER

TYPE: SP800

Assembly drawing



How to order

SP800 for a slot diffuser with 2 slots, insulated, for mounting with holding clips, no damper, L = 1000 mm; delivered separately.

S	P	8	0	2	-	G	0	1	6	0	1	0	0	0
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

spigot diameter slot length (mm)

-: non insulated plenum
G: internally insulated plenum
H: plenum insulated at the top and on the opposite side of the inlet

-: one piece
R: end piece right*
L: end piece left*
M: intermediate piece

number of slots

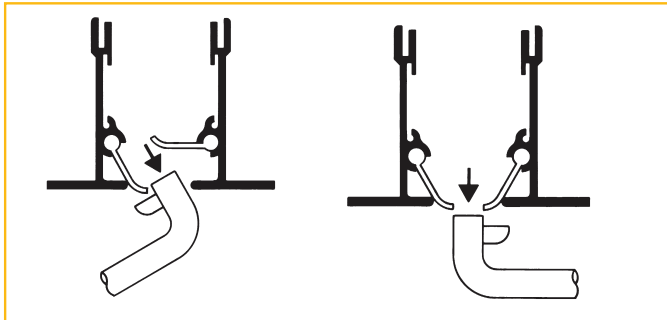
- 0: for mounting with screws**, no damper in the inlet spigot
- 1: for mounting with screws**, with damper in the inlet spigot
- 2: for direct fixed mounting, no damper in the inlet spigot
- 3: for direct fixed mounting, with damper in the inlet spigot
- 4: for mounting with mounting brackets, without damper and with mounting straps***
- 5: for mounting with mounting brackets, with damper and with mounting straps***
- 6: for direct fixed mounting, without damper and with mounting straps***
- 7: for direct fixed mounting, with damper and with mounting straps***

* L (Left) and R (Right) looking at plenum front
** mounting of grill onto the plenum
*** mounting of the plenum into the ceiling

ADJUSTABLE SLOT DIFFUSER

TYPE: S-800

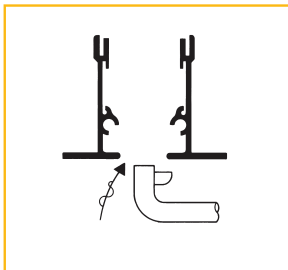
Air flow rate measurement - supply



Velometer jet 2220 A or 6070

A _k - values (m ² /m)				
	Number of slots			
	1	2	3	4
A _k	0,009	0,018	0,027	0,036

Air flow rate measurement - exhaust



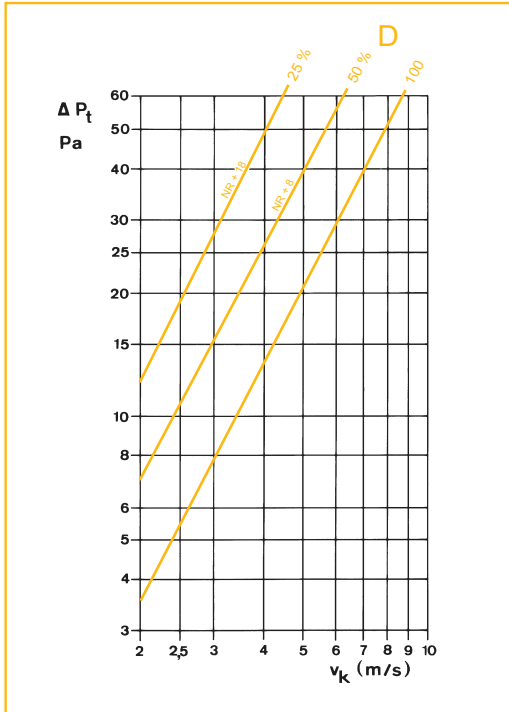
Velometer jet 2220 A or 6070

A _k - values (m ² /m)				
	Number of slots			
	1	2	3	4
A _k	0,016	0,032	0,049	0,065

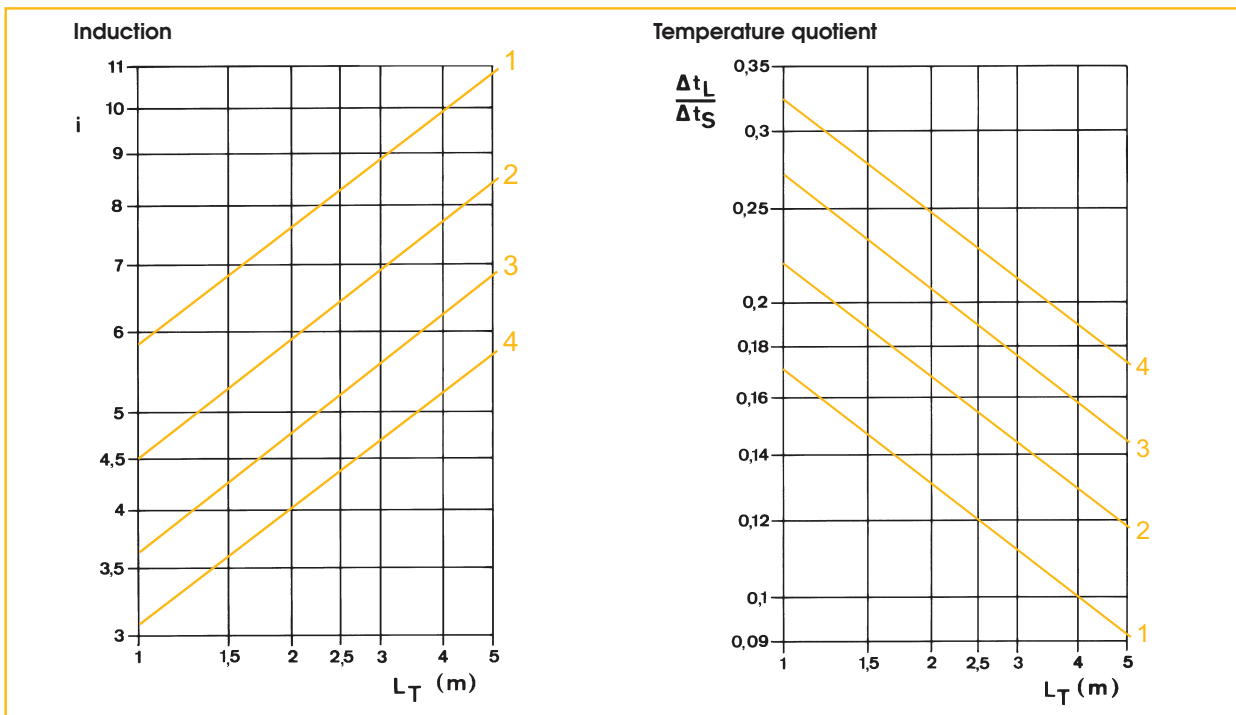
ADJUSTABLE SLOT DIFFUSER

TYPE: S-800

Pressure loss - supply



Induction and temperature quotient with ceiling effect



ADJUSTABLE SLOT DIFFUSER

TYPE: SB/SE 800 SERIES SELECTION DATA

25MM ONE SLOT

NUMBER OF SLOT DIFF	VOL PER MTR L/S	OUTLET VEL	THROW	PA	NR
1 SLOT	32	3.56	2.8	9.1	20.0
1 SLOT	40	4.44	3.5	14.2	25.0
1 SLOT	45	5.00	3.9	18.0	30.0
1 SLOT	55	6.11	4.8	26.9	35.0
1 SLOT	65	7.22	5.7	37.6	40.0
1 SLOT	75	8.33	6.5	50.0	45.0

25MM TWO SLOT

NUMBER OF SLOT DIFF	VOL PER MTR L/S	OUTLET VEL	THROW	PA	NR
2 SLOT	55	3.06	3.4	7.8	20.0
2 SLOT	65	3.61	4.0	11.0	25.0
2 SLOT	80	4.44	4.9	16.6	30.0
2 SLOT	95	5.28	5.8	23.4	35.0
2 SLOT	110	6.11	6.8	31.4	40.0
2 SLOT	125	6.94	7.7	40.5	45.0

25MM THREE SLOT

NUMBER OF SLOT DIFF	VOL PER MTR L/S	OUTLET VEL	THROW	PA	NR
3 SLOT	75	2.78	3.8	6.7	20.0
3 SLOT	90	3.33	4.5	9.7	25.0
3 SLOT	110	4.07	5.5	14.4	30.0
3 SLOT	130	4.81	6.5	20.2	35.0
3 SLOT	155	5.74	7.8	28.7	40.0
3 SLOT	180	6.67	9.0	38.7	45.0

25MM FOUR SLOT

NUMBER OF SLOT DIFF	VOL PER MTR L/S	OUTLET VEL	THROW	PA	NR
4 SLOT	95	2.64	4/1	6.1	20.0
4 SLOT	110	3.06	4.8	8.1	25.0
4 SLOT	140	3.89	6.1	13.2	30.0
4 SLOT	160	4.44	7.0	17.2	35.0
4 SLOT	200	5.56	8.7	26.9	40.0
4 SLOT	225	6.25	9.8	34.0	45.0

ADJUSTABLE SLOT DIFFUSER TYPE: S-800

Example

SUPPLY

Selection data:

- Air flow rate $q_V = 0,09 \text{ m}^3/\text{s.m}$
- Throw $L_T = 5,7\text{m}$ at $v_T = 0,4 \text{ m/s}$

Solution:

- Number of slots: 2
- Supply air velocity $v_k = 5 \text{ m/s}$
- Noise level NR 34
- Total pressure loss with damper 100 % open: $\Delta p_t = 20 \text{ Pa}$

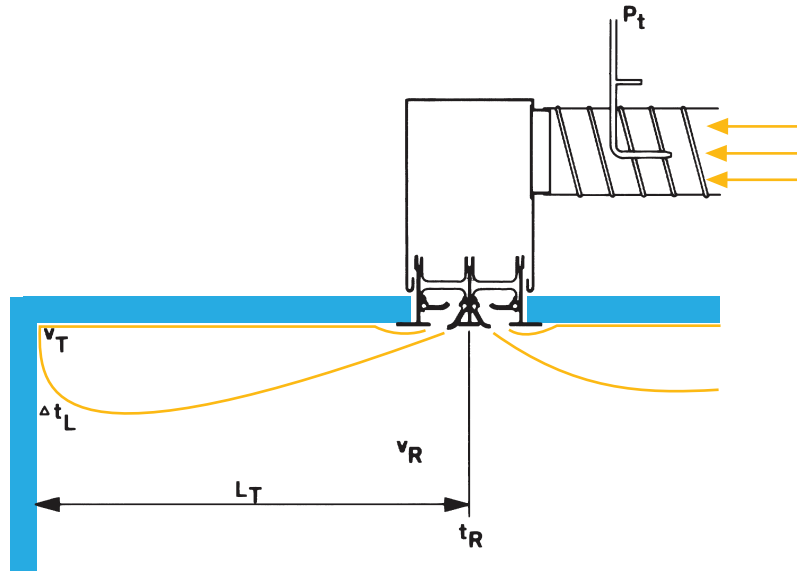
EXHAUST

Selection data:

- Air flow rate $q_V = 0,2 \text{ m}^3/\text{s.m}$
- Number of slots: 3; without deflectors

Solution:

- Supply air velocity $v_k = 4,1 \text{ m/s}$
- Noise level NR 29
- Total pressure loss with damper 100 % open: $\Delta p_t = 8 \text{ Pa}$



Correction factors

For linear slot diffusers

Slot length (m)	Throw correction	Noise rating correction (NR)
1 - 1,5	$L_T \times 1,00$	+0 NR
1,5 - 2	$L_T \times 1,05$	+2 NR
2 - 6,5	$L_T \times 1,1$	+5 NR

Correction factors on vertical throw

	Cooling	Ventilation	Heating
	$\Delta t = -10 \text{ K}$	$\Delta t = 0 \text{ K}$	$\Delta t = +15 \text{ K}$
Case 1	$L_T \times 1$	$L_T \times 0,9$	$L_T \times 0,6$
Case 2	$L_T \times 0,7$	$L_T \times 0,6$	$L_T \times 0,4$

