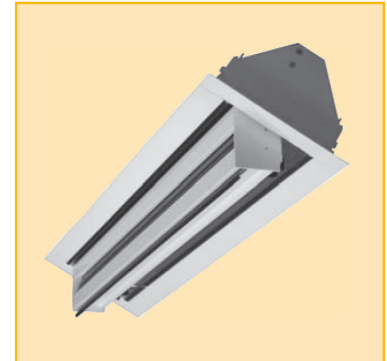
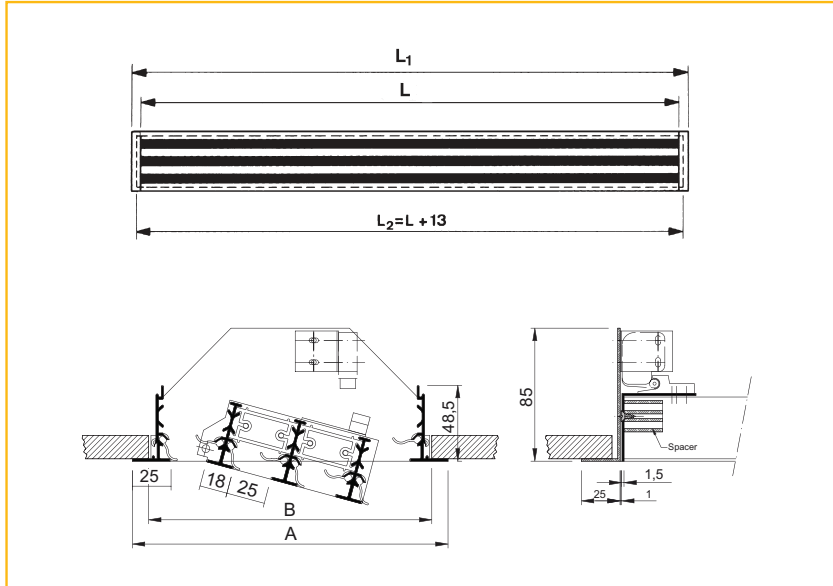


# ADJUSTABLE SLOT DIFFUSER WITH DOOR

## TYPE: SE900

### Installation dimensions



### Application

The slot diffuser type SE900 is used for the supply and exhaust of cooled and heated air in facilities such as offices, shops, meeting rooms, ... It is designed for ceiling or sidewall mounting and is available from 3 to 8 slots. Each slot is individually adjustable and equipped with 2 deflector vanes of a special design to minimise the internal turbulences. An ideal air supply pattern, adjustable over 180° can be obtained. All lengths are available, so the diffuser is perfect to fit in each ceiling system.

	Number of slots					
	3	4	5	6	7	8
<b>A (SE)</b>	161	204	247	290	333	376
<b>B</b>	140	183	226	269	312	355

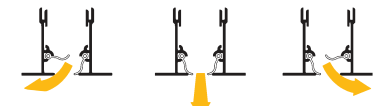
L = slot length  
L<sub>2</sub> . B = minimum ceiling opening  
SE : L<sub>1</sub> = L + 50  
E = 25  
All dimensions in mm

### Technical information

#### Characteristics:

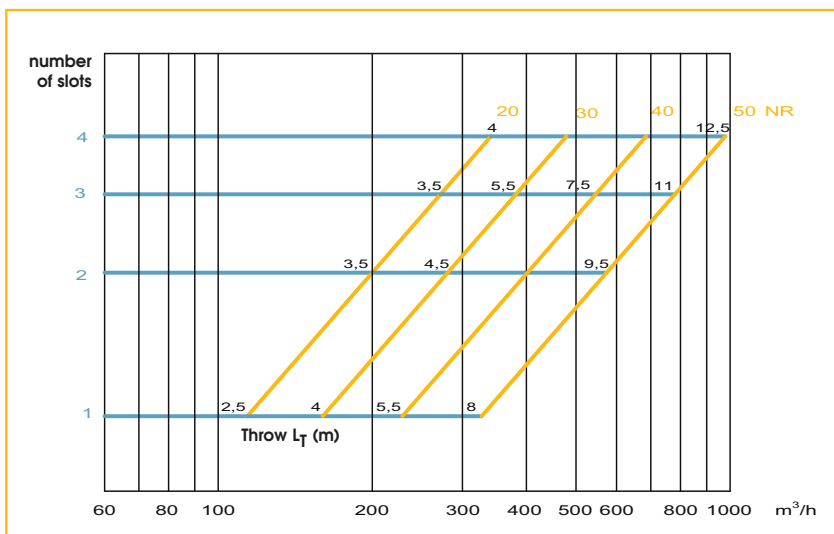
- **SE900:** available from 3 to 8 slots
- all lengths available (in steps of 1 mm) from 300 mm up to 2000 mm in one piece
- frame 25 mm
- exhaust: without deflectors
- supply: horizontal or vertical air supply pattern possible through adjustable deflectors

#### Adjustment possibilities:



Available with plenum box; up to a length of 1600 mm supplied with one circular inlet, over 1600 mm two circular inlets.

### Fast selection diagram



Throw factor is based on a  $v_f$  of 0,17 m/s in the occupied zone.  
See page 4 016 for a detailed selection.

# ADJUSTABLE SLOT DIFFUSER WITH DOOR

## TYPE: SE900

### Construction:

- **SE900:** extruded aluminium and natural tone anodised aluminium with black extruded aluminium deflectors
- **plenum:** galvanised steel sheet, optional insulation.

### Specification description

#### Example:

Aluminium linear diffuser with 3 exhaust slots and adjustable deflectors. Plenum can be supplied mounted or separate, with internal insulation, with circular inlet spigot. Natural to anodised diffuser, black aluminium deflectors

**Type:** SE913 + SP923G  
L = ... mm

### Fixing

- Either by direct and fixed mounting of the diffuser on the plenum (mounting by Grada upon request).
- Plenum provided with mounting eyes (Ø 7 mm), mounting straps available upon request.

### How to order

SE913 with 3 slots and black aluminium deflectors

S	E	9	1	3	-	-	1	0	0	0	-	-	-	-
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

slot length (mm)

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

number of slots

0: exhaust, no deflectors  
1: supply, with black aluminium deflectors  
2: supply, with white aluminium deflectors

E: frame width 25 mm

Slot diffuser in a panel

S	E	9	1	3	P	F	1	2	0	0	1	3	5	0
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

slot length (mm)      panel length

F: painted in RAL-colors

P: with panel, with rebord on all sides\*  
Z: with panel, with fine line 5/8 on the two shortest sides\*\*

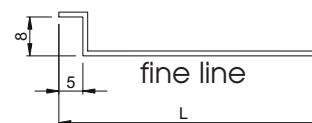
number of slots

1: black deflectors  
2: white deflectors

\* All panels have a width of 300 mm with rebord on all sides and a flange of 10 mm at all sides

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

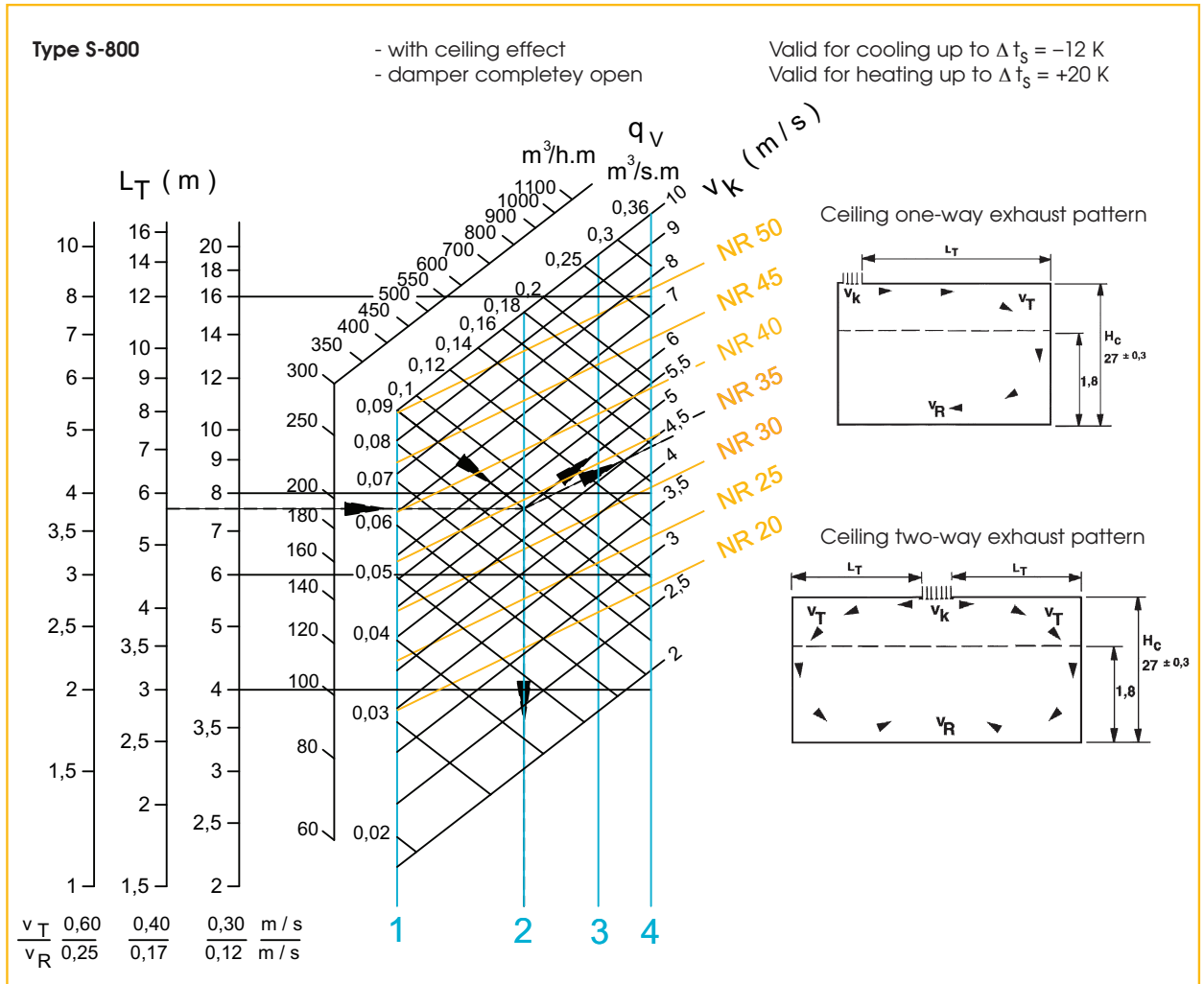
remark: the length of the panel must be 55 mm longer than the nominal length of the diffuser.



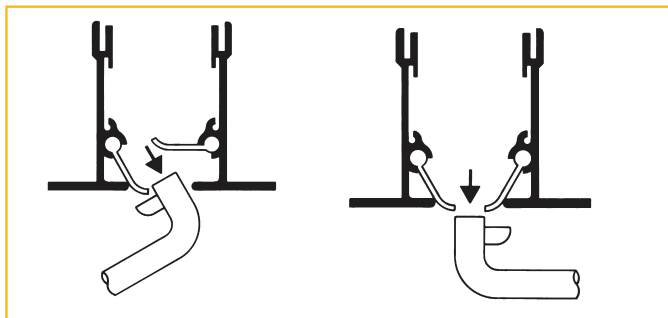
# ADJUSTABLE SLOT DIFFUSER

## TYPE: S-800 • S-900

### Selection diagram - supply



### Air flow rate measurement - supply



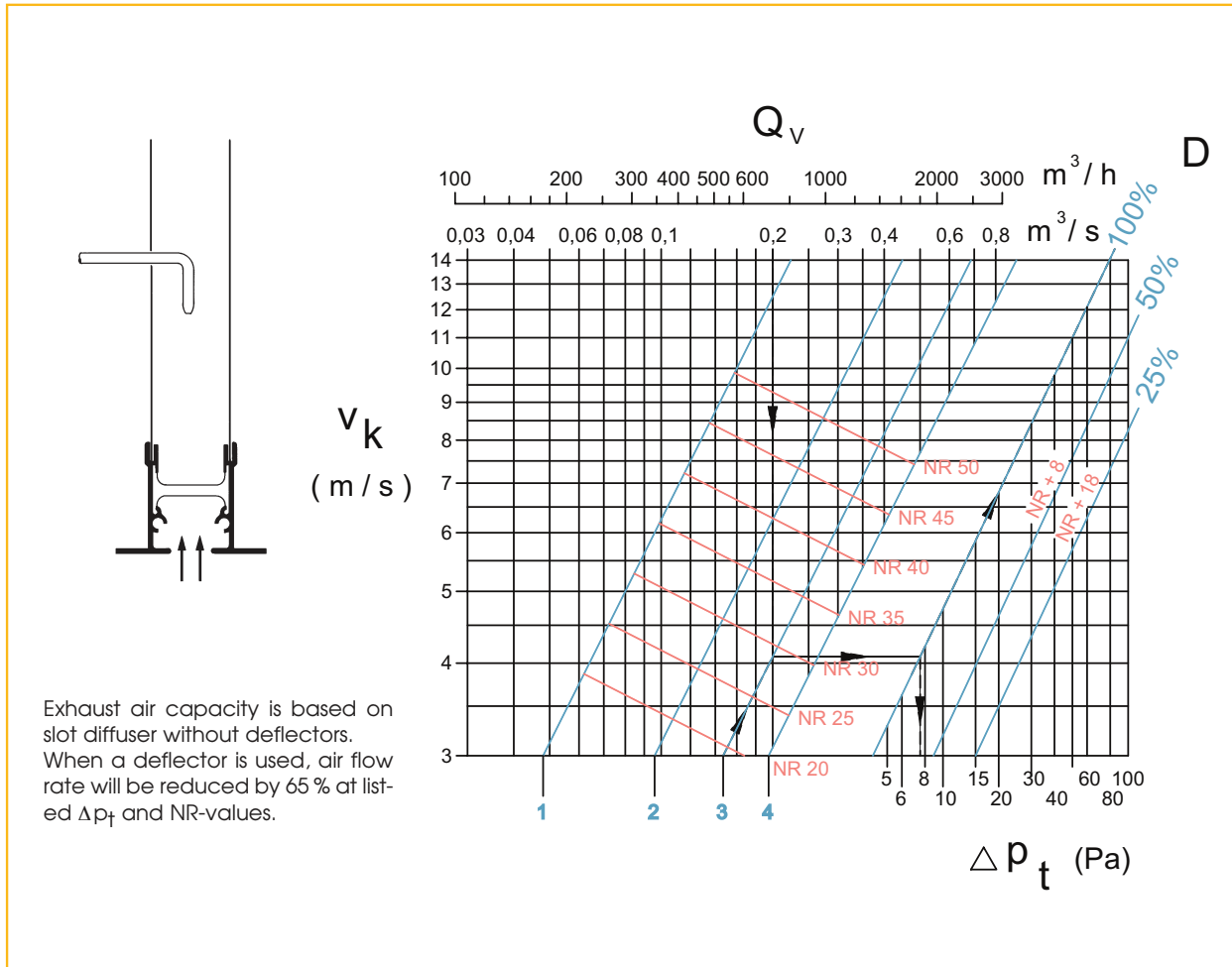
Velometer jet 2220 A or 6070

	$A_k$ - values (m <sup>2</sup> /m)			
	Number of slots			
	1	2	3	4
$A_k$	0,009	0,018	0,027	0,036

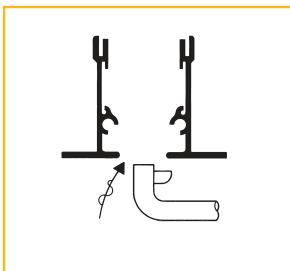
# ADJUSTABLE SLOT DIFFUSER

TYPE: S-800 • S-900

## Selection diagram - exhaust



## Air flow rate measurement - exhaust



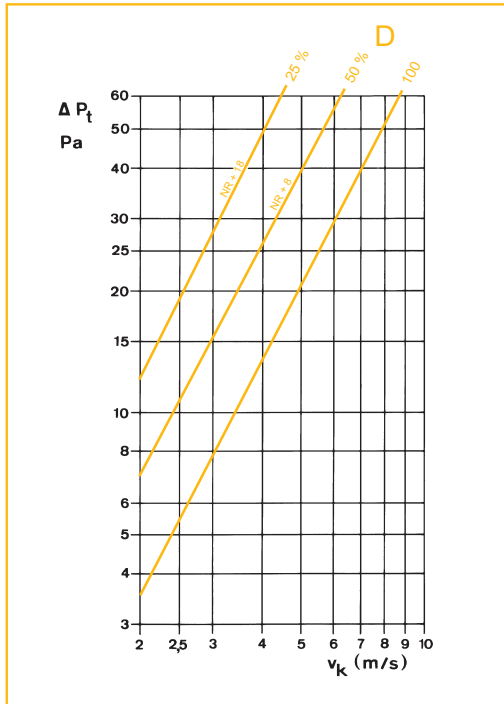
Velometer jet 2220 A or 6070

$A_k$ - values (m <sup>2</sup> /m)				
	Number of slots			
	1	2	3	4
$A_k$	0,016	0,032	0,049	0,065

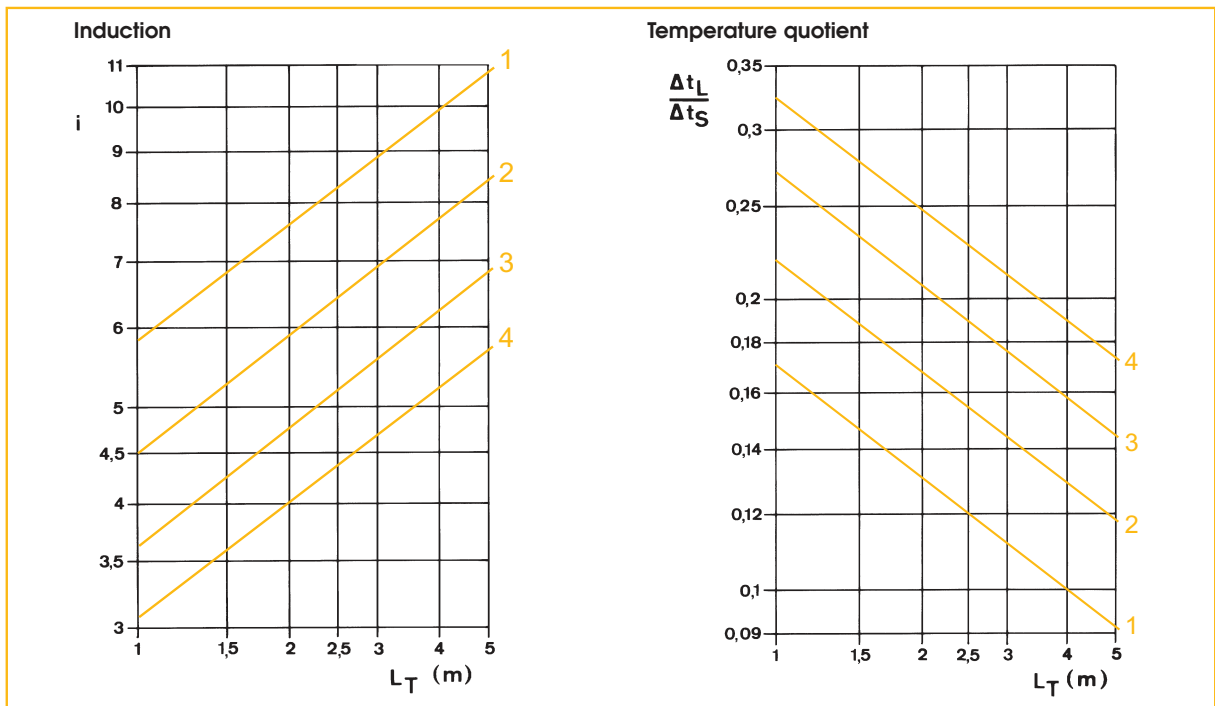
# ADJUSTABLE SLOT DIFFUSER

## TYPE: S-800 • S-900

### Pressure loss - supply



### Induction and temperature quotient with ceiling effect



# ADJUSTABLE SLOT DIFFUSER

## TYPE: S-800 • S-900

### 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:  $\Delta p_t = 20 \text{ Pa}$

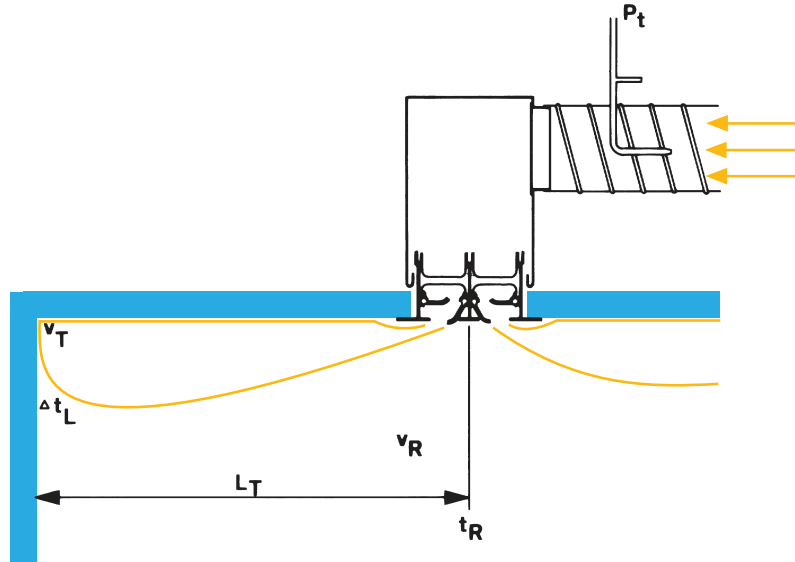
#### EXHAUST

##### 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:  $\Delta p_t = 8 \text{ Pa}$



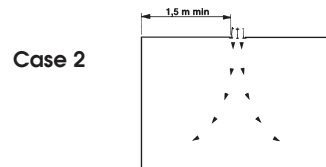
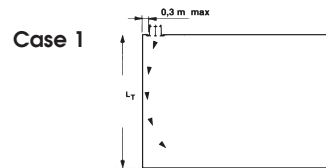
### Correction factors

#### 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

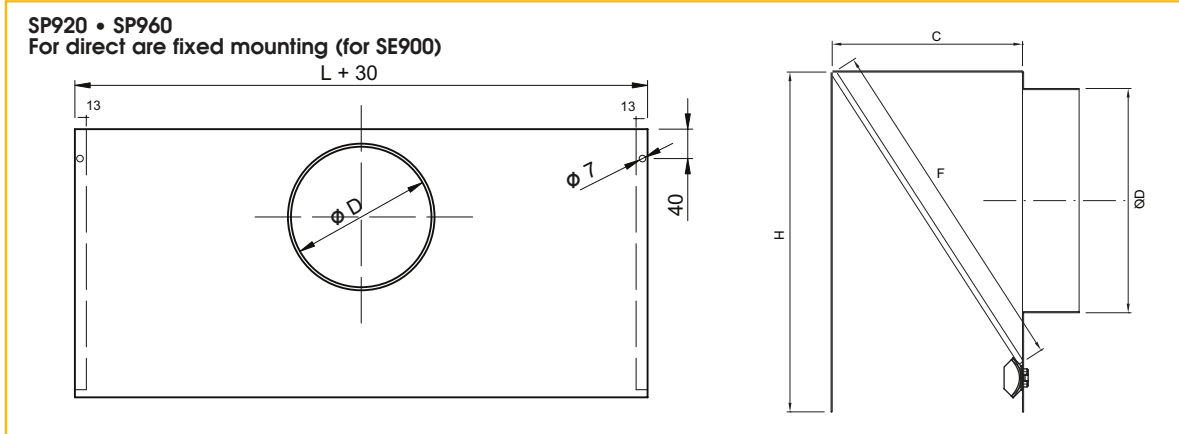
	Cooling	Ventilation	Heating
	$\Delta t = -10 \text{ K}$	$\Delta t = 0 \text{ K}$	$\Delta t = +15 \text{ K}$
Case 1	$L_T \times 1$	$L_T \times 0,9$	$L_T \times 0,6$
Case 2	$L_T \times 0,7$	$L_T \times 0,6$	$L_T \times 0,4$



# PLENUM FOR ADJUSTABLE SLOT DIFFUSER WITH DOOR

## TYPE: SP900S

### Installation Dimensions



	Number of slots					
	3	4	5	6	7	8
Ø D	198	198	248	248	313	313
H	320	320	370	370	420	420
C	125	168	211	254	297	340
F	302	322	387	412	478	506
H	270	320	370	370	420	420

#### Execution:

Supplied with removable filter type XFI (dimensions L x F)

L = slot length  
All dimension in mm

### How to order

SP900 for a slot diffuser with 3 slots, insulated, for direct and fixed mounting, no damper, L = 1000 mm, delivered separately

S	P	9	2	3	-	-	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 pièce

number of slots

2: for direct fixed mounting, without damper

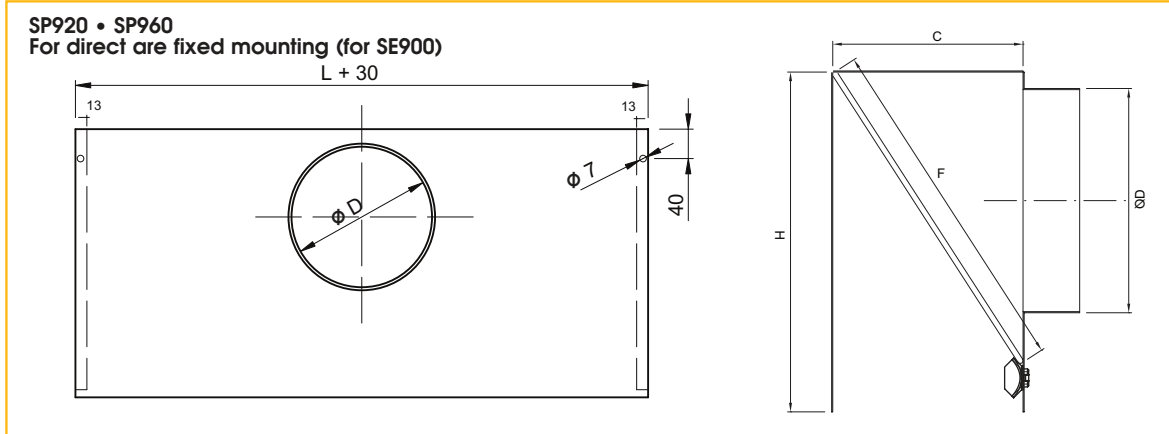
6: for direct fixed mounting, with damper and with mounting straps\*

\* for mounting of the plenum into the ceiling

# FIXED SLOT DIFFUSER

## TYPE: SP900

### Installation Dimensions



	Number of slots					
	3	4	5	6	7	8
Ø D	198	198	248	248	313	313
H	320	320	370	370	420	420
C	125	168	211	254	297	340
F	302	322	387	412	478	506
H	270	320	370	370	420	420

#### Execution:

Supplied with removable filter type XFI (dimensions L x F)

L = slot length  
All dimension in mm

### How to order

SP900 for a slot diffuser with 3 slots, insulated, for direct and fixed mounting, no damper, L = 1000 mm, delivered separately

S	P	9	2	3	-	-	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 pièce

number of slots

2: for direct fixed mounting, without damper

6: for direct fixed mounting, with damper and with mounting straps\*

\* for mounting of the plenum into the ceiling