

# SLA

Linear slot diffuser for ceilings



## Quick facts

- ▶ Flexible spread pattern
- ▶ Vertical spread option
- ▶ Simultaneous vertical/horizontal spread option
- ▶ Large induction effect
- ▶ Possible to mount in long runs
- ▶ Corner module
- ▶ Commissioning box with measurement, regulation and sound absorbent functions

## Quick guide

AIR FLOW - SOUND LEVEL			
SLA Size	l/s per metre		
	25 dB(A)	30 dB(A)	35 dB(A)
2-900	50	60	70
3-900	80	90	110
4-900	95	115	145
6-900	105	130	150
2-1200	55	65	80
3-1200	80	95	115
4-1200	95	115	135
6-1200	120	140	170
2-1500	55	65	80
3-1500	80	95	115
4-1500	105	120	145
6-1500	125	145	165
2-1800	50	60	70
3-1800	75	90	105
4-1800	105	120	145
6-1800	120	145	170

# Technical description

## Design

Rectangular linear supply air diffuser with two or more air slots. Each slot is equipped with a deflector that can be easily adjusted by hand to provide a free choice of direction of supply air between 0° and 180°. The standard setting on delivery is a 90° two-way spread pattern. SLA must be mounted in a commissioning box of the type SLAT 1a to obtain the correct functioning. See below under "Accessories".

## Materials and surface treatment

SLA is manufactured in aluminium and coated with our white interior paint.

## Customizing

In addition to the standard sizes, the diffuser is available for delivery with alternative dimensions, number of slots, colours and so on. Please contact your nearest sales representative for further information.

## Accessories

### Commissioning box:

SLAT 1: Manufactured in galvanized sheet steel. Contains commissioning damper, fixed measurement outlet and sound absorbent material with reinforced surface layer. The box is delivered as a standard with long side connection (L), but is also available in an alternative version with rear side connection (B).

### Plenum box for wall-to-wall-mounting:

SLWT 1: Designed for wall to wall. Manufactured in galvanized sheet steel. Contains commissioning damper, fixed measurement outlet and sound absorbent material with reinforced surface layer. The box is delivered as a standard with long side connection (L), but is also available in an alternative version with rear side connection (B).

### Corner module:

SLWT 2: Is manufactured as SLA but in a prefabricated corner module with mitre profiles. Used in wall-to-wall-mounting.

## Project planning

The option of mounting a number of diffusers together in long, uninterrupted lengths is made possible by using the wall-to-wall-version. The intermediate diffuser modules are manufactured without end caps while the diffusers at the end of each WTW row are equipped with caps on the short end. Alignment rails are included in delivery that keep the assembly in true, and joining plates to adapt the assembly to the matching commissioning box. See figure 2.



## Installation

The commissioning box is suspended from the ceiling. The box is equipped with mounting fastenings. When mounting several boxes in wall-to-wall-installations, there are specific c/c measurements between the boxes.

Hole cutting for the diffuser/commissioning boxes is done in accordance with the measurements table.

In the case of wall-to-wall installation, alignment keys provided in the delivery are used to position the diffuser sections in a straight line. The diffuser section is screwed into place on the commissioning box through the fasteners in the commissioning box. See figures 1 and 2.

## Commissioning

Commissioning is carried out with the diffuser section mounted in place. The measurement tube and damper cord are pulled outside the diffuser through the slots. When the pressure measurements are completed and the damper position determined, the two damper cords are stretched and joined in a commissioning knot. The cords are then wound around the cord locking screw which is subsequently tightened.

The k-factor is stated on the product label. K-factors are also found in the relevant K-factor guide which is available at [www.swegon.com](http://www.swegon.com).

## Maintenance

The diffuser is cleaned when necessary using lukewarm water with added detergent. The duct system can be accessed by removing the diffuser sections, and the perforated distribution plate which are fixed to the commissioning box with screws. The removable damper unit placed in the inlet spigot is fixed with wingnuts.

## Environment

The declaration of construction materials is available at [www.swegon.com](http://www.swegon.com).

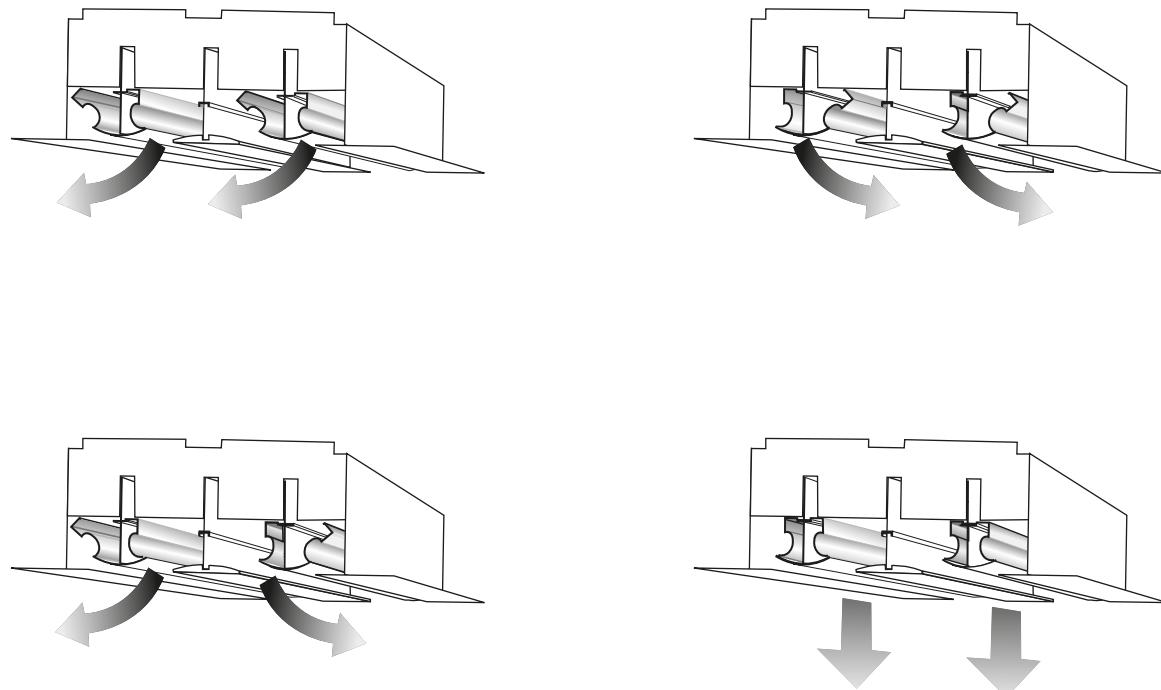


Figure 1. Spread pattern.

SLA

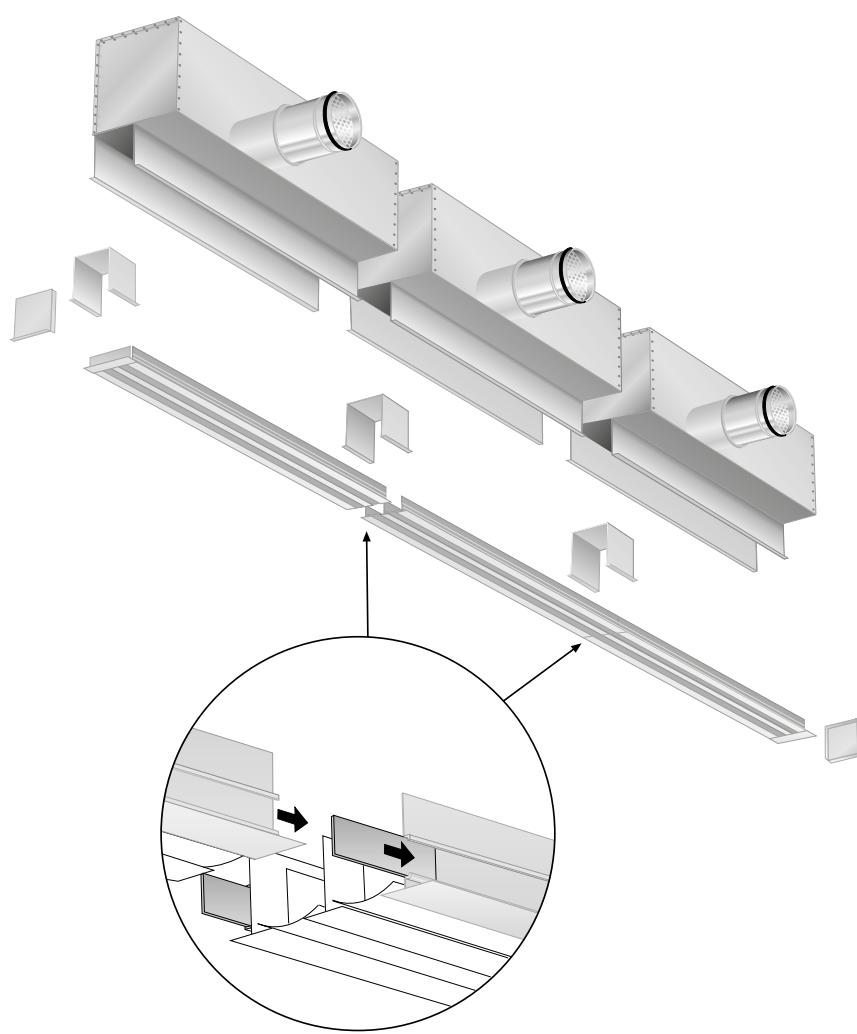


Figure 2. SLA example of wall-to-wall installation.

## Sizing

- Sound level dB(A) is valid for rooms with 10 m<sup>2</sup> equivalent absorption area.
- Throw length l<sub>0,2</sub> is measured with isothermal supply air.
- Recommended maximum under temperature 10 K.
- For calculation of the width of air stream, air velocity in the affected area or sound levels in rooms with other dimensions, refer to our calculation program ProAir web which is available at [www.swegon.com](http://www.swegon.com).

## Sound data

### SLA – Supply air

**Sound power level L<sub>w</sub> (dB)**

**Table K<sub>ok</sub>**

Size SLA	Mid-frequency (Octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
2-900	15	12	5	-3	-2	-9	-22	-24
3-900	15	12	5	-3	-2	-9	-22	-24
4-900	15	12	5	-3	-2	-9	-22	-24
6-900	15	12	5	-3	-2	-9	-22	-24
2-1200	13	10	8	-1	-6	-10	-14	-16
3-1200	13	10	8	-1	-6	-10	-14	-16
4-1200	13	10	8	-1	-6	-10	-14	-16
6-1200	13	10	8	-1	-6	-10	-14	-16
2-1500	12	11	8	-1	-6	-9	-14	-17
3-1500	12	11	8	-1	-6	-9	-14	-17
4-1500	12	11	8	-1	-6	-9	-14	-17
6-1500	12	11	8	-1	-6	-9	-14	-17
2-1800	13	10	7	0	-4	-7	-15	-17
3-1800	13	10	7	0	-4	-7	-15	-17
4-1800	13	10	7	0	-4	-7	-15	-17
6-1800	13	10	7	0	-4	-7	-15	-17
Tol. ±	2	2	2	2	2	2	2	2

**Sound attenuation ΔL (dB)**

**Table ΔL**

Size SLA	Mid-frequency (Octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
2-900	13	6	7	9	13	7	10	11
3-900	10	6	7	9	13	7	10	11
4-900	10	6	7	9	13	7	10	11
6-900	10	6	7	9	13	7	10	11
2-1200	14	7	10	11	15	13	14	12
3-1200	14	7	10	11	15	13	14	12
4-1200	14	7	10	11	15	13	14	12
6-1200	14	7	10	11	15	13	14	12
2-1500	11	9	7	9	12	9	11	11
3-1500	11	9	7	9	12	9	11	11
4-1500	11	9	7	9	12	9	11	11
6-1500	11	9	7	9	12	9	11	11
2-1800	8	4	5	6	11	11	11	12
3-1800	8	4	5	6	11	11	11	12
4-1800	8	4	5	6	11	11	11	12
6-1800	8	4	5	6	11	11	11	12
Tol. ±	2	2	2	2	2	2	2	2

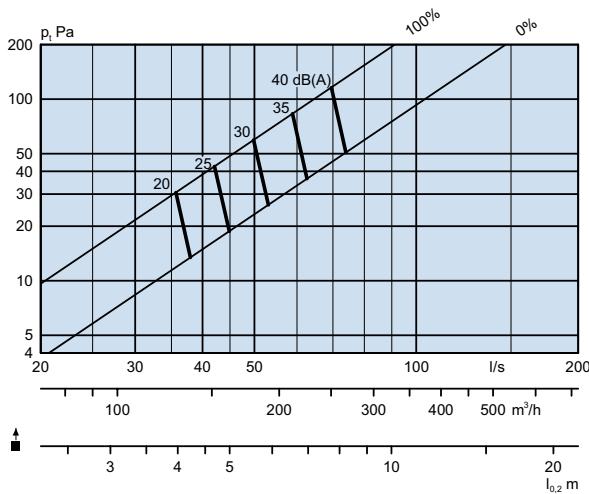
## Engineering graphs

### SLA – Supply air

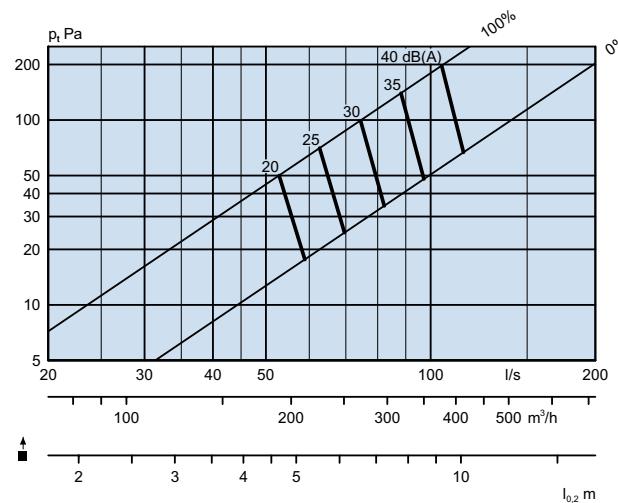
#### Air flow – Pressure drop – Sound level – Throw

- The graphs refer to data for SLA flush mounted in a ceiling.
- The graphs must not be used for commissioning.
- The dB(A) values are for rooms with a normal acoustic absorption of 4 dB.
- The dB(C) values normally lie 6-9 dB higher than dB(A) values.

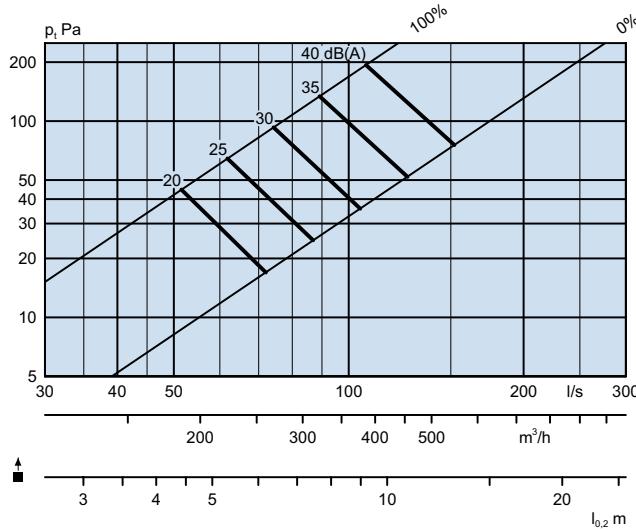
**SLA 2-900 + SLAT 1-2-900**



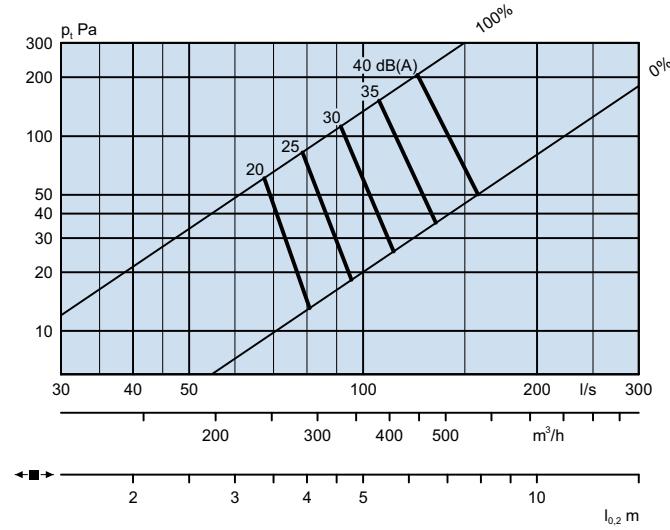
**SLA 3-900 + SLAT 1-3-900**

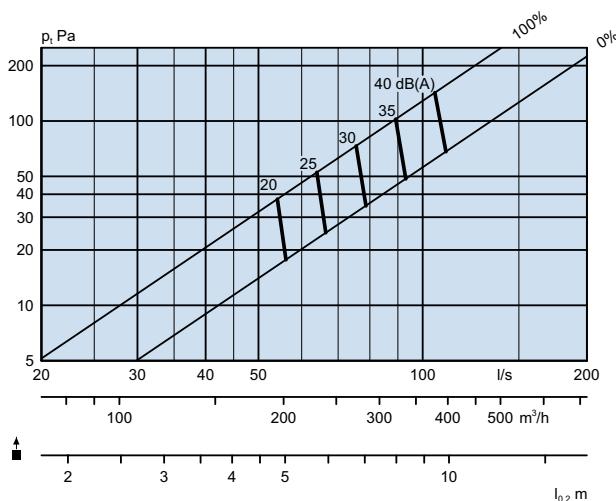
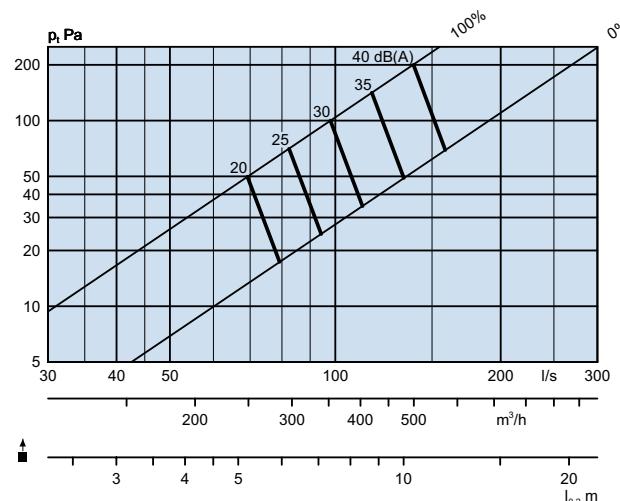
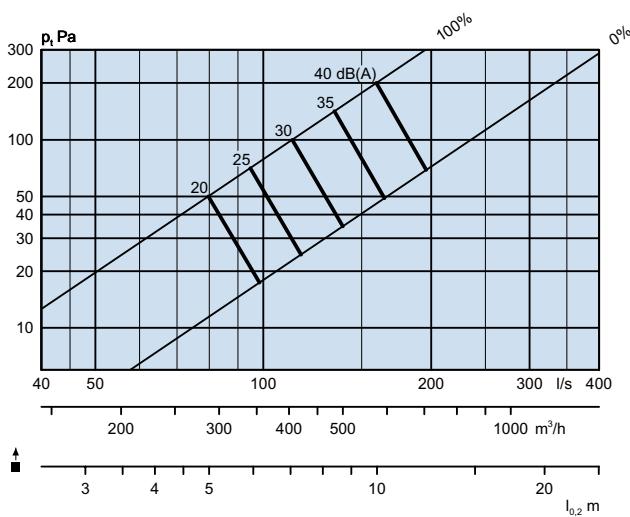
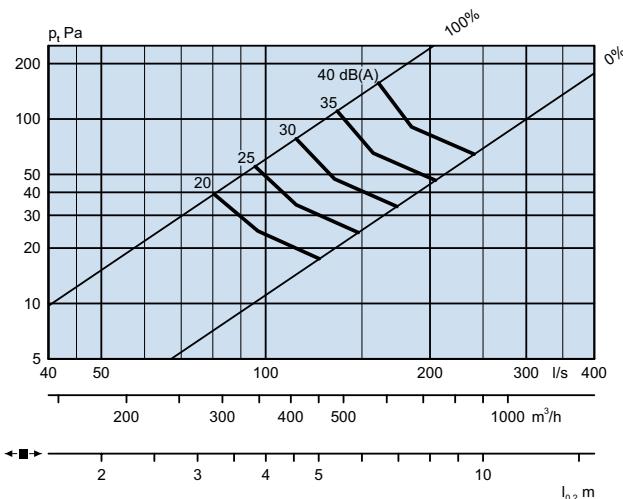


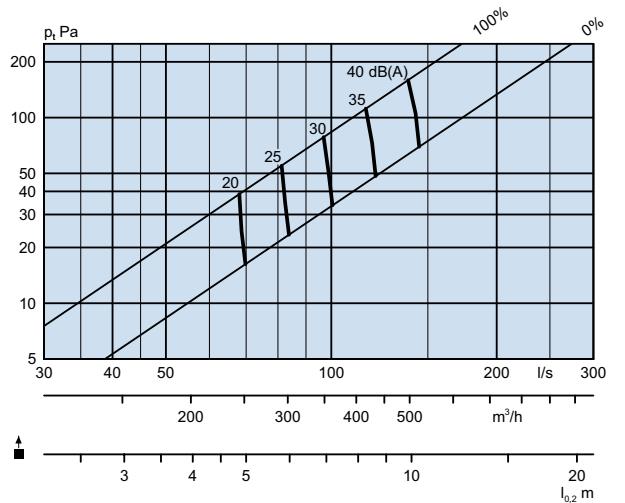
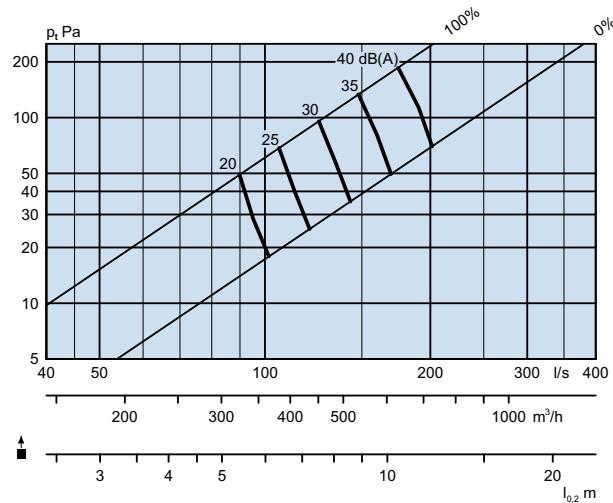
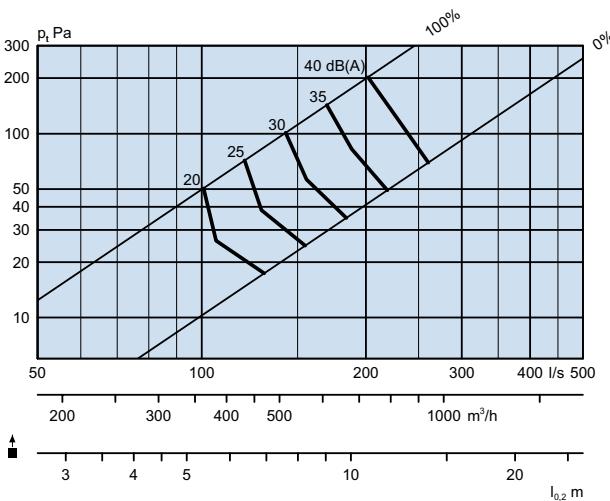
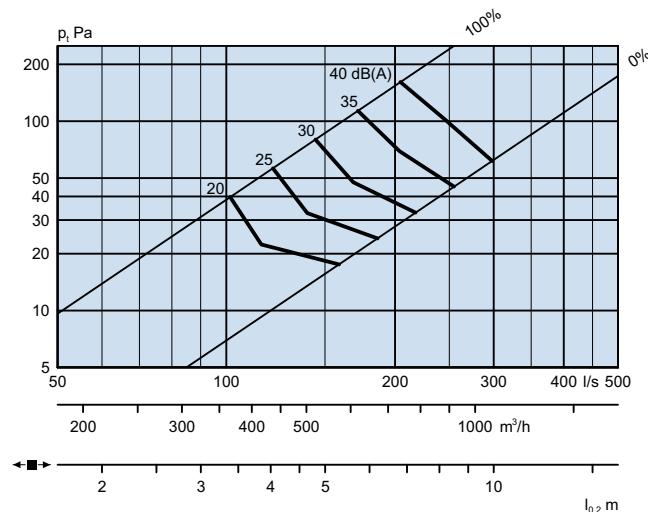
**SLA 4-900 + SLAT 1-4-900**

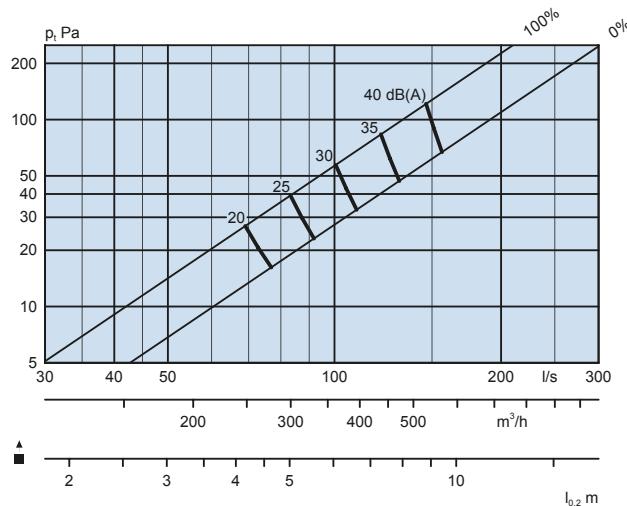
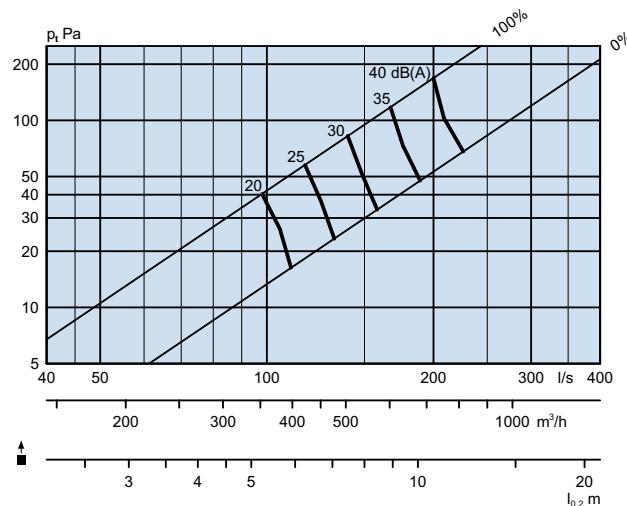
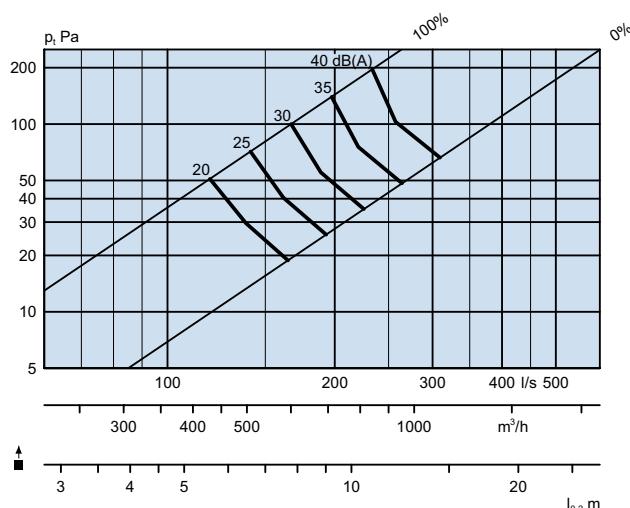
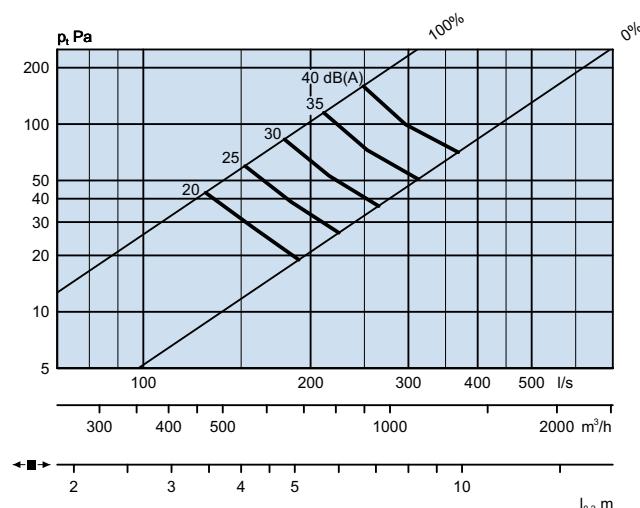


**SLA 6-900 + SLAT 1-6-900**



**SLA 2-1200 + SLAT 1-2-1200****SLA 3-1200 + SLAT 1-3-1200****SLA 4-1200 + SLAT 1-4-1200****SLA 6-1200 + SLAT 1-6-1200**

**SLA 2-1500 + SLAT 1-2-1500****SLA 3-1500 + SLAT 1-3-1500****SLA 3-1500 + SLAT 1-3-1500****SLA 4-1500 + SLAT 1-4-1500****SLA 6-1500+ SLAT 1-6-1500**

**SLA 2-1800 + SLAT 1-2-1800****SLA 3-1800 + SLAT 1-3-1800****SLA 4-1800 + SLAT 1-4-1800****SLA 6-1800 + SLAT 1-6-1800**

## Dimensions and weight

### SLA + SLAT 900, 1200, 1500, 1800 - Figures 3 and 4

Size	A	B	C	ØD	G	H
2-900	958	114	88	199	380	280
3-900	958	152	126	199	380	280
4-900	958	190	164	199	380	280
6-900	958	267	240	199	380	280
2-1200	1258	114	88	249	380	280
3-1200	1258	152	126	249	380	280
4-1200	1258	190	164	249	380	280
6-1200	1258	267	240	249	380	280
2-1500	1558	114	88	2x199	380	280
3-1500	1558	152	126	2x199	380	280
4-1500	1558	190	164	2x199	380	280
6-1500	1558	267	240	2x199	380	280
2-1800	1858	114	88	2x249	380	280
3-1800	1858	152	126	2x249	380	280
4-1800	1858	190	164	2x249	380	280
6-1800	1848	267	240	2x249	380	280

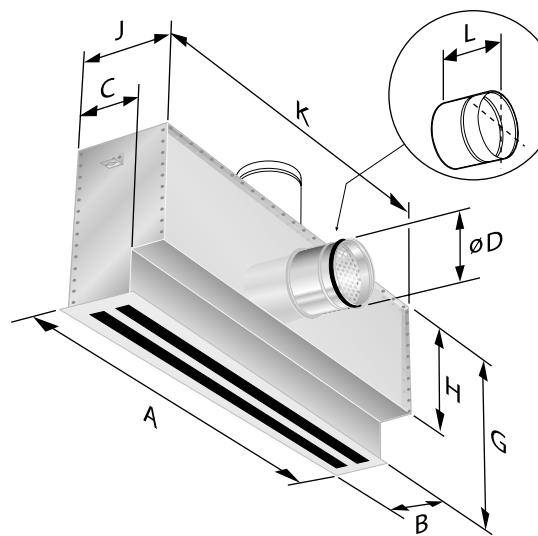


Figure 3. SLA + SLAT 900 and 1200.

### SLAa + SLAT - Figures 3 and 4

Size	J	K	L	M	N	Weight, kg
2-900	196	912	115	-	-	11,6
3-900	234	912	115	-	-	17,4
4-900	272	912	115	-	-	25,0
6-900	348	912	115	-	-	34,9
2-1200	196	1212	140	-	-	15,5
3-1200	234	1212	140	-	-	23,3
4-1200	272	1212	140	-	-	33,4
6-1200	348	1212	140	-	-	46,5
2-1500	196	1512	115	750	381	19,4
3-1500	234	1512	115	750	381	29,0
4-1500	272	1512	115	750	381	41,7
6-1500	348	1512	115	750	381	58,1
2-1800	196	1812	140	900	456	23,2
3-1800	234	1812	140	900	456	34,9
4-1800	272	1812	140	900	456	50,1
6-1800	348	1812	140	900	456	69,2

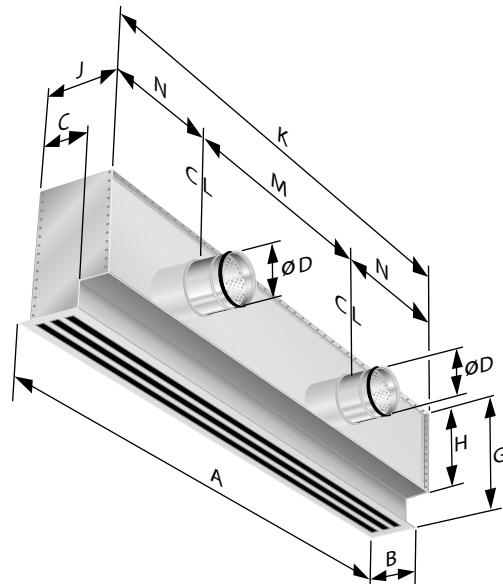


Figure 4. SLA + SLAT 1500 and 1800.

**SLA + SLWT WTW - Figures 5 and 6**

Size	A	E	F	K
900	900	x)	100	800
1200	1200	x)	100	1100
1500	1500	x)	100	1400
1800	1800	x)	100	1700

x) Custom designed

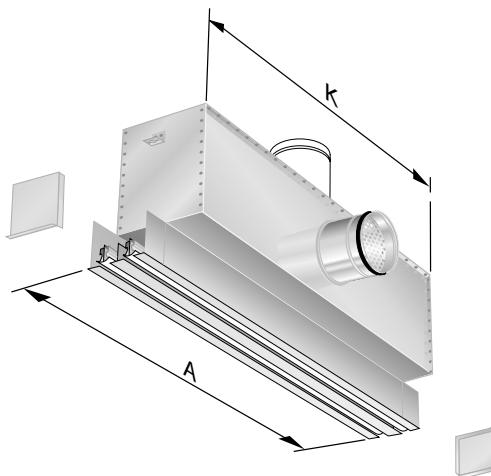


Figure 5. SLA + SLWT, wall-to-wall-mounting

**SLWT 2 - Figure 7**

No. of slots	A
2	114
3	152
4	190
6	267

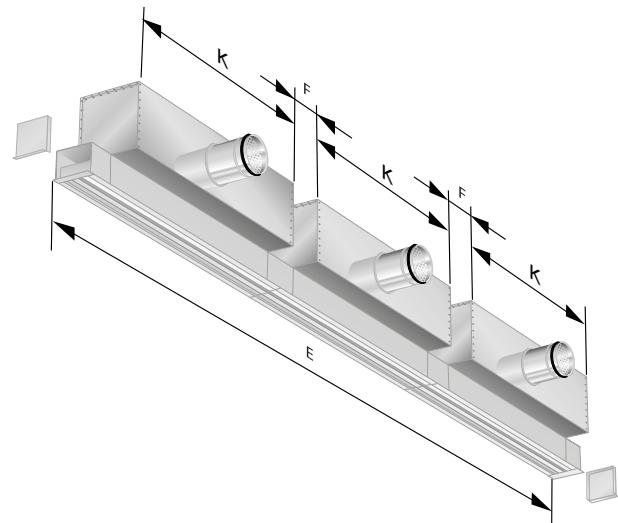


Figure 6. SLA + SLWT, wall-to-wall-mounting

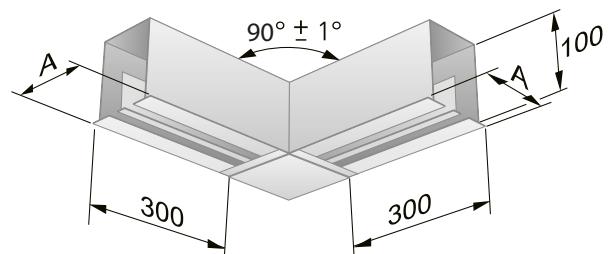


Figure 7. SLWT 2

## Order key

### Product

Linear slot diffuser SLA a -a -bbbb  
 Version:  
 Number of slots: 2, 3, 4, 6  
 Length: 900, 1200, 1500, 1800

### Standard range

SLA	2-900	2-1200	2-1500	2-1800
	3-900	3-1200	3-1500	3-1800
	4-900	4-1200	4-1500	4-1800
	6-900	6-1200	6-1500	6-1800

### Accessories – Single item orders

Commissioning box, SLAT 1 a -a -bbbb -c -ddd e  
 Version:  
 Number of slots: 2, 3, 4, 6  
 Nom. length: 900, 1200, 1500, 1800  
 Number of duct connection: 1, 2  
 Connection duct dimension: 160, 200, 250  
 Duct connection: L = Long side connection (standard)  
 B = Rear side connection

### Standard range

For SLA	2-900	SLAT 1	2-900-1-200-L/B
	3-900	"	3-900-1-200-L/B
	4-900	"	4-900-1-200-L/B
	6-900	"	6-900-1-200-L/B
SLA	2-1200	SLAT 1	2-1200-1-250-L/B
	3-1200	"	3-1200-1-250-L/B
	4-1200	"	4-1200-1-250-L/B
	6-1200	"	6-1200-1-250-L/B
SLA	2-1500	SLAT 1	2-1500-2-200-L/B
	3-1500	"	3-1500-2-200-L/B
	4-1500	"	4-1500-2-200-L/B
	6-1500	"	6-1500-2-200-L/B
SLA	2-1800	SLAT 1	2-1800-2-250-L/B
	3-1800	"	3-1800-2-250-L/B
	4-1800	"	4-1800-2-250-L/B
	6-1800	"	6-1800-2-250-L/B

### Product – wall-to-wall-orders

Linear slot diffuser for wall-to-wall-installations SLA a -a -bbbb  
 Version:  
 Number of slots  
 Total wall-to-wall-length, mm, including end caps, mm

### Accessories – wall-to-wall-orders

Commissioning box SLWT 1 a -a -bbbb -c -ddd -e  
 for wall-to-wall-installations  
 Version:  
 Number of slots  
 Total wall-to-wall-length, mm, including end caps, mm  
 Number of duct connection: 1, 2  
 Connection duct dimension: 160, 200, 250  
 Duct connection: L = Long side connection (standard)  
 B = Rear side connection

Passive corner module SLWT 2 a -a  
 Version:  
 Number of slots: 2, 3, 4, 6  
 Any joining units required are incl. into the delivery.

## Specification example

Swegon's linear slot diffuser of type SLA for ceiling installation with commissioning box and joining sections for wall-to-wall-mounting, with the following functions:

- Flexible spread pattern
- Individually adjustable deflectors in easy slot
- Powder coated white finish
- Cleanable
- Commissioning box with removable commissioning damper with lockable controls, measurement function with low method error and interior sound absorbent material with reinforced surface layer
- Requisite jointing components

Size	SLA a-bbb	xx items
	SLWT 1a 1-bbbb-ccc-L/B	xx items