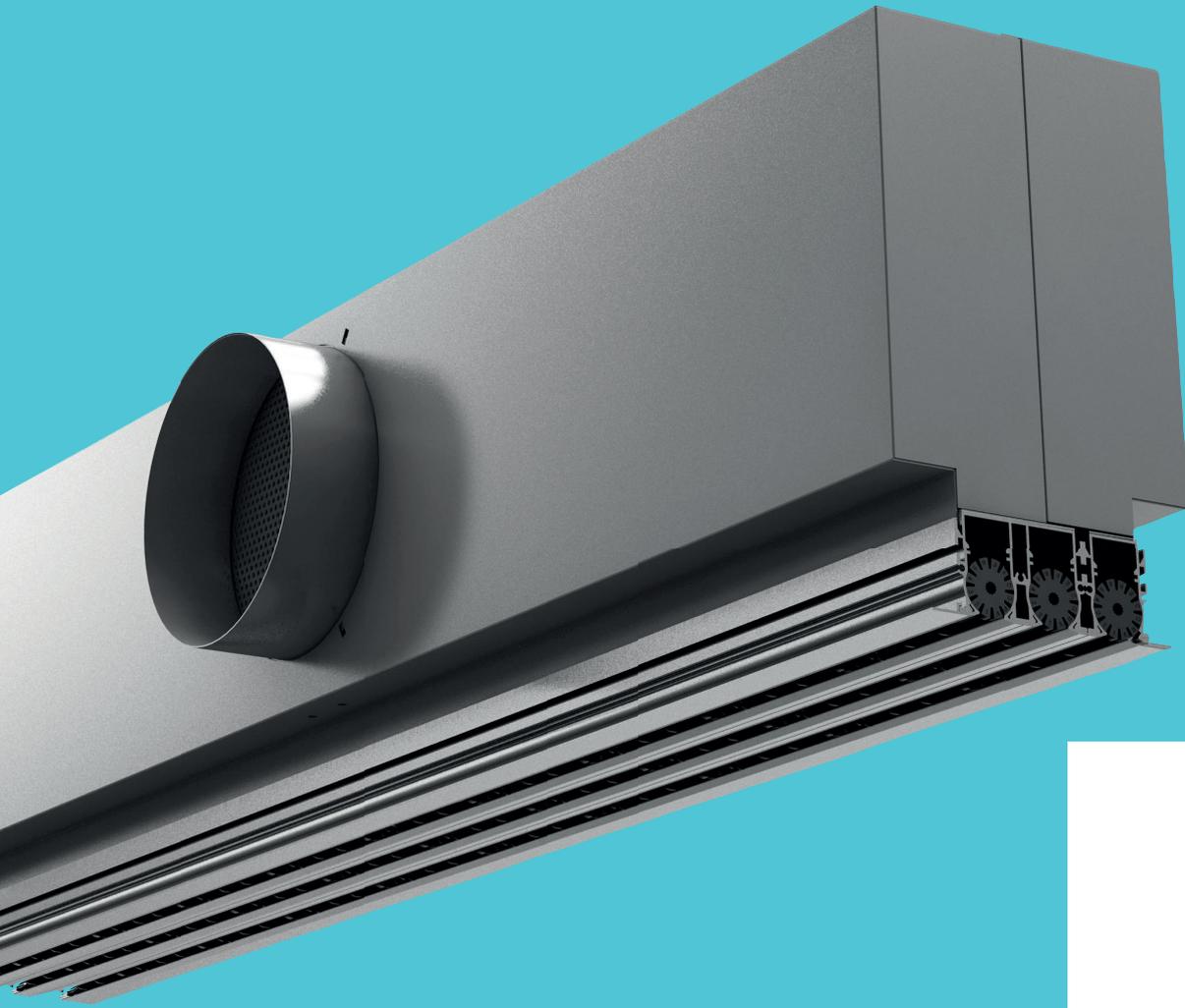


# Slot Diffusers

For an optimum climate



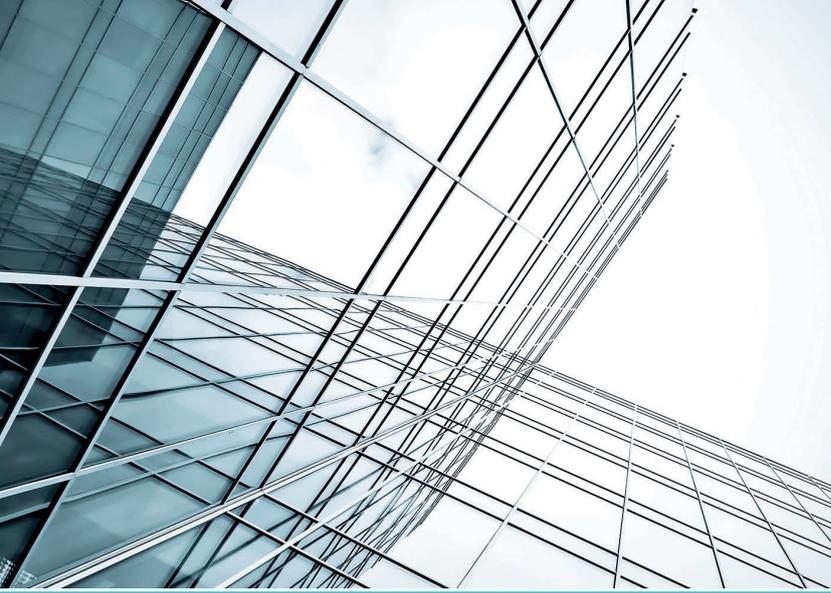
**Genau  
mein  
Klima.**

**KAMPMANN**

# We have been at the forefront of the market for more than 50 years

With over 1000 employees at 16 sites around the world, Kampmann is one of the major players in the construction and building services sector. **Kampmann systems for heating, cooling and ventilation lead a range of market segments today.**

**That's exactly my kind of climate.**



1000  
+

KAMPMANN GROUP  
EMPLOYEES

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Lingen (Ems)  
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- > Canada / USA
- > France
- > Italy

- > Netherlands
- > Austria
- > Poland

- > Switzerland
- > Great Britain
- > Hungary



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# Diffusers

**Can be discreetly integrated into walls and ceilings or used as a key design feature. We offer flexibility and versatility with a wide range of diffusers for the comfort and industrial sector. We will swirl, move and mix these options until we find the perfect system for your project.**

- » They have character. Diffusers with the patented eccentric roller for project-based air discharge characteristics.
- » No compromise between large air volumes and comfort with swirl and slot diffusers.
- » A lake of fresh air in offices and industrial buildings. Displacement ventilation is efficient and very popular with users.
- » Enjoy the benefits of dry wall construction with combined diffusers. Supply air, extract air and sound insulation can be rolled into one.
- » Industry is becoming a comfort zone. Introduce large volumes of primary air comfortably with our industrial diffusers.
- » Call it loft style or industrial charm – tubular diffusers are truly eye-catching. And hydraulic balancing? That's our job!

## Applications

- » Comfort zones with average room heights for heating and cooling
- » Areas with high air exchange rates and low air velocities
- » Situations in which the form and colour of the diffuser has to be adapted to the interior
- » With variable air volume flow systems
- » Offices and commercial buildings
- » IT facilities
- » Laboratories
- » Department stores
- » Cinemas
- » Theatres

## Our slot diffusers at a glance

### Flush-mounted ceiling slot diffuser



#### SAL 35

- » 35 mm profile width
- » Eccentric roller



#### SAL 50

- » 50 mm profile width
- » Eccentric roller

---

### Flush-mounted floor slot diffuser



#### SDA

- » Load-bearing
- » Visible width 38/59 mm (one-/two-row)

# SAL35 / SAL 50



Single- or multi-row supply air and exhaust air slot diffusers made of extruded aluminium profiles with built-in eccentrically mounted air guide rollers and integrated plastic rectifiers (ABS)



## Product benefits

- » Infinitely-variable control of the outlet velocity and air volume flows by changing the cross-section of the air guide roller
- » Influence of the critical air flow path (can be extended, for example)
- » Influence of the induction behaviour
- » Controllable penetration depth
- » Eccentric roller length 100 or 150 mm
- » Optional adjustment of the Coanda effect
- » The rollers can be steplessly rotated between 0 and 360 degrees so that both the outlet cross-section and the air flow direction can be controlled and influenced as required.
- » Reproducible air flow setting
- » Can also be adjusted after installation
- » Opening setting retained during cleaning
- » Suitable for installation in ceilings either singly or as strips.
- » Available with mitred corners to match the contour of the room.

## Features

- » Flush-mounted linear ceiling diffuser
- » 35 mm and 50 mm profile width
- » Available as supply air and extract air diffuser
- » Aluminium extruded profiles
- » Matching plenum box
- » Slot profile powder-coated in RAL colours or natural aluminium

**Installation** » ceiling-mounted

**Air flow** » supply air

» extract air

» mixed air

**Adjustment** » air stream direction adjusted by eccentric rollers

## Performance data

**Air volume flow** [m<sup>3</sup>/h] 90 – 790

**Sound pressure level** [dB(A)]<sup>2</sup> 30 – 40

**Pressure loss** [Pa] 15 – 24

## Limits of use

» max. SAL35 50 - 90 m<sup>3</sup>/hm

» max. SAL50 100 - 180 m<sup>3</sup>/hm

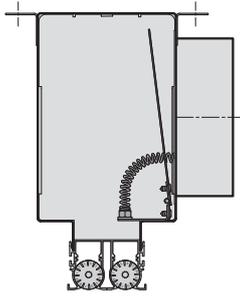
» Minimum distance from 0.5 m

## Application

Flush mounting in ceiling in comfort zones with exacting visual design requirements

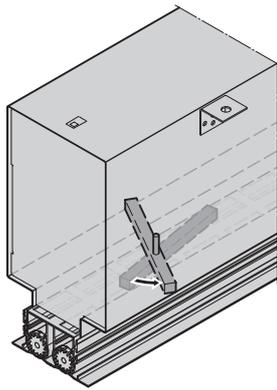


## Design information



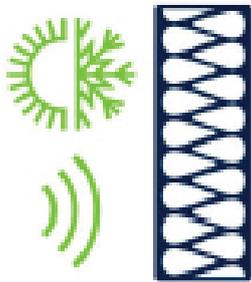
### Plenum box with throttle operable from the front

SAL plenum boxes are optionally available with a throttle that can be operated from the front. The throttle setting can be adjusted with a screwdriver via the front rail of the SAL. It is thus not necessary to access the connection spigot to adjust the throttle setting.



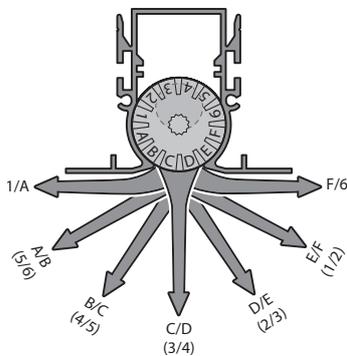
### Cross bar fixing

The SAL can optionally be attached to the plenum box by means of a cross bar. This is locked in place in the plenum box with a screwdriver via the front rail of the SAL. This guarantees simple subsequent assembly of the front rail, and simplifies inspection and cleaning of the outlet. Push-in plates are supplied as gauges to align the plenum box at its intended height without the front rail mounted when installing it for the first time.



### Plenum box with internal or external insulation

To reduce airborne sound transmission from the duct, the plenum box can be fitted with an internal lining made of sound-absorbing material. This increases the end-to-end attenuation of the plenum box. To prevent condensation from forming on the plenum box or to reduce heat losses, the plenum box can also be ordered with an external elastomer foam insulation. Both types of insulation (internal and external) can also be combined.



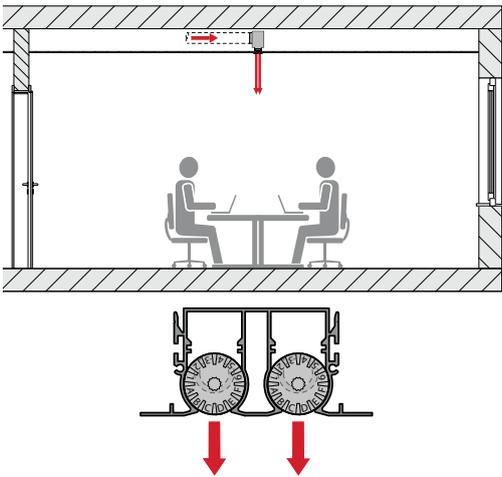
Air stream direction  $\delta$

### Control of the air stream direction

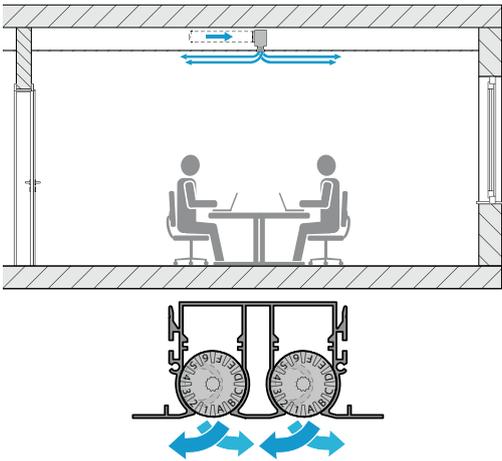
The free-bearing roller enables the direction of the air stream to be continuously adjusted between 0° and 180°. It is possible to select between a high and low air volume flow with every roller setting. The air guides can be adjusted when installed and in operation. The individually adjustable rollers are 100 mm (SAL35) and 150 mm (SAL50) long. This results in an almost unlimited number of air stream combinations. Consecutive rollers are set alternately to 1/A and F/6 at the factory as standard. This highly inductive setting is easy to use even with high cooling loads and air exchange rates.

## Installation scenarios

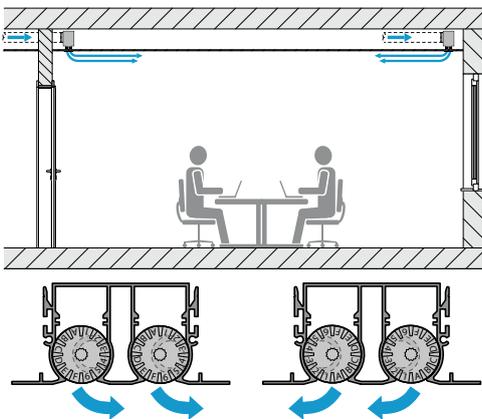
As can be seen from the graphics below, almost all installation scenarios within a room can be achieved. The supply air can be discharged on one or two sides, depending on the installation position



Example showing heating in the centre

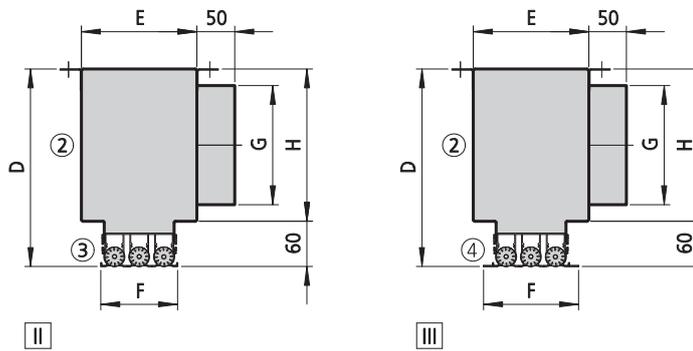
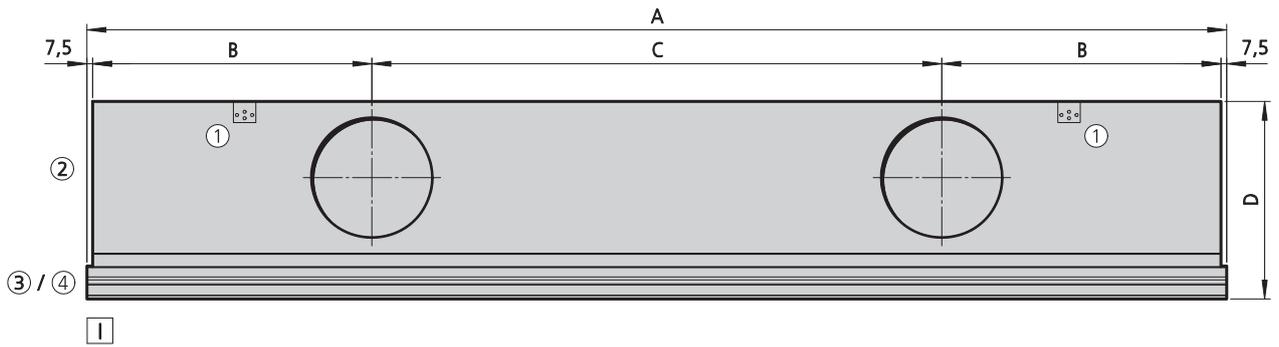


Example showing cooling in the centre



Example showing cooling on the left/right

# SAL35 technical data and drawings



- I Front view
- II Side view of ZS profile
- III Side view of ZB profile

- ① Perforated bracket, supplied loose, for threaded rods M4 - MS
- ② Plenum box
- ③ SAL with cover profiles (ZS)
- ④ SAL with support profile (ZB)

A [mm]	B [mm]	C [mm]
500	242.5	-
600	292.5	-
700	342.5	-
800	492.5	-
900	442.5	-
1000	592.5	-
1100	542.5	-
1200	692.5	-
1300	642.5	-
1400	792.5	-
1500	742.5	-
1600	396.25	792.5
1700	421.25	842.5
1800	446.25	892.5
1900	471.25	942.5
2000	496.25	992.5

SAL	D [mm]	E [mm]	F [mm] (ZS)/(ZB)	G [mm]	H [mm]
<b>35-1</b>	227	88	36 / 60	123	167
<b>35-2</b>	242	120	68 / 92	138	182
<b>35-3</b>	262	152	101 / 125	158	202
<b>35-4</b>	302	184	133 / 157	198	242

## SAL35 ventilation data (table applies for L = 1 m)

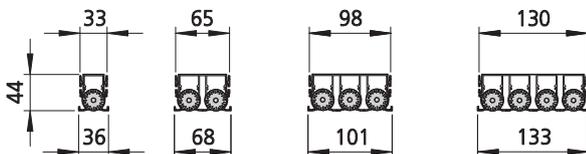
Nominal size [-]	$L_{WA}$ [dB(A)]	$\dot{V}$ [m <sup>3</sup> /hm]	$\Delta p$ [Pa]	Minimum distance [m]	$x_{krit}$ [m]	$\dot{V}$ [m <sup>3</sup> /hm]	$\Delta p$ [Pa]	$y$ [m]
<b>SAL35-1</b>	30	90	15	0.5	8.0	95	21	1.6
	35	115	23	2.7	10.5	118	32	2.2
	40	140	33	10.5	13.3	142	45	2.7
<b>SAL35-2</b>	30	165	12	3.3	10.6	170	18	2.3
	35	200	18	12.0	13.8	210	25	2.9
	40	250	27	> 15.0	> 15.0	250	36	3.6
<b>SAL35-3</b>	30	230	10	8.0	12.3	240	15	2.7
	35	275	15	> 15.0	15.0	290	22	3.4
	40	350	23	> 15.0	> 15.0	360	33	4.5
<b>SAL35-4</b>	30	280	9	11.0	13.4	300	13	2.9
	35	360	14	> 15.0	> 15.0	370	20	3.8
	40	440	21	> 15.0	> 15.0	450	29	4.9

Stipulation: Minimum distance at an installation height of 3.0 m so that speeds in the occupied zone do not exceed 0.2 m/s (isothermal).  
 Critical air stream path for  $\Delta T = -8$  K; penetration depth in heating scenario  $y$  for  $\Delta T = 10$  K.  
 Blue columns: Roller position 1/A, F/6 (horizontal air stream), red columns: roller position C/D (vertical air stream)

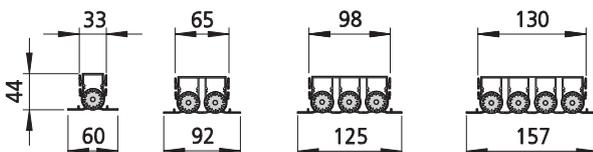
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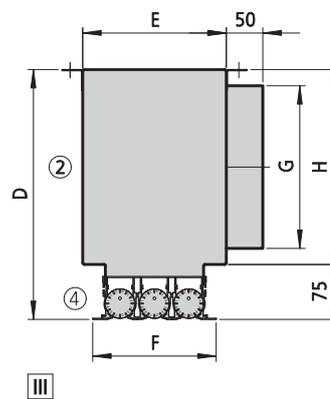
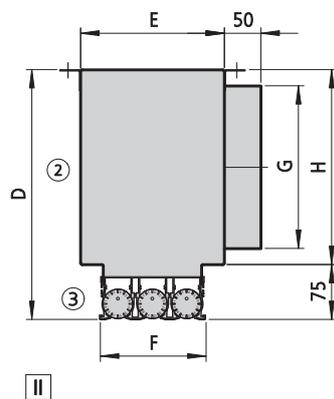
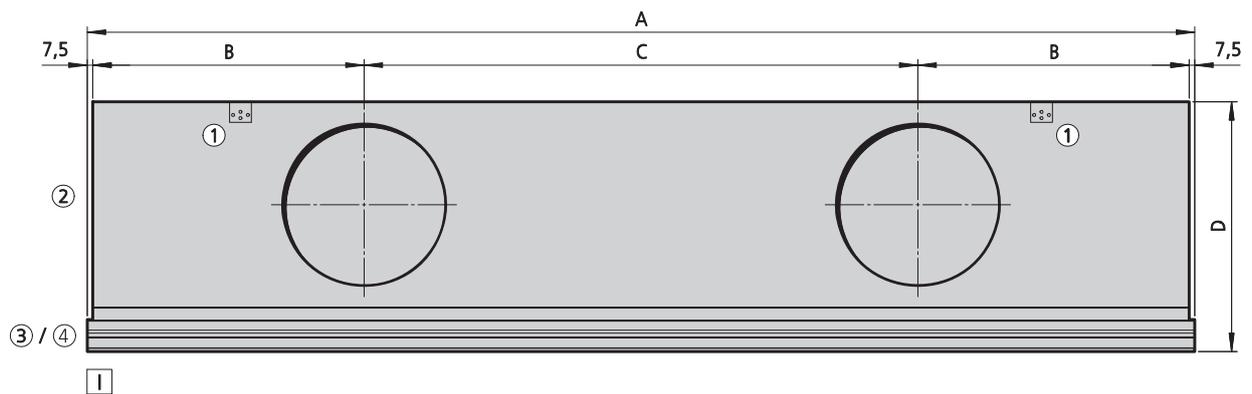
### SAL35 with cover profiles (ZS)



### SAL35 with support profiles (ZB)



## SAL50 technical data and drawings



- I Front view
- II Side view of ZS profile
- III Side view of ZB profile

- ① Perforated bracket, supplied loose, for threaded rods M4 - MS
- ② Plenum box
- ③ SAL with cover profiles (ZS)
- ④ SAL with support profile (ZB)

A [mm]	B [mm]	C [mm]
500	242.5	-
600	292.5	-
700	342.5	-
800	492.5	-
900	442.5	-
1000	592.5	-
1100	542.5	-
1200	692.5	-
1300	642.5	-
1400	792.5	-
1500	742.5	-
1600	396.25	792.5
1700	421.25	842.5
1800	446.25	892.5
1900	471.25	942.5
2000	496.25	992.5

SAL	D [mm]	E [mm]	F [mm] (ZS)/(ZB)	G [mm]	H [mm]
<b>50-1</b>	277	101	50 / 74	158	202
<b>50-2</b>	317	148	97 / 121	198	242
<b>50-3</b>	341	195	143 / 167	222	266
<b>50-4</b>	367	241	190 / 214	248	292

## SAL50 ventilation data (table applies for L = 1 m)

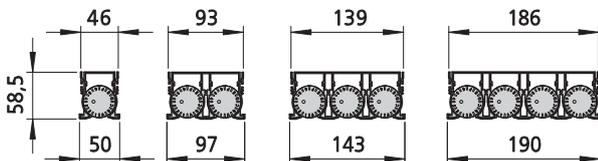
Nominal size [-]	$L_{WA}$ [dB(A)]	$\dot{V}$ [m <sup>3</sup> /hm]	$\Delta p$ [Pa]	Minimum distance [m]	$x_{krit}$ [m]	$\dot{V}$ [m <sup>3</sup> /hm]	$\Delta p$ [Pa]	y [m]
<b>SAL50-1</b>	30	170	18	8.3	8.4	165	21	1.6
	35	205	25	> 15.0	10.6	200	31	2.1
	40	250	38	> 15.0	13.8	240	42	2.6
<b>SAL50-2</b>	30	300	15	> 15.0	11.6	300	18	2.3
	35	375	22	> 15.0	14.8	360	25	2.8
	40	445	30	> 15.0	> 15.0	440	36	3.6
<b>SAL50-3</b>	30	430	13	> 15.0	13.6	420	16	2.7
	35	520	19	> 15.0	> 15.0	510	22	3.4
	40	630	27	> 15.0	> 15.0	600	31	4.3
<b>SAL50-4</b>	30	540	11	> 15.0	> 15.0	520	14	3.0
	35	660	17	> 15.0	> 15.0	640	20	3.8
	40	790	24	> 15.0	> 15.0	760	28	4.7

Stipulation: Minimum distance at an installation height of 3.0 m so that speeds in the occupied zone do not exceed 0.2 m/s (isothermal).  
 Critical air stream path for  $\Delta T = -8$  K; penetration depth in heating scenario y for  $\Delta T = 10$  K.  
 Blue columns: Roller position 1/A, F/6 (horizontal air stream), red columns: roller position C/D (vertical air stream)

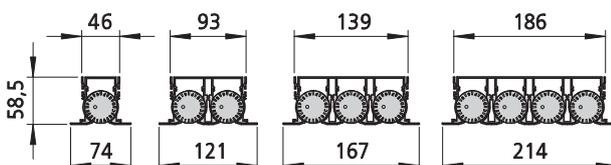
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### SAL50 with cover profiles (ZS)

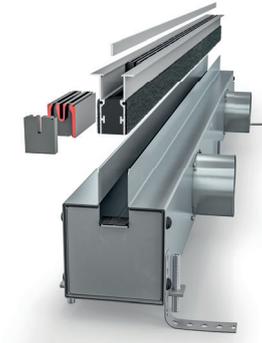


### SAL50 with support profiles (ZB)



# SDA

## SDA design information



### Tool-free installation

The slot profile can be fitted without tools and can also be removed again to clean the plenum box. It is simply inserted into the neck of the box and placed on the false floor. Seals on both sides ensure there is an airtight connection between the SDA and plenum box.



### Simple strip arrangement

The connecting plates supplied enable the SDA visually to blend seamlessly with the architectural design as continuous strip.



### Perfect finish

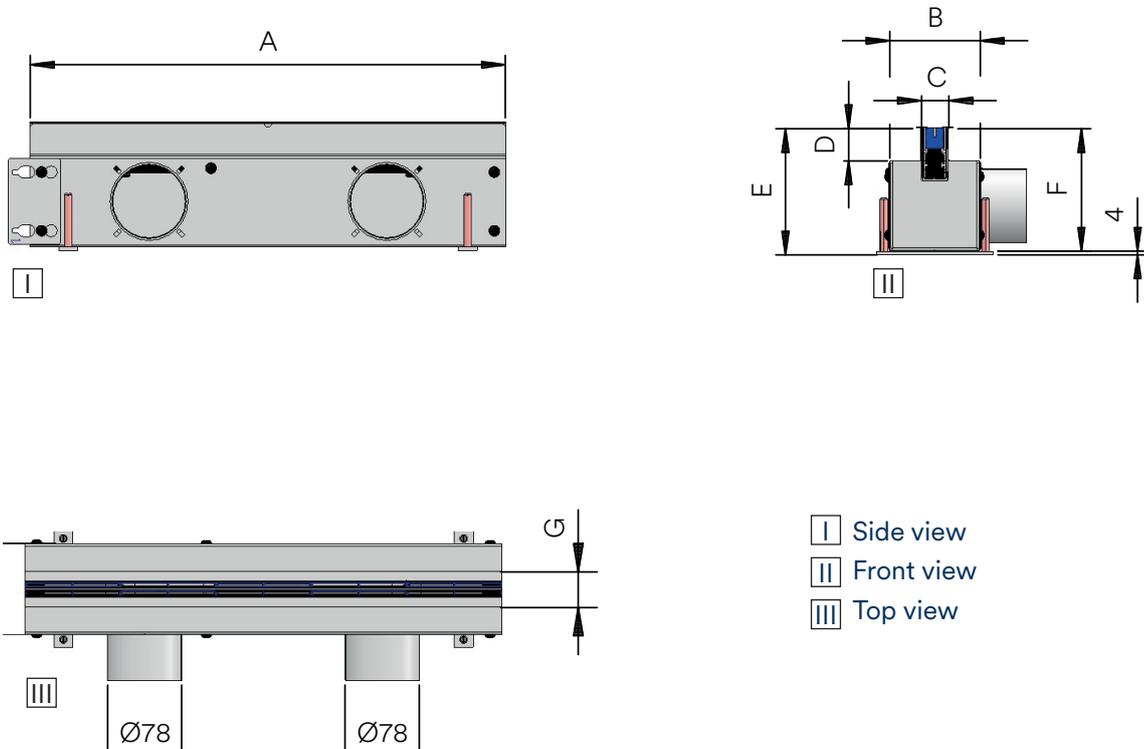
The front profile of the SDA lies flush with the finished floor. The slot is walkable and load-resistant. In turn, the narrow slot width prevents tampering.



### Height adjustment

The plenum box is fitted with threaded feet for height adjustment and is suitable for use in false floors.

## SDA technical data and drawings



- I Side view
- II Front view
- III Top view

Number of slots	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]
1	500	95	29	34	134-188	130
	1000	95	29	34	134-188	130
	1500	95	29	34	134-188	130
	2000	95	29	34	134-188	130
2	500	116	50	34	113-167	109
	1000	116	50	34	113-167	109
	1500	116	50	34	113-167	109
	2000	116	50	34	113-167	109

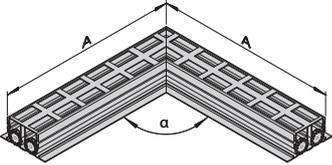
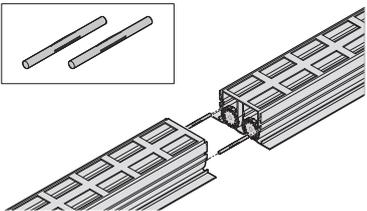
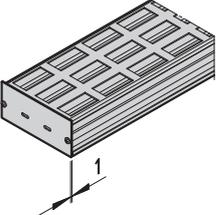
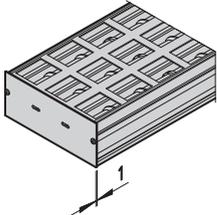
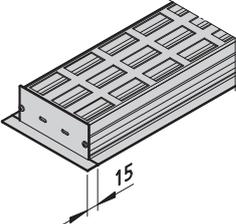
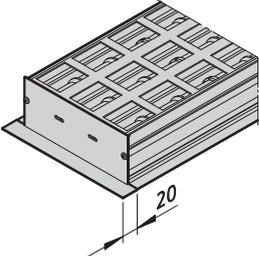
## SDA ventilation data (table applies for L = 1 m)

Nominal size	Number of slots	Sound power level [dB(A)]	Volumetric flow [m <sup>3</sup> /h]	Spec. air volume flow [m <sup>3</sup> /hm]	Pressure loss [Pa]
<b>500</b>	1	30	51	102	44
		35	62	124	65
		40	77	154	99
	2	30	90	90	34
		35	110	110	51
		40	136	136	78
<b>1000</b>	1	30	90	90	34
		35	110	110	51
		40	136	136	74
	2	30	158	79	26
		35	195	98	40
		40	241	121	61
<b>1500</b>	1	30	125	83	29
		35	154	103	44
		40	190	127	67
	2	30	221	74	23
		35	272	91	35
		40	336	112	53
<b>2000</b>	1	30	158	79	26
		35	195	98	40
		40	241	121	61
	2	30	280	70	21
		35	345	86	32
		40	424	106	47

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# Accessories

Figure	Article	Properties	SAL 35	SAL50	SDA
	Mitred corner	Mitred corners are also available in addition to strip arrangements to blend the slot diffusers seamlessly with the architectural design. Mitred corners for the SAL 35 and SAL 50 can be configured up to an angle of 120° and a leg length of 300 mm or more	✓	✓	✗
	Centre grooved pin	Multiple slots can be connected using centre grooved pins. The right number are supplied to guarantee a visually continuous slotted front.	✓	✓	✗
	End plate	End plate for the air-tight closure of the ZS profile	✓	✗	✗
	End plate	End plate for the air-tight closure of the ZS profile	✗	✓	✗
	End bracket	End bracket for the air-tight closure of the ZS profile	✓	✗	✗
	End bracket	End bracket for the air-tight closure of the ZS profile	✗	✓	✗



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