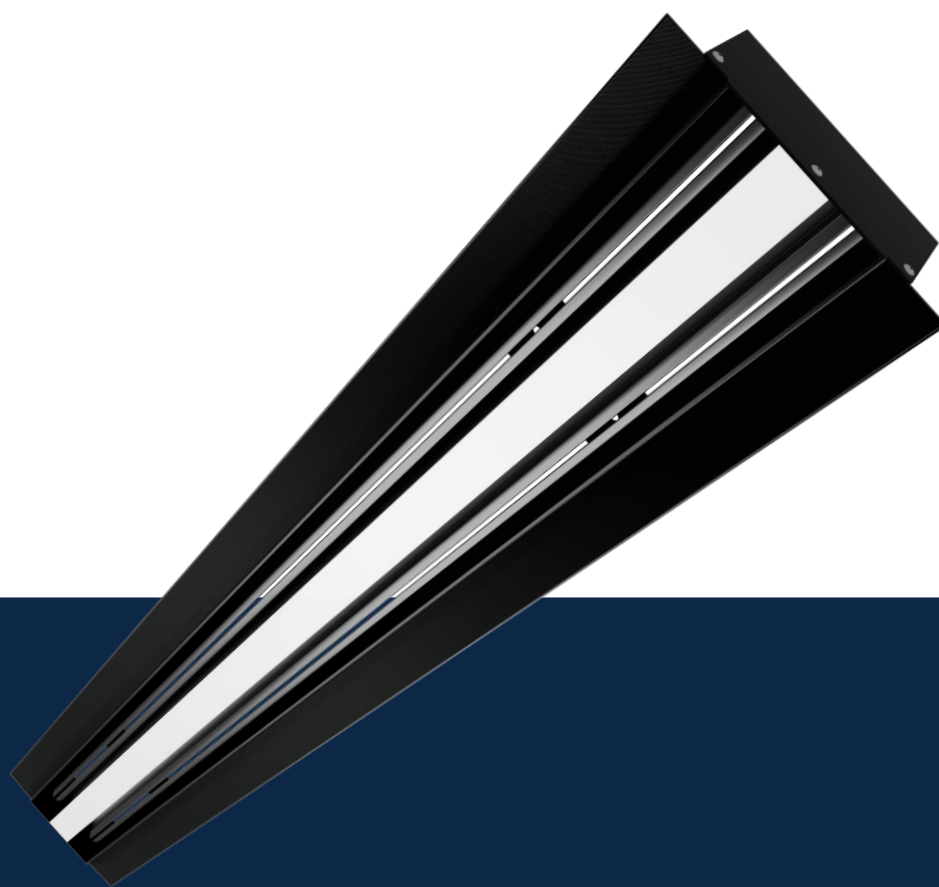


Air through perfection

Linear diffuser

WING



ACP
Architectural diffusers

Linear diffuser WING



Description

WING is an architectural, linear diffuser, used to introduce or evacuate air.

The diffuser is both an elegant and practical ventilation solution.

WING integrates fully into the ceiling and is recommended for residential spaces, conference rooms, offices, classrooms, etc.

Technical specifications

Characteristics

The diffuser is made with 1 to 4 slots with a width of 19 mm and is equipped with adjustable blades.

The diffuser blades allow to adjust the airflow.

Long-length diffusers have segmented blades at a maximum size of 1500 mm

For a uniform appearance of the enclosures, the WING diffuser can also be used for air evacuation.

Dimensional limits of diffuser length: minimum 0.3m and maximum 3m.

In the case of diffusers with a length > 3m, the execution is modular, and the product is delivered together with the necessary connecting parts.

Depending on the overall position, the modular parts are built without termination elements (caps), or with a single element - see assembly sections.

Perimeter configurations can be made by using corner sections (angle 90°).

Corner elements are inactive.

The product is delivered with the following elements: "U" type mounting system (bracket) and fixing screw.

The number of mounting systems depends on the length of the product.

Materials

The diffuser is made of extruded aluminum profiles.

Available finishes:

- LN - standard finish – outer frame and blades in black anodized aluminum. For diffusers with 2-4 slots, the inner frame is made of aluminum painted RAL 9016 glossy
- LV – optional finish – diffuser painted in electrostatic field in any shade from the RAL palette. The surface on which the finishing adhesive will be applied will remain unpainted.

Technical drawing

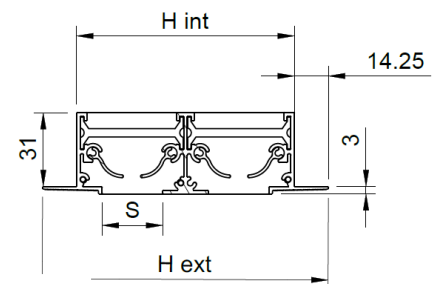
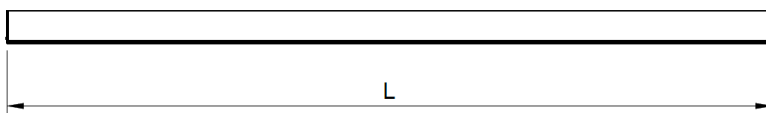
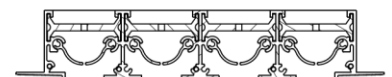
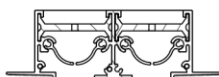
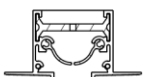


➤ 1 slot

➤ 2 slots

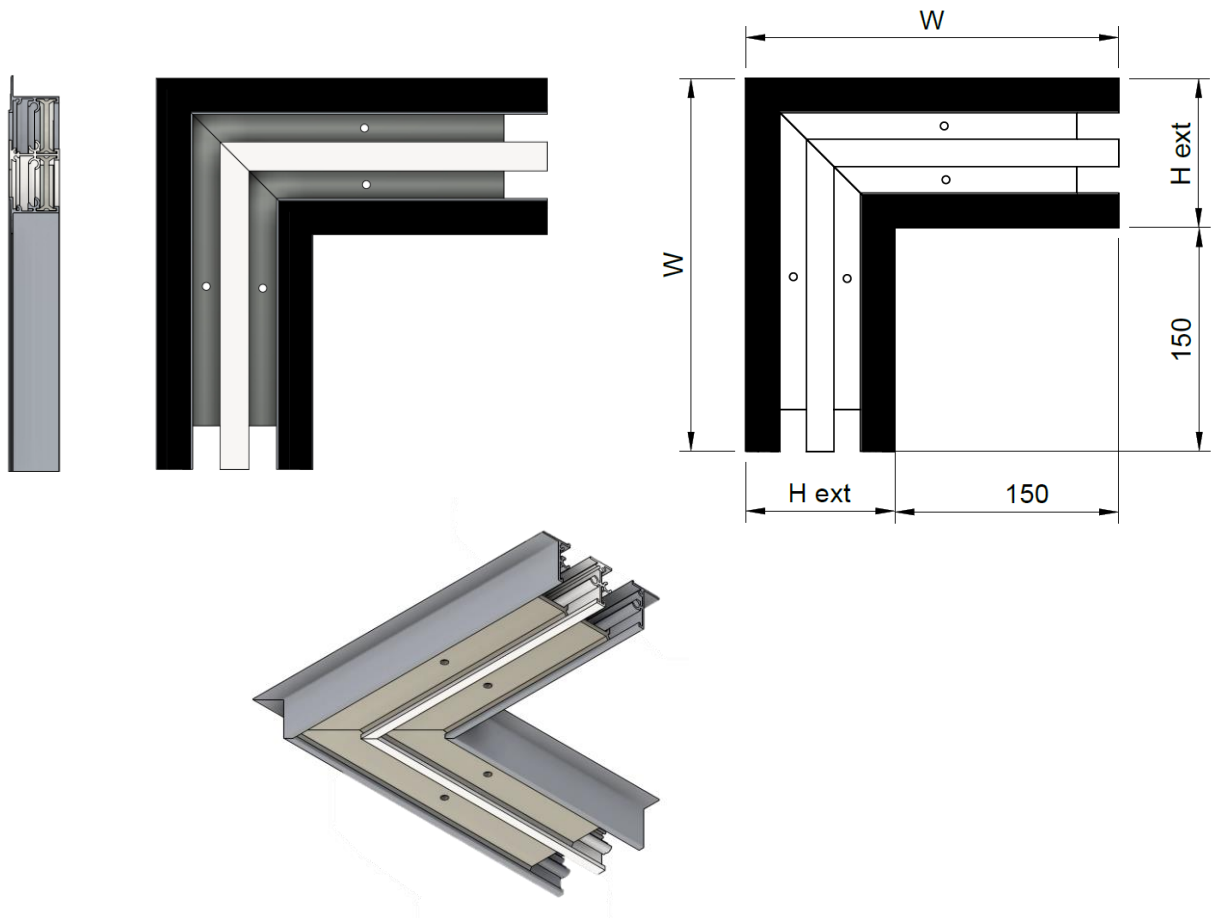
➤ 3 slots

➤ 4 slots

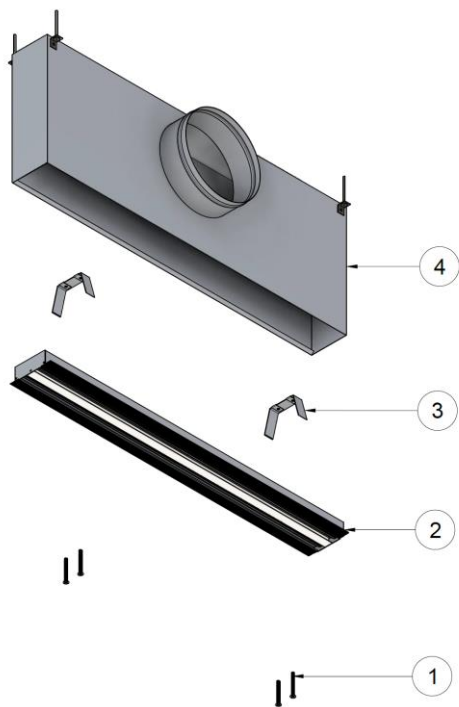


S [mm]	No. of slots	H ext [mm]	H int [mm]	W [mm]
19	1	69	40.5	219
	2	108	79.5	258
	3	147	118.5	297
	4	186	157.5	336

WING – 90° angle

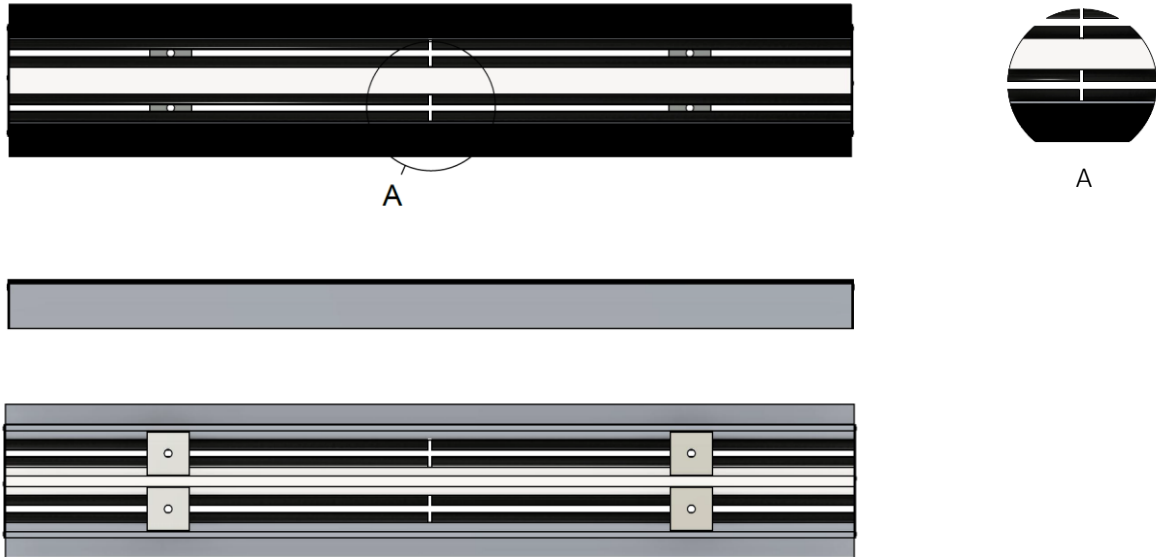


Product specifications



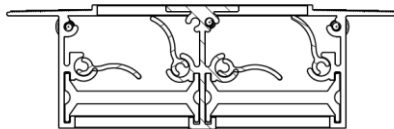
- 1 - Fixing screw
- 2 - WING diffuser
- 3 - Bracket ("U" type system)
- 4 - Plenum box (optional)

Long-length diffusers have segmented blades at a maximum size of 1500 mm. This makes it easier to adjust the diffuser blades to achieve the desired adjustment.

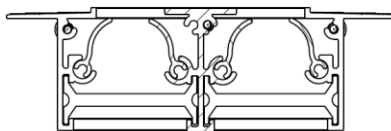


Positioning the blades

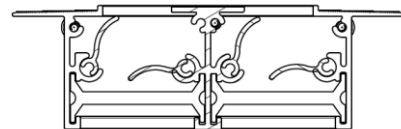
Direction of air jet to the left



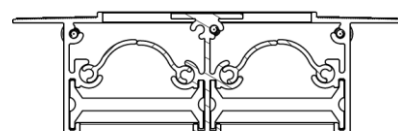
Blades open



Direction of air jet to the right

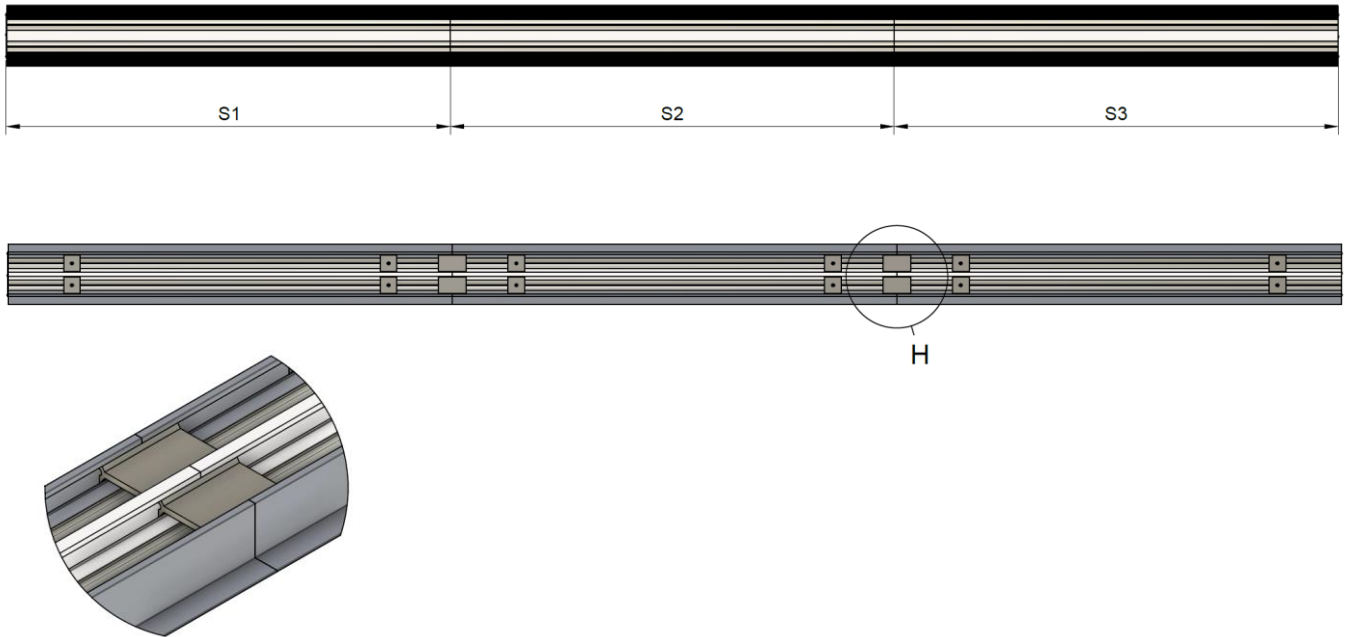


Blades closed



Section assembly

Long-length (large dimension) diffusers are made of modules with a maximum length of 3 m.
In this case, the product is delivered with connecting elements between modules.



H – Sections assembly detail

Accessories

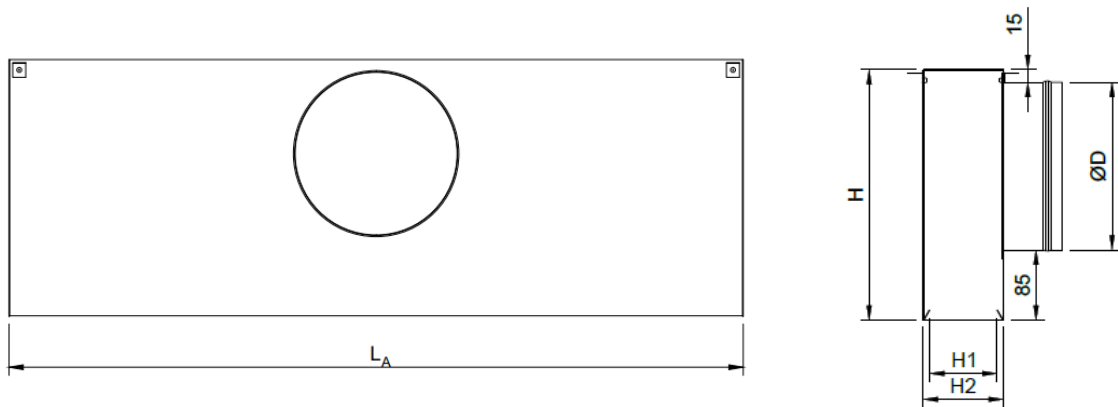
The diffuser can be supplied with a plenum connecting to a circular duct with horizontal connection.

The plenum is provided with suspension elements (lugs) and bead roll on the spigot, for easy fixing of the flexible duct.

The plenum is delivered insulated or uninsulated.

Optionally, a perforated damper can be mounted on the plenum connection to balance the air flow.

Adapter (plenum box)



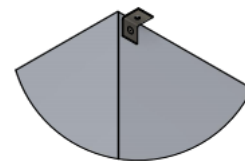
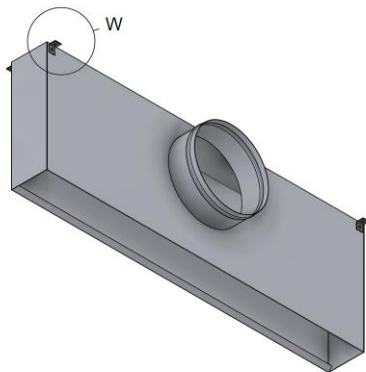
$$L_A = L_{WING} + 4$$

$$H1 = H_{int_{WING}} + 2$$

$$H2 = H1 + 16$$

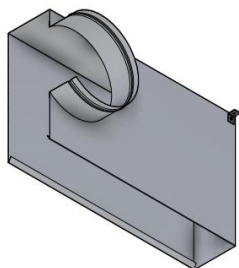
H – depending on ØD

The adapter is made of Z140 galvanized steel sheet and is equipped with suspension lugs.

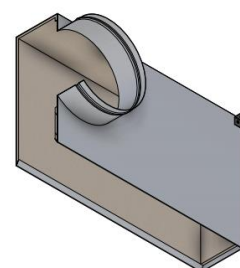


W - Suspension lug

On request, the plenum can be insulated with 6 mm thick elastomeric rubber.

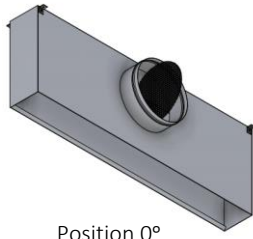


AN - Uninsulated adapter

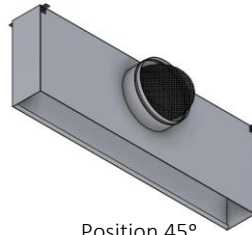


AIZ - Insulated adapter

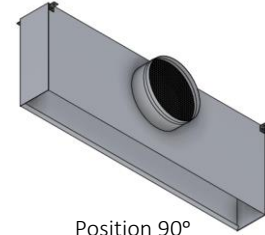
Perforated damper



Position 0°



Position 45°



Position 90°

The perforated damper is mounted on the adapter spigot and has the role of balancing the air flow.

Functional parameters

Air flow [m ³ /h]	Slots no. Ak [m ²]	1 0.019
Length = 1000 mm		
33	X [m] (Horizontally)	1.00
	X [m] (Vertically)	1.00
	NR [dB(A)]	-
	ΔPt [Pa]	0.98
67	X [m] (Horizontally)	2.00
	X [m] (Vertically)	2.00
	NR [dB(A)]	-
	ΔPt [Pa]	4.02
106	X [m] (Horizontally)	4.00
	X [m] (Vertically)	3.00
	NR [dB(A)]	15.00
	ΔPt [Pa]	9.22
140	X [m] (Horizontally)	5.00
	X [m] (Vertically)	4.00
	NR [dB(A)]	21.00
	ΔPt [Pa]	16.18
173	X [m] (Horizontally)	5.00
	X [m] (Vertically)	4.00
	NR [dB(A)]	27.00
	ΔPt [Pa]	25.40
206	X [m] (Horizontally)	6.00
	X [m] (Vertically)	5.00
	NR [dB(A)]	31.00
	ΔPt [Pa]	36.38
240	X [m] (Horizontally)	7.00
	X [m] (Vertically)	5.00
	NR [dB(A)]	35.00
	ΔPt [Pa]	49.52
279	X [m] (Horizontally)	7.00
	X [m] (Vertically)	5.00
	NR [dB(A)]	38.00
	ΔPt [Pa]	64.72
312	X [m] (Horizontally)	8.00
	X [m] (Vertically)	5.00
	NR [dB(A)]	41.00
	ΔPt [Pa]	82.18

Air flow [m ³ /h]	Slots no. Ak [m ²]	2 0.038
Length = 1000 mm		
67	X [m] (Horizontally)	1.00
	X [m] (Vertically)	1.00
	NR [dB(A)]	-
	ΔPt [Pa]	0.98
140	X [m] (Horizontally)	3.00
	X [m] (Vertically)	3.00
	NR [dB(A)]	-
	ΔPt [Pa]	4.02
206	X [m] (Horizontally)	5.00
	X [m] (Vertically)	4.00
	NR [dB(A)]	18.00
	ΔPt [Pa]	9.22
279	X [m] (Horizontally)	7.00
	X [m] (Vertically)	5.00
	NR [dB(A)]	24.00
	ΔPt [Pa]	16.18
346	X [m] (Horizontally)	8.00
	X [m] (Vertically)	6.00
	NR [dB(A)]	30.00
	ΔPt [Pa]	25.40
413	X [m] (Horizontally)	9.00
	X [m] (Vertically)	6.00
	NR [dB(A)]	34.00
	ΔPt [Pa]	36.38
485	X [m] (Horizontally)	9.00
	X [m] (Vertically)	7.00
	NR [dB(A)]	38.00
	ΔPt [Pa]	49.52
552	X [m] (Horizontally)	10.00
	X [m] (Vertically)	7.00
	NR [dB(A)]	41.00
	ΔPt [Pa]	64.72
625	X [m] (Horizontally)	11.00
	X [m] (Vertically)	8.00
	NR [dB(A)]	44.00
	ΔPt [Pa]	82.18

Air flow [m ³ /h]	Slots no. Ak [m ²]	3 0.057
Length = 1000 mm		
106	X [m] (Horizontally)	2.00
	X [m] (Vertically)	2.00
	NR [dB(A)]	-
	ΔPt [Pa]	0.98
206	X [m] (Horizontally)	4.00
	X [m] (Vertically)	3.00
	NR [dB(A)]	-
	ΔPt [Pa]	4.02
312	X [m] (Horizontally)	6.00
	X [m] (Vertically)	5.00
	NR [dB(A)]	19.00
	ΔPt [Pa]	9.22
413	X [m] (Horizontally)	8.00
	X [m] (Vertically)	6.00
	NR [dB(A)]	26.00
	ΔPt [Pa]	16.18
519	X [m] (Horizontally)	10.00
	X [m] (Vertically)	7.00
	NR [dB(A)]	32.00
	ΔPt [Pa]	25.50
625	X [m] (Horizontally)	11.00
	X [m] (Vertically)	8.00
	NR [dB(A)]	36.00
	ΔPt [Pa]	36.38
725	X [m] (Horizontally)	12.00
	X [m] (Vertically)	9.00
	NR [dB(A)]	40.00
	ΔPt [Pa]	49.52
831	X [m] (Horizontally)	12.00
	X [m] (Vertically)	9.00
	NR [dB(A)]	43.00
	ΔPt [Pa]	64.72
932	X [m] (Horizontally)	13.00
	X [m] (Vertically)	10.00
	NR [dB(A)]	46.00
	ΔPt [Pa]	82.18

Air flow [m ³ /h]	Slots no. Ak [m ²]	4 0.076
Length = 1000 mm		
140	X [m] (Horizontally)	2.00
	X [m] (Vertically)	2.00
	NR [dB(A)]	-
	ΔPt [Pa]	0.98
279	X [m] (Horizontally)	5.00
	X [m] (Vertically)	4.00
	NR [dB(A)]	-
	ΔPt [Pa]	4.02
413	X [m] (Horizontally)	7.00
	X [m] (Vertically)	6.00
	NR [dB(A)]	21.00
	ΔPt [Pa]	9.22
552	X [m] (Horizontally)	10.00
	X [m] (Vertically)	7.00
	NR [dB(A)]	27.00
	ΔPt [Pa]	16.18
692	X [m] (Horizontally)	11.00
	X [m] (Vertically)	8.00
	NR [dB(A)]	33.00
	ΔPt [Pa]	25.40
831	X [m] (Horizontally)	12.00
	X [m] (Vertically)	9.00
	NR [dB(A)]	37.00
	ΔPt [Pa]	36.38
971	X [m] (Horizontally)	13.00
	X [m] (Vertically)	10.00
	NR [dB(A)]	41.00
	ΔPt [Pa]	49.52
1105	X [m] (Horizontally)	14.00
	X [m] (Vertically)	10.00
	NR [dB(A)]	44.00
	ΔPt [Pa]	64.72
1244	X [m] (Horizontally)	15.00
	X [m] (Vertically)	11.00
	NR [dB(A)]	47.00
	ΔPt [Pa]	82.18

The legend

Ak [m²] - The free surface

X [m] - The length of the air jet at a speed of 0.375m/s

NR [dB (A)] - Noise level without room attenuation

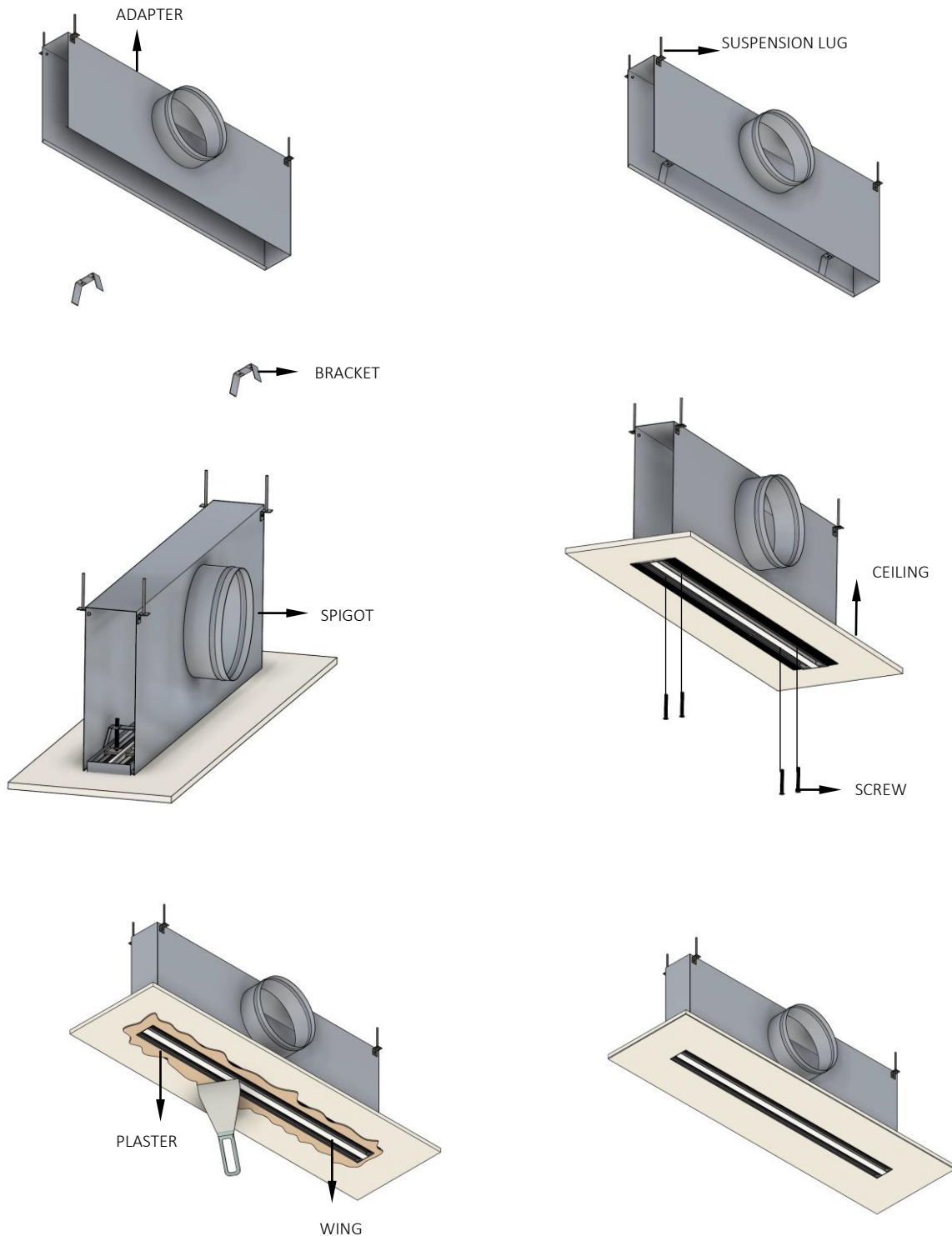
ΔPt [Pa] - Pressure loss

Installation

The diffuser is mounted in a false continuous ceiling. The fixing of the plenum diffuser is done by means of “U” type mounting systems (bracket), positioned inside the plenum and the screws.

After fixing, apply gypsum plaster (adhesive) over the diffuser frame and then apply wall paint.

False continuous ceiling mounting



Order code

Example on how to place an order

Type	Slot number	Length	Section	Accessories	Finish
WING					
1, 2, 3 or 4 slots					
On request					
S1 - Left end section					
S2 - Middle section					
S3 - Right end section					
AIZ - Insulated plenum box					
AN - Uninsulated plenum box					
Perforated damper (plenum box)					
LN - standard - black anodized aluminum external frame & blades, inner frame RAL9016 glossy (2÷4 slots)					
LV - painted in RAL on request					