

Air through perfection

Circular swirl diffuser

VS



ACP
Swirl diffusers

Circular swirl diffuser VS



Description

VS is a diffuser with fixed radially arranged blades and a swirl air jet, used to introduce air. The diffuser is recommended for installations with constant or variable air flow and is intended for spaces with heights between 2.6 and 4 m.

Technical specifications

Characteristics

The design of the blades, their radial arrangement and the swirl action determine a high level of induction rate.

The product is delivered with fixing screw and masking cap.

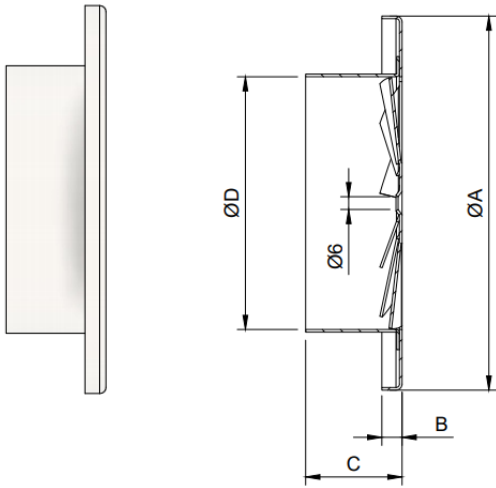
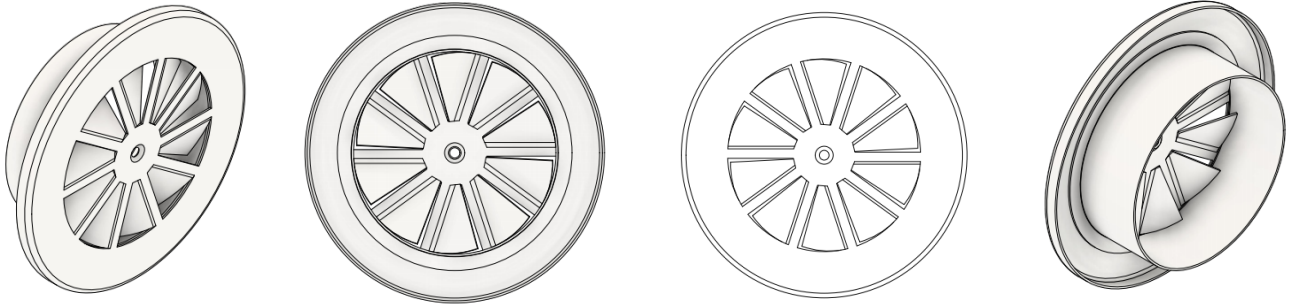
Dimensional range: $\varnothing 125$, $\varnothing 160$, $\varnothing 200$, $\varnothing 250$, $\varnothing 315$, $\varnothing 400$.

Materials

The diffuser is made of galvanized steel electrostatic field painted in glossy white RAL9016.

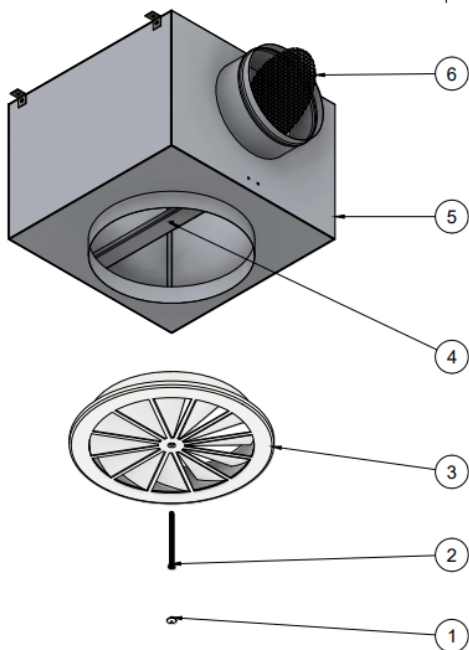
Other RAL colours are available on request.

Technical drawing



VS	ØD [mm]	ØA [mm]	C [mm]	B [mm]
125	123	178	44	8
160	158	195	44	8
200	198	248	44	8
250	248	296	44	8
315	313	363	44	8
400	398	600	44	8

Product specifications



- 1 - Masking cap
- 2 - Fixing screw
- 3 - VS diffuser
- 4 - Bracket (optional)
- 5 - Plenum box (optional)
- 6 - Perforated damper (optional)

Accessories

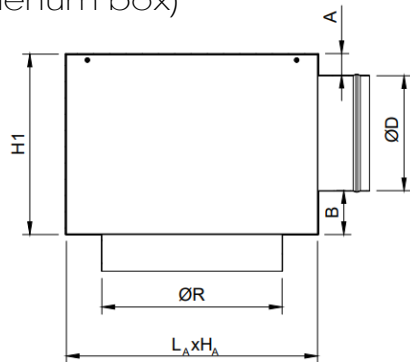
The diffuser can be delivered with a connecting plenum to the circular duct, with horizontal connection.

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.

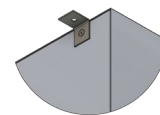
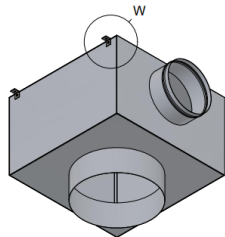
Optionally, a perforated damper can be mounted on the plenum connection to balance the air flow.

Adapter (plenum box)



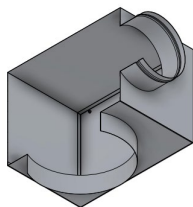
$L_A \times H_A$ – depending on $\varnothing R$
 $A, B, H1$ – depending on request and $\varnothing D$
 $\varnothing R$ – connection diameter VS + 4 mm

The adapter is made of galvanized steel sheet Z140 and is equipped with 4 lugs for suspension.

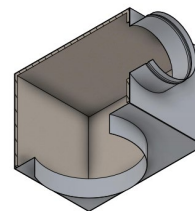


W - Suspension lug

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

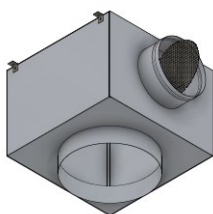


AN - Uninsulated adapter

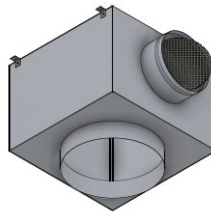


AIZ - Insulated adapter

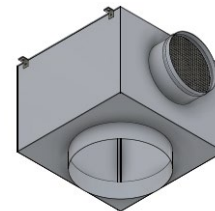
Perforated damper



Position 0°



Position 45°



Position 90°

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

Bracket ("U" system)

The bracket is used for mounting/fixing the plenum diffuser.



Functional parameters

Air flow [m ³ /h]	Ø [mm]	125
	Ak [m ²]	0.003
35	Veff [m/s]	3.9
	NR [dB(A)]	17.0
	ΔPt [Pa]	8.2
43	Veff [m/s]	4.8
	NR [dB(A)]	22.0
	ΔPt [Pa]	13.5
50	Veff [m/s]	5.6
	NR [dB(A)]	27.0
	ΔPt [Pa]	18.0
61	Veff [m/s]	6.8
	NR [dB(A)]	32.0
	ΔPt [Pa]	28.0
76	Veff [m/s]	8.4
	NR [dB(A)]	37.0
	ΔPt [Pa]	39.0
96	Veff [m/s]	10.7
	NR [dB(A)]	42.0
	ΔPt [Pa]	60.0

Air flow [m ³ /h]	Ø [mm]	160
	Ak [m ²]	0.004
43	Veff [m/s]	3.0
	NR [dB(A)]	17.0
	ΔPt [Pa]	7.5
52	Veff [m/s]	3.6
	NR [dB(A)]	22.0
	ΔPt [Pa]	9.0
65	Veff [m/s]	4.5
	NR [dB(A)]	27.0
	ΔPt [Pa]	15.0
81	Veff [m/s]	5.6
	NR [dB(A)]	32.0
	ΔPt [Pa]	23.0
100	Veff [m/s]	6.9
	NR [dB(A)]	37.0
	ΔPt [Pa]	35.0
120	Veff [m/s]	8.3
	NR [dB(A)]	42.0
	ΔPt [Pa]	50.0

Air flow [m ³ /h]	Ø [mm]	200
	Ak [m ²]	0.007
90	Veff [m/s]	3.6
	NR [dB(A)]	17.0
	ΔPt [Pa]	12.0
120	Veff [m/s]	4.8
	NR [dB(A)]	22.0
	ΔPt [Pa]	18.0
140	Veff [m/s]	5.6
	NR [dB(A)]	27.0
	ΔPt [Pa]	25.0
160	Veff [m/s]	6.3
	NR [dB(A)]	32.0
	ΔPt [Pa]	35.0
185	Veff [m/s]	7.3
	NR [dB(A)]	37.0
	ΔPt [Pa]	48.0
230	Veff [m/s]	9.1
	NR [dB(A)]	42.0
	ΔPt [Pa]	70.0

Air flow [m ³ /h]	Ø [mm]	250
	Ak [m ²]	0.011
190	Veff [m/s]	4.8
	NR [dB(A)]	17.0
	ΔPt [Pa]	15.0
240	Veff [m/s]	6.1
	NR [dB(A)]	22.0
	ΔPt [Pa]	20.0
280	Veff [m/s]	7.1
	NR [dB(A)]	27.0
	ΔPt [Pa]	30.0
320	Veff [m/s]	8.1
	NR [dB(A)]	32.0
	ΔPt [Pa]	40.0
410	Veff [m/s]	10.4
	NR [dB(A)]	37.0
	ΔPt [Pa]	58.0
520	Veff [m/s]	13.1
	NR [dB(A)]	42.0
	ΔPt [Pa]	60.0

Air flow [m ³ /h]	Ø [mm]	315
	Ak [m ²]	0.021
240	Veff [m/s]	3.2
	NR [dB(A)]	17.0
	ΔPt [Pa]	9.0
270	Veff [m/s]	3.6
	NR [dB(A)]	22.0
	ΔPt [Pa]	13.5
320	Veff [m/s]	4.2
	NR [dB(A)]	27.0
	ΔPt [Pa]	18.0
380	Veff [m/s]	5.0
	NR [dB(A)]	32.0
	ΔPt [Pa]	25.0
470	Veff [m/s]	6.2
	NR [dB(A)]	37.0
	ΔPt [Pa]	35.0
530	Veff [m/s]	7.0
	NR [dB(A)]	42.0
	ΔPt [Pa]	48.0

Air flow [m ³ /h]	Ø [mm]	400
	Ak [m ²]	0.028
290	Veff [m/s]	2.9
	NR [dB(A)]	17.0
	ΔPt [Pa]	10.0
330	Veff [m/s]	3.3
	NR [dB(A)]	22.0
	ΔPt [Pa]	15.0
350	Veff [m/s]	3.5
	NR [dB(A)]	27.0
	ΔPt [Pa]	20.0
500	Veff [m/s]	5.0
	NR [dB(A)]	32.0
	ΔPt [Pa]	30.0
600	Veff [m/s]	6.0
	NR [dB(A)]	37.0
	ΔPt [Pa]	42.0
720	Veff [m/s]	7.1
	NR [dB(A)]	42.0
	ΔPt [Pa]	65.0

The legend

Ak [m²] - The free surface

Veff [m/s] – The effective air velocity

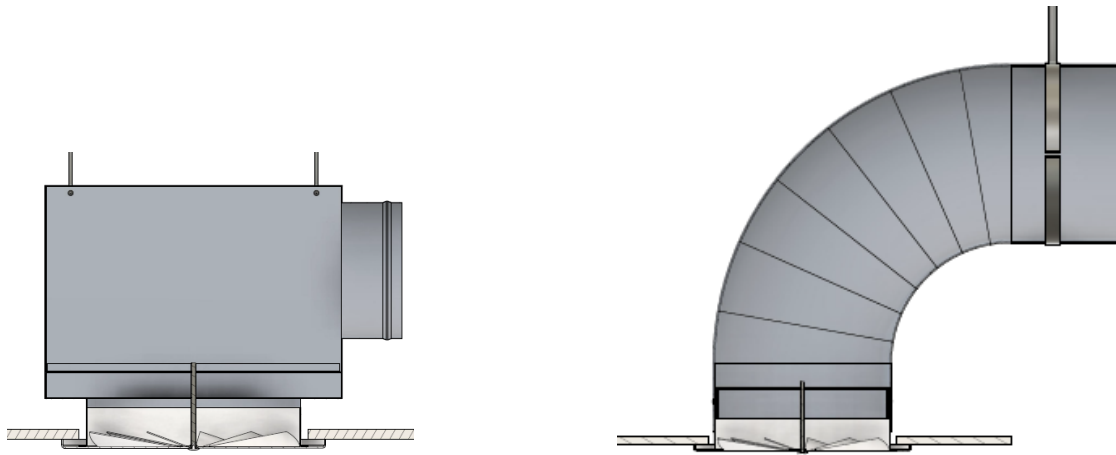
NR [dB (A)] - Noise level without room attenuation

ΔPt [Pa] - Pressure loss

Installation

The diffuser is mounted in a continuous false ceiling. The fixing of the plenum diffuser is done by means of a central screw.

Installation in continuous ceiling



Order code

Example on how to place an order

Type	Dimensions	Accessories	Finish
VS	Ø125 ... Ø400 mm	Perforated damper (plenum box) Bracket	RAL 9016 RAL.. - Other RAL colors on request
AIZ - Insulated adapter			
AN - Uninsulated adapter			