

VSD-1

VARIABILNI VRTINČNI DIFUZOR VARIABLE SWIRL DIFFUSER

OPIS:

Variabilni vrtinčni difuzor VSD-1 je namenjen hlajenju in ogrevanju velikih prostorov višine od 4 do 12 m. Omogoča turbulenten tok zraka, dolge domete pri ogrevanju in enakomerno razpršitev zraka pod stropom pri hlajenju – Coanda efekt.

KONSTRUKCIJA: Difuzor sestavlja lijakasto oblikovano ohišje in šest centralno nastavljivih lopatic.

MATERIAL:

- jeklena pločevina pobarvana v belo barvo RAL 9010 MAT ali na željo kupca poljubno barvo po RAL lestvici
- OPCIJA: nerjaveča pločevina AISI 304 SB

POGON:

C - centralna ročna nastavev položaja lopatic

E - pripravljen za montažo elektromotornega pogona.

Na željo kupca se elektromotor tudi namesti na ohišje difuzorja:

- LM230A
- LM230A SR
- LM24A
- LM24A SR

T - difuzor ima vgrajen termostatski pogon, ki zaznava temperaturo vpihovanega zraka in samodejno uravnava položaj lopatic. Termostatski element deluje v temperaturnem območju od 22 °C do 38 °C. Deluje avtomatsko in ne potrebuje dodatnih virov energije in s tem povezanih instalacij. Difuzor je nastavljen na optimalen položaj in aktiviran že v tovarni. Lopatice so pri temperaturi 38 °C odprte pod kotom 85°. Pri temperaturi 20 °C mehanska blokada zaustavi zapiranje lopatic pod kotom 35°.

DESCRIPTION:

The VSD-1 variable swirl diffuser can be used for various ceiling heights from 4 m to 12 m. It enables turbulent airflow, long-range constant airflow and the Coanda effect – where cold air is dispersed below the ceiling.

CONSTRUCTION: The device includes a casing of nozzle shaped aluminium and 6 centrally adjustable blades.

MATERIAL:

- steel sheet metal painted in white finish RAL 9010 MATT or can be any RAL colour according to the customer's request.
- OPTION: stainless steel sheet metal AISI 304 SB

DRIVE:

C - central manual drive

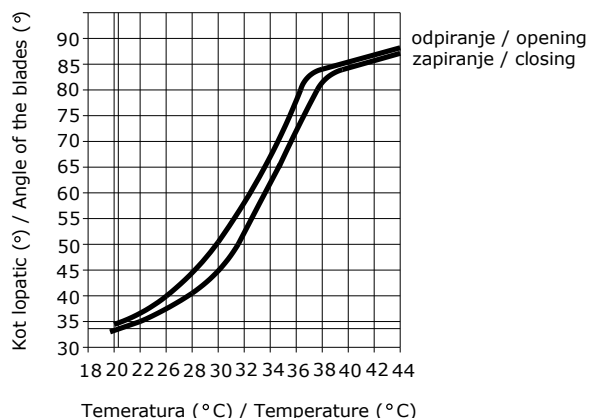
E - ready for electric drive.

Upon request the electric motor drive can be added on the diffuser:

- LM230A
- LM230A SR
- LM24A
- LM24A SR

T - thermostatic drive installed inside diffuser perceives a surroundings temperature and automatically adjusts the position of the blades. It does not need any additional source of energy, installations or settings. Diffuser is set in an optimal position and activated in the production. The wax element works in a temperature range from 22 °C to 38 °C. At temperature 38 °C the blades are open at 85° angle. At temperature 20 °C the blockade fixed on the holder stops the blades in position of 35° angle.

Delovanje difuzorja s termostatskim pogonom: / Operation of diffuser with thermostatic drive:



DODATKI in OPCIJE / ACCESSORIES and OPTIONS:

PL – plošča dim 595x595 mm za vgradnjo difuzorja v spuščen strop / plate dim. 595x595 for installation in prefabricated ceilings



ZM – zaščita proti udarcem žoge v telovadnicah / ball impact protection in gyms



PP – perforirana plošča v vratu difuzorja / perforated plate placed on the neck of the diffuser



INOX AISI 304 SB – nerjaveča pločevina / stainless steel sheet metal AISI 304 SB

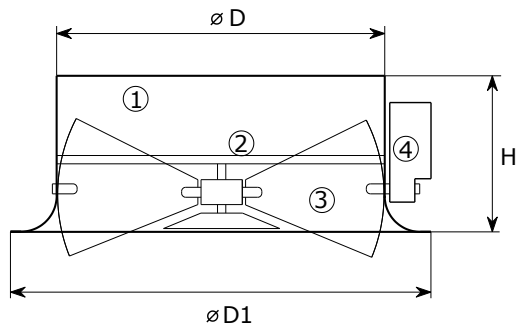


PB-3 – priključna komora / plenum box



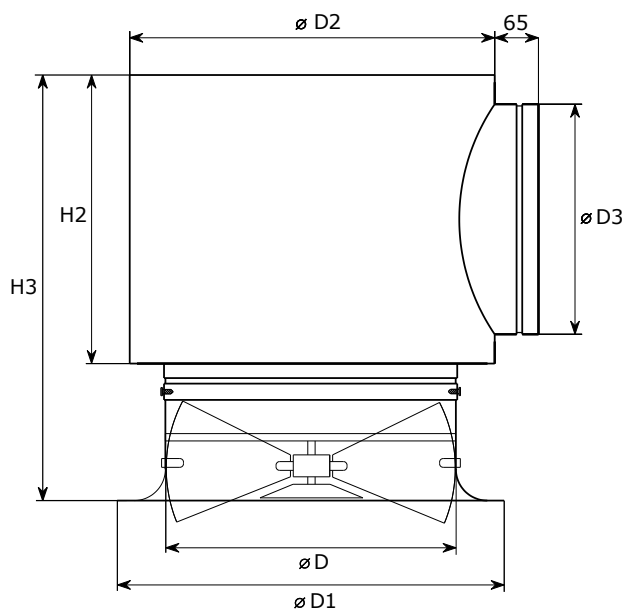
PB-4 – priključna komora / plenum box



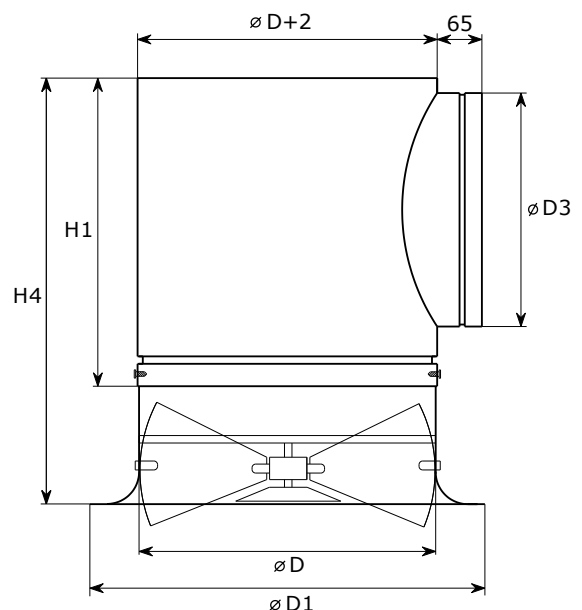
DIMENZIJE / DIMENSIONS:

1. difuzor / diffuser
2. prečka / traverse
3. lopatice / blades
4. elektromotorni pogon / electric drive

Difuzor VSD-1 s priključno komoro PB 3
Diffuser VSD-1 with plenum box PB 3

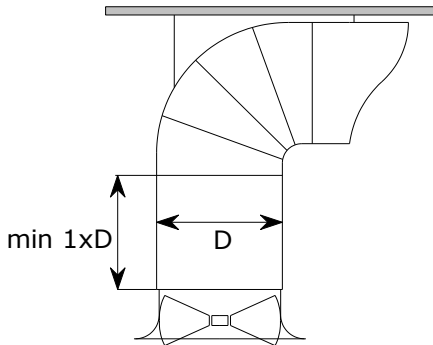
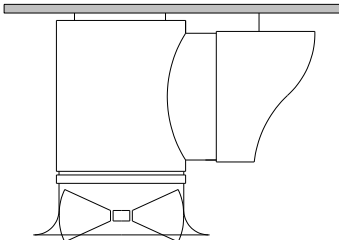


Difuzor VSD-1 s priključno komoro PB 4
Diffuser VSD-1 with plenum box PB 4



D	$\varnothing D$	$\varnothing D1$	$\varnothing D2$	$\varnothing D3$	H	H1	H2	H3	H4
125	123	173	225	98	80	170	170	280	220
160	158	220	260	123	90	195	195	315	255
200	198	280	300	158	105	230	230	365	305
250	248	345	350	198	120	270	270	420	360
315	313	425	415	248	150	320	320	500	440
400	398	530	500	313	180	385	385	595	535
500	498	660	630	398	220	470	470	720	660

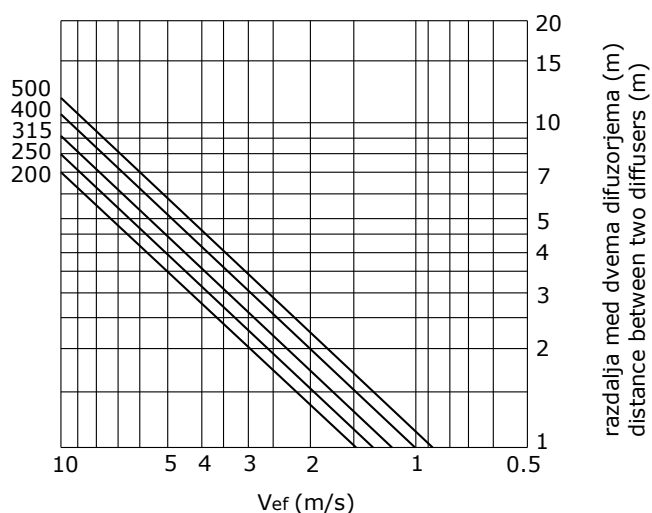
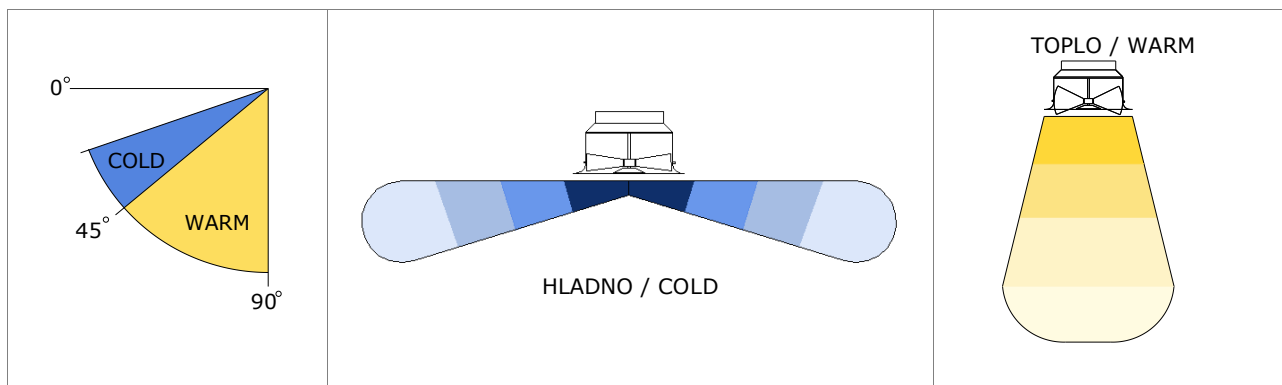
MONTAŽA / INSTALLATION:

Pritrditev na cev / Fitting on air shaft.	Pritrditev na priključno komoro / Fitting on plenum box.
	

MINIMALNA RAZDALJA MED DIFUZORJI: / MINIMUM DISTANCE BETWEEN DIFFUSERS:

Minimalna razdalja med difuzorjema mora biti pri minimalnem pretoku zraka vsaj 5x premer difuzorja in vsaj 10x premer difuzorja pri maksimalnem pretoku zraka.

Minimum distance between two diffusers must be at least 5 times the diameter of the diffuser at minimum flow and 10 times the diameter of the diffuser at maximum flow.

**KOT LOPATIC IN SMER ZRAČNEGA CURKA: / ANGLE OF BLADES AND DIRECTION OF AIR FLOW:**

HITRA IZBIRA Z IZBORNIM PROGRAMOM / FAST SELECTION WITH SELECTION TOOL: <https://izdelki.kosanc.si>

IZBIRNA TABELA / SELECTION TABLE:

Q [m³/h]	dim	125	160	200	250	315	400	500
50	Lh [m]	3,3						
	PT [Pa]	<5						
	NH [db(A)]	<20						
	Lv [m]	7,2						
	PT [Pa]	<5						
	NH [db(A)]	<20						
100	Lh [m]	3,9	3,5					
	PT [Pa]	13	5					
	NH [db(A)]	27	<20					
	Lv [m]	8,5	7,5					
	PT [Pa]	5	<5					
	NH [db(A)]	20	<20					
150	Lh [m]	4,3	3,8	3,5				
	PT [Pa]	31	11	<5				
	NH [db(A)]	37	26	<20				
	Lv [m]	9,3	8,3	7,5				
	PT [Pa]	12	<5	<5				
	NH [db(A)]	27	<20	<20				
200	Lh [m]		4,1	3,7				
	PT [Pa]		20	8				
	NH [db(A)]		32	23				
	Lv [m]		8,8	8				
	PT [Pa]		8	<5				
	NH [db(A)]		23	<20				
300	Lh [m]			4,1	3,7			
	PT [Pa]			18	7			
	NH [db(A)]			31	22			
	Lv [m]			8,8	7,9			
	PT [Pa]			7	<5			
	NH [db(A)]			22	<20			
400	Lh [m]			4,4	3,9	3,5		
	PT [Pa]			34	13	5		
	NH [db(A)]			38	27	<20		
	Lv [m]			9,4	8,5	7,6		
	PT [Pa]			13	5	<5		
	NH [db(A)]			27	20	<20		
500	Lh [m]				4,1	3,7		
	PT [Pa]				21	8		
	NH [db(A)]				32	23		
	Lv [m]				8,9	8,0		
	PT [Pa]				8	<5		
	NH [db(A)]				23	<20		

Q [m³/h]	dim	125	160	200	250	315	400	500
600	Lh [m]				4,3	3,9	3,5	
	PT [Pa]				31	12	<5	
	NH [db(A)]				37	26	<20	
	Lv [m]				9,3	8,3	7,5	
	PT [Pa]				12	5	<5	
	NH [db(A)]				27	<20	<20	
700	Lh [m]				4,5	4,0	3,6	
	PT [Pa]				43	16	6	
	NH [db(A)]				41	29	21	
	Lv [m]				9,6	8,6	7,7	
	PT [Pa]				17	6	<5	
	NH [db(A)]				30	21	<20	
800	Lh [m]					4,1	3,7	
	PT [Pa]					21	8	
	NH [db(A)]					32	23	
	Lv [m]					8,9	8,0	
	PT [Pa]					8	<5	
	NH [db(A)]					23	<20	
900	Lh [m]					4,3	3,8	
	PT [Pa]					27	10	
	NH [db(A)]					35	25	
	Lv [m]					9,2	8,2	
	PT [Pa]					11	<5	
	NH [db(A)]					26	<20	
1000	Lh [m]					4,4	3,9	3,5
	PT [Pa]					34	13	5
	NH [db(A)]					38	27	<20
	Lv [m]					9,4	8,4	7,6
	PT [Pa]					13	5	<5
	NH [db(A)]					28	<20	<20
1200	Lh [m]						4,1	3,7
	PT [Pa]						18	7
	NH [db(A)]						31	22
	Lv [m]						8,8	7,9
	PT [Pa]						7	<5
	NH [db(A)]						22	<20
1400	Lh [m]						4,2	3,8
	PT [Pa]						25	10
	NH [db(A)]						34	25
	Lv [m]						9,1	8,2
	PT [Pa]						10	<5
	NH [db(A)]						25	<20
1600	Lh [m]						4,4	3,9
	PT [Pa]						34	13
	NH [db(A)]						38	27
	Lv [m]						9,4	8,5
	PT [Pa]						13	5
	NH [db(A)]						27	20

Q [m³/h]	dim	125	160	200	250	315	400	500
1800	Lh [m]							4,0
	PT [Pa]							17
	NH [db(A)]							30
	Lv [m]							8,7
	PT [Pa]							7
	NH [db(A)]							22
2000	Lh [m]							4,1
	PT [Pa]							21
	NH [db(A)]							32
	Lv [m]							8,9
	PT [Pa]							8
	NH [db(A)]							23
2200	Lh [m]							4,2
	PT [Pa]							26
	NH [db(A)]							34
	Lv [m]							9,1
	PT [Pa]							10
	NH [db(A)]							25
2400	Lh [m]							4,3
	PT [Pa]							31
	NH [db(A)]							37
	Lv [m]							9,3
	PT [Pa]							12
	NH [db(A)]							27

Domet zraka je izračunan do hitrosti 0,2 m/s / Air flow range is calculated up to the velocity of 0.2 m/s

Q - količina zraka [m³/h] / amount of air [m³/h]

Lh - dolžina horizontalnega dometa zraka pri kotu lopatic 30° [m] / length of horizontal air flow range at 30° blade angle [m]

Lv - dolžina vertikalnega dometa zraka pri kotu lopatic 70° [m] / length of vertical air flow range at 70° blade angle [m]

PT - padec tlaka [Pa] / pressure drop [Pa]

NH - nivo hrupa [db (A)] / noise level [db (A)]

A - meritev jakosti zvoka je izvedena pri 0,8 m od izvora / measurement of sound intensity is carried out at 0.8 m from the source

NAROČANJA / HOW TO ORDER:

VSD-1	C	315	RAL 9010	PP	PB 3	315	/	250	H	L	ISO 6mm
											izolacija / insulation 6 mm, 10 mm, 13 mm, 19 mm loputka / damper pozicija priključka / position of connection H – horizontalen / horizontal V – vertikalni / vertical priključek / connection opening standard poljuben / optional dimenzija komore / plenum dimension komora / plenum PB3 komora / plenum PB4 komora / plenum dodatki / supplements PL – plošča 595x595 / plate 595x595 PP – perforirana razpršilna plošča / perforated dispersing plate ZM – zaščita proti udarcem žoge v telovadnicah / ball impact protection in gyms barva / colour standard RAL 9010 MAT optional dimenzija difuzorja / diffuser dimension 125, 160, 200, 250, 315, 400, 500 pogon / drive C – centralni ročni pogon / central manual drive E – pripravljeno za elektromotorni pogon / ready for electric drive E + BELIMO ... – montiran el. pogon / mounted electric drive T – montiran termični pogon / mounted thermostatic drive tip difuzorja / diffuser type