

# Swirl diffusers OD-4

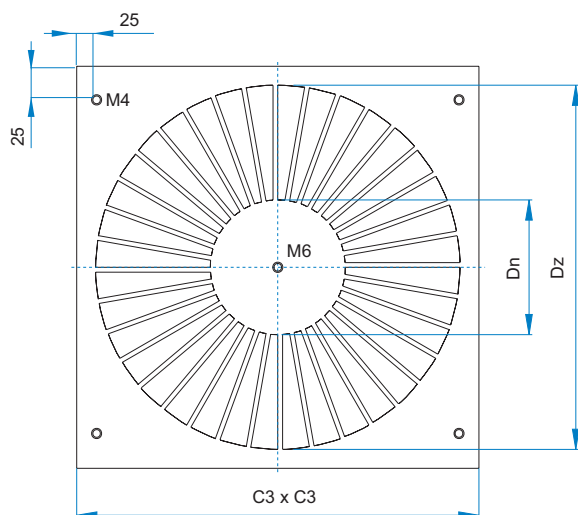
- Fixed slots
- Possible volume control damper in spigot
- Diffusing ring is an additional element, preventing the discharged air to flow over the diffuser face itself.

## Diffuser face fastening

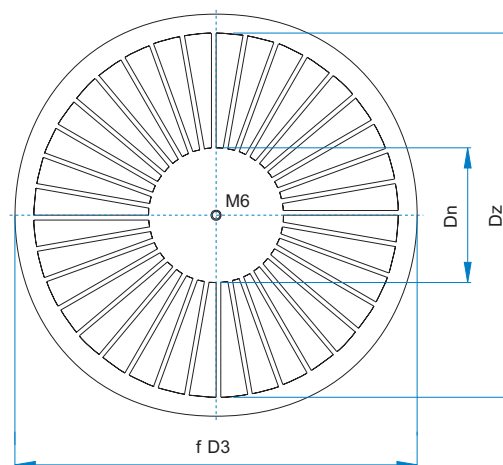
Diffuser plate can be fastened with central screw OD-4/K1 or with four peripheral screws OD-4/K4. Diffuser plate OD-4/R1 is to be fastened with one central screw.



**OD-4/K**



**OD-4/R**

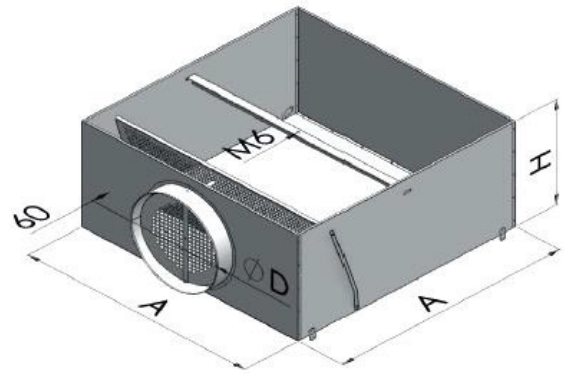


Size	Dn	Dz	C3	ΦD3	A <sub>ef</sub> (m <sup>2</sup> )
400	130	350	395	400	0.0138
500			495	500	
600			595	600	
625			620	625	
600D	200	540	595	600	0.0367
625D			620	625	
675D			670	675	

A<sub>ef</sub> – effective discharge area (m<sup>2</sup>)

## Square plenum box

Designation	Size	A [mm]	ΦD [mm]	H [mm]
K/Z/S/M/	400	390	198	250
K/Z/S/M/	500	390	198	250
K/Z/S/M/	600	390	198	250
K/Z/S/M/	625	390	198	250
K/Z/S/M/	600D	590	248	300
K/Z/S/M/	625D	590	248	300

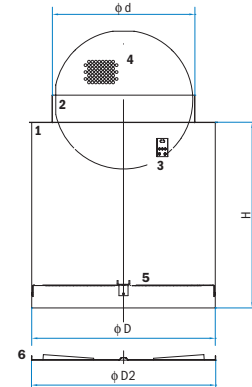
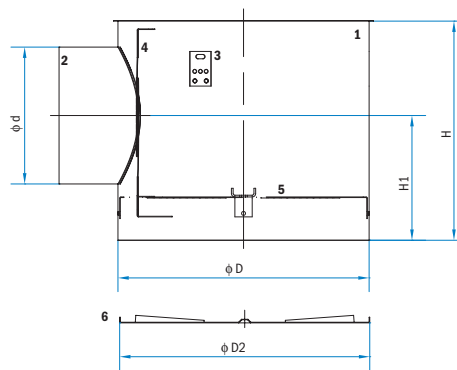


## Round plenum box

1. Plenum box
2. Inlet spigot
3. Suspension bracket
4. Volume control damper M
5. Dispersing plate (only for supply)
6. Diffuser OD-4

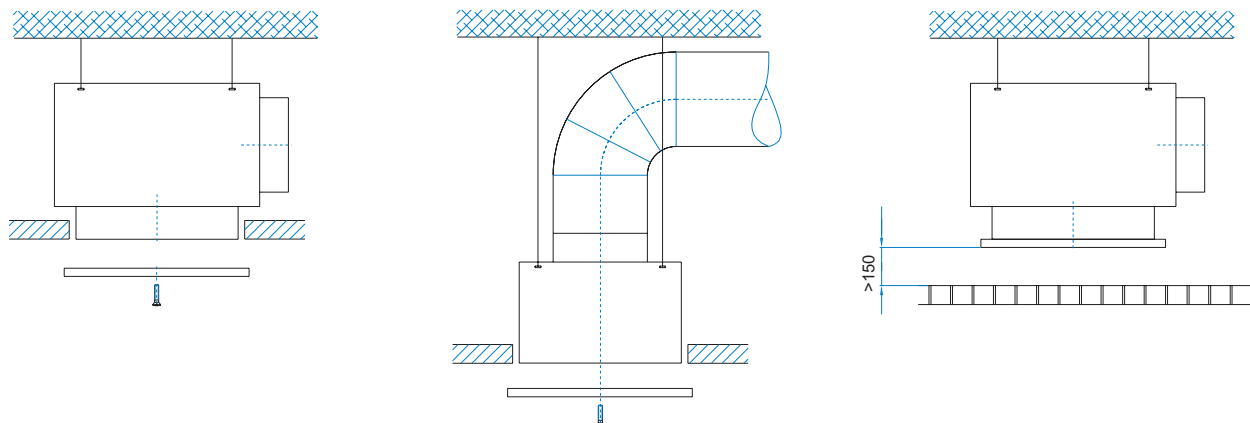
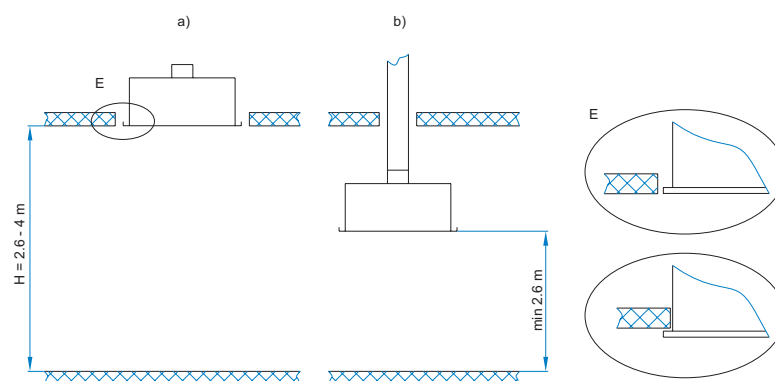
Size	ΦD2	ΦD	H	H1	Φd
400	400	370	285	164	198
500	500				
600	600				
625	625				
600D	600	560	335	189	248
625D	625				
675D	675				

Size	ΦD2	ΦD	H	Φd
400	400	370	280	198
500	500			
600	600			
625	625			
600D	600	560	330	248
625D	625			
675D	675			



## Installation

- a) into the ceiling  
 b) with extended tube under the ceiling



## Ordering key

**OD-4 K1 / Z / S / M / I5 Size**

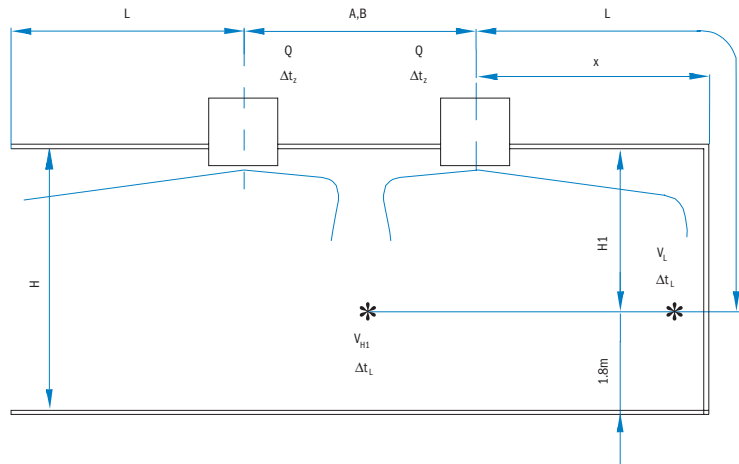
1 2 3 4 5 6 7

1	Diffuser type
<b>OD-4</b>	Swirl diffuser
2	Diffuser plate type
<b>K1</b>	Square diffuser plate, central fastening
<b>K4</b>	Square diffuser plate, fastening with four screws (available for diffuser plate only, without plenum box)*
<b>R1</b>	Circular diffuser plate, central fastening
3	Plenum box
<b>Z</b>	Square plenum box for air supply
<b>ZR</b>	Circular plenum box for air supply
4	Spigot
<b>S</b>	Side entry spigot
5	Air regulation
<b>M</b>	Volume control damper in entry spigot
6	Insulation
<b>I5</b>	5 mm PE thermal insulation outside of ZR plenum box
<b>I6</b>	6 mm PE thermal insulation outside of Z plenum box
<b>I9</b>	9 mm synthetic rubber based sound & thermal insulation (-40°C - 105°C) outside of ZR plenum box
<b>I10</b>	10 mm synthetic rubber based sound & thermal insulation (-40°C - 105°C) outside of Z plenum box
<b>I19</b>	19 mm synthetic rubber based sound & thermal insulation (-40°C - 105°C) outside of ZR plenum box
7	Dimensions
<b>400</b>	Size
<b>500</b>	Size
<b>600</b>	Size
<b>600D</b>	Size
<b>625</b>	Size
<b>625D</b>	Size
<b>675D</b>	Size

\* When installing to the plenum box, diffuser plate is always K1, with central fastening.

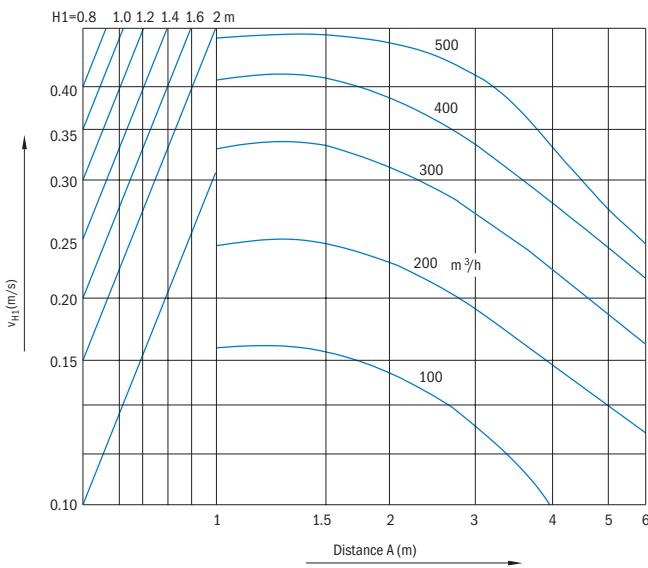
## Definition of symbols

<b>Q (m³/h)</b>	Air flow
<b>x (m)</b>	Horizontal distance to the wall
<b>H (m)</b>	Room height
<b>H1 (m)</b>	Distance from ceiling to occupied zone
<b>L (m)</b>	Throw distance ( $L = H1 + x$ )
<b>V<sub>L</sub> (m/s)</b>	Air velocity at the throw distance L
<b>Δt<sub>z</sub> (K)</b>	Temperate difference between the supply and room air
<b>Δt<sub>c</sub> (K)</b>	Difference between the core and room air temperature
<b>Δp<sub>t</sub> (Pa)</b>	Pressure drop
<b>L<sub>WA</sub> (dB(A))</b>	Sound power level
<b>V<sub>H1</sub> (m/s)</b>	Air velocity at the H1 distance
<b>A, B (m)</b>	Distance between diffusers by length and by width

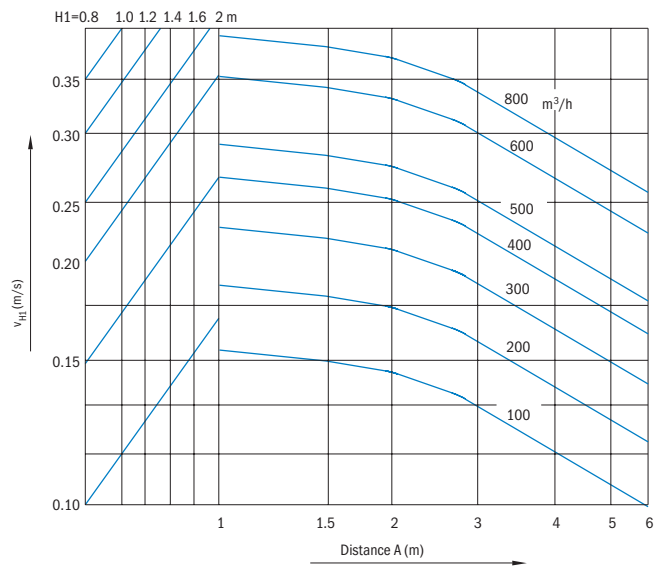


## Air velocity at the throw distances (for OD-4 without diffusion ring and with ceiling effect)

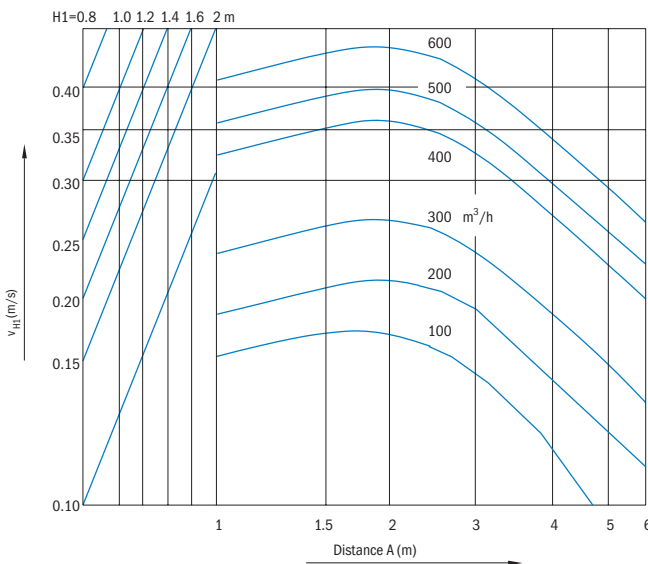
**OD-4 size 400,500,600,625**  
B=2.5... 3.5 m



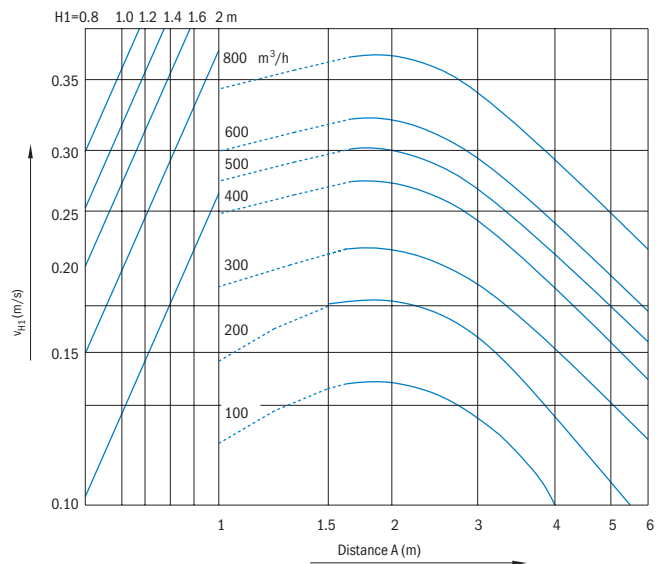
**OD-4 size 600D,625D,675D**  
B=2.5... 3.5 m



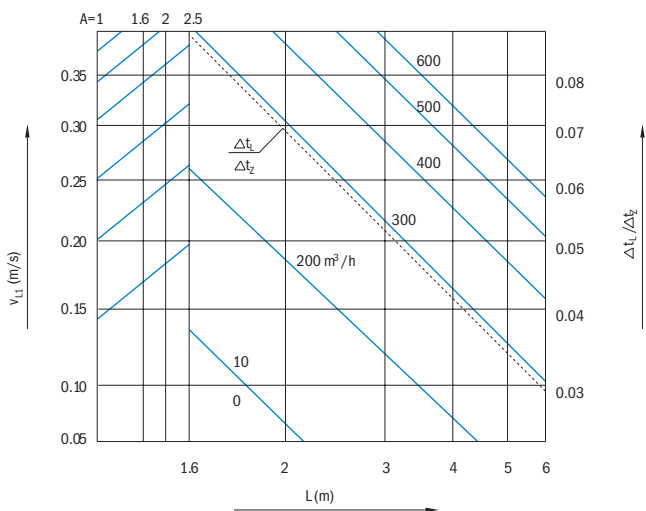
**OD-4 size 400,500,600,625**  
B>4m



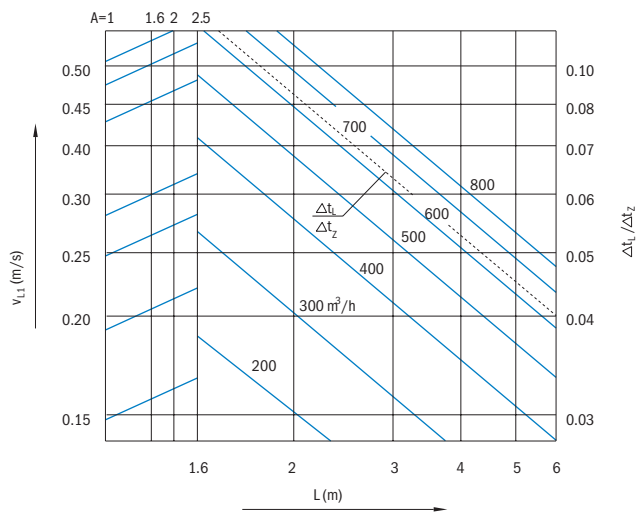
**OD-4 size 600D, 625D,675D**  
B>4m



**OD-4 size 400,500,600,625**



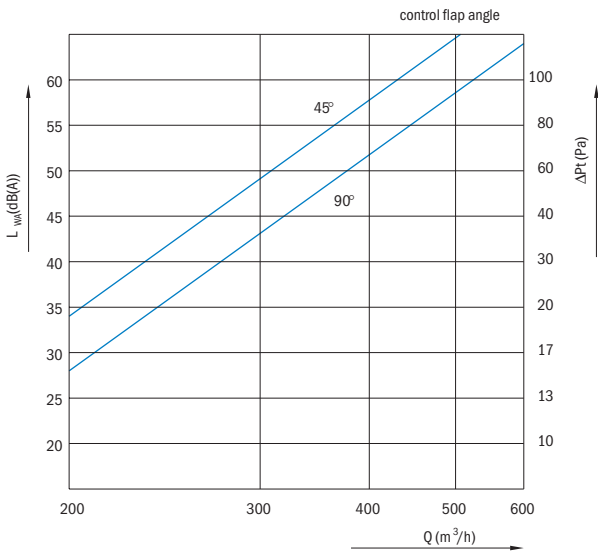
**OD-4 size 600D,625D, 675D**



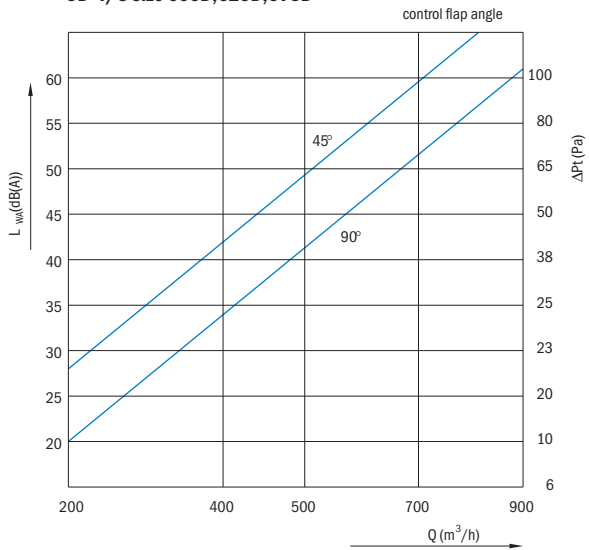
**Pressure drop and sound power level**

Control flap angle: 90° – opened, 45° – half opened

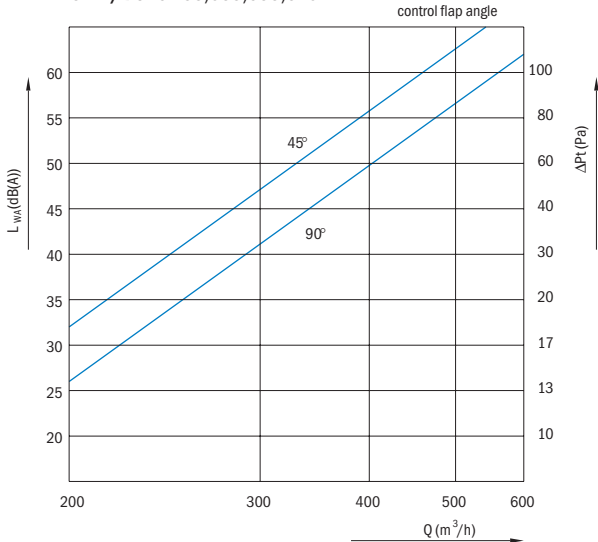
**OD-4/S size 400,500,600,625**



**OD-4/S size 600D,625D,675D**



**OD-4/V size 400,500,600,625**



**OD-4/V size 600D,625D,675D**

