

Swirl diffusers OD-4

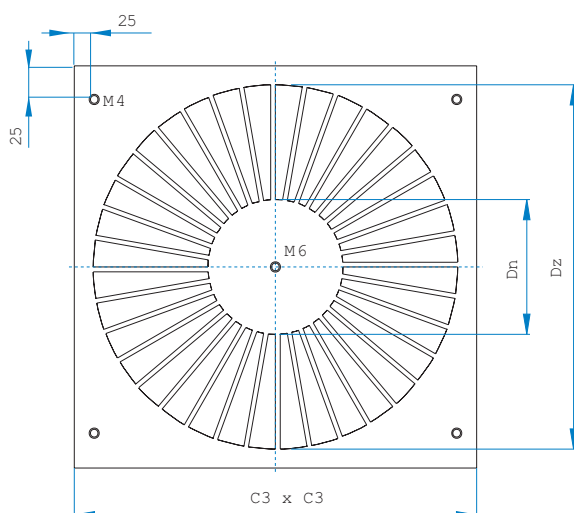
- Fixed slots
- Possible volume control damper in spigot
- Diffusing ring is an additional element, preventing the discharged air to flow over the diffuser face itself.

Diffuser face fastening

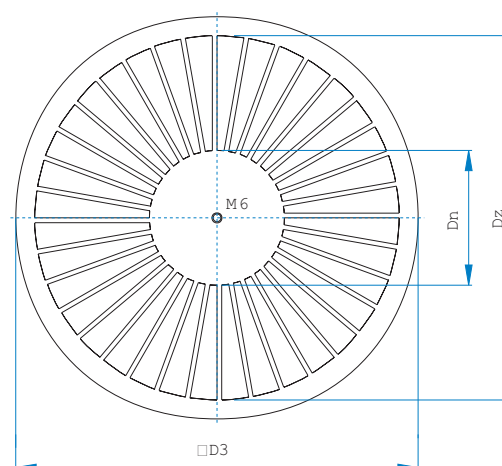
Diffuser plate can be fastened with central screw OD-4/K1 or with four peripheral screws OD-4/K4. Diffuser plate OD-4/R1 is to be fastened with one central screw.



OD-4/K



OD-4/R

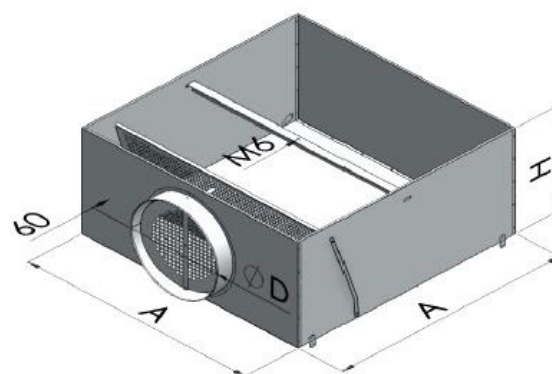


Size	Dn	Dz	C3	ΦD3	A _{ef} (m²)
400	130	350	395	400	0.0138
500			495	500	
600			595	600	
625			620	625	
600D	200	540	595	600	0.0367
625D			620	625	
675D			670	675	

A_{ef} – effective discharge area (m²)

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

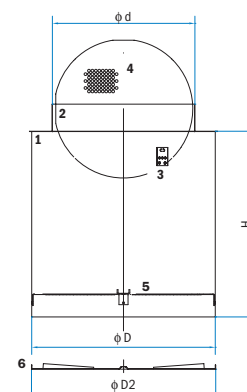
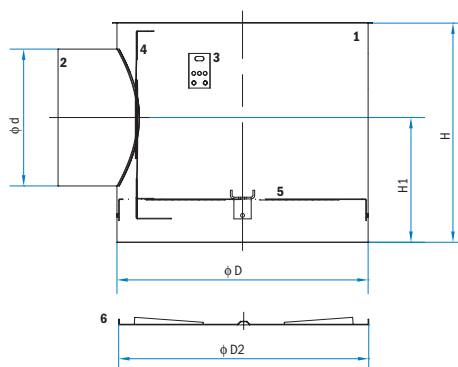


Round plenum box

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

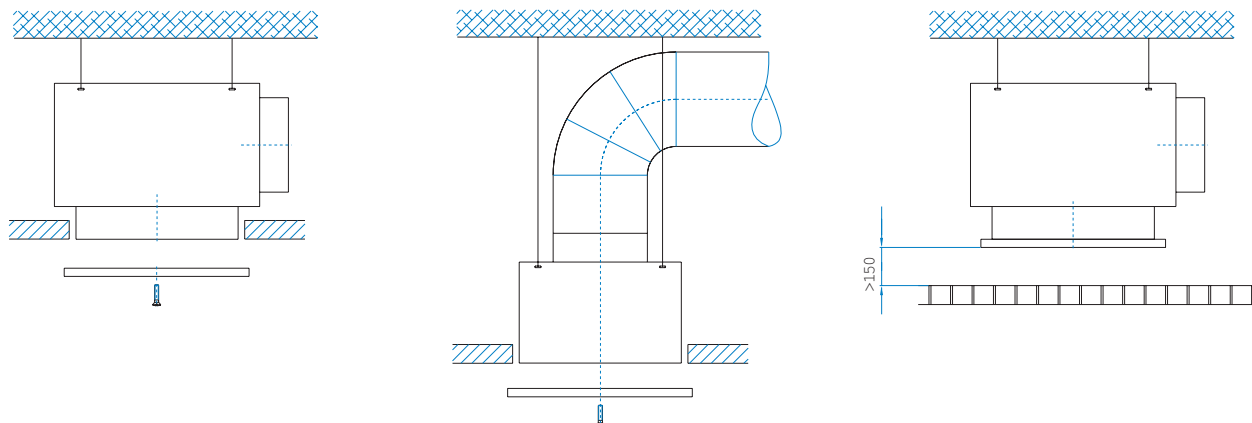
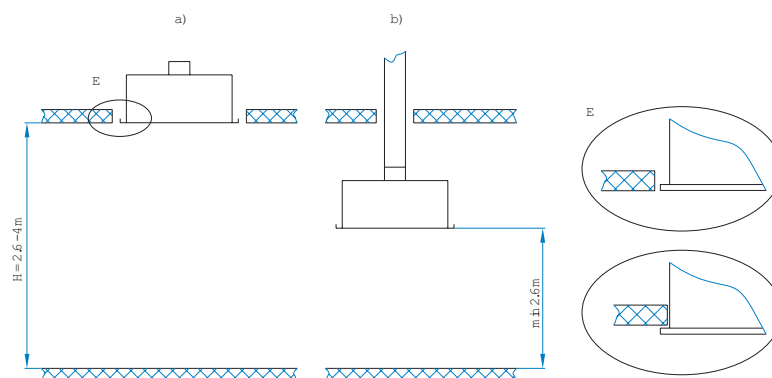
Size	$\Phi D2$	ΦD	H	H1	Φd
400	400	370	285	164	198
500	500				
600	600				
625	625				
600D	600	560	335	189	248
625D	625				
675D	675				

Size	$\Phi D2$	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 / I Size

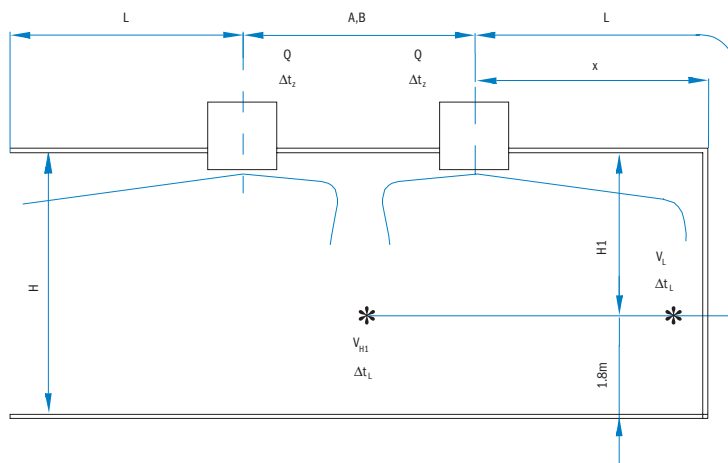
1 2 3 4 5 6 7

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

* When installing to the plenum box, diffuser plate is always K1, with central fastening. R1 is without plenum box.

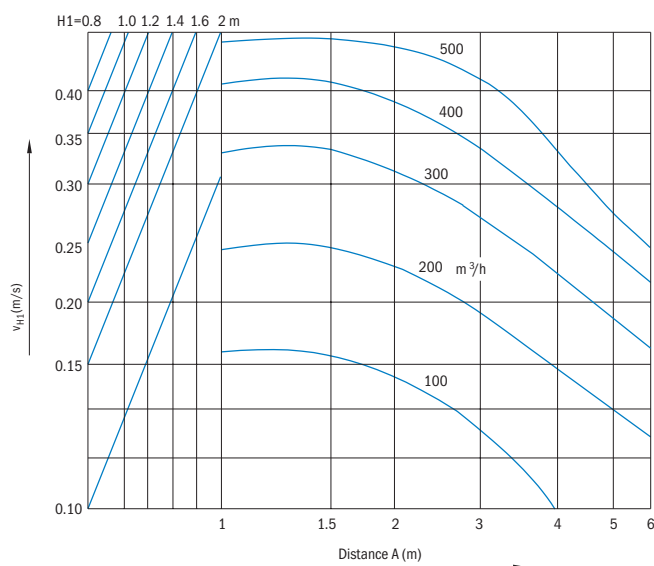
Definition of symbols

Q (m³/h)	Air flow
x (m)	Horizontal distance to the wall
H (m)	Room height
H1 (m)	Distance from ceiling to occupied zone
L (m)	Throw distance ($L = H1 + x$)
V_L (m/s)	Air velocity at the throw distance L
Δt_z (K)	Temperature difference between the supply and room air
Δt_L (K)	Difference between the core and room air temperature
Δp_i (Pa)	Pressure drop
L_{WA} (dB(A))	Sound power level
V_{H1} (m/s)	Air velocity at the H1 distance
A, B (m)	Distance between diffusers by length and by width

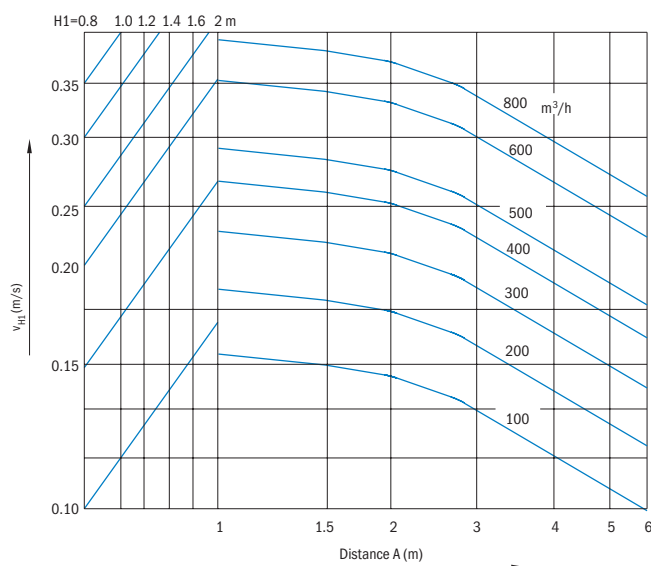


Air velocity at the throw distances (for OD-4 without diffusion ring and with ceiling effect)

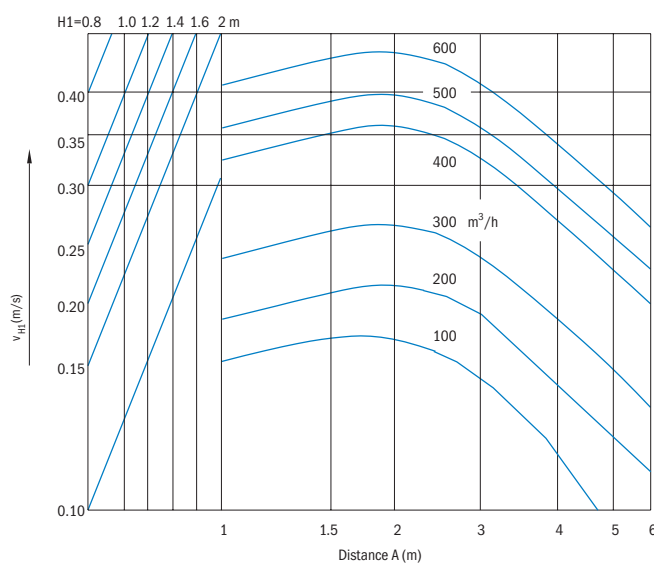
OD-4 size 400,500,600,625
B=2.5 ... 3.5 m



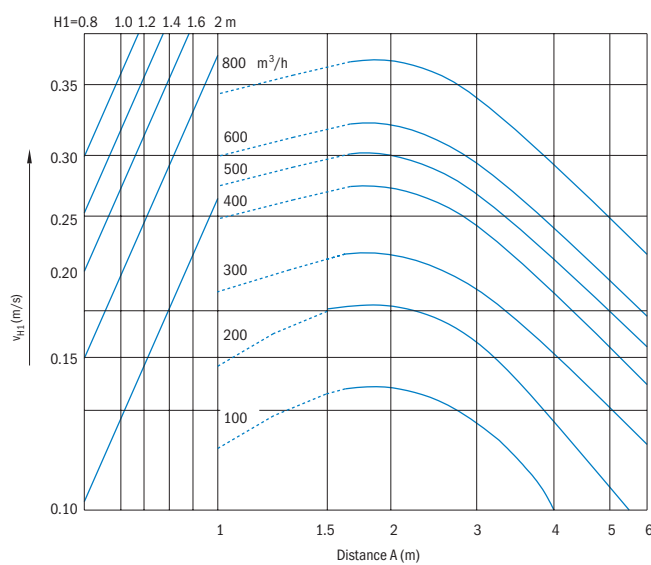
OD-4 size 600D,625D,675D
B=2.5 ... 3.5 m



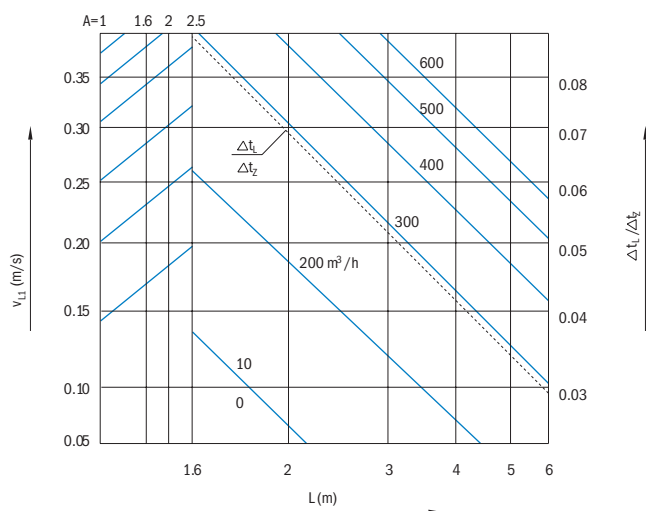
OD-4 size 400,500,600,625
B>4m



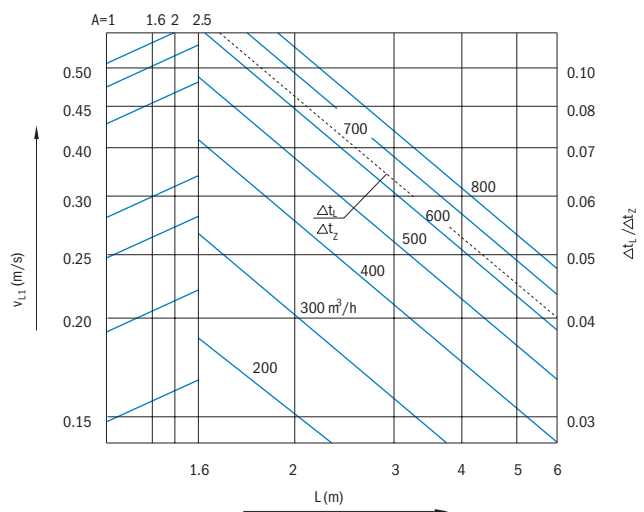
OD-4 size 600D, 625D,675D
B>4m



OD-4 size 400,500,600,625



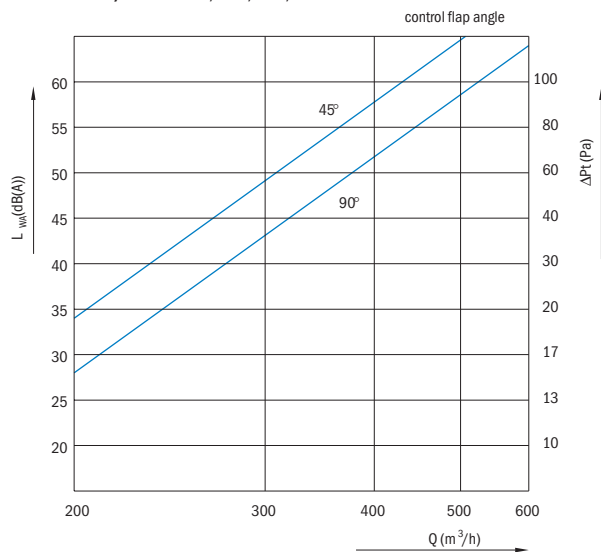
OD-4 size 600D,625D, 675D



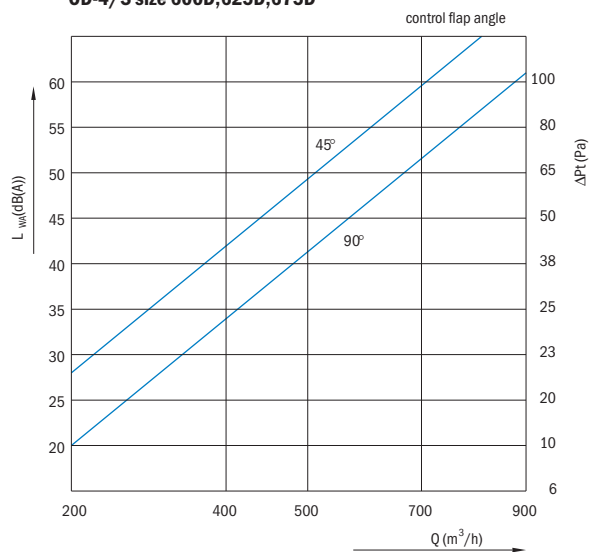
Pressure drop and sound power level

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

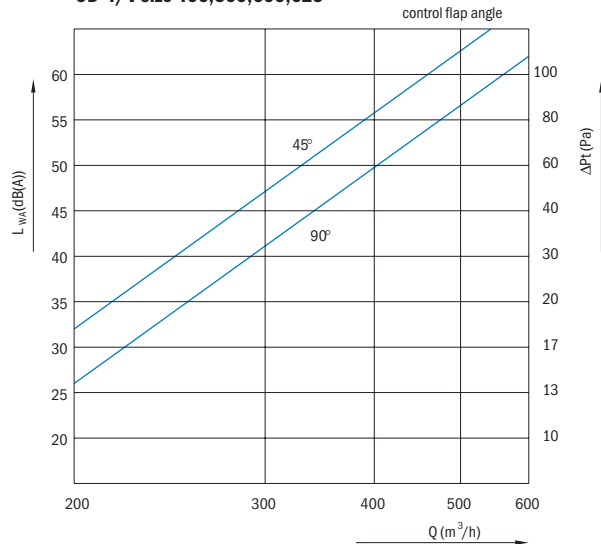
OD-4/S size 400,500,600,625



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



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



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

