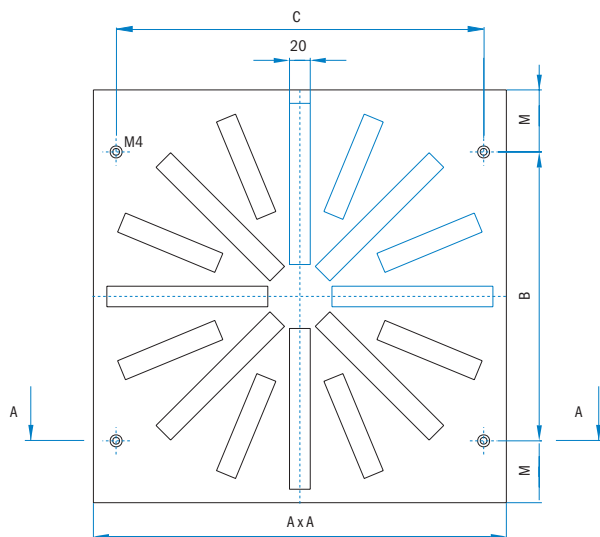


Swirl diffuser OD-9

- Square or round front mask
- Square or radial deflector arrangement
- Plastic deflectors
- Possible volume control damper in spigot
- Foam sealing on the flange



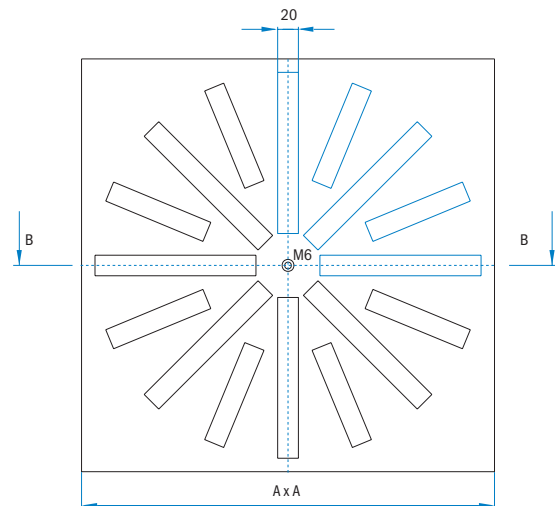
Fastening of the plate



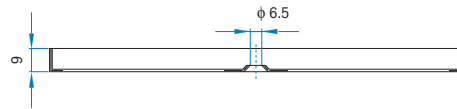
Section A-A



Fastening with four screws (4xM4)



Section B-B



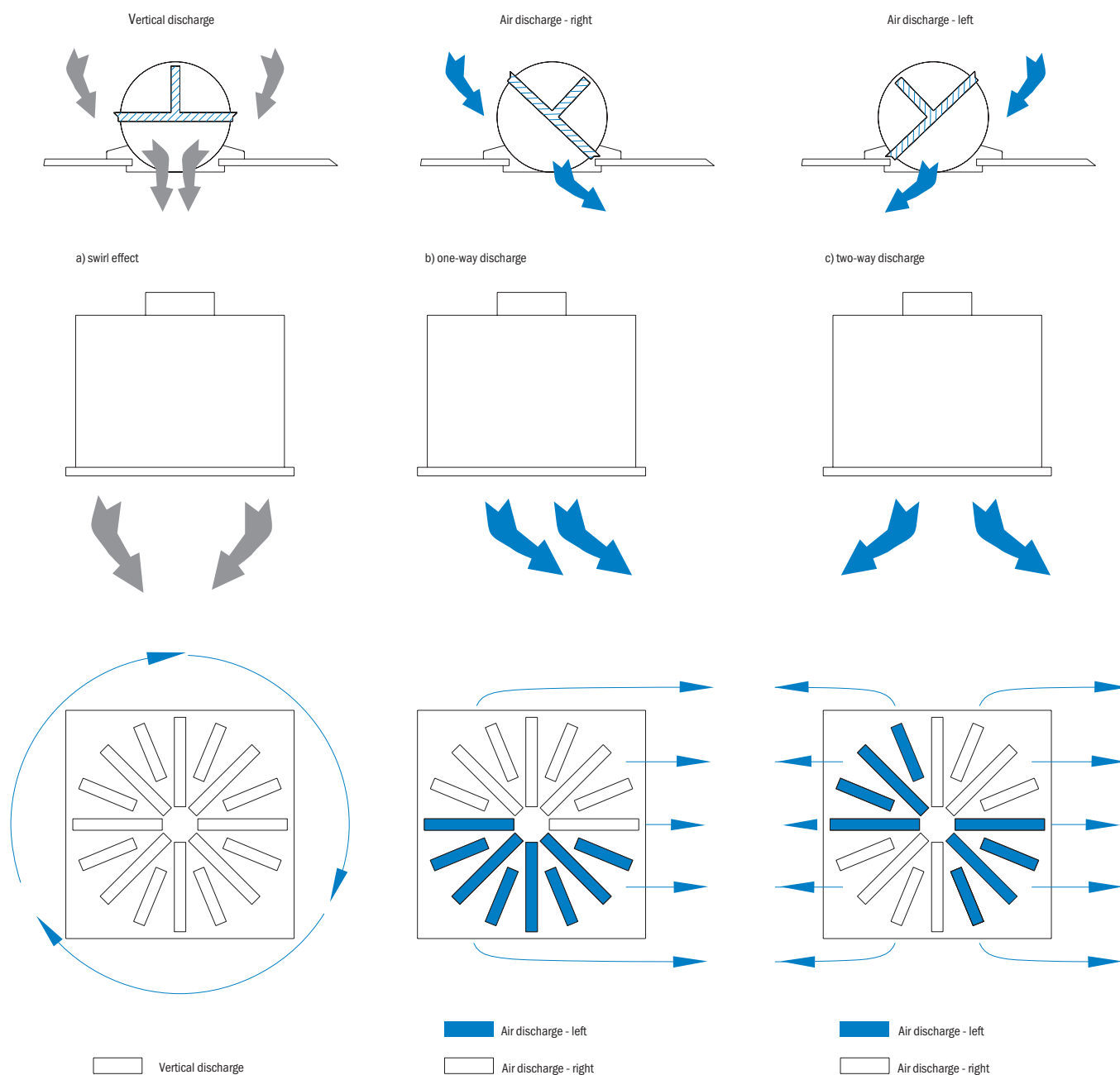
Central fastening (1xM6)

Fastening with four screw is recommended by sizes 600 and 625. For size 800, fastening with five screws is always applied (4xM4 + 1xM6).

Size	A	M	B	C	A_{ef}/K	A_{ef}/R
310	305	59	190	270	0.0192	0.0120
400	395	64	270	360	0.0248	0.0248
500	495	64	370	460	0.0517	0.0392
600	595	69	460	560	0.0718	0.0565
625	620	81.5	460	560	0.0718	0.0565
800	795	124	550	760	0.1359	0.0938

A_{ef} – effective discharge area (m^2)

Discharge direction and air jet shape

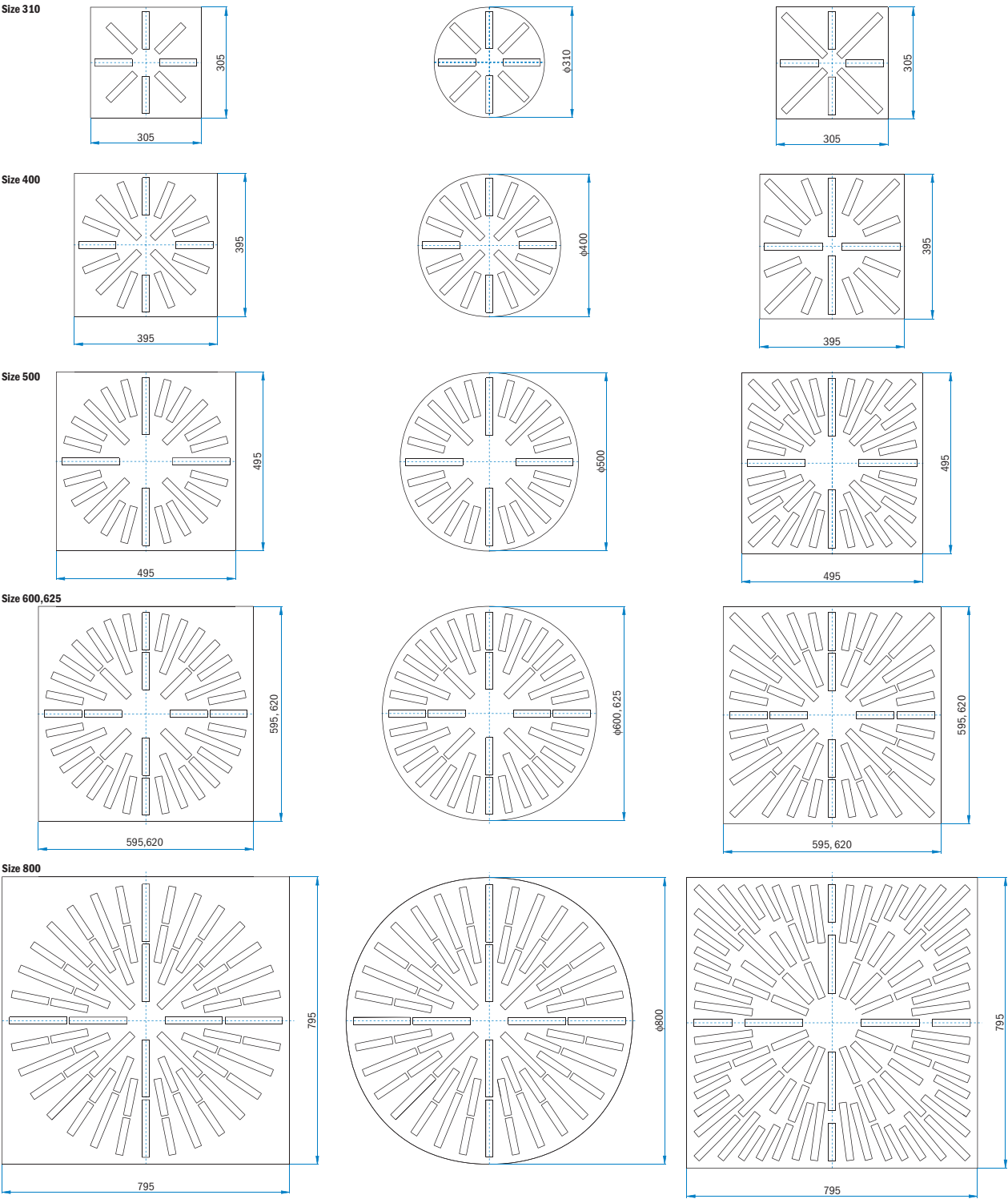


Diffuser face forms and blades arrangement

OD-9/KR

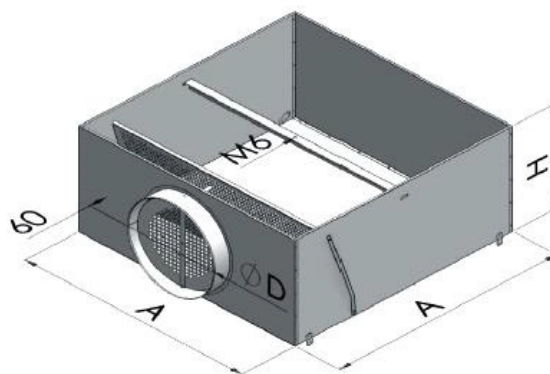
OD-9/RR

OD-9/KK



Square plenum box

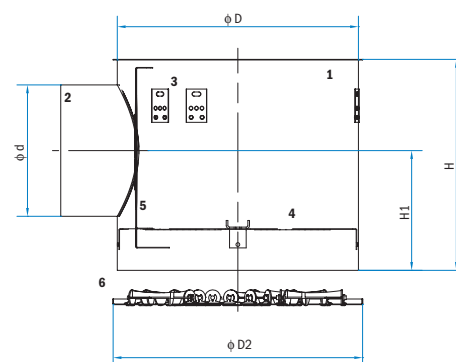
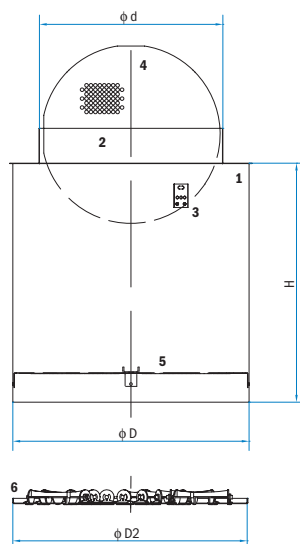
Designation	Size	A [mm]	ΦD [mm]	H [mm]
K/Z/S/M/	310	290	158	210
K/Z/S/M/	400	390	198	250
K/Z/S/M/	500	490	248	300
K/Z/S/M/	600	590	248	300
K/Z/S/M/	625	590	248	300
K/Z/S/M/	800	790	313	365



Round plenum box

1. Plenum box
2. Inlet spigot
3. Suspension bracket
4. Dispersing plate (only for supply)
5. Volume control damper
6. Diffuser OD-9

Size	$\Phi D2$	ΦD	H	Φd
310 RR,KR	310	290	245	158
400 RR,KR	400	390	280	198
500 RR,KR	500	488	330	248
600 RR,KR	600	590	330	248
625 RR,KR	625	590	330	248
800 RR,KR	800	790	395	313



Size	$\Phi D2$	ΦD	H	H1	Φd
310 RR,KR	310	290	245	144	158
400 RR,KR	400	390	285	164	198
500 RR,KR	500	488	335	189	248
600 RR,KR	600	590	335	189	248
625 RR,KR	625	590	335	189	248
800 RR,KR	800	790	400	211	313

Ordering key

OD-9 KR1 / ZR / S / M / I5 400

1 2 3 4 5 6 7

1 Diffuser type

OD-9 Swirl diffuser

2 Diffuser plate type

KK1 Square diffuser plate, square blade arrangement, central fastening
KK4 Square diffuser plate, square blade arrangement fastening with four screws
KR1 Square diffuser plate, radial blade arrangement, central fastening
KR4 Square diffuser plate, radial blade arrangement, fastening with four screws
RR1 Circular diffuser plate, central fastening
RR4 Circular diffuser plate, fastening with five screws (for size 800 only), without plenum box

3 Plenum box

Z Air supply with black plastic deflectors
ZW Air supply with white plastic deflectors
A Air exhaust **without** plastic deflectors
ZR Circular plenum box for air supply (only KR1 and RR1)

4 Spigot

S Side entry spigot and with perforated dispersion plate in the plenum box
V Vertical entry spigot - only on request (with perforated dispersion plate in the plenum box)

5 Air regulation

M Volume control damper in entry spigot

6 Insulation

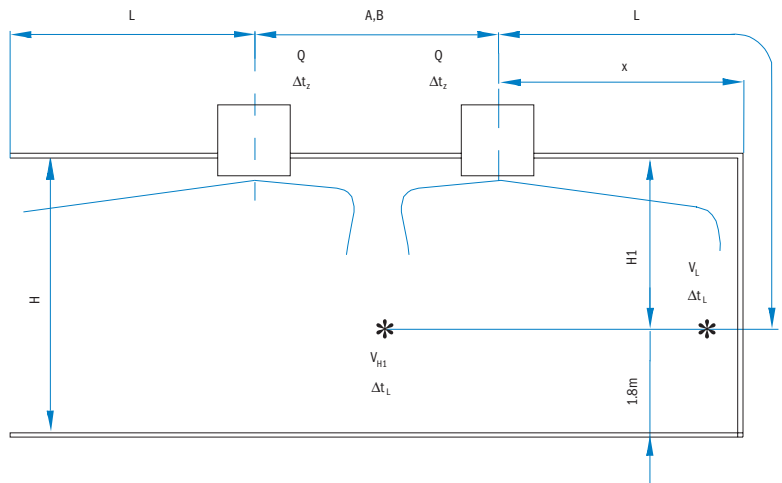
I5 5 mm PE thermal insulation outside of ZR plenum box
I6 6 mm PE thermal insulation outside of Z plenum box
I9 9 mm synthetic rubber based sound & thermal insulation (-40°C - 105°C) outside of ZR plenum box
I10 10 mm synthetic rubber based sound & thermal insulation (-40°C - 105°C) outside of Z plenum box
I19 19 mm synthetic rubber based sound & thermal insulation (-40°C - 105°C) outside of ZR plenum box

7 Dimensions

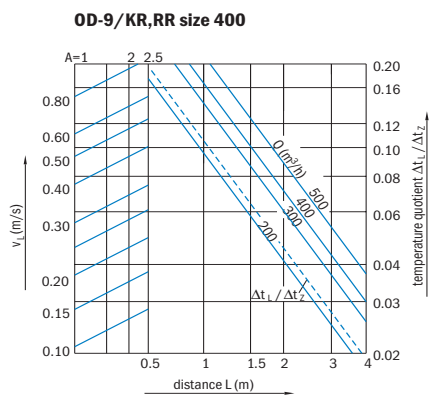
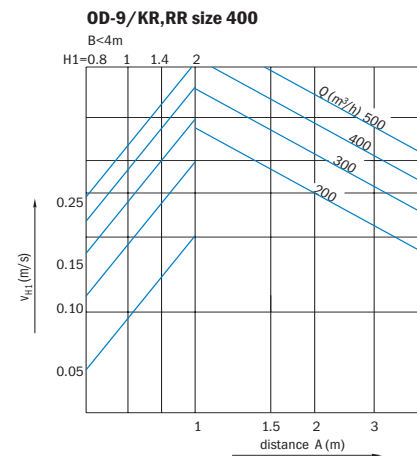
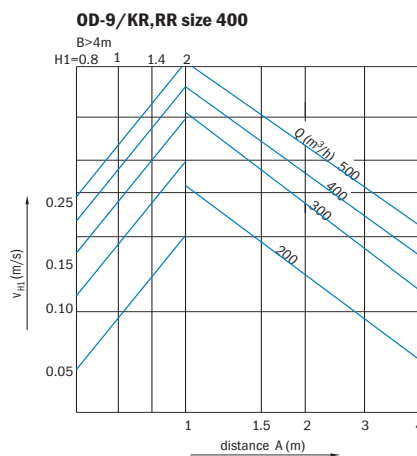
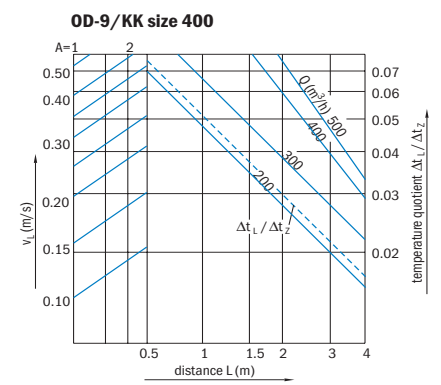
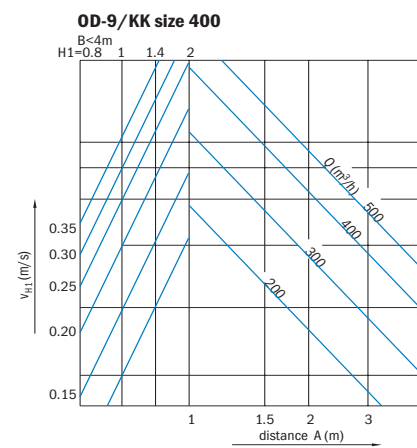
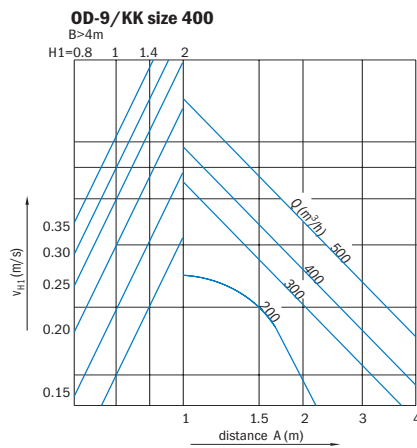
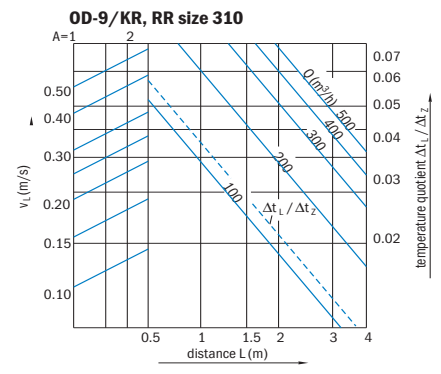
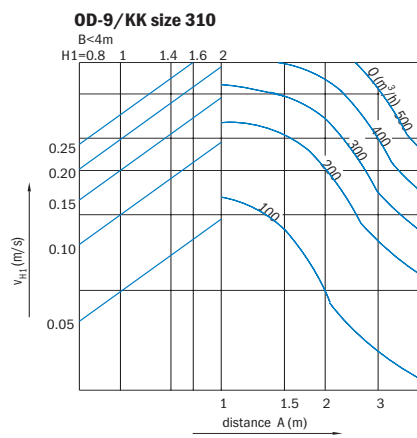
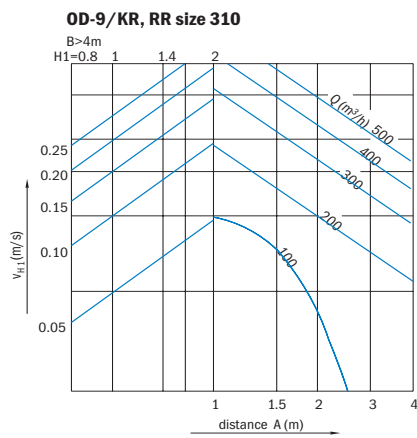
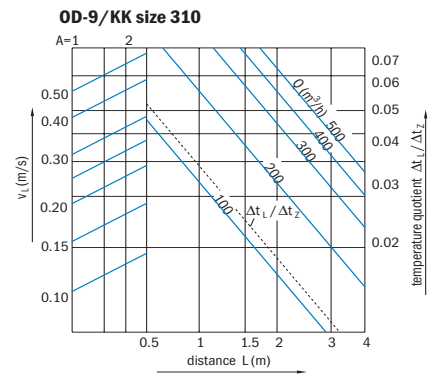
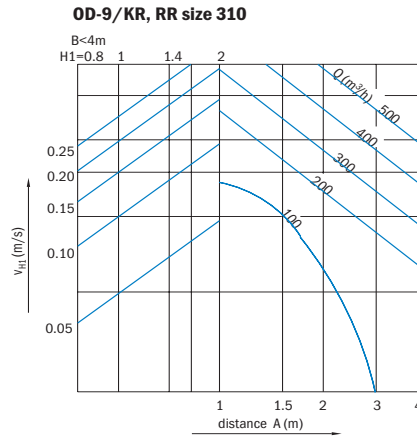
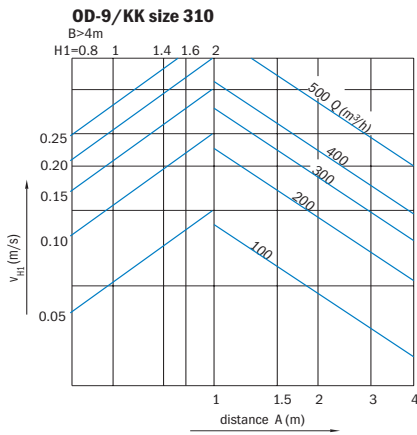
310 plenum box for size is not available!
400 KK4, KR4 versions available when ordering diffusers only, without plenum box
500 KK4, KR4 versions available when ordering diffusers only, without plenum box
600
625
800 with KK4, KR4, RR4 plate types only, fastening with 5 screws: 4 along the edge and 1 centrally

Definition of symbols

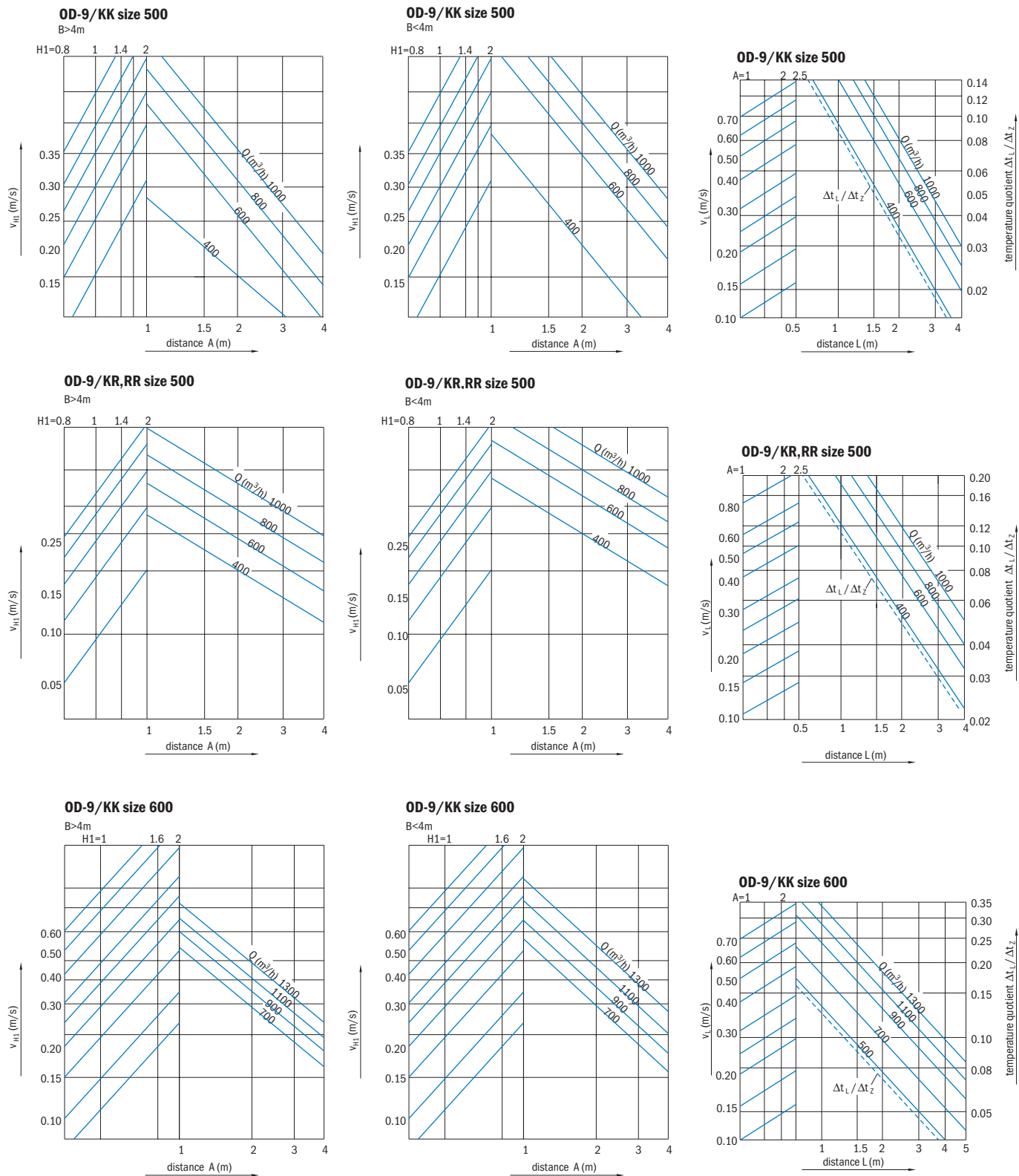
Q (m³/h)	Air flow
x (m)	Horizontal distance to wall
H (m)	Room height
H1 (m)	Distance from ceiling to occupied zone
L (m)	Throw distance ($L = H1 + x$)
V_L (m/s)	Air velocity at the throw distance L
Δt_z (K)	Temperature difference between the supply and room air
Δt_L (K)	Difference between the core and the room air temperature
Δp_t (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 two diffusers by length and width



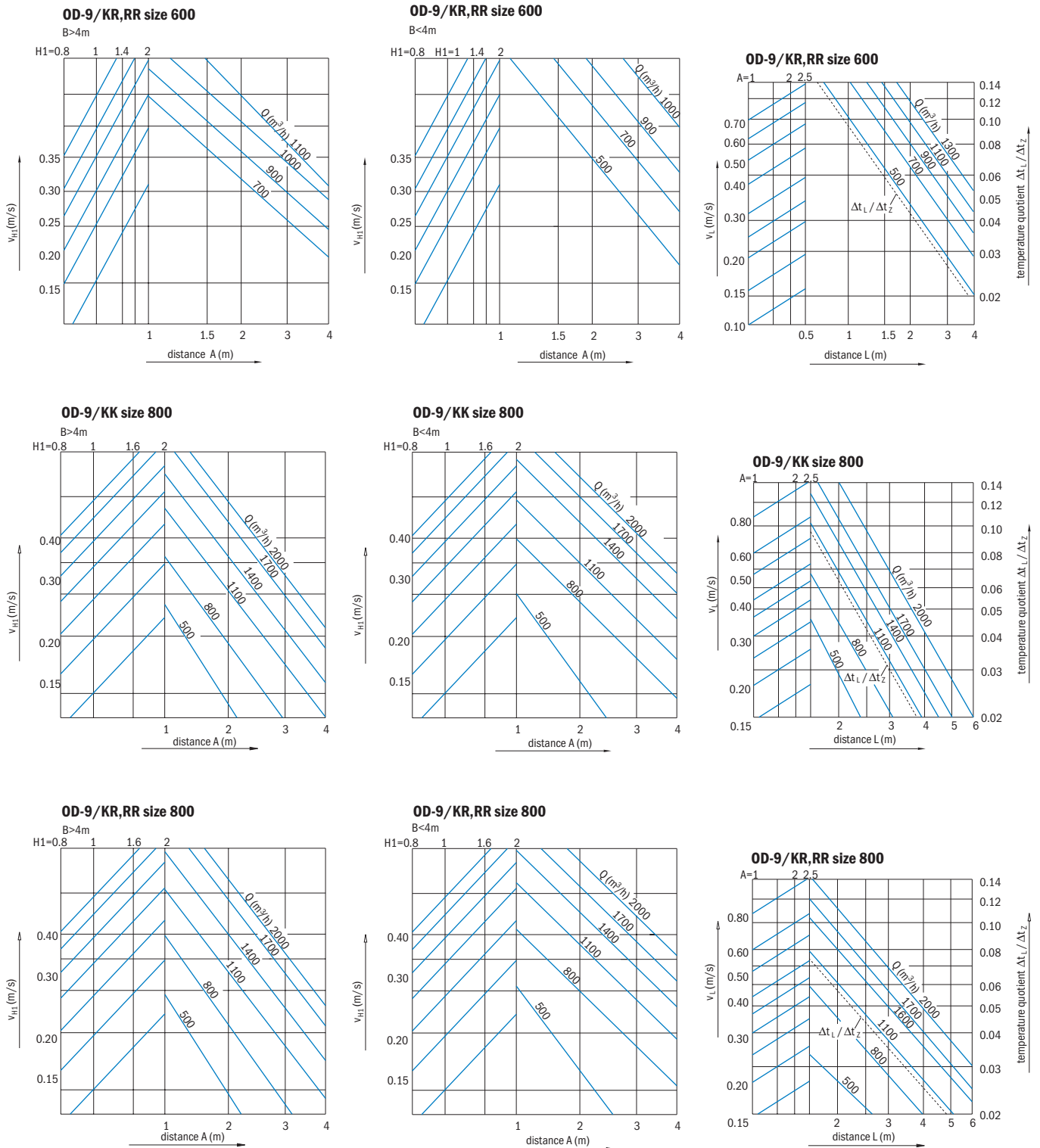
Air velocity at the throw distances and temperature quotient (with ceiling effect)



Air velocity at the throw distances and temperature quotient (with ceiling effect)



Air velocity at the throw distances and temperature quotient (with ceiling effect)



Pressure drop and sound power level

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

