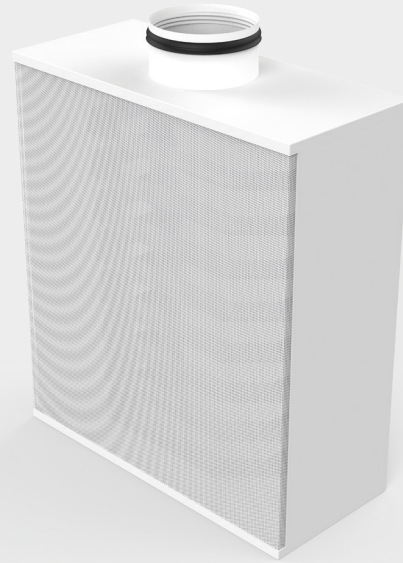


Displacement unit for
exposed installation

RP (PFG)



Description

The **RP (PFG)** (rectangular) displacement units are designed for exposed or integrated installation, and are suitable for all types of applications, such as offices, restaurants, etc. **RP (PFG)** transfer the draught free air directly to the occupied zone. The fix inter-nal air deflectors guarantees an even air distribution across the entire surface of the perforated diffuser front plate.

Recommended $\Delta t = 3-6^{\circ}\text{C}$

Size

250, 315, 400 and 500 mm

Airflow range

80 - 3.500 m³/h (20-1000 l/s)

Materials

RP (PFG) is made of sheet steel and powder coated in standard white RAL 9003.

Main features

- Delivered ready for installation
- Low air velocities
- Integrated air deflectors
- Integrated or exposed installation
- Low sound levels
- Front plate easy to open for cleaning

Accessories

IK: duct cover - variable lengths

LP: sound attenuator

ZMS: commissioning damper

GS: bottom part

Sound data

The sound level is applicable at an equivalent sound absorption area of 10 m².

Sound power level: L_W [dB]

Sound level: L_A [dB(A)] see diagram 1.

Correction factor: K_O [dB] from table 2.

$$L_W = L_A + K_O$$

T.1. Sound level, L_{PA}

Room volume capacity (m ³)	Room type	Correction (dB)
25	hard	+2
25	attenuated	-2
150	hard	-3
150	normal	-5
150	attenuated	-7

The sound pressure level L_{pA} dB(A) applies to an equivalent surface of 10 m², which corresponds to an attenuation of 4 dB in a 25 m³ room with normal attenuation. Please see the chart to the right for correction examples of different room types.

T.3. Sound attenuation, RP (PFG) ΔL_p [dB]

Type	Medium frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
250	15	12	10	5	4	3	4	3
315	14	11	9	5	4	2	3	3
400	11	9	7	4	3	3	3	2
500	9	8	6	3	2	2	3	2

Tol. ±3 dB

T.2. Correction, RP (PFG) K_O [dB]

Type	Medium frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
250	+2	+2	+3	+3	+2	-4	-15	-16
315	+3	+3	+3	+4	+2	-5	-16	-18
400	+5	+5	+4	+4	+4	-5	-18	-20
500	+6	+6	+5	+5	+4	-6	-19	-22

Tol. ±3 dB

T.4. Sound attenuation, LP ΔL_p [dB]

Type	Medium frequency (Hz)							
	125	250	500	1000	2000	4000	8000	
250	7	12	21	30	36	23	15	
315	7	11	19	26	28	20	15	
400	6	10	18	24	24	18	14	

Tol. ±3 dB

Near zone

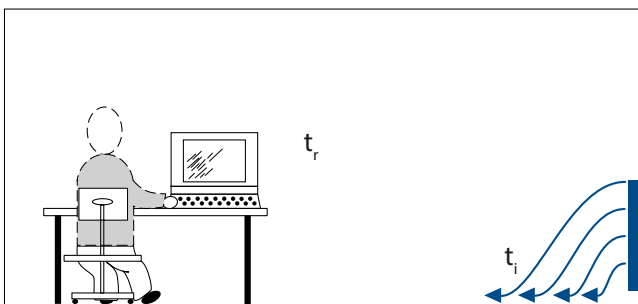
The area around the unit where the air velocity is greater than 0,2 m/s is called the near zone.

t_i is the temperature of the supply air [°C]

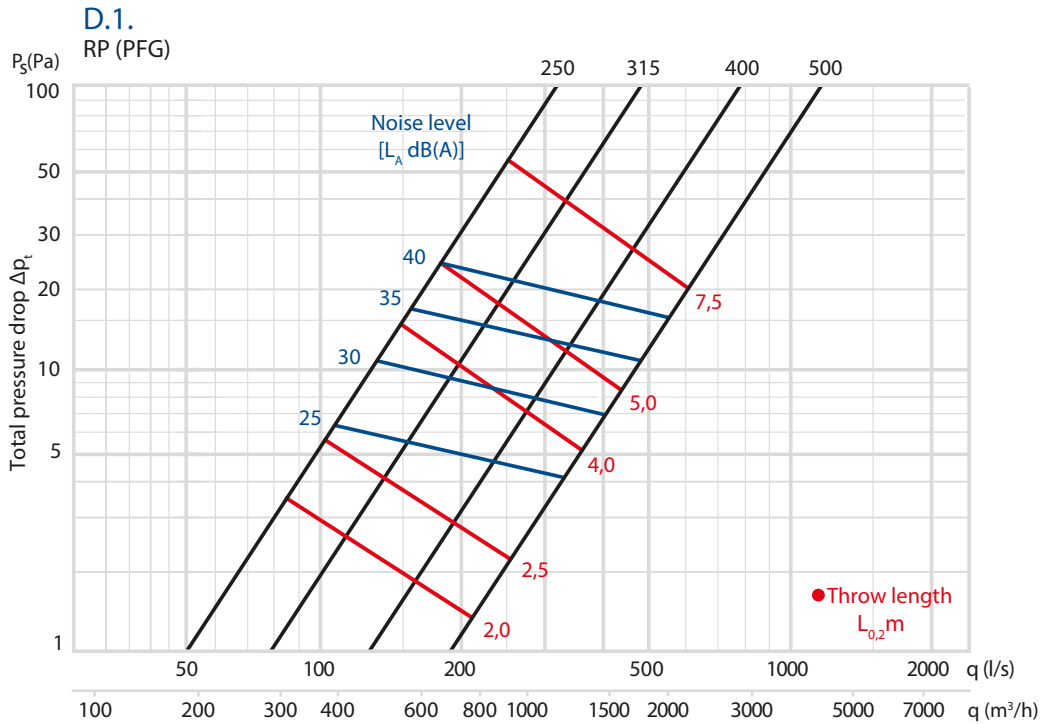
t_r is the temperature of the room (1,1 m above floor level) [°C]

The size of the near zone is given at a temperature difference of $\Delta t = t_r - t_i = 3K$ (Figure 1.)

Figure 1.

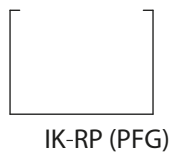
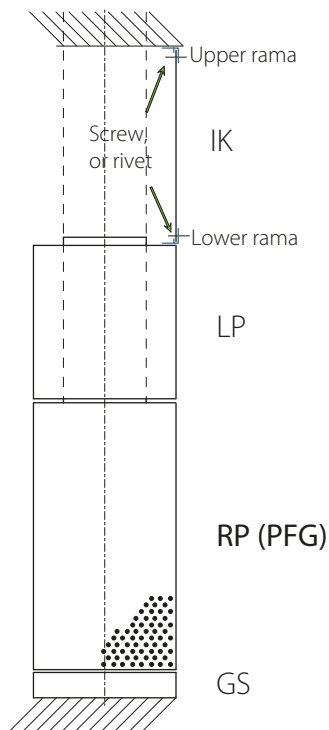


Diagram

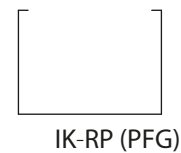
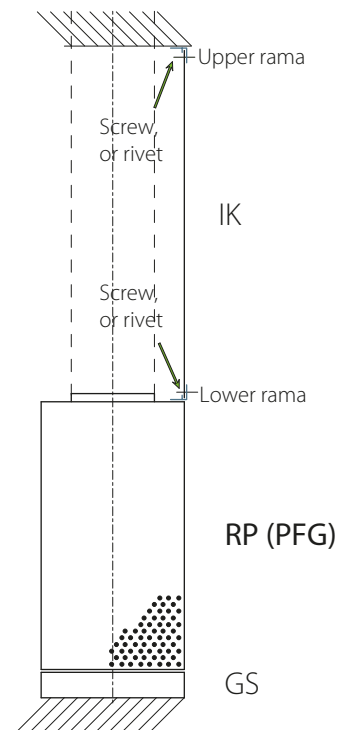


Assembly

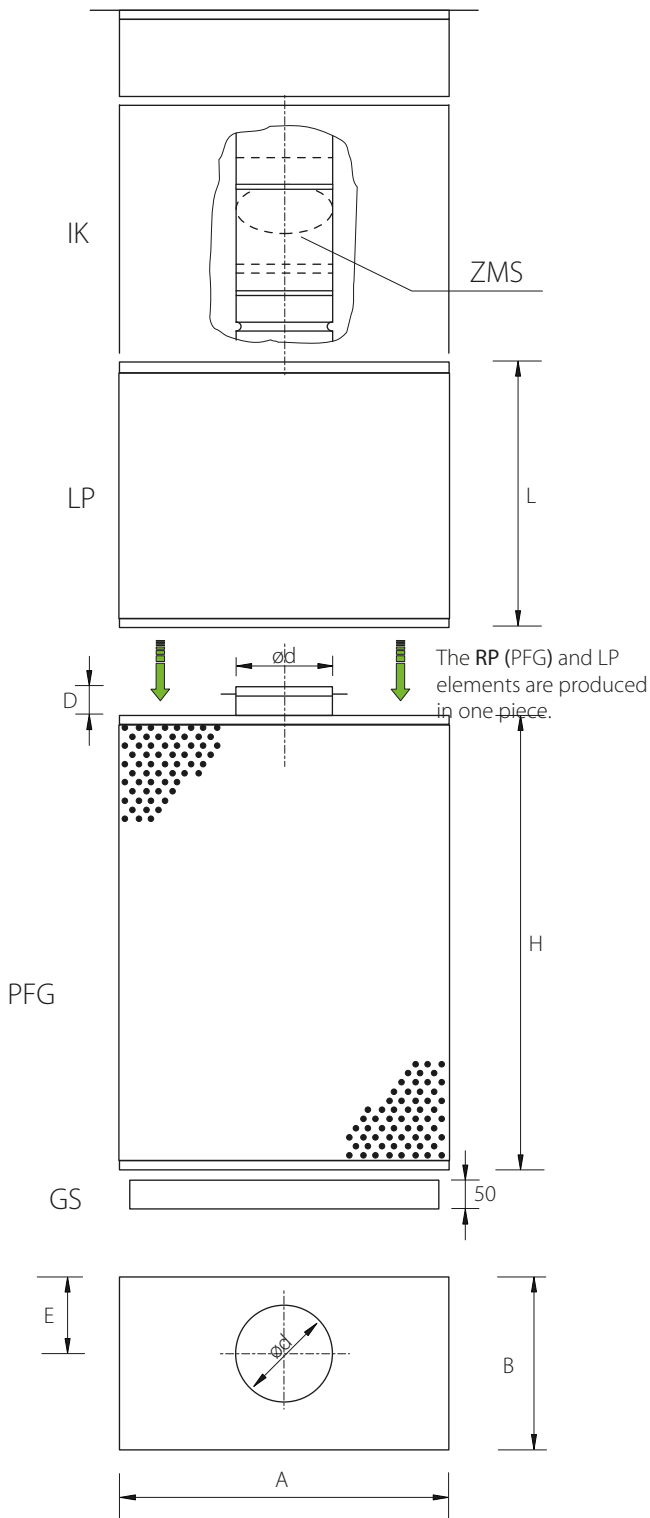
with sound attenuator



without sound attenuator



Dimensions



ZMS circular commissioning damper

ZMS is a circular damper which is suitable for controlling the air volume by turning the blade. The damper blade is non-perforated. It is designed to be mounted behind the IK cover of the displacement unit, because of this the manual adjusting of the damper blade is only possible with strings. To make the air pressure measurement easier ZMS is equipped with extended plastic tubes so that the measurement and adjustment can be done from one place. It can be used in places that are less easily accessible.

Measurement accuracy: ±5%

LP attenuator

LP attenuator, as an option, can be ordered for the displacement unit. In case of ordering the two products together, they will be joint permanently which means that during delivery and installation they cannot be dismantled. The figure on the left shows them separately for better illustration.

The attenuator can be ordered separately for the displacement unit, in those cases the two items can be easily assembled together.

T.5. RP (PFG)

Type	A	B	D	H	ød	L	E
250	700	350	57	900	249	500	155
315	850	425	57	1000	314	600	188
400	1000	500	75	1250	399	700	230
500	1200	600	75	1500	499	-	280

The indicated sizes are shown in mm. Other dimensions are also available.
 *D size tolerance: 57(+5/-5), 75(+10/-10)

Specification

Ordering code:	RP (PFG)	XXX	XX
Product acronym:	RP (PFG)		
Size:		250	
		315	
		400	
		500	
Duct cover:			IK*
Bottom part:			GS
Commissioning damper:			ZMS
Sound attenuator:			LP
Example:	RP (PFG)	250	IK 2700 GS ZMS LP

*The length of the IK duct cover depends on the internal height of the building and needs to be given in mm.