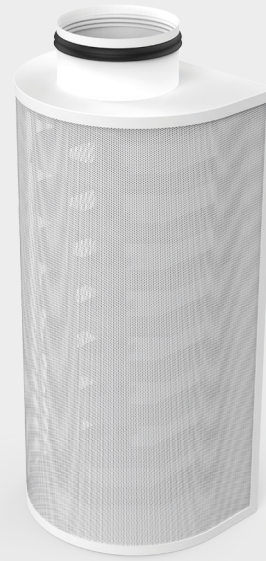


Displacement unit for
exposed installation

HC(OPEG)



Description

The **HC (OPEG)** (circular) displacement unit is designed for floor and corner mounted installation, and is suitable for all types of applications, such as offices, restaurants, etc. **HC (OPEG)** transfer draught free air directly to the occupation zone. The fixed air deflectors guarantee an even air distribution across the entire surface of the perforated diffuser front plate.

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

Size

100, 125, 160, 200, 250, 315 and 400 mm

Air low range

80 - 3.600 m³/h (20-1000 l/s)

Materials

HC (OPEG) 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
- Exposed floor and wall mounted 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

Cleaning and maintenance

Our displacement units are delivered with a removable front plate which makes the internal cleaning of the unit easy.

Type mark: **HC (OPEG)**

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]

Correction factor K_O [dB] from table 2.

$$L_W = L_{PA} + K_O$$

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, HC (OPEG) ΔL_p [dB]

Type	Medium frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
100	19	16	13	9	7	6	6	5
125	18	15	11	7	5	4	5	5
160	17	14	10	6	4	3	4	4
200	17	14	9	5	4	2	4	4
250	16	13	9	4	4	3	4	3
315	15	12	7	4	3	3	3	3
400	12	10	6	3	2	3	3	3

Tol. ±3 dB

T.2. Correction, HC (OPEG) K_O [dB]

Type	Medium frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
100	+1	+1	+2	+1	+1	-2	-15	-21
125	+1	+1	+2	+2	+1	-2	-15	-20
160	+1	+1	+2	+2	+1	-3	-14	-20
200	+2	+2	+2	+3	+2	-3	-12	-20
250	+2	+2	+3	+3	+2	-4	-13	-18
315	+3	+3	+3	+4	+3	-5	-15	-19
400	+5	+5	+4	+4	+4	-5	-14	-18

Tol. ±3 dB

T.4. Sound attenuation, LP ΔL_p [dB]

Type	Medium frequency (Hz)						
	125	250	500	1000	2000	4000	8000
100	9	14	26	36	42	30	19
125	9	13	24	34	38	27	17
160	8	12	22	31	36	25	16
200	7	11	19	28	30	20	15
250	7	11	18	25	26	18	15
315	5	8	15	21	19	13	12
400	4	7	14	18	16	12	11

Tol. ±3 dB

Near zone

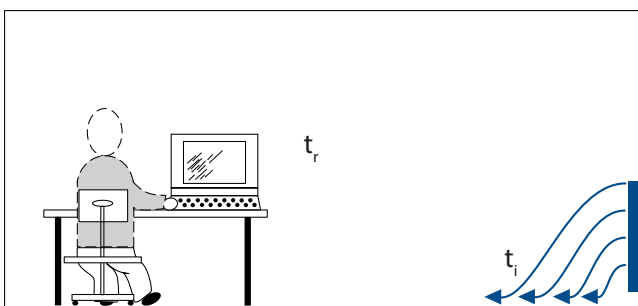
The area around the unit where the air velocity is greater than 0,2 m/s is called the near zone.

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

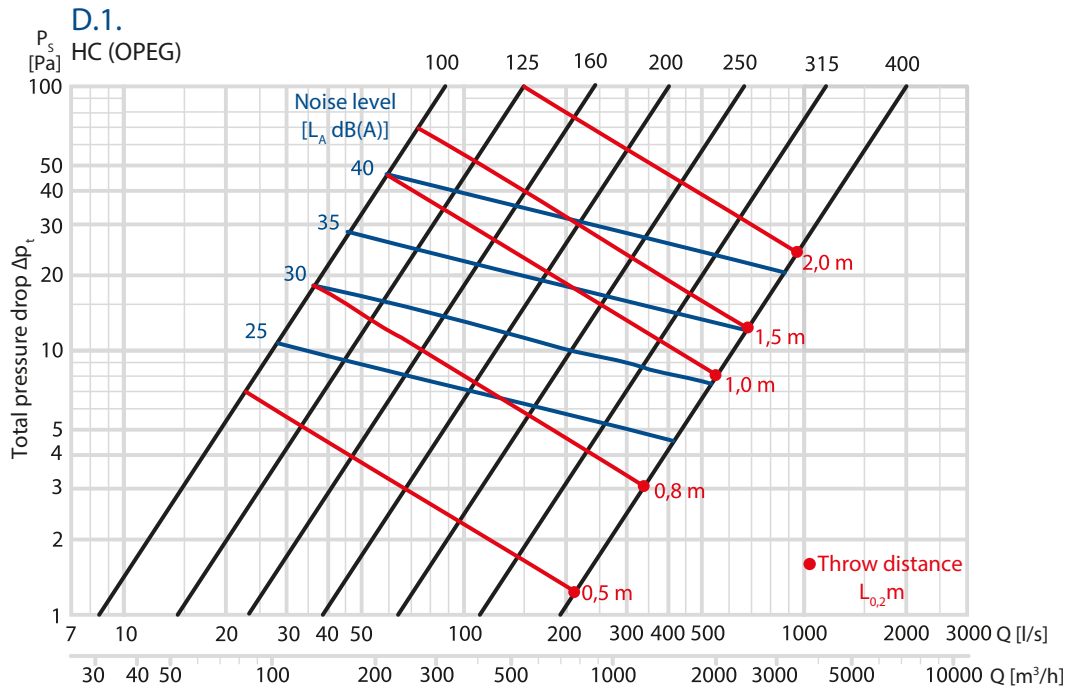
t_r is the temperature of the room (1,1 m above floor level) [°C]

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

Figure 1.

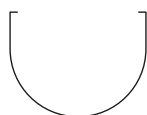
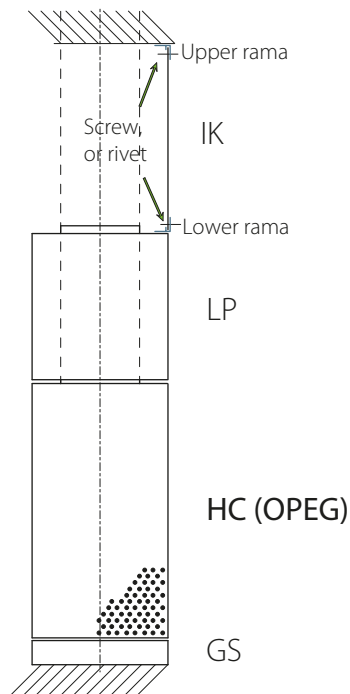


Diagram



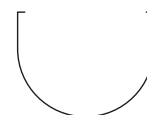
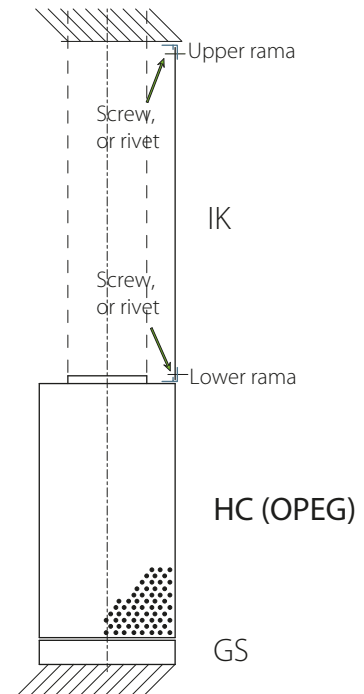
Assembly

with sound attenuator



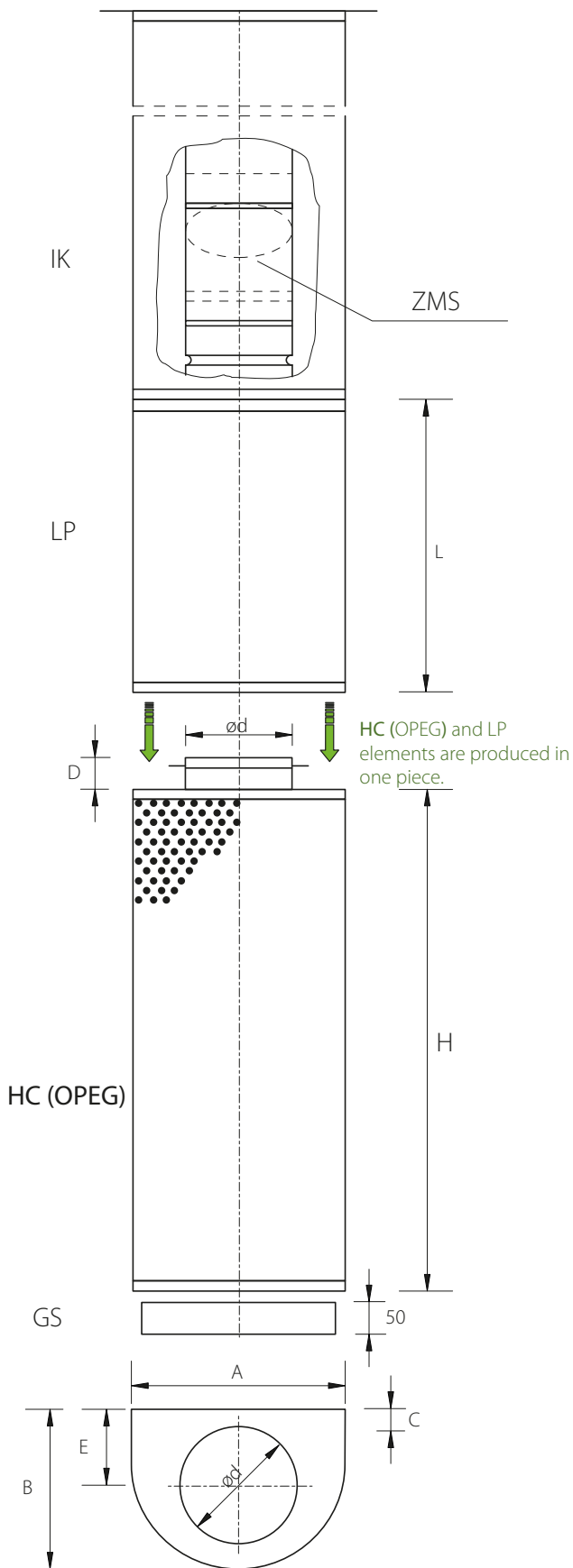
IK - HC (OPEG)

without sound attenuator



IK- HC (OPEG)

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. HC (OPEG)

Type	A	B	C	D	E	H	ød	L
100	254	220	93	35	110	400	99	300
125	282	246	105	35	123	500	124	300
160	324	280	118	35	140	700	159	400
200	370	320	135	35	160	800	199	400
250	428	370	156	57	185	900	249	500
315	502	436	185	57	218	1000	314	600
400	600	520	220	75	260	1250	399	700

The indicated sizes are shown in mm. Other dimensions are also available.
 *D size tolerance: 35 (+5/-1), 57 (+5/-5), 75 (+10/-10)

Specification

Ordering code:	HC (OPEG)	XXX	XX
Product acronym:	HC (OPEG)		
Size:		100	
		125	
		160	
		200	
		250	
		315	
		400	
Duct cover - variable lengths:			IK*
Bottom part:			GS
Commissioning damper:			ZMS
Sound attenuator:			LP
Example:	HC (OPEG)	200	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.