

Pressure control valve

OLC



Description

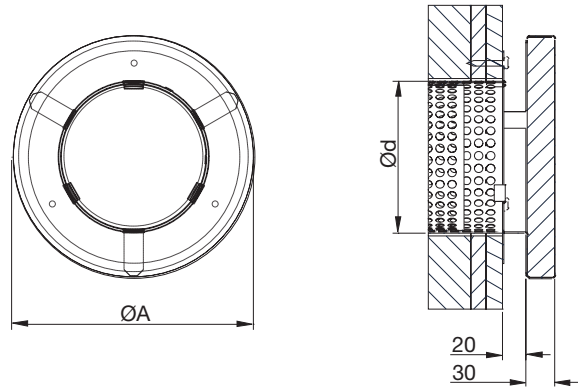
OLC is a circular pressure control valve for installation directly onto a wall. OLC consists of two sound-attenuating baffles, which are mounted either side of the wall and are connected by means of the accompanying perforated wall sleeve, which ensures excellent noise reduction.

- Discrete design
- Sound-attenuating baffles
- Can be installed in wall thicknesses from 90-170 mm

Maintenance

Front plate can be removed to enable cleaning of internal parts. The visible parts of the diffuser can be wiped with a damp cloth.

Dimensions



Size	ØA mm	Ød mm
100	160	100
125	200	125
160	250	160

Hole dimension = Ød + 10 mm

Order code

Product	OLC	aaa	A
Type			
Size			
Version			

Materials and finish

Installation bracket:	Galvanised steel
Front plate:	Galvanised steel
Standard finish:	Powder-coated
Standard colour:	RAL 9010, Gloss 30

The diffuser is available in other colours. Please contact Lindab's sales department for further information.

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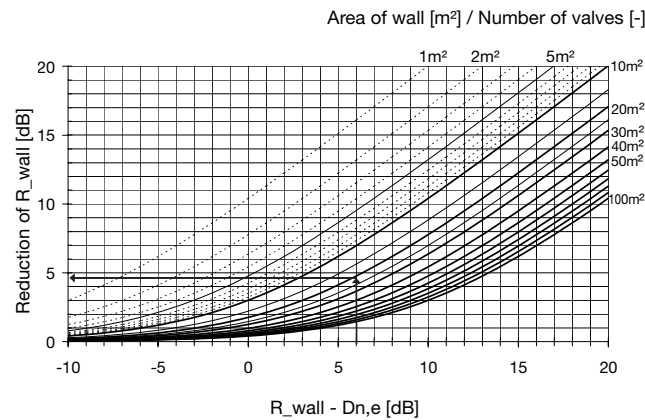
Technical data

Sample calculation

When dimensioning an overflow diffuser, calculate the decrease in the wall's noise-reducing properties. For these calculations, the area of the wall and sound reduction figure R must be known. This is adjusted in relation to the diffuser's $D_{n,e}$ value. $D_{n,e}$ is the diffuser's R value given at a transmission area of 10 m², as specified in ISO 140-10. The $D_{n,e}$ value can be converted into the R value for other transmission areas using the table below.

area [m ²]	10	2	1
correction [dB]	0	-7	-10

The diagram below indicates the decrease in the wall's reduction figure, based on the diffuser, in a given octave band:



As a rough estimate the calculation can be performed directly using the wall's R_w value.

Example:
 R_w (wall) 50 dB
 $D_{n,e,w}$ (diffuser) 44 dB $R_w - D_{n,e,w} = 6$ dB
 Area of wall 20 m²
 Number of diffusers 1 20 m²/1 = 20 m²

Indicated reduction of R_w (wall): 5
 R_w value for wall with diffuser $\sim 50 - 5 = 45$ dB

The calculation can also be performed using the following formula:

$$R_{res} = 10 \cdot \text{Log} \left(\frac{S}{(10m^2 \cdot 10^{-0,1 \cdot D_{n,e}}) + (S \cdot 10^{-0,1 \cdot R_{wall}})} \right)$$

where:

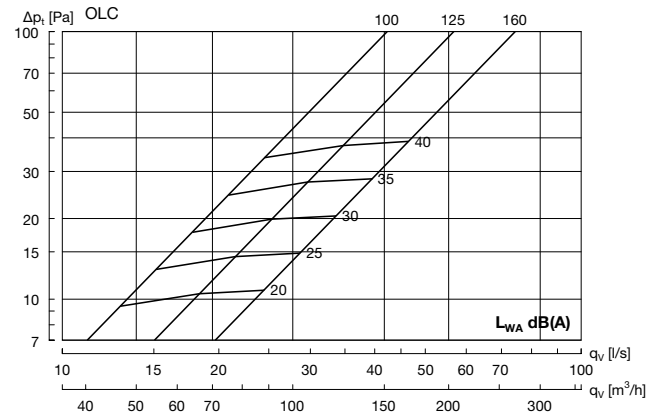
- R_{res} is the resulting reduction figure for wall and diffuser.
- S is wall area.
- $D_{n,e}$ is the diffuser's $D_{n,e}$ value.
- R_{wall} is the wall's R value without diffuser.

Technical data

Capacity

Volume flow q_v [l/s] and [m³/h], total pressure drop Δp_t [Pa] and sound effect level L_{WA} [dB(A)] are specified for a diffuser on either side of the wall.

Dimensioning diagram



Element-normalised reduction figure $D_{n,e}$

Table 1: Cavity wall with 120 mm insulation

Size	Centre frequency Hz					$D_{n,e,w}$
	125	250	500	1K	2K	
100	*29	*35	40	*44	*50	44
125	*29	*35	40	*43	*52	44
160	*29	*35	38	43	52	43

Table 2: Cavity wall with 35-70 mm insulation

Size	Centre frequency Hz					$D_{n,e,w}$
	125	250	500	1K	2K	
100	*29	*35	40	*40	*51	43
125	*29	*35	37	*40	*50	42
160	*29	*35	35	40	49	41

Table 3: Solid wall without insulation

Size	Centre frequency Hz					$D_{n,e,w}$
	125	250	500	1K	2K	
100	*29	*35	30	35	46	36
125	*29	*35	30	36	45	36
160	*29	*35	28	38	45	36

* minimum values