Overflow unit

OLC

Description

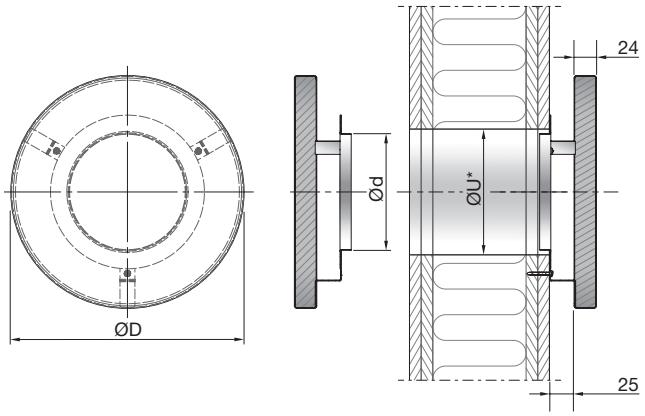
OLC is a circular overflow unit for installation directly into a wall. OLC consists of two sound-attenuating baffles, which are mounted on both sides of the wall.

- Discrete design
- Sound-attenuating baffles

Maintenance

The sound attenuation baffles on both sides of the wall can be removed to enable cleaning of internal parts. The visible parts of the unit can be wiped with a damp cloth.

Dimensions



*ØU = Cutout dimension in wall = Ød + 10 mm

OLC Size (Ød)	ØD [mm]	*ØU	m [kg]
100	200	110	0,8
125	250	135	1,0
160	300	170	1,2

Quick selection

OLC Size Ød	Δp_t = 10 [Pa]		Δp_t = 15 [Pa]		Δp_t = 20 [Pa]		$*D_{n,e,w}$
	[l/s]	[m³/h]	[l/s]	[m³/h]	[l/s]	[m³/h]	[dB]
100	19	68	24	86	27	97	49
125	28	101	34	122	39	140	47
160	40	144	49	176	56	202	44

***** Values valid for cavity wall with 95 mm insulation.

Order code

Product	**OLC**	**aaa**
Type		
OLC		
Size		
100, 125, 160 mm		

Example: OLC - 125

Materials and finish

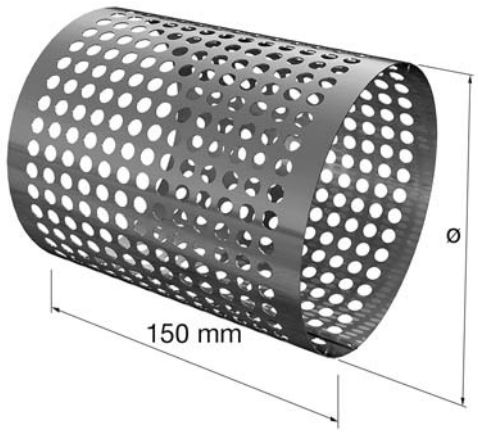
Installation bracket:	Galvanised steel
Front plate:	Galvanised steel
Standard finish:	Powder-coated
Standard colour:	RAL 9003 and RAL 9010, Gloss 30

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

Overflow unit OLC

Accessories

OLCZ - Perforated wall sleeve

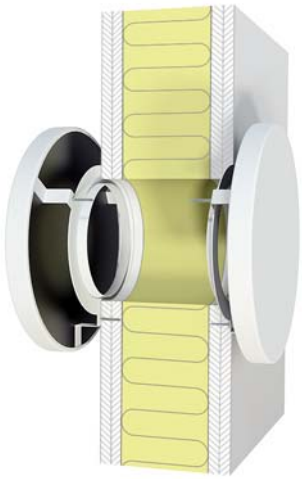


Order code

Product	**OLCZ**	**aaa**
Type		
OLCZ		
Size		
ø 100, 125, 160 mm		

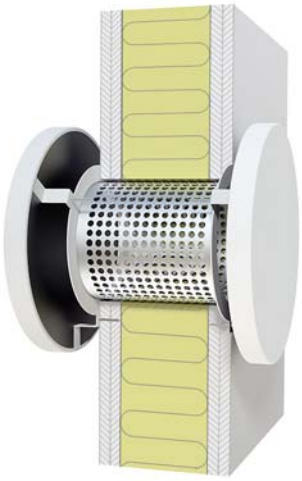
Example: OLCZ - 160

OLC installed in wall



OLC with OLCZ installed in wall

OLCZ optional accessory.



For further information, see OLC installation instruction.

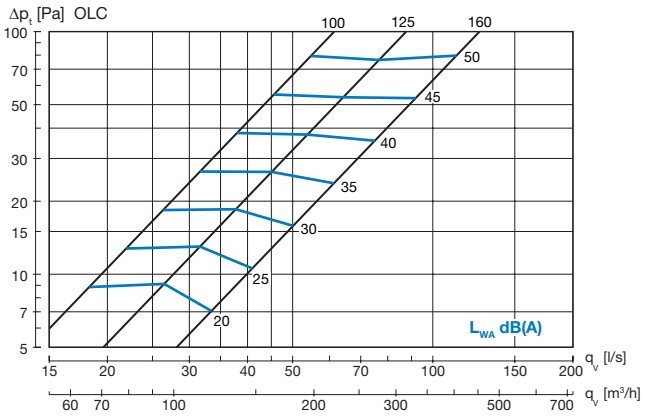
Overflow unit OLC

Technical data

Capacity

Air flow rate q_v [l/s] and [m^3/h], total pressure loss Δp_t [Pa] and sound power level L_{WA} [dB(A)] are specified for a OLC unit on both sides of the wall.

Dimensioning diagram



Element-normalized level difference $D_{n,e}$

Weighted value ($D_{n,e,w}$) evaluated according to ISO 717-1.

Cavity wall with 95 mm insulation

Size	Centre frequency [Hz]					
[mm]	125	250	500	1K	2K	$D_{n,e,w}$
100	32	46	46	48	54	49
125	34	43	43	46	51	47
160	34	40	40	44	50	44

Cavity wall with 70 mm insulation

Size	Centre frequency [Hz]					
[mm]	125	250	500	1K	2K	$D_{n,e,w}$
100	30	40	38	42	50	43
125	30	37	37	42	49	43
160	30	34	34	40	50	41

Solid wall without insulation

Size	Centre frequency [Hz]					
[mm]	125	250	500	1K	2K	$D_{n,e,w}$
100	24	24	23	32	40	31
125	23	24	23	33	40	31
160	24	24	23	32	39	30

Overflow unit OLC

Technical data

Sound calculation

When dimensioning an overflow unit, calculate the decrease in the walls noise-reducing properties.

For these calculations, the area of the wall and sound reduction index (R) must be known

This is adjusted in relation to the unit's $D_{n,e}$ value. $D_{n,e}$ is the unit's R value given at a transmission area of 10 m^2, as specified in ISO 10140-2.

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 of the sound reduction index of the wall, for a given octave band value ($D_{n,e}$) or weighted value ($D_{n,e,w}$).

As a rough estimate the calculation can be performed directly using the wall´s R_w value and the weighted element-normalized level difference $D_{n,e,w}$ of the unit.

Example

(See diagram below) :

R_w (Wall):	50dB	
$D_{n,e,w}$ (Unit):	44dB	$R_w - D_{n,e,w}$ = 6dB
Area of wall:	20m^2	
Number of Units:	1	20m^2/1 = 20 m^2

Indicated reduction of R_w (Wall): 5 dB
R_w value for wall with unit: (50-5) = 45 dB

The calculation can also be performed by using the following formula:

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

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