

# 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

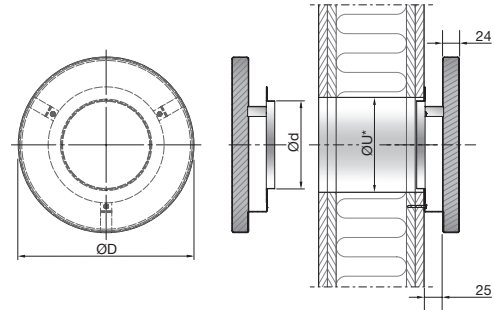
The sound attenuation baffles on both sides of the wall can be removed to enable cleaning of internal parts. The visible parts of the unit can be wiped with a damp cloth.

## Order code

<b>Product</b>	<b>OLC</b>	<b>aaa</b>
<b>Type</b>		
<b>Size</b>		
100, 125, 160 mm		

Example: OLC - 125

## Dimensions



OLC Size (Ød)	ØD [mm]	*ØU	m [kg]
100	200	108-110	0,8
125	250	133-135	1,0
160	300	168-170	1,2

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

## Quick selection

OLC Size Ød	Δp <sub>t</sub> = 10 [Pa]		Δp <sub>t</sub> = 15 [Pa]		Δp <sub>t</sub> = 20 [Pa]		*D <sub>n,e,w</sub> [dB]
	[l/s]	[m <sup>3</sup> /h]	[l/s]	[m <sup>3</sup> /h]	[l/s]	[m <sup>3</sup> /h]	
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.

## Materials and finish

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

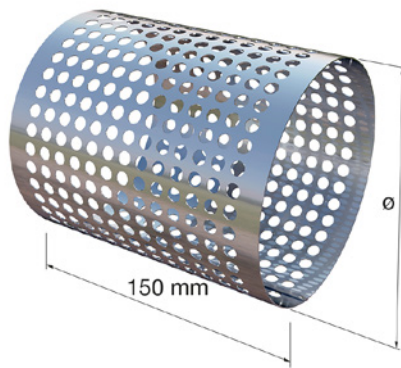
The OLC is available in other colours. Please contact Lindab's sales department for further information.

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## Accessories

### OLCZ - Perforated wall sleeve

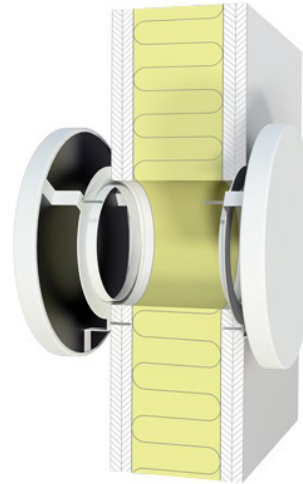


### Order code

<b>Product</b>	OLCZ	aaa
<b>Type</b>	OLCZ	
<b>Size</b>	ø 100, 125, 160 mm	

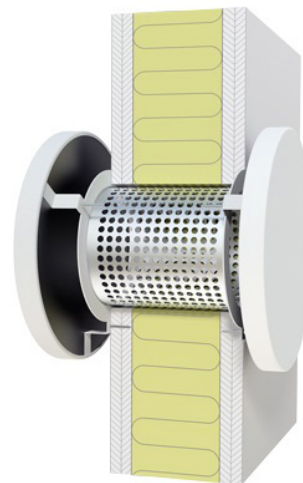
Example: OLCZ - 160

### OLC installed in wall



### OLC with OLCZ installed in wall

OLCZ optional accessory.



For further information, see OLC installation instruction.

# Overflow unit

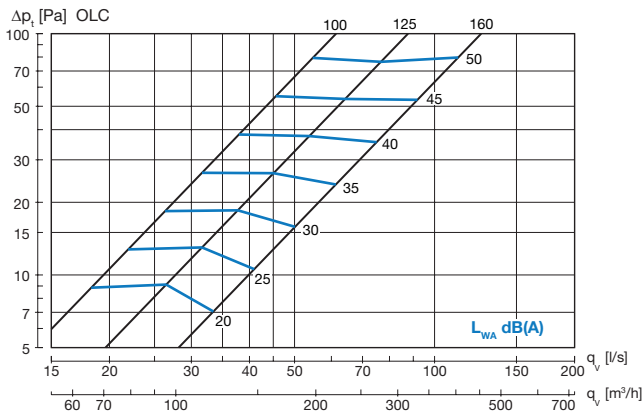
# OLC

## Technical data

### Capacity

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

### Dimensioning diagram



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

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

### Cavity wall with 95 mm insulation

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

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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 unit's  $D_{n,e}$  value.  $D_{n,e}$  is the unit's R value given at a transmission area of 10 m<sup>2</sup>, 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 <sup>2</sup> ]	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 elementnormalized level difference  $D_{n,e,w}$  of the unit.

### Example:

(See diagram below) :

$R_w$  (wall): 50 dB  
 $D_{n,e,w}$  (diffuser): 44 dB  
 Area of wall: 20 m<sup>2</sup>  
 Number of Units: 1

$R_w - D_{n,e,w} = 6$  dB  
 $20 \text{ m}^2 / 1 = 20 \text{ m}^2$

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

The calculation can also be performed using the following formula:

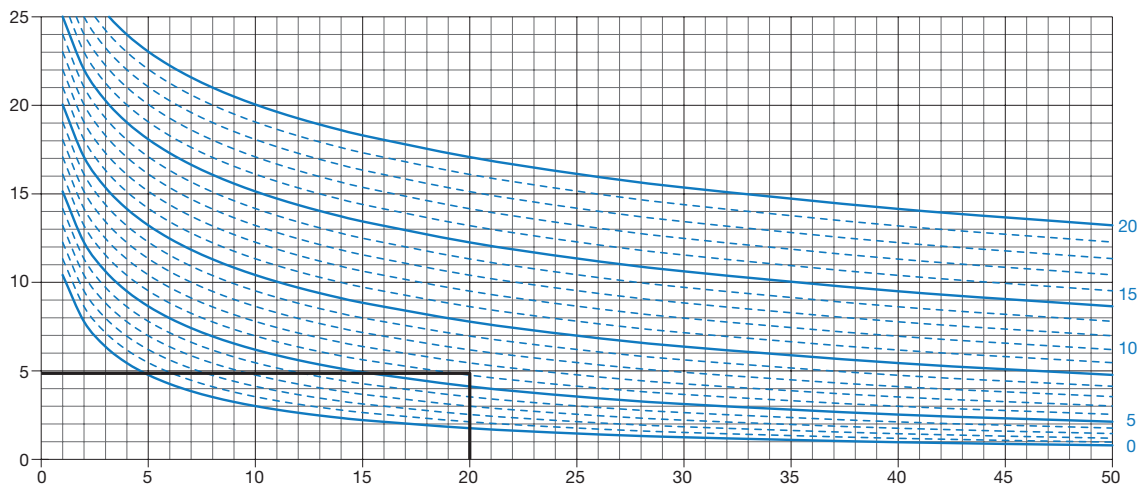
$$R_{res} = 10 \cdot \text{Log} \frac{S_{wall}}{(10 \text{m}^2 \cdot 10^{-0,1 \cdot D_{n,e}}) + (S_{wall} \cdot 10^{-0,1 \cdot R_{wall}})}$$

where:

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

Reduction of wall ( $R_w$ ) [dB]

Difference between wall and unit ( $R_w - D_{n,e,w}$ ) [dB]



Area of wall [m<sup>2</sup>] / Number of units [-]