



UK, UE Pressure Relief  
Dampers

# UK, UE Pressure Relief Dampers

Steel, galvanised, with aluminium blades



UK



UE

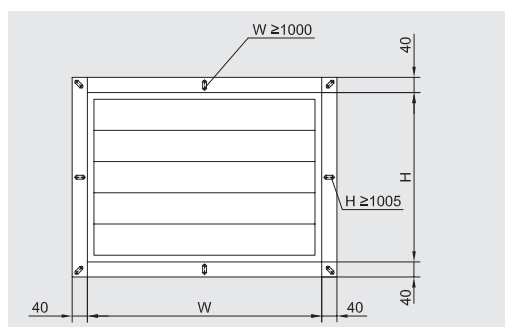
**Pressure relief dampers** for ventilation and air conditioning systems. Made of galvanised sheet steel with stable, self-actuating extruded aluminium profile blades with grooved, elastic seals and plastic bearing journals. The blades are not coupled together.

**UK** pressure relief dampers with 120 mm long flange frame for installation between ventilation ducts and on walls within a building.

**Accessories**

**MR Wall mounting frame**  
made of galvanised sheet steel

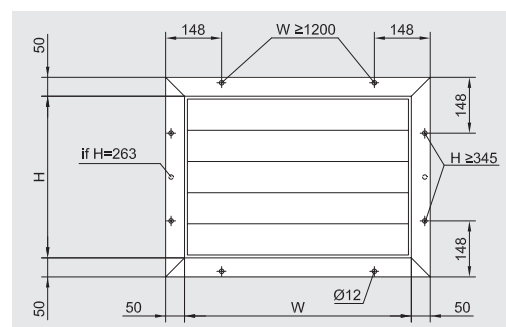
**GF Counter flange**  
made of galvanised sheet steel



**UE** pressure relief dampers with blind frame for installation in walls.

**Accessories**

**MR Wall mounting frame**  
made of galvanised sheet steel



Sizes W x H	
Width W [mm]	Height H [mm]
200	263
400	345
600	428
800	510
1000	675
1200	840
1400	1005
1600	1170
	1335
	1500
	1665

All W and H dimensions can be combined.

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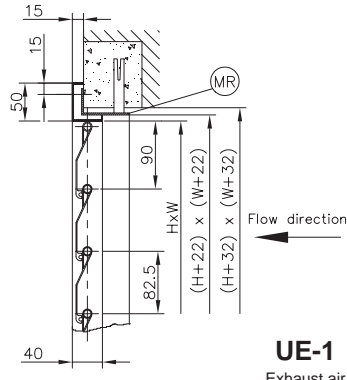
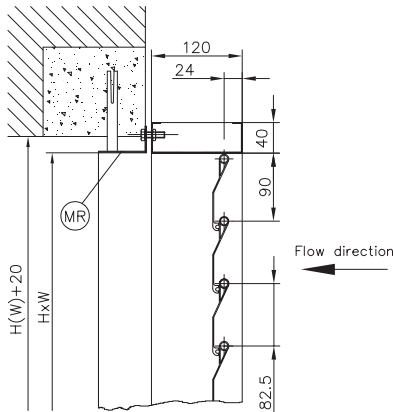
Details, installation, pressure drop, sound power level

## Installation: UK

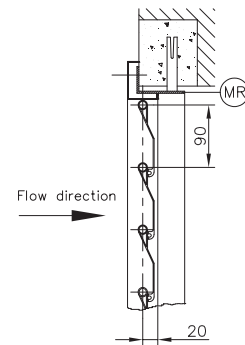
Customers can reverse the flow direction by twisting the pressure relief damper blades.

## Installation: UE

Customers cannot change the specified flow directions on site; they must be specially ordered.

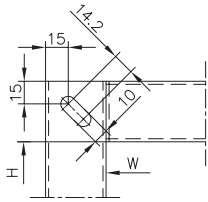


**UE-1**  
Exhaust air  
- blowing -

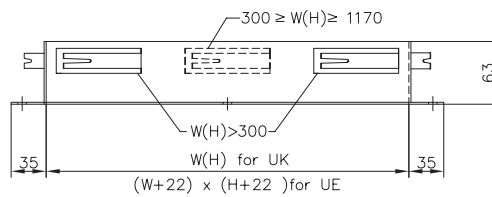


**UE-2**  
Supply air  
- suction -

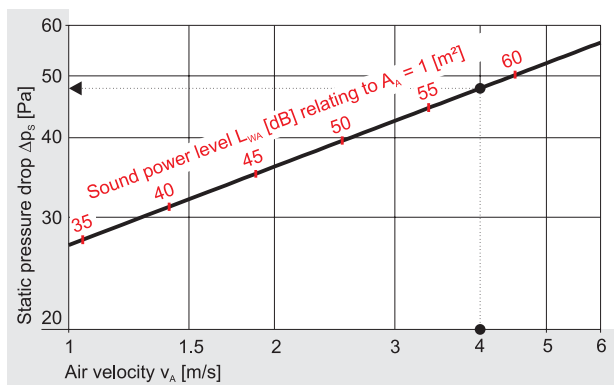
## Corner drill hole in UK connecting frame



## MR wall mounting frame for UK and UE GF counter flange for UK (without wall clamps)



## Pressure drop, sound power level



$A_A$ [m <sup>2</sup> ]	$\Delta L$ [dB]
0.10	-10
0.25	-6
0.40	-4
0.50	-3
0.60	-2
1.00	0
1.25	+1
1.60	+2
2.00	+3
2.50	+4

The sound power levels in the nomogram are referenced to a inflow cross-section of  $A_A = 1$  [m<sup>2</sup>].  $\Delta L$  corrections must be added for other inflow cross-sections.

### Example

Volume flow rate  $V = 7775$  [m<sup>3</sup>/h]  
 Width  $W = 800$  [mm]  
 Height  $H = 675$  [mm]  
 $\Rightarrow$  Inflow section  $A_A = 0.54$  [m<sup>2</sup>]  
 $\Rightarrow$  Inflow velocity  $v_A = 7775 / 3600 / 0.54 = 4$  [m/s]

$\Rightarrow$  from the nomogram:

Pressure drop  $\Delta p_s = 48$  [Pa]  
 Sound power level  $L_{wA} = 58$  [dB(A)]  
 relating to  $A_A = 1$  [m<sup>2</sup>]

$\Rightarrow$  from the table:

Correction value  $\Delta L = -3$  [dB]  
 Sound power level  $L_{wA} = 55$  [dB(A)]  
 relating to  $A_A$

## Nomenclature

- $A_A$  [m<sup>2</sup>] = inflow cross-section  $A_A = W \cdot H$
- $V$  [m<sup>3</sup>/h] = volume flow rate  
 $V$  [m<sup>3</sup>/h] =  $v_A$  [m/s] · 3600 [s/h] ·  $A_A$  [m<sup>2</sup>]
- $v_A$  [m/s] = flow velocity relating to  $A_A$  (inflow velocity)
- $\Delta p_s$  [Pa] = static pressure drop
- $L_{wA}$  [dB(A)] = A-weighted sound power level
- $\Delta L$  [dB] = correction to  $L_{wA}$  relating to  $A_A = 1$  [m<sup>2</sup>]  
 $L_{wA} = L_{wA-1m^2} + \Delta L$  [dB]

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Order information, installation notes

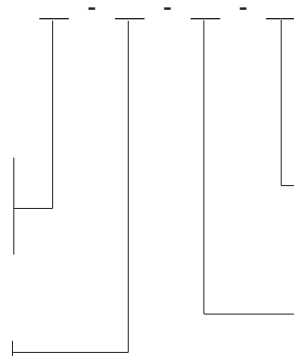
## Pressure relief damper

- with flange frame UK
- with blind frame, for exhaust air UE-1
- with blind frame, for supply air UE-2

## Size

nominal size W x H ..... x .....

⇒ see page 19



## Accessories

- 1GF with 1 counter flange\*)
- 2GF with 2 counter flanges\*)  
⇒ see page 20
- MR with wall mounting frame  
⇒ see page 20

\*) only for UK

**Straps for combining** two UK pressure relief dampers must be ordered separately:

- |       |                       |  |
|-------|-----------------------|--|
| U-LU1 | for widths < 1000 mm  | same width arranged<br>one upon the other! |
| U-LU2 | for widths ≥ 1000 mm  |  |
| U-LN1 | for heights < 1005 mm | same height arranged<br>alongside!         |
| U-LN2 | for heights ≥ 1005 mm |  |

**Straps for combining** two wall mounting frames for UE pressure relief dampers must be ordered separately:

- |       |                       |  |
|-------|-----------------------|--|
| Z-LU1 | for widths < 1000 mm  | same width arranged<br>one upon the other! |
| Z-LU2 | for widths ≥ 1000 mm  |  |
| Z-LN1 | for heights < 1005 mm | same height arranged<br>alongside!         |
| Z-LN2 | for heights ≥ 1005 mm |  |

## Installation notes

Pressure relief dampers can be used for:

temperatures: -20°C to +70°C

pressure differences: to 500 [Pa]

inflow velocities: to 5 [m/s]

Back pressure due to wind or uneven inflows can lead to fluctuations in pressure.

In extreme cases this can cause undesired noises.

