

# Weather Resistant Louvre Combinations

Steel / Aluminium / Aluminium anodised

**Weather resistant louvre combination** for outside air and exhaust air. Profiled, water-repellent blades in an all-around frame for installation in external walls. Permanently mounted stainless steel protective grille with 16 mm mesh size.

**W** weather resistant louvres with frame and blades made of galvanised sheet steel

**AW** weather resistant louvres with frame and blades made of extruded aluminium profiles with untreated surfaces

**AWE** weather resistant louvres with frame and blades made of extruded aluminium profiles with natural anodised surfaces

Mounted on the rear side:

**JK** Multileaf dampers made of galvanised sheet steel, with hollow blades profiled for optimum flow with linkage and galvanised actuator spindles in plastic or brass bushings; 180 mm long frame with canted connecting flanges:

Blade coupling	Blade bearing	Length L 180 mm
opposed with external linkage	plastic	<b>JK-N180G</b>
	brass	<b>JK-M180G</b>
parallel with external linkage	plastic	<b>JK-N180</b>
	brass	<b>JK-M180</b>
parallel with internal linkage	plastic	<b>JK-N180I</b>
	brass	<b>JK-M180I</b>

**JL** Multileaf dampers, airtight in accordance with DIN 1946-4 and leak tightness class 4 according to EN 1751 at 100 [Pa] static pressure difference. Made of galvanised sheet steel. The sealed, opposed hollow blades profiled for optimum flow and connected via linkage turn in special brass bushings on a 180 mm long frame with canted connection flanges.

**UK** Pressure relief dampers with self-actuating extruded aluminium profile blades with grooved, elastic seals and plastic bearing journals and 120 mm long frame made of galvanised sheet steel with canted connecting flanges. The blades are not coupled together. Only available to width W = 1600 mm and height H = 1665 mm.



Size W x H	
Width W [mm]	Height H [mm]
400	345
600	510
800	675
1000	840
1200	1005
1400	1170
1600	1335
1800 <sup>*)</sup>	1500
2000 <sup>*)</sup>	1665
	1830 <sup>*)</sup>
	1995 <sup>*)</sup>

All W and H dimensions can be cominded.

<sup>\*)</sup> Note size restrictions!

Note:

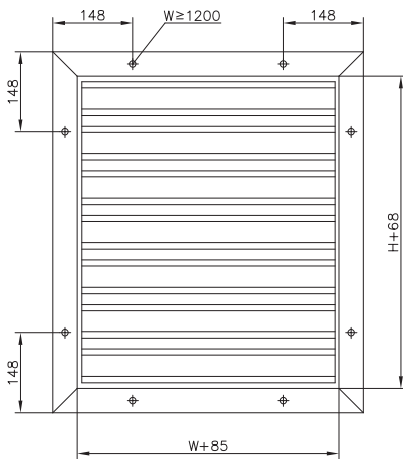
Weather resistant louvres protect wall openings against the penetration of impurities, provided these are unable to penetrate the mesh on the protective grille, and the effects of direct rain. In the case of strong winds, especially at great heights, it may not be possible to fully prevent the penetration of a small amount of rain or snow. Therefore actions should be taken to provide suitable drainage in the building.

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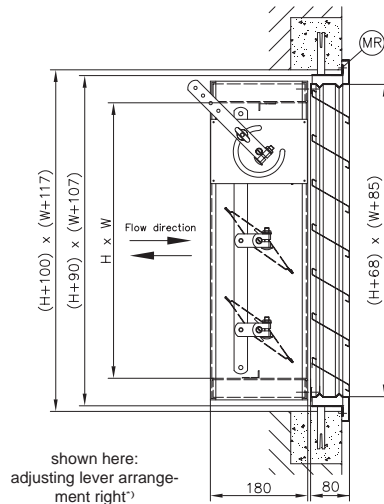
## Designs, dimensions

Weather resistant louvre combinations consist of W, AW and AWE weather resistant louvres and permanently mounted JK multileaf dampers, JL multileaf dampers or UK pressure relief dampers on the rear side.

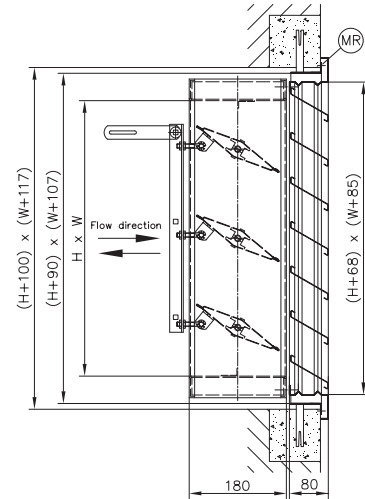
The units are factory assembled from standard products.



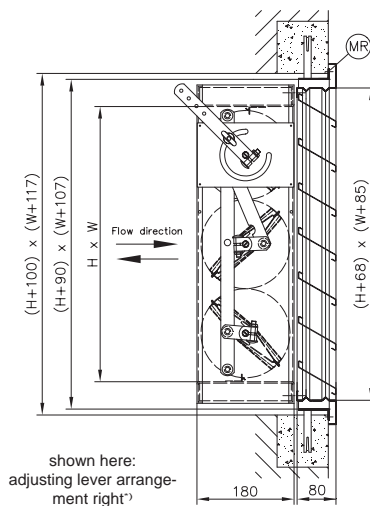
**W, AW, AWE**  
**Weather Resistant Louvres**



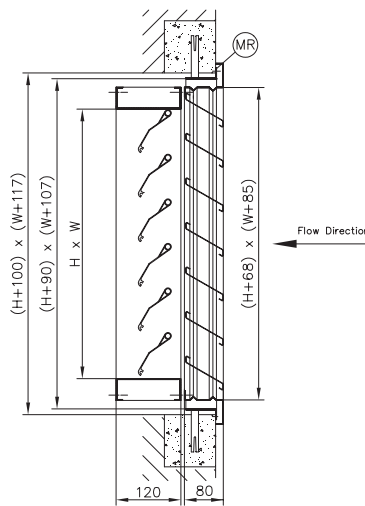
combined with **JK-N (M) 180 (G)**



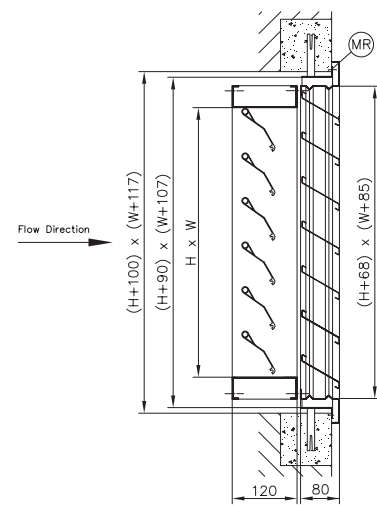
combined with **JK-N (M) 180 I**



combined with **JL**



combined with **UK1**  
- suction -



combined with **UK2**  
- blowing -

\*) optimal: adjusting lever also deliverable on left.

All illustrations are shown with MR wall mounting frame.

**Installation openings without wall mounting frame: (W + 100 mm) · (H + 93 mm)**

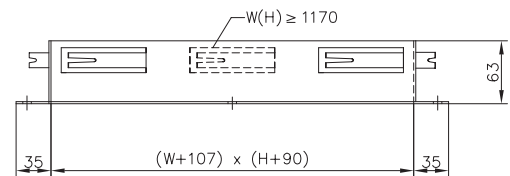
Note: It may be necessary to temporarily disassemble the adjusting lever or actuators!

# Weather Resistant Louvre Combinations

Accessories, pressure drop, sound power level, nomenclature

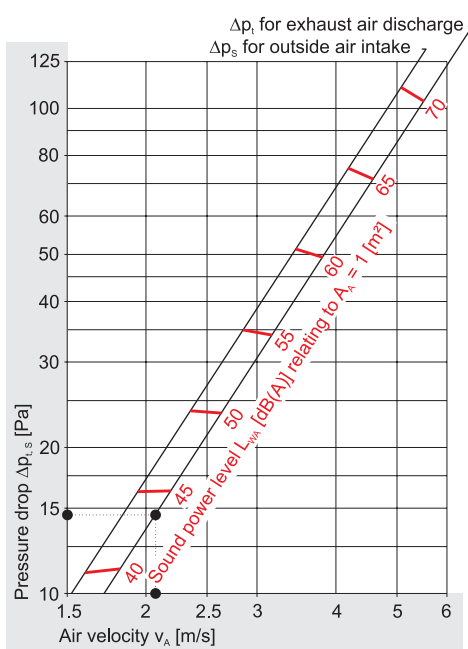
## Accessories

- MR** Wall mounting frame made of galvanised sheet steel, punched, canted, corner welded with several wall clamps for cementing.
- GF** Counter flange made of galvanised sheet steel, punched, canted and corner welded.



Counter flanges are without wall clamps!

## Pressure drop, sound power level for weather resistant louvres



These sound power levels relating to inflow cross-section  $A_A = 1 \text{ [m}^2\text{]}$ .  $\Delta L$  corrections must be added for other inflow cross-sections:

$A_A \text{ [m}^2\text{]}$	$\Delta L \text{ [dB]}$
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
3.20	+5
4.00	+6

$$L_{wA} = L_{wA-1m^2} + \Delta L \text{ [dB]}$$

## Example

- Exhaust air volume flow rate  $V = 5000 \text{ [m}^3\text{/h]}$
- Sound power level  $L_{wA} = 45 \text{ [dB(A)]}$
- Width  $W = 800 \text{ [mm]}$
- Height  $H = 840 \text{ [mm]}$
- Pressure drop  $\Delta p_t = 14 \text{ [Pa]}$

Alternatively, inflow velocity  $v_A = 5000 \text{ [m}^3\text{/h]} / 3600 \text{ [s/h]} / 0.67 \text{ [m}^2\text{]} = 2.1 \text{ [m/s]}$  is calculated from inflow cross-section  $A_A = 0.8 \text{ [m]} \cdot 0.84 \text{ [m]} = 0.67 \text{ [m}^2\text{]}$ . For this inflow velocity  $v_A$  and at the same pressure drop  $\Delta p$  as before, a sound power level  $L_{wA} = 43 \text{ [dB(A)]}$  relating to  $A_A = 1 \text{ [m}^2\text{]}$  can be read from the nomogram opposite, which must be corrected by  $\Delta L = -2 \text{ [dB]}$  to  $L_{wA} = 41 \text{ [dB(A)]}$  relating to  $A_A$

The pressure drops of the attached shut-off dampers must be added. This and other technical data can be found in the respective product brochures.

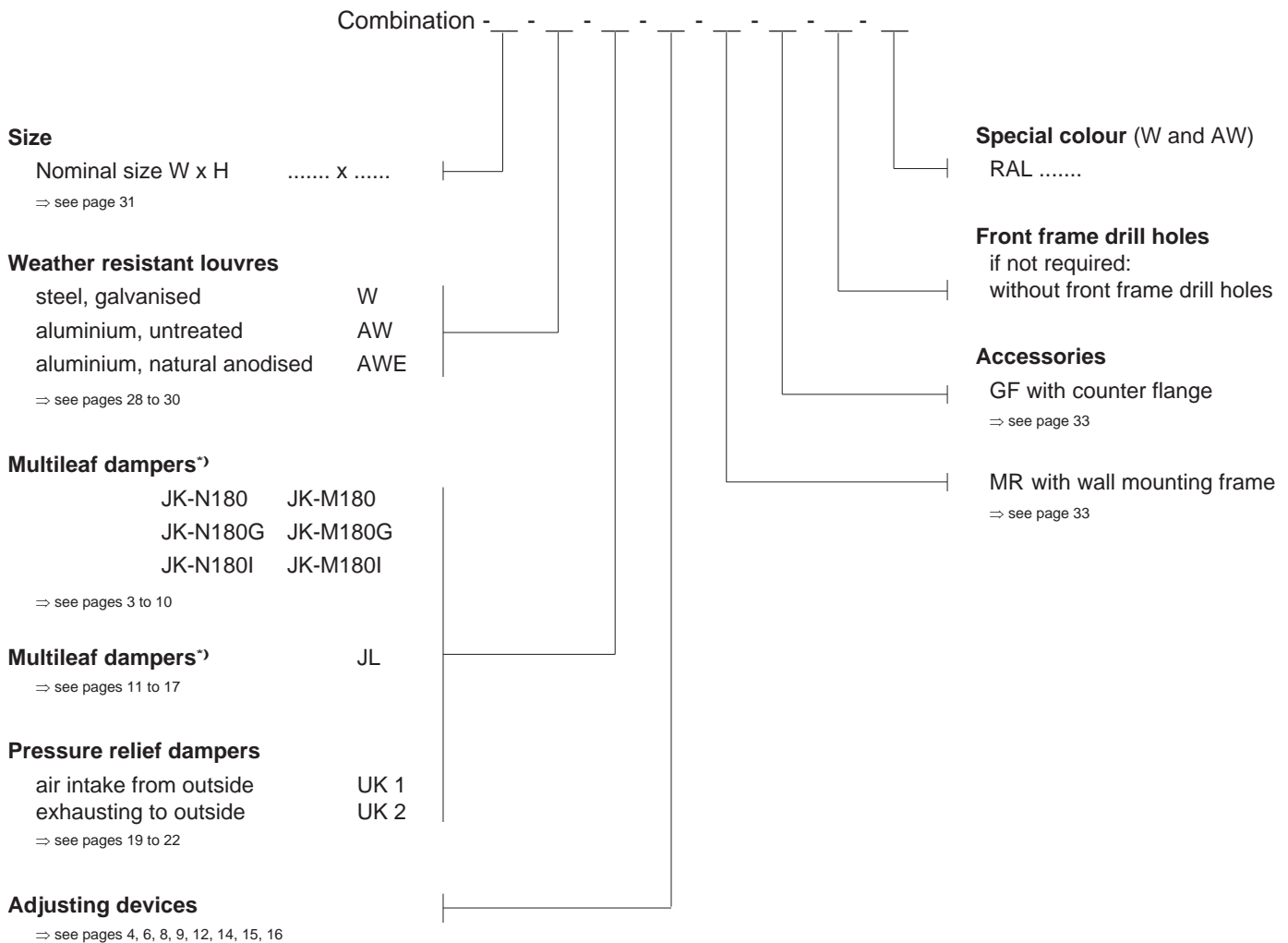
The highest of the sound power values for the weather resistant louvre or the attached shut-off damper should be used. If both values are approximately the same and do not differ by more than 7 [dB], +3 [dB] must be added to the highest value to obtain the total sound power level.

## Nomenclature

- $A_A \text{ [m}^2\text{]}$  = inflow cross-section  $A_A = W \cdot H$
- $V \text{ [m}^3\text{/h]}$  = volume flow rate  
 $V \text{ [m}^3\text{/h]} = v_A \text{ [m/s]} \cdot 3600 \text{ [s/h]} \cdot A_A \text{ [m}^2\text{]}$
- $v_A \text{ [m/s]}$  = flow velocity relating to  $A_A$
- $\Delta p_t \text{ [Pa]}$  = total pressure drop (for exhaust air discharge)
- $\Delta p_s \text{ [Pa]}$  = static pressure drop (for outside air intake)
- $L_{wA} \text{ [dB(A)]}$  = A-weighted sound power level
- $\Delta L \text{ [dB]}$  = correction to  $L_{wA}$  relating to  $A_A = 1 \text{ [m}^2\text{]}$

# Weather Resistant Louvre Combinations

Order information



<sup>\*)</sup> Indicate where appropriate: adjusting lever on left  
⇒ see page 32

# Weather Resistant Louvre Combinations

## Specification text

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Weather resistant louvres to protect against the direct penetration of rain and coarse impurities, for outside air intake and exhaust air. Made of galvanised steel / untreated aluminium / natural anodised aluminium, with all-around profile front frame, horizontal, water-repellent profile blades and permanently mounted stainless steel protective grille with 16 mm mesh size on the rear side. Screw mounting via drill holes in frame and with wall mounting frame made of galvanised sheet steel. **With mounted**

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### Text for JK

Multileaf damper made of galvanised sheet steel with hollow blades profiled for optimum flow, external opposed / external parallel / internal parallel linkage, galvanised actuator spindles in plastic / brass bushings. All-around, canted frame with 180 mm length and with connecting flanges for installation on ducts. With adjusting lever, locking device and counter flange made of galvanised sheet steel.

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### Text for JL

Multileaf damper made of galvanised sheet steel. Airtight in accordance with DIN 1946-4 and leak tightness class 4 according to EN 1751 at 100 [Pa] static pressure difference. Hygienically smooth, opposed hollow blades profiled for optimum flow in special brass bushings and 180 mm long all-around canted frame and with connecting flange for installation on ducts. With adjusting lever and locking device, counter flange made of galvanised sheet steel.

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### Text for UK

Pressure relief damper with 120 mm long flange frame made of galvanised sheet steel, for installation on ventilation ducts. With individual, self-actuating, opening and closing extruded aluminium profile blades with grooved, elastic seals and plastic bearing journals. With counter flange.

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..... pieces

Volume flow rate: ..... m<sup>3</sup>/h

Manufacturer: WILDEBOER®

Type: .....

Dimension W x H .....x..... mm

Complete with fasteners supply: .....

install: .....

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Delete text in non-bold type as required!