MANUFACTURER OF VENTILATION ELEMENTS

SAW-POL

EXTERNAL INTAKE LOUVRE CzS-A-HF

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TABLE OF CONTENTS

DESCRIPTION AND APPLICATION

Ventilation louvres are used in intake and exhaust ventilation systems, serving as air duct endings or as part of building's external walls. The design of the blades is intended to protect facade opening from the weather and wind. Standard louvres are equipped with protective mesh to prevent birds, vermin and debris (such as leaves) from entering the system.

This type of louvre features a high visual free area of 90%, making it ideal for smoke extraction compensation and aeration in areas where a large flow area is required.

The product has a B construction mark, CE marking and hygiene certificate. We also issue a National Declaration of Performance.

MATERIALS

The louvres are available in three material versions:

- **galvanized steel***
- **aluminium***
- **stainless steel, acid-resistant (type 1.4301/AISI 304 or 1.4404/AISI 316L)**

*Powder coating in any color from the RAL palette. As standard, stainless steel, acid-resistant elements are not painted.

The air intake has fixed slats. There is a protective mesh directly behind the air intake shutter.

DIMENSIONS

Wall air intakes are made to order. The dimensions of the louvre are according to the customer's needs.

L - width of mounting hole
H - height of mounting hole
L_1 x H_1 - nominal dimension of the air intake louvre

Frame width:

25mm for L or H ≤ 1000mm
50mm for L or H > 1000mm

Frame depth:

110mm for all dimensions

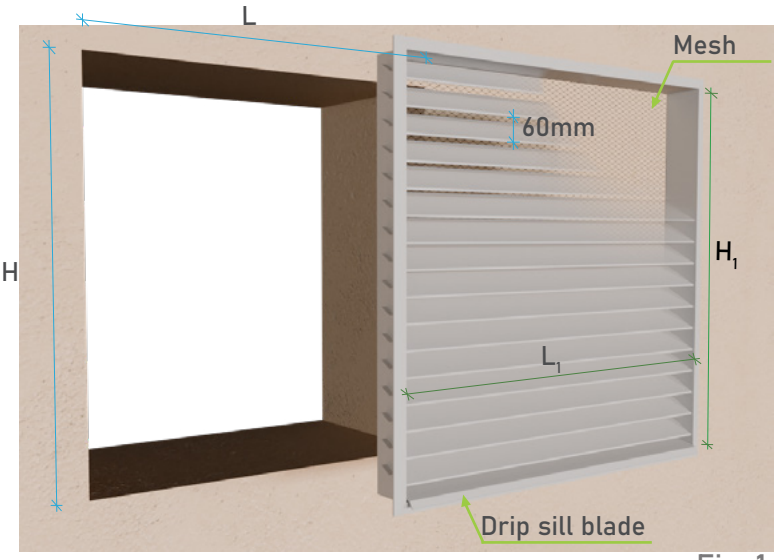


Fig. 1

For this type of louvre, the optical clearance is 90%, the net free area is 75%.
The manufacturer reserves the right to make technological changes.

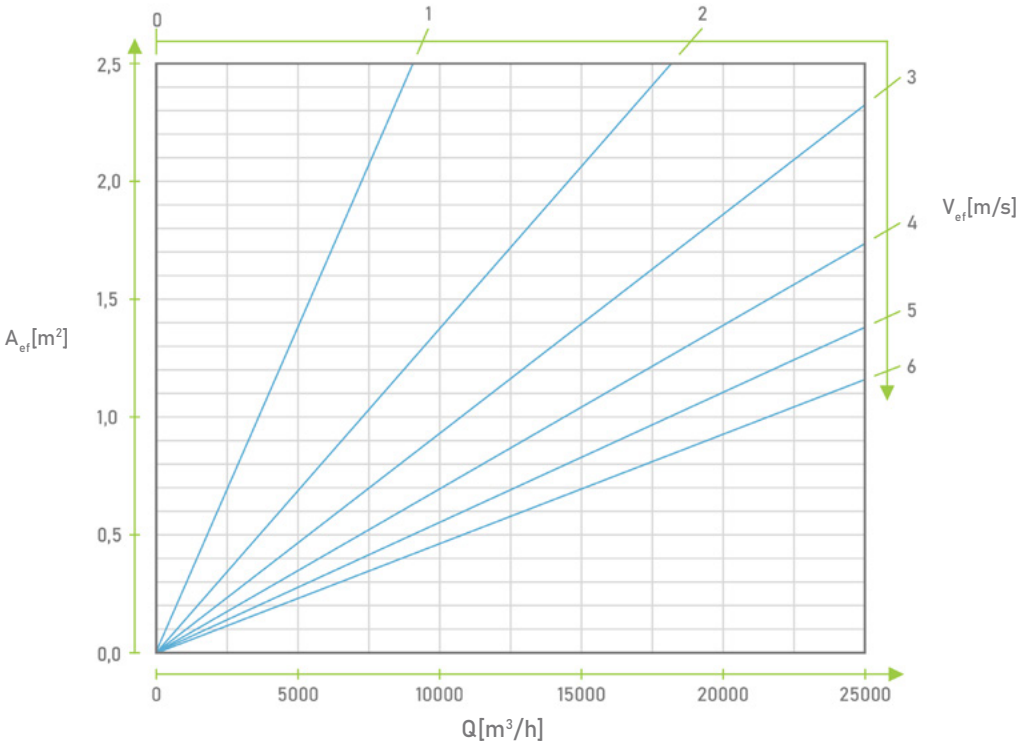
TECHNICAL DATA

Free area Aef [m²] of the intake grille, based on the nominal dimension $L_1 \times H_1$

H_1[mm] \ L_1[mm]	300	400	500	600	800	1000	1200	1400	1600	1800	2000
300	0,070	0,090	0,110	0,140	0,180	0,230	0,270	0,320	0,360	0,410	0,450
400	0,090	0,120	0,150	0,180	0,240	0,300	0,360	0,420	0,480	0,540	0,600
500	0,110	0,150	0,190	0,230	0,300	0,380	0,450	0,530	0,600	0,680	0,750
600	0,140	0,180	0,230	0,270	0,360	0,450	0,540	0,630	0,720	0,810	0,900
800	0,180	0,240	0,300	0,360	0,480	0,600	0,720	0,840	0,960	1,080	1,200
1000	0,230	0,300	0,380	0,450	0,600	0,750	0,900	1,050	1,200	1,350	1,500
1200	0,270	0,360	0,450	0,540	0,720	0,900	1,080	1,260	1,440	1,620	1,800
1400	0,320	0,420	0,530	0,630	0,840	1,050	1,260	1,470	1,680	1,890	2,100
1600	0,360	0,480	0,600	0,720	0,960	1,200	1,440	1,680	1,920	2,160	2,400
1800	0,410	0,540	0,680	0,810	1,080	1,350	1,620	1,890	2,160	2,430	2,700
2000	0,450	0,600	0,750	0,900	1,200	1,500	1,800	2,100	2,400	2,700	3,000
2400	0,540	0,720	0,900	1,080	1,440	1,800	2,160	2,520	2,880	3,240	3,600
2800	0,630	0,840	1,050	1,260	1,680	2,100	2,520	2,940	3,360	3,780	4,200
3000	0,680	0,900	1,130	1,350	1,800	2,250	2,700	3,150	3,600	4,050	4,500

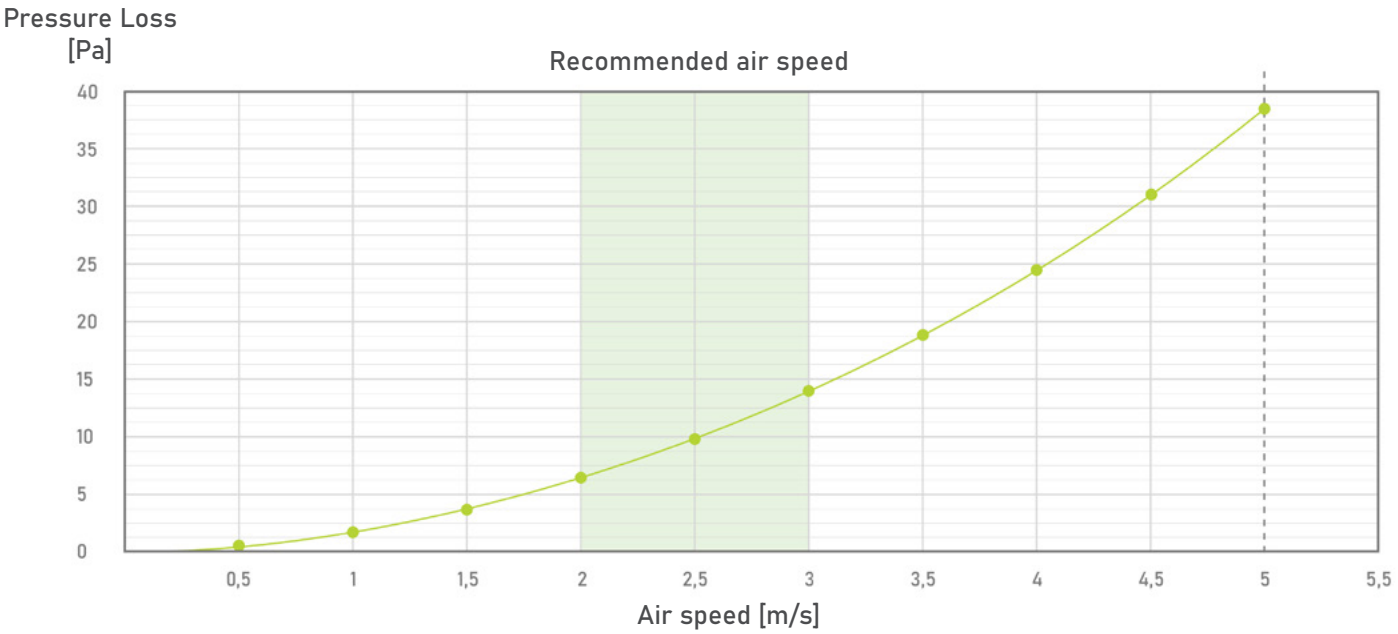
EFFECTIVE SPEED

Effective velocity **V_{ef}[m/s]** depending on the air flow **Q[m³/h]** and effective area **A_{ef}[m²]**.



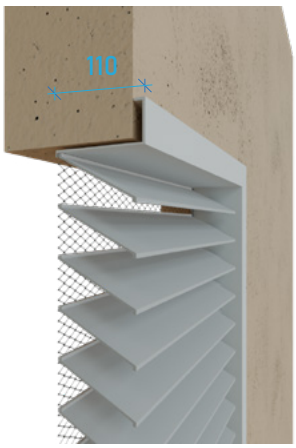
PRESSURE LOSS

Pressure loss depending on air velocity at the intake



TYPES OF FRAMES

Our wall air intake louvres offer two types of frames. The **R1 frame** has a flare that allows it to be screwed to the wall from the outside while masking the imperfections of the opening. The **R2 frame** is characterized by a discreet appearance, perfectly fitting into the wall, without any elements flaring out onto the wall. Dedicated to walls made of stone, clinker or similar materials.



Frame R1

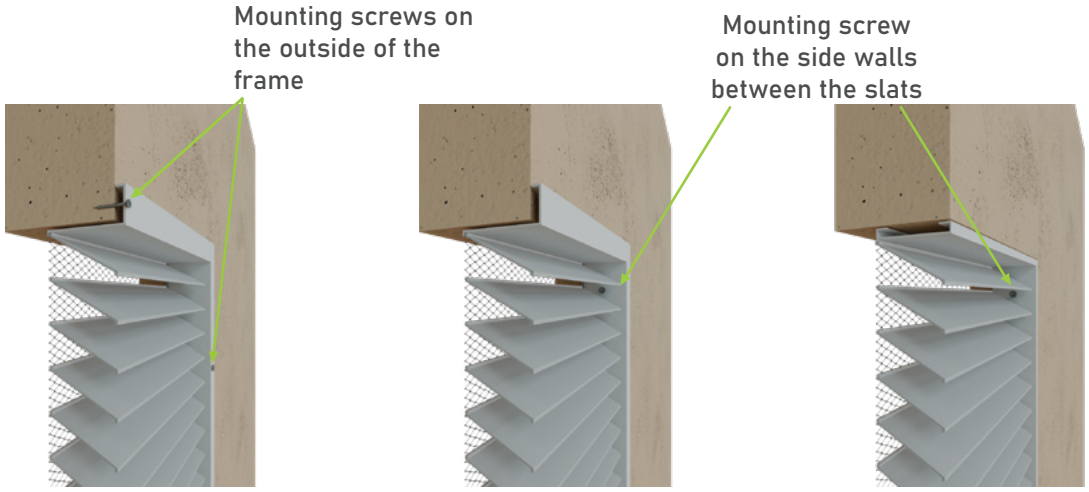
Frame R2

Fig. 2

MOUNTING METHODS

Variant W1

Installation using screws and mounting holes in the frame's extension to the wall **(W1)** or in its vertical frames **(W1a)**. In the case of the R2 frame, holes are made only in vertical frames **(W1a)**, in louvres with a width of less than 1000 mm.



W1
Frame R1

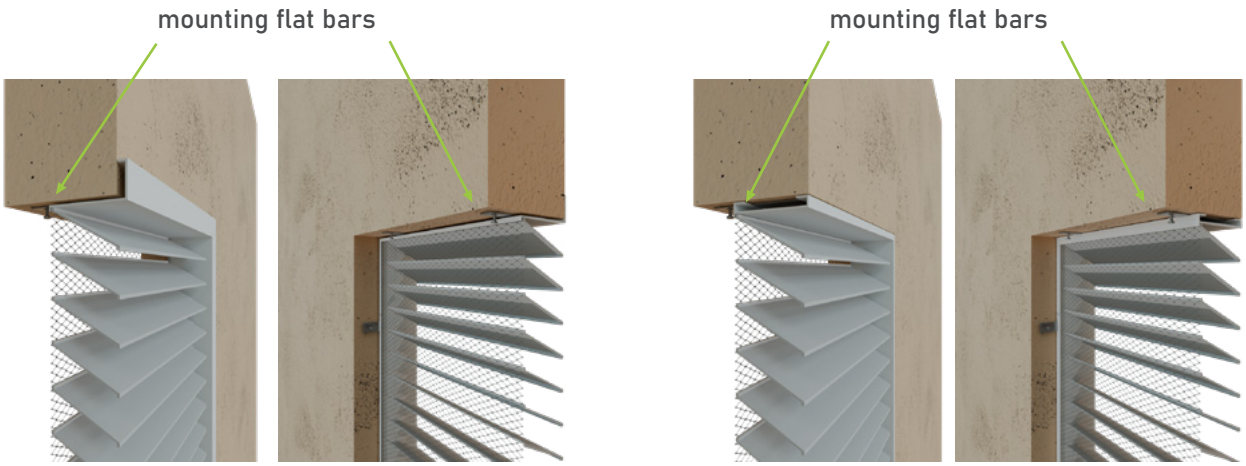
W1a
Frame R1

W1a
Frame R2

Fig. 3

Variant W2

Concealed installation using screws and mounting flat bars - a recommended solution in the case of free access from the room side. Flat bars are supplied separately, to be riveted to the louvre directly on the construction site. Length of flat bars to be agreed.



Frame R1

Frame R2

Fig. 4

MOUNTING METHODS

Variant W3

Concealed installation using screws and mounting angles in the RM frame, enabling multiple installation and removal of the air intake. Variant recommended for walls with a layer of insulation. Variant W3 is not suitable for the **R2 frame**. For the **R1 frame**, we offer installation from the room side **(W3a)**, for louvres with a width of less than 1000 mm, it is also possible to install them from the front of the ventilation grille **(W3b)**.

W3a **W3b** Fig. 5

Variant W3a - installation from the room side.
Variant W3b - installation from the front of the louvre only for width L ≤ 1000mm.

Wariant W4

Designed for mounting the air intake in a sandwich panel. Due to the construction of the panel (filling cover made of thin sheets with a thickness of 0.5 mm), we recommend using a mounting frame. This frame strengthens the mounting and covers the filling (wool/foam). Additionally, it allows for screwing with a locking bolt or profile surrounding the mounting hole. The described mounting variant guarantees solid mounting of the air intake in the sandwich panel, especially in the case of large-sized modules.

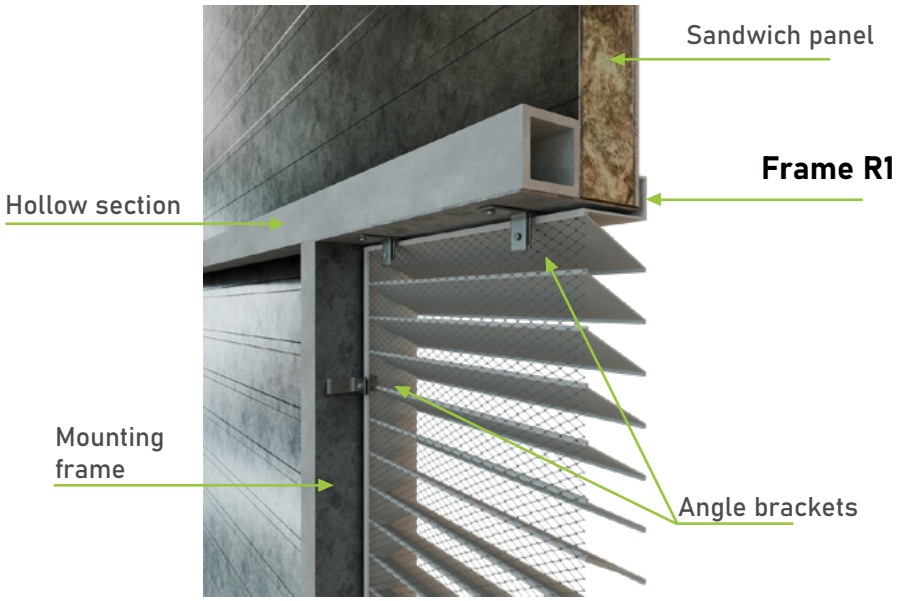


Fig. 6

INTAKE LOUVRE DIVIDING

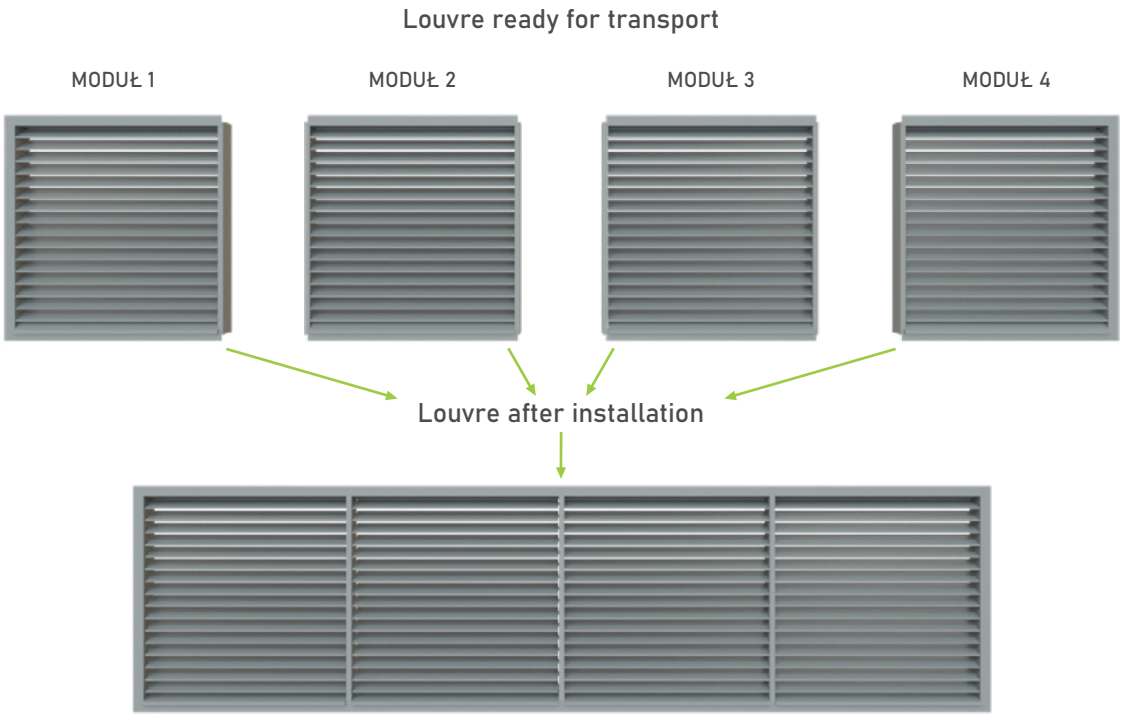
If the width of the louvre L (slat length) exceeds 2800 mm, it is necessary to divide it. We offer two variants of modular louvres, adapted to the installation conditions. The choice should be discussed individually.

FRAME IN ONE PIECE

For dimensions L ≤ 2800mm and H ≤ 1500mm we propose a complete frame in which the air intake louvres reinforced with vertical brackets will be attached.

PUZZLE

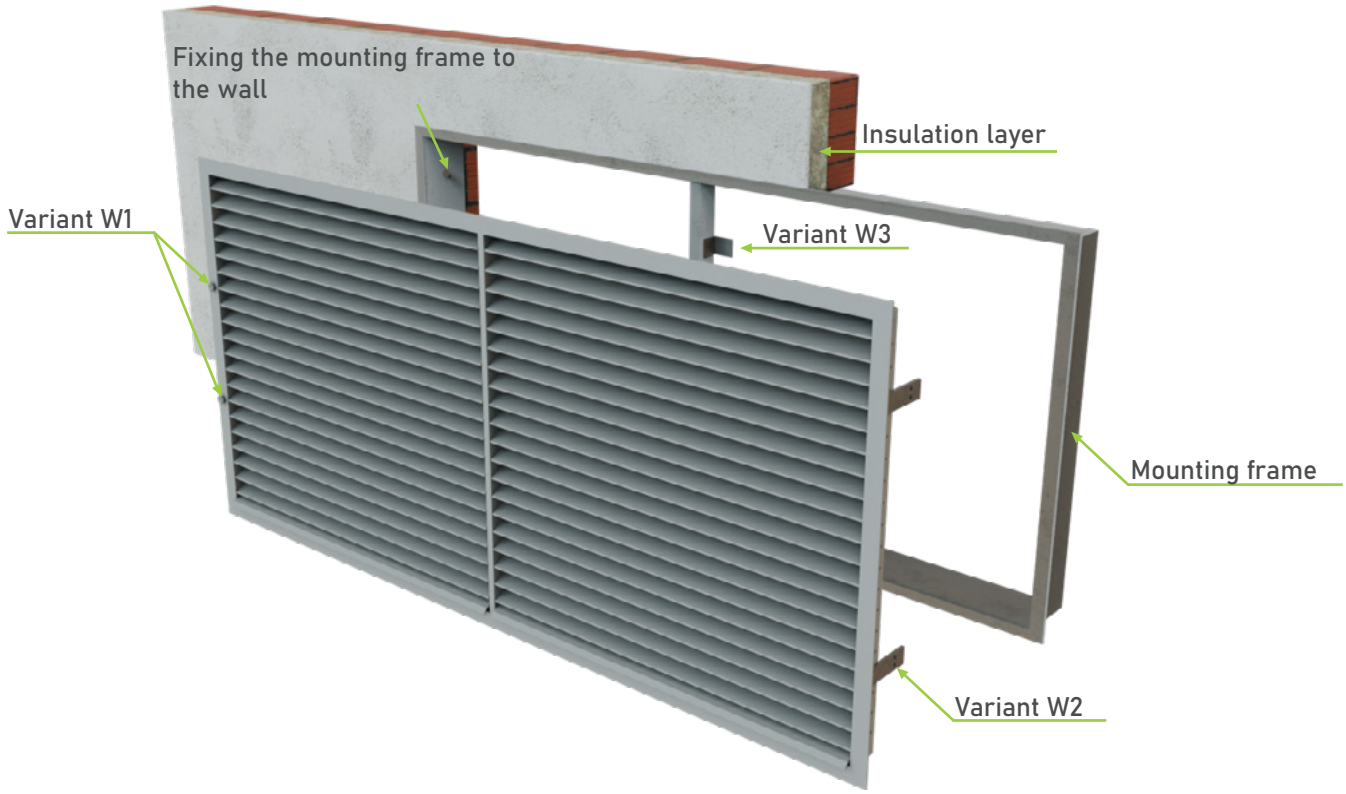
For mounting opening dimensions L > 2800mm and H > 1500mm, we divide the louvre into so-called "puzzle" modules that form one whole and the connections are discrete.



INTAKE LOUVRE DIVIDING

MOUNTING FRAME / SUBSTRUCTURE

In order to strengthen and protect the insulation layer and to firmly mount the louvre in the ventilation opening, especially for large modular louvres, we suggest using a mounting frame with substructure elements. Alternative mounting variants W1, W2 and W3 are also presented below.



Variant W1 - visible assembly with screws.

Variant W2 - hidden assembly using screws and flat bars. This solution is recommended in the case of free access from the room side. Flat bars are supplied separately, to be riveted to the louvre directly on the construction site. The length of the flat bars to be agreed.

Variant W3 - hidden assembly using angle brackets attached to the louvre and their identical counterparts in the substructure frame. After placing the air intake in the mounting hole, screw the pairs of assembly locks at the same height.

Variant W3a - assembly from the room side.
Variant W3b - assembly from the front of the louvre.

HOW TO PLACE AN ORDER

Please place orders using the form below:

CzS-A-HF / 'LxH' / 'M' / 'RAL' / 'R' / 'W'

CzS-A-HF product name

LxH width x height of mounting hole in mm (Fig. 1)

M material

- **OC*** - powder coated galvanized steel
- **AL** - powder coated aluminium
- **KO** stainless/acid-resistant steel (grade 1.4301/AISI 304 or 1.4404/AISI 316L)

RAL color according to the RAL palette

- **RAL9016, 7004, 9010, 7016 matt, fine structure***
- **number of any color from the RAL palette**

R type of frame (Fig. 2)

- **R1*** - frame with a wall extension
- **R2** - C-section shaped frame

W assembly variant

- **W1*** - visible assembly using screws and mounting holes on the frame (Fig. 3)
  - **W1a** - Screws on the inside walls of the frame
- **W2** - concealed assembly using screws and mounting flat bars (Fig. 4)
- **W3** - concealed assembly using screws and mounting brackets in the RM frame (Fig. 5)
  - **W3a** - installation from the room side
  - **W3b** - front mounting of the ventilation grille only for L ≤ 1000mm
- **W4** - assembly in sandwich panel for girt (Fig. 6)

*** - standard parameters that will be used if no information is provided.**

Order example:

CzS-A-HF/1600x800/OC/RAL9016/R1/W3a

The mission of P.P.H.U. SAW-POL is to provide all customers with access to the widest possible range of ventilation products.

As a Polish manufacturer of ventilation components, we strive to meet and adapt our product range to the expectations of architects, designers, and investors – even the most demanding ones. We continuously expand our portfolio, including new product categories. We improve our operations with respect to environmental responsibility.
An additional value for our customers is the highest standard of service, supported by an experienced team always ready to assist, as well as an individual approach to every order.

Please contact us by phone between 8:00–16:00.

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Product page:
https://www.sawpol.pl/pliki/en/CzS-A-HF_Saw-Pol_eng.pdf

Full product range:
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