

MANUFACTURER OF VENTILATION ELEMENTS



# SAW-POL



## WALL LOUVRE WITH MOVABLE LAMELLAS ZSR-N

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## DESCRIPTION AND APPLICATION

The louvre with movable slats that allow you to regulate the air flow is designed for use in supply and exhaust ventilation systems. The special shape of the louver/slat protects the intake opening from precipitation. The louvre can be opened and closed by manual adjustment - type ZSR-N-R, using a ZSR-N-C rod or using an actuator - type ZSR-N-S. The louvre mechanism allows you to set any opening angle (in the case of electric adjustment, an analog actuator should be used). As standard, the louvre mechanism is adapted to the Belimo rotary actuator. It is possible to use a different type of actuator - in such a case, you should send the technical data sheet of the given model in advance. The number of actuators depends on the size of the louver.

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

## MATERIALS

Ventilation grilles are available in three material variants:

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

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

At the customer's request, the mesh can be used directly behind the slats, which will not change the depth of the louvre.

The manufacturer reserves the right to make technological changes.

## DIMENSIONS

Louvres are produced to order. Blind dimensions according to customer requirements. The width of the frame depends on the size of the blind. Other options are available on request.

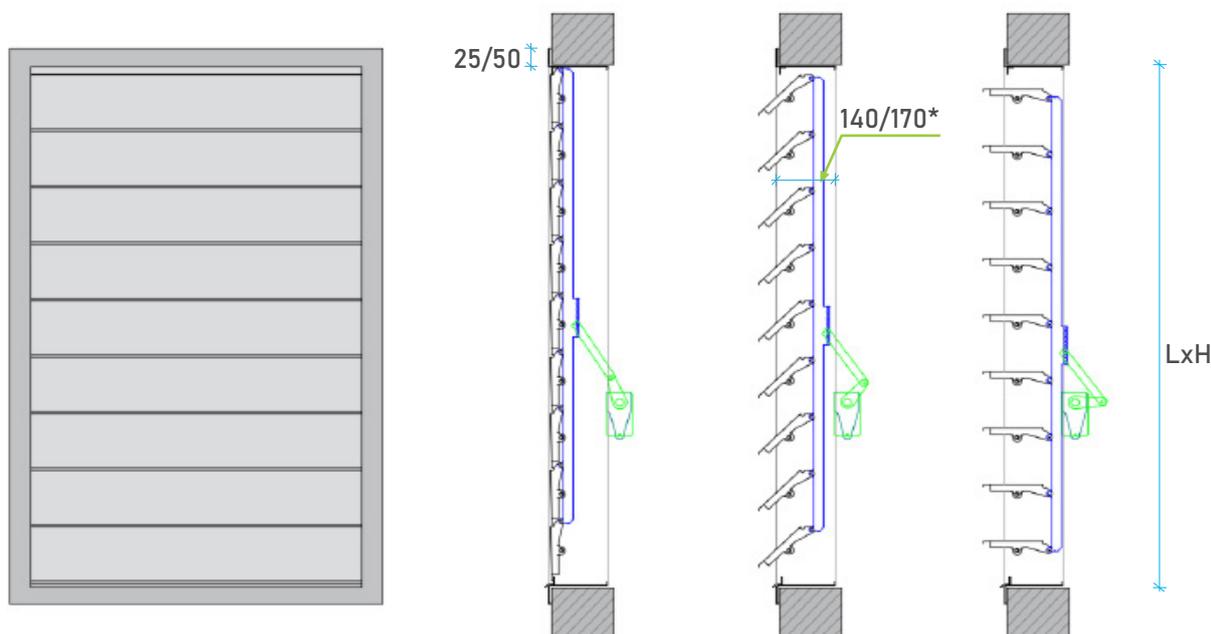


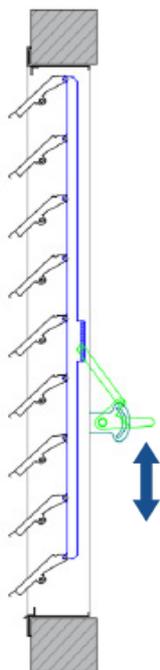
figure 1

\*The depth of the ZSR-N blind depends on its height: when  $H \leq 1600$  the depth is 140mm, when  $H > 1600$ , the depth is 170mm.

# LOUVRE ADJUSTMENT OPTIONS

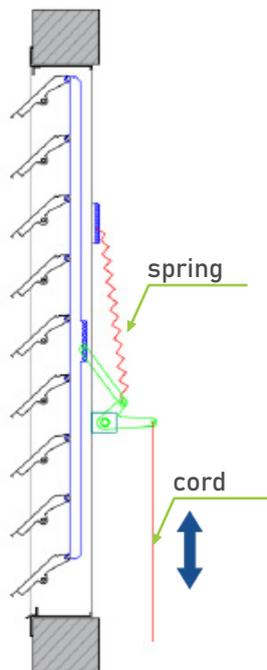
The ZSR-N louvres can be adjusted manually, using a cord or an electric actuator. The adjustment options are common for each louvre depth and frame width.

ZSR-N-R



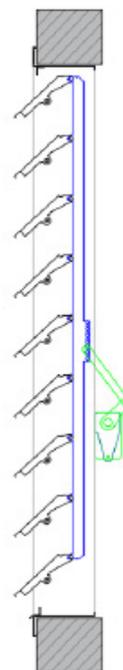
Louvre adjusted manually.

ZSR-N-C



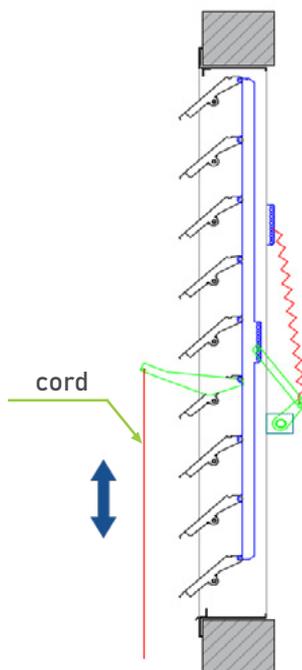
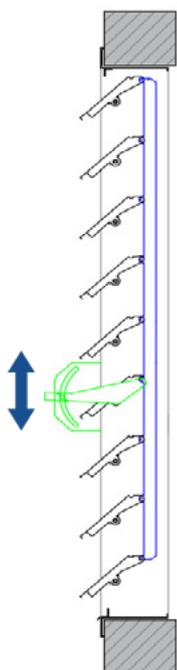
Louvre adjusted with a pull cord.

ZSR-N-S



Louvre adjusted using a Belimo rotary actuator (the method of opening the blinds and the moment they stop depends on the type of actuator)

figure 2



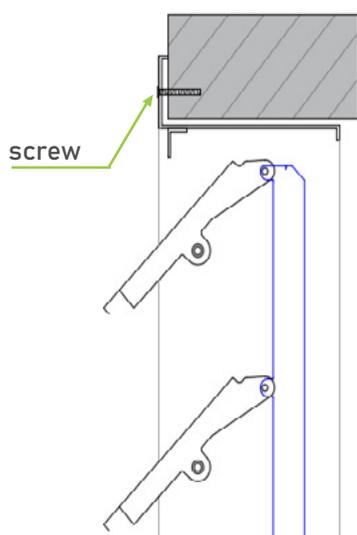
Manual and cord adjustment are also available with the option of adjustment from the front of the louvre.

figure 3

When ordering, please provide the depth of the wall and the height at which the louvre is mounted in order to adjust the depth, as well as the length of the adjustment cord.

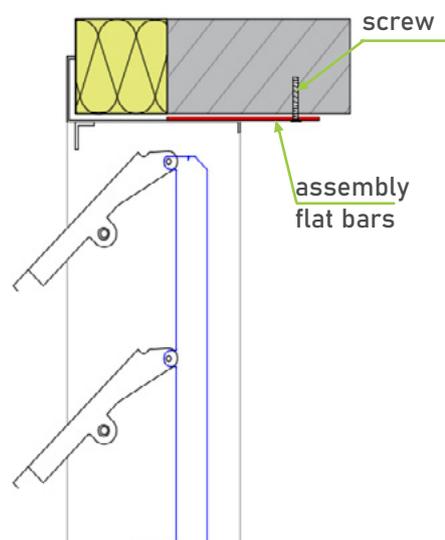
## MOUNTING METHODS

## Variant W1



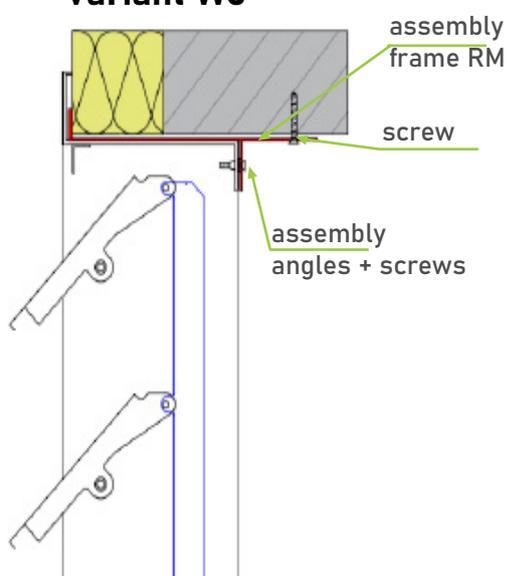
Visible installation using screws in mounting holes in the louvre frame.

## Variant W2



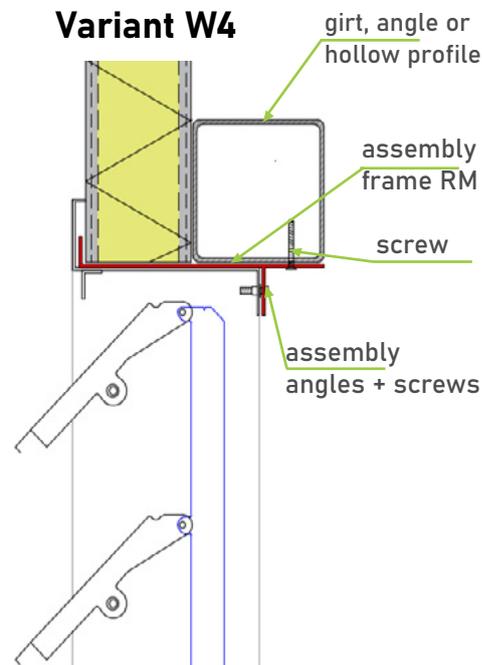
Concealed mounting using assembly flat bars - a recommended solution in case of access from the room side. The flat bars are supplied separately, for connection with the grille directly on the construction site. The length of the flat bars is specified in the order.

## Variant W3



Concealed mounting using assembly angles in the RM frame, enabling multiple mounting and removal of the louvre. This variant is recommended for walls with a layer of insulation.

## Variant W4



Designed for mounting the louvre in a sandwich panel. Due to the construction of the panel (filling cover made of thin sheets 0.5 mm thick), we recommend using an assembly frame that strengthens the mounting and covers the filling (wool/foam), allows for screwing with a girt or hollow profile surrounding the mounting hole. The described mounting variant guarantees solid mounting of the louvre in the sandwich panel, especially in the case of large-sized modules.

figure 4

## TECHNICAL DATA

### NET FREE AREA

Net free area  $A_{ef}[m^2]$  of the louvres with slats set at an angle of  $45^\circ$

$H_{[mm]} \backslash L_{[mm]}$	600	800	1000	1200	1400	1600	1800	2000
650*	0,230	0,307	0,384	0,460	0,537	0,614	0,690	0,767
800	0,283	0,378	0,472	0,566	0,661	0,755	0,850	0,944
1000	0,654	0,472	0,590	0,708	0,826	0,944	1,062	1,180
1200	0,425	0,566	0,708	0,850	0,991	1,133	1,274	1,416
1400	0,496	0,661	0,826	0,991	1,156	1,322	1,487	1,652
1600	0,566	0,755	0,944	1,133	1,322	1,510	1,699	1,888
1800	0,637	0,850	1,062	1,274	1,487	1,699	1,912	2,124
2000	0,708	0,944	1,180	1,416	1,652	1,888	2,124	2,360

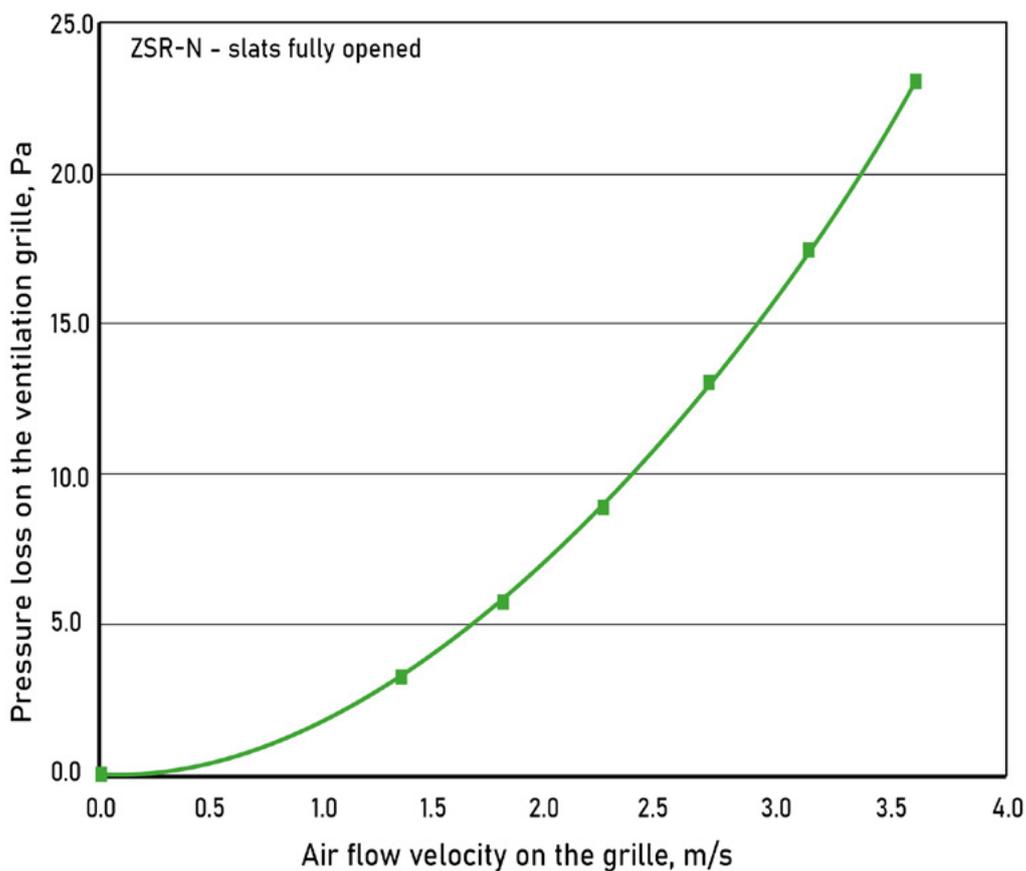
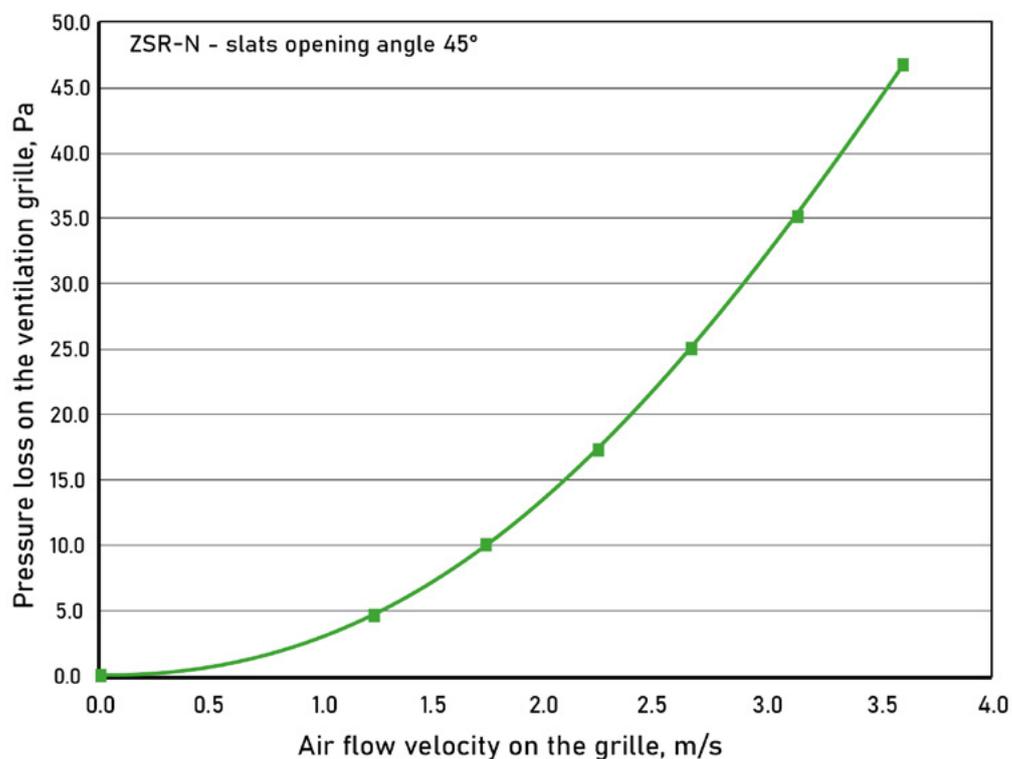
Net free area  $A_{ef}[m^2]$  of the louvres with slats fully open

$H_{[mm]} \backslash L_{[mm]}$	600	800	1000	1200	1400	1600	1800	2000
650*	0,343	0,458	0,572	0,686	0,801	0,915	1,030	1,144
800	0,422	0,563	0,704	0,845	0,986	1,126	1,267	1,408
1000	0,528	0,704	0,880	1,056	1,232	1,408	1,584	1,760
1200	0,634	0,845	1,056	1,267	1,478	1,690	1,901	2,112
1400	0,739	0,986	1,232	1,478	1,725	1,971	2,218	2,464
1600	0,854	1,126	1,408	1,690	1,971	2,253	2,534	2,816
1800	0,950	1,267	1,584	1,901	2,218	2,534	2,851	2,168
2000	1,056	1,408	1,760	2,112	2,464	2,816	3,168	3,520

\*For dimensions  $H < 650$  we produce louvres with a smaller slat spacing, see page 8, or for a request for quotation.

## PRESSURE LOSS

Pressure loss depending on air velocity on the louvre



## HOW TO PLACE AN ORDER

Please place orders using the form below:

**ZSR-N / 'R' / PM' / 'LxH' / 'RAL' / 'M' / 'W' / 'D'**

### ZSR-N product name

#### R adjustment options (figures: 2, 3)

- **R\*** - manual
- **C** - adjusted with a pull cord
- **S** - adjustment using a Belimo rotary actuator (the actuator is not included in the standard equipment of the blinds)

#### PM position of the regulating mechanism

- **T\*** - back of the louvre (figure 2)
- **P** - front of the louvre (figure 3)

#### LxH width x height of mounting hole in mm (figure 1)

#### RAL color according to the RAL palette

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

### 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)

### W assembly variant (figure 4)

- **W1\*** - visible assembly using screws and mounting holes on the frame
- **W2** - concealed assembly using screws and flat bars
- **W3** - concealed assembly using screws and angles in the RM frame
- **W4** - installation in sandwich panel for girt

### D optional equipment (standardly not included with the louvres)

- **D** - a protective net to prevent birds, rodents and larger dirt (e.g. leaves) from entering the installation

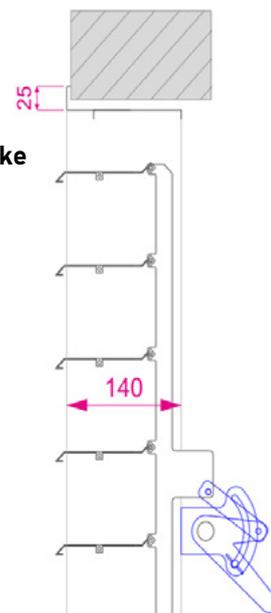
\* - standard parameters that will be used if no information is provided.

## Order example:

ZSR-N/C/T/1350x1000/RAL9016/OC/W3



When the height of the louvre is  $H < 650$ , we make ZSR model with a cross-section as opposite:





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As a Polish manufacturer of ventilation elements, we try to meet and adapt our range to the expectations of architects, designers and investors, even the most demanding ones. We are constantly developing our product range, also in new categories. We improve our activities from the environmental perspective. An additional value for our Customers is the highest level of service, experienced staff always ready to help and an individual approach to each order.

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