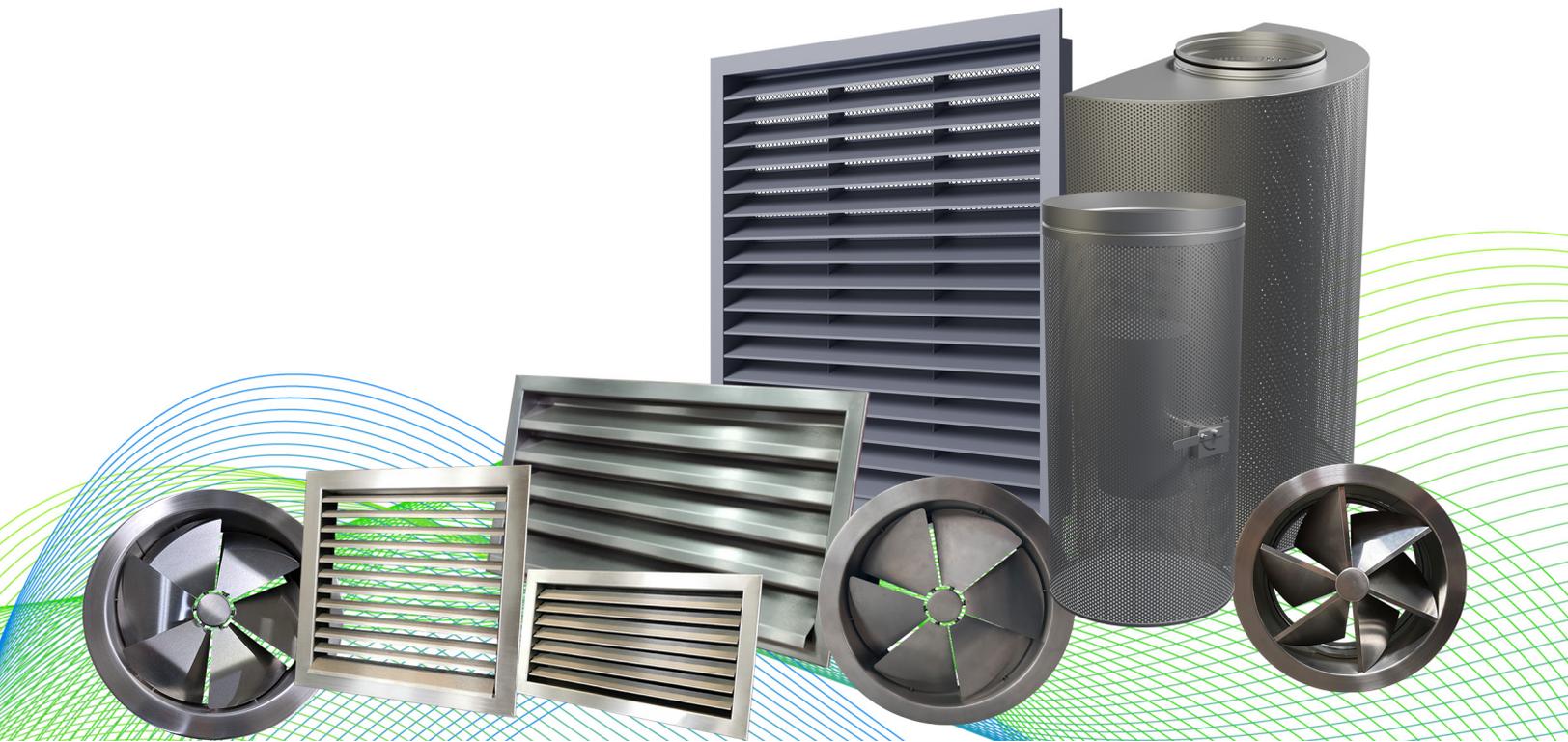




VENTILATION IN BUILDINGS WITH AGGRESSIVE ENVIRONMENTS



Saw-Pol specializes in the production of ventilation and air conditioning system components, with a particular focus on solutions designed for facilities with aggressive environments, such as industrial plants, chemical and pharmaceutical facilities, power plants, wastewater treatment plants, farms, agricultural facilities, and chemical storage warehouses. Ventilation components installed in such facilities are manufactured using corrosion-resistant materials. Saw-Pol products are made from high-quality materials, including stainless steel (1.4301/304 and 1.4404/316L). Thanks to our in-house powder coating facility, we can coat components up to the C5I corrosion resistance class. Our components can also be equipped with high-efficiency filters (e.g., HEPA filters) to ensure the elimination of dust and other contaminants. We have a modern machinery park tailored to produce large-scale industrial components, and our products are custom-made to meet the expectations and visions of even the most demanding designers and architects.



LONG-RANGE AIR DIFFUSERS: NWO-9, NWO-11, NWO-12

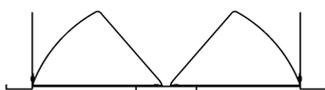
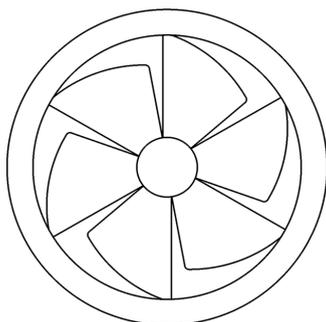


Long-range swirl diffusers are especially crucial in facilities with aggressive environments, as they deliver large volumes of air over long distances, ensuring uniform air distribution throughout the room, particularly in areas where it is most needed. Our diffusers enable even air distribution over significant distances, which is essential in large industrial plants. By reaching distant areas with airflow, they help prevent the formation of zones with stagnant air, which could lead to issues such as dust accumulation, humidity, and condensation.

The NWO-11 diffuser can be equipped with a thermal (wax) actuator, an electric actuator, or manual adjustment, allowing the angle of airflow to be changed for heating or cooling purposes. The NWO-12 model also features adjustable blades that can be individually set for optimal airflow.

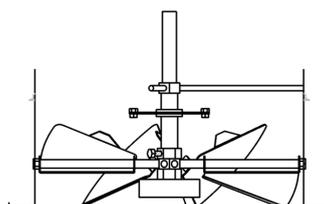
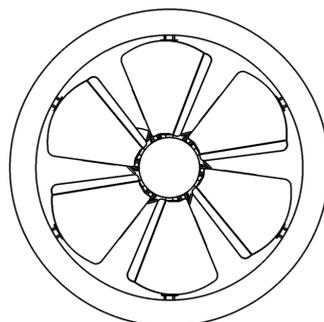
NWO-9

Air diffuser with fixed blades



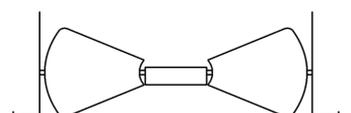
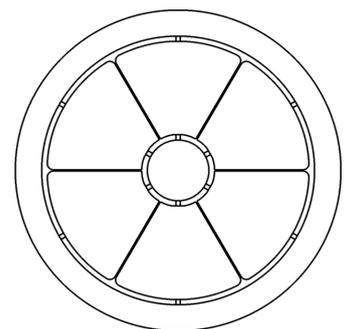
NWO-11

Air diffuser with adjustable blades. All blades move simultaneously. Can be manually controlled, or operated with an electric or thermal (wax-based) actuator.



NWO-12

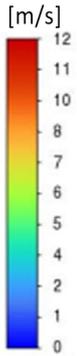
Air diffuser with adjustable blades. Manually adjustable. The angle of each blade is individually set.



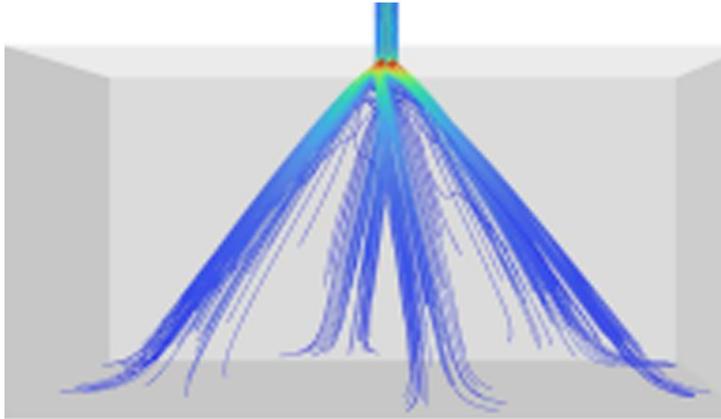


Airflow streamlines for diffuser NWO-11 $\phi 710$, capacity 6500 m³/h Domain in the shape of a rectangular prism 20x20m, H=10m

Velocity Magnitude

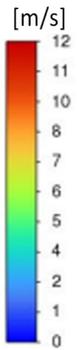


pathlines-1

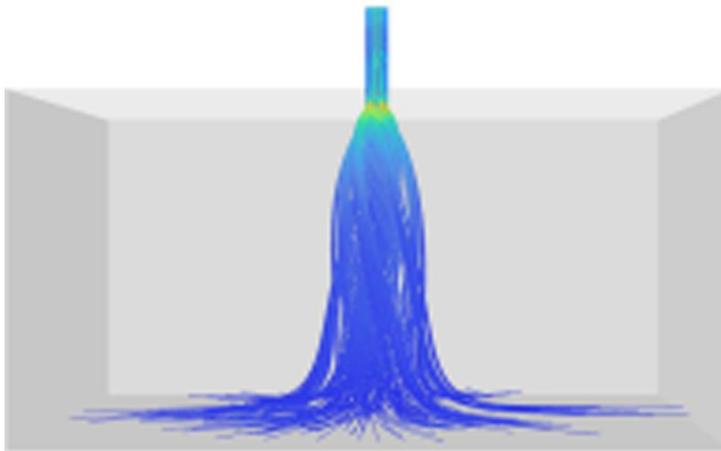


Blade angle of inclination 30°
Heating $\Delta T=10^\circ$

Velocity Magnitude

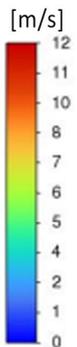


pathlines-1

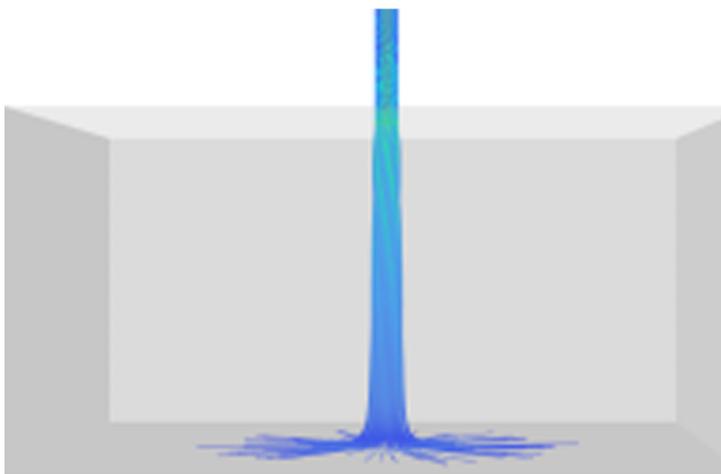


Blade angle of inclination 45°
Heating $\Delta T=10^\circ$

Velocity Magnitude



pathlines-1



Blade angle of inclination 83°
Heating $\Delta T=10^\circ$





DISPLACEMENT AIR DIFFUSERS TYPES: NW, NW-P, NW-N, NW-4P, NWJ



Displacement diffusers are designed to supply large volumes of air at low velocity with a laminar flow pattern, displacing contaminated air towards exhaust openings without causing drafts or mixing fresh air with polluted air, for example, in production processes.

Displacement diffusers effectively remove dust, gases, and fumes without mixing them with fresh air, ensuring efficient extraction of chemical vapors from the working zone.

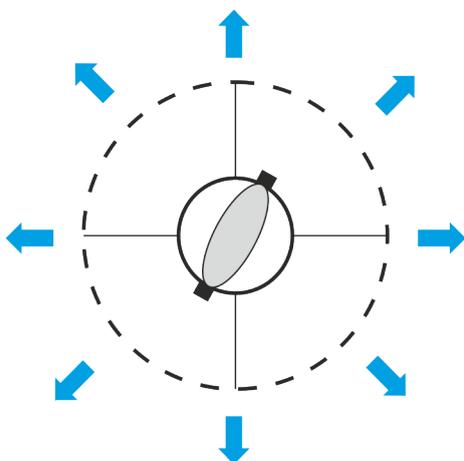
Our product range includes:

- Round displacement diffusers (NW)
- Semi-round displacement diffusers (NW-P)
- Corner displacement diffusers (NW-N)
- Rectangular displacement diffusers (NW-4p)

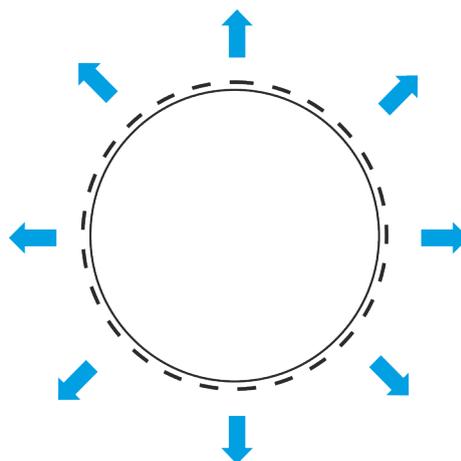
We also produce round single-layer industrial displacement diffusers (types NWJ-1, NWJ-2), which are particularly recommended for use in industrial facilities.

Single-layer displacement air diffusers – Industrial

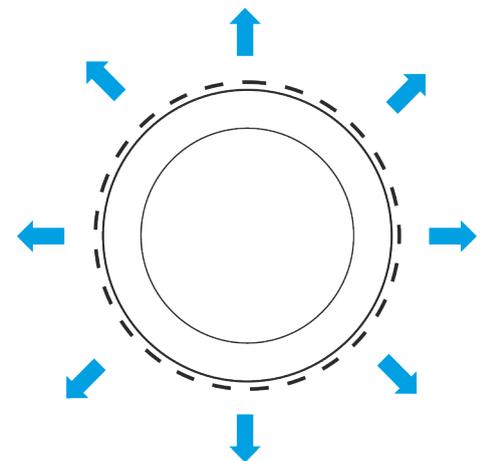
NWJ-P
Air diffuser with
damper



NWJ-1
Air diffuser with air
deflection disk



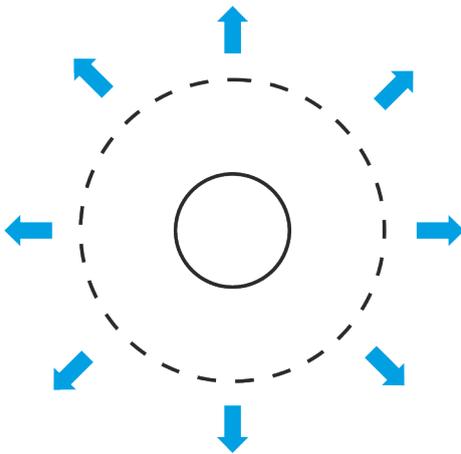
NWJ-2
Air diffuser with air
deflection rings



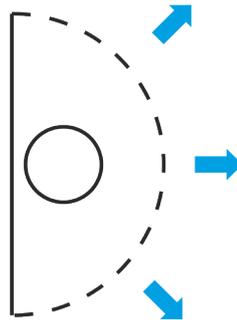


Double-layer displacement air diffusers

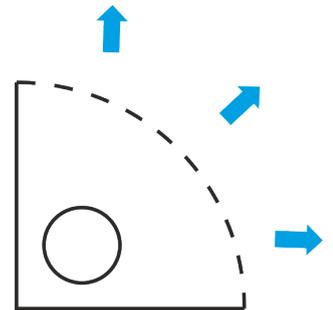
NW
Round air
diffuser



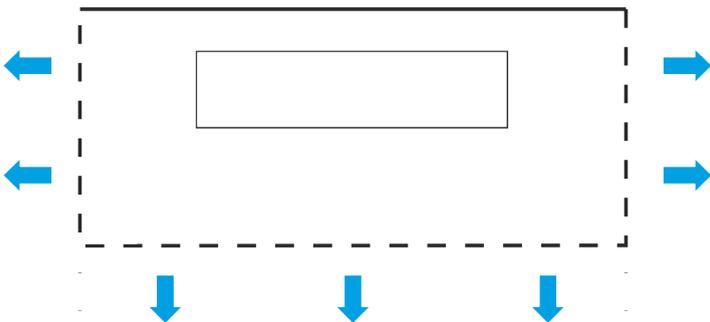
NW-P
Half-round air
diffuser



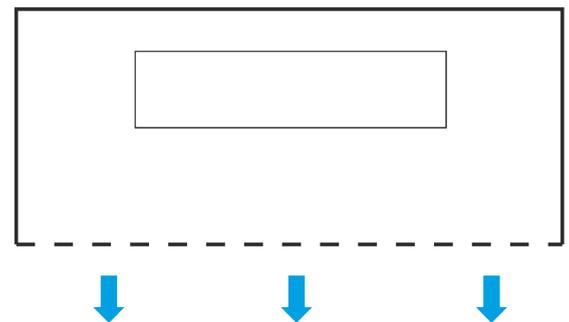
NW-N
Corner air diffuser



NW-4P
Rectangular
air diffuser

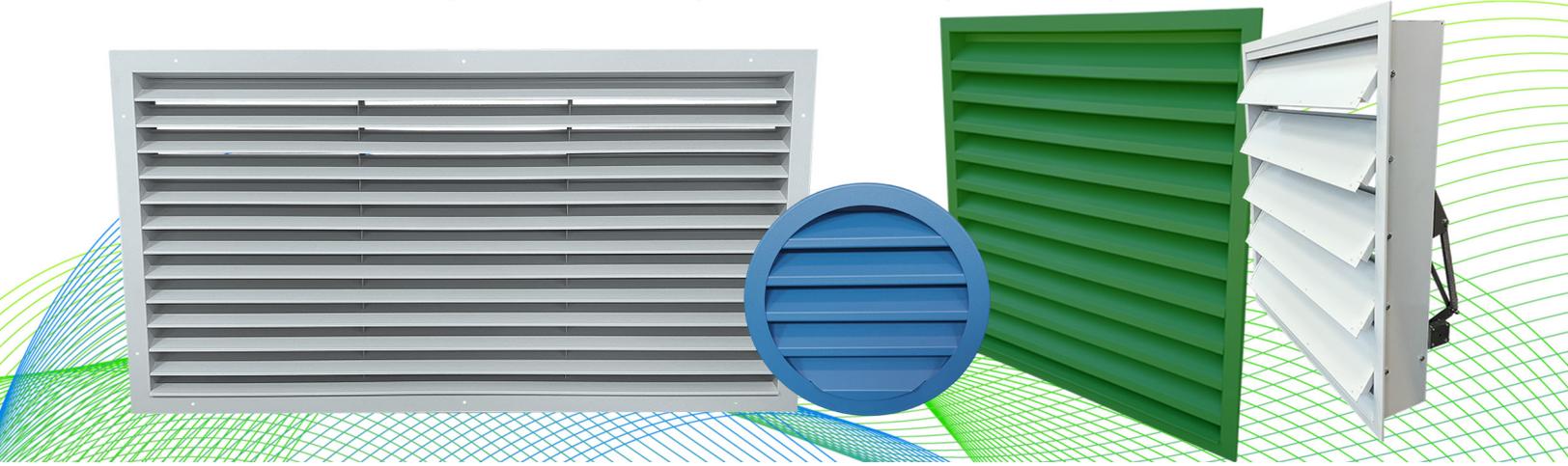


NW-4P
Rectangular
air diffuser





EXTERNAL GRILLES, AIR INTAKES, AND EXHAUST LOUVERS TYPES CzS-A, CzS-A-HF, CzS-A-HV, Czs-B, ZSR-N



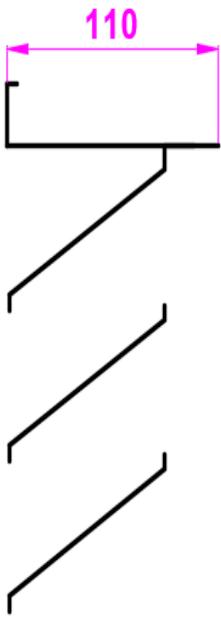
Air intakes and external louvers play a key role in industrial ventilation systems, ensuring proper fresh air intake and protecting the system from contaminants and damage. In facilities with aggressive environments (e.g., high humidity, presence of chemicals, or dust), air intakes must be properly designed to ensure durability, corrosion resistance, and operational efficiency.

Our components are built from robust materials such as stainless steel, galvanized steel, or aluminum, making them resistant to environmental factors such as rain, snow, wind, or UV radiation. In facilities with aggressive environments, where there is a high risk of corrosion, the construction of air intakes must also prevent the ingress of rainwater into the ventilation system. For this purpose, Saw-Pol incorporates special drip trays to direct water outside. We offer external components in various aesthetic and color options, allowing them to blend with the building's facade. For many production processes, it is crucial that the intake air is free from contaminants such as dust, dirt, or insects, which is why our air intakes and external louvers can be equipped with appropriate filters or protective screens.

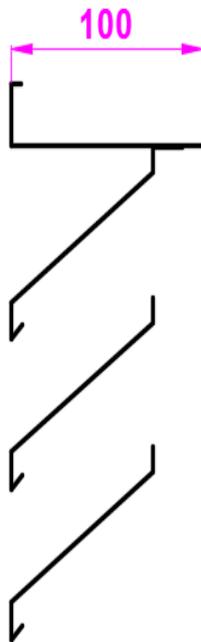
Our standard product, the CzS-A wall-mounted air intake, is available in different versions to achieve the desired parameters. These range from standard lamella spacing to high-flow intakes, such as the CzS-A-HV model with an optical free area of 75% and a net free area of 60%, to the highly popular CzS-A-HF model, which features an optical free area of 90% and a net free area of 75%.



CzS-A-HF



CzS-A-HV



CzS-A
Blade spacing 55mm



CzS-A
Blade spacing 65mm



Net free area
75%

60%

50%

53%

Optical transparency
90%

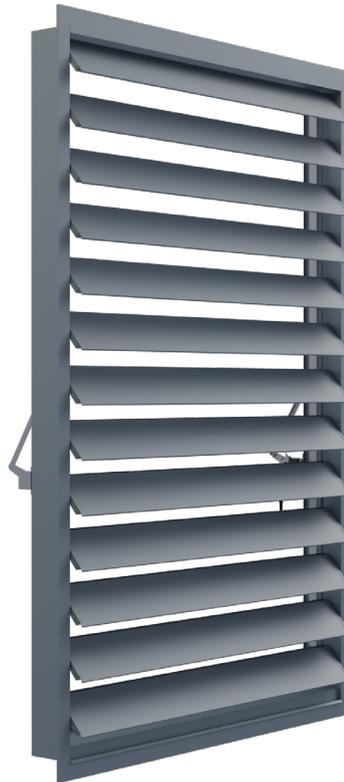
75%

72%

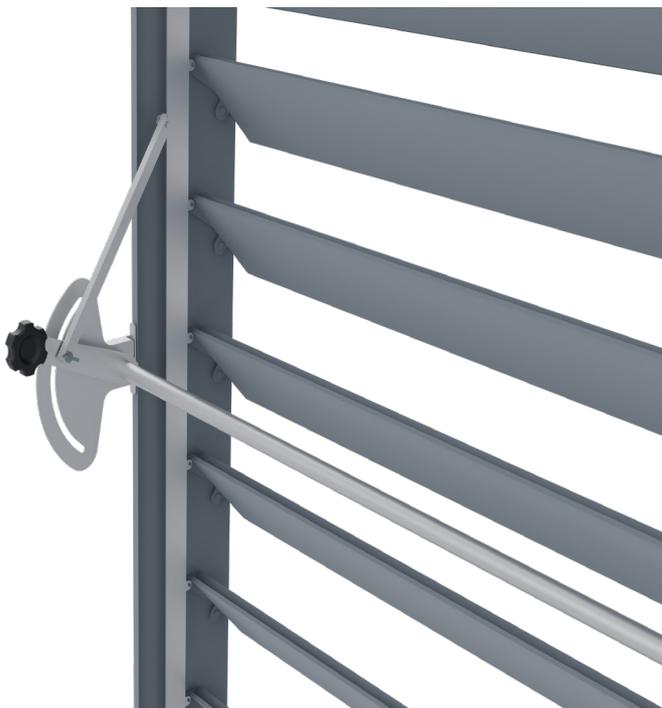
76%



Saw-Pol also offers louvers with adjustable blades, which allow precise control over airflow, protection against environmental factors, and improved energy efficiency by closing them in unfavorable weather conditions. These louvers can be operated manually (type ZSR-N-R), by cable (type ZSR-N-C), or electrically with an actuator (type ZSR-N-S). Explosion-proof actuators are used in facilities with explosion hazards.



Manual control



Control with actuator



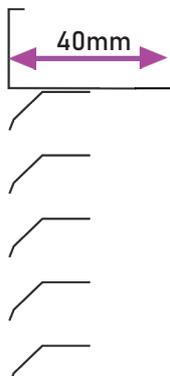


VENTILATION GRILLES: KPZ, KSL, ALWP-1, KFC, ST-W, ST-S

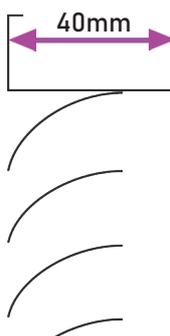


Ventilation grilles are essential components of ventilation and air conditioning systems, responsible for proper air supply and exhaust in rooms. Saw-Pol's grilles are easy to install and remove, facilitating regular cleaning, which is crucial in industrial facilities where dust and other contaminants are common. Our product range includes grilles with fixed lamellae (e.g., KPZ, KSL, ALWP-1, KFC) and grilles with adjustable louvers (ST-W), which allow control over airflow direction and intensity. The key advantages of our grilles, particularly those with fixed louvers, are their sturdy construction and durability, making them suitable for areas prone to mechanical damage. In agricultural and storage facilities, it is necessary to protect the ventilation system from rodents, so our grilles can be equipped with protective screens made of corrosion-resistant material. Our components can also be fitted with high-efficiency filters (e.g., HEPA filters) to ensure the removal of dust or harmful gases.

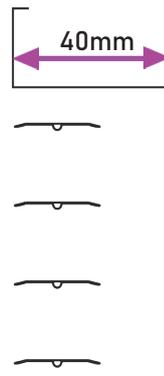
KPZ
fixed blades



KSL
fixed blades



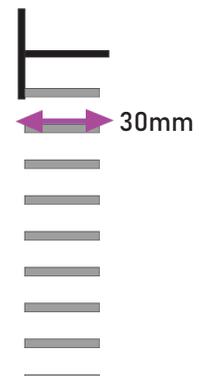
ST-W
adjustable blades



KFC
fixed blades



ALWP-1t
Fixed blades with
T-profile frame





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office@sawpol.pl (EN/DE)



Office: Góra Św. Małgorzaty 31a

Production und warehouse: Góra św. Małgorzaty 25a

99-122 Góra Św. Małgorzaty, Poland

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