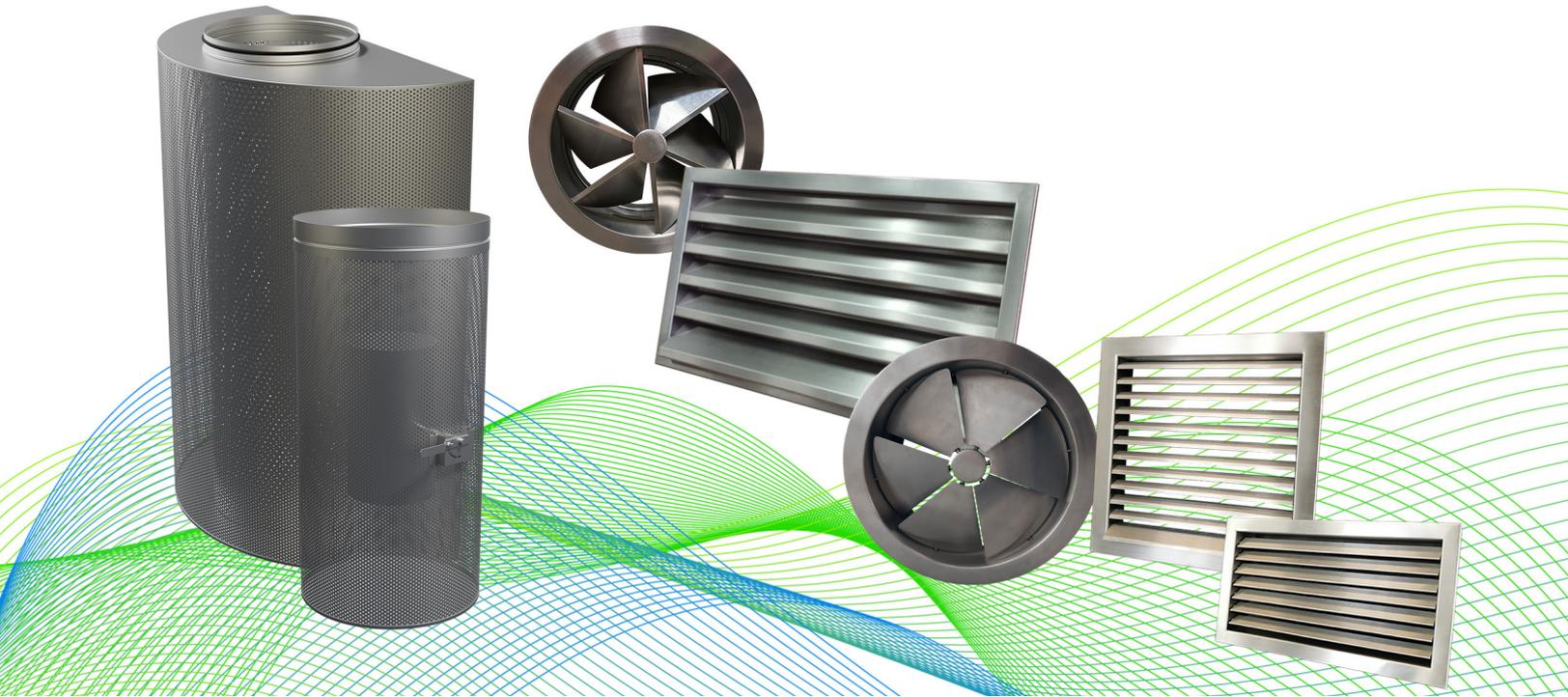




VENTILATION SYSTEM IN FOOD INDUSTRY FACILITIES



The ventilation system in food industry facilities must be designed with consideration of specific production processes and strict hygiene requirements. Saw-Pol specializes in manufacturing ventilation and air-conditioning system components, with a particular focus on solutions for food industry facilities, including diffusers, air intakes, louvers, grilles, and displacement diffusers. Products for such environments must meet stringent hygiene standards; therefore, they are made from corrosion-resistant materials, and their design takes into account the need for frequent cleaning and disinfection. Saw-Pol's ventilation products are made from high-quality materials, such as stainless steel (1.4301/304 and 1.4404/316L).

With our in-house powder coating facility, we offer coating options suitable for corrosive environments up to C5i class. Our components can be equipped with high-efficiency filters (e.g., HEPA filters), ensuring the removal of contaminants such as dust, pollen, and smog—particularly crucial in high-cleanliness areas. We have a modern machinery park capable of producing large, industrial-sized components, allowing us to customize products to fit various mounting openings. Our components are made to order, enabling us 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 air diffusers are ideal for food industry facilities, where maintaining proper air quality, temperature, and humidity is critical. Our diffusers ensure even air distribution over long distances, which is essential in large industrial halls, warehouses, and cold storage rooms. The extended range of air distribution prevents areas with poor air circulation, thereby mitigating issues with humidity and condensation.

These diffusers maintain stable climate conditions throughout the facility, which is vital for food storage and processing. The NWO-11 diffuser can be equipped with a thermal (wax) actuator, electric actuator, or manual adjustment for changing the air discharge angle, making it suitable for both heating and cooling. The NWO-12 model also features adjustable louvers that can be manually set individually.

NWO-9

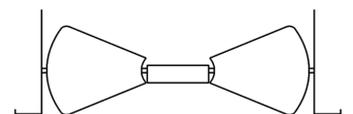
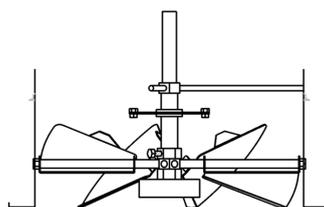
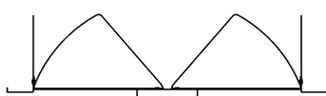
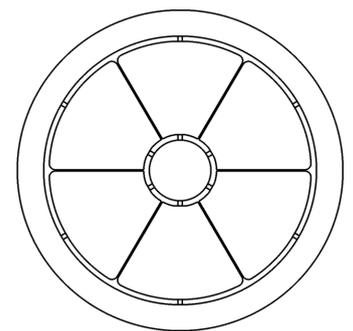
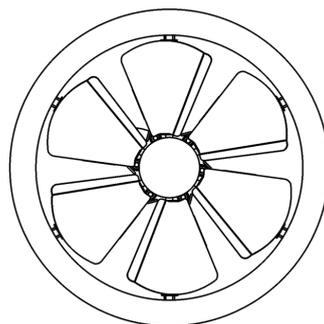
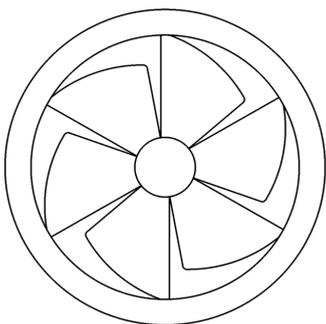
Air diffuser with fixed blades

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

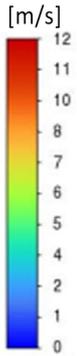
Air diffuser with adjustable blades. Manually adjustable. The angle of each blade is individually set.



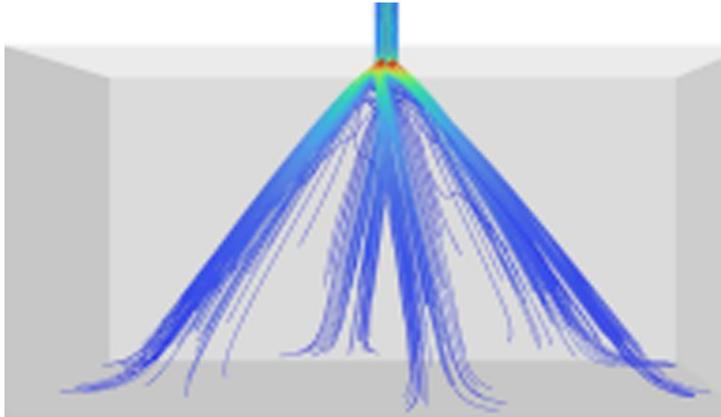


Airflow streamlines for diffuser NWO-11 $\phi 710$, capacity 6500 m³/h Domain in the shape of a rectangular prism 20x20m, H=10m

Velocity Magnitude

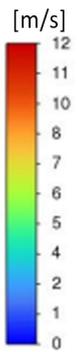


pathlines-1

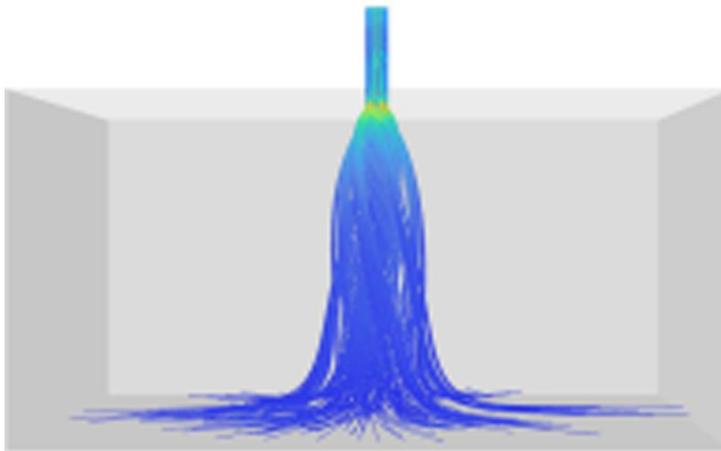


Blade angle of inclination 30°
Heating $\Delta T=10^\circ$

Velocity Magnitude

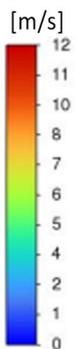


pathlines-1

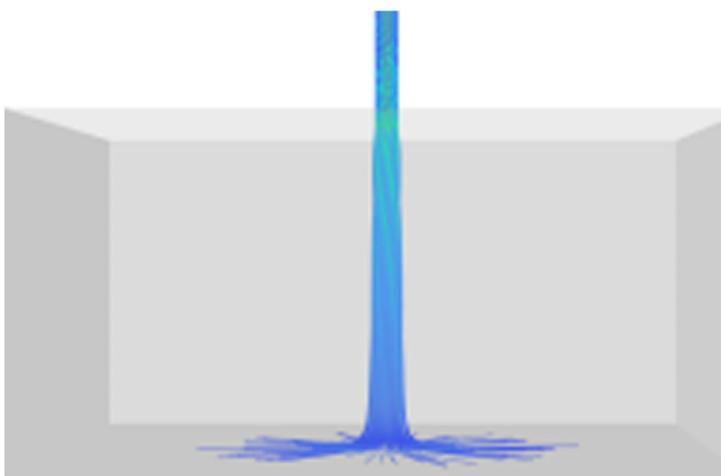


Blade angle of inclination 45°
Heating $\Delta T=10^\circ$

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 air diffusers in food industry facilities provide laminar, low-turbulence air streams, ensuring proper air quality, hygienic conditions, and thermal comfort in production and storage areas. Due to the specific technological processes in the food industry—high humidity, significant heat gains, dust, and stringent sanitary requirements—Saw-Pol offers a variety of technological solutions to meet these challenges.

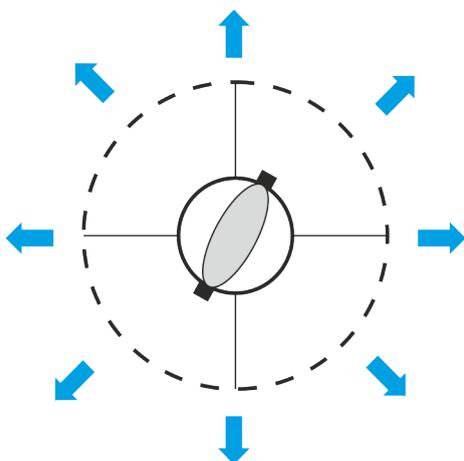
Our range includes:

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

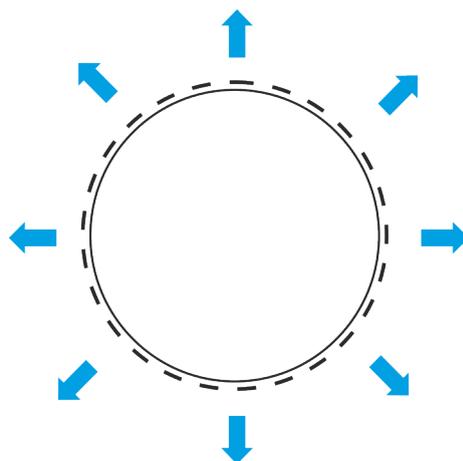
We also produce single-shell round displacement diffusers for industrial applications (NWJ-1, NWJ-2) with suspension options, avoiding interference with technological lines or communication routes.

Single-layer displacement air diffusers – Industrial

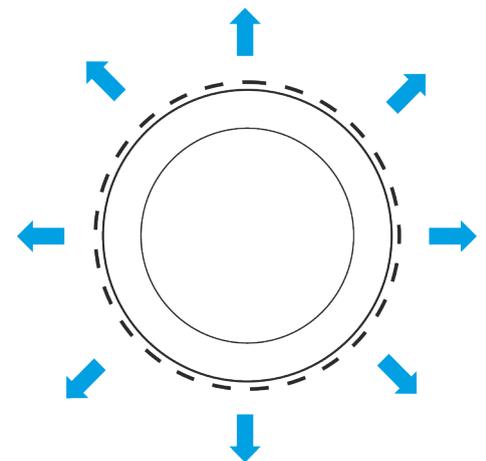
NWJ-P
Air diffuser with
damper



NWJ-1
Air diffuser with air
deflection disk



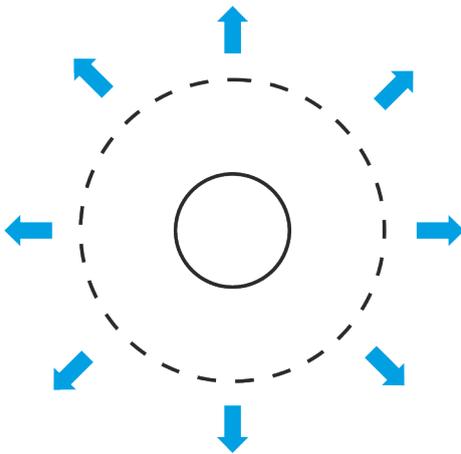
NWJ-2
Air diffuser with air
deflection rings



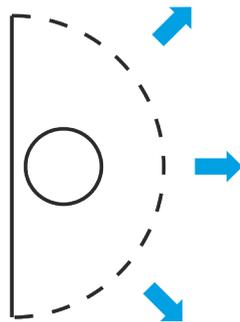


Double-layer displacement air diffusers

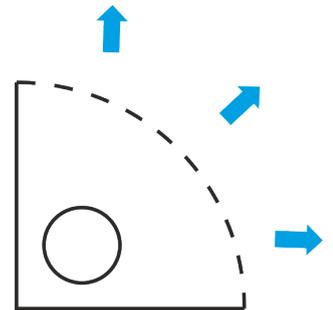
NW
Round air
diffuser



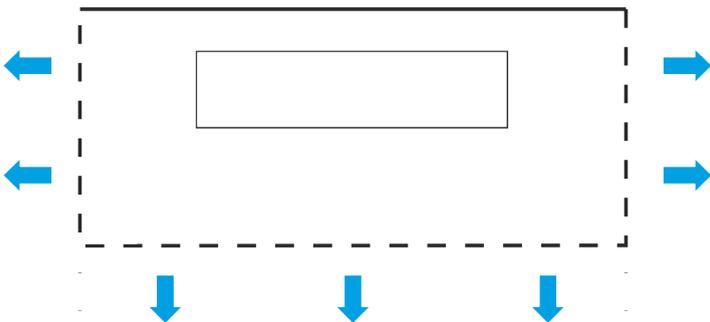
NW-P
Half-round air
diffuser



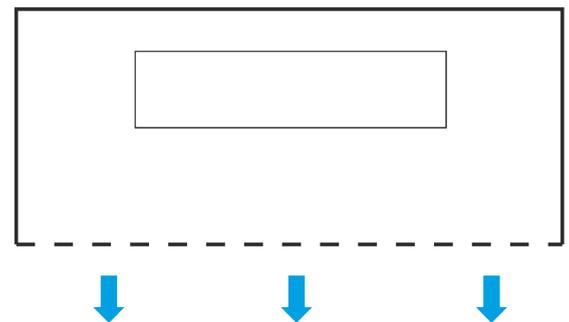
NW-N
Corner air diffuser



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 crucial role in industrial ventilation systems by ensuring the proper supply of fresh air while protecting the system from contaminants and damage. The advantages of our components include durable construction from high-quality materials such as stainless steel, galvanized steel, and aluminum, making them resistant to harsh weather conditions, including rain, snow, wind, and UV radiation.

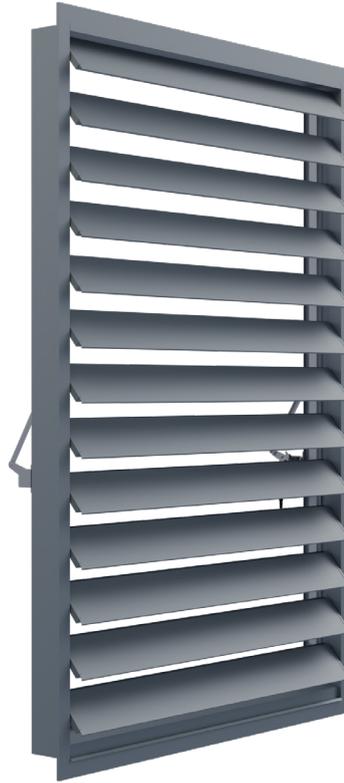
In food industry facilities, air intake designs must often prevent rainwater from entering the ventilation system. To achieve this, Saw-Pol uses special drip edges that channel water outside. Our external components are available in various mounting and color options, ensuring they match the building façade.

Given the importance of clean air in food industry environments, our air intakes and external louvers can be equipped with filters or protective meshes to prevent contaminants like dust, particulates, and insects from entering the ventilation system.

The CzS-A wall air intake is our standard product, offered in several variants to achieve desired performance. These range from intakes with standard blade spacing to high-flow variants like CzS-A-HV, with an optical clearance of 75% and a net free area of 60%, and the highly popular CzS-A-HF, which offers an optical clearance 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
110	100	55	55
Net free area 75%	60%	50%	53%
Optical transparency 90%	75%	72%	76%

Saw-Pol offers adjustable louvers with different blade angles, providing precise airflow control, weather protection, and improved energy efficiency. These louvers can be manually operated (ZSR-N-R), cable-operated (ZSR-N-C), or electrically controlled with an actuator (ZSR-N-S).



Manual control



Control with actuator





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



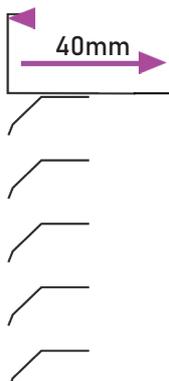
Ventilation grilles are essential components of ventilation and air-conditioning systems, responsible for proper air supply and exhaust in rooms. Saw-Pol's products are designed for easy installation and removal, facilitating regular cleaning, which is crucial for maintaining high hygiene standards.

Our range includes grilles with various aerodynamic properties:

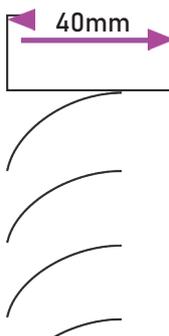
- Grilles with fixed louvers (e.g., KPZ, KSL ALWP-1, KFC)
- Ventilation grilles with adjustable louvers (e.g., ST-W)

Grilles with fixed louvers are particularly robust, making them suitable for areas prone to mechanical damage. In food industry environments, air cleanliness is paramount, so our ventilation grilles can be equipped with filters to limit the ingress of dust and microorganisms into indoor spaces.

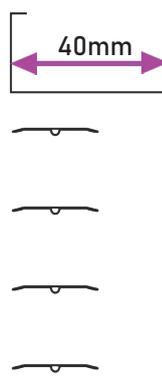
KPZ
fixed blades



KSL
fixed blades



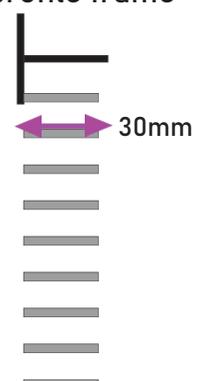
ST-W
adjustable blades



KFC
fixed blades



ALWP-1t
Fixed blades with
T-profile frame





SAW-POL

Trust Our 20+ Years of Experience.

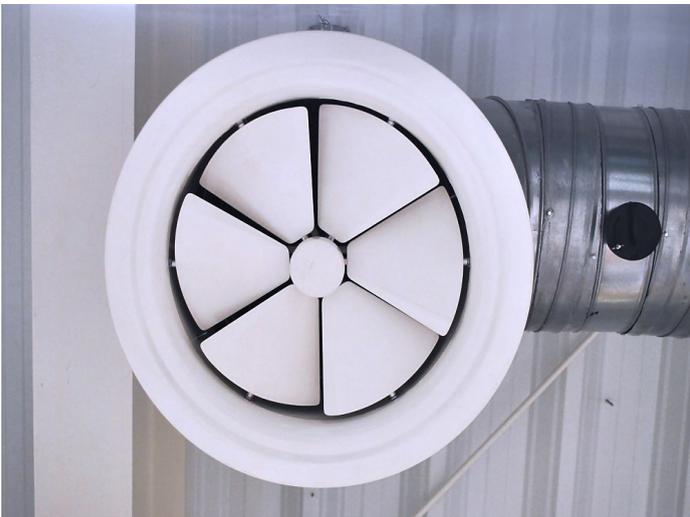
With over 20 years of experience, Saw-Pol is a trusted partner in delivering high-quality ventilation solutions tailored to the specific needs of the food industry.



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