

A photograph of a modern commercial kitchen. In the foreground, there is a stainless steel countertop with a built-in sink and a large, vertical stainless steel chimney hood. To the left, there are stacks of colorful plates and a stainless steel pot. In the background, there are various kitchen fixtures, including a range hood with a circular vent, and several potted plants. The lighting is bright, with a warm glow from a pendant light fixture. A large, dark blue diagonal shape is overlaid on the right side of the image, containing the text.

Air handling solutions for commercial kitchens

Maximum flexibility – Tailor-made ventilation systems

Your strong partner in ventilation systems for commercial kitchen

Front cooking with a grill or wood-fired pizza oven places high demands on kitchen ventilation. But even when guests cannot see the kitchen from their table, they expect that it remains imperceptible in the restaurant — neither through heat and humidity nor through smell.

Air from commercial kitchens must be continuously extracted and replaced with hygienically fresh supply air, in accordance with occupational safety regulations. The kitchen workspace is subject to numerous standards and guidelines concerning energy efficiency and fire protection.

The designer of a commercial kitchen bears significant responsibility. In the event of damage — whether due to fire or violations of building codes and the national construction

legislation— it is typically the planner who is held accountable, not the operator.

Always at your side with expertise to find the ideal ventilation solution for your kitchen and dining area: WOLF, your HVAC equipment specialist for all professional kitchen applications. Our goal is to optimize temperature, humidity, and air circulation to harmonize occupational safety, energy efficiency, comfort, and maximum security.



WOLF

Occupational Safety, Hygiene and Heat Recovery.

The technical equipment of HVAC systems for kitchens and dining areas primarily serves occupational safety and hygiene. WOLF ventilation units are also equipped with efficient heat recovery systems in accordance with DIN EN 16798 Part 1 (air volume flow) and Part 3 (devices).

Heat recovery is carried out in accordance with VDI 6022 Sheet 1 "Indoor Air Technology, Indoor Air Quality – Hygiene Requirements for HVAC Systems and Devices" (2018) and VDI 2052 Sheet 1, either via a plate heat exchanger or an H-VKS system. Up to 90 percent of the heat can be recovered by a central ventilation unit specially designed for kitchen operations.

WOLF offers tailor-made kitchen climate solutions in terms of design, size, and functionality. The HVAC units ensure hygienic and safe operation, provide efficient odor and grease control, and maintain the desired temperature range in the cooking and dishwashing areas as needed.

The modern, modular design of WOLF HVAC units with the WOLF Easy-Lifting system ensures particularly easy installation and assembly. For high user comfort, WOLF kitchen ventilation units are equipped with central control systems.



Heat Recovery Solutions

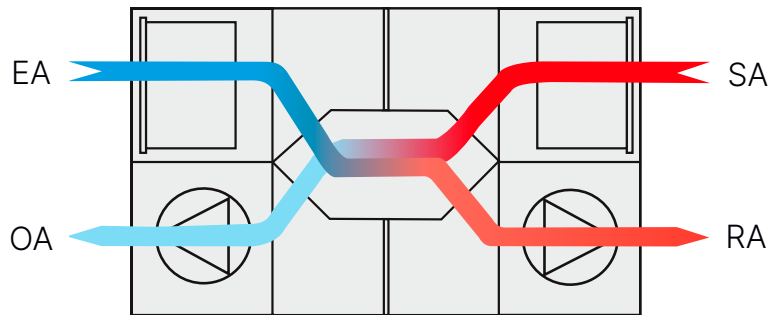
WOLF kitchen ventilation units can recover heat in different ways.

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Cross-counterflow plate heat exchanger

This type is used for high air volumes when the goal is to minimize investment costs. Unlike a simple crossflow heat exchanger, the airflow of supply and exhaust air runs not only crosswise but also counter to each other.

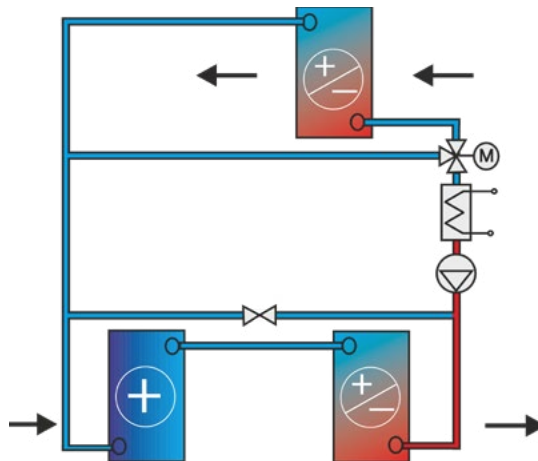
Heat is transferred on all four sides, resulting in significantly higher efficiency. Return heat ratios between 80 and 90% are achieved.



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High-performance circuit system (HKVS)

In this system, a separate brine-based circuit is placed between the two plate heat exchangers of the supply and exhaust air. The warm exhaust air flows through the registers of the exhaust system and transfers its heat to the brine circuit. The brine then transports the heat to the second heat exchanger in the supply air unit, where it is transferred to the kitchen supply air.



To handle grease-laden aerosols, the fin spacing within the heat exchangers is relatively wide at 3.5 mm. Despite this, return heat ratios of up to 70% are achieved.

Highly Efficient Components

WOLF kitchen ventilation units operate on demand. Humidity and VOC sensors automatically detect when a kitchen is in operation and switch to the optimal operating mode. These units are fully compliant with regulations:

Fans with encapsulated motor

According to VDI 2052, fans must be controllable in steps or continuously. The Model Ventilation Systems Directive (M-LüAR) requires that fans be easily accessible, controllable, and cleanable. The drive motors must be located outside the exhaust airflow.

WOLF supplies fans with encapsulated motors, available as EC motors or with free-running fans including frequency converters — all positioned outside the exhaust airflow. These fans ensure high energy efficiency even in partial load operation. Continuous speed control allows precise air volume adjustment, compact design, and low noise emissions.

Climate split heat pump

To ensure occupational safety, air temperature in commercial kitchens must be at least 18 °C and should not exceed 26 °C during normal operation. Seasonal exceedances are allowed under the Technical Rules for Workplaces (ASR A3.5).

To maintain thermal comfort, VDI 2052 defines three limits: kitchen temperatures max. 32 °C, relative humidity max. 30%, and absolute humidity max. 16.5 g/kg.

To consistently meet these values year-round, supply air can be tempered using a decentralized reversible heat pump (direct evaporator).



Maximum Comfort for Guests and Employees

When roasting and dishwashing can be done without steam and vapors escaping the ventilation ceiling area — and at pleasant room temperatures — both your guests and staff benefit from maximum comfort.

When roasting and dishwashing can take place without steam or vapors escaping the ventilation ceiling area — and when room temperatures remain pleasantly comfortable — both your guests and your staff enjoy the benefits of maximum comfort and well-being.

In a dining area that is pleasantly tempered and efficiently ventilated, the hustle and bustle of the kitchen stays out of sight and mind. At the same time, the kitchen environment remains healthy and safe, with full compliance to current occupational safety standards, hygiene protocols, and fire protection regulations.

Thanks to energy-efficient heat recovery systems, operating costs are significantly and sustainably reduced — providing a solid and future-proof foundation for your economic success.



WOLF is one of the leading international suppliers of innovative solutions for indoor climate control. Here's what matters most to our customers:



German Know-how

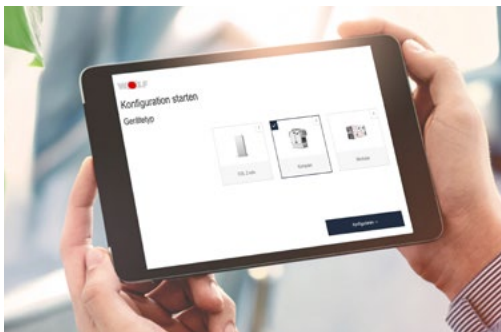
We develop our products at our headquarters in Mainburg, Bavaria - and manufacture them with the highest precision and vertical integration. WOLF Campus training programme offers you in-depth expert knowledge on professional installation, maintenance, etc. with seminars and in-house training courses.



Partnership at eye level

A nationwide and international network of personal contacts at our locations ensures fast and uncomplicated support. The WOLF Service Team provides you with expert advice and support during commissioning and maintenance.

A network of wholesale partners facilitates the procurement of spare parts.



Simply powerful solutions

WOLF ventilation systems combine efficiency, durability and ease of operation.

The wide-ranging air handling product portfolio is complemented by digital services that save time, money and CO₂.



For an intact environment and diversity

We consciously prioritise durability and sustainability in our design and choice of materials. At WOLF, different generations and nations work hand in hand and benefit from each other.

WOLF Air handling

A suitable solution for every demand



Hotel and accommodation



Pools and spa



Production and industrial buildings



Healthcare



Agriculture



Experience, culture and sports buildings



Office and administration buildings



Logistics and warehouses



Retail stores



Transportation and traffic



Educational institutions



Data centers

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Dennis Rösing
Expert in Commercial Kitchens