KemJet

Room ventilation with cleanable filters

Circulation of the filtered air by means of nozzles

Applications

- Workshops where local exhaust ventilation is not possible
- To complement local exhaust ventilation systems
- Environments with changing sources of smoke and dust
- For large work pieces or where work positions are well separated

Properties

- Automatic filter cleaning, pressure-controlled
- Control via touch screen
- KemTex® ePTFE filter cartridges
- Dust collection container with pneumatic lifting device
- High-performance nozzles adjustable by 30 degrees

Benefits

- Cleaned air distribution adaptable to the location of the plant as high-performance nozzles are adjustable by 30 degrees
- Contamination-free dust collection due to compressed air fixation of dust collection containers
- Uninterrupted continuous operation due to automatic differential pressure-controlled filter cleaning
- Various outlet heights possible by using different pipe lengths
- Little noise emission due to a low noise level
- Heating costs minimised by air recirculation
- Quick and simple to set up
- Convenient operation due to intelligent control via touch screen with diagnostic system

Accessories

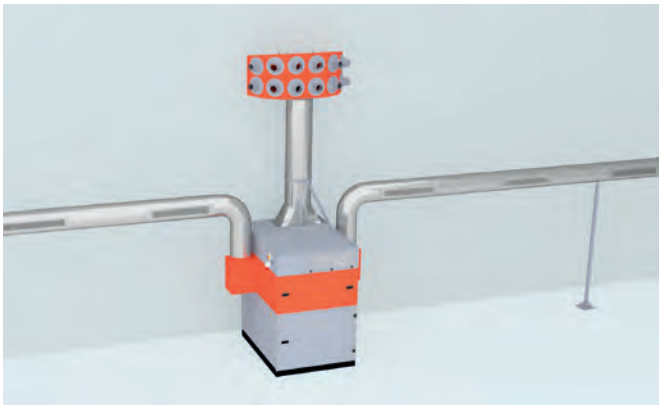
- Automatic dust disposal - DustEvac
- External On/Off
- AirWatch
- Stanchion support
- Wall-mounting kit

▶Video

W3	IFA-certified welding smoke filter unit	W3

KemJet 6000

KemJet general ventilation system with maximum extraction capacity of 6,000 m³/h. An installation of this size has a total filter area of 60 m² and ducts for the extraction over a length of 1 x 6,000 mm. The blow-out angle of the 10 individual nozzles can be individually adjusted by 30 degrees each and the cleaned air is returned up to 30 metres into the room.



KemJet 9000

KemJet general ventilation system with maximum extraction capacity of 9,000 m³/h. An installation of this size has a total filter area of 90 m² and ducts for the extraction over a length of 2 x 6,000 mm. The blow-out angle of the 12 individual nozzles can be individually adjusted by 30 degrees each and the cleaned air is returned up to 38 metres into the room.

KemJet 13000

KemJet general ventilation system with maximum extraction capacity of 13,000 m³/h. An installation of this size has a total filter area of 120 m² and ducts for the extraction over a length of 2 x 9,000 mm. The blow-out angle of the 10 individual nozzles can be individually adjusted by 30 degrees each and the cleaned air is returned up to 45 metres into the room.

Order Data

Art. No.	Extraction capacity	Filter surface total	Length of extraction duct	Nozzles	Air nozzles, range
99 880 0407	6000 m³/h	60 m²	6000 mm	10 x 200 mm	approx. 30 m
99 880 0401	9000 m³/h	90 m²	2 x 6.000 mm	12 x 200 mm	approx. 38 m
99 880 0414	13000 m³/h	120 m²	2 x 9.000 mm	10 x 250 mm	approx. 45 m

With KemJet to "Clean production"

Source extraction systems were already in use at Tenwinkel GmbH & Co. KG but, against the background of increasingly stringent workplace limits, occupational health and safety in production was given even higher priority. The company no longer looked just at individual workplaces but focussed on the overall indoor air quality.

After all, keeping the production air clean has always played an important role for the manufacturer of technical concrete parts and so, together with KEMPER, the company developed a new general ventilation system on the basis of an independent energy concept. As a result, Tenwinkel decided to invest in the KemJet general ventilation system.

Optimum addition to the local exhaust ventilation
Complementing the mobile source extraction units already present, KEMPER integrated the general ventilation system in a central position on a gallery above the welding stations. From there, a ducting system runs along the hall wall. Open points in the ducting system continuously draw in the contaminated air. In this way, thanks to their special thermal properties, the rising hazardous substances enter the filter system.

After the ultra-fine dust has been separated by the high-quality filter media, KemJet guides the cleaned air back into the hall, hence ensuring a constant exchange of air. Tenwinkel achieves large energy cost savings by returning already heated air to the hall.

The high-performance nozzles are each adjustable by 30 degrees. In this way, Tenwinkel can influence the distribution of fresh air itself and deliberately direct clean air into specific areas of the hall. The nozzles guide the cleaned air above the intake pipes back into the hall – and this with an enormous reach. The automatic, differential pressure-controlled filter cleaning system enables uninterrupted continuous operation.

Effective protection for all employees
Because Tenwinkel already relied on source extraction systems at the welding stations before installing KemJet, the manufacturer is following the recommendation for an overall view of the hall air. KemJet acts in a complementary way, protecting not only the welders, but all production employees.

"The quality of the indoor air has improved significantly. The effect is visible to all our employees. We are very pleased with the result."

Markus Tenwinkel
Managing Director

Concept creation individually tailored to your needs

Whether displacement or mixed ventilation system: A general ventilation system for welding fumes is more than just a mere supplement to local extraction systems. It also ensures occupational safety for surrounding workplaces.

The following basic rule applies to occupational health and safety during welding: The more dense the welding fumes are collected at their source, the greater the chance of extracting all hazardous particles from the air in the workshop. Therefore, the relevant regulations state that pollutants must be collected directly at the point of origin.

In practice, however, the situation is often different, as each production workshop and welding task is different. KEMPER therefore offers ventilation solutions as a supplement to spot extraction or personal occupational safety, using the mixed ventilation principle, displacement ventilation - also known as stratified ventilation - or concepts with a combination of both. We analyse your initial situation and develop a hall ventilation concept that is suitable for your production environment, taking into account your budget, energy efficiency and the best possible factory air quality.

Stratification ventilation / displacement ventilation
Via inlet pipes at a height of four to six metres, the rising air containing pollutants is collected. Displacement outlet pipes close to the floor return the filtered air back into the room with low impulse. The filtered air displaces the welding smoke and supports its thermal flow. The pipes are connected to the central extraction and filter system.

Mixed ventilation /Push-Pull
The Push-Pull room ventilation system is an opposite outlet and inlet pipe system at a height of about four to six metres. The pipes are connected to a central extraction system. The entire hall air is mixed in this air cleaning principle.