



CASE STUDY

REMOVAL OF VEHICLE EXHAUST FUMES AT FIRE STATIONS



THE CHALLENGE

The fire brigade of Kassel (Germany) was looking for three new vehicle exhaust extraction systems. Systems that would remove exhaust fumes very effectively, protecting the fire fighters from hazardous diesel exhaust fumes. Other fire stations within the Kassel region were already provided with extraction systems.

The fire brigade of Kassel choose for a fully automatic extraction system of Plymovent. One of the requirements was that the extraction system should be compatible and should connect to all emergency vehicles of the fire brigades. The vehicle exhaust extraction systems should feature up-to-date technology and comply with the latest restrictions. Besides setting up three entirely new systems, the other six existing extraction systems had to be upgraded. Whilst upgrading the existing controls, ducting and fans were used again to minimise additional costs for the city of Kassel.

The city of Kassel has two professional (paid) fire brigades and seven voluntarily fire brigades spread over the Kassel region. Each team has its own fire station. The city of Kassel offers organised fire protection and has professional fire fighters since the 16th century. Back then, inhabitants of the city were educated to be fire fighters.



TESTIMONIAL

“We selected the vehicle exhaust extraction systems of Plymovent because these extraction systems can be connected to all emergency vehicles at the various fire stations of Kassel by the pneumatic Grabber® nozzle. This allows a vehicle exchange between the different fire stations at all times. Which is extremely important for our fire brigade. Furthermore, the extraction systems are easy to use and offer additional safety with the adjustable safety coupling.”

» The extraction systems of Plymovent are easy to use and offer additional safety, protecting our fire fighters. «

THE SOLUTION

In order to provide a cost effective system to ensure the health of the fire fighters and other people working at the fire brigades of Kassel, Plymovent installed two types of fully automatic disconnect systems.

1. The SBT (Sliding Balancer Track) system for vehicle driving into the station backwards.

2. And the STR (Straight Rail) system for an area where two vehicles can be parked in the same bay.

The automatic SBT/STR exhaust extraction systems are installed in line with the vehicle on the tailpipe side. The STR system distributes the exhaust gasses to the installed ducting at various points. This enables two vehicles to be parked behind each other in the same bay.

The exhaust extraction systems SBT and STR of Plymovent are factory standard TÜV certified for product safety and ISO 9001 certified.



FEUERWEHR KASSEL 112



MAIN BENEFITS

- 100% source capture of hazardous exhaust gasses, protecting the fire fighters and people working in the fire station.
- Clean air in all fire stations.
- Possibility of exchanging vehicles between the various bays and fire stations.
- Fully automatic system with low maintenance costs.
- Easy to operate.

PRODUCT/SYSTEM FACTS

Year of installation

- 2008 and 2009

Rail systems

- 38 SBT-6 units;
sliding balancer track
- 4 x SBT-9 units;
sliding balancer track
- 2 STR-12
(straight rail units with two trolleys each)

Fans

- TEV-985
- TEV-765
- TEV-385

DE-06



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