

APPLICATION

THE TASK

The company M-Technika is part of the meusburger Fahrzeugbau GmbH. The core competence of the company is the production of various components for special utility vehicles (single-type production or small series) which demands considerable design engineering efforts. The average production in the moment is around 900 to 1,000 vehicles annually. „Made-to-measure vehicles“ is the company strategy. M-TECHNIKA has state-of-the-art technology. Not only the welding systems are up-to-date, also the extraction unit and the filtration must comply with that.

At the Prachatice site, a new welding hall was built in 2016. This hall is 176 meters long and 23 meters wide. The main activity with corresponding technical equipment there: The welding of semi-trailers. In addition to the filtration, it should be possible to recirculate the cleaned air back into the hall. The required air flow was defined at 48,000 m³/h. The customer was looking for a cost-effective and efficient solution.



THE SOLUTION

The Herding® MAXX filter system offers optimum conditions for dedusting at the planned air flow. The duct work was designed as a PUSH-PULL system. On one longitudinal side of the hall, the air is extracted and cleaned by the filter system. This cleaned air is then recirculated to the other longitudinal side of the hall and is there returned back into the building again. In combination with the suction on the opposite side, this creates an airflow throughout the hall that moves the welding fume to the filter unit.

The high separation efficiency of the installed Herding® Sinter-Plate Filters allows the return of the air without a second filtration stage and without recuperation. The operation by frequency inverters allows extraction of the complete welding hall or individually in up to three separate areas. The compact filter system is installed outside of the hall.



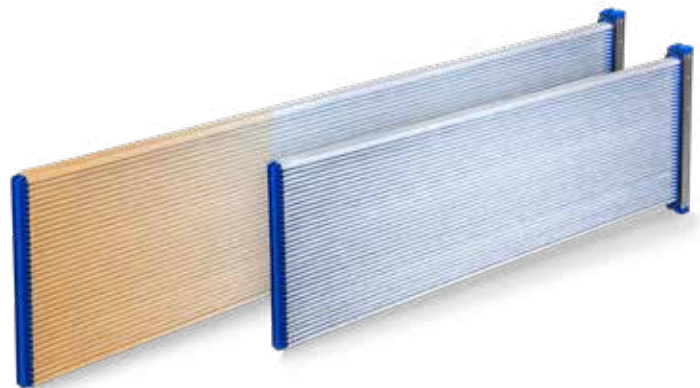
MANUFACTURE OF MOTOR VEHICLES BODIES



Duct of the PUSH-PULL-system



Duct of the PUSH-PULL-system



Herding® MAXX filter system

FEATURES OF THE FILTER SYSTEM Herding® MAXX

- » Extraction air flow: 48,000 m³/h
- » Clean gas side covers for easy access to the filter elements
- » Energy savings by operation with frequency inverters
- » Low clean gas values for direct re-circulation, no need for recuperation devices
- » Expected operational life time of over 15 years

ADVANTAGES WITH THE Herding® SINTER-PLATE FILTER

- » High material recovery rate due to the high separation rate
- » Constant operating conditions and extraction volume due to pure surface filtration
- » Low maintenance costs due to the rigid filter medium (no flexing and no wear)
- » Low space requirement due to compact and customer-specific system design
- » Long service lives ensure low servicing costs
- » Herding Filtertechnik as engineering partner and problem solver
- » Very low clean gas values

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