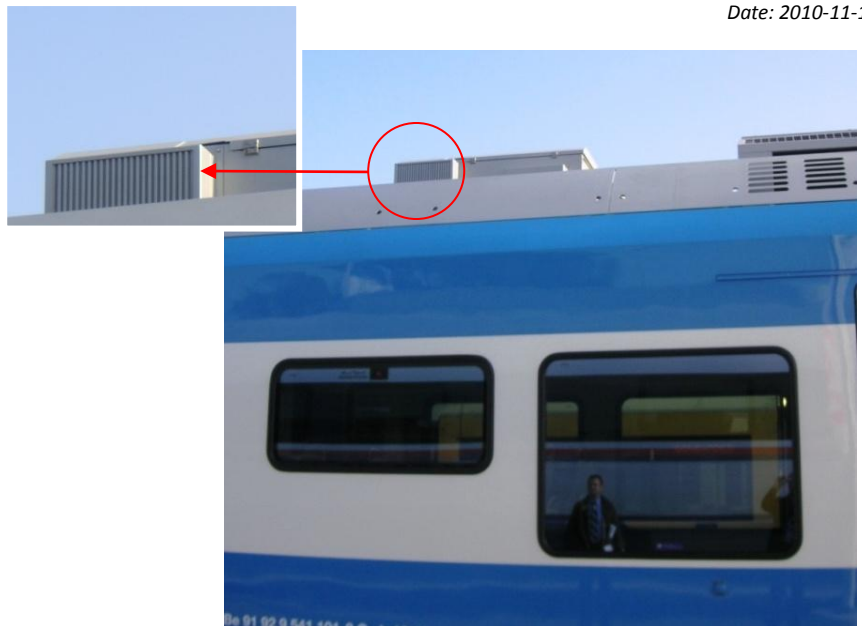


## Dust separator for railway vehicles

- completely out of aluminum
- compact
- self-cleaning
- Dust absorbing up to 60%
- Low maintenance



The dust separator reduces the dust amount contained in the inlet air by up to 60%.

## Description

High dust rates in the inlet air in railway vehicles can lead to frequent maintenance rates of downstream components or to failures, due to contamination by dust. Because of that either full filters have to be changed often or downstream components have to be cleaned regularly to ensure a failure-free operation of the ventilation systems.

The self-cleaning dust separator for ventilation systems in railway vehicles enables longer maintenance rates and improves service life times of the remaining components (filters, ventilators, controlling elements...) in the ventilation system. Low pressure drop and small installation size simplify the use. The image shows the dust separator on the roof of

the FLIRT Algier. There the cooling air for the compressed air production gets filtered. As well the air supply for the driver's cab and for the air conditioning units for the passengers in the FLIRT Algier is equipped with the Krapf & Lex dust separator.

## Pros and Cons of dust separators

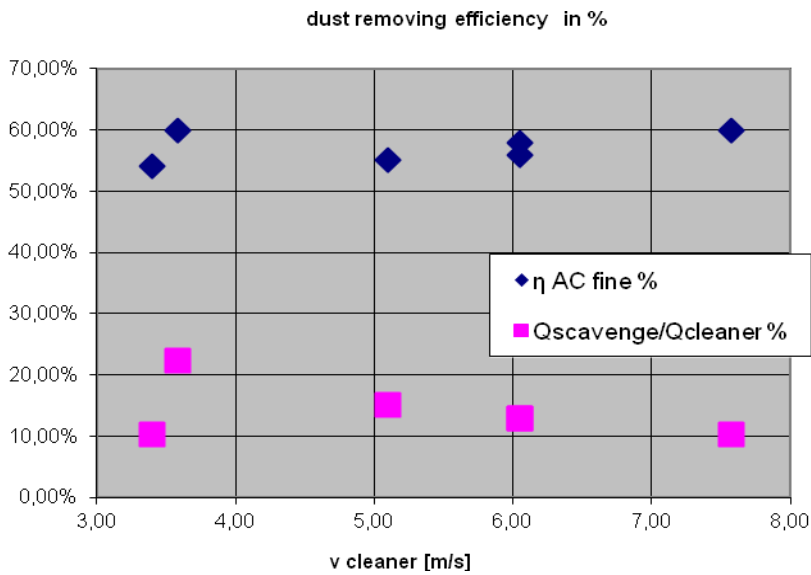
	Standard Ventilation grille	Dust separator Ventilation grille	Multi-cyclone
Filtering efficiency dust	-	+	++
Filtering efficiency water	++	++	+
Price	++	+	+/-
Pressure loss	++	+	--

**Standard ventilation grilles** from Krapf & Lex do have a high filtering efficiency of water and a relatively low filtering efficiency of dust. **Dust separator ventilation grilles** do have a constant dust separation of up to 60 % and also absorb up to 95% of water.

**Multi-cyclones** reach up to 93% at an adequate pressure drop.



## Technical data

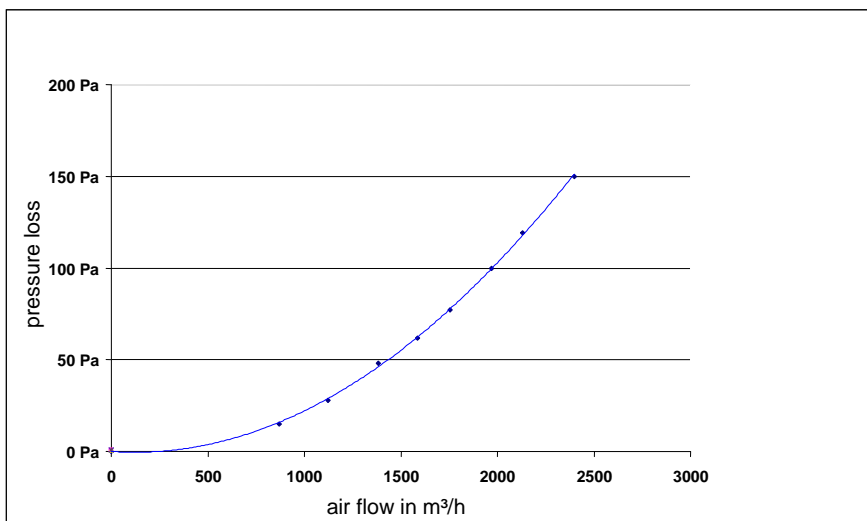


Ventilation grilles dust separator feature a filtering efficiency of up to 60% with dust particles bigger 10 µm. These data were determined through measurements by the university of Amberg-Weiden.

Important pre-condition therefore is the continuous exhaust of the separated dust by a dust discharge ventilator.

The air volume of the dust discharge ventilator must amount approx. from 10 up to 20% of the total volume flow.

## Pressure loss



The ventilation grille optimized for dust separation shows minor pressure drops compared to cyclone separators.

At 1000 m³/h the air speed amounts approx. 2 m/s. The optimal dimensioning range lies between 3 m/s (approx. 1500 m³/h) and 4 m/s (approx. 2200 m³/h).

At 4 m/s the pressure drop lies at approx. 120 Pa.

## Dust separation with all authorizations for railway vehicles



You receive Krapf & Lex dust separator with:

- Certificate of welding
- Certificate of fire prevention
- proof of vibration test

In the past there were no systems for the pre-separation of dust adjusted to the branch. Usually multi-cyclones which have been originally developed

for the military- and commercial vehicle sector were used. But these systems do not have the authorizations customary for the railway industry.

Or standard ventilation grilles have been used, which cannot assure a continuous dust separation.

**Request our information about Krapf & Lex multicyclones!**



Our filters protect against ...

- ... pressure shocks
- ... dust
- ... water
- ... snow

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