

# CUBE FILTERS ARE UNDER TESTING

MANN+HUMMEL filter cubes under testing in Stuttgart will be retrofitted in order to reduce the concentration of nitrogen dioxide in addition to fine dust particles

**TO** decrease pollutants with special filters that have to be installed not on vehicles but directly on the road is the innovative solution that is being tested in Stuttgart where, from the end of 2018, 17 MANN + HUMMEL Filter Cubes III were installed at the congested

Neckartor road junction. With the pilot project of the German company MANN+HUMMEL, sponsored by the Ministry of Transport in Baden-Württemberg and supported by the state capital (Stuttgart), they want to investigate the extent to which technology can be used to reduce the local fine dust pollution. “The assessments made so far”, stated MANN+HUMMEL, “have shown that the filters contribute to the reduction of pollution from fine dust particles by between 10 to 30%, which corresponds to 40% of all fine dust emissions generated by heavy traffic at the junction”.

The system will soon be improved with an increase in the number of installations (from 17 to 23) and with the retrofit of the Filter Cubes III at the Neckartor traffic junction. These will

be equipped with a newly developed MANN+HUMMEL combifilter that includes a filter layer capable of retaining particles and additional activated carbon layers in order to absorb nitrogen dioxide (NO<sub>2</sub>) in addition to fine dust particles.



Pollutants are retained using different processes: physical adsorption, chemical binding and catalytic reduction.

Control electronics makes it possible to adapt the operation of the filters to match operating conditions and therefore to react to the current air

quality. The sensors record air and weather data that are transferred to a cloud and then analyzed. In the last quarter of 2019, another project will start in Ludwigsburg, where MANN+HUMMEL is based, where filter cubes are used with combifilters. On the basis of the company’s own calculations and a simulation carried out by an independent engineering office, MANN+HUMMEL has calculated that 23 filter columns will be able to demonstrably reduce the concentration of pollutants along Friedrichstrasse, one the main streets in Ludwigsburg. ●