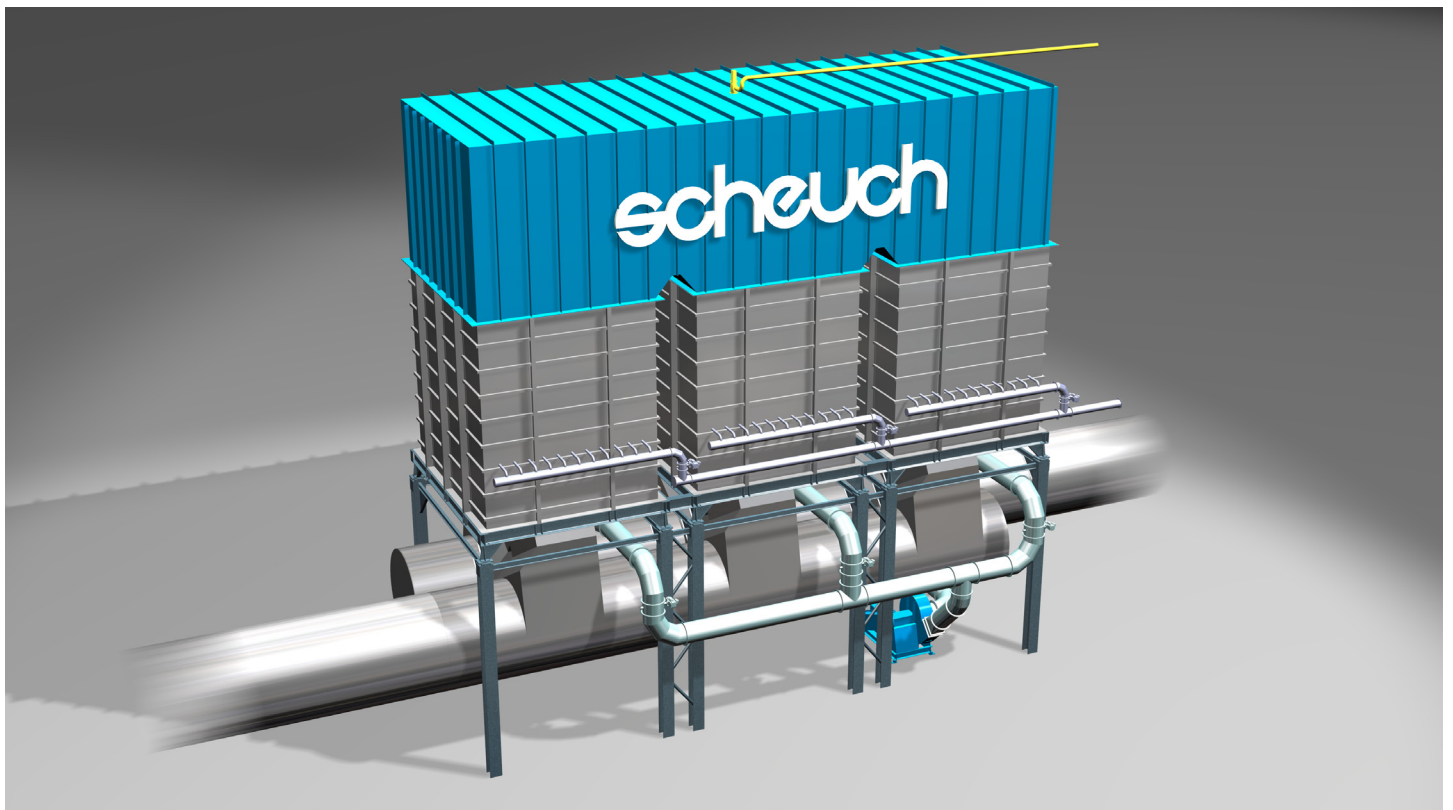


# PATENTED PROCESS FOR COMBINED NO<sub>x</sub> REDUCTION AND VOC SEPARATION

deconox, the novel process for exhaust gas treatment from industry, uses energy from polluted exhaust gas to break down other pollutants, such as nitrogen oxides and organic compounds.

This leads to a significant reduction in emissions in the industrial environment and prevents unwelcome odours. Moreover, since the residual energy can be fed back into the production process or reused in some other way, the process also makes a considerable contribution to energy saving.



## THE PROCESS

The deconox process combines regenerative thermal oxidation (RTO) with a low-dust SCR (selective catalytic reduction). It unites these two proven technologies in one system.

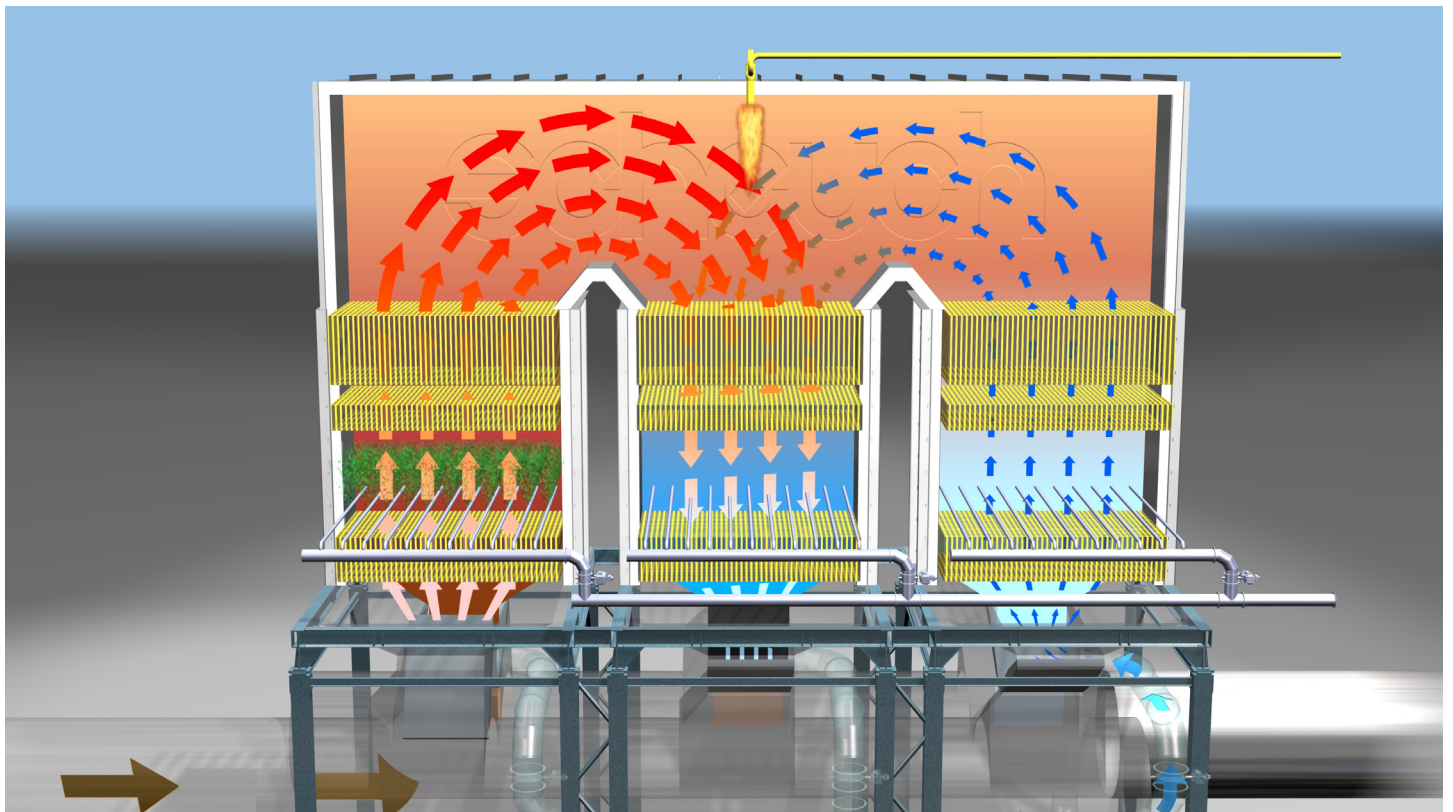
### Reduction of nitrogen oxides and organic carbon compounds

The breakdown of NO<sub>x</sub> takes place through catalytic reduction using ammonia and the breakdown of carbon compounds takes place through combustion (thermal oxidation in the combustion chamber). The heat arising in the afterburning process covers at least part of the thermal energy requirement (autothermal operation) for the NO<sub>x</sub> reduction, which is necessary in order to reheat the flue gas to the required operating temperature of the catalytic converter. As a result, the energy expenditure of the deconox process is reduced considerably in comparison to a low-dust SCR.

deconox versions with three, five or seven towers are also available for use in large industrial plants, depending on the volumetric flow.

deconox - THE FUTURE TECHNOLOGY FOR THE INDUSTRY

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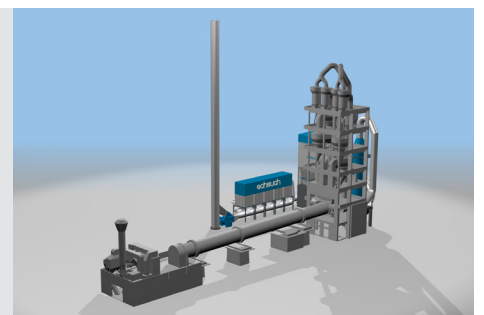


## SOPHISTICATED TECHNOLOGY

More than three years of development have gone into developing the deconox process. In long-term testing at a laboratory plant in Scheuch's Technical Centre and two industrial plants in Austria and Germany under real conditions, the basic principles of denitrification with ammonia injection and of regenerative afterburning were explored and optimised and the functional capacity was verified.

### KEY PERFORMANCE FEATURES:

- One system for reduction of NO<sub>x</sub>, VOC and CO
- NO<sub>x</sub> reduction of up to 90%
- CO/VOC reduction of 98 - 99 %
- Pressure drop of 30 mbar (flange/flange)
- Autothermal operation possible
- Use of secondary fuels or secondary raw materials possible



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