

# DEO-100™ Catalytic conversion of VOC and odour

# centriair

## Key benefits:

- High and stable performance
- Insensitive to VOC and odour concentration
- No media or media changes required
- Life cycle cost savings
- Low energy consumption
- Compact and easy installation

## DEO™ - operating principle:

- DEO™ - one-step recuperative catalysis of H<sub>2</sub>S and other VOCs
- Mesh-type catalysts coated with catalytic material. Mesh can be shaped and adapted for optimal reactor design.
- The process gas is preheated by passing one of the heat exchangers.
- If energy content in gas is insufficient for auto-thermal operation, the electrical heater tops up the gas to set temperature (250 to 400°C)
- The hot process gas is led to the catalyst where VOC and odour removal occur
- After the oxidation process the gas is led through the heat-exchanger to preheat new process gas after which is led out through the stack
- Control and monitoring of the unit is done through a PLC.

DEO-100™ is a regenerative catalyst system for elimination of VOC and odour emissions from industrial processes.

The system offers a compact, high performing, low-maintenance and energy efficient solution to most VOC and odour issues.

DEO-100™ is tried and tested on a wide range of applications including various industrial processes and waste applications such as biogas production, substrate and sludge holding tanks, hygienization, sewage pipelines, pumping stations and sewage treatment plants.

VOC and odour compounds are eliminated through patented mesh catalyst technology allowing for optimized and compact reactor geometry, large catalyst area and excellent heat capacity.

The unit is low-maintenance, requires no media or media changes and offers significant cost savings and stable performance throughout the lifecycle. Just push the start button and let DEO-100™ do the job.

DEO-100™ achieves a conversion rate of more than 98% of most VOCs, including those that are difficult to eliminate with conventional technologies such as Ionization, Ozonolysis, UV radiation, Scrubbers and Active Carbon.

High conversion rates maintain also in cases of extreme VOC concentrations, a condition where competing technologies will rapidly become inefficient or uneconomical. In fact, the higher the VOC concentration, the lower the need for external energy input.

The RCO – unit comes with a built-in heat exchanger where thermal energy is regenerated to heat the process gas and keep the reactor at desired operating temperature with minimum energy consumption.

Small dimensions allow it to fit into the trunk of a standard car, can be handled manually, and is very easy to install. Just plug it in, connect inlet to emission source and release exhaust straight through the wall. No stack or chimney needed in most cases.

The unit comes equipped with remote monitoring and alarm capabilities and an intuitive control panel.

# Technical data DEO-100™

## Application:

Conversion of reduced sulphur compounds (e.g. hydrogen sulphide and mercaptans), ammonia and other types of VOCs in waste application such as biogas production, biogas upgrading, sludge holding tanks, hygienization tanks, sewage pipelines, sewage pumping stations and sewage treatment plants.

## Performance:

> 95 % VOC and odour removal

## Pressure drop:

< 100 Pa

## Weight:

65 kg

## Connection flanges:

100 mm straight flange

## Dimensions:

(W x D x H): 477 x 660 x 773 mm

## Process gas flow:

100 m<sup>3</sup>/h

## Electrical connections:

380-400 V / 3-ph + Neutral/50 Hz

or

480 V/3-ph+Neutral/60 Hz

## Installed power:

6 kW

## Material:

Oxidized aluminum exterior

## Operating temperature:

330-350 °C

## Catalyst life:

Minimum 3 years

