# John Cockerill Europe Environnement



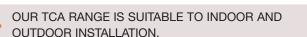
# **Adsorption Solution on Activated Carbon** Activated Carbon Tower TCA

Air filtration on Activated Carbon is a technique that has proven itself in the field of deodorisation. Simple and effective, this method allows the removal and adsorption of multiple pollutants.

Activated Carbon by the adsorption process is able, due to its microporous structure, to trap harmful VOC-type molecules (Volatile Organic Compounds) or corrosive and odorous molecules present in wastewater treatment plants (NH<sub>3</sub>, H<sub>2</sub>S, etc.).

In order to increase the adsorption efficiency of pollutants, Activated Carbon may be impregnated with KOH or H<sub>2</sub>SO<sub>4</sub> depending on the type of gas to be treated.

Treatment with Activated Carbon is used in particular in processes within the chemical, petrochemical, food and pharmaceutical industries, and also in water treatment facilities (pumping stations, buffer/storm basins, sludge storage and processing).





Flows processed up to 10,000 m<sup>3</sup>/h efficiency greater than 99%

Thermoplastic or steel construction suitable for aggressive and corrosive compounds

Several possible choices of sizes, regenerative adsorbant materials, etc.

Requires little maintenance excluding replacing the Activated Carbon



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### **Operation**

The operating principle of the TCA is based on the adsorption of pollutants through the use of Activated Carbon. Thus the polluted gas passes through an adsorbent medium consisting of Activated Carbon pellets.

The effluent to be treated is injected under the Activated Carbon.

The air flows through the adsorbent medium in a uniform manner through the use of a grate with calibrated openings according to the flow.

The air is purified and then discharged to a remote outlet or directly into the atmosphere.

When the Activated Carbon has reached saturation, it is extracted via the discharge hatch and subsequently retreated.

Our maintenance department offers complete maintenance packages for your TCA including:

- the removal and reprocessing of the used Activated Carbon.
- the supply of replacement Activated Carbon.
- reloading the TCA.

Our standard range: a full cylindrical TCA range in thermoplastic. Other designs available such as metal TCA, rectangular TCA, Annul'AirTM TCA, dedicated to specific constraints like footprint.

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1 rue des Pins - Parc d'Activités du Pays de Thann 68700 Aspach-Michelbach, France Tél. +33 (0)3 89 37 41 41 europe.environnement@johncockerill.com

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