#### Integrated solutions for the purification of gas and liquids







Jacobi's expertise ranges from laboratory technicians, engineering and installation specialists and implementation consultants to application support teams and on-site service staff.

**UNWANTED CONTAMINANTS PRODUCED** from a wide range of sources are facts of life that affect us all every day. Organic or inorganic, these contaminants are present in the air we breathe and the food we eat to the water we drink. Activated carbon is the tried and true guardian on the front line when it comes to safe and effective removal of pollutants in air, gas or liquid streams from industrial processes, and by-products in the manufacture of foodstuffs.

Choosing the right activated carbon is an important step but it is not enough. As a full service company Jacobi knows what it takes to achieve a maximum solution. Our service experts handle issues regarding placement/removal, reactivation or disposal as well as required filtration equipment, pilot trials and full scale operations.





Control of gaseous and liquid emissions to the environment is achieved with EcoFlow<sup>™</sup> and AquaFlow<sup>™</sup> mobile filter units.

# *The* Service Company

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> Mobile adsorption systems for purification of gas and liquids provide flexible solutions to emissions from a variety of sources.

4 | ACTIVATED CARBON SELECTION AND ASSESSMENT OF PROCESS

### The Skilled Company

**ACTIVATED CARBON IS** effective in removing a wide array of pollutants such as chlorine, ozone or halogenated compounds. The nature of some these substances means that spent activated carbon needs to be disposed of properly according to regulations set forth by various government authorities. We are well acquainted with these various requirements and regulations and can provide proper disposal service for spent activated carbon.



Samples of spent carbon are tested in an authorized lab to ensure safe reactivation according to stringent regulations.

A5-MV146 NOTES 10, 13



Engineering expertise and on-site support is offered by our highly skilled technical team.

**JACOBI OFFERS:** 

LABORATORY TESTING PILOT STUDIES BENCH PROVING APPLICATION SIMULATION LIFE EXPECTANCY CALCULATIONS ENGINEERING ASSISTANCE APPLICATION KNOW-HOW TECH EXPERTS FOR ON-SITE SUPPOR





Our dedicated site service teams are available to assist in the installation of mobile filter systems wherever they are required.

### The Solutions Company







Our filter units are well suited for emergency use, allowing efficient removal of a wide range of dissolved organic compounds.





Mobile filter units can be operated in parallel or in series to remove a wide array of contaminants.

**OUR MOBILE FILTER UNITS** are designed to treat dissolved organics from a variety of sources. The units can be placed in parallel to increase processing effectiveness, or in series to improve performance. The entire filter bed is constantly flooded with evenly distributed liquid, which prevents channelling at low treatment rates and optimizes the life of the filter.

The media is always active even in cases of intermittent use and can be easily serviced under backwash conditions. When spent activated carbon reaches saturation, it can be replaced in the existing filter. In semistatic mode the modular units are particularly suitable for temporary or emergency situations.

#### JACOBI OFFERS MODULAR FILTRATION FOR:

POTABLE AND PROCESS WATER AIR AND GAS PURIFICATION EFFLUENT PROCESSING GROUNDWATER TREATMENT PROCESS LIQUOR PURIFICATION



**JACOBI'S MODULAR FILTER** units come in two sizes, and provide a convenient and easy-to-use solution to emissions from a variety of liquid and gas application. AquaFlow<sup>™</sup> and EcoFlow<sup>™</sup> can be arranged in parallel to increase treatment rates, or in series to improve the removal efficiency.

AquaFlow<sup>m</sup> can be used for treatment of flows from 1–50 m<sup>3</sup> per hour, utilising granular or extruded activated carbons in fixed beds. EcoFlow<sup>m</sup> is available for treatment of flows up to 60 000 m<sup>3</sup> per hour per module, and 25 m<sup>3</sup> of activated carbon per module.

Depending on the type of activated carbon selected, the system can be used to adsorb multi contaminant streams, or adapted to remove specific contaminants such as chlorine, ozone or halogenated compounds. The system is especially suitable for use in temporary or emergency situations in site remediation or spillage scenarios.



#### The Mobile Company

Mobile adsorption systems for purification of gas and liquids provide flexible solutions to emissions from a variety of sources.





Using innovative design combined with economic solutions provides the optimum result for our customers.





### The Systems Company



Treatment systems can be project managed from initial drawings, through implementation to final equipment handover.

2/10,6,8



**ACTIVATED CARBON FILTRATION SYSTEMS** are often installed as an upgrade to a current emission point or as part of a new build. This requires not only the filtration units but also the means of passing the contaminated substance through the treatment facilities. In addition to pumps and piping or fans and ducting, the carbon must be measured for effectiveness using various pressure or temperature sensors and VOC detectors.

Jacobi provides full packaged facilities for end-of-pipe solutions and mobile treatment stations for the addition of PAC at remote locations. If required, treatment systems can be project managed by Jacobi, from initial drawings, through commissioning to final equipment handover. Understanding our customer's needs is key to our ability to offer full and comprehensive solutions.



12 | ACTIVATED CARBON REPLACEMENT

### Hands-on Company



Jacobi has the equipment, experience and expertise to ensure maximum effectiveness and return on investment.



Our team is certified according to all environmental health and safety standards.



**USING ACTIVATED CARBON** effectively requires careful placement and removal to ensure the integrity of the asset is maintained. In order to maximize the yield from reactivated material, spent carbon should be carefully removed as this has a direct financial impact on overall operating costs.

Jacobi's dedicated team of specialists have over 20 years' experience and are certified to all environmental health and safety regulations. They work constantly with handling activated carbon as well as associated filtration media, such as sand and anthracite.

For removal purposes we utilize specially designed equipment for handling activated carbon by either water-eduction or dry vacuum, and also can arrange transportation from the site. By providing a full service package, Jacobi ensures maximum effectiveness and return on investment.



**IN MANY APPLICATIONS**, spent carbon can be reused after recycling. We offer users of granulated and extruded carbon a cost effective and environmentally friendly reactivation service eliminating the need for costly landfill or incineration. Thermal reactivation is an environmentally responsible

process that helps to reduce  $CO_2$  emissions, while contributing to a sustainable use of the world's resources.

In order to eliminate cross contamination of materials, Jacobi operates two dedicated reactivation kilns, each designated for use dependent on the type of spent carbon being reactivated. One line is dedicated to food grade and potable water applications only. The other unit processes spent activated carbon from industrial applications such as chemical processing, wastewater or gas treatment.

Regardless of the reactivation process we can put together a complete carbon exchange service. Our skilled application support team and lab technicians will customize a world class solution for your specific needs. It is, of course, our customers and their requirements that dictate the reactivation solution we provide.



State-of-the-art operations of som of the most modern reactivation systems in the world.



COMPANY

RBON



## Recycling Company

# The Local Company

Jacobi Services, is a division of the Jacobi Carbons Group. It is the provider of mobile filter equipment; media handling and testing services; and product recycling throughout the European region. Our regional service sites can provide rapid and professional assistance to users of adsorption equipment.







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