



WATER



Water Treatment Solutions

**Axens**  
SOLUTIONS

**D&F**  
technik  
DRYING & FILTRATION TECHNOLOGY

# Emergence of New Challenges

Water is needed to sustain life with growing population, but also as an input to many processes or industries that society depends on. Potable water for human consumption needs to be primarily available where needed but also purified to high quality. As a result of the increasing water consumption and pollution, more efficient and specific treatments are required.

Axens has a long history in water treatment, with products, internal expertise, and partners to offer solutions for many challenges such as treatment of storm water, effluents and contaminated water resources. Positioned globally, Axens is covering existing and emerging applications wherever they occur such as water reuse or recycling. With continuing investment in the water treatment market Axens can confidently support this market now, and in the future.

## Axens Solutions Key Figures



2

Manufacturing Sites  
on 2 continents: America and Europe



35 years

of adsorbents production



Over

70,000

tons of catalysts and adsorbents each  
year coupled with catalysts services

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*Safe and readily available water is important for public health, whether it is used for drinking, domestic use, food production or recreational purposes. Improved water supply and sanitation, and better management of water resources, can boost countries' economic growth and can contribute greatly to poverty reduction.*

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*Inadequate management of urban, industrial, and agricultural wastewater means the drinking-water of hundreds of millions of people is dangerously contaminated or chemically polluted.*

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From World Health  
Organization Website:  
<https://www.who.int/home>

# Life Cycle of Water and Main Challenges

## MUNICIPAL

Surface water, and particularly groundwater sources for municipal, residential, or water bottling can contain a single or multiple contaminants that must be removed to comply with regulations or consumer demands. In many cases, where no other viable water source is available, simple single or multi-step processes can be used to treat and remove these contaminants.

## ENVIRONMENTAL

Ongoing or historical construction, industrial, mining, or other activities can or have introduced contamination to many water systems either on or below ground. Treatment of contaminated water sources from ongoing or legacy projects as issues are identified reduces the occurrence of wide-spread contamination and minimizes the cost of abatement.

## INDUSTRIES

Industrial effluents represent a challenging issue for many industries. Treatment of industrial effluents is usually needed either to reuse this resource or to meet compliant levels of contaminants before disposal. Different technologies can be deployed in order to deal with various contaminants leading to a better water footprint and helping industries to comply with increasingly stringent discharge standards.

## AGRICULTURE

Agricultural effluent is an emerging issue that is difficult to tackle. Tremendous volumes of water are used to irrigate crops or feed livestock. This results in significant potential contamination from a variety of sources and in many different locations. Simple gravity system processes can be used to treat and remove these contaminants. Valorization of effluents and water reuse will be even more important to manage in the near future.

Managing Water Resource

Reducing Water Footprint

Thanks to a portfolio of high performance products and valuable client support throughout all phases of the process, D&F Techniek is the partner of choice in many areas of the water treatment industry.



More than  
**300**  
customers used ActiGuard™  
Products

### Adsorbents for Water Treatment

### Applications

ActiGuard™ AA400G	Unpromoted activated alumina granule suitable for regenerating applications
ActiGuard™ AAFS50	Enhanced activated alumina granule with increased capacity and selectivity for many contaminants
ActiGuard™ F	Enhanced activated alumina granule with increased capacity for single use fluoride removal systems
ActiGuard™ R	Enhanced activated alumina granule with increased capacity and selectivity for remediation applications
ActiGuard™ 320	Unpromoted activated alumina trilobe with unique shape and capacity for specific applications

OIL REFINING



PETROCHEMICALS



GASES



ALTERNATIVES  
& RENEWABLES



WATER



Axens is a Group providing a complete range of solutions for the conversion of oil and biomass to cleaner fuels, the production and purification of major petrochemical intermediates as well as all of natural gas treatment and conversion options. The integrated offer includes technologies, equipment, furnaces, modular units, catalysts, adsorbents and related services, commercialized under “Axens Solutions”, “Heurtey Petrochem Solutions” and “Axens Horizon” brands.