

Based on an old family business founded more than 135 years ago, Royal Dahلمان has grown into a major supplier of tailor-made industrial FILTRATION solutions and high-quality FILTER media. With particular expertise in refining and petrochemical FILTRATION engineering, Royal Dahلمان is continuously adapting her range to cover a wide portfolio of net zero processes and technologies.

Our advanced FILTRATION systems and packages add value to critical processes, are of a cost-effective design and can be delivered in accordance with the most demanding requirements and specifications. With our FILTRATION technology, we are contributing to the current transition of the energy and transportation markets and support our customers to meet the challenges of newly developed processes for f.i. the production of sustainable aviation and transportation fuels, and hydrogen production, distribution and storage.

Royal Dahلمان has a proven track record, and our FILTRATION technologies are recommended by leading licensors worldwide. We supply basic engineering packages including delivery of critical, proprietary internals, up to fully dressed FILTRATION skids.

At Royal Dahلمان transparent business values are combined with high tech solutions which are engineered and realised in modern offices and highly qualified production and warehousing facilities. It is our aim to build-up long term relationships with our clients, based on trust and reputation for delivering quality against value for money.

Royal Dahلمان has not forgotten her roots and how we reached our current position. In 2011, when celebrating our 125-year anniversary, Dahلمان honourably received a "Royal" designation from the Former Queen Beatrix of the Netherlands.



ROYAL DAHLMAN'S KEY FILTRATION TECHNOLOGIES

- **PROCESS GAS / OFF-GAS FILTRATION**

Over the last three decades, Royal Dahلمان has supplied (hot) gas/catalyst & polymer fines dust FILTRATION systems in challenging refining, petrochemical and food applications, designed by world's leading licensors. Automatic blowback dust FILTRATION systems are tailor-made and designed for high operating pressures, high operating temperatures, highly corrosive and /or oxidative environments; dedicated to remove catalyst fines, flakes, fines, fluff and powders, from (hot) process gas, employing high quality FILTRATION media, from fabric to sintered porous metal.

Extreme process conditions require a serious mechanical & process design to be able to guarantee a reliable and safe dust FILTRATION system. Our expertise and know-how in the field of industrial dust FILTRATION form the basis of our customized solutions, utilising modern and sophisticated technology.

Main (dry) applications:

- **Polyethylene & Polypropylene Production Plants (Polyolefins Industry)**

Critical, automatic blowback dust FILTRATION units for FILTRATION of PE or PP fines in various processes.

- **Fluidised Catalytic Cracking (RFCC/FCC) Plants (Refining Industry)**

Emission level reduction:

- ✓ Full Flow FCC Flue Gas FILTERS
- ✓ Fourth Stage Separators/ Underflow FILTERS
- ✓ Catalyst Hopper Vent Gas FILTERS

- **Gasification Plants (IGCC, Biomass Gasification Plants)**

FILTRATION systems for removal of solid fines from hot and/or high pressure process gas.

- **Specialty Chemical Plants (a.o. VCM, BPA, CMC, Melamine production plants)**

Automatic dust FILTRATION packages for FILTRATION of sticky and/or explosive fines in various, demanding applications.

Main (wet) applications:

- **STARCH AND YEAST PRODUCTION PLANTS**

In comparison with a dry solids-gas FILTER, a scrubber is an excellent technology for applications where the dust is sticky, abrasive and/or has a high explosion risk. A scrubber is also a perfect solution for removing solids from highly humid gas streams, where vapour absorption is required or where the solids can be recycled in the process as a sludge.

Royal Dahlman has her own proprietary VANE-CAGE scrubber technology that is widely praised for her high efficiency, self-cleaning properties, minimal maintenance and very low energy consumption.

- **HEAVY OIL FILTRATION**

For the most challenging applications, Royal Dahlman designs and supplies automatically regenerated FILTRATION packages, removing catalyst, sand, fines, impurities, etc. from (hot) oils. We combine the use of porous sintered, wedge wire or Dutch weave metal FILTER media, with our proprietary gas-assisted backwash, or backflush technology, which is considered to be one of the most effective and efficient in-situ cleaning methods.

Main applications:

- **RFCCU/ FCCU (Refining Industry)**
FCC slurry oil (CLO/ Main column bottoms)
FILTRATION: removal of catalyst fines.

- **Heavy Oil Processing Units/ Plants (Oil & Gas/ Refining Industry)**

Oil FILTRATION: removal of contamination from various heavy oil and hydrocarbon streams.

- **AMINE FILTRATION**

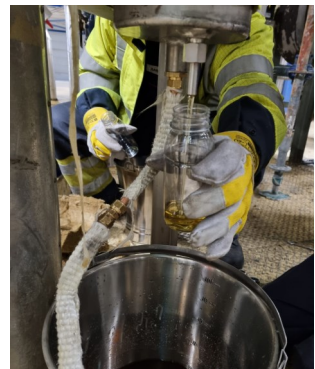
The Royal Dahlman Terraced FILTER, abbreviated T-FILTER, derives its name from the construction of its FILTER element. By applying a radially pleated construction instead of the commonly known axial pleats, a significant increase in FILTRATION area is achieved. In addition, the FILTRATION direction is from the inside to the outside.

This minimizes spills on site and exposure of operators to harmful substances during change out. Between each terrace, a layer of drainage material provides space between each layer. This enhances a proper flow distribution and makes a very high dirt holding capacity (DHC) possible.

- **PRODUCT SERVICES**

We pay special attention to supporting our customers with a wide array of services, before delivery and after start-up of our equipment as well. Such services are including but not limited to:

- ✓ Laboratory services (sample/product and testing)
- ✓ Industrial Field Testing
- ✓ Key Supply Services (Dahlman Filter Services)
- ✓ After Sales
- ✓ FILTER element cleaning services



Royal Dahlman provides full mechanical guarantees in material, fabrication and workmanship and / process performance guarantees (pressure drop, FILTER element lifetime and efficiency), as per common client requirements. This recognition by our customers is shown by recommending Royal Dahlman on many of their processes.

Please view all of our capabilities on our website:

www.royaldahlman.com

DAHLMAN FILTER SERVICES

INNOVATIVE & RELIABLE SINCE 1886

Royal Dahlman actively developed its service and after market approach with an independent view on reliable filtration systems. These days the Dahlman Filter Services division is globally active in after sales services to all projects supplied by Royal Dahlman regarding filtration. An extensive concept is regionally supported through its offices in The Netherlands, Spain, Czech Republic and Germany by offering:

- **Technical Filtration Consultancy**
- **Filtration Spare Parts & Equipment**
- **Key Supply Frame Agreements**
- **Maintenance & Cleaning Services**
- **After Sales Services**



Dahlman Filter Services is both a manufacturer and distributor of filtration systems and filter replacement parts and has, as an independent party, a wide range of filtration options for process filtration and secondary filter processes. As a total supplier Dahlman Filter Services provides customer- focused solutions for oil & gas, (petro) chemical, food & beverage and pharmaceutical industries as well as for the energy sector.

As a filter specialist we offer customized solutions for each filtration principle. We have a great variety in standard equipment and filtration spare parts in our product range, both for existing and new applications. It is also possible to provide custom made equipment and filtration spare parts to meet specific client specifications.



The many years of experience as a filtration specialist ensures that Dahlman Filter Services is the perfect partner for service and maintenance for all common filtration systems. Royal Dahlman offers its own team of service engineers who with their specialist knowledge and skills can maintain any filter regardless of the filtration application. Together with these maintenance activities it is possible to optimize and upgrade the current filters setup. Obviously these maintenance activities can be combined with inventory management and delivery of spare parts.

The Dahlman Filter Services division has been a reliable partner as Key Supplier and currently has a base of more than 27 Key Supply Contracts throughout Europe, where Dahlman is available to its customers 24-hours a day. As a Key Supplier, Dahlman Filter Services unburdens her customers, enabling them to concentrate on their core business and to do so they need a reliable and experienced partner. Royal Dahlman Filter services is such an experienced partner because the services of Royal Dahlman are perfectly adjusted to the needs and wishes of its customers with cost and reliability being the main cornerstones.



Features in the Dahlman Key Supply Frame Agreements

- **Supplier reduction**
- **Stock reduction**
- **TCO Cost Saving Proposals**
- **Technical support for every filtration principle**
- **Security of supply**

Please view all of our capabilities on our website:
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