

**Cleaning. Filtration. Automation.**



**Ecoclean**



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# Dürr Ecoclean

Member of the Dürr Group

The Dürr Group consists of two divisions. Both offer a complex range of services and know-how and are world leaders in many industries.

## Paint and Assembly Systems

Paint and Assembly Systems provides turnkey mass-production paint shops for automobile manufacturers and suppliers. A complete supplier for the final assembly of automobiles as well as a materials handling specialist, this branch of the company is one of the leading international partners of the automotive industry. Exhaust air cleaning for various industries and assembly and conveyor systems complete the range of services offered.

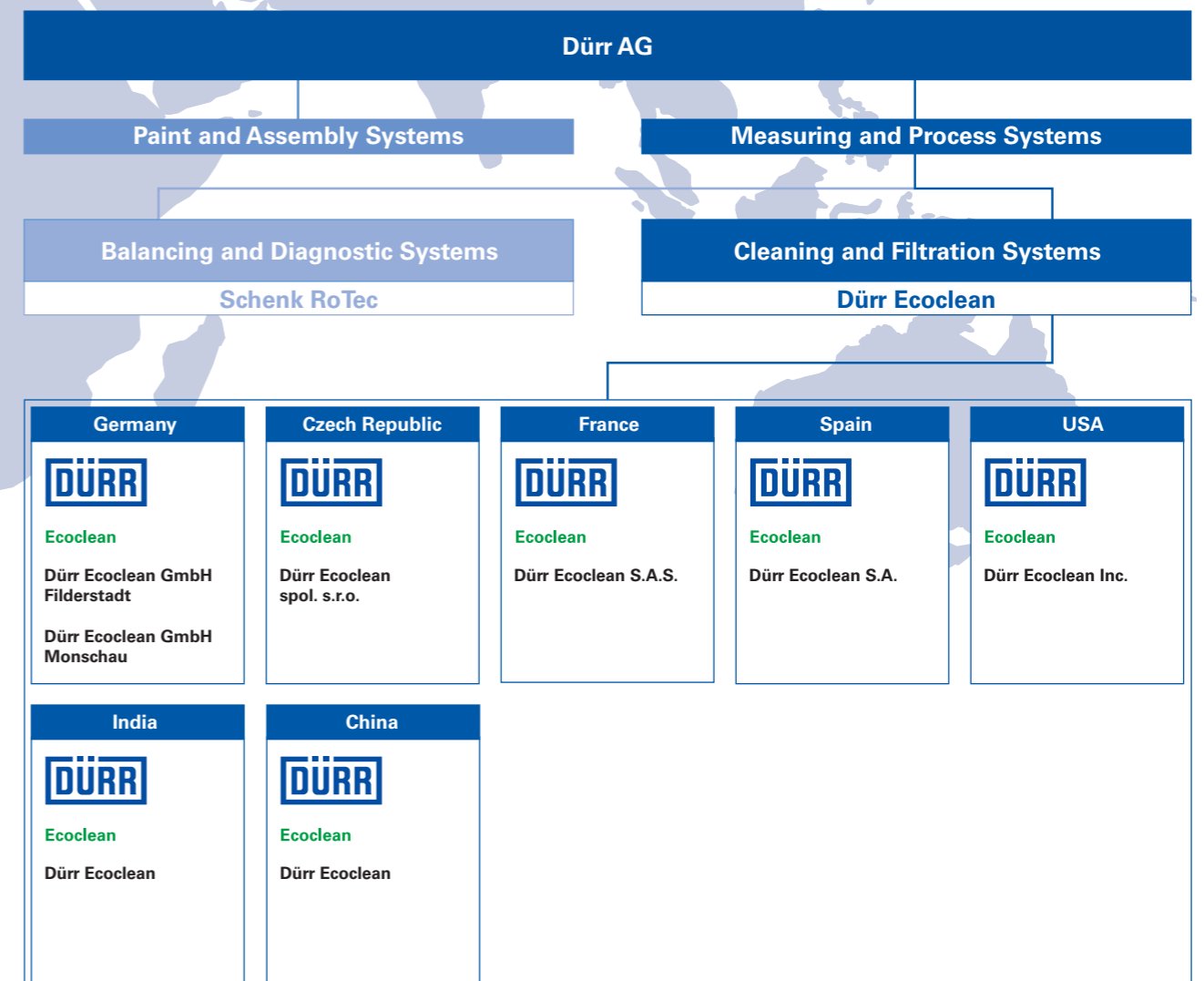
## Measuring and Process Systems

Measuring and Process Systems draws together measurement and process engineering along with industrial cleaning technology. Measurement engineering, which includes balance engineering and diagnostics, is carried out by the Schenck Group.

The Dürr Ecoclean Group supplies state-of-the-art, needs-based cleaning technology to the automotive industry and its suppliers as well as the diversified industrial market. Dürr Ecoclean is also one of the leading international suppliers of innovative solutions for cooling lubricant processing and automation.

## Added Value Through Networked Know-how

In order to offer optimal solutions to clients around the world, the Dürr Ecoclean Group works with uniform standards and a common sales and service structure. Expert knowledge turns every branch into a highly qualified competence centre – autonomous on the one hand and networked on the other. If a job requires several skills, the required know-how is brought together from the relevant branches. This results in comprehensive consulting and development services as well as better on-site service and support for customers. This is why the companies active in the field of cleaning and automation have been working under the name Dürr Ecoclean since 2006.

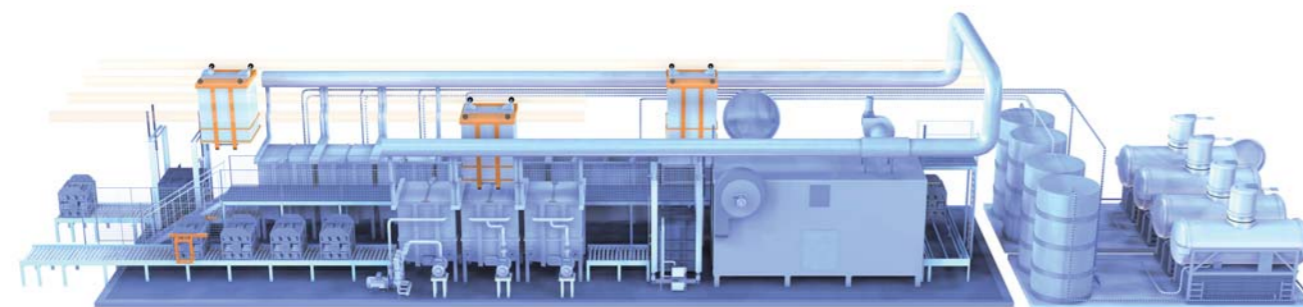


# Dürr Ecoclean Group

Your partner for cleaning, filtration and automation – worldwide.



From its roots in Germany, Dürr Ecoclean has grown into a company group acting worldwide. Its solutions for industrial parts cleaning, automation and filtration consistently set new standards. ■■■■



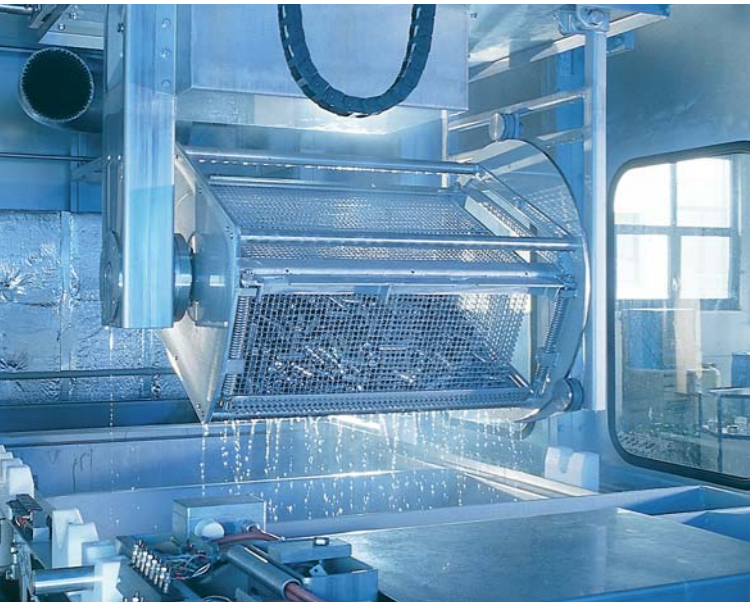
**Cleaning** offers needs-based standard solutions and tailor-made systems for cleaning and deburring work pieces, to fulfill the needs of the automotive industry, its suppliers and the diversified industrial market. In order to meet all the requirements of the different markets for work pieces, soiling and system standardization, the Cleaning division is split into **Cleaning Systems Industrial** and **Cleaning Systems Automotive**. ■■■■

**Filtration** offers the latest filter systems for the reliable, environmentally friendly and efficient processing and reconditioning of cooling lubricants and industrial liquids.

**Automation** develops and produces systems fit for the future ensuring the flexible handling of work pieces. Moreover, this company division uses coordinated solutions to provide a smooth material flow and optimum interlinking of individual process steps in manufacturing. ■■■■

# Cleaning Systems Industrial

Needs-based cleaning for all industries



Growing demands on the quality of components requires increasingly complex solutions for industrial cleaning. With innovative standard solutions and individually customized cleaning systems, Dürr Ecoclean meets international requirements on cleanness in diverse industries such as the production of mechanical components, aviation and space flight, medical technology, the food industry, electronics and laboratory equipment. Dürr Ecoclean has solutions for all areas of wet chemical cleaning. Whether with aqueous cleaners, environmentally friendly hydrocarbons and modified alcohol, chlorinated hydrocarbons or innovative polar solvents, the result is always the same – the reliable cleaning of every type of soiling. ■■■

Optimally customized process engineering is another ingredient of efficient and needs-based cleaning solutions. With comprehensive consulting and engineering services as well as its own technology centre, Dürr Ecoclean offers optimal solutions from a single source for companies of all sizes, cleaning small or large components made of metal, plastic, glass or ceramic with low or high throughput. Dürr provides solutions for spray and immersion cleaning, degreasing with steam as well as injection flood washing and ultrasound cleaning.

With their sophisticated design and top quality equipment, the systems set the standard. They guarantee excellent cleaning, high levels of efficiency and reliability and meet labour and environmental guidelines, both on an every day basis and in the long term. ■■■



## Core competence:

Standard solutions and customized cleaning systems for use with

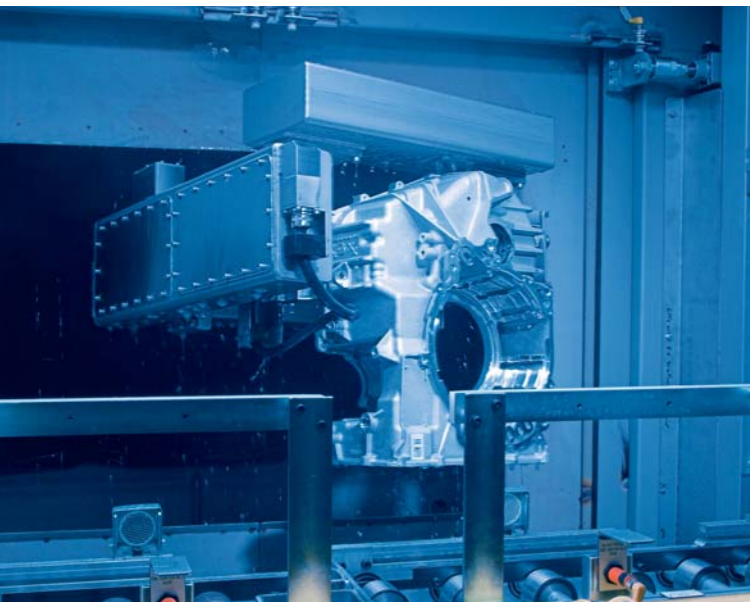
- Aqueous media
- Chlorinated hydrocarbons
- Non-halogenated hydrocarbons
- Polar solvents

## Service portfolio:

- Single chamber systems
- Multi-chamber systems
- Conveyor wash systems
- Systems for the inline immersion cleaning of single components
- Ultrasound cleaning systems
- Injection flood washing
- Degreasing with steam
- Special cleaning systems

# Cleaning Systems Automotive

Customized solutions for automotive engineering



**Cleaning Systems Automotive** concentrates on customized solutions for the automotive industry. The quality and operational reliability of automobiles and commercial vehicles are fundamentally dependent on the cleanness of their individual components. In accordance with the special requirements of automobile manufacturers and their suppliers, Dürr Ecoclean develops and produces aqueous cleaning and deburring systems for large and medium-sized serial parts, such as those from the power train. The systems are customized according to customers' needs. In order to offer the optimum solution in terms of technology and economy, Dürr Ecoclean provides comprehensive consulting and engineering services. In our own in-house technology centres, we adapt the different procedures to best suit the individual cleaning task.

Dürr Ecoclean meets the ever-growing demands made on cleaning quality, flexibility and cost-effectiveness with innovative developments such as flexible robotic cleaning modules and new cleaning technologies. The continual development of the tried and tested procedures of high-pressure water jets, spray cleaning, immersion cleaning, injection flood washing and steam/dry cleaning also ensures that we are able to offer our customers technology that is always one step ahead. With integrated single step and multi-step deburring processes, be it high-pressure deburring, brush deburring or mechanical deburring, Dürr Ecoclean helps its customers to increase productivity efficiently.

## Core competence:

Standard solutions and customized systems for use with

- Aqueous media
- High-pressure deburring systems
- Brush deburring systems
- Special systems

## Service portfolio:

- Spray cleaning systems
- High-pressure cleaning systems
- Immersion cleaning systems
- Injection flood washing
- Ultrasound cleaning systems
- Wet/dry cleaning
- Systems for high-pressure deburring
- Systems for brush deburring
- Systems for mechanical deburring with tools

# Filtration

Filtration technology and cooling lubricant processing of the highest standards



More stringent quality regulations, growing cost pressure and stricter environmental protection requirements make the processing of industrial fluids and cooling lubricants indispensable.

H.R. Black and Henry Filters of the Dürr Ecoclean Group have the process engineering know-how and the experience to remove liquid and particle soiling from machining fluids efficiently. The services we offer range from local filtration systems for individual processing machines to complete central filtration systems for processing lines with tens of thousands of litres of fluid in circulation per minute. These systems are able to separate soiling from different machining media cleanly and recondition the medium for reuse.

**Henry Filters** produces the latest filtration technology for maximal operational safety and tool reliability. Machining processes are improved and waste management costs reduced. The Henry Filters brand pressure belt filters and vacuum belt filters are normally used in large processing lines. The powerful band filter systems from **H.R. Black** are used worldwide in individual processing machines as well as in complete, smaller processing lines. Adjusting capacity to suit individual requirements ensures optimal results for every application.



#### Core competence:

- Filtration technology
- Materials preparation technology for cooling lubricants

#### Service portfolio:

- Permanent filters
- Single-use filters
- Replaceable filters as permanent or single-use filters
- Magnetic separators
- Systems for filtration and separation
- Sludge Briquetters
- Supply pipe, return pipe and troughing

# Automation

Perfectly automated and interlinked processes



Consistent sequential manufacturing steps are the prerequisite for efficient series production with a high level of quality. The automation division specializes in innovative systems for the flexible handling of work pieces and future-oriented solutions for smooth material flow and the interlinking of manufacturing lines to ensure an optimized production process. ■■■■



## System integration

From robots, conveyor systems and processing lines to complete manufacturing lines, Dürr Ecoclean develops, implements and installs automation products for an efficient and smooth workflow. The different system modules are integrated in accordance with individual customer needs. Machining processes are supported through a variety of standard products, custom solutions, and value-added services such as simultaneous engineering and controls integration for interlocks and safety coordination. ■■■■



## Core competence:

- Handling technology
- Conveyor systems
- Automation technology
- Layout planning
- Controls integration
- Simultaneous engineering

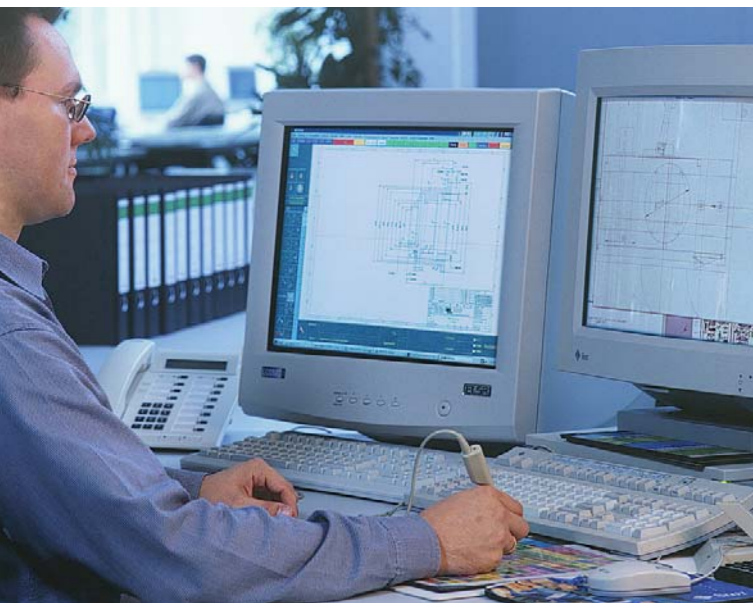
## Service portfolio:

- PZR powered zone roller product family (conveyors, shuttles, rail-guided vehicles)
- Standard gantries
- Robotic systems for Pack-in/Pack-out buffers
- Custom robot and gantry gripper tooling
- Special installations
- Complete production lines
- Standardized floor automation conveyors
- RCI roller chain integrated conveyor
- FCC flexible chain conveyor
- OPC over-under pallet conveyor
- FTC flat top chain conveyor



# Dürr Ecoclean Group

Uncompromising Quality



Anyone who wants their products to contribute to their customers' value-added needs to supply top quality. This is why our installations and systems fulfill the highest international quality requirements. This is reflected by both a wide variety of certificates, such as DIN ISO 9001, and by numerous awards.

Uniform worldwide standards in consulting, production, support and service ensure that every product that bears the Dürr Ecoclean name is designed uncompromisingly to strengthen our customers' competitive position. For us, this also includes integrated environmental protection. With innovative developments, we support our customers in saving resources, reducing waste and minimizing emissions.

The latest certifications can be found at [www.durr-ecoclean.com](http://www.durr-ecoclean.com)

## Innovation – Ideas today for the products of tomorrow

“Generating added value for customers” is the objective of the innovation management team at Dürr Ecoclean. This means more flexibility, quality and environmental protection during production as well as greater effectiveness and efficiency. Our ideas for innovative process and production solutions come from our extensive experience in the field and from our ongoing commitment to research and development. Each new concept is tested under real-life conditions in our technology centre. Our success is reflected in the 20 patents that we have registered over the last 10 years.

Each technology centre promotes new product development in its sphere of specialized expertise. The result is a combined and global development network that delivers a range of innovations that strengthen our customers' competitive position, are more efficient and available more quickly to the global market.

# Dürr Ecoclean Group

We're right where you need us

Industrial cleaning technology, filtration and automation are our strengths. The Dürr Ecoclean Group has become the global technology leader in these areas.

Maintaining our position as the global technology leader requires that we continuously improve our products and services in every aspect. Our goal is to provide one point of contact, from initial consultation and project planning to commissioning and start-up. Dürr Ecoclean can act as a local partner that understands your project needs and can monitor all tasks down to the very last detail. At any stage of the project, we can call upon the vast knowledge of our global Dürr Ecoclean competence network to best support your individual situation and overall performance goals.

In order to ensure this high level of consulting quality and guarantee the quality of the Dürr Ecoclean technology and support standards everywhere in the world, we are constantly expanding our worldwide distribution and service network. It is our aim to be right where you need us, anywhere in the world, at any time.

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