



Custom made solutions for parts cleaning

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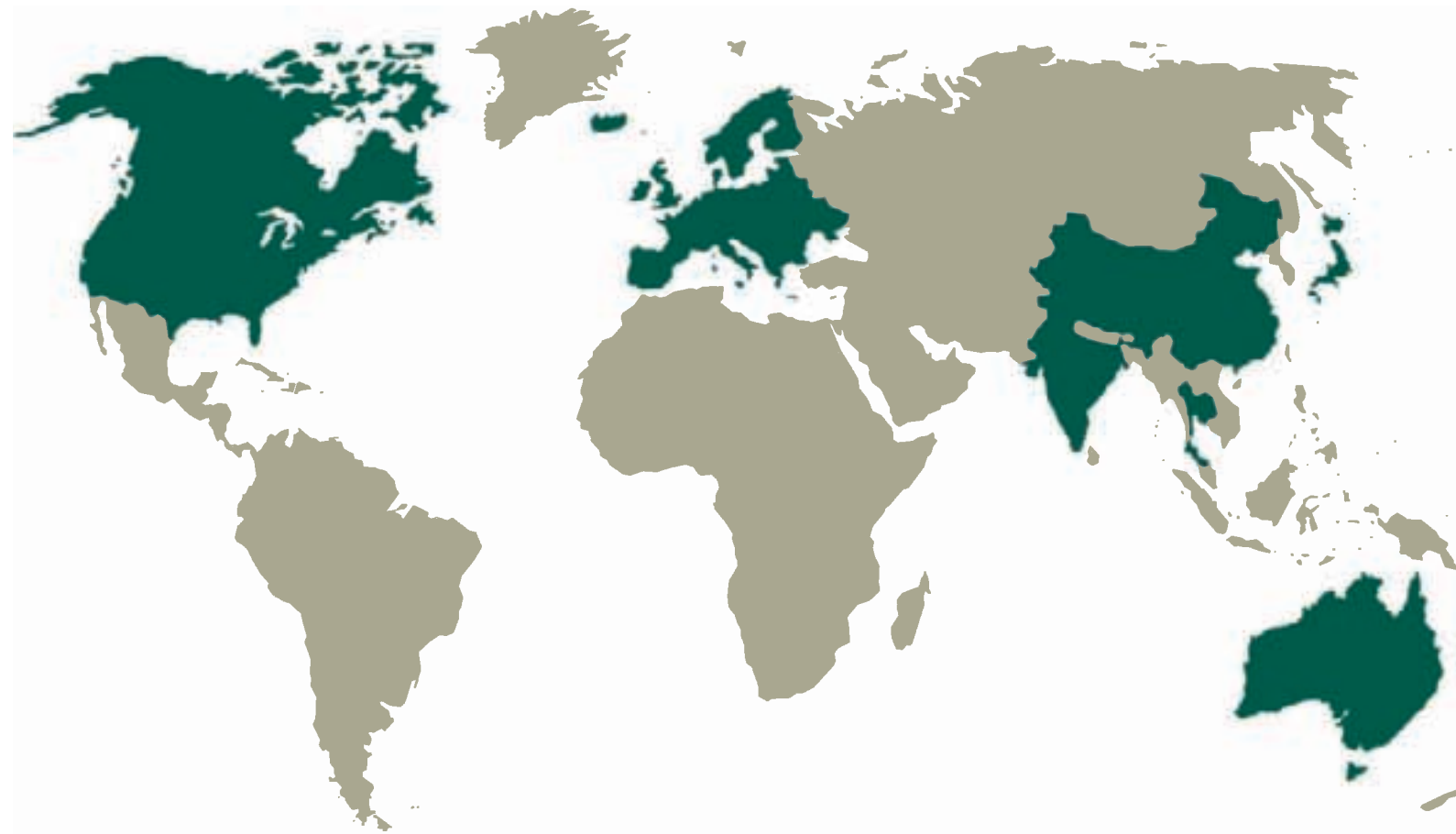


Custom made solutions for parts cleaning

Perfect cleanliness.

Höckh. Custom made solutions for parts cleaning.





Partner to the industry – for more than 35 years.

Welcome to Höckh Metall-Reinigungsanlagen GmbH, a family-run company that has been a partner to the metal-processing industry with fully automatic parts cleaning systems for more than 35 years. Under the brand name MULTICLEAN, more than 600 of our custom-made systems are in operation around the world as integrated components of industrial production lines.

Three fundamentals that make us successful:

Some call it their mission statement – we call it our 'Constitution': The base on which Höckh wants to work with its customers.

In every good business there are two winners. This is why your wishes and interests are at the forefront of our thoughts from the beginning. We develop the optimum solution for you according to your demands also in the same manner a business relation is developed that satisfies both parties.

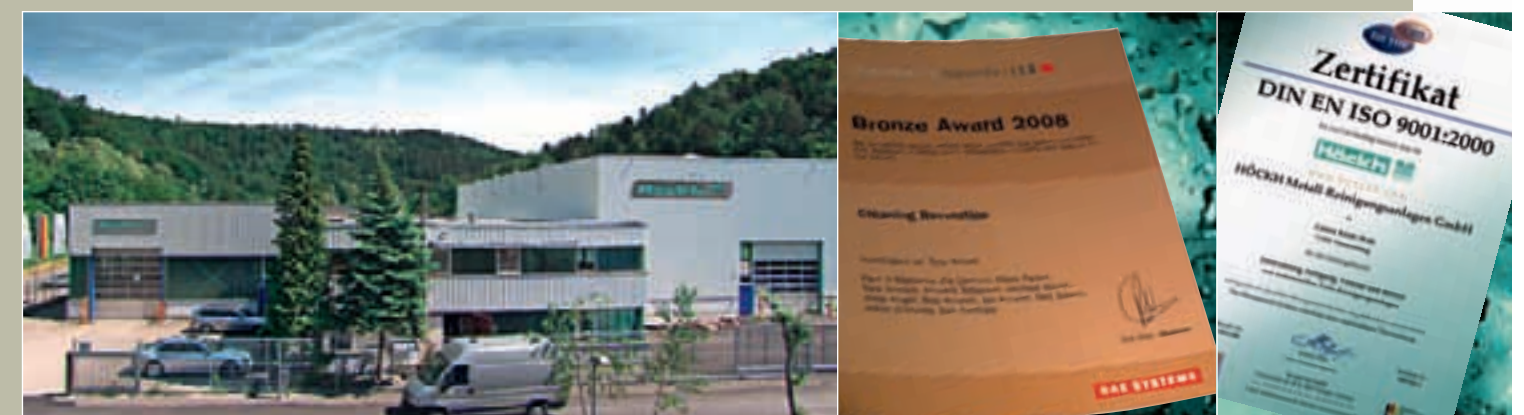
Quality is, when the customer returns. And not the product. For this reason all our practices ensure maximum quality of our products and services – from the consultation and development to the production and comprehensive after-sales service. That we are certified according to DIN ISO 9001:2000 is a matter of course.

The effort by each individual is part of our combined strength. At Höckh, we understand ourselves as a team that can rely on the individual capabilities of every member of the team. No matter if it is a young creative head or a colleague with many years of experience – there is one goal that unites all: The perfect solution for each customer.

*Jürgen Höckh, Director
and Founder of the Company*



*Michael Höckh, Dipl. Ing.,
Sales manager and Director*



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Perfection is more than the sum of all parts.

Needs-oriented parts cleaning systems are not standard equipment. They are developed and manufactured by Höckh with particular focus on their application. This is the only way to achieve the perfect solution for you.

Meaningful planning and development.

Every MULTICLEAN plant is designed and constructed on modern 3D CAD work stations. We are therefore capable of being able to present you with a meaningful layout in the proposal phase and can clarify all the details beforehand. Thus customised parts cleaning systems are created by Höckh based on standardised components. They are all united by our standards in light of these requirements:

- » thoroughly designed out construction
- » sensibly arranged system construction
- » high-quality execution

Beyond that, we make sure your system is stable during the development and establish the convenient access to all relevant areas.

High quality construction and manufacture.

Therefore you profit from the Höckh system in the long run, with our production focuses on utmost precision during the plant construction. This includes modern pipe installation technology using CNC-bent and orbitally welded stainless steel pipes as well as an excellent container construction, primarily by regional partner companies. In this manner, Höckh plants fulfil the continuously increasing demands of precision cleaning, for example of high-security components for the automotive and aerospace industries.

First-class components.

Even when deciding on purchased parts, the motto is valid: Maximal quality during the selection. For this reason we prefer using products made in Europe and cooperate with effective partners. That guarantees a high process reliability and quick reaction times when service is needed.



CNC pipe bending machine for pre-assembling stainless steel pipe lines



Orbital welding device for optimal smooth welding seams even in the pipes interior.



Reliable technology.

Not every cleaning task can be solved satisfactorily straightaway. This is why we conduct extensive tests and research in our pilot plants for the preselection of the appropriate cleaning system for you. Various series plants based on water, solvents and combinations of both processes are available at Höckh.

Trust is good, ...

Which system is suitable in particular for a specific task depends first of all on the property, the material and the form of manufacture of the parts to be cleaned. Determining also the type and amount of initial soiling as well as the required part cleanliness after the treatment.

Sometimes it is recommendable to take into account the entire process chain of the manufacture of a component to find the optimal solution in a qualitative and economic respect. Höckh customers rely here on our experience of more than 600 installed plants.

... control is better!

In a 'live test' with soiled parts from their own production, interested parties can get an impression of the qualities of the MULTICLEAN systems. Thanks to the obligatory glass doors on the work chambers you can precisely observe and follow each step of the cleaning process. After which if desired, we inspect the achieved parts cleanliness in our cleanliness laboratory – of course by means of up to date methods according to VDA 19 / ISO 16232.



When it really counts ...

Worldwide spare part supply.

In many production lines, parts cleaning is the bottle neck. If it comes to a standstill, then the entire production is stopped. It is good when in such a case you can rely on a perfect plant service. Not the least therefore do we rely primarily on standard components of leading European manufacturers when we purchase parts. This guarantees our customers a high operational reliability as well as a quick spare part supply in case of a defect – with this service available around the world.

Comprehensive service.

After the installation of a plant in the company, Höckh takes care of its customers: All involved employees receive a comprehensive commissioning training as well as further competent support by experienced Höckh technicians as required. We gladly conduct the annual main inspection of your plant as well as the course of a maintenance contract. In addition, the Höckh service team offers all interested parties a service hotline with also various remote diagnostics possibilities.



The system control offers many service functions as standard features.



A comprehensive training of your personnel is a matter of course for us.

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No quarter for oil and swarf!

Even though Höckh plants are customised to the needs of each customer, you profit from our experience with certain requirements that are typical of various industries. The results are system solutions upon which you can rely without a compromise.

MULTICLEAN-F – Cleaning and degreasing with solvents under vacuum.

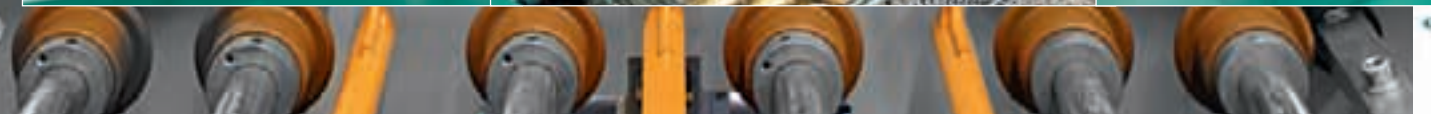
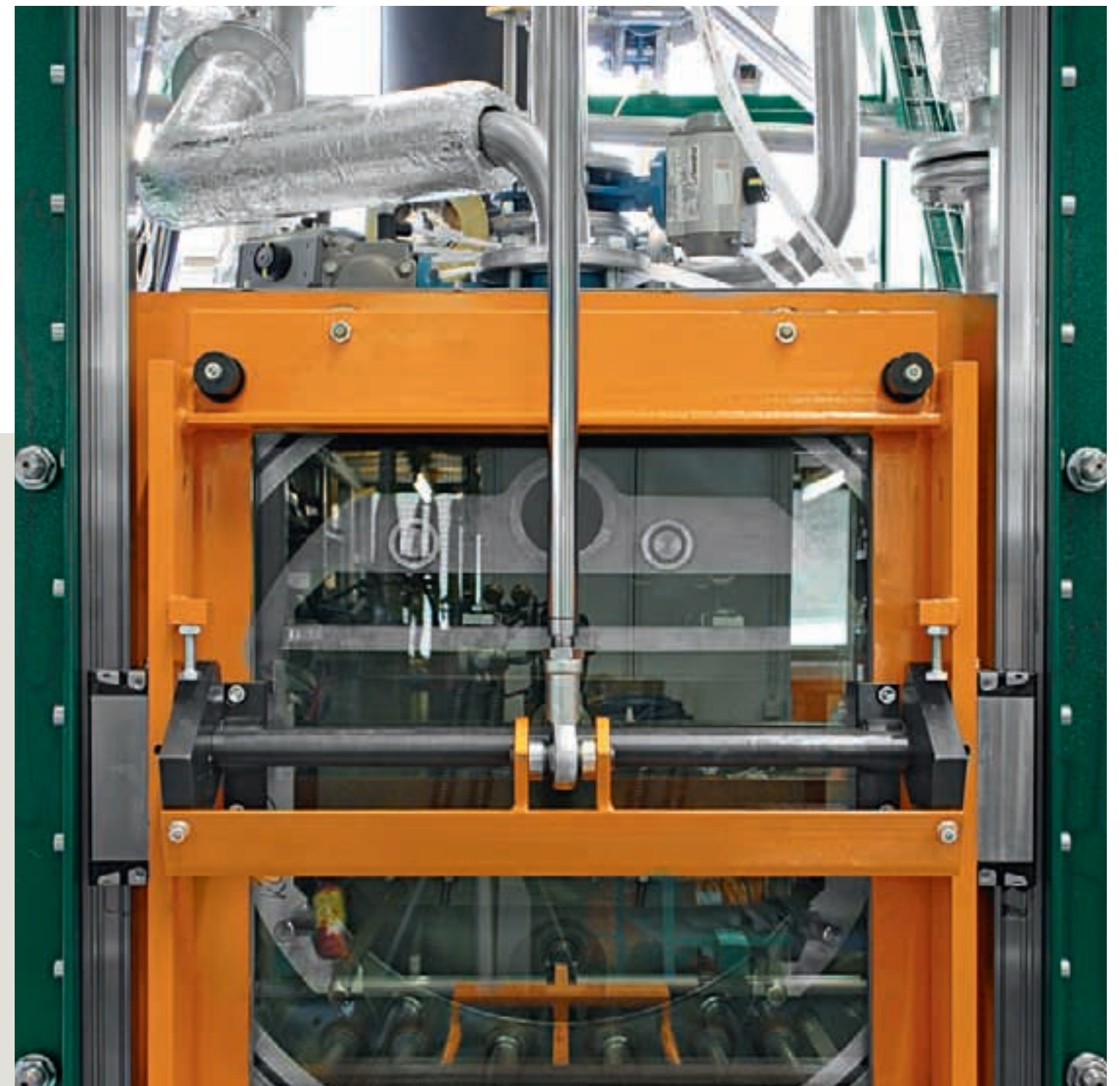
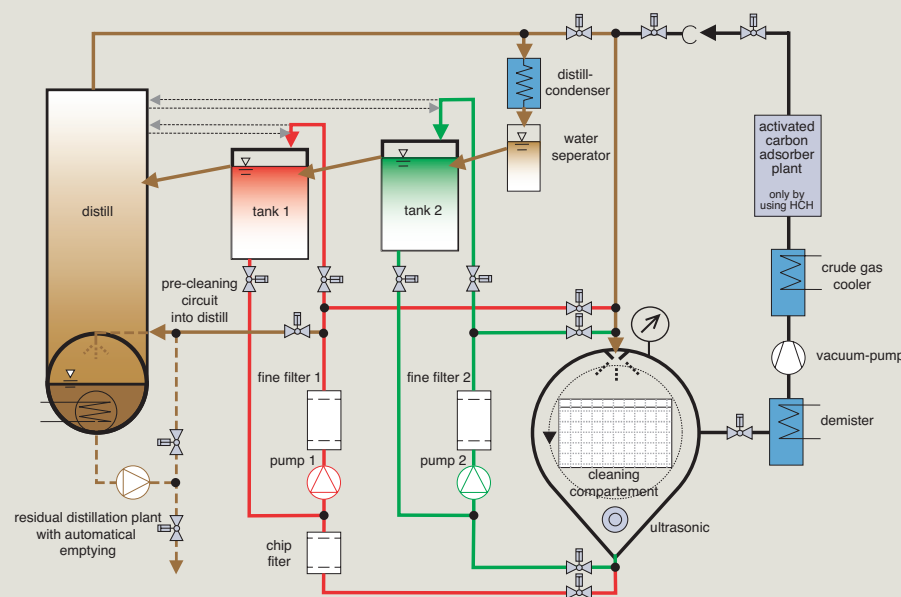
MULTICLEAN-F cleaning systems are ideal solutions if you have to clean milled, stamped, polished or ground parts that are heavily coated with oil or grease and the following features are especially important:

- ▶ fully automated operation
- ▶ maximum cleaning quality
- ▶ high environmental compatibility
- ▶ smooth solvent distillation
- ▶ low energy and operational costs

With a MULTICLEAN-F solution you are ensured a hermetically closed plant that can selectively be operated with perchloroethylene or as an alternative with non-halogen solvents or modified alcohols.

The most important advantages of the MULTICLEAN-F system:

- ▶ Process cycle completely under vacuum – including self-monitoring for leaks
- ▶ Special pre-cleaning cycle: Rinses already in the first step the bulk of the adherent contaminations into the distillery
- ▶ Outstanding parts cleaning by surge flooding across the entire length of the process chamber
- ▶ Spray or immersion cleaning with full-stream filtration, circular pressure flushing and/or ultrasonics
- ▶ Degreasing with solvent vapor under vacuum
- ▶ Obligatory vacuum drying



Get rid of grit and dirt!

You have the task of cleaning parts perfectly that are coated with emulsions – for example cast metal after the milling process. Then this may be the perfect solution for you:

MULTICLEAN-S – Precision cleaning with water-based media.

MULTICLEAN-S cleaning systems for water-based media are employed everywhere where you cannot do without these features:

- » maximal cleaning quality
- » reliable plant equipment
- » minimal heat loss because closed system
- » circulation of all media with long fluid life cycle

Depending on the required cleaning process and the parts throughput, MULTICLEAN-S cleaning systems can be delivered as single chamber or as multi-chamber plants with split cleaning processes.

The most important advantages of the MULTICLEAN-S system:

- » Flooding the process chamber by all-side spraying system
Alternative: Gentle flooding by gravitation
- » Spray or immersion cleaning with full-stream filtration, circular pressure flushing and/or ultrasonics
- » Consistent separation of the circuits of all media
- » Drying as needed by hot air, vacuum, infrared or in combination
- » Water treatment systems individually configured to your requirements
- » Multi-chamber version as option: Especially recommended for high parts throughput or for spatial separation of contaminated and clean side for extreme cleanliness requirements

Standard plant type	Basket dimensions	Charge weight	Throughput
Multiclean-0	370 x 220 x 200 mm	max. 25 kg	4 - 12 charges/h
Multiclean-1	530 x 320 x 200 mm	max. 80 kg	4 - 12 charges/h
Multiclean-2	670 x 480 x 300 mm	max. 150 kg	4 - 12 charges/h
Multiclean-3	2 x 670 x 480 x 300 mm	max. 300 kg	4 - 10 charges/h

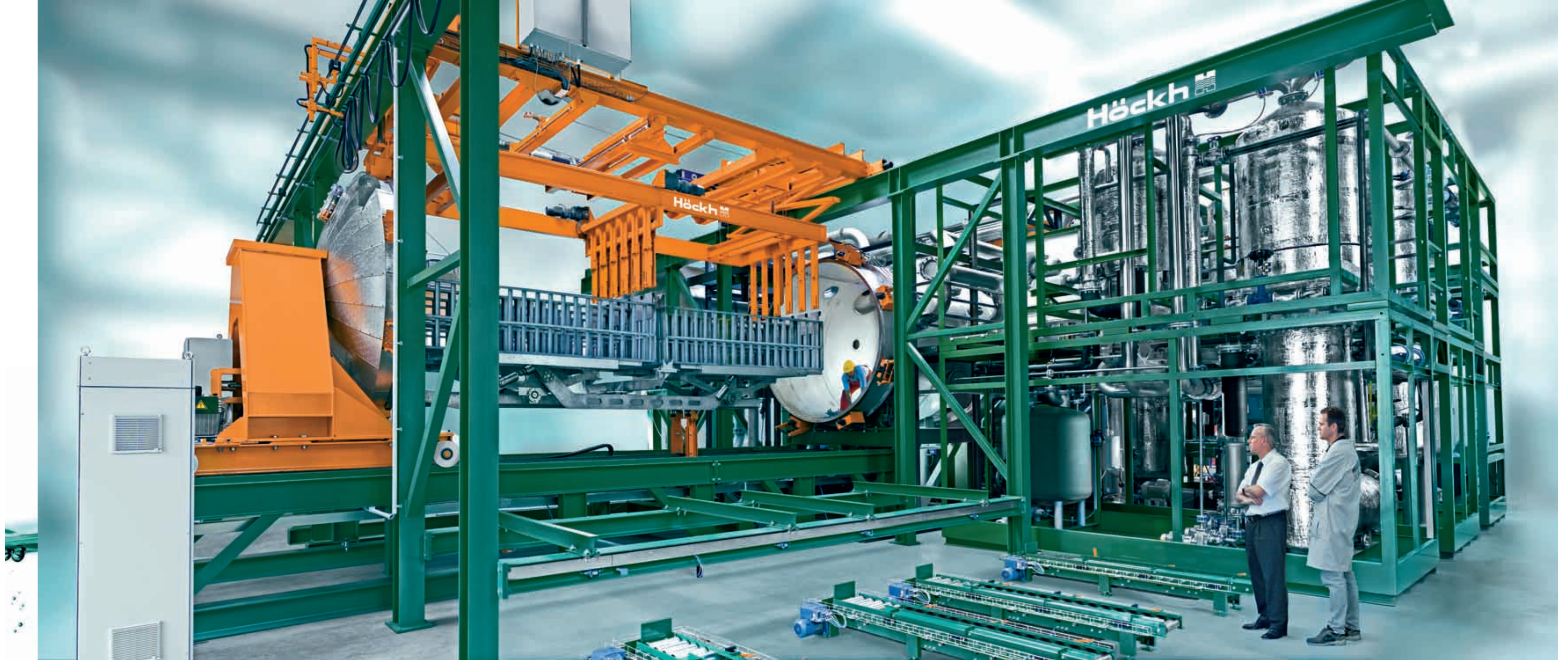
Further manufactured sizes upon request



In case space conditions are tight at the installation site: maintenance access by rolling shutters



Fully automatic loading by multi-tracked roller conveyor



*Vacuum plant Multiclean-6-3-F for cleaning of large-format fin heat exchangers.
Charges size: 6,250 x 1,820 x 1,600 mm. Charge weight: 3,500 kg. Solvent fill volume: 60,000 litres.*

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Water-based multi-chamber plant with split process for high throughputs



Double-chamber solvent plant with fast 3-axis gantry

The perfect solution – for all!

You cannot find the solution you need for your individual requirements in our range of standard plants? Then just give us a call and tell us about your cleaning problem. You can rely on that: We will find the appropriate concept for you!

MULTICLEAN special plants. Made to order, customer-specific problem solutions for amongst other things:

- » the cleaning of fine capillary components such as ballpoint pen tips, spinning nozzles, fin heat exchangers
- » the degreasing of double-walled, deep-drawing encasings and other complex components
- » the preparation of ultrapure surfaces, e.g. for medical and pharmaceutical equipment
- » complex conveying systems, such as across corner, in line or with integrated lift-tilt stations
- » charge formats that are non-standard: grid boxes, pipe bundles, special palettes
- » the fully automated discharge of enormous amounts of dirt and oil brought in



Höckh-WDW – the industry solution for cans and sleeves.

- » More than 150 Höckh plants of this type are in operation around the world for fully automated cleaning of aerosol cans and similar rotation-symmetrical hollow containers. Usually in 3-shift operations, almost always integrated in high-output production lines and with a cycle time of up to 350 parts per minute.
- » Their scope of application encompasses for instance the interior and exterior cleaning of cold-extrusion aluminium aerosol cans before the coating. Or the preparation of ultrapure surfaces in and on pharmaceutical containers made of stainless steel.
- » In addition to multi-staged, water-based spray cleaning with subsequent hot air drying, immersion processes with ultrasonics or solution-based cleaning stages are also employed in special applications.



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Proven technologies for all industries.

Detailed information on our comprehensive manufacturing program for a range of industries can be found on our Internet site at www.hoeckh.com. Or better yet: Gather information in an in-depth consultation on the ideal solution for you. Give us a call.

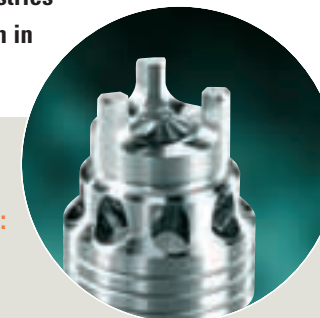
MULTICLEAN plants can be found in corporations with these machining processes:

- » Turning and milling ①
- » Machining of pressure and fine casting ②
- » Grinding and polishing ③
- » Stamping and bending ④
- » Hot and cold shaping ⑤
- » Hardening
- » Joining

Our customers come from the following industries for instance:

- » Machine construction
- » Automotive
- » Aerospace
- » Electrical engineering
- » Medical engineering
- » Controls and instruments industry
- » Aerosol can industry ⑥

We are confident: Based on the innovative modular system of the MULTICLEAN model series we will find the ideal solution for your requirements. We look forward to your challenge.



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