

THE TWIN TAS

Parts cleaning systems from HEMO.
Excellent technologies in double pack.

HEMO GmbH: Fusion for a pioneering future.



Innovative cleaning with solvents and hybrid processes.

The two well-known manufacturers of parts cleaning systems EMO Oberflächentechnik and HÖSEL now trade under the name HEMO GmbH. The merger of the two companies to form one of the world's largest suppliers was accompanied by an investment worth millions in an ultra-modern new building with generous office and production space and its own pilot plant.

The merger in 2017 is the last logical step in a close partnership that has lasted for decades and was characterized by joint, groundbreaking technological developments. The two owner-managed family companies have been working together in partnership since 1999 and founded the Surface Alliance in the same year, which has been consistently expanded over the past few years through company investments at home and abroad.

New company headquarters
of HEMO GmbH in Ötisheim



Parts cleaning plants for the use of solvents and for combined processes with solvents and aqueous media.

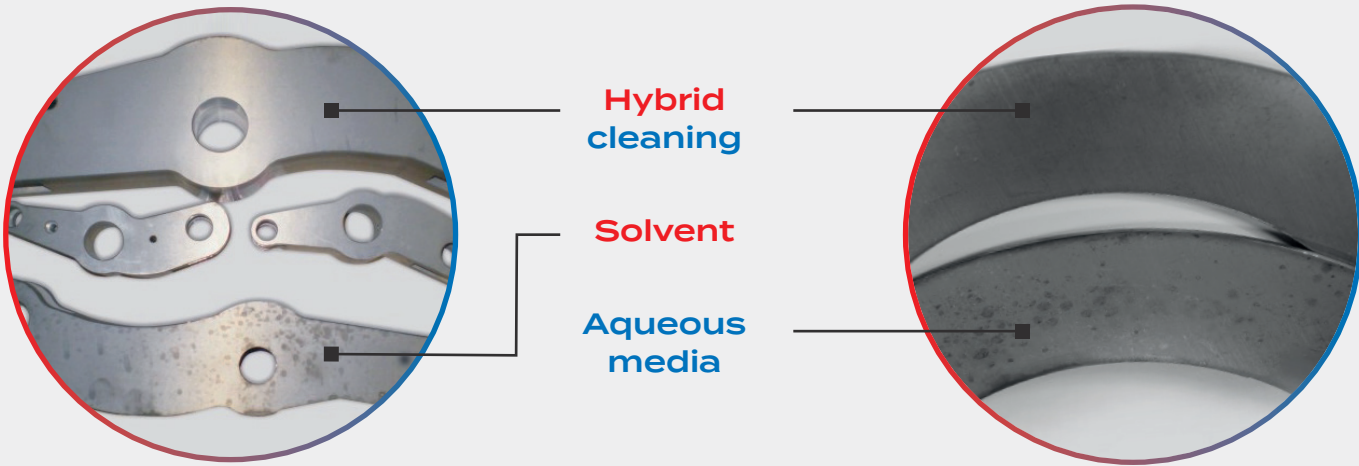
- between individual production steps
- before vacuum coating
- before and after heat treatment
- before final assembly in the clean room

Like dissolves like

The innovative solvent cleaning from HEMO sets new standards: A freely scalable cleaning process that offers new possibilities between the classic use of solvents or

aqueous cleaners in separate plants. Fast, stain-free and suitable for both organic and inorganic soiling - that's HEMO.

Organic contaminants (non-polar / non-water soluble) e.g.: oil/grease/wax/petroleum	Inorganic contaminants (polar / water soluble) e.g.: emulsion / salt / abrasion / fingerprints
To be cleaned with	
Chlorinated hydrocarbons (CHC) e.g. perchloroethylene, trichloroethylene	
Hydrocarbons (HC)	
Mixtures (MA + HC)	
Modified alcohols (MA)	
Aqueous cleaning	
BEYOND cleaning process	
Solvent	HYBRID cleaning
	Aqueous media



Uncompromising demands on absolute cleanliness



SOLVACS 3 cleaning system for fine and ultra-fine cleaning.



Easy integration

HEMO has gained experience in special equipment engineering and creates tailored compact cleaning systems which exactly meet customer specifications. User benefits: easy integration, fast commissioning, optimised space requirements, design of special programs and processes, maximum efficiency.



Efficient operation

The cleaning agents are circulated in the system without nearly any losses. Continuous care of the cleaning fluids by means of filtration and distillation provides unlimited service life and ensures economic and environmentally compatible operation.



Flexible loading

Based on the customer request, the working chamber is loaded automatically and/or manually. Connection to all common loading or discharging equipment as well as process control systems may easily be implemented.



Easy upgrade or retrofit

The requirements in industrial parts cleaning may rapidly change because of new products, environmental requirements or updated customer specifications.

In these cases, HEMO will use its long-term knowledge to support the customer and adapt the existing VAIOCS or SOLVACS systems to the new requirements.



Excellent energy efficiency

The energy efficient design of the entire system including consistent heat insulation of tanks and piping systems, sophisticated heat recovery, automatic standby modes and many other detail solutions sets the benchmark with regard to energy efficiency.



Technical cleanliness of components and systems

Residues on components of all kinds can quickly become the proverbial sand in the gearbox. With innovative cleaning technology, our systems ensure maximum cleanliness. Because admittedly - „nothing“ does not exist in this context. With the modern testing and analysis technology available to us, even the smallest particles can be detected. With innovative standard systems and individually adapted system solutions, we meet the highest cleanliness requirements of precision part manufacturers, for example in the automotive industry, aerospace, medical technology, precision mechanics and the electrical and electronics industries.



Quality down to the last detail

Thanks to the use of first-class components from German production, we guarantee certified quality; quality that is reflected in the well thought-out design of every system in terms of functionality and ease of maintenance.



Consistent service offering

In addition to the plant business, HEMO offers a comprehensive service package for all aspects of industrial parts cleaning. The comprehensive range of services extends from consulting and service, customer service and training to residual dirt regulations in the in-house laboratory.



Effective consultancy

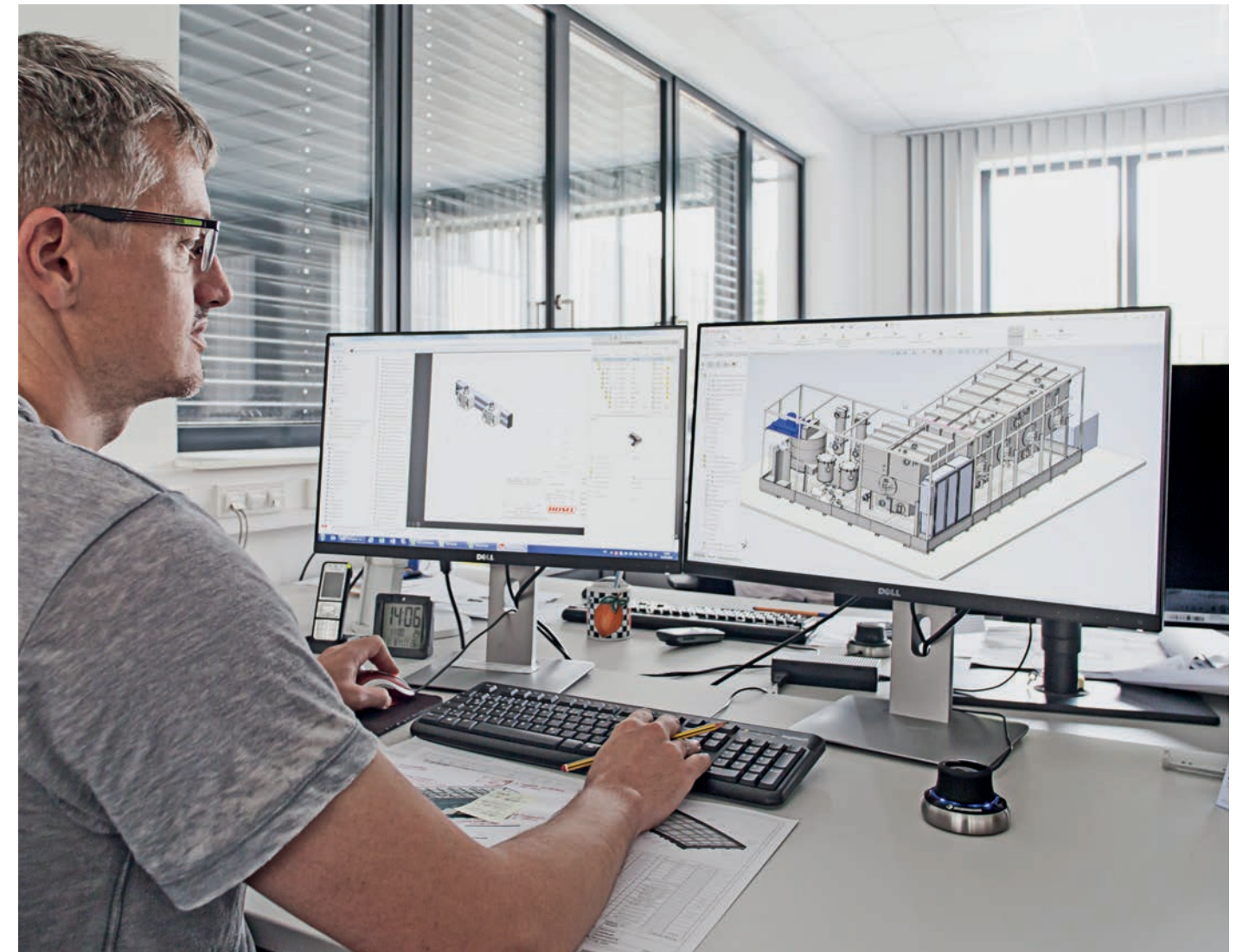
Our range of services includes intensive customer consulting for customized solutions as well as project planning, production and installation of the cleaning systems, maintenance and supply of replacement parts.

Customer consultancy ranges from a needs analysis onsite, right up to the development of a customized solution. Conducting practical cleaning tests in the early stages, including the evaluation and reporting of the results in our own residue laboratory, ensures that you get a proper matched solution for your exact needs.

Most modern cleaning systems according to customer requirements



SOLVACS S with 3 cleaning chambers for preliminary cleaning, hybrid cleaning and conservation.



Innovative technologies for absolute cleanliness.

The VAIOCS process was already developed and patented in the mid-1990s. This process, which was later patented, defines the current state of the art for the safe use of combustible solvents above their

flash point. By the time the patent expired in 2013, many well-known market players had made use of licenses for this process concept and continue to use it today.

The HYBRID technology represents a further groundbreaking development step. In order to be able to solve particularly demanding cleaning tasks even better, solvents and aqueous media are used in separate successive cleaning steps in a common treatment chamber.

The BEYOND process was introduced in 2016 as the latest development for the time being, for the use of solvents and aqueous media not in separate steps but in a mixture.

VAIOCS

With its patented VAIOCS technology for the application of hydrocarbon solvents and modified alcohols under vacuum at elevated temperatures, EMO has succeeded in revolutionizing industrial parts cleaning. VAIOCS stands for Vacuum Assisted Inorganic Organic Cleaning System and offers excellent cleaning results as well as fast and effective drying.

Since the treatment chamber of the plants is permanently surrounded by solvent vapour during operation and is therefore heated from the outside, the cleaning and drying effect is additionally improved.

The VAIOCS systems of the EMO brand are mainly used for bulky batches in hardening shops, e.g. in the aerospace industry, up to very large batches such as 30 m long tube bundles.



SOLVACS

The same procedure is used in the SOLVACS product series for the HÖSEL brand. SOLVACS is an abbreviation for SOLvent VACuum System. SOLVACS systems are mainly used for the fine and ultra-fine cleaning of precision parts and usually have comparatively compact dimensions.



VAIOCS Hybrid SOLVACS Hybrid

The parts to be cleaned are not always contaminated with only organic or inorganic material. There is frequently a combination of both types of contamination on the surfaces. In such cases the effort using conventional technology to achieve cleanliness in accordance with current industry standards is enormous.

This is precisely where the principle of hybrid cleaning comes in. The „combination solution“ in the truest sense of the word relies on single-stage or multi-stage aqueous cleaning in addition to the solvent - in separate cleaning steps, but in the same treatment chamber.

Properties of hybrid cleaning

- Combination of the advantages of organic solvents and inorganic aqueous media („like dissolves like“)

- Immersion cleaning (solvent and aqueous) and vapour degreasing (solvent)
- Optimum cleaning of organic and inorganic contamination
- Simultaneous operation of ultrasound (optional) and pressure circulation with increased temperature (Power-Sonic cleaning)
- High lifetime of the aqueous bath (amount of oil in solvent part)
- Solvent preservation even after aqueous cleaning
- Continuous distillation of the solvent
- Vacuum drying



VAIOCS Beyond SOLVACS Beyond

The new solvent cleaning system from HEMO gets to the heart of the matter: As a consistent further development of VAIOCS and SOLVACS technology, BEYOND offers new possibilities between the classic use of solvents or aqueous cleaners in separate systems and the combined application of the media in a HYBRID cleaning system.

BEYOND is extremely fast, naturally stain-free and suitable for both organic and inorganic soiling. Ideal for a large number of common tasks in parts cleaning, where every second counts and even stubborn soiling can be handled.



HEMO GmbH | Industriestraße 24 | D-75443 Ötisheim | Phone +49 7041 93 74 00
www.hemo-gmbh.de

International presence:
www.surface-alliance.de