



NEWS

spring/summer 2014



cleaning your world

Cleaning and sterilisation for Döhler Group **3**



New wash bay opened at Remia **4**



Saigon Newport Corporation takes a big step forward **10**



INTRODUCTION

Gröninger Cleaning Systems has always considered the transport and logistics sector as an important target group. Not only for its products and services such as tank cleaning and ISO tank container cleaning, but also for its cleaning installations for trucks and heavy equipment.

In addition Gröninger develops a range of products and systems specifically for the industry, including the food, non-food, metal and chemical industry.

In many cases this involves the implementation of multi-purpose and customised cleaning installations designed specifically for the client. Gröninger goes far beyond the standard and always thinks outside the box. Gröninger offers a standard products range (i.e. own products and Nilfisk ALTO machines), but experience shows that one solution doesn't

fit all. Gröninger's real strength lies in its mix of expertise, experience, technical innovation and creativity, which forms the basis for the development of extremely reliable technical installations. These provide the solution to many cleaning issues. In this newsletter, Jaap Schokker (Account Manager Industry) will explain in further detail how Gröninger approaches its industry projects, and in particular its applications. To conclude this issue a number of innovative tank cleaning projects are reviewed.

On the new website www.groninger.eu it is possible to find an overview of a detailed range of the company's equipment applications, products and services together with contact details and a contact form.

The Gröninger Team

Jaap Schokker talking about industry projects

2



"We receive special requests on a daily basis through our website and agents but also from our existing customers, some of whom we have been working with for years. We

like to have initial discussions with the client in order to fully understand the cleaning issue in terms of size, nature and complexity.

This is why we speak with all parties involved, including the people in the workplace. If appropriate, I will be joined by a Gröninger engineer. A complex or totally new situation may require a 3D engineering proposal. The cost of which will be deducted from the total cost if a contract is signed. Often though, a detailed technical proposal is sufficient. I have been working at Gröninger for the past 8 years and can only remember a few situations where a suitable solution hadn't been found."

Jaap continues "When a project has been agreed, it will be handed over to the engineering department where a project manager and project supervisor are appointed. The project supervisor has all the practical knowledge and experience and is crucial to the project from start through to completion. Of course I also stay in close contact with the project team, our service department and the customer." 🇳🇱





Fully automated installation for cleaning and sterilisation for **Döhler Group in Limeira**

3

The Döhler Group produces and supplies natural ingredients, ingredient systems and integrated solutions for the food and beverage industry. This includes fruit concentrates, juice concentrates, fruit preparations, raw materials for beverages and blends and compounds as well as emulsions, flavourings and colourings. With Darmstadt (D) being its home base, the company operates from several production locations and sales offices around the world.

In Limeira (BRA) Döhler produces fruit juice concentrates for the South American market. These are transported to clients in 800 litre stainless steel food containers. After use, these containers are returned dirty.

With the number of containers in circulation growing fast, the Döhler Group decided to invest in a professional, fully

automated installation for cleaning and sterilisation. Gröninger helped to design and implement this solution. The containers are cleaned automatically both on the inside and the outside in a stainless steel wash booth. Gröninger does this in accordance with current standards in

the food industry. Subsequently they are sterilized to a standard that means that they are ready to be reused. The system completed manufacturing in Schiedam, where extensive factory acceptance tests (FAT) took place before sending it as components to Limeira to be reassembled. 🇳🇱



3D design

Fully automated cleaning and drying tunnel for ODS in Barendrecht

ODS in Barendrecht (NL) is part of Klöckner & Co SE and delivers a wide range of steel, non-corroding products and materials for the construction industry, such as stainless steel pipes, stainless steel plates, bars, profiles, hollow sections etc.

The warehouse in Barendrecht has recently been equipped with a fully automated coating installation for steel

pipes, profiles and hollow sections. This treats the steel profiles in the below processes:

- Cleaning (degreasing) and drying
- Blasting
- Heating up to 40 °C
- Spraying with protective coatings

The products are prepared to maximise corrosion prevention which results in an especially high standard of service and



end product for the customer.

Gröninger developed, delivered and assembled the cleaning and drying tunnel. The automated wash tunnel in which the hollow sections are first cleaned uses a degreasing agent and water recirculation (60 °C). The product is then completely dried in the tunnel using so-called 'air knives'. 🇳🇱



3D design

4

New wash bay opened at Remia

Remia CV in Den Dolder (NL), producer of margarines and sauces, recently installed a completely new wash bay. At the Remia factory a multitude of packaging is used and cleaned on a daily basis, including 1,000 litre containers for mayonnaise and sauces, buckets, pallets, product totes, barrels and trolleys.

In 2013, a joint Remia-Gröninger team did an analysis of the packaging production line and its use of water and energy. This served as a basis to design an entire wash bay with (new) cleaning equipment and systems.

The wash bay has been cleverly divided into a 'dirty packaging side' and a 'clean packaging side' and is fully equipped according to the latest requirements in the food industry.

All packaging is now automatically and professionally cleaned using a cleaning booth, a pallet washer, a bucket cleaning unit and a cleaning installation for totes and trolleys. 🇳🇱



3D design

Unique filter cleaning booth for Sonneborn

Difficult and dirty job now made easy

Sonneborn Refined Products started using a cleaning booth to wash filter plates. The production plant in Amsterdam (NL) is involved in the refining of various types of waxes and mineral oils. The production process makes intensive use of various types of filter plates, which must be cleaned regularly. Previously, this was done by hand, a laborious and expensive task that presented quite a few drawbacks. This is why Sonneborn recently installed a fully automated filter cleaning booth from Gröninger. Manufacturers in the industry sector now believe this development sets a new standard in this production process. The cleaning booth offers several important advantages. This includes an increased life span of expensive filter plates, the ability to clean different types of filters, the high quality of cleaning and the advantage of having virtually no pollution in the factory. 🏭



5

New cleaning booth used at IFF Tilburg

IFF in Tilburg (NL), producer of flavours and fragrances, is once again using a Gröninger cleaning system. It is a wash bay that cleans the interior of stainless steel containers using a rotor jet, hot water and alkaline detergent.

Part of the high pressure system is located outside and therefore equipped with an antifreeze technical cabinet.

The installation is easy to use. The rotor jet is initially positioned in the container. For safety purposes, the system will not start before this step has been completed. The operator then presses a single button to start the fully automated washing process. 🏭



MainPro

Cleaning Software for Food

A Gröninger Cleaning installation combined with a MainPro cleaning software provides you with the so-called Cleaning Guard principle. It ensures that cleaning stations and their customers (carriers, shippers and end customers) are guaranteed a high quality of (tank) cleaning. Cleaning Guard is primarily important in the food industry, but also offers solutions for other industries. Adding different modules to MainPro Cleaning Base, such as Cleaning Guard, Invoicing, Webportal and Pre-announce, offers a solution that can be customised to any company's needs.

MainPro Cleaning Base is the user friendly software base that plays a pivotal role in every cleaning. The entire process - from acceptance to invoicing - is managed in one single application that controls client data, products and programs in one basic solution. It also offers the possibility to print ECD's, export data and the use as a tool for planning purposes. MainPro Cleaning Base can be linked to your financial administration and creates easy to read reports.

After each cleaning job, automated invoices are generated based on the specific data. The MainPro Invoicing module ensures the right link exists between this data and the different (price) agreements for the client. The correct VAT, payment terms and internal bookkeeping accounts are automatically selected. Cash payment will allow clients to pay without creating an account. 📄

6

The customer's view



Kees in 't Veen, owner of Tankcleaning Europoort is very pleased with the new system: "With Cleaning Guard we take note of the latest industry developments and really add value to our clients in the food sector.

Our Gröninger installation has always allowed us to set the input, i.e. the temperature, wash programs, detergent dosage etc. The Cleaning Guard is even more detailed as it checks afterwards if everything has been done appropriately. This continuous validation makes it 100% reliable. Rightly so, customers often have high standards, in view of their own reputation and improved control over all food chain processes. Cleaning Guard gives me the right tools to guarantee the quality and food safety for our customers in the part of the supply chain we are responsible for, i.e. the tank cleaning. Monitoring the quality should indeed lie where it belongs, with the tank cleaning station itself. As professionals, we stand behind our service and quality 100%."

Web portal
Pre-announce



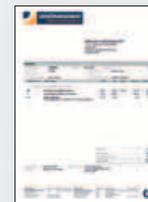
Acceptance

Every job starts with the acceptance phase, asking the driver to provide the necessary information and documentation. This information can be supplemented or verified by the transport company. The entire process is fully automated through the MainPro Cleaning Base. It is even possible to add modules that allow drivers to make a pre-announcement using a touch panel or the cleaning station's web portal.



Product database Program

Operational and human errors are minimised through automated programme selection and control via the PLC. An important part of the MainPro Cleaning Base that helps to select the program is the product database included in the software. The residue in the tank, the acceptor's experience and/or the shipper's or end user's requirements combines a pre-established program to the tank using an unique number.



Invoicing

Web portal

MainPro Cleaning Base

MainPro Cleaning Guard



Cleaning instruction

The program that is selected to clean the tank includes certain (safety) regulations and sets out the requirements, by giving instructions to the operator. This information is reproduced on the cleaning instruction. Entering the unique number on the control panel of the wash bay ensures the installation always starts the correct wash program (input control). As additional tasks, such as the cleaning of hoses and pipes, drying, etc. have already been established, the operator can effectively perform the cleaning.



Tankcleaning (Hardware, PLC)

The Cleaning Guard principle ensures the security of cleaning registering hardware information in the software. Data on (water) pressure, flow, dosage of detergents, disinfectant and temperature, etc., are recorded in the wash bay through special sensors and gauges (output control). This data is continuously validated through a link to the PLC. If one of the parameters doesn't correspond to the requirements or the pre-set values, the PLC will repeat the previous step in the program. Based on this principle, the quality and validations of the entire cleaning process using MainPro Cleaning Guard is guaranteed.



Validation – program steps



Validation – water pressure



Validation - dosage of detergents



Validation – temperature



Validation – water flow



Registration – extra tasks performed

“We are convinced that the responsibility of cleaning must lie where it belongs, at the tank cleaning station itself”

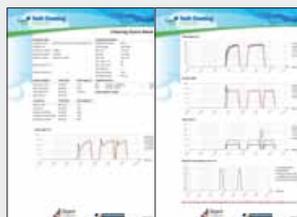
For more information see www.mainprocleaning.com



ECD

If the cleaning is performed adequately, the MainPro Cleaning Base issues an ECD (European Cleaning Document) to confirm the cleaning method

has been executed in accordance with the requirements. It is also possible to design customised certificates.



Cleaning Guard certificate

The values of the different parameters such as pressure, temperature, flow, etc., are constantly measured during the cleaning. A certificate will provide both graphic and numeric data.

The MainPro Cleaning Guard is proof that the cleaning has been completed as specified.

How to clean **cooling pipes** in the radar systems of naval ships

Thales Netherlands and Gröninger identified a solution

Thales Netherlands in Hengelo (NL) belongs to the French Thales Group and produces advanced radar installations and other sophisticated systems for the defence, security, communications and transport sectors.

Modern radar systems for naval ships are large energy consuming installations. They generate a lot of heat that needs cooling, which is done through cooling pipes that run throughout the radar installation.



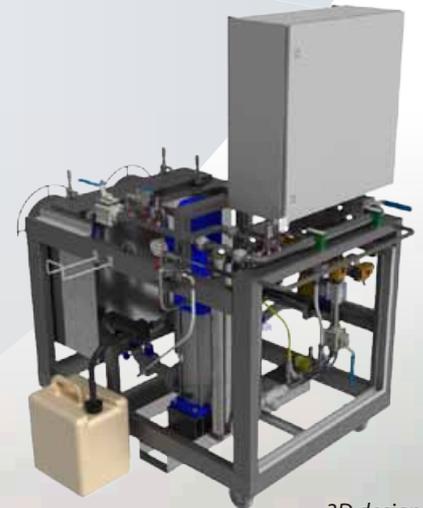
When a new radar system is being built, the cooling pipes are cleaned thoroughly before filling them with coolant. Dust, grime and lubricant etc.,

are removed completely from the pipe-work. Gröninger isn't an expert in rocket science, but knows a lot about cleaning techniques.

Thales Netherlands and Gröninger have jointly designed a cleaning unit, which is basically a small mobile CIP installation that uses demineralised water and a degreaser to rinse the pipes.

Additional features of the system include the options to 1) flush the cooling pipe, both from the inside and the outside 2) compress a pipe at 10 bar in order to detect leaks and 3) empty a pipe using compressed air.

The main advantage of this system is that all activities are now fully automated, where they were previously performed manually. Thales Netherlands has not only become faster but also more efficient. 🚩



3D design



Modern cleaning system for sauce containers at De Menken Keuken

Over the past 40 years, De Menken Keuken BV in Sassenheim (NL) has been producing and packaging salads, sauces and meats for bread and toast. The sauces De Menken Keuken produces include mayonnaise, garlic and honey-mustard. These are shipped in 1,000 litre containers which need to be cleaned after use.

“Never before have we cleaned our sauce containers this fast and good” said Leo van der Bent, head of TD at De Menken Keuken. In previous years, the TD of De Menken Keuken had gained a lot of



practical experience cleaning these types of sauce containers and had invited a number of suppliers to replace the old recirculation system. Gröninger was successful and the obvious choice to supply the new equipment.

De Menken Keuken now owns a cleaning system that works quickly (3.5 minutes per clean versus 20 minutes previously) and hygienically through the use of steam. The new system saves about three hours of cleaning per day as well as a significant amount of water. 🇳🇱

New wash bay for the city of Oosterhout

Last year, the city of Oosterhout (NL) completely renovated its waste collection station at the Wilhelminakanaal Oost, in Oosterhout. The city added a new recycling station and wash bay. The wash bay has been designed specifically to respond to the needs of the Council's varied fleet, which includes small vans, grass cutting vehicles and garbage trucks. The degree of soiling varies from light to heavy. Consequently, the functionality of the wash bay can be adjusted to use low pressure and high

volumes of water or high pressure and low volumes of water (cold/hot/detergent).

Several waste collection stations and recycling stations have been equipped with installations from Gröninger nationwide. Irado, Gröninger's neighbours in Schiedam, have been using such a system for some years. And successfully, as can be seen on a daily basis from Gröninger's premises! 🇳🇱

9

Food grade cleaning at Double Aces Food

For some years, Double Aces Food which is based in Ede (NL), has been producing various types of oriental sauces for the food industry. The sauces are packed in 1,000 litre containers. In recent years, the company has experienced a strong growth and so they started looking for a professional cleaning system to clean their containers.

Through 'word of mouth' Double Aces Food contacted Gröninger and after several talks on layout and technique of the installation, the building process began.

The company now owns a system that

cleans the containers using a fully automated wash program. The operator selects a program and the system performs a validated clean.



The Managing Director of Double Aces Food, Ad Weijnsfeld, says this is “a pleasant way of working” adding, “you simply press the button and it all runs automatically.”

Double Aces Food can now show its clients that the new installation is working in accordance with the latest food standards. Last but not least, significant savings have been made on the number of working hours and the use of resources such as water and detergents. 🇳🇱

3D design



10

Saigon Newport Corporation (VN) takes a big step forward

Since its inception in 1989, Saigon Newport Corporation (SNC) has become the largest container terminal operator in Vietnam. Besides logistics, SNC is active in real estate, construction and multimodal transport. About 50% of all containers entering or leaving Vietnam are handled by SNC.

To meet growing demand, modern tank cleaning operations were installed mid 2013, which saw the first tank cleaning installation in Ho Chi Minh City. The cleaning of Saigon Newport

Corporation mainly focuses on tank containers. The Gröninger installation supplies cleaning as well as water treatment. Water is purified through a DAF (Dissolved Air Flotation) unit and discharged for further treatment. The system has been built in containers. As a result, the local commissioning time was significantly reduced. 🚧

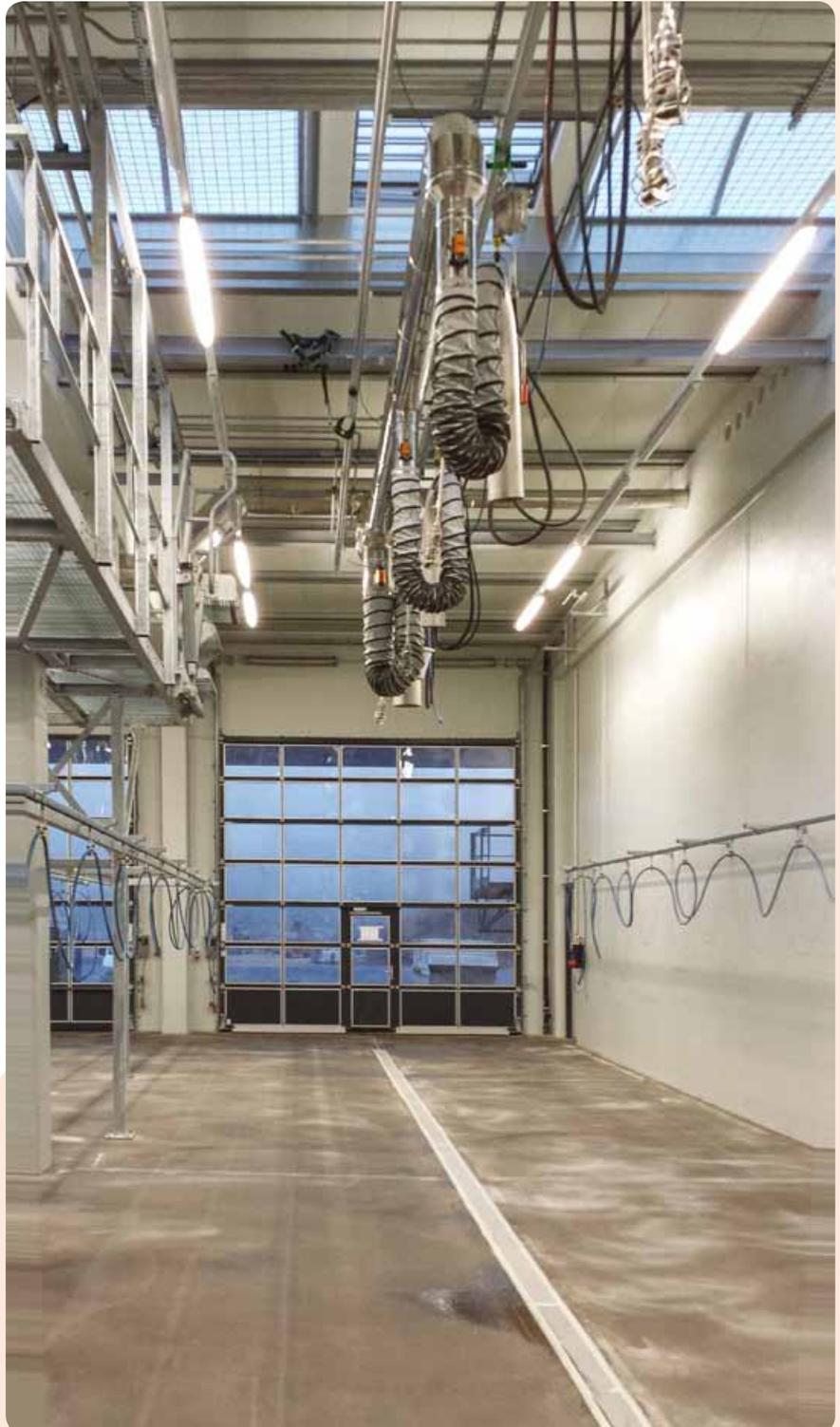


Köbrunner in Regau is ready for the future

The Köbrunner family business has been in food transportation for about 70 years and considers reliability, flexibility and hygiene of major importance. With this as a starting point and focusing on the further development of the company, it was decided in 2013 that a new tank cleaning installation for the food industry would be built at the new Regau location. The project has been completed in collaboration with Gröninger, resulting in an ultra-modern tank cleaning installation with the necessary technical innovations.

The installation consists of two cleaning tracks with five rotor jets, each of which can be used alternately. Geothermal heat is used to provide the supply of hot water that warms the rinse water to up to 50 - 60°C. A steam generator further provides heating of up to 90 °C. The high pressure pumps can be supplied with water up to a temperature of 90 °C. A special pump configuration, newly developed by the manufacturer, ensures water supply at such temperatures. A low pressure control valve maintains the temperature between 10 °C and 90° C, depending on the required temperature in the wash cycle. The cleaning installation is equipped with spray guns, cleaning system for hoses, airline cleaning, opportunities to steam and disinfect and fall protection to take complete care of the entire wash process.

The used rinsing water is purified through a flotation unit which has also been delivered by Gröninger. Köbrunner also uses Cleaning Guard, which has been discussed elsewhere in this newsletter. With the newly developed business location, Köbrunner is ready for the future. 🇦🇹



News items

Gröninger goes India

Since September 2013 Amfico Agencies Pvt. Ltd. has been appointed as an official agent for the Indian subcontinent. In 2010/2011 Gröninger first started working in India with deliveries to Fourcee. Pictured on the photo from left to right: Joost Kasbergen (Group business development manager Gröninger), Farhad K. Cooper (Managing Director Amfico), Lindsey Wallace (Director Gröninger Asia) and Henk Klein (CEO Gröninger). Last November, to kick-off activities in India, Gröninger participated in the CTL (Cargo, Transport and Logistics) Expo & Conference in Mumbai. The reactions of



clients and prospects show that Gröninger systems addresses clear needs in India.



With the appointment of Amfico and our own subsidiary in Singapore, managed by Lindsey Wallace, our market share in Asia has improved significantly.

Gröninger keeps investing in future relationships and customers in this important region. Practice shows that each market needs its own long-term approach with preferably local contact points. Gröninger intends to expand the network step by step in the coming years.

DVTI Hausmesse in Hürth (D)

On March 13th, the annual meeting of the DVTI, the German trade association for tank cleaning companies took place. The DVTI has now been in existence for 10 years and is a critical link for tank cleaning operators, the government, certification bodies and of course clients and shippers.

This annual meeting included a 'Hausmesse', where several of the industry-related exhibitors were able to showcase their products and services to the association members present. Being a preferred supply partner to many German tank cleaning operators, Gröninger was also able to profile its product range. During the day several meetings took place that promise to show encouraging future potential.



Ongoing projects

Tank cleaning

STAG - Bludenz (AT)

Stolt - Moerdijk (NL)

Globe - Jubail (KSA)

BSAT - Minsk (BY)

OTT - Alblisserdam (NL)

Eco Chem - Tambov (RF)

In-plant and IBC cleaning

Döhler - Moscow (RF)

IFF - Tilburg (NL)



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