



**GRÖNINGER**  
Cleaning Systems

Cleaning systems

# NEWS

2017 - 1



**cleaning  
your  
wörl**

70 years  
of innovation

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State-of-the-art  
chemical  
logistics park

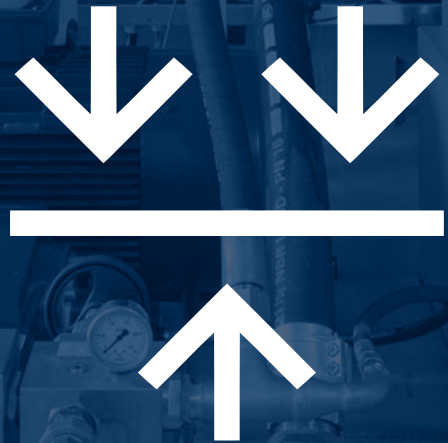
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World's first  
food wash bay  
at 200 bar

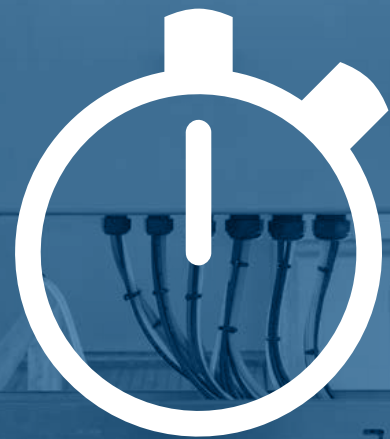
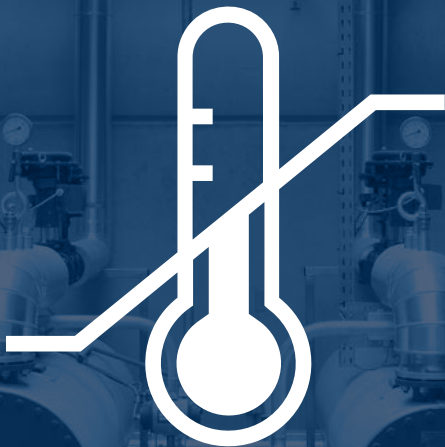
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**GRÖNINGER**  
Cleaning Systems

**70 YEARS INNOVATION**





GRÖNINGER CLEANING SYSTEMS 1947-2017

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## 70 years of innovation

**In 2017 Gröninger will be celebrating its 70<sup>th</sup> anniversary. In 1947 the company was founded as Gröninger Shipping and Trading Company and renamed Gröninger Cleaning Systems in 2004, to better reflect its core business: cleaning. The company's activity in (high pressure) cleaning systems dates back for over 50 years.**

Despite its many years of existence Gröninger remains an energetic, creative and innovative company when it comes to cleaning systems. This newsletter focusses on some recent projects Gröninger undertook in the sectors of transport & logistics, manufacturing industry, shipping & offshore and in the waste collection & treatment industry.

### Industry developments

In 2008 Gröninger built the first cleaning booth for IBCs and stainless steel product containers. Since then many booths have found their way to a variety of customers. Based on operational experiences, new insights and current engineering standards Gröninger in 2016 decided to completely re-engineer the booth, which has resulted in a new state-of-the-art design. The first new Gröninger Container Cleaning Booth was delivered to DMK, one of the largest dairy companies in Europe. All future cleaning booths will be based on this new modular platform with specific customer requirements able to be incorporated. At the moment three booths from this new series are on order.

### Tank cleaning developments

In the tank cleaning market Gröninger has become the partner of choice for turn-key tank cleaning projects. Since 2004 Gröninger expanded not only into the global marketplace but also into new areas of technology, like air purification and waste water treatment systems. Everything from the first litre of cold municipal water coming in until the last litre of water which is discharged into the municipal sewer system is now in Gröninger's scope. This newsletter shows several examples about what the scope of this technology means in practice.

### Thanks to our customers

Many of Gröninger technology developments can be traced back to requests and questions from customers, often from the leaders in their specific industry. Customer requirements bring many challenges. Gröninger's prime activity is to help out and to find solutions. John W. Gardner – a former United States Secretary of Health, Education, and Welfare – described it as follows: "We are all faced with a series of great opportunities – brilliantly disguised as insoluble problems." This is what drives Gröninger's innovations. 🚀

*The Gröninger Team*



RSA-TALKE - DUBAI (UAE)

## RSA-Talke's state-of-the-art chemical logistics park

**This new location combines all the services needed to handle, store, clean, repair and test tank containers. Apart from handling empty tanks, there is a large depot, which includes modern firefighting equipment protecting the area where loaded tanks are stored.**

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With the first stage completed, RSA-Talke is now ready to start operations. The second phase will include a dangerous goods warehouse and a drumming facility.

The cleaning system installed was designed by Gröninger. It features two drive-through lanes that are subdivided into four cleaning positions. The drive-through bays are the first of their kind in the UAE and especially designed to clean containers that are mounted on chassis. This eliminates the need for lift-on

and lift-off services and improves the turn-around time of the container. In addition the bays will eventually be used for tank containers from the depot.

Six multi-purpose positions are equipped for (latex) cleaning and heating. The containers are placed on a trolley and manoeuvred into position by a forklift. A special Gröninger Latex Circulation Unit is installed to circulate an alkaline based chemical to clean containers that are contaminated with latex and/or resins. Two positions are equipped with standard high pressure rotor jets. Four positions are dedicated for heating services where steam or electricity can be used. The steam system is controlled by a temperature sensor to protect the tank from overheating.

In order to comply with local waste water regulations and to reduce the consumption of water, which is a valuable commodity in the UAE, a comprehensive waste water treatment system was designed. The system includes various treatment stages, leading to water that can be partly reused in the cleaning system. 🇦🇪



*Gröninger and RSA-Talke staff at the opening celebrations*



MTR - MANNHEIM (DE)

# Modern cleaning of food tanks and road tankers

**In December 2016 food cleaning operations at MTR in Mannheim became operational. This new and efficient cleaning facility enables MTR to clean food road tankers and ISO tank containers to the highest quality standards.**

In 1969 MTR was founded by Dietrich Ehrhardt and has since developed to become an expert in the field of tanker and tank cleaning for the chemical and food industries. Since 2004 the company has been headed by Jost and Martina Ehrhardt. With this completely new food tank cleaning plant MTR will be able to respond to the growing demand for food cleaning. The new cleaning depot is just steps away from the old cleaning location which is now the only place where tanks and tankers are being cleaned with chemicals as previous cargo.



## Two tanks cleaned simultaneously

The cleaning equipment was chosen on the basis of many years of experience in the cleaning industry for both MTR and Gröninger. The result of this close relationship between all parties has delivered a modern and efficient plant in which two food trucks can be cleaned simultaneously. Rinsing water is collected, cooled down and treated so that it can be discharged into the sewer system. The energy released during the cooling process is used again for heating of the rinsing water.

## Automatic dosage and control

By making use of (100 bar) high pressure pumps even the most stubborn product residues can be cleaned consistent with the required quality standards. The product residues are able to be removed through access to unique wash programs which determine the appropriate temperatures and the dosage of chemicals. Various sensors monitor the cleaning process and the complete wash cycle can be electronically documented for audit purposes.



TRISTAR - DUBAI (UAE)

# Tristar Tank Cleaning opens

**Tristar is a UAE based, fully integrated, liquid logistics solutions provider, active in 15 countries throughout the Middle East and Africa. Tristar opened a Gröninger built cleaning station in Dubai in October 2016.**

This multifunctional facility emphasises Tristar's strategy to be an end-to-end logistics provider. The cleaning facility has two cleaning bays and is capable of cleaning both road tankers and ISO tank containers. The system has extensive steaming capabilities having been equipped with a wide-body steam boiler. In addition the cleaning station has the latest version Gröninger Latex Circulation Unit installed.

With the combination of all these technical features the Tristar Jebel Ali cleaning facility is ideally positioned to provide the widest possible range of cleaning services. The system is constructed on a modular basis and is completely containerised. The depot cleaning bays are completely covered, which provides a state-of-the-art professional appearance and safe working environment. The system is linked to Gröninger's remote diagnostic service and support system, which ensures the equipment maintains maximum up-time and optimises performance.



# The first food wash bay in the world with an operating pressure of 200 bar

**Since the summer of 2016 Cleaning Twente has had a new food wash bay. This new wash bay offers a unique service. It is the first food bay in the world with a working pressure of 200 bar.**

This particular desire came from the owner Evert Sanderman who said that there was a requirement for Cleaning Twente to clean on a daily basis, many tankers with chocolate and cocoa mass. With the new high pressure food bay these stubborn product residues can be removed faster than with the previous 100 bar installation.

In combination with steam and the proper selection of cleaning chemicals the cleaning can be carried out according to the most stringent requirements. After cleaning the food tank a disinfection step can be added to the cleaning program if specified by customer requirements. The food bay itself now is EFTCO Food and Cargill certified.

The new 200 bar pressure system was manufactured in a modified 20ft container. As a result the commissioning on site was completed very quickly. This was obviously very important, as the system down-time had to be kept to a minimum.

Groninger wish Evert and his team good luck and many successful cleanings with the new 200 bar equipment. 🇳🇱



3-D design





SAALEMÜHLE - ALSLEBEN (DE)

## Expanding operations with tank cleaning

**Ever since the Middle Ages a mill for processing grain has been located on the banks of the river Saale in Alsleben. “Saalemühle” started as a simple mill but now has become a modern producer with a capacity of over 1,300 tons of wheat per day.**

To handle the delivery of more than 100 different flour recipes to its customers Saalemühle has its own fleet of trucks. To ensure quality and flexibility the company has made the decision to build its own tank cleaning facility.

### Double food bay for internal tank cleaning

With the new cleaning operation Saalemühle has the ability to carry out internal cleanings on two bays. In the construction and setting up of the food wash bay, quality and reliability were viewed as the most important features. This has led to a system design that uses steam as well as central heating. As a result of this, the temperature is guaranteed, even if one of the two sources of heat is in need of maintenance. During the cleaning of the tanks there are a wide range of detergents and disinfectants available. After the cleaning program it is possible for the tanks to be dried with warm filtered air using a Gröninger DryPack. The entire cleaning process is recorded in “real-time” and controlled by a PLC. After completion of the disinfection an ATP test (a process of rapidly measuring actively growing micro-organisms) is performed to check if the tank is clean.

### Exclusion cross contamination and infection

A third washing bay is specially equipped for external cleaning. To avoid contamination this bay is completely separate from the internal cleaning bays. A Gröninger FoamPack is used to guarantee the application of perfect foam.

The collected washing water is pumped into buffer tanks where it is homogenized. In a flotation unit (DAF), the water is stripped of all solid suspended particles and the pH is neutralized. Sludge is collected in a sludge tank and the purified water is discharged into the sewer following a proper analysis. 📄





IEPERSE TRUCKWASH - IEPER (BE)

## Ieperse Truckwash moves into tank cleaning

**Unfortunately the Belgian Ieper is known for being at the centre point of a battle in World War 1. But 100 years later this West Flanders town is home to many of Belgium's backbone SMEs, such as Ieperse Truckwash.**

8 Founded in 2004 the company concentrated on truck washing, i.e. outside cleaning. The combination of the search for quality and an unrivalled entrepreneurial drive soon led to capacity challenges. Whilst preparing the hand-over to a new generation this family owned company decided to take a leap forward and move to a new location, which would offer both truck washing and tank cleaning.

A planning team was formed consisting of long-term regional partners and Gröninger. Civil works started in August 2016 and in record time a high-end one-stop-shop cleaning facility was built.

Ieperse Truckwash now has six truck wash bays and two tank cleaning bays with a full blown waste water treatment plant. The tank cleaning bays are each equipped with six rotor jets to either clean road tankers or ISO tank containers. Operating at 100 bar



and equipped with steaming points the tank cleaning bays are ideally suited for high-end food cleanings.

Future expansion has been taken into account in the design of the site. Within six months after the initial decision was taken, the first cleaning took place at the new location, showing the enthusiasm of this dynamic company. Gröninger is convinced that Ieperse Truckwash will be successful at its new location as it sets new cleaning standards in the West Flanders region. 🇳🇱

## Globally latex is cleaned w

**In recent months a number of Gröninger Latex Circulation Units have been commissioned. RSA-Talke and Tristar have acquired latex units as an integral part of their new cleaning facilities, but a number of new and existing customers have also started working with the Gröninger Latex Circulation Units.**

Austria (Roitham) based Lugmair Trading & Transport GmbH has been transporting latexes for years and are familiar with the challenges of cleaning. The company has its own fleet of road tankers and tank containers and has been operating a cleaning station for decades. Following Lugmair's request the Gröninger LA30 Latex Circulation Unit has been equipped with three rotor jets to be able to clean multiple compartment tanks. In addition the system has a pre-filter for taking out the larger latex parts in order to increase the lifetime of the chemical batch. The results in the first months of operation have been exceptionally encouraging.



HELA / LANFER - HAMM (DE)

## Fully refurbished tank cleaning

**Lanfer Logistik offer chemical and food transport services and they are also active in the tank cleaning business. The company has tank cleaning facilities at its headquarters in Meppen, but also operates facilities in Frankenthal, Salzbergen und Hamm, all under the name of "HeLa Tankwagenreinigung".**

In 2016 Gröninger received an order to completely modernise the tank cleaning plant in Hamm. This turn-key project included not only the cleaning systems but also the steam boiler, air purification and waste water treatment systems. The two new cleaning bays have 5 rotor jets each and are designed to clean road tankers and ISO tank containers. For the interior and exterior cleaning of IBCs a separate cleaning bay was established.

With the new facilities HeLa is fully equipped to clean tanks in a very efficient and effective way, while also keeping an eye on environmental issues. Modern, intelligent technology enables recovery of heat from the waste water and also the boiler exhaust gases. Pressure and temperature of the cleaning water can be selected based on the product residue and level of contamination in the tank. This guarantees the optimum wash program is selected for the cleaning process.

The waste water is collected, buffered and circulated to create a homogenous mixture. After the heat has

been recovered the waste water is further cleaned using Dissolved Air Flotation (DAF) technology. The waste water is then suitable for discharging in the communal waste water system. Sediment from the waste water is de-watered using a centrifuge, before shipment to an external incineration plant.

Steam from the new boiler, allows tanks to be both cleaned and heated. This can be done using either hot water or direct steam. In addition strict temperature control ensures the right heating operations at night and over weekends. 🇩🇪



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## With Gröninger Latex Circulation Units

DTS (Drensteinfurter Transport und Speditionen GmbH) is a high-end transport company that has been active in the logistics industry for decades. Located at the border of Germany's industrial heartland Ruhrgebiet the company is familiar with all the challenges of cleaning. After careful market research DTS decided to purchase a Gröninger LA30 Latex Circulation Unit that has been running since the summer of 2016. With this system DTS is capable of cleaning two latex tanks simultaneously. DTS has been able to dramatically reduce cleaning time and can in this way further improve the quality of service the company wanted to offer to its customers.

Leading tank container operator Stolt Tank Containers operates a fleet of 35,000 tank containers and is involved in 20 owned or JV depots globally. For a new activity in Jiangsu China, Stolt ordered yet another LA15, Gröninger's single bay Latex Circulation Unit. Stolt is now running four Gröninger Latex Circulation Units on three continents. The unit will be connected to Gröninger's remote diagnostics system and will without doubt also further contribute to Stolt's efficient handling of latex cleaning challenges. 🇩🇪





DMK - NEUBÖRGER (DE)

## Food container cleaning brought to the next level

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**With 26 locations in ten German regions and around 7,500 employees, the DMK GROUP is one of Germany's largest dairy companies, obtaining its raw milk from more than 8,300 active dairy farmers.**


The cooperative-based company headquartered in Zeven, Lower Saxony, processed around 6.7 billion kilos of milk in the year under review to make internationally recognised quality products for retailers, food manufacturers and bulk consumers. With a turnover of 4.6 billion euros, the DMK GROUP is also one of the leaders of the European dairy industry. DMK is present in more than 100 countries. The product range covers the spectrum from basic milk products and cheese through dairy ingredients for food manufacturing to baby food, ice cream and health products.

Gröninger recently delivered a latest design Container Cleaning Booth for Neubörger. DMK has a growing need at the Neubörger site to clean stainless steel food containers and plastic bag-in-box containers. The market is changing to smaller product deliveries so more and more food containers are being used. These containers are being returned partly contaminated. Because of the food safety requirements, it is very important that these containers are cleaned very effectively. After cleaning and before the containers are refilled a final sterilization step takes place.

The new Gröninger Container Cleaning Booth offers automatic product residue removal in the pre-cleaning phase with 100 bar high pressure water at 60° C. A conductivity measurement determines if all residual product is 100% removed. The next phase is automatic internal cleaning with 60° C water at 100 bar and with alkaline dosing. The rinsing water of the main cleaning phase is collected in a basin in the bottom of the booth and is subsequently

used for the external cleaning of the containers. The final cleaning phase uses pure municipal water.

An insulated 800 liter hot water tank is part of the system. Cold water is heated by a built-in 3 bar steam coil. Outdoor cleaning of valves and sticker removal takes place with a high pressure lance on a stainless steel hose reel at 100 bar. The Gröninger Container Cleaning Booth is pre-engineered to be used as inline cleaning booth in the future

Gröninger has a lot of experience in developing cleaning booths. In 2016 Gröninger decided to put all past experiences and new insights into a new state-of-the-art design. All future booths will be based on the new modular platform; specific requirements can be built in based on customer demands. At the moment three booths from the new series are on order. 





CHOCOLAT CALLIER - BROC (CH)

## Cleaning the right way for 'heaven's delight'

**The first things that comes to mind when the word Switzerland is mentioned are mountains and... chocolate. Maison Caillier is Switzerland's oldest chocolate brand and is still in existence.**

In 1818 François-Louis Cailler opened a grocery store in Vevey where also chocolate was sold. Starting in 1820 factory space was created in order to produce chocolate on a larger scale. Since then the Caillier brand has developed and flourished. In 1929 the brand merged into what is now one of the largest global food companies, Nestlé.

Nestlé's Caillier production facility in Broc (CH) operates according to the highest standards when it comes to product quality, manufacturing operations and food safety. In the plant many mobile stainless steel storage and production containers are in use. These containers have to be kept clean at all times. Gröninger was selected to provide a high quality cleaning system that functions according to validated cleaning procedures. Gröninger's references at other chocolate factories in Switzerland were a decisive factor in Caillier's decision making.

The system design consists of a CleanPack with integrated water buffer tank, high pressure pump, control cabinet, PLC and touch panel to manage integrated wash programs. Gröninger cleaning logging software stores data after every cleaning. The system offers an alkaline and disinfectant dosing. All hardware has food grade stainless steel cover panels. The interior cleaning of containers is done with a rotor jet. A separate high pressure pump feeds a spray gun for exterior cleaning.

The system was built in Rotterdam and prepared for plug-and-play installation in Broc. As a result no cleaning time was lost between replacing the old system and installing the new Gröninger unit. 🚧

VAN VLIET - NIEUWEGEIN - (NL)

## New Wheelie Bin and Drum Container cleaning system

**The Van Vliet Groep is a leading waste management company in the Netherlands and part of the multinational Shanks group. In March 2017 Gröninger commissioned a brand new container cleaning system for a wide range of small containers.**

One of the Van Vliet collection depots for various waste materials is located in Nieuwegein in the centre of the Netherlands. After emptying the various containers Van Vliet is now equipped to clean these containers in three new washing bays. Before Van Vliet did not carry out any cleanings. This meant that the containers had to be replaced frequently at relatively high cost. The new environmentally friendly system is using 100% rainwater collected from the roof of the Van Vliet facilities.

### Gröninger provided:

- a Drum Cleaning Station
- a ASP/Wheelie Bin Cleaning Station
- an Extra-Large (XL) Cleaning Booth

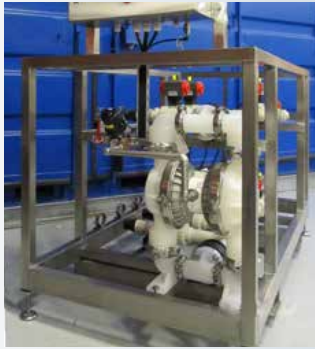
The stations are equipped with automatic washing programs. In the Cleaning Booth all kinds of items are cleaned using a high pressure gun. The system works with high pressure, hot water and cleaning detergents. Gröninger has supplied many Shank subsidiaries with equipment. Van Vliet is the latest addition and proud operator of a top class cleaning facility. 🚧



*The three cleaning stations under construction at the Gröninger Rotterdam plant*

## NEWS IN BRIEF

### Gröninger equipment developed for container maintenance at Barcelona Container Depot Services Barcelona – (ES)



Tank container depots often offer a variety of services such as logistics, storage, handling, cleaning and maintenance and repairs. Gröninger's Spanish customer, Barcelona Container Depot Services operates a tank cleaning station in the port of Barcelona situated in the Zona Franca on the premises of Progeco España and Martainer.

In every depot where maintenance and repair on ISO tanks takes place a so called pickling & passivating (P&P) treatment can very useful. Due to the increased depot activities of Barcelona Container Depot Services

the company has also experienced increased demand for P&P treatment. The company added service activities with a Gröninger P&P Circulation Unit.

### GP Groot Recycling – Heiloo (NL)

GP Groot recently purchased a custom made truck wash system from Gröninger. The system consists of a bottom washer, foam application unit, oscillating high pressure cleaning systems and a rinsing unit. Special vehicles like municipal waste trucks can now be thoroughly cleaned before they hit the road again.



### New food grade Drypack at Walter Rau – Neuss (DE)

Following a request from the food processing company Walter Rau, Gröninger has designed a special food grade DryPack. The unit is designed to dry IBCs before they are refilled with cargoes like vegetable oils. The components used are specifically selected and predominantly made of stainless steel 304/316 and food grade plastics. A food grade F7 filter and lubricants complete the configuration. The unit was built in a 20ft box container for plug-and-play installation at the customer site.



## Ongoing projects

ASM – Mjölby (SE)

Global Depot Solutions – Jubail (SA)

Döhler – Darmstadt (DE)

BTR – Bernburg (DE)

Stolt – Vado (IT)

Newport – Moerdijk (NL)

Eco Chem – Togliatti (RU)

Global-Talke – Zaragoza (ES)

TCE III – Europoort Rotterdam (NL)

Gold Bond - Ashdod (IL)

Klaeser - Hamburg (DE)



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