



GRÖNINGER
Cleaning Systems

NEWS

summer 2015



**cleaning
your
wörl**

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Containers



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CLEANING YOUR WORLD

2015 promises to be an exciting year for Gröninger.

Since 1972 Gröninger has been located in the Fokkerstraat in Schiedam, but on 1 July 2015 we will be moving to Overschieweg 111 in Rotterdam. Not a major step forward in terms of distance but one that is of significance for our business. The new building is twice as large and has a lot more showroom and office space. More importantly, it offers larger production facilities, a bigger warehouse for parts and a fenced outdoor area.

In March 2015 Gröninger Cleaning Systems joined forces with



DYNAJET GmbH, a leading German manufacturer of powerful and durable water jetting systems and accessories up to 3,000

bar, all of which complement the growing Gröninger product range perfectly.

A considerable number of Cleaning Guard software upgrades are scheduled for 2015. In recent years a significant amount of effort has been put into development of this tank cleaning software. Our client Tank Cleaning Europort played an important contributing role. As a company we feel we have been rewarded for our efforts and we are particularly proud to support our clients in delivering optimised services to their shippers. In October 2015 the system was accredited by SGF, a leading external party, showing that we are on the right track.

This newsletter will review the different types of projects with which the Gröninger Group has been involved. We wish you a pleasant read.

The Gröninger Team



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Modern silo truck cleaning at STAG Bludenz (AT)

STAG Staubguttransporte is a modern logistics service provider which focuses on (inter)national silo transportation and container trucking. Regionally STAG transports all kinds of construction materials such as sand, cement, clay, plaster, etc., while internationally the company aims to transport a much wider range of products.



The headquarters of STAG are located in Bludenz, where a wash bay has been in use for quite some time. Taking into consideration the more stringent requirements and their increased activities they decided early in 2014 to build an entirely new wash facility.

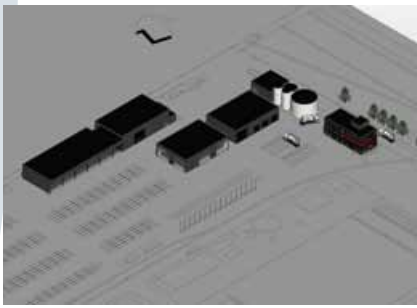
The first meetings between STAG and Gröninger date from 2007 with Italcombi in Sterzing (I), a STAG's subsidiary. Fully satisfied with the cleaning facilities

that Gröninger built in Sterzing, STAG decided to commission Gröninger with the installation of the Bludenz facility as well.

The new wash facility features two wash lanes and is specifically equipped for the cleaning of silo trucks. With the installation of six washing nozzles per lane no time is lost shifting nozzles. Rather than having just two fixed temperatures, the high-pressure pumps can be set to any temperature using temperature regulating valves, which results in a considerable energy cost saving for the company. To complete the cleaning cycle the silo is air-dried using filtered warm air.

Waste water is drained through gutters in the floor and is collected centrally through an oil and fat separator. Before being released into the sewer its pH is neutralised. The system is designed for the addition of a flotation unit at a later stage. The cleaning process will be controlled by the Gröninger supplied Depot Software.

Meanwhile, STAG has obtained SQAS certification and has become a member of VÖTS, which allows them to issue an ECD (European Cleaning Document) after each cleaning. 🇪🇺



New tank container depot for Stolt Tank Containers (STC) in Moerdijk (NL)

With more than 35,000 units in service STC's fleet of tank containers has been the largest in the world for many years. STC operates tank container depots throughout the world for the cleaning, storage, heating and repair services of these containers. The new depot in Moerdijk, will be without doubt seen as a the new flagship tank container facility.

Strategically located between Rotterdam and Antwerp the Moerdijk site provides STC with an ideal location for a service depot. The depot has three drive-through wash lanes for driver-accompanied vehicles; one lane specifically for food products and two lanes for chemical products. Containers from the depot

are lined up in rows of six and are (water) cleaned under high pressure at 100 or 200 bar in a separate cleaning bay. The site also has a bay for interior works (polishing and grinding), two additional bays for circulation cleaning (latex and resins) and two bays for outside cleaning.

The container temperature is maintained using steam, hot water or electricity. The temperature is measured inside the tanks and can be assessed by a read out in the operations office. This allows customers to stay informed about the current status in real time. 📊

Ecochem in Tambov (RU) provides tank cleaning that satisfies **the most modern standards**

In Russia the use of tank containers is gaining in popularity but only a limited number of cleaning stations are in use. Recently, Ecochem Plus Ltd joined this group of stations introducing state-of-the-art technology. The new cleaning facility in Tambov (RU) allows Ecochem to clean tankers, tank containers and IBCs utilising the latest standards.

Ecochem is a joint venture between Russian Pigment Ltd. and Ecochem B.V. (NL). The joint venture is intended to serve a rapidly developing market with the cleaning station. The opening took place in July 2014.

The heart of the facility comprises two 100 bar high-pressure pumps. These were built and tested in the Gröninger factory

along with the control cabinets and dosing

pumps. The close cooperation between Gröninger and local engineers ensured that the system and its commissioning on site were executed in the shortest possible time frame. The operations staff were successfully trained locally by Gröninger engineers, helped by the fact that the control software was written in Russian.

Programme adjustments can be made and potential faults resolved remotely through a network connection. At a later stage the depot will be enhanced by offering repairs and other depot services. 📊



At Bulkhaul in Fussgönheim (DE) **cleaning and repair** go hand in hand



Bulkhaul is a prominent Global Player in the tank transportation market. This position has been achieved through their commitment to the highest standards of service, quality and safety. Bulkhaul ensures the transportation of liquid chemicals in tank containers as well as powders and other materials in Bag in the Box containers takes place with maximum care and efficiency.

The company was founded in 1981 and operates from its headquarters in Middlesbrough (UK) and many other locations around the world. Bulkhaul's tank units in transit are regularly routed through the company's own workshops for monitoring and maintenance. The facilities in Fussgönheim, close to Mannheim (DE) are of key importance and have had significant capital invested to maximise the services the location offers. These services consist of preventive and regular testing, maintenance and repair. All Bulkhaul tanks -many of them self-built- are equipped with steam and/or electric heating systems. Such systems are tested to the client's requirements. Not only with regard to use and availability but especially for safety, quality and aesthetic presentation purposes. Bulkhaul's fleet of tanks ranges from 14,000 litres up to 35,000 litre capacity

tanks, to baffle tanks and multiple compartment tanks. Exterior cleaning and repair are intrinsically linked. This is where Gröninger can fulfil its role.

In the autumn of 2014 Gröninger was commissioned to supply various state-of-the-art technical equipment, including a large 2,900 kW boiler, a test lane for hydraulic high-pressure testing of tank containers, the set-up of six cleaning bays for tank containers cleaning including associated equipment (four heavy duty high-pressure pumps are installed) and an efficient circulation cleaning

unit. A new high-pressure system with separate water supply allows sixteen high-pressure spray guns to operate simultaneously. Gröninger also renovated the existing air purifier so that it complies with the latest legal German "TA Luft" requirements. A new water pre-treatment solution in the form of a flotation unit completed the project.

The installation of all systems was scheduled while existing operations remained fully functional. 🇩🇪



Fully automated cleaning facility for Döhler Group in Moscow

The Döhler Group produces and provides natural ingredients, ingredient systems and integrated solutions for the food and beverage industry. This includes fruit juice concentrates, fruit preparations, raw materials for beverages, blends and compounds as well as emulsions, flavours and colours.

Following an earlier commissioning in

Brazil Gröninger also manufactured a cleaning facility for the production site in Moscow (RU), where Döhler produces fruit juice concentrates for the Russian market. These are transported to clients in various stainless steel food containers. After use, these containers are returned dirty.

In accordance with current food safety standards in the food industry the



Production and transportation tanks are **spotlessly clean** at Chocolate Frey in Buchs (CH)

Chocolate Frey is a leading Swiss chocolate manufacturer with 900 employees. Chocolate Frey in Buchs chose a Gröninger's state-of-the-art high-pressure system for the cleaning of production and transportation tanks.

The system is designed to clean a wide variety of tanks, which were filled with chocolate, and included several washer nozzles and lids. The washer nozzles are powered by a central high-pressure unit providing both hot and cold water. The steam function, customised to Frey's requirements, offers an additional feature as it allows the larger portions of remaining residue of chocolate to melt quicker, ensuring a faster and better cleaning process.

During this process, detergent dosing can be selected for a faster cleaning process cycle and a better result. After cleaning, the tanks can be sprayed or rinsed with a disinfectant to kill any remaining bacteria.

All cleaning parameters are measured and collected during the cleaning process. The recorded data is subsequently processed in Chocolate Frey's database and linked to the container number. In this way the quality of the cleaning can be closely monitored, and as a result the quality of the chocolate as well. 🚩

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ng station for w (RU)

containers are cleaned automatically both on the inside and the outside in a stainless steel wash booth, ready to be reused. The system had been assembled in Schiedam and following the extensive Factory Acceptance Test was rebuilt in Moscow for final commissioning. 🚩





Focus on technology: tank container heating

Although heating tank containers is in most cases based on steam, this solution is not suitable for all products. The (chemical) properties of certain products means that heating becomes a critical process.

For example, the contact temperature of some products must not be too high in order to prevent burning or discoloration. In addition, too sharp a temperature rise may cause an exothermic reaction resulting in an explosion or causing the container to overflow.

A good alternative for heating containers gradually is to use hot water. From a central tank multiple containers can be heated to a pre-set temperature, with each container being equipped with a temperature probe. The whole system is linked to an SMS alarm module that advises of any potential faults.

In the past few months such heating systems have been delivered to HTC Antwerp (BE) and Stolt Tank Containers in Moerdijk (NL). 🚚

Focus on technology: Cleaning systems built into containers – always custom built

Gröninger is a pioneer in building cleaning equipment into containers. The first was delivered in 1991 to the transportation group Van der Laan (today part of Geodis) and has recently been replaced after more than twenty years by a larger and more modern descendant, also built into a container. In the last few years - and mainly for export purposes - many more systems have been built in 10FT, 20FT or 40FT, high cube, reefer or flat rack unit variants by Gröninger.

Two basic configurations exist: the technical container (that contains all the technical equipment) and the wash container (for the wash system itself).

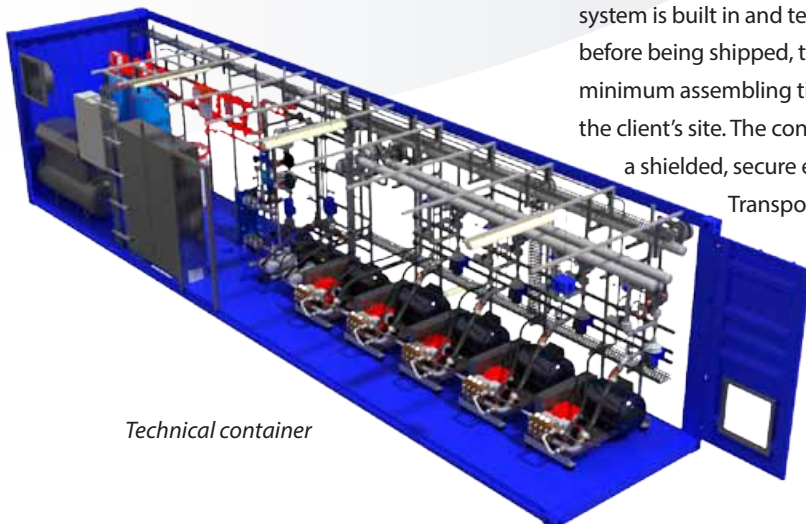


Wash container

The technical container consists solely of a technical room. An entire (tank) cleaning system is built in and tested at Gröninger before being shipped, thus reducing to a minimum assembling time and costs at the client's site. The container provides a shielded, secure environment.

Transport to its destination takes place as a standard sea container freight unit.

The wash container is mobile and saves space. It is possible to divide the container into two sections: a technical room and a wash area. In some cases built-in containers don't require legal permits and authorisations. The system is delivered in turnkey format. It is easy to lease a container, or sell the units if the cleaning volumes or needs are changing over the years. Gröninger always customises both technical and wash containers to the end users specific requirements. 🚚



Technical container

Cleaning Guard system for tank cleaning accredited by SGF

In the food industry regulations relating to food safety and quality are becoming more and more strict. Using the new developed Cleaning Guard software data on (water) pressure, flow, dosage of detergents, disinfectant and temperature, etc., are recorded in the wash bay by special sensors and gauges. This data is continuously validated through a link to the PLC. The quality and validation of the entire tank cleaning process using the MainPro Cleaning Guard module is verified on the basis of this principle. The cleaning stations stay fully in control and own all the data.

On 22 October 2014 the Cleaning Guard system for tank cleaning and tank container cleaning was audited and accredited by SGF. This association is the world's leading independent industrial self-control platform for the fruit juice, fruit nectar and fruit products industry. The organisation is the partner for

all matters relating to quality, safety, authenticity and sustainability. The SGF audit accreditation report states: "The auditor concludes that the present system of Gröninger & Lucrosoft - Cleaning Guard - as a third party data processing system is robust and reliable and complies with the requirements as

laid down in the SGF Control Code for Tank Cleaning. Taking everything into consideration the auditor recommends that SGF International e.V. (Sure-Global-Fair) accredit Gröninger & Lucrosoft - Cleaning Guard - as a third party data monitoring system provider."

The Cleaning Guard module has since been implemented at many different cleaning stations. The Cleaning Guard module can be used on any type of system, supplied either by Gröninger or any other third party. (See also www.mainprocleaning.com/en)



Gröninger expands product range with DYNAJET high pressure water jetting systems

Gröninger Cleaning Systems has formed a close working relationship with DYNAJET GmbH, a German manufacturer of high pressure, long-life high pressure water jetting systems and accessories capable of producing up to 3,000 bar (43,500 psi). DYNAJET systems are used for professional applications in a wide range of market sectors including industry, (road) construction, renovation, cleaning services, shipyards, offshore, agriculture and forestry.

DYNAJET has been a leading manufacturer of high pressure water jetting systems for many years. The company has its roots in the German Putzmeister organisation and in recent years became independ-

ent. The company is based in Nürtingen, which is in the centre of Germany's "technology and manufacturing triangle Munich-Stuttgart-Nuremberg". DYNAJET is a member of the VDMA (Verband



Deutscher Maschinen-und Anlagenbau e.V. – German Engineering Federation). When it comes to high pressure water jetting systems, DYNAJET has proven that it continues to set global standards.

"DYNAJET systems offer significant opportunities for Gröninger's Northwest European business and are an ideal addition to our existing product range", according to Jaap Schokker, Sales Manager at Gröninger. Joost Kasbergen -Business Development Director at Gröninger responsible for this division of the Group- adds: "Very often we get enquiries from tank cleaning companies on how to handle and clean high viscosity chemical liquids like TDI and

MDI. This can be done using advanced DYNAJET technology."The DYNAJET systems will offer effective solutions to Gröninger's global customers who are active in servicing the logistics industry with tank container cleaning, rail car cleaning and IBC / stainless steel tank cleaning.

Both DYNAJET and Gröninger share common business philosophies and a desire to provide cutting-edge cleaning technology to global customers looking to reduce operational costs and provide environmentally friendly techniques and equipment that will enhance their business activities.



Focus on markets



Our Asian team: Joost Kasbergen (Business Development Manager), Farhad Cooper (Agent for India), Lindsey Wallace (Director Gröninger Asia) and Henk Klein (Group Managing Director).

India determined to play catch-up in bulk liquid container cleaning

In the 18 months since Gröninger first participated at an Exhibition in India with Amfico, its Mumbai based agent, the level of interest from the local bulk liquid transport industry has been very encouraging. Fuelled by a desire to match global cleaning standards, the Indian logistics industry, which has long been hampered by very rudimentary cleaning practices, is pushing ahead to install equipment that can clean to a recognised standard.

Gröninger, with its market-leading turnkey systems, has made significant inroads in exposing Indian industry, road tanker haulers and tank cleaning depots not only to Gröninger equipment but also the EFTCO – ECD standard that is achieved by its cleaning systems.

In the absence of any formal cleaning standards in India for ISO tank containers and road tankers, freight companies and cleaning depots can see the marketing opportunities that are presenting themselves by offering the large multi-national chemical manufacturers the opportunity to have their bulk liquid transport tanks cleaned to the same standard as their European manufacturing counterparts.

ISO tank container cleaning depots are leading the way by investing in state-of-the-art Gröninger technology together with existing facilities looking to improve the cleaning services they offer.

However road tanker cleaning is in its infancy but Gröninger technology, which has been supplied to many multi-purpose cleaning depots throughout Western Europe, is being considered by companies in a number of the key logistics locations across India.

New location

As per July 1, 2015 Gröninger will move to a new location:

Overschieeseweg 111
3044 EH Rotterdam

Ongoing projects

Global Depot Solutions
– Jubail (SA)

Köppen – Duisburg (DE)

Globe – Jubail (SA)

Dekker – Dendermonde (BE)

Den Ouden – Alblasterdam (NL)

BSAT – Minsk (BY)

Döhler – (TR)

Grand Ranking – (CN)



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