



HIMMEL[®] - technologies
hoelschertechnik-gorator[®]



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YOUR DRIVE FOR SUCCESS.



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HIMMEL®
Antriebstechnik
by Neudecker & Joltitz

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hoelschertechnik-gorator®

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LAT®
ANTRIEBSTECHNIK

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WABE

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himmel
Fördertechnik
Lagertechnik
Montagetechnik

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BSB
Erfolg braucht Ideen!

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PVG
Pumpen-Vertrieb
Gescher GmbH

HIMMEL® technologies – this umbrella unites eight companies specializing in machine and drive engineering, control technology, plant construction, water treatment and environment engineering.

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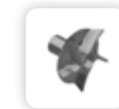


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Group of companies

HIMMEL® technologies

Medium-sized business – innovative – successful

HIMMEL® technologies – this umbrella unites eight companies specializing in machine and drive engineering, control technology, plant construction, water treatment and environment engineering.

They represent a broad competence spectrum, on which an increasing number of customers around the globe build. Whether it is the design of one single component or a complete plant – the companies of HIMMEL® technologies offer solutions designed for your individual needs.

When realizing complete plants we work closely together. You will have – starting with the concept to the assembly and finally turnkey commissioning – the same contact person. This ensures quick solutions and on-time commissioning for your project.

Our strengths

- high degree of flexibility
- individual product manufacture
- personal customer contact
- family company
- developed structures



Company principles

HIMMEL® technologies is a family company with a long tradition. Reliability is one of our most important principles. Long-term action determines our conduct. We want to grow under our own steam and to remain financially independent. This reliability gives our employees certainty.

The companies within the HIMMEL® technologies group live and work by similar principles.

We focus on sustainable success, characterised by extensive know-how and employees who have worked with us for years;

we invest in our growth and in training our employees. We also value and cultivate personal customer relationships.

The decision-making processes in the company are consciously kept short in order to offer customers maximum flexibility. Our customer-oriented and service-oriented practices are also reflected internally.



The Company

hoelschertechnik-gorator®

We have clear objectives

The name hoelschertechnik-gorator® GmbH & Co. KG stands for one of the leading companies in environmental technology. The various product groups provide systems and plants for the conveyance and processing of waste water and process liquids.

The company hoelschertechnik-gorator® evolved from Hoelscher Pumpen Berlin, founded in 1889. With the production of pumps, rotary compressors and fittings hoelschertechnik-gorator® quickly built up a good reputation. Apart from produc-

Ideas are a result of visions

Long-term and worldwide business relationships and satisfied customers prove our success and are an incentive as well as an obligation.

Experience and Quality

We use our experience as machine manufacturer to optimise technical details for special applications.

A wide range of machine equipment and a well-trained staff assure a high quality as well as a quick availability of the components, even for tailor-made solutions.



tion the company also focussed in the following years on the constant development and projecting of innovative ideas and technologies.

Today the company is located in Gescher - in the Western part of the Münsterland region/North Rhine-Westphalia - with a branch office in Berlin and an additional technical office in Bavaria. In addition hoelschertechnik-gorator® benefits from the support of qualified agencies all over the world.

Reliability

We have a highly qualified staff which delivers an exceptional after sales experience. We can provide maintenance and assistance with maintenance training. This will ensure satisfaction and optimum equipment life.

Quality is not co-incident

The satisfaction of our customers is of key importance to us. Therefore it will always be our prime objective to optimise our high-quality recycling systems to the greatest possible benefit of our customers. All working processes are subject to a continual optimization. Our quality management is certified according to DIN ISO 9001.





GULLIVER® Pneumatic Waste Water Transportation System

Clogging-free waste water and sewage transportation with compressed-air for the prevention of decay and corrosion

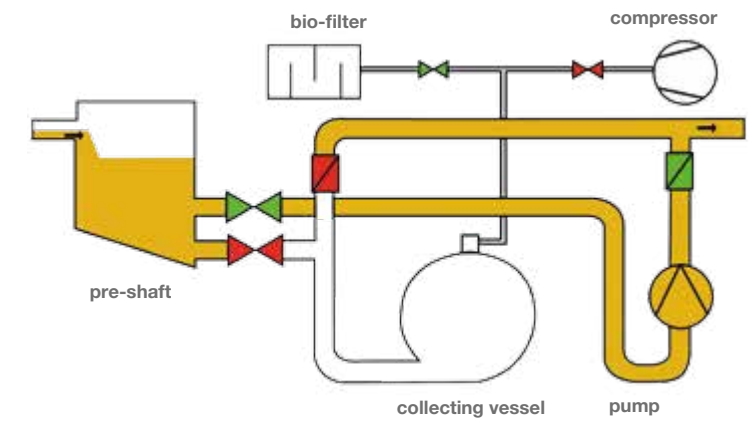
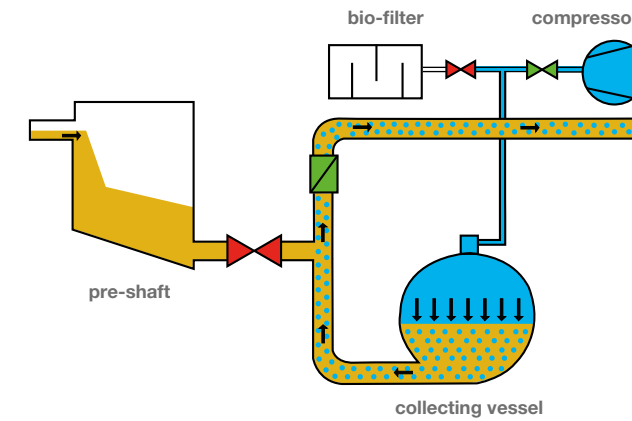
What is a GULLIVER® plant?

Waste water and sewage are collected in a pressure vessel and transported without blocking by means of compressed air. With every pumping action oxygen is injected into the waste water which ensures that it remains aerobic. The whole

pressure pipe is completely emptied by pneumatic flushing on a daily basis thus avoiding sedimentation and the formation of drain skin.



Functional scheme of the pneumatic waste water transportation – pressure process



System GULLIVER®

Advantages of the pneumatic waste water transportation, system GULLIVER®

- The aeration of the waste water prevents anaerobic fermentation and unpleasant odours caused by hydrogen sulphide.
- Complete depletion of the pressure pipe to prevent sedimentation
- No corrosion of concrete and metal components resulting from biogenous sulphuric acid
- Low-maintenance and clogging-free operation as the waste water does not come into contact with rotating parts, even if highly solid-loaded
- Air venting valves in the pipe are unnecessary
- No solid reduction, therefore no sludge formation in the duct system and optimization of the efficiency of the separation stage in the sewage plant
- No biological pollution of the sewage plant by decaying waste water
- Safe and clean handling as the staff of the sewage plant has no direct contact with the waste water

System GULLICOMB®

Advantages of the pneumatic waste water transportation, system GULLICOMB®

- Combining the positive features of hydraulic and pneumatic waste water transportation
- Energetic, optimised work, adapted to different operating conditions
- Improved drain usage
- Energy-optimised waste water transportation by reducing frequency of operation

Applications typically suited to the GULLIVER® system

- long pressure pipes causing long retention times
 - closing of small-sized sewage plants and transportation to a central sewage plant
 - connection to the sewage system even for distant settlements
- irregular waste water flow rates
 - touristic areas, for example camping sites
 - recreational areas, for example leisure parks
 - motorway service areas
 - sewage systems with large rain catchment areas
 - partially completed construction projects where the plant may need extending
- high geodetic heads, even for small quantities
 - mountainous areas
 - installation of landscape tailored pressure pipes



Ready-to-use supply



in-house construction of switch cabinets



GULLICOMB® - The combination of the advantages of the hydraulic and pneumatic waste water transportation.





Hydraulic pumps

Water transportation by pumps

hoelschertechnik-gorator® delivers the complete equipment for your dewatering project.

With many years of experience, hoelschertechnik-gorator® is your competent partner for the transportation of municipal and household waste water and rain water.

Depending on the application, the submersible pumps are equipped with impellers or cutting devices. They can be installed in concrete or plastic shafts. Our standard pumps achieve pumping heads of up to 52 m in shafts of up to 80 cm diameter. The use of dry-installed pumps is preferred for maintenance-friendly operation.

In addition to a cost-efficient standard control system, hoelschertechnik-gorator® also manufactures various designs of automated and control room technology in accordance with the wishes and requirements of our customers.

With respect to servicing, repairs can be carried out on our own pumps and machines from other manufacturers. It goes without saying that the suitable hydraulic pumps are also supplied in combination with pneumatic waste water transportation. We are happy to advise you!



Submersible pump



Dry-installed pump

Compressed air stations

Waste water aeration and drainage of pressure pipes

Aeration and regular drainage of the pressure pipe

Our compressed air stations ensure that waste water which stays too long in the pressure pipe is aerated. This prevents the formation of drain skin and hydrogen sulphide.

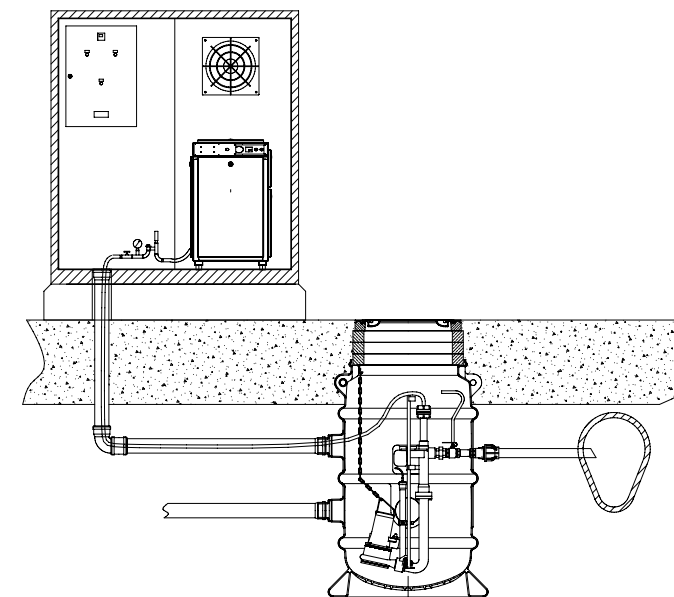
It is currently the case that ever longer distances have to be covered with small quantities of waste water to reach the treatment plant. Hydrogen sulphide develops in the pressure pipe line which leads to the formation of sulphuric acid and causes the corrosion of metal and concrete materials.

The advantages of hoelschertechnik-gorator® compressed air stations

- waste water aeration prevents anaerobic fermentation
- regular flushing prevents drain skin formation and sedimentation
- no hydrogen sulphide formation - no unpleasant smell
- the possibility of flushing removes deposits in the pressure pipe line
- reduction in the retention time of the waste water



Concrete equipment cabinet with a 7.5 kW screw compressor and an integrated pump control



schematic diagram of a compressed air station



Compact design



Clinkered cabinet



Concrete equipment cabinet



Elevator plants

Waste water and sewage transportation by pumping stations and elevator plants

The hoelschertechnik-gorator® elevator plants for draining surfaces and buildings below the back-up level

Waste water elevator plants are prescribed in accordance with DIN 1986 for dewatering under specific conditions. Waste water from lavatories and urinals and waste water which causes an odour nuisance must be collected in closed and odour-proof containers which are freestanding on all sides.

If there are existing facilities beneath the level of back-up water, the drainage must be carried out by an automatically

operating elevator plant. Waste water and excrement elevator plants must be licensed for use within closed buildings. The elevator plants from hoelschertechnik-gorator® GmbH & Co. KG corresponding to DIN 18200 are regularly checked by the LGA in accordance with DIN EN 12050-1 and are thus licensed for use in closed buildings.



Type WK



Type WK 1D



Type NSK 1D



Type NSK 2D

Flexible design and materials

The waste water elevator plants are compact and of robust construction and easy to maintain due to large maintenance flaps.

With our modern facilities and highly qualified staff we are able to offer flexible and economical solutions. We process many

materials and are able to manufacture vessel sizes according to requirements.

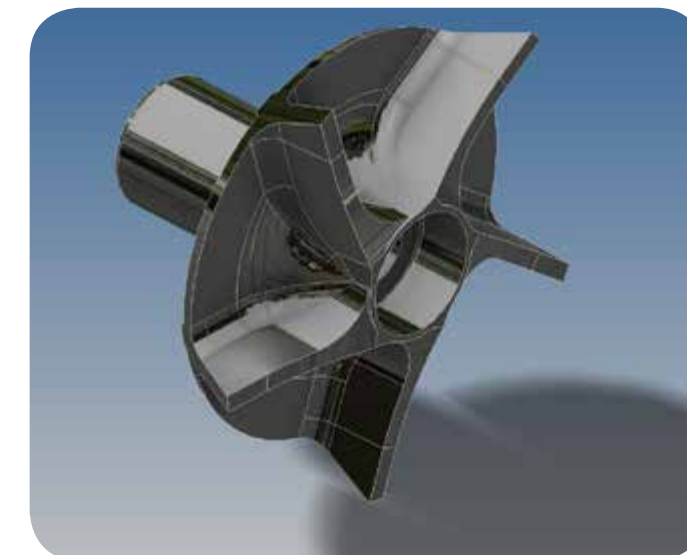
Take advantage of our experience in the application of the latest technology and contact us!



Type REGO

Waste water elevator plants guarantee permanent functional efficiency applications:

- single family homes, apartment blocks
- basement flats
- cellar rooms
- housing complexes
- basement garages
- hospitals
- schools
- sports facilities
- swimming baths
- restaurants
- industrial units
- administration buildings



The elevator plants are specially drained for reliable drainage in accordance with the areas of application.

The free passage of the vortex impeller pumps ranging from 70 to 105 mm guarantees virtually blockage-free transportation of waste water with coarse, fibrous and stringy elements.

The design of pumps with macerators enables the disposal of the waste water even with large pumping heads and with small pipe diameters starting at DN40.





Recycling of process water in the concrete industry

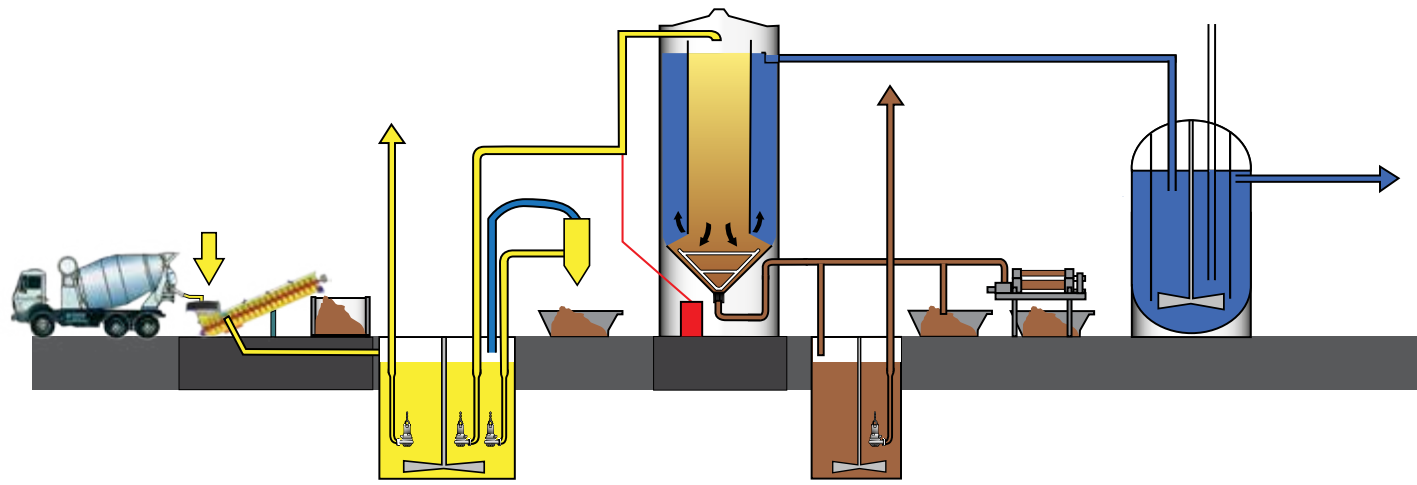
Recycling of active and inactive process water in the concrete industry



{ The KLÄRFIX® formula turns process water into water for industrial use }

The recycling of process water is our contribution to protect the environment and to reduce costs. The re-use of rinsing water and other constituents combine the economical advantages with the protection of our environment.

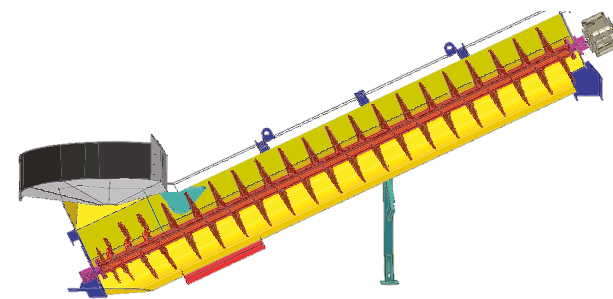
hoelschertechnik-gorator® delivers optimally equipped plants for all applications. A large range of accessories completes our product range.



{ Wash-out screw } { Agitation Pool } { Cyclone } { Sedimentation tower } { Sludge recycling } { pH neutralization }

KBS washout screw for the separation of coarse material such as sand and gravel

- high wash-out capacity with a reliable cut-off size of 0.2 mm
- overflow protection for continuous throughput
- proven technology ensuring low wear and high durability



Modular design allows individual solutions

Our concrete recycling plants consist of modular components which can be combined so suit the type of waste water contamination and the desired reutilization. The washout screw removes the coarse materials, sand and gravel for reutilization. Depending on the required degree of purification, the sedimentation tower, the cyclone and the lamella clarifier continue to

separate smaller solids from the waste water stream. The pH-value is regulated by a neutralising unit. In order to minimise the costs for disposal the remaining solid volume is reduced by dewatering and thickening processes. Various dewatering components as thickener, dewatering container or chamber filter press are available for this purpose.



The mobile KLÄRFIX® plant KSWM:

Completely pre-installed and ready for connection. Our mobile plant is an effective solution for use on sites where fast and simple installation is important.



KLÄRFIX® recycling plants - successfully installed all over the world

Our plants have been working day and night for decades in many countries under a variety of challenging conditions. We are supported by numerous partners all over the world.



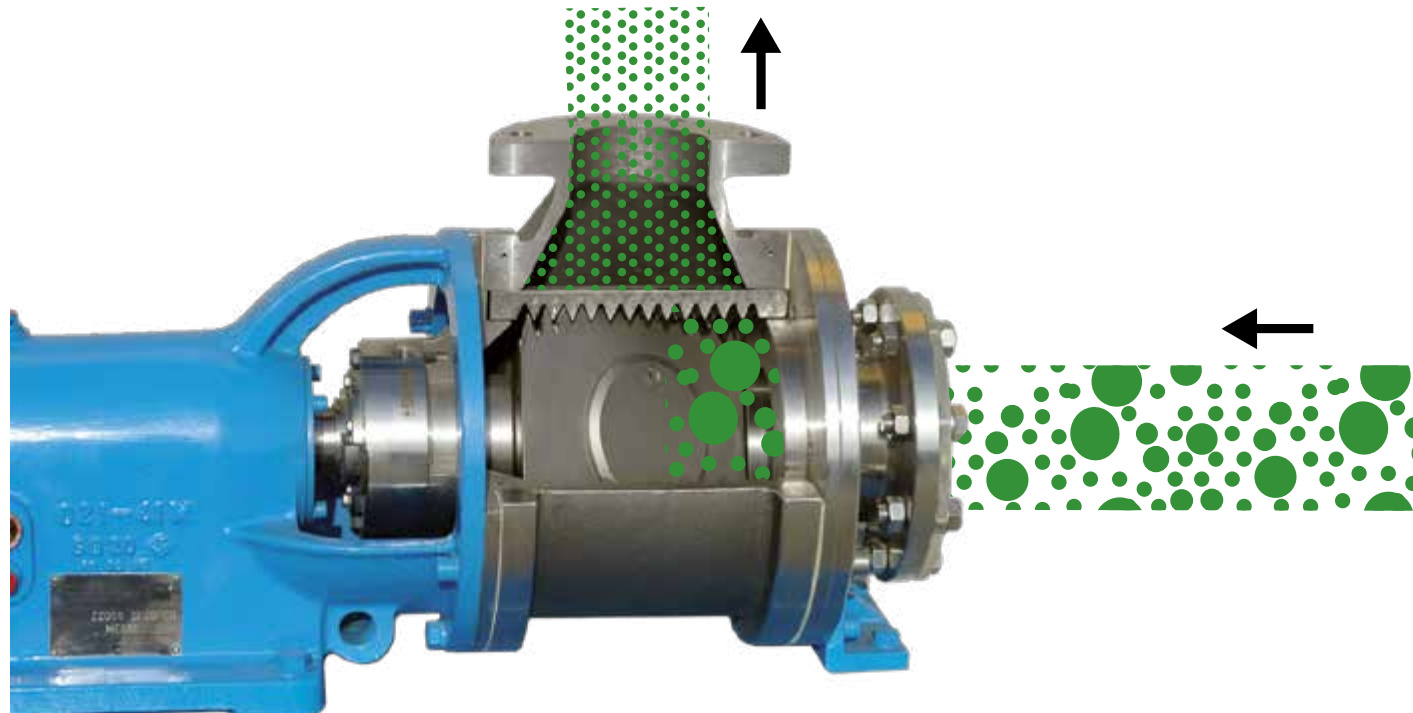


GORATOR® Wet Processing Systems

The universal grinding aggregate for creating a defined grain size and stable solid-liquid mixtures

GORATOR® - the universal grinder

The GORATOR® can crush, defibrate, shred, grind, mix, homogenise and aerate with simultaneous pumping action. It conditions the medium in various physical and mechanical methods.



RANGE of APPLICATION for the GORATOR®

- Crushing and homogenizing of coke particles in thick tar
- Dispersing of pigments to produce colours
- Mixing fluids of various viscosities
- Processing and homogenizing of undesired crystallization
- Processing of pulp and black liquor in the paper industry
- Shell crushing as part of the polymerization processes (PVC, DMT, POVH, PE etc.)
- Treatment of diverse contaminated hydrocarbons for fluidised bed combustion
- Mixing and crushing of liquid and paste-like waste materials
- Surface enlargement through reduction in grain size for the dissolving process to reduce the dissolving time
- Final homogenisation of alloyed masses of bitumen in the production of bituminous sheeting
- Waste cut treatment in the manufacture of fibre cement
- Diverse extractions for manufacturing essences
- Mixing and homogenizing spice extracts
- Processing of substrates in biogas plants



The multitasking solution for your process

This is just a small excerpt from the multiple applications of the food industry through pharmaceuticals, chemicals, cosmetics, paper, building materials, and mining technology to the recycling industry. Due to its versatile field of application possibilities the GORATOR® effects product optimization



Different vector systems for different tasks



Simply by modifying the ROTOR and STATOR in the housing, particle sizes can be varied from 0,3 mm to 20 mm.

and reduces operating costs. Using the modular principle, it is always possible to replace or to test without major expense, housings, rotor and stator depending on the requirements and process modifications.

GORATOR® Designs and Materials

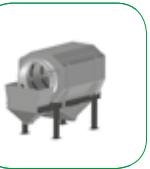
- GORATOR® in a modified version in accordance with process instructions
- All materials that are to be machined are in stock
- Product parts can be available in electro polished design
- Deployable up to 250° C and 24 bar system pressure
- Double casing for heating or cooling
- Capacities up to 400 m³/h
- Ex-protection according to ATEX
- Design comes with gland packings or mechanical seals
- Speed control via frequency convertor



Exhibition GORATOR®



The new 33-size GORATOR® for flow rates up to 400 m³/h.



Screening technology

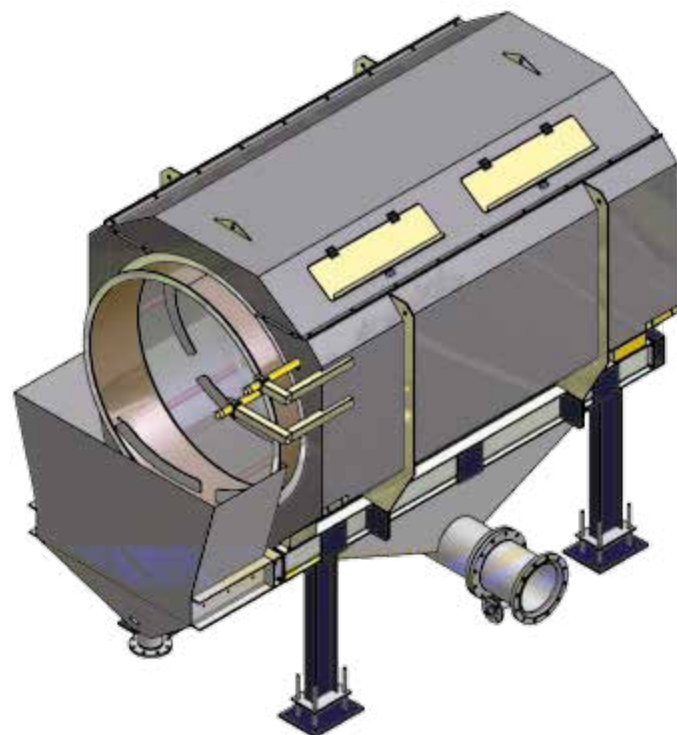
Solid-liquid-separation with screens according to the principle of gravity

Screening technology

Performing a modular design, hoelschertechnik-gorator® is able to deliver various screen types in standard or special design according to individual requirements. Our screens are suitable for many different applications in the industrial and municipal water and waste water treatment.

The HTMSS mesh shear screen

The patented hoelschertechnik-gorator® mesh shear screen with rotating screen drum is especially suited for the separation of fibrous materials and slot passing particles. The separation takes place on the inner screen surface. A multi-layer mesh fabric acts as filter. Compared with a standard drum screen the filtration fineness can be substantially increased. The open screen area is multiplied by the factor 4 to 5 without changing the screen size so that efficiency is optimised and costs are reduced. A special inlet chamber stabilises the inflowing solid-loaded medium and directs it by tangential flow to the screen area via the overflow weirs on each side, thus ensuring optimal input.

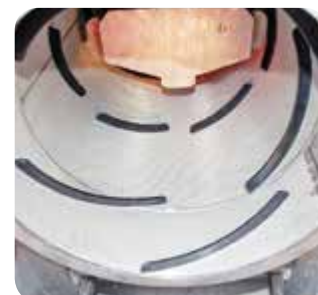


Design and materials

- Sizes depending on mesh and throughput required
- Screen drums and screen plates can be replaced if required
- Customised designs for product inflow, product outflow and sediment discharge
- Standard tool 1.4301, design of 1.4404 and 1.4571 if required
- Components can be supplied electro-polished
- Speed regulation possible via FU with control cabinet
- High-pressure or standard screen cleaning systems available
- Screen cleaning on the outside, inside or a combination of the two



The filtration fineness can be significantly raised.



Compared to the standard drum mesh screen the active screen area is 4 to 5 times greater. This allows an increased throughput capacity for the same screen size.

The HSS static screen

The hoelschertechnik-gorator® static screen is a simple, but very effective separation system. Three different angled screen areas combined with the surface tension of the liquid, characterised as the Coanda-effect, guarantee an optimal drainage and separation.



The HTS drum screen

The HTS drum screen is a classical standard screen and is applicable in many product ranges. It is characterised by its horizontal feed and radial slots. This screen type is fed externally and the separation takes place on the outer screen surface. The liquids flow into the inner area of the drum while the screened solids remain on the screen surface and are removed by a scraper.



The HTSS drum shear screen

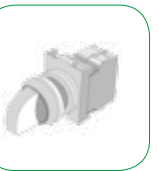
This screen type is successfully installed in municipal sewage plants and in the process water treatment of the chemical industry. The separation takes place on the inner screen surface. The radial slot guarantees an optimal solid separation and thickening. The mechanical resilience of this screen is the basis of its success.



The HDFS rotating fine screen

This disc screen has vertically positioned pairs of screen discs covered with multi-layer steel mesh. The solids are collected on the screen surface and transported to the solids discharge by the rotation of the screen discs. This screen type is used for continuous fine separation of liquids containing fibres.





Automation and Telecontrol

Controls for machine and process sequences including visualization and remote monitoring

Control systems - Made in Germany

The large data volume arising in our plants is analysed and, if necessary, visualised in various forms. Our product area 'electrical engineering' enables us to deliver practical and easy to handle solutions.

We offer comprehensive integrated monitoring and reporting systems ranging from a standard automation system to the transmission of fault reports as well as the process visualisation for optimal visual control and monitoring.

Automation technology

- Advice and development
- Electrical engineering
- Autonomous control system production
- Visualisation and software development
- Industrial and process automation
- Migration and optimization of existing installations
- Assembly and commissioning
- Documentation
- Support onsite or via remote access
- After-sales service



Better performance - the new generation of automation

Our plants are controlled by Siemens' high quality industrial automation systems:

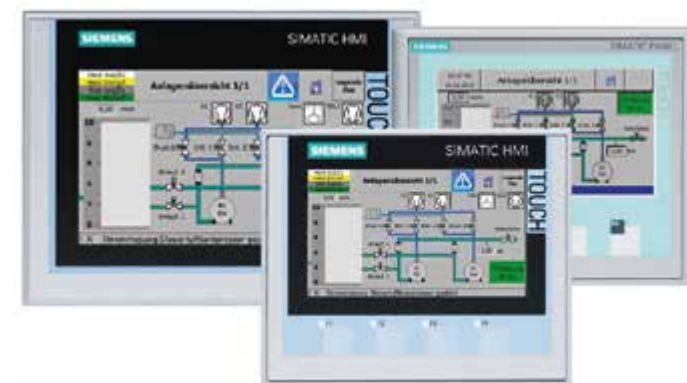
SIEMENS SIMATIC S7-1200 - the new generation of compact and efficient controls

SIEMENS SIMATIC S7-300 - the proven and solid version with numerous possibilities of extension and communication.

Easy to handle displays

The clearly arranged displays can be based on text or graphics. Several solutions are available. Our proven standard solution is:

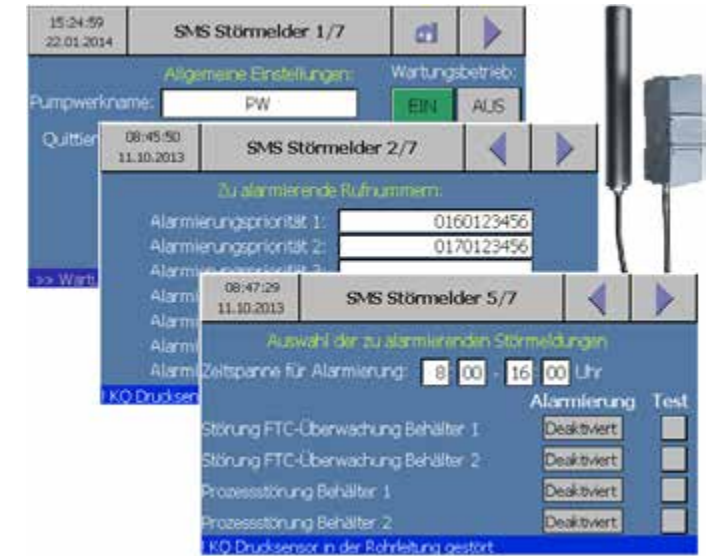
SIEMENS SIMATIC TOUCHPANEL - full graphic and rich in contrast display with operation via touch screen.



Permanently informed

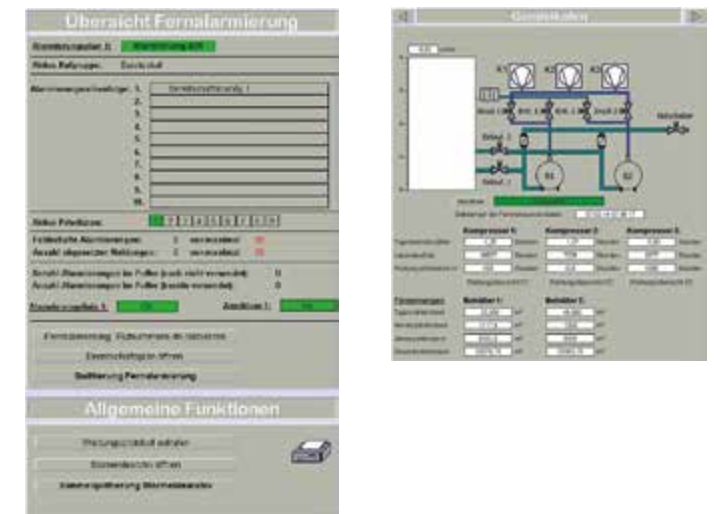
If errors occur the standard system displays them in clear text and files to memory. Detailed alarm messages can be transmitted by SMS.

The control centre software offers an efficient unit for the collection, evaluation and recording of data. It allows a comfortable and operator-friendly monitoring of the connected remote stations.



Remote visualisation

Remote visualisation allows individual presentation of substations via diagrams, photos and maps. Due to full network capability and multi user access the hoelschertechnik-gorator® technology can be flexibly adapted to the customer's requirements. The collected data can be displayed as lists, reports and diagrams.



Our service team - qualified and motivated

Our service teams are highly qualified and professionally equipped. They are regularly trained and kept informed about new developments. Each team is equipped with service modems allowing a programmable connection between the pumping station and our headquarters. Thus the program is accessible without time delay and, most importantly, at lower costs.





System Jödden fuel container

Mobile storage tanks for diesel fuels, mixtures and petrol



15 container sizes from 200 – 1,000 litres

The fuel container licensed as IBC in accordance with traffic regulations may be carried without a permit to carry hazardous goods. The General Building Inspection Permit no. Z-38, 11-56 issued by the German Institute for Building Technology (DIBt) for the storage of diesel fuels in accordance with DIN EN 590 also entitles the user to carry out stationary operations and operations on construction sites, including in water protection areas.

In addition to the mobile tank, there are other bulky goods which with ideal dimensions can be transported next to one another. As a long-term partner to the construction industry, we switched over to individual production at an early stage. So you can choose between 15 versions as standard.



IBC made of metal (hot-dip galvanised)

- 1,000 litre useable volume
- Compact
- Double-walled, top quality (2 x 3 mm metal sheet)
- Robust
- Simple handling
- Durable
- Secure
- ADR certification D/BAM 14151/31A, (road, railway, sea transportation), no time limit
- Transportation without hazardous goods permit
- General Building Inspection permit applied for
- Use and storage in water protection areas also
- 10-year guarantee for the container if used properly and in accordance with regulations



LT 1000 for diesel fuels

Type Lt 1000, the new fuel container developed by System Jödden, promises simple handling, robustness and longevity. The double-walled cylindrical tank with a useable volume of 1,000 litres is primarily used for fuelling construction machinery on building sites, but can also be used for stationary storage, e.g. a petrol station facility.

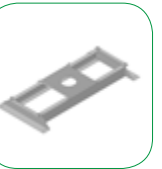
The LT 1000 is licensed as IBC in accordance with traffic regulations and is equipped for storage with the certificate of compliance in accordance with Building Rules List A, DIN 6623-2.

In contrast to standard upright cylindrical 1,000 l storage tanks, the height of which including the pump cabinet generally exceeds 2 m, the overall height of the LT 1000 measures just 1.40 m. It can thus also be transported in closed vehicles and fits into any material container. The stable hinged lid with 'Diskus' lock effectively protects not only the contents, but also the feed pump and all the fittings against theft and vandalism. The extremely solid construction guarantees the tank can be used for decades.



With our products, you get added security – for you, for your employees and for the environment. See for yourself the financial benefits our products can offer you. We'd be happy to advise!





Steel construction

Production and contract manufacture

Your competent partner for steel manufacture and sheet metal working

The hoelschertechnik-gorator® name has for many years been synonymous with quality and precision. We have continually expanded our production. Skilled workers and a modern equipment pool guarantee the high quality of our products. With our steel manufacture we produce components and all the products of HIMMEL® technologies. However, we will happily take over the production of complete steel components or individual items and offer contract manufacture for the complete range. Our machinery comprises sheet metal working machines for the manufacture of blanks or complete sheet steel designs in accordance with your specifications or drawings.

With our modern laser cutting facilities, as well as the round bending and swivel bending machines, our trained staff manufacture your components in-house to a substantial production depth. Extensive stocks provide the basis for short-term deliveries. Collaboration with machining production at HIMMEL® technologies also enables complex tasks to be undertaken without large interfaces and laborious processes.



Our services

- Design
- Lasering
- Milling
- Assembly
- Construction
- Edging
- Welding

You can expect more from us – Quality and service

We are your competent partner for individual production steps, complex assemblies or complete system solutions including the necessary surface treatment. A continuously effective cooperation with our customers ensures the production of an individual and high-quality product at a fair price.

We are steadily trying to improve our quality. All processes are subject to a constant process optimization. Our quality management is certified according to DIN ISO 9001.

Benefit from our strengths – versatile, flexible and accurate

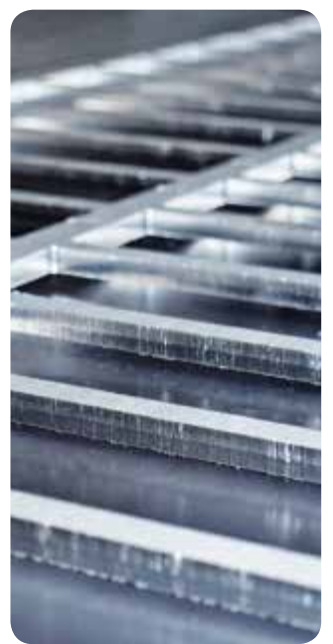
We manufacture your products in accordance with your specific requirements. But we are also able to fulfil complete projects – from planning and production to assembly – on schedule and to your complete satisfaction.



Generous production area with a hook clearance of 8 m



Laser for large format (3 x 1.5 m) with a thickness of up to 20 mm. Edging up to 3 m and thickness of 8 mm





HIMMEL[®]
technologies
YOUR DRIVE FOR SUCCESS.



hoelschertechnik-gorator[®]

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