SULZER

Water and wastewater solutions

Take full control of your wastewater treatment

Sulzer's innovative solutions combine treatment performance and energy efficiency in key applications within the treatment process.
sulzer.com/**treatment**

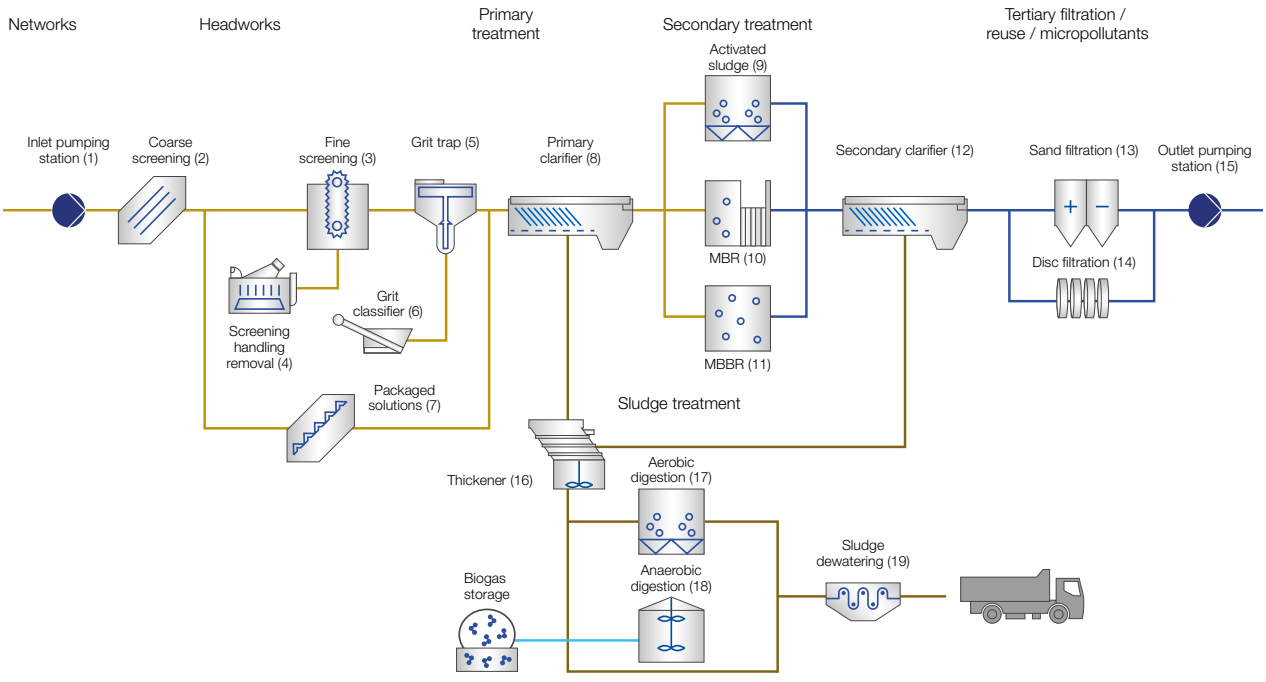
Driving innovation in wastewater treatment

When planning a new wastewater treatment plant or upgrading an existing one, operating costs are as important as investment costs. We deliver reliable treatment performance and high energy efficiency through our broad innovative range of products, including pumps, mixers, screens, settlers, scrapers, filters, compressors and aeration systems.

The Sulzer advantage is evident from the moment sewage enters your wastewater treatment plant. We ensure the efficiency and reliability of both mechanical and biological processes, while at the same time reducing energy consumption.

We do this through leading motor technologies, advanced hydraulic designs and innovative equipment construction. Premium Efficiency IE3 motors or high-efficiency permanent-magnet motors are used as standard. Energy use is further reduced by features like our self-cleaning mixer propellers or the superior magnetic bearings of our turbocompressors.

Supporting our equipment is an extensive body of knowledge and a wide range of tools. Using these, we can analyze your existing plant and determine the right solutions for a complete upgrade. In working with Sulzer, you have a single partner for plant-wide improvement.



Complete solutions for every stage of wastewater treatment

Facing the challenges of the changing world

Global

A changing world and changing legal requirements place pressure on your business.

- Legislation
- CO_2 limits
- Overflow concerns
- Climate change
- Urban development

Business

You face financial challenges and the service demands of your customers.

- Reducing energy costs
- Lowering operating costs
- Improving service levels
- Municipal vs. private structures
- Replacements and upgrades

Social

Your business is a part of meeting larger goals in a broad human perspective.

- Water consumption
- Personal hygiene
- Environmental protection
- Sustainability

Our comprehensive product portfolio

Product technology	Products	Inlet pumping station (1)	Coarse screening (2)	Fine screening (3)	Screening handling removal (4)	Grit trap (5)	Grit classifier (6)	Packaged solutions (7)	Primary clarifier (8)
Agitators	Scaba								
	Salomix™ SSF and SSA								
Submersible mixers	XRW 210 to 900								
	XSB 900 to 2750								
	SB 900 to 2500								
	SB 1200 KA								
	RW 200 to 650								
Aeration systems	Venturi jet								
	XTA, XTAK								
	OKI aerator mixer								
	Disc diffuser system								
	HST™ 2500 to 6000					●			
	HST™ 10, 20, 30 and 40					●			
Submersible heavy duty pumps	AFP	●							
	XFP	●							
	VUPX								
	AFLX								
	XRCP 250 to 800								
	RCP 250 to 800								
Single stage pump	FR	●							
Progressing cavity pumps	PC transfer pump								
	PC transfer perform pump								
	PC cake pump								
	PC dosing pump								
Sewage grinders	Inline Muffin Monster™								
	Open channel Muffin Monster™	●			●				
	Channel Monster™	●	●						
Screens	MevaScreen, MevaPress, MevaGrit, MevaSpiral		●	●	●	●	●	●	
Separator	Lamella								●
Scraper	Zickert					●			●
Filters	DynaBelt, DynaCloth, DynaDisc, DynaSand			●					
Monitoring and control	CA 461	●							
	CA 462	●							
	EC 531	●							
	BlueLinQ Pro controller	●							

● Standard ● Optional (See application numbers in flow chart on page 2.)

Activated sludge (9)	MBR (10)	MBBR (11)	Secondary clarifier (12)	Sand filtration (13)	Disc filtration (14)	Outlet pumping station (15)	Thickener (16)	Aerobic digestion (17)	Anaerobic digestion (18)	Sludge dewatering (19)
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SULZER

Product overview

Agitators

Scaba top-mounted vertical agitator

Features and benefits
Scaba top-mounted vertical agitators are used for mixing and agitating process liquids in demanding wastewater treatment applications. They ensure homogenous mixing results, high process reliability, high efficiency, low operating costs and low environmental stress.

Key characteristics

Temperatures	up to 350°C
Propeller diameter	100 mm to 6 m
Shaft length	up to 30 m

SALOMIX™ SSF and SSA side-mounted agitators

Features and benefits
SALOMIX SSF and SSA side-mounted horizontal agitators are ideal for mixing and agitating process liquids in demanding wastewater treatment applications. They ensure homogeneous mixing results, process reliability, high efficiency, low operating costs and low environmental stress.

Key characteristics

Drive	Gear drive (SSF) or belt drive (SSA)
Propeller diameter	500 to 1'700 mm
Power	4 to 160 kW

Submersible mixers

Flow booster type ABS XSB 900 to XSB 2750

Features and benefits
Although the premium range of flow booster type ABS XSB is the biggest of its type on the market for wastewater treatment, it cuts energy consumption by a remarkable 25%. It achieves this through a Premium Efficiency motor, a highly efficient gearbox and a unique innovative design that boosts mixer efficiency as proven by long and exhaustive testing.

Key characteristics

Maximum mixing flow	6.159 m^3/s (50 Hz) / 6.0 m^3/s (60 Hz)
Propeller diameter	900 to 2'750 mm

Flow booster type ABS SB 900 to SB 2500

Features and benefits
The standard range of flow booster type ABS SB are slow running submersible units with integral motors for gentle circulation and mixing of fluids in treatment plants and industrial applications. The flow booster is complete with monocast propeller blades and excellent self-cleaning properties, giving optimum operation with low energy input. The unit can be raised and lowered for inspection even in filled tanks.

Key characteristics

Maximum mixing flow	4.3 m^3/s (50 Hz) / 4.2 m^3/s (60 Hz)
Propeller diameter	900 to 2'500 mm

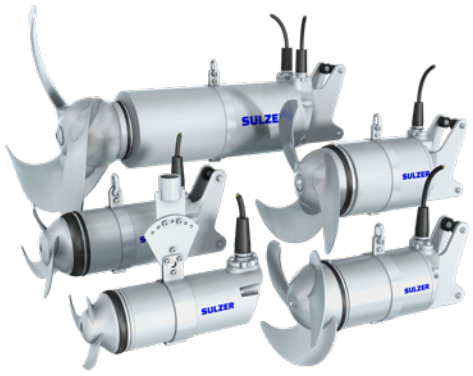
Submersible mixer type ABS SB 1200 KA

Features and benefits
The submersible mixer type ABS SB 1200 KA combines all the specific requirements of those treatment processes where the biofilm is bound on the surface of plastic carriers. The low tip speed in combination with a specially designed propeller, prevent any negative effects on the carrier material during the mixing. The energy cost is reduced thanks to a unique drive unit.

Key characteristics

Maximum mixing flow	0.82 m^3/s
Propeller diameter	900 to 1’080 mm

Submersible mixer type ABS XRW 210 to XRW 900



Features and benefits
The submersible mixer type ABS XRW premium series provide a total efficiency improvement of up to 35% compared to our RW mixer standard range and other conventional mixer designs. The mixers are mainly used for agitating, blending, mixing, dissolving, and suspension of solids in municipal treatment plants, industry, and agriculture. Use of Premium Efficiency motor technologies, together with optimized and proven propeller designs, gives the XRW mixers the lowest energy consumption for each mixing speed. A wide range of brackets and adapters facilitate easy upgrades of existing installations. Also available with explosion-proof motors.

Key characteristics

Maximum mixing flow	1.876 m^3/s (50 Hz) / 1.88 m^3/s (60 Hz)
Propeller diameter	210 to 900 mm

Submersible mixer type ABS RW 200 to RW 650

Features and benefits
These standard mixers have an integral motor and are suitable for agitating, blending, mixing, dissolving and suspension of solids in municipal treatment plants, industry and agriculture. Sulzer offers multiple and gear driven mixers with either standard or explosion-proof motor enclosures. A wide range of brackets and adapters facilitate easy upgrades of existing installations.

Key characteristics

Maximum mixing flow	0.831 m^3/s (50 Hz) / 0.923 m^3/s (60 Hz)
Propeller diameter	185 to 650 mm

Aeration products

Aerator type ABS Venturi jet

Features and benefits
Based on the ejector principle, the Venturi Jet aerator is an ideal solution for water depths from 1.5 m to 5 m. It provides cost-effective mixing and aeration in municipal and industrial wastewater applications, storm water retention tanks, and balancing tanks.

Key characteristics

Oxygen transfer	1 to 16 kg O_2/h at 3 meter water depth
Motor range	1.3 to 18.5 kW

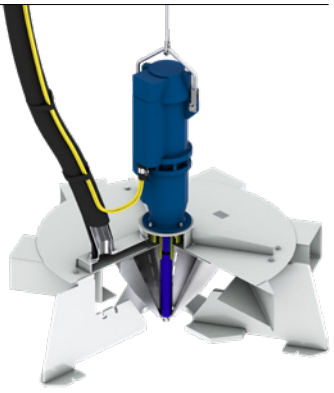
Submersible aerator type ABS XTA, XTAK

Features and benefits
These products are suitable for wastewater treatment in municipal and industrial plants. Application areas include mixing, equalization and activated sludge tanks. Suitable also for SBR-reactors and sludge storage tanks at a water depth between 2 and 9 m. The aerator is free-standing on the bottom of the basin and hence can be installed without emptying the basin. The self aspirating aerator has a very low noise level due to it's efficient silencer. Compared to conventional surface aerators the submerged XTA aerator creates no aerosol thus preventing formation of coliform bacteria.

Key characteristics

Oxygen transfer	up to 80 kg O_2/h
Motor range	4 to 75 kW (50 Hz) / 4.5 to 86 kW (60 Hz)

OKI aerator mixer



Features and benefits
The submersible OKI aerator mixer is a heavy-duty unit with the capacity to operate both as an aerator and/or a mixer. This makes it suitable for discontinuous aeration processes such as simultaneous denitrification, nitrification and SBR processes, even at depths of 12 m and in liquids with high dry matter content. The high pumping and mixing capacity of the OKI aerator mixer makes it the right choice for many processes. Maintenance or changing the plant configuration is easy thanks to the OKI's liftability.

Key characteristics

Oxygen transfer	up to 405 kg O_2/h
Motor range	3 to 37 kW

Disc diffuser system type ABS Sucoflow DS

Features and benefits
The robust Sucoflow disk diffuser has an EPDM membrane perforated using a specially developed process. The large effective surface area and the thread mounting means it is a good choice for stainless steel piping and liftable systems. The membrane is reliably mounted on the frame with a stainless steel wire. A built-in non-return valve provides additional safety for planned or unplanned outages.

Key characteristics

Membrane surface area	0.183 m^2
Operating range	1 to 15 m^3/h (+20°C; 1'013 mbar)

Disc diffuser system type ABS

Features and benefits
Disc diffuser system type ABS offers a number of alternative membrane and porous aeration diffuser models that are easy to install and maintain. Special features that improve the operation reliability and efficiency include the non-return valve, available on all models and the sliding ring, available on the types ABS PIK 300 and PRK 300. High oxygen transfer efficiency combined with low pressure drops makes the diffusers extremely effective.

Key characteristics

Diffuser diameter	PIK300, PRK300: 336 mm, KKI215: 215 mm
Operating range	PIK300, PRK300: 1.5 to 8 m^3/h (+20°C; 1.013 mbar) KKI215: 0.5 to 4 m^3/h (+20°C; 1.013 mbar)

HST™ 2500 and 6000 turbocompressors

Features and benefits
The modern and silent HST turbocompressor features an advanced design with proven magnetic bearing technology and a high-speed motor driven through a built-in frequency converter. The turbocompressors are widely used to supply air to aerobic treatment processes in wastewater treatment plants. They can also be used in other positions where large amounts of compressed air is needed.

Key characteristics

Air flow range	600 to 6’800 Nm^3/h
Pressure range	30 to 125 kPa

HST™ 10, 20, 30 and 40 turbocompressors

Features and benefits
The new generation of world class high efficiency turbocompressors, HST 10, 20, 30 and 40, gives exceptional energy savings from wire to air, savings in maintenance costs, stable efficiency with magnetic bearings, compact and cost effective installation and an optimized process by an intuitive compressor control.

Key characteristics

Air flow range	1’100 to 16’100 Nm^3/h
Pressure range	30 to 130 kPa

Submersible heavy duty pumps

Submersible sewage pump type ABS AFP

Features and benefits
The submersible sewage pump type ABS AFP offers high sustainability and excellent rag handling, and power up to 600 kW. The AFP pumps are designed for reliable and economical pumping of heavily polluted sewage in commercial, industrial and municipal applications.

Key characteristics

Discharge sizes	DN 400 to DN 800
Motor range	160 to 550 kW (50 Hz) / 160 to 620 kW (60 Hz)
Bearing life	100’000 h

Submersible sewage pump type ABS XFP

Features and benefits
The submersible sewage pumps type ABS XFP are designed for wet or dry installation in pumping stations. The XFP pumps use Premium Efficiency IE3 motors to offer significant energy savings, along with excellent rag handling, long-term reliability and a future-proof design.

Key characteristics

Discharge sizes	DN 80 to DN 800
Motor range	1.3 to 550 kW (50 Hz) / 2.0 to 620 kW (60 Hz)
Bearing life	100’000 h

Submersible propeller pump type ABS VUPX

Features and benefits
The VUPX series of submersible propeller pumps are ideal for applications where large volumes of storm or process water have to be pumped to heads up to a maximum of 10 m. Available with Premium Efficiency IE3 motors. These compact pumps feature highly efficient three- or four-blade propellers and a space-saving design for direct installation in compact rising mains.

Key characteristics

Pipe diameter	600 to 1’400 mm and larger
Motor range	9 to 650 kW (50 Hz) / 14 to 750 kW (60 Hz)
Bearing life	100’000 h

Submersible mixed flow column pump type ABS AFLX

Features and benefits
Save space and reduce installation costs with the AFLX range of submersible axial-flow pumps, designed for direct installation in compact rising mains. Available with Premium Efficiency IE3 motors. Featuring highly efficient three- to five-blade mixed flow impellers. The AFLX-pumps ensure high reliability and efficiency.

Key characteristics

Pipe diameter	600 to 1’200 mm and larger
Motor range	7.5 to 500 kW (50 Hz) / 14 to 468 kW (60 Hz)
Bearing life	100’000 h

Submersible recirculation pumps

Submersible recirculation pump type ABS XRCP 250 to XRCP 800

Features and benefits
Our premium range of submersible recirculation pumps type ABS XRCP is specifically designed for pumping and recirculation of activated sludge in the denitrification/nitrification process of a wastewater treatment plants. With this compact and easy-to-handle pump, you choose the market's best ongoing energy performance. You also get the best life cycle cost, from initial purchase to ongoing operation.

Key characteristics

Maximum flow	5'500 m^3/h (50 Hz) / 5'200 m^3/h (60 Hz)
Maximum head	1.55 m (50 Hz) / 1.35 m (60 Hz)
Discharge sizes	DN 250, DN 400, DN 500, DN 800

Submersible recirculation pump type ABS RCP 250 to RCP 800

Features and benefits
Our standard range of submersible recirculation pumps type ABS RCP is specifically designed for pumping and recirculation of activated sludge in the denitrification/nitrification process of a wastewater treatment plants. This compact and easy-to-handle pump is efficient and reliable.

Key characteristics

Maximum flow	5'800 m^3/h (50 Hz) / 5'600 m^3/h (60 Hz)
Maximum head	1.3 m (50 Hz) / 1.45 m (60 Hz)
Discharge sizes	DN 250, DN 400, DN 500, DN 800

Single stage pumps

Dry-installed sewage pump type ABS FR

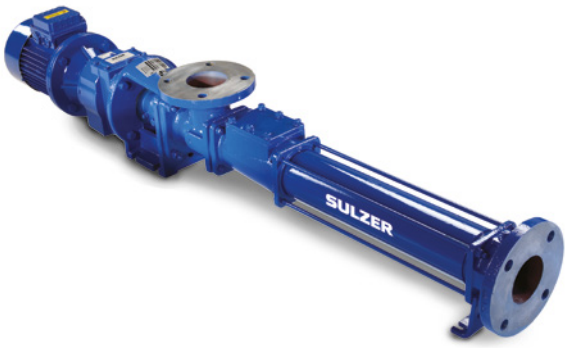
Features and benefits
The FR dry-installed clogless pump enables economical pumping of heavily-polluted sewage and wastewater in municipal and industrial applications. It is ideal for pumping clear water, polluted water, and heavily-polluted sewage in commercial, industrial, and municipal applications.

Key characteristics

Discharge sizes	DN 150 to 800
Motor range	up to 700 kW
Bearing life	100'000 h

Progressing cavity pumps

PC transfer pump



Features and benefits
Sulzer's competitively priced transfer pump, with close-coupled drive and gearbox. Options for vertical or horizontal installation, baseplate and flanged or square inlet. This product has a small footprint, useful where space to install is tight and is available in low to high flow configurations.

Key characteristics

Capacities	up to 440 m^3/h
Pressures	up to 24 bar
Temperatures	-10 to 100ºC

PC transfer perform pump

Features and benefits
The PC transfer perform pump is designed for easy dismantle and reassembly, maintain in place without the need to disconnect, remove suction or discharge pipework and minimize time and cost. An extension of the PC transfer, available in cast iron or stainless steel, with a choice of rotor, stator materials and inlet configurations.

Key characteristics

Capacities	up to 225 m^3/h
Pressures	up to 12 bar
Temperatures	-10 to 100ºC

PC cake pump

Features and benefits
Available as standard or maintain in place, the cake pump is designed with a wide throat inlet for transfer and handling of thickened and blended sludge. Capable to transfer viscous sludge cakes, slurries, thick non-flowing pastes and specifically dewatered sludge cake > 30% dry solids concentration.

Key characteristics

Capacities	up to 215 m^3/h
Pressures	up to 48 bar
Temperatures	-10 to 100ºC

PC dosing pump

Features and benefits
In sludge dewatering and thickening, barrier layer injection and conditioning agents are added to the delivery pipework for lubrication, to reduce friction losses and system operating pressure. Our products are used in low flow dosing applications where flow capacity needs to be maintained.

Key characteristics

Capacities	5 to 1'250 l/h
Pressures	up to 72 bar
Temperatures	up to 120ºC

Sewage grinders

Muffin Monster™ – Inline

Features and benefits
Inline Muffin Monster grinders help protect dry-installed centrifugal or PC pumps in both pumping stations and treatment plant applications. They keep tanker import stations running and prevent damage to pumps and dewatering equipment in sludge treatment and energy-from-waste-systems. The dual-shafted, slow-speed, high-torque grinder conditions and reduces the impact of wipes and difficult solids that can damage centrifuges and clog pumps, valves, heat exchangers and other equipment. In anaerobic digestion applications, grinders reduce particle size, increase surface area for biological activity, and protect the pumps essential for keeping digesters in operation.

Key characteristics

Flow capacity	up to 1’558 m^3/h
Flange connections	100 to 500 mm
Pressures	up to 6 bar max working pressure
Cutter options	individual depending on application

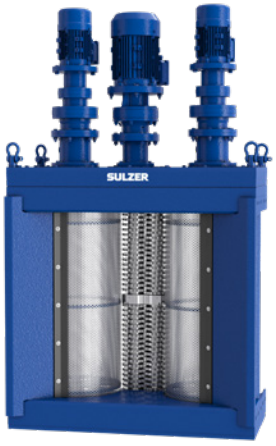
Muffin Monster™ – Open channel

Features and benefits
Dual-shafted, slow-speed and high-torque Muffin Monster grinders shred tough solids in wastewater to protect pumps and other critical equipment from clogs and damage. Open channel Muffin Monsters are utilized in network and inlet pump stations, installed ahead of the pump to prevent solids from damaging downstream equipment and processes.

Key characteristics

Flow capacity	up to 1’277 m^3/h
Cutting options	individual, selected to suit application

Channel Monster™



Features and benefits
High-flow Channel Monster grinders protect large wastewater pump stations and treatment plants from solids that can cause damage. Revolving side drum(s) allow fluid to pass through while capturing solids and diverting them to the powerful dual-shafted grinder for shredding. Channel Monsters can protect headworks screens from damage or completely replace screens in pump stations, reducing the pump station's footprint, construction and ongoing maintenance costs.

Key characteristics

Flow capacity	up to 9’305 m^3/h
Cutting options	individual, selected to suit application
Bearing life	100’000 h

Screens

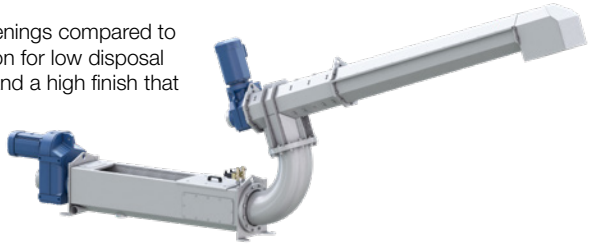
MevaScreen coarse and fine screens by Nordic Water

Features and benefits
MevaScreen offers one of the highest separation degrees of screenings and solids available on the market. It features heavy-duty and extremely robust bar course screens with low head loss. The high-capacity fine screens are designed with a fully covering screenings mat. These fine screens have the lowest energy usage due to the absence of brushes and similar components. No water consumption as the design has excluded the wash water requirement in other screens. The unique automatic controls with pulse-operation, gives fully screenings mat benefits. The system is highly tolerant of varying flow volumes.

Key characteristics

Slot width	1 to 50 mm
Discharge height	0.7 to 25 m
Channel width	300 to 3'000 mm

MevaPress screw wash press and counter pressure screw by Nordic Water



Features and benefits
MevaPress offers superior dewatering, with approximately 50% less screenings compared to conventional design. This results in significant volume and weight reduction for low disposal costs and savings of CO2. Additionally, it includes shredded screenings and a high finish that guarantees a long lifetime.

Key characteristics

Flow capacity	up to 88 m^3/h per unit @20 rpm
Dry solids content	50 to 60%

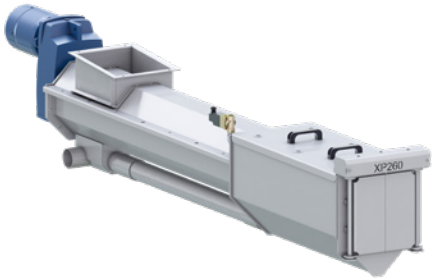
MevaGrit by Nordic Water

Features and benefits
The MevaGrit offers efficient removal, washing and separation of sand and mineral particles on a low footprint. It is available in a wide range of sizes and models for energy-efficient grit recycling. The effluent sand has a low organic content, with less than 5% ignition loss. MevaGrit is designed for long life with fewer parts to maintain and low wear resulting in reduced disposal costs.

Key characteristics

Flow capacity	up to 30 l/s
Dry solids content	>90%

MevaSpiral press and screw conveyor by Nordic Water



Features and benefits
MevaSpiral ensures transportation and dewatering in the most compact and cost-efficient way. It features a robust and flexible design with easy replacements of wear liners and other components. The system can handle wet, stringy, and sticky materials without requiring maintenance and is highly tolerant of varying flow volumes. Additionally, it is fully encapsulated with bolt-on supports and inlets.

Key characteristics

Conveyor length	up to 30 m
Diameter	up to 500 mm

Separator

Lamella settler by Nordic Water

Features and benefits
Lamella settler maximizes settling efficiency with a reduced footprint at 10% of a traditional sedimentation tank. It features a unique flow control system and inlet openings designed for uninterrupted settling. The system efficiently separates solids with basically no energy consumption. CleanBot, an automatic cleaning robot cleans lamella plates without the need for water.

Key characteristics

Flow capacity	3 to 50'000 m^3/h
Sedimentation area	Free-standing versions up to 165 m^2, plate pack design for concrete basin to meet request

Scraper

Zickert sludge scrapers by Nordic Water

Features and benefits
Zickert sludge scrapers are designed for continuous sludge transport in rectangular or circular shaped sedimentation tanks. The hydrodynamically designed profiles provide a sludge thickening effect. The lowest part of the sludge layer is removed while the more diluted sludge above remains. This results in a dryer sludge which will facilitate dewatering, leading to efficiency improvements and energy savings. The flexible design allows for easy adaptation to tanks with pillars or other obstructions inside.

Bottom tank dimensions
- Rectangular tanks max 100 m in length, max 12 m in width per scraper, parallel scrapers for wider tanks
- Circular tanks up to Ø 50 m

Filters

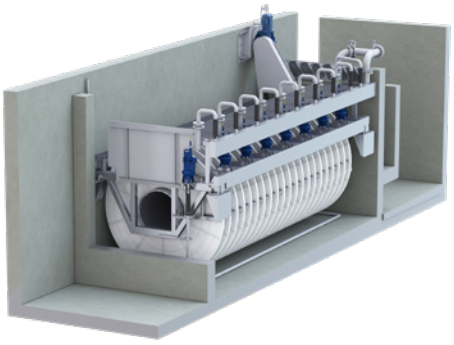
DynaBelt automatic belt filter by Nordic Water

Features and benefits
DynaBelt ensures the efficient removal of solids and particles through its rotating filter belt. The filter belt is automatically cleaned mechanically and by high pressure water. Which is better and more cost efficient then compressed air or an ordinary brush. DynaBelt gives exceptionally high filtration capacity in relation to its small footprint. The smart belt filter design facilitates easy maintenance and repair. Additionally, its primary treatment design features result in remarkably low life cycle costs.

Key characteristics

Flow capacity	5 to 660 m^3/h
Filter area	up to 2.7 m^2 in a single unit
Filter cloth	200 µm to 800 µm

DynaCloth fiber disc filter by Nordic Water



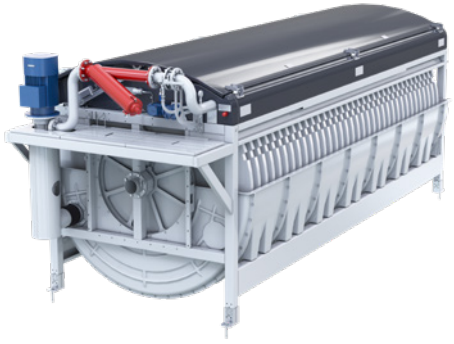
Features and benefits
The DynaCloth outside to inside flow filter provides high-quality filtration performance using the pile cloth technique, making it particularly suitable for applications where removal of fine particles to deliver high-quality effluent is required. It is tolerant of high inlet Total Suspended Solids (TSS) shock loads. It offers high operational reliability and high flow rate capacity in a single unit at a competitive cost. Providing continuous filtration during backwash eliminates the need for additional units.

Key characteristics

Flow capacity	10 to 2'600 m^3/h per filter
Submerged effective filter area	up to 258 m^2 in a single unit
Typical reject water volumes	1 to 4%
Filter cloth	nominal 5 and 10 µm equivalent

- Three diameters available for different flow/load applications

DynaDisc microscreen filter by Nordic Water



Features and benefits
The DynaDisc inside to outside flow filter provides high filtration efficiencies, featuring a patented filter cassette that ensures easy maintenance. The integrated level tank optimizes the head loss, retains filtrate for use by the backwash system and helps increases the lifetime of the filter cloths. Oscillating backwash spray nozzles ensure an even and efficient cleaning further enhancing the lifetime of the filter cloth. It offers high flow capacity in a single unit coupled with high operational reliability at a competitive cost. Providing continuous filtration during backwash eliminates the need for additional units.

Key characteristics

Flow capacity	10 to 3'250 m^3/h per filter
Gross filter area	up to 300 m^2 in a single unit
Typical reject water volumes	1 to 3%
Filter cloth	nominal 10 and 20 µm and upwards

- Two diameters available for different flow/load applications

DynaSand™ continuous sand filter by Nordic Water

Features and benefits
The DynaSand offers continuous filtration that builds up a secondary filter bed layer, for better turbidity removal rates. DynaSand uses "contact filtration," in-line dosing and precipitation with coagulation and separation inside the filter. This process effectively addresses turbidity, color, COD, and provides a hygienic barrier to meet stringent drinking water standards. The system supports mechanical, chemical, and biological processes within the same filter unit. With DynaSand wash water reduction, you can save up to 75% of energy and wash water usage. The continuous operation sand filters achieve higher flows and loading capacities per unit compared to backwash operating filters.

Key characteristics

Flow capacity	3 to 50'000 m^3/h
Filter area	From 0.7 to 7 m^2 for a single free-standing / tank version unit

- Concrete basin design as high as requested
- Contact filtration saves up to 70% of footprint and 40% coagulation chemicals compared to conventional designs

Monitoring and control equipment

Sulzer offers a wide range of monitoring and control equipment for advanced monitoring and control of wastewater treatment equipment. The control solutions offered can also help to improve efficiency of the collection network including wastewater treatment plants as well as improving the whole network availability. For information about the full range, visit www.sulzer.com.

Leakage control type ABS CA 461

Features and benefits
The CA 461 is designed to detect leakages in pumps and mixers. The amplifier is housed in a norm enclosure fitted for DIN-rail mounting. The unit is available in two executions, 24 VDC or 110-230 VAC supply.

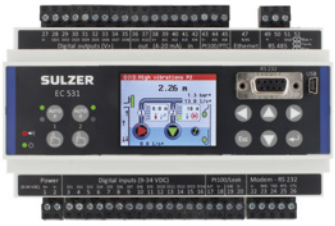
Key characteristics
- Supports one moisture signal input
- Leakage detection threshold (+/- 10%): < 100 kohm
- Leakage alarm delay: 10 sec.

Temperature and leakage relay type ABS CA 462

Features and benefits
The CA 462 is designed to monitor and detect temperature changes and leakages in pumps and mixers. The amplifier is housed in a norm enclosure fitted for DIN-rail mounting. The unit is available in two executions, 24 VDC or 110-230 VAC supply.

Key characteristics
- Supports one moisture signal input and one temperature signal input
- Leakage detection threshold (+/- 10%): > 3.3 kohm (PTC/Klixon)
- Leakage alarm delay: 10 sec.

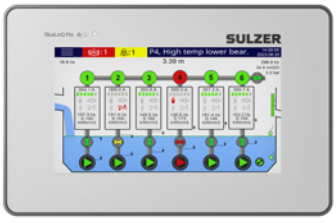
Equipment controller EC 531



Features and benefits
The equipment controller EC 531 is an all-in-one unit for monitoring and control of one or two pumps. It is designated primarily for municipal pumping stations. The digital display and monitoring module provides key status values, as well as quick access to a week's history on counters and accumulators (including run time, start count, flow and analog history logging).

Key characteristics
- Supports one to two pumps
- 2.2" graphical display
- Supervises motors with multiple combination of built-in sensors
- Up to 1'024 pump and alarm events
- Datalogger with 16-channel, 2-week local storage capacity with one minute sampling
- Event crash log functionality with one second sampling

BlueLinQ Pro controller



Features and benefits
The BlueLinQ Pro can control up to six pumps, mixers and valves. The compact controller has many advanced features to reduce operating costs and improve pump station availability. The touchscreen provides key status values, as well as quick access to a week's history on counters and accumulators (including run time, start count, flow, and analog history logging). All configurations can be managed via the local display.

Key characteristics
- Supports one to six pumps, mixers or valves
- 7" touchscreen interface
- Configures and monitors equipment with multiple combinations of built-in sensors
- For up to 4'000 pump and alarm events
- Datalogger with 32-channel, 4-week local storage capacity with one minute sampling
- Event crash log functionality with one second sampling

A committed partner for full-service, life-cycle solutions

Sulzer is the expert not only when it comes to supplying your equipment, but also when it comes to supporting it throughout its life-cycle. By bringing together OEM technical know-how with deep process and industry expertise, Sulzer has the unique ability to understand the intricacies of your wastewater treatment plant and help you get the best performance from your assets.

Working closely with our customers, we take a holistic view and proactively seek to realize economic, reliability, efficiency, sustainability and digitalization gains for your benefit.

Our tailored service and maintenance offering extends from workshop repairs, complete operation and maintenance framework agreements, to consulting, energy audits and operating advice. Complimented by service centers and partners in every region, our local workforce actively engages with the dynamics, needs and interests of each market to deliver best-in-class solutions that are backed by global resource and capability.

Blending our subject matter expertise, proprietary physical and digital innovations, and customer-centric approach, you can rely on us to deliver consistent, high-quality service solutions to support you in an everchanging market.

Workshop repairs

- Extensive network of workshops close to you for rapid response
- Staffed by highly trained engineers, closely partnered with our manufacturing centers
- Repair and refurbish all types of Sulzer and non-Sulzer wastewater equipment
- Backed by OEM expertise, repaired products are updated to the newest standards
- Restore high-value equipment to “as-new” condition

Onsite services

- Onsite installation, refurbishment, commissioning and preventive maintenance
- Onsite repairs for Sulzer and non-Sulzer equipment
- Customizable long-term maintenance and/or service contracts for peace of mind, with the right features and scope to meet your equipment, plant and business needs
- Breakdown services
- Energy audits, analysis, and improvement advice

Spare parts and spares kits

- Extensive central stocks and efficient logistics guarantee quick delivery of commonly used parts
- A range of kits with everything needed to service or upgrade your equipment
- Original spare parts for the highest reliability and lowest energy consumption
- Strategic spares recommendations

Rental solutions

- Temporary and hire equipment for maximum flexibility

Service training

- Tailored training courses, available online, at a Sulzer facility, or preferred customer location

Remote services

- Monitoring, troubleshooting, optimization and analysis in combination with a service agreement for seamless support

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The Sulzer Flow division keeps your processes flowing. Wherever fluids are treated, pumped, or mixed, we deliver highly innovative and reliable solutions for the most demanding applications.

The Flow division specializes in pumping solutions specifically engineered for the processes of our customers. We provide pumps, agitators, compressors, grinders, screens and filters developed through intensive research and development in fluid dynamics and advanced materials. We are a market leader in pumping solutions for water, oil and gas, power, chemicals and most industrial segments.