Pioneering for You

Product brochure

Wastewater collection and transport
Your reliable solids separation system.
Wilo-EMUport CORE.

Wilo
Pioneering for You.

We are there for you worldwide.

Since 1872, we at Wilo have been turning visionary ideas into intelligent solutions that regularly set new standards in the industry. The goal of our company founder, Caspar Ludwig Opländer, was to use his copper and brass goods factory to improve and facilitate the supply of water to people. It did not take long for the company to take the key step: in 1928, his son Wilhelm designed the world's first circulation accelerator.

We have been continuing this tradition ever since with pioneering innovations in the heating, air-conditioning and cooling sector, such as the world's first high-efficiency pump, and at the same time we have proven our commitment to using valuable resources such as energy and water responsibly. Today the Wilo Group, headquartered in Dortmund, is represented across the globe as an all-round provider of pumps and pump systems for water management.

Cooperative support you can rely on.

With over 7500 employees and 60 production and sales companies all over the world, we personally see to it that our customers' and users' needs and requirements – whether they are specialist consultants, operators, or general contractors – are met optimally every day. This means making your life and work as easy as possible with our products, solutions and services.

"Pioneering for You" is our permanent pledge of clear customer focus, unrelenting pursuit of quality, and of our special passion for technology. In times of dwindling natural resources the responsible management of water is an extremely important task, which is why we are committed to providing pioneering developments, sustainable product solutions, and cooperative support to ensure that you can rely on our solutions for the daily management of water. That's what we call Pioneering for You.

Daniel Busuioc, International Projects Coordinator
Group Competence Team, WILO SE, Hof, Germany

Reliable solutions have design.
With Wilo.

Wilo sewage expertise at a glance

1 Drainage inside buildings

2 Drainage of localities

Our complete support for you.

Our experts support you personally in every project phase, from design and configuration right through to commissioning and maintenance. We take a holistic approach to your system. This allows us to provide customised product solutions and set new standards for you in terms of technical performance, cost efficiency, safety and durability – in all wastewater collection and transport applications.

Wilo – the right partner to address your challenges.

Given global climate change, low energy consumption is a key issue in the market. The cost pressures on municipal or private suppliers are rising. The challenges are growing. These include increasing levels of solids in sewage, more and more regulations, and stricter legal requirements. With Wilo you have a partner for this that you can fully rely on. In this brochure we provide you with reliable solutions for sewage transport from buildings and for local drainage of entire areas.

Wilo-EMUport CORE. The system as an underground pumping station.

Wilo-EMUport CORE.
For your reliable sewage transport. And separation.

Growing solid content in sewage is creating great challenges in the context of drainage of entire localities, but also public buildings such as hotels and airports hospitals. The technological and economical solution: Wilo-EMUport CORE. The innovative solids separation system offers the highest level of operational reliability and guarantees reliable transport of sewage. By separating solids from sewage, pumps do not come into contact with the solids. Clogging, which can lead to operational failures, is prevented in a sustainable manner. Therefore, the systems sets the highest standards with regards to operational reliability, economy and comfort.

Efficient sewage lifting unit with solids separation system

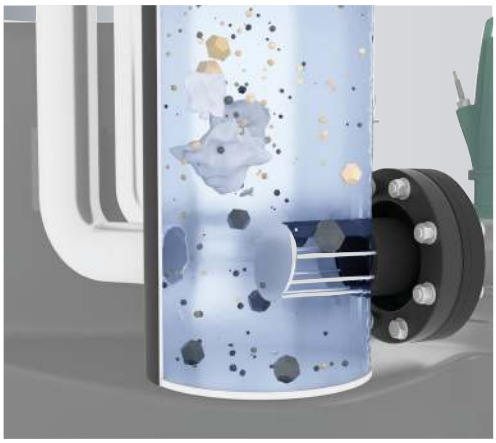
Wilo technology is behind clean pumping.

The solids separation system reveals unique Wilo technology. It is used to separate coarse solids from sewage and retain them in separate solids separation reservoirs upstream of the pumps. Only the pre-treated sewage passes through the pump hydraulics and is fed into the collection reservoir. This sewage is pumped into the upstream solids separation reservoir during the pumping procedure and pumped with the solids into the discharge pipeline. The pumps remain dry due to their location outside the reservoir and not in the fluid. This allows maintenance work on the pumps to be carried out conveniently and hygienically.

Now watch the animation and discover more about the professional solids separation. Visit wilo.com/watermanagement and our Wilo YouTube channel.

Functionally reliable division and separation.
Inflowing sewage flows over the distributor into the solids separation reservoir. The solids are retained, and the pre-treated sewage flows on into the collection reservoir.

Open. Close.
The collection reservoir is filled, and the floating shut-off ball automatically closes the inlet of the solids separation reservoir.



Clean forwarding.
Due to prior separation, only pre-treated sewage passes through the pump hydraulics. In this way no deposits are formed and the system is practically self-cleaning.

Targeted pumping out.
The pumping procedure of a pump is started. Pre-treated sewage is pumped in the opposite direction through a solids separation reservoir. Solids are pumped into the discharge pipeline.

Wilo-EMUport CORE.
Designed such that solids do not disrupt your sewage transport.

The solids separation system Wilo-EMUport CORE is your solution for reliable sewage transport. A prefabricated system, which is compact, flexible and modular.
In this way it is suited both for installation in buildings as well as for concealed floor installation in chambers. Owing to the various available sizes, you can choose the system that is a precise match for your inflow conditions.
All systems of the Wilo-EMUport CORE series are type-tested by TÜV Rheinland in accordance with DIN EN 12050-1 and are also continuously monitored. This ensures you the highest level of operational reliability and quality.

Resistant, long-lasting.

Collection reservoir with deposit-free geometry made of corrosion-free PE

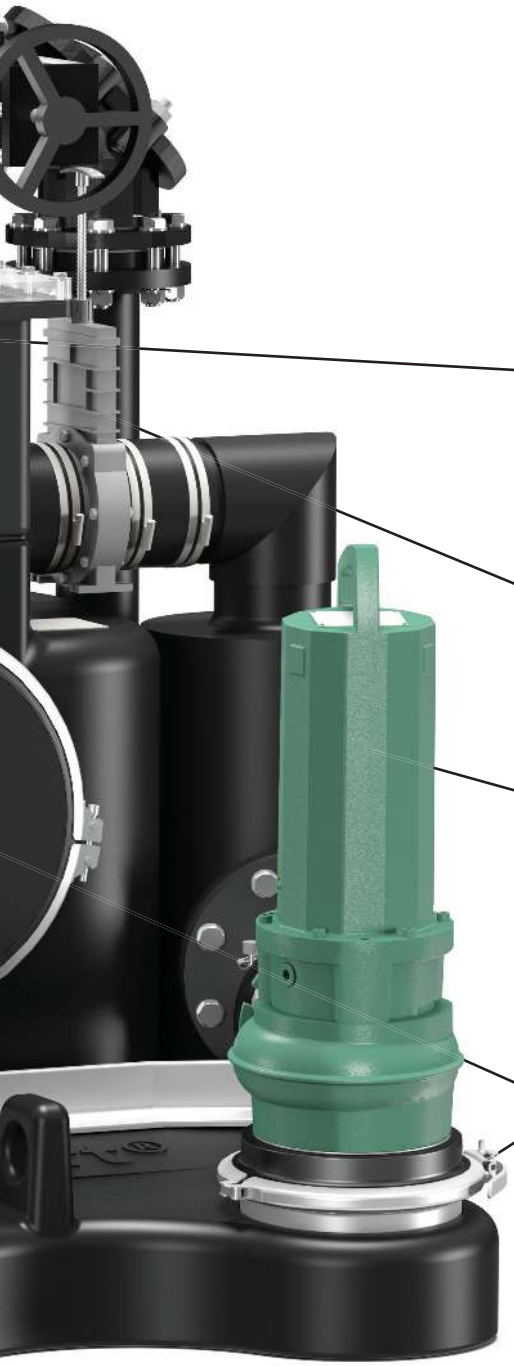
Well-thought-out retention.

Solids separation reservoir made of corrosion-free PE

Manual flushing.

Backwashing into collection reservoir for manually flushing the collection reservoir

Overview of product series				
	EMUport CORE 20.2	EMUport CORE 45.2	EMUport CORE 50.2	On request
Max. inlet flows:	20 m³/h	45 m³/h	50 m³/h	Up to 1000 m³/h
Gross volume:	400 l	1200 l	1200 l	Up to 20000 m³/h
Positive suction head:	750 mm	1200 mm	1200 mm	–
Inlet connection:	DN 150 – DN 25	DN 200 – DN 350	DN 200 – DN 350	Up to DN 800
Pressure connection:	DN 80/DN 100	DN 100/DN 150	DN 100/DN 150	Up to DN 350
Protection class:	IP68	IP68	IP68	IP68
Min. pump chamber diameter:	1500 mm	2000 mm	2000 mm	Up to 3600 mm
Material of reservoir:	Polyethylene	Polyethylene	Polyethylene	Polyethylene
Material inlet distributor box:	Polyurethane	Polyurethane	Polyurethane	Polyethylene
Dimensions (D x W x H):	390 x 1410 x 1400 mm	1830 x 1730 x 1865 mm	1830 x 1730 x 1865 mm	–



Control at a glance.

Inlet box with transparent cover. For visible inspection during operation

Easy maintenance during operation.

Individual shut-off of the solids separation reservoirs

Efficient power.

Submersible pump with slight tilt for automatic venting, optionally with IE3 motor*. In easy maintenance, hygienic dry well installation.
*Based on IEC60030-2.

Easy to clean.

Cleaning opening on the collection reservoir and pump connection with quick-release fastenings

Wilo-EMUport CORE.
Reliably drain entire areas or localities.

Sewage disposal involves having to transport great volumes at low cost. That requires solutions which are highly efficient and durable. With the Wilo-EMUport CORE solids separation system, Wilo offers a highly economical system ready for connection and designed for installation in pump chambers. It entails minimal operating costs and is easy to maintain. A technology with which entire localities or even large industrial and commercial complexes can be reliably drained. Special features: Wilo-EMUport CORE is designed in such a way that it is also suitable as a retrofit system for modernising older pumping stations.

From the existing system in a wet well installation to clean hygienic solution in dry well installation. Wilo-EMUport CORE allows for modification as a retrofit system.

The Retrofit system. The perfect replacement.

For operators it makes sense to modernise existing systems for economic reasons. With Wilo-EMUport CORE you are instead choosing a particularly economical, reliable and future-proof solution. By converting a conventional pumping station with wet well installation to a solids separation system in dry well installation, you are opting for greater hygiene and cleanliness. That also makes maintenance easier, faster and cheaper. In addition, you can be sure that the pumps are overflow-proof (protection class IP68) and will also function if the chamber occasionally fills up.

So that you can benefit from these advantages, Wilo provides you with a cost-effective design concept with the retrofit system. A renovated pumping station is designed by experts taking into account all existing dimensions, inlets, pipe outlets and your custom requirements.

Learn more about the future-proof pumping stations and view the animation now. Visit wilo.com/watermanagement and our Wilo YouTube channel.

Faster and easier to the new pumping station with solids separation. Wilo-EMUport CORE is a "Plug & Pump" system. In other words, completely ready for connection, including chamber, pumps and switch system.

Complete pumping station made of polyethylene.

When it comes to redevelopment of localities, choosing intelligent drainage of sewage is crucially important. A reliable choice based on the Wilo-EMUport CORE solids separation system is future-proof and dependable. Here you can also choose the system as a complete pre-fabricated pumping station. A unit ready for connection, including pumps and switchgears – that is, a modern Plug & Pump solution. It is also so compact that it can be installed in chambers from 1500 mm in diameter.

This application also keeps the pump room dry, clean and odour-free. The design, including a pump chamber made from polyethylene, ensure a long service life and reliable operation. From various cover classes which can be driven over to the highest ground water levels, this offers a future-proof alternative in contrast to concrete and stainless steel-based designs.

Variable designs.
Systems with customised sewage pumps, also with active cooling system, for a performance range up to 80 m and 600 m³/h. Our experienced personnel take the exact dimension on site. This collected data can then be used together with your individual customer requirements to design and produce your pumping station together with all the necessary equipment.

Overview of the advantages:

- Maximum reliability by separating solids from sewage: Large solids do not have to pass through the pump – no clogging
- Cost-effective due to retrofit system for simple renovation of old pumping stations
- Durable and corrosion-free due to the use of PE and PUR material
- Easy maintenance, even during operation – owing to hygienic dry well installation and easy access from outside and individual blocking
- Future-proof even with increasing solid content in sewage
- Flexible installation in buildings or in chambers from 1500 mm diameter
- Energy savings due to efficient submersible sewage pumps, optionally with IE3 motors

Usedom – sunny island.
Modern sewage treatment – from future-proof design to all-year-round security.

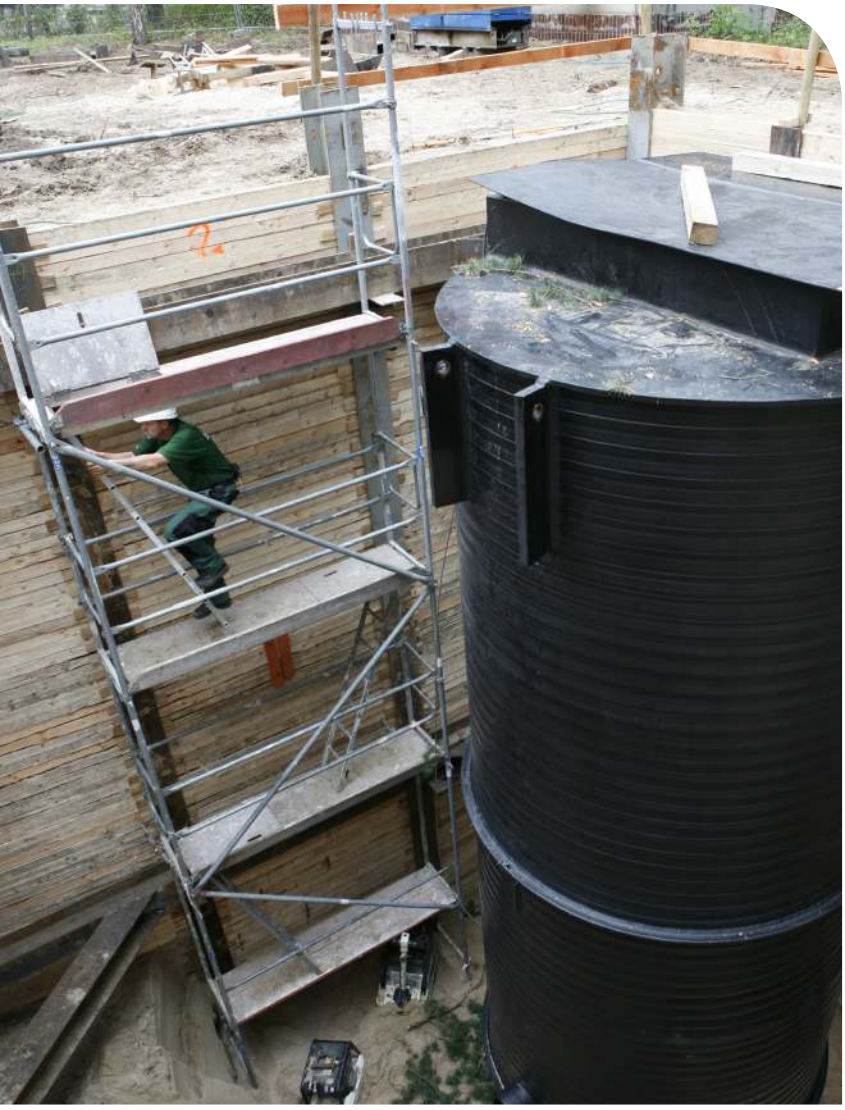
The sunny island of Usedom shows how future-proof and sustainable the decision can be for a well-thought-out waste water system. The competent supervisory association just 18 years ago could see that island conditions coupled with growing popularity among tourists would lead to high demands on the waste water system.

Large island, large amounts of sewage.

Usedom is Germany's second-largest island. With approximately 31000 inhabitants on the German side, it is relatively sparsely populated. However, its infrastructure has to cope with the seasonal demands, particularly in the summer. The supervisory association registers up to 70 % more sewage during this time because of the three-fold increase in the population. In addition to this, the quantity of sewage also changes depending on the usage behaviour of the inhabitants and tourists. Due to this, both the sewer system and the pumping stations must be designed to simultaneously cope with the maximum amount of sewage and the increase in solids.

Manfred Schultz

Supervisory association for water supply and sewage removal of Usedom Island:
"With Wilo we deliberately counted on the noted partner for reliable solids separation systems. It was important for us to choose someone who commanded the sewage know-how and could custom design systems and precisely tailor them to the specific sewage structure. This worked out in practice just as we imagined. All the pumps stations were precisely planned and designed for the projected inlet quantities and the calculated inflow depth. We can now say that the solids separation system on Usedom has been absolutely trouble-free for 18 years. That is economical for us and, of course, makes planning very secure. Wilo has been just the right decision for us."



From numerous requirements to the unique solution.

Since then, Usedom has opted for pressure drainage for economic reasons. Needs-based solutions were chosen instead together with Wilo as the reliable systems partner. In the meantime, 13 pumps stations with the Wilo fail-safe solids separation system were installed in this complex waste water system on the German side. These are tailored solutions, which ensure reliable sewage transport.
These are the result of expedient systems designing, where long-term measurements were taken at different collection points. In this way, the supervisory association obtained guide values for calculating the required system capacities, such as the average per-capita water consumption and the associated inlet flows.

Wilo-EMUport CORE.
That is how you smoothly drain buildings.

Hotels, airports, train stations, hospitals or shopping centres are heavily used public buildings. An undefined category of people has free access here to the sanitary facilities. This creates great challenges for sewage transport as solids content can increase in an uncontrolled manner in these kinds of buildings. Opt for reliable systems with Wilo-EMUport CORE. These compact lifting units with the solids separation system according to DIN EN 12050-1 are ideal for installation within buildings. By separating out solids, these systems are extremely non-susceptible to clogging and, therefore, very operationally reliable. They facilitate the smooth operation of buildings.

Overview of the advantages:

- Maximum operational reliability for building services. Owing to clogging-free operation.
- Individually integrable Plug & Pump system ready for connection
- Maintenance also possible during operation. So there is no interrupting of operations.
- Reduced service call-outs

Learn about efficient solids separation within buildings. Animated for you. On wilo.com/water-management and our Wilo YouTube channel.

Operational reliability.
Ideal where there might be increasingly indefinable solids in sewage and operation cannot be interrupted for maintenance work.

Well-thought-out operability.
Perfectly coordinated control and monitoring with Wilo-Control SC-Lift FTS.

Customised switchgears for complete system control.
We provide customer-specific, pre-assembled switchgears and control systems. The range of functions extends from simple pump controls to complex remote control systems.

Vienna scheduled to operational reliability.
Underground.

Consultants, operators and facility managers often ask how lifting units can operate reliably in sewage with unpredictable solid content. The main train station in Vienna provides the perfect answer: using the Wilo-EMUport innovative solids separation system.

Wilo-EMUport against costly loss of service

Heavily used. Highly susceptible to a loss of service.

More than 1100 trains arrive daily at the Vienna Main Station, with roughly 145000 passengers arriving and departing. They spend their waiting time at the 20000 m² large shopping centre. In addition, thousands of visitors take to the enormous shopping centre on a daily basis and park their cars in the multi-storey underground car park. The risk: The uncontrollable use of sanitary facilities can likewise leads to increases in uncontrolled solids content ending up in the waste water system. Related breakdowns and downtimes would be troublesome and extremely problematic for a 24-hour service like a main train station. They would lead to considerable costs in this highly used complex due to both loss of service and repair work.

Reliable operation.

Wilo has been entrusted since 2014 with a wide range of water management functions by consultants of the Vienna Main Station. Following extensive precise analysis, 18 lifting units of the Wilo-EMUport FTS series, for instance, were installed for the sanitary facilities of the building complex. Operation has been trouble-free since this functioning solids separation system was installed.

Michael Jelleschitz

ÖBB Infrastruktur AG, project management of Vienna Main Station, TGA – Baumanagement:
"The Vienna Main Station is a building complex which only functions when it is operationally reliable 24 hours a day. The waste water system is, needless to say, an important factor in that.
Thanks to Wilo, system solutions of the EMUport series ensure dependable solids separation as well as smooth sewage transport. These are economical systems, which can be main-tained during operation. Two alternately connected pumps on the outside of the sewage collection reservoir mean the system for maintenance work doesn't have to be switched off at all. Therefore, there is no malfunction or interruption to service. It's ideal for a building complex that can't afford downtime."

The Vienna Main Station. Operational reliability – due to modern pump technology for sewage disposal.
© ÖBB/Roman Bönsch

Wilo Services.
Our full-service package for you as partners.

With Wilo as your partner, you can not only be sure of choosing high-quality product solutions, but also of benefiting from a comprehensive, worry-free package of well-thought-out services. This means that we reliably support you in every project phase, from design and configuration right through to commissioning and maintenance. In our seminars we tell you about the very latest technologies and trends. And when it comes to attractive conditions for your projects, we also have just the right package to offer.
In short, Wilo is always by your side. In person and on site. With local services in over 60 countries and more than 1200 Wilo engineers worldwide.

We make the design and selection process simple for you.

We don't want you to choose just any old solution – we want you to find the one that meets your exact requirements. As a result, we work through your requirements with you before the purchase and, on this basis, we prepare the individual product solution that is most economical for you.

Pre-sales services for your tailor-made choice:

- On-site support
- Consulting support
- Product selection
- Select programme
- Digital flow simulations
- Flow calculation
- Pipeline calculation
- Installation drawings
- Documentation

For more information, go to
www.wilo.com/en/watermanage-
ment

You cannot go wrong with Wilo.

When you have made your choice, we provide you with thorough advice on your investment. What is more, we do not just deliver your solution, we continue to support you – from certification right through to commissioning.
For example, qualified plant engineers with years of experience will carry out an extensive test and training phase with our pumps.

Sales services
that really work for you.

- Certification
- Acceptance testing at the plant
- Commissioning
- Start-up

- **Wilo-Financial Services.**
  We help you with the financial implementation of your projects, and gladly create a quotation specially tailored for your investment.

- **Try & Buy.**

  Try & Buy lets you play safe with your investments. Choose a no-risk trial for up to six months to convince yourself of the quality of Wilo's products.

We are there for you. Even after the purchase.

Our tailor-made service solutions cover the entire lifecycle of your Wilo products – including what comes after your purchase. That is why we have professional service engineers available for you locally and globally so that we can supply spare parts quickly and reliably at any time, and why we provide targeted training courses among other things to enhance your expertise.
And we continually strive to improve our services.

After-sales services
with real added value for you!

- Customised, reliable maintenance concepts
- Rapid repair service
- Fast spare parts solutions
- Efficiency check
- Specific training courses

- **WiloCare.**
  Our service offer for guaranteed operational reliability and cost certainty. Monthly reports keep you up to date on how your system is doing: system status, energy consumption, possible optimisations and pending maintenance intervals. Wilo can offer you individually tailored services in various packages at a fixed monthly price. These allow you to check how reliable your processes are at any time – both in terms of technology and costs.

www.wilo.com/WaterManagement

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