

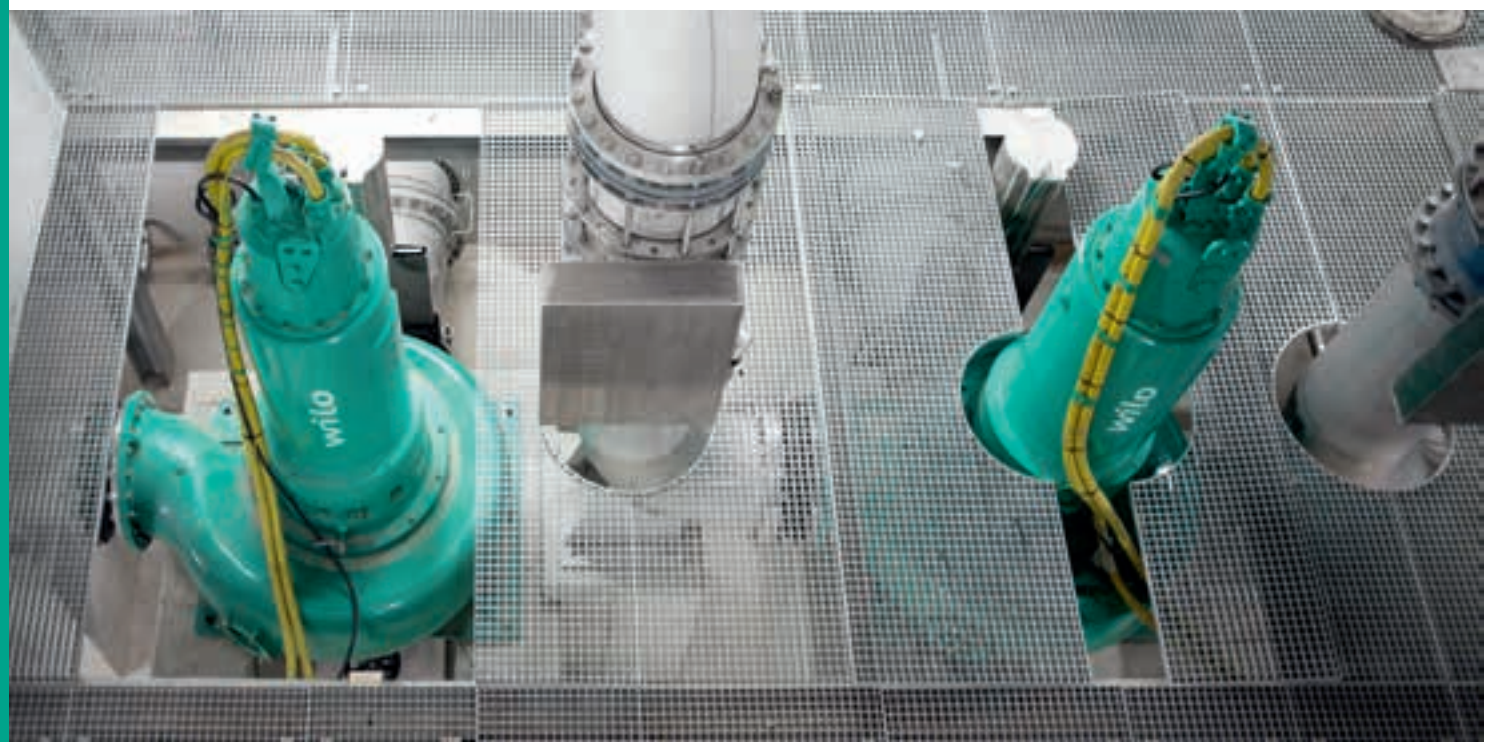
Pioneering for You

wilo

Application brochure

Wilo systems for wastewater collection and transport.

Solutions for municipal applications.



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 *Kupfer- und Messingwarenfabrik* to improve and facilitate the supply of water to people. It was not long until the decisive step was made: In 1928, his son Wilhelm designed the world's first circulation accelerator.

We have continued this tradition ever since with pioneering innovations, such as the world's first high-efficiency pump in the heating, air-conditioning and cooling sector, and at the same time we have proven our commitment to using valuable resources such as energy and water responsibly. Today, with its headquarters in Dortmund, the Wilo Group is a complete system supplier of pumps and pumping systems for water management with worldwide presence.

Cooperative support on which you can rely on.

With over 7,500 employees and 60 production and sales companies all over the world, we personally see to it that the desires and requirements of our customers and users – whether specialist consultants, operators, or general contractors – are optimally met every day. This means making your life and work as easy as possible with the help of our products, solutions and services.

“Pioneering for You” is our commitment to a clear customer focus, strict quality orientation and strong 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 you can rely on our solutions for the daily management of water. That’s what we call Pioneering for You.



“Engineering technology that is both efficient and easy to use, that’s what I call Pioneering for You.”

Thomas Keil,
Design Engineer, WILO SE Hof/Germany

Reliable solutions for channelling wastewater.



You can rely on that.

Our experts provide you with personal support in every phase of the project, from design and configuration, through to commissioning and maintenance. And our systems and product solutions set new standards in terms of technical performance, cost efficiency, security standards, and durability – in all applications relating to wastewater collection & transport.

Wilo – the right partner to address your challenges.

With regard to world climate change, low energy consumption is a key market topic. The cost pressure on municipal or private suppliers is rising. Challenges are growing. These include an increasing amount of solids in sewage, a growing number of regulations, and stricter legal requirements. Against this backdrop, Wilo is a partner on whom you can fully depend in all areas.

This brochure introduces a selection of applications relevant to the topic of wastewater collection and transport. This is only a section of our entire portfolio. Just ask us what we can do for you.



- 1 Pressure drainage for individual properties
- 2 Pressure drainage for building complexes
- 3 Pumping stations
- 4 Solids separation system

Pressure drainage for individual properties: Wastewater disposal according to the type of building.



Application:

Wherever no sewer system is available and the construction of one is not possible or uneconomical, pressure drainage using pipelines with small diameters is recommended.

Challenge:

Typical challenges are overdeveloped areas and regions with difficult ground conditions, deficient gradients, too high groundwater levels or topographic obstacles such as mountains or surface waters. Design is often very complex. Standards and requirements also set strict limits when dimensioning.

Wilo solution:

Thanks to years of experience and comprehensive knowledge, Wilo has designed an extremely eco-

nomical sump system especially for pressure drainage – Wilo-Port System. Sump, pump, and control technology are perfectly matched. A variety of component combinations enables individually adapted to specific requirements.



Wilo-Port

Design:

PE sump Wilo-Port 600 and 800

Application:

- Specifically for the pressure drainage of domestic sewage

Special features/product advantages:

- Anti-buoyant and dimensionally stable against ground water up to ground level
- Secure installation due to the monolithic (one-piece) design to 2.25 m, optional step-less sump length extension to a total height of 2.75 m
- Can be driven up to class B without load distribution plate, optional class D
- Water column on the removable non-return ball valve ensures the discharge pipeline closes reliably.
- Easy to maintain as all functions can be operated from the outside



Wilo-Drain Control PL1-WS

Design:

Switchgear

Application:

Switchgear for level control of 1 submersible pump

Operation voltage:

1~230 V, 3~400 V

Connected load P2:

4,0 kW

Special features/product advantages:

- Level measurement can be carried out with either the bubbling-through or dynamic pressure systems, via an electronic level sensor or float switch
- LC Display
- LED for alarm, operation/follow-up time, manual/automatic mode
- Potential-free contact for collective fault signal and high water alarm
- Forced switch-on of the pump
- Pump switch-off with run-on time (0...180 s)
- Integrated buzzer, Operating hours counter and pump starts

Building complexes without gravitational drainage: Pressure drainage in the big class.



Application:

Sewage disposal from apartment buildings or public buildings places higher requirements on the pressure drainage system. For example, highly variable inflows and a different solid content need to be taken into consideration.

Challenge:

When selecting the proper drainage system, demographic change, changes in user behaviour and climate change also play important roles alongside cost effectiveness. While the flexibility of the systems need to be increased for sustainable development, standards and guidelines (e.g. EN 752, DWA-A 116 or other regional guidelines) place tight constraints on the dimensioning of technical solutions.

Wilo solution:

Wilo-RexaCut is the new generation of macerator pumps. Thanks to its above-average wide variety of connection options, the Wilo-RexaCut adapts to almost every pipeline. It is therefore particularly suitable for replacement in the event of retrofitting.

**Wilo-RexaCut, the active one****Design:**

- Centrifugal macerator pump

Application:

- For pressure drainage system and the disposal of domestic sewage

Volume flow:

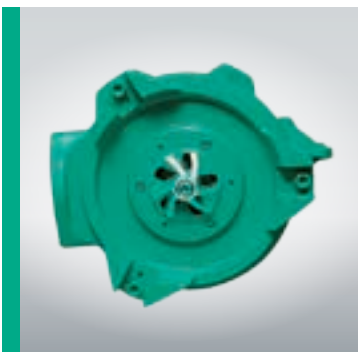
max. 23 m³/h

Delivery head:

max. 35 m

Special features/product advantages:

- Two mechanical shaft seals for reliable operation
- Patented macerator for maximum operational reliability at very high efficiency
- Premium motor monitoring with additional optional sealing chamber electrode
- Great connection versatility for maximum flexibility (DN 32 / DN 40 / Rp 1½")
- Optionally with ATEX protection

**Twice as good: patented macerator**

The proven Wilo macerator concept combines two advantages in one technology: maximum operational reliability and maximum result.

- ensures optimal feeding of solids
- even heavy pulps won't stop it

Whether intermediate pumping station or collective pumping station: Well-equipped for any eventuality.



First class impeller geometries

Effective and reliable – that is how SOLID works, the innovative Safe Operation Logic Impeller Design by Wilo.

- combines the advantages of a non-clog impeller and a vortex impeller
- increases the reliability of the pumping of untreated sewage with high solids content
- available in closed design for low vibration, very smooth running and efficiency of up to 82%
- or as a half-open variant for increased operational reliability in smaller nominal sizes

Application:

A basic distinction is made between intermediate pumping stations and collective pumping stations. With intermediate pumping stations, economic efficiency is improved in terms of the sewage disposal – as opposed to the free-flow pipeline – due to using the same pipelines and avoiding large installation depths in areas with partly difficult access or hilly terrain. When disposing of the sewage from built-up areas and cities with gravitational drainage, the sewage is fed into a collective pumping station instead and from there pumped directly to the wastewater treatment plant.

Challenge:

The construction or retrofitting of sewage disposal systems is now dependent more than ever on numerous standards, laws, and individual requirements. Urbanisation and metropolitan areas are demanding newer, larger sewage networks. At the same time, changes in consumer behaviour, which always tends towards the more economical use of water, need to be taken into account. In Germany, for example, more and more consumers are opting for flush saving systems or are using their own rainwater due to the high potable water and sewage charges. The consequence: less water is fed into the sewage network, the solids content increases, and the pumping operation becomes more difficult.

Wilo solution:

At Wilo you will find the right solution to almost all questions. Self-cooling submersible sewage pumps from the Wilo-EMU FA series in dry or wet installation guarantee the reliable transport of large volume flows. Innovative hydraulic constructions cope with the increasing solids content. The Wilo-RexaBloc also offers a cost-effective solution for dry well installation pumps with standard motor.





Wilo-RexaBloc, the permanent one

Design:

- Dry well installation sewage pump standard motor in compact design. Also available as Wilo-RexaNorm with coupling, on a base plate

Application:

- For pumping sewage with solid constituents
- In wastewater treatment plants and pumping stations for local drainage and process water extraction

Volume flow:

on request

Delivery head:

on request

Special features/product advantages:

- Space-saving design due to compact monobloc construction technique
- Low installation and maintenance costs due to service-friendly modular construction
- High operational reliability due to oil barrier chamber with optionally available sealing chamber monitoring
- Low maintenance due to roller bearings being lubricated with a grease filling to last the service life
- Optionally with energy-efficient IE3 motor technology



Wilo-EMU FA, the solid one

Design:

- Submersible sewage pump with self-cooling or non-self-cooling motor

Application:

- For pumping sewage with solid constituents
- In wastewater treatment plants and pumping stations
- For local drainage, water control, and process water extraction

Volume flow:

max. 7,950 m³/h

Delivery head:

max. 95 m

Special features/product advantages

Wilo-EMU FA:

- Broad range of applications thanks to variety of different possible motor and impeller combinations
- Hydraulic pump output optimally adapted to the desired duty point
- Optionally with energy-efficient IE3 motor technology
- Optional special materials and Ceram coating for protection against abrasion and corrosion

Special features/product advantages

FKT motor technology:

- Process reliability thanks to comprehensive monitoring facilities
- Optimal motor cooling thanks to the efficient heat exchanger with a two-chamber system
- Low vibration and long service life thanks to high-quality components



Solids separation system: Separation with a system – the most economical solution

Application:

On the one hand, the local drainage or disposal from industrial and commercial complexes needs to satisfy numerous environmental requirements and function reliably over a long period of time. On the other hand, it must not produce any "escalating" costs.

Challenge:

Large amounts of wastewater need to be transported economically. Above all, the maintainability and durability of the plants is of paramount importance, in addition to achieving the most efficient operation possible.

Wilo solution:

The Wilo-EMUport solids separation system is a real innovation in sewage disposal – it works very efficiently, generates low operating costs and is easy to maintain. Special feature: Before the polluted sewage passes through the pump region, the solid material is filtered out and retained in separate vessels. The pump does therefore not come into contact with solid materials. The water only picks up the solid material again once it has passed through the pump region; thus avoiding blockages and increasing operational reliability. Since only pre-purified sewage flows through the pump hydraulics, the free ball passage of the pumps can be designed to be considerably smaller than in conventional systems and greater efficiency is achieved.



The material in the durable sump pumps is: PE-HD

We place emphasis on proven durability to safeguard your requirements on a sustainable basis – with thermoplastic PE HD (high density polyethylene).

- secures your investments on a reliable and lasting basis, even in an earthquake
- is environmentally friendly and recyclable up to seven times
- consists of hydrogen and carbon, totally without harmful dyestuffs
- is even resistant to a high level of chemical contamination
- is around 90% lighter than concrete



Wilo-EMUport FTS, the long-lasting one

Design:

- Ready for connection sump pumping stations with dry well installation sewage pumps and solids separation system
- also available as sump or building version

Application:

- For the disposal from residential estates, built-up areas, or large industrial and commercial complexes using conventional gravity-flow drainage systems

Volume flow:

on request

Delivery head:

on request

Special features/product advantages:

- Economical due to the smaller ball passage compared to conventional wet well installation without solid separation
- Insusceptible to clogging as the pumps do not come into contact with the solid materials in the sewage
- Hygienic conditions for maintenance and assembly, pump compartment is clean, dry and odour-free
- Resistance to corrosion and durable due to construction from PE-HD material
- Easy commissioning on site due to being delivered fully assembled in the sump

Pro-active replacement:

- Economic renewal of pumping stations thanks to retrofit system
- Reconstruction within one day

For us, partnership means that you achieve more with us as a partner.

Customer service always starts with a personal consultation. On this basis, we develop tailor-made individual solutions precisely for your demands. Our service then goes far beyond this. With fast and reliable repair and maintenance concepts, we also assist you in the long term.

Plan with our consulting.

We are here for you and will draw up an exact assessment of what you require. From this, our specialists will work closely with you to find an individual solution.

You can count on our selection of pumps.

With the help of a modern selection programme, we can offer you the most economical solution.

You can rely on our pump installation.

The installation and complete connection, as well as an extensive testing and training phase of our pumps is done for you by skilled workers with many years of experience.

Wilco means "all-round service from one source".





Your complete service package

Pre-sales:

- On site support
- Design support
- Product selection
- Select programme
- CFD simulations
- Flow calculation
- Pipeline calculation
- Installation drawings
- Documentation

Sales:

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

After-sales:

- Local service in 60 countries
- More than 1,200 Wilo technicians worldwide
- Individual maintenance concepts
- Customer-oriented replacement solutions
- Efficiency check
- Training





Argentina
WILO SALMSON
Argentina S.A.
C1295ABI Ciudad
Autónoma de Buenos Aires
T +54 11 4361 5929
info@salmson.com.ar

Australia
WILO Australia Pty Limited
Murrarie, Queensland,
4172
T +61 7 3907 6900
chris.dayton@wilo.com.au

Austria
WILO Pumpen
Österreich GmbH
2351 Wiener Neudorf
T +43 507 507-0
office@wilo.at

Azerbaijan
WILO Caspian LLC
1014 Baku
T +994 12 5962372
info@wilo.az

Belarus
WILO BelOOO
220035 Minsk
T +375 17 3963446
wilo@wilo.by

Belgium
WILO SA/NV
1083 Ganshoren
T +32 2 4823333
info@wilo.be

Bulgaria
WILO Bulgaria Ltd.
1125 Sofia
T +359 2 9701970
info@wilo.bg

Brazil
WILO Brasil Ltda
Jundiaí – São Paulo – Brasil
13.213-105
T +55 11 2923 9456
wilo@wilo-brasil.com.br

Canada
WILO Canada Inc.
Calgary, Alberta T2A 5L4
T +1 403 2769456
bill.lowe@wilo-na.com

China
WILO China Ltd.
101300 Beijing
T +86 10 58041888
wilobj@wilo.com.cn

Croatia
Wilo Hrvatska d.o.o.
10430 Samobor
T +38 51 3430914
wilo-hrvatska@wilo.hr

Czech Republic
WILO CS, s.r.o.
25101 Cestlice
T +420 234 098711
info@wilo.cz

Denmark
WILO Danmark A/S
2690 Karlslunde
T +45 70 253312
wilo@wilo.dk

Estonia
WILO Eesti OÜ
12618 Tallinn
T +372 6 509780
info@wilo.ee

Finland
WILO Finland OY
02330 Espoo
T +358 207401540
wilo@wilo.fi

France
WILO S.A.S.
78390 Bois d'Arcy
T +33 1 30050930
info@wilo.fr

Great Britain
WILO (U.K.) Ltd.
Burton Upon Trent
DE14 2WJ
T +44 1283 523000
sales@wilo.co.uk

Greece
WILO Hellas SA
14569 Anixi (Attika)
T +302 10 6248300
wilo.info@wilo.gr

Hungary
WILO Magyarország Kft
2045 Törökbálint
(Budapest)
T +36 23 889500
wilo@wilo.hu

India
WILO India Mather and
Platt Pumps Ltd.
Pune 411019
T +91 20 27442100
services@matherplatt.com

Indonesia
WILO Pumps Indonesia
Jakarta Selatan 12140
T +62 21 7247676
citrawilo@cbn.net.id

Ireland
WILO Ireland
Limerick
T +353 61 227566
sales@wilo.ie

Italy
WILO Italia s.r.l.
20068 Peschiera
Borromeo (Milano)
T +39 25538351
wilo.italia@wilo.it

Kazakhstan
WILO Central Asia
050002 Almaty
T +7 727 2785961
info@wilo.kz

Korea
WILO Pumps Ltd.
618-220 Gangseo, Busan
T +82 51 950 8000
wilo@wilo.co.kr

Latvia
WILO Baltic SIA
1019 Riga
T +371 6714-5229
info@wilo.lv

Lebanon
WILO LEBANON SARL
Jdeideh 1202
Lebanon
T +961 1 888910
info@wilo.com.lb

Lithuania
WILO Lietuva UAB
03202 Vilnius
T +370 5 2136495
mail@wilo.lt

Morocco
WILO MAROC SARL
20600 CASABLANCA
T +212 (0) 5 22 66 09
24
contact@wilo.ma

The Netherlands
WILO Nederland b.v.
1551 NA Westzaan
T +31 88 9456 000
info@wilo.nl

Norway
WILO Norge AS
0975 Oslo
T +47 22 804570
wilo@wilo.no

Poland
WILO Polska Sp. z o.o.
05-506 Lesznowola
T +48 22 7026161
wilo@wilo.pl

Portugal
Bombas Wilo-Salmson
Portugal Lda.
4050-040 Porto
T +351 22 2080350
bombas@wilo.pt

Romania
WILO Romania s.r.l.
077040 Com. Chiajna
Jud. Ilfov
T +40 21 3170164
wilo@wilo.ro

Russia
WILO Rus ooo
123592 Moscow
T +7 495 7810690
wilo@wilo.ru

Saudi Arabia
WILO ME – Riyadh
Riyadh 11465
T +966 1 4624430
wshoula@watanaiand.com

Serbia and Montenegro
WILO Beograd d.o.o.
11000 Beograd
T +381 11 2851278
office@wilo.rs

Slovakia
WILO CS s.r.o., org. Zložka
83106 Bratislava
T +421 2 33014511
info@wilo.sk

Slovenia
WILO Adriatic d.o.o.
1000 Ljubljana
T +386 1 5838130
wilo.adriatic@wilo.si

South Africa
Salmson South Africa
1610 Edenvale
T +27 11 6082780
errol.cornelius@
salmson.co.za

Spain
WILO Ibérica S.A.
28806 Alcalá de Henares
(Madrid)
T +34 91 8797100
wilo.iberica@wilo.es

Sweden
WILO Sverige AB
35246 Växjö
T +46 470 727600
wilo@wilo.se

Switzerland
EMB Pumpen AG
4310 Rheinfelden
T +41 61 83680-20
info@emb-pumpen.ch

Taiwan
WILO Taiwan Co., Ltd.
24159 New Taipei City
T +886 2 2999 8676
nelson.wu@wilo.com.tw

Turkey
WILO Pompa Sistemleri
San. ve Tic. A.Ş.
34956 Istanbul
T +90 216 2509400
wilo@wilo.com.tr

Ukraine
WILO Ukraine LLC
08130 Kiev
T +38 044 3937384
wilo@wilo.ua

United Arab Emirates
WILO Middle East FZE
Jebel Ali Free Zone-South
PO Box 262720 Dubai
T +971 4 880 91 77
info@wilo.ae

USA
WILO USA LLC
Rosemont, IL 60018
T +1 866 945 6872
info@wilo-usa.com

Vietnam
WILO Vietnam Co Ltd.
Ho Chi Minh City, Vietnam
T +84 8 38109975
nkminh@wilo.vn