

Pioneering for You

wilo

*Efficient solutions – 50 Hz*

## General Overview 2020

Our product and system solutions for Heating, Air conditioning, Cooling, Water supply as well as Drainage and sewage.

DISCOVER  
ADDITIONAL  
DIGITAL  
CONTENT



# GREEN SOLUTIONS FOR A BETTER CLIMATE.

Smart. Efficient. Sustainable. Our solutions offer measurable added value.. Energy-efficiency and resource-efficiency are vital elements to the efforts to protect the climate. One of our primary sustainability goals is to supply people with clean water while reducing our ecological footprint.

With our high-efficiency technologies we contribute worldwide to more gentle handling with valuable resources like water and energy. In doing so, we rely on smart products that integrate seamlessly into digitally controlled infrastructures. In this context, we use digitalisation which offers us new opportunities in terms of energy savings.

Wilo offers an extensive range of products for Building Services, Water Management and Industry, and is continuously working on the further development of its product portfolio.

[www.wilo.de](http://www.wilo.de)



|   |                |
|---|----------------|
| <b>Wilco – Protect and act</b> .....                | <b>4 – 9</b>   |
| Sustainability Strategy.                            |                |
| <b>Heating, air conditioning, cooling</b> .....     | <b>10 – 27</b> |
| Networked solutions for an optimal indoor climate.  |                |
| <b>Water supply</b> .....                           | <b>28 – 51</b> |
| Intelligent technologies to combat water shortages. |                |
| <b>Drainage and sewage</b> .....                    | <b>52 – 72</b> |
| Reliable waste water systems for growing cities.    |                |
| <b>Service and support</b> .....                    | <b>73 – 76</b> |
| Practical support for your daily work.              |                |

**More is more: in-depth digital content**  
 **Our extra for you:** wherever you see this logo you can call up additional information we prepared for you. Simply scan the area with your smartphone and find out more about selected topics.





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# Pioneering for You

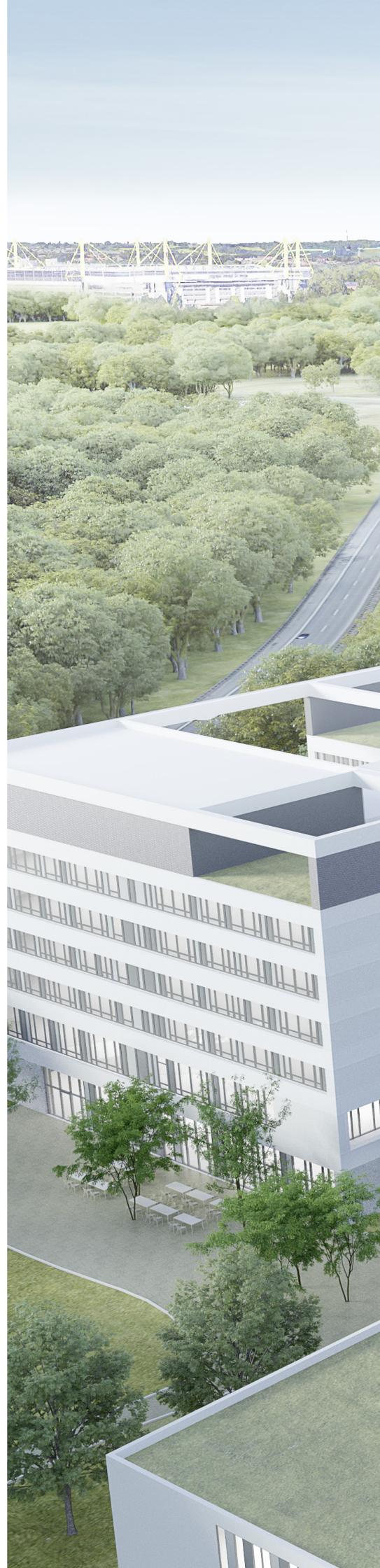
## **Our promise to you.**

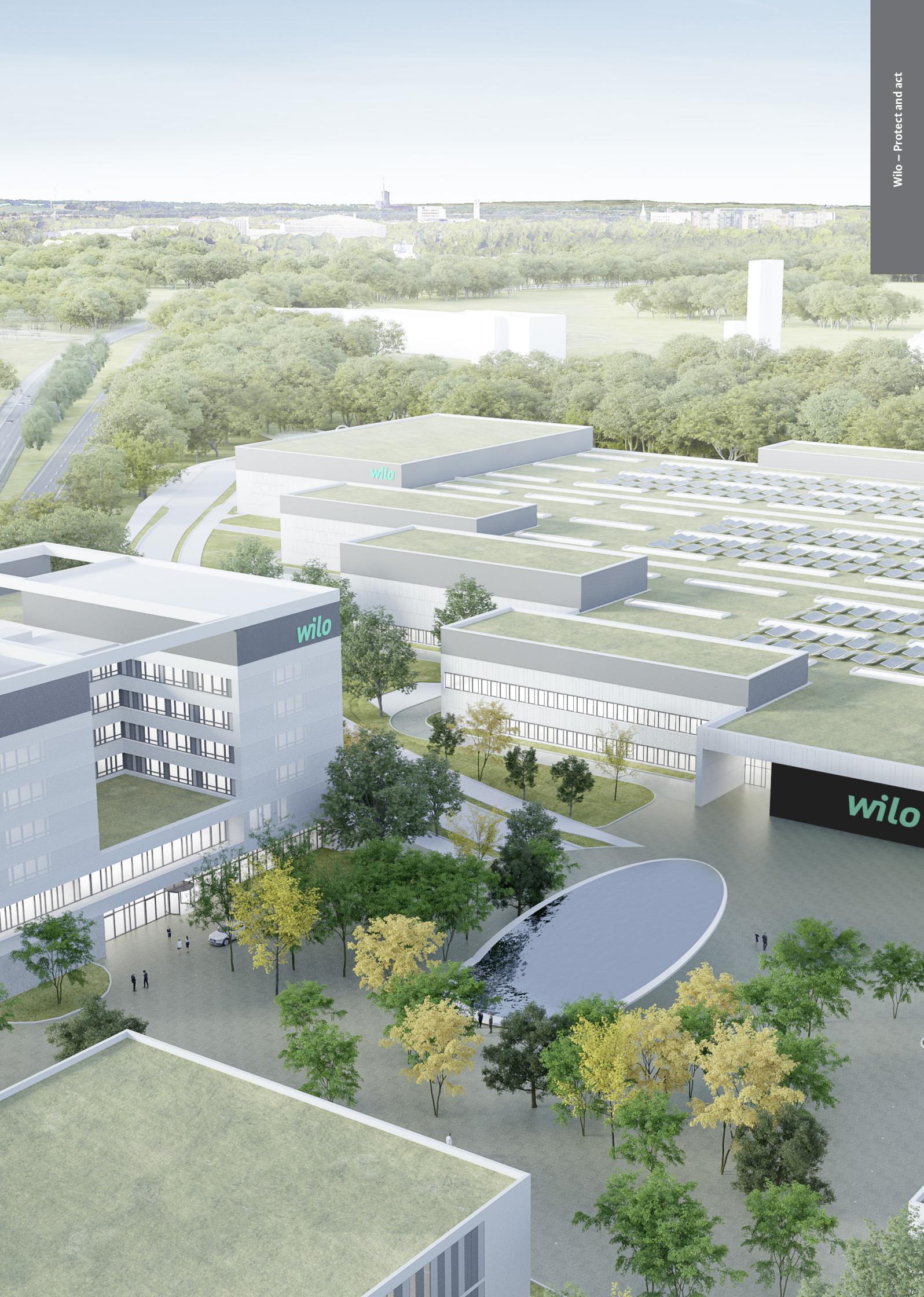
WILO SE is one of the world's leading premium suppliers of pumps and pump systems for building services, water management, and the industrial sector. With round 8000 employees in more than 60 subsidiaries around the world, we develop smart solutions that connect people, products and services to effectively support you in your daily work. "Pioneering for You" is our lasting commitment to clear customer focus, unrelenting pursuit of quality and our special passion for technology.

As the digital pioneer of the pumps industry, we understand the challenges that will shape the future. As an innovation and technology leader, we provide holistic solutions to address them. We know that these issues play a major role in your daily work and, in turn, ours too.

## **Sustainably better.**

One of the most pressing tasks in times of limited natural resources is the responsible consumption of water, a resource that is becoming increasingly scarce. Efficiency, connectivity and safety will become increasingly important in the future. We aspire to offer you sustainable, user-friendly and high-performance solutions for building services and water management that are ahead of their time. We work closely with our customers to create innovative products and systems that perfectly match their requirements and are rounded off with convenient services. The result is integrated solutions you can rely on at all times.





# PROTECT AND ACT

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**Climate change** poses a real threat and global challenge. It is the most important subject of our time, and will continue to be so for this generation and beyond.

Rigorous and speedy action is necessary to **slow down global warming**. Energy and resource efficiency are crucial if we are still to limit global warming.

The Wilo Group faces the **challenges of climate change** and makes its contribution to a positive overall development.

# SUSTAINABILITY STRATEGY

Wilo has developed an integrated sustainability strategy based on the **corporate strategy** known as **Ambition 2025**. At the core of this strategy is the aim of supplying more people with clean water while simultaneously **reducing our ecological footprint** along the entire value-added chain. Our innovative and highly efficient products and system solutions contribute to this, as do our production processes, which we are continuously optimising in terms of resources and energy efficiency.



## WATER

We are giving **100 million people** better access to clean water.

Increasing the range of innovative water solutions: Growth rate **7.5%**.

Extending the portfolio of smart-water-systems:

Growth rate **35%**.  
Expansion of strategic partnerships.

Reduction in drinking water consumption at Wilo sites: **20%**.

## ENERGY & EMISSIONS

We are reducing CO<sub>2</sub> emissions by **50 million tonnes**.

Energy savings through high-efficiency pumps: **1.8 TWh** annually.

Increase energy solution projects: **10,000** projects annually.

Extending the portfolio of smart products: Growth rate **15%**.

Reduction of CO<sub>2</sub> emissions at Wilo sites: climate-neutral production.

## MATERIAL & WASTE

We are reducing the consumption of raw materials by **250 tonnes**.

Increasing the number of reusable parts: **30,000** items annually.

Reduction in material consumption: **12 tonnes** annually.

Greater use of reusable packaging: **100%**.

Increasing the recycling rate at Wilo sites: **90%**.

## EMPLOYEES & COMPANY

We act with a **greater sense of responsibility** towards staff and society.

Promotion of educational programmes: **20** new training centres.

Ensuring social compliance: **90%** training coverage.

Effective development programmes: **70%** of managers developed internally.

Reinforce the culture of variety: **20%** of women in management positions.

Ensuring a safe working environment: **0** accidents.

# DISCOVER WILO SOLUTIONS.

Wilo offers a wide variety of intelligent pumps and systems to make our users' everyday lives simply more pleasant. Our energy-efficient solutions are suitable for residential, public and commercial properties. Wilo products are used in heating, air conditioning, cooling and water supply applications as well as for drainage and sewage..



## HEATING, AIR CONDITIONING, COOLING

Wilo delivers individual solutions and highly efficient technology for applications in heating, air conditioning, cooling and domestic hot water.

## WATER SUPPLY

Innovative products and systems from Wilo support applications in rainwater utilisation, water supply and pressure boosting, firefighting and raw water intake.

## DRAINAGE AND SEWAGE

Wilo pumps and lifting units ensure safe and reliable operation in wastewater and sewage disposal.

# ENERGY AND EMISSIONS

→ We are reducing CO<sub>2</sub> emissions by 50 million tonnes.

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Climate change is becoming increasingly visible and tangible thanks to global warming and the accompanying extreme weather conditions. Action is required worldwide to stop, or at least limit, climate change and its consequences. One important measure is the reduction of greenhouse gases. Wilo is also making a significant contribution in this area with its products.

# UP-HIGH – GREEN PUMPS IN EUROPE'S TALLEST BUILDING

A project of superlatives: Like a crystalline needle, the tower of the Lakhta Centre rises up into the sky in St. Petersburg. The city's first "supertall" building on the coast of the Gulf of Finland is to become a modern business centre, a sustainable district for life and work. Germany-based Technology Company Wilo takes care of several applications in the futuristic giant – over 530 pumps are in operation to contribute to the "Green features" of the building.

Since the end of the 19th century, skyscrapers are the embodiment of power; monuments that represent financial wellbeing, new technologies and that form a parallax around which people can automatically reorient in a city. They give a recognition value to a place. Supertall buildings have always been known for using the latest and most advanced construction technology. With a height of 462 metres, the Lakhta Centre is the tallest building in Europe and the 13th tallest building in the world. It broke ground in 2012, the exterior was completed six years later. The "northernmost skyscraper in the world" will also serve as the headquarters of Russian gas giant Gazprom, which carried out the construction. Capturing the changes in daylight, the main tower's unique silhouette symbolizes a flame, a distinctive feature of Gazprom's logo. With a total floor area of over 400,000 square metres, Lakhta Centre comprises four different facilities. Besides the skyscraper with a 90-degree twist from foundation to top, the complex also provides a multifunctional building, the stand-alone arch that represents the entrance as well as a stylobate that hides the parking, warehouses and logistic passages.

## High-efficiency in the "Star of St. Petersburg"

Wilo pumps are in operation in several applications – from heating, ventilation and air conditioning to the water supply. For the HVAC applications, the pumps are installed in several district substations in different levels of the tower. "One of the main requirements was that all pumps should be high-efficient with an internal or external frequency converter", says Nikolay Samoylov from Wilo Russia. "For example we therefore provided inline pumps with electronic control as well as high-pressure centrifugal pumps."

The Wilo-CronoLine-IL-E is an electronically controlled glanded single pump in in-line design, used for the pumping of heating water, cold water and water-glycol mixtures in heating, cold water and cooling systems. The multistage centrifugal pump Wilo-Helix can be used for water supply and pressure boosting as well as cooling water in circulation systems. For a reliable operation in the HVAC applications, the Lakhta Centre also relies on the Wilo-Stratos-D. The glandless double circulation pump increases energy savings due to optimised system efficiency via a volume flow limiter.

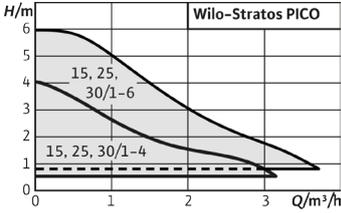
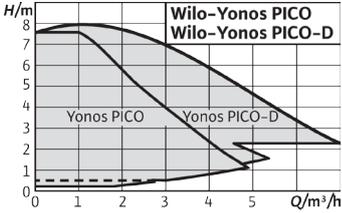
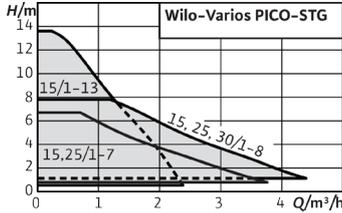
Cooling centres are located on four different levels. To make the cooling as efficient as possible, the building uses cold accumulation. The preliminary freezing of a thermal energy storage medium with the aim of shifting refrigeration loads enables a more efficient operation as well as more beneficial energy consumption patterns. This way, energy is accumulated at low peak hours and used when the need increases again.

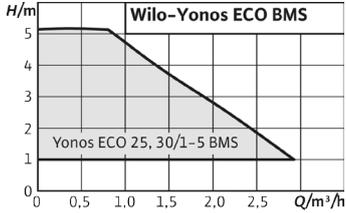
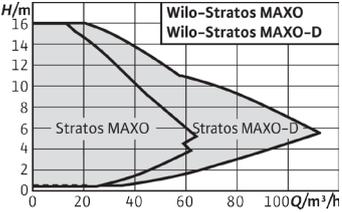
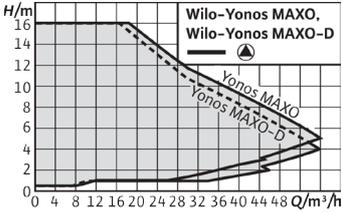
Horizontal booster pumps (borehole pumps with a horizontal cooling shroud) are in operation for the water supply, to achieve a minimum water level in the storage tank. "The Lakhta Centre is a huge building, so it has water supply systems on different levels", explains Nikolay Samoylov from Wilo Russia. "By using vertical high pressure pumps instead of horizontal ones, the unusable water volume will be less. Also, borehole pumps have a minimum sound level."

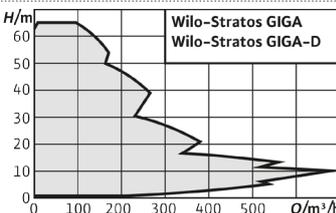
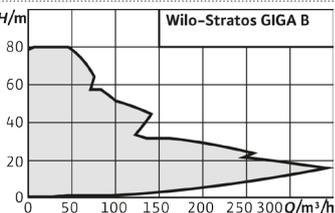
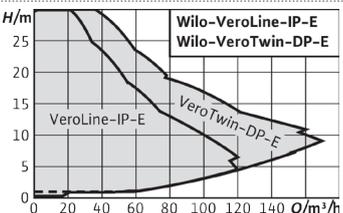


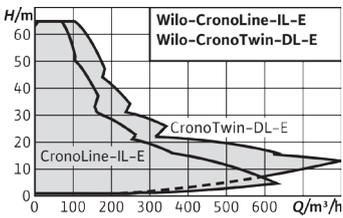
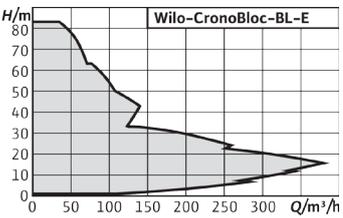
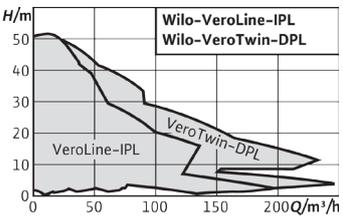
### A flagship of high technology

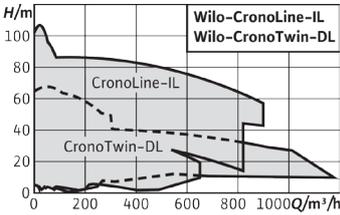
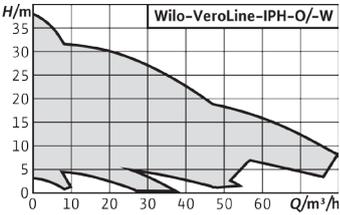
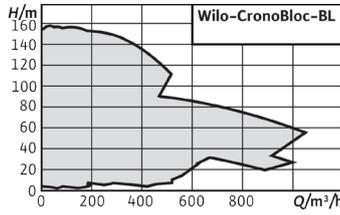
The smart façade is made from 16,500 individual panes of glass with a system of automatic shutters and valves to reduce heat loss. Due to the double skin façade of the Lakhta Centre main tower, the heating and air-conditioning consumption can be reduced up to 50 percent. As sustainability is an important topic, innovative technologies such as energy recuperating elevators, a vacuum disposal system and a water reuse and purification system are also a part of the 87-floor building. Substituting conventional heating devices into infra-red radiators and applying this technology to other technical and household devices, achieves additional energy savings. The tower buffer area will be equipped with sensors that automatically maintain the temperature, as per the number of people being present in a room. In December 2018 this led to the LEED® Platinum certification, according to the results of the assessment of the environmental performance criteria. High-efficient pumps from Wilo contribute to the “Green Features” of the Lakhta Centre.

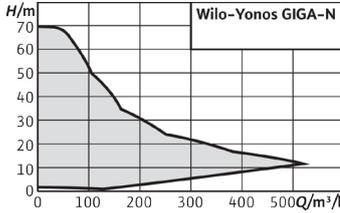
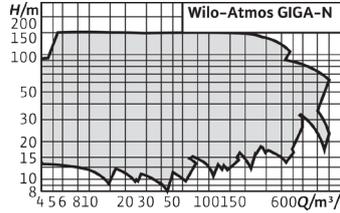
| Series                  | Wilo-Stratos PICO   | Wilo-Yonos PICO<br>Wilo-Yonos PICO-D  | Wilo-Varios PICO   |
|-------------------------|---|---|--|
| Product photo           |    |    |   |
| Construction            | Glandless circulator with screwed connection, EC motor and automatic power adjustment   | Glandless circulator with screwed connection, EC motor and automatic power adjustment   | Glandless circulator with screwed connection, EC motor and automatic power adjustment  |
| Application             | Hot-water heating systems of all kinds, air-conditioning applications, industrial circulation systems   | Hot-water heating systems of all kinds, air-conditioning applications, industrial circulation systems   | Hot-water heating systems of all kinds, air-conditioning applications, industrial circulation systems, primary circuits of solar and geothermal systems  |
| Duty chart              |    |   |   |
| Volume flow $Q_{max}$   | 4 m <sup>3</sup> /h   | 7 m <sup>3</sup> /h   | 4.4 m <sup>3</sup> /h  |
| Delivery head $H_{max}$ | 6 m   | 8 m   | 13 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Fluid temperature +2 °C to +110 °C</li> <li>→ Mains connection 1~230 V, 50 Hz</li> <li>→ Energy Efficiency Index (EEI) ≤ 0.20</li> <li>→ Screwed connection Rp ½, Rp 1, Rp 1¼</li> <li>→ Max. operating pressure 10 bar</li> </ul>   | <ul style="list-style-type: none"> <li>→ Fluid temperature -10 °C to +95 °C</li> <li>→ Mains connection 1~230 V, 50 Hz</li> <li>→ Energy Efficiency Index (EEI) ≤ 0.20 (Yonos PICO.../1-8 ≤ 0.23)</li> <li>→ Screwed connection Rp ½, Rp 1, Rp 1¼</li> <li>→ Max. operating pressure 10 bar</li> </ul>  | <ul style="list-style-type: none"> <li>→ Fluid temperature:                             <ul style="list-style-type: none"> <li>– -20 °C to +95 °C (Heating/Geothermal)</li> <li>– -10 °C to +110 °C (Solar)</li> </ul> </li> <li>→ Mains connection 1~230 V, 50 Hz</li> <li>→ Energy Efficiency Index (EEI) ≤ 0.20</li> <li>→ Screwed connection Rp ½, Rp 1, Rp 1¼</li> <li>→ Max. operating pressure 10 bar</li> </ul>  |
| Special features        | <ul style="list-style-type: none"> <li>→ Maximum energy efficiency thanks to the combination of the EC motor, Dynamic Adapt and precise settings</li> <li>→ High reliability through self-protecting automatic routines</li> <li>→ Intuitive setting by activating functions and modes shown on LC display</li> </ul>   | <ul style="list-style-type: none"> <li>→ Maximum set-up comfort with new smart settings, self-explanatory interface and new functions</li> <li>→ Optimised energy efficiency thanks to EC motor technology, precise settings by 0.1m</li> <li>→ Quick installation/replacement thanks to the improved compact design</li> <li>→ Easier maintenance due to automatically and manually activated restart or air venting function</li> </ul>   | <ul style="list-style-type: none"> <li>→ A highly compatible replacement solution for all applications thanks to compact dimensions, new control modes e.g. iPWM and the new Sync function</li> <li>→ Highest comfort in handling with one push button for control mode and one for preset curves and the LED display</li> <li>→ Easy installation through adaptable connections and maintenance functions like air venting</li> </ul>                         |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Control mode: Δp-c and Δp-v (Dynamic Adapt)</li> <li>→ Automatic setback operation; venting routine; restart and dry running detection</li> <li>→ Display of the current power consumption or flow and cumulative kWh</li> <li>→ Reset function for the electricity meter or to factory settings</li> <li>→ Hold function (Key lock)</li> <li>→ Wilo-Connector</li> <li>→ Options: stainless steel pump housing</li> </ul> | <ul style="list-style-type: none"> <li>→ Control mode: Δp-c, Δp-v and constant speed (3 pump curves)</li> <li>→ Setting the operating mode by application, delivery head or constant speed</li> <li>→ Automatic deblocking function</li> <li>→ Manual restart and venting function</li> <li>→ LED display for setting the setpoint and displaying current consumption</li> <li>→ Wilo-Connector</li> <li>→ Twin-head pump for individual (Δp-c, Δp-v, 3 speeds) or parallel operation (Δp-c, 3 speeds)</li> </ul> | <ul style="list-style-type: none"> <li>→ Control mode: Δp-c, Δp-v and constant speed</li> <li>→ External control (iPWM GT and iPWM ST)</li> <li>→ Sync function (manual manual programming mode)</li> <li>→ Air venting function</li> <li>→ Manual restart</li> <li>→ LED display and 2 push buttons for settings and functions activation</li> <li>→ Dual electrical connection (Molex and Wilo-Connector)</li> <li>→ Front access to motor screws</li> </ul> |

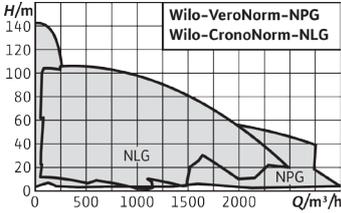
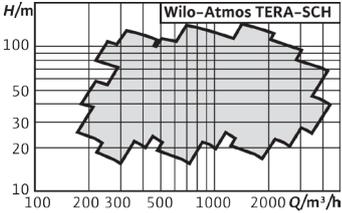
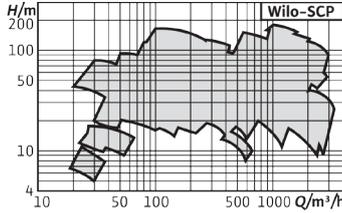
| Series                  | Wilo-Yonos ECO...-BMS  | Wilo-Stratos MAXO<br>Wilo-Stratos MAXO-D  | Wilo-Yonos MAXO<br>Wilo-Yonos MAXO-D   |
|-------------------------|--|---|--|
| Product photo           |   |    |   |
| Construction            | Glandless circulation pump with screwed connection, EC motor and automatic power adjustment  | Smart glandless circulator with screwed connection or flange connection, EC motor with integrated power adjustment  | Glandless circulator with screwed connection or flange connection, EC motor and automatic power adjustment   |
| Application             | Hot-water heating systems of all kinds, air-conditioning systems, closed cooling circuits, industrial circulation systems  | Hot-water heating systems of all kinds, air-conditioning systems, closed cooling circuits, industrial circulation systems   | Hot-water heating systems of all kinds, air-conditioning systems, closed cooling circuits, industrial circulation systems  |
| Duty chart              |   |   |   |
| Volume flow $Q_{max}$   | 3 m <sup>3</sup> /h  | 112 m <sup>3</sup> /h   | 60 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 5 m  | 16 m  | 16 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Fluid temperature -10 °C to +110 °C</li> <li>→ Mains connection: 1~230 V, 50 Hz</li> <li>→ Energy Efficiency Index (EEI) ≤ 0.20</li> <li>→ Screwed connection Rp 1, Rp 1¼</li> <li>→ Max. operating pressure 10 bar</li> </ul>  | <ul style="list-style-type: none"> <li>→ Fluid temperature -10 °C to +110 °C</li> <li>→ Mains connection: 1~230 V, 50 Hz</li> <li>→ Nominal diameter Rp 1 to DN 100</li> <li>→ Max. operating pressure 10 bar (special version: 16 bar)</li> </ul>  | <ul style="list-style-type: none"> <li>→ Fluid temperature -20 °C to +110 °C</li> <li>→ Mains connection 1~230 V, 50 Hz</li> <li>→ Energy Efficiency Index (EEI) ≤ 0.20</li> <li>→ Nominal diameter Rp 1 to DN 100</li> <li>→ Max. operating pressure 10 bar</li> </ul>  |
| Special features        | <ul style="list-style-type: none"> <li>→ Potential-free collective fault signal (SSM) for connection to external monitoring unit (e.g. building automation) and control input 0-10 V</li> <li>→ Control cable (4-core, 1.5 m) for connecting SSM and 0-10 V</li> <li>→ Wilo-Connector</li> <li>→ Thermal insulation as standard</li> <li>→ Pump housing with cathaphoretic coating protects against corrosion due to condensation formation</li> </ul> | <ul style="list-style-type: none"> <li>→ Intuitive operation by guided application settings with the Setup Guide</li> <li>→ Energy-saving functions such as No-Flow Stop</li> <li>→ Innovative controlling functions such as Dynamic Adapt plus and Multi-Flow Adaption</li> <li>→ Direct pump networking for multiple pump control via Wilo Net</li> <li>→ Installation comfort by the optimised Wilo-Connector</li> </ul> | <ul style="list-style-type: none"> <li>→ LED display for indication of set delivery head and fault codes</li> <li>→ Quick setting when replacing an uncontrolled standard pump with pre-set speed stages, e.g. TOP-S</li> <li>→ Electrical connection with Wilo plug</li> <li>→ Collective fault signal ensures system availability</li> <li>→ Pump housing with cathaphoretic (KTL) coating protects against corrosion due to condensation</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Control modes: Δp-c, Δp-v and manual control mode (n = constant)</li> <li>→ Control input "Analog In 0 - 10 V" (remote speed control)</li> <li>→ Collective fault signal (potential-free NC contact)</li> <li>→ Control cable (4-core, 1.5 m) for connecting SSM and 0-10 V</li> <li>→ Wilo-Connector</li> <li>→ Deblocking function</li> </ul>   | <ul style="list-style-type: none"> <li>→ Control mode: Dynamic Adapt plus, Δp-c, Δp-v, n-const, T-const, ΔT-const and Q-const</li> <li>→ Multi-Flow Adaptation</li> <li>→ Remote control via Bluetooth interface</li> <li>→ Selection of application range with Setup Guide</li> <li>→ Heat and cold metering</li> <li>→ Dual pump management</li> <li>→ Retrofittable interface modules for communication</li> </ul>       | <ul style="list-style-type: none"> <li>→ Control modes: Δp-c, Δp-v, 3 speed stages</li> <li>→ LED display for setting the required delivery head</li> <li>→ Quick electrical connection with Wilo plug</li> <li>→ Motor protection, fault signal light and contact for collective fault signal</li> <li>→ Combination flanges PN 6/PN 10 (for DN 40 to DN 65)</li> <li>→ Retrofittable interface module (Connect module) for communication</li> </ul>  |

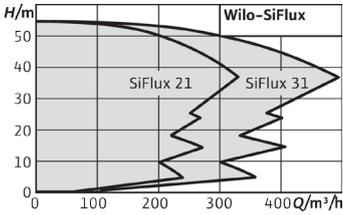
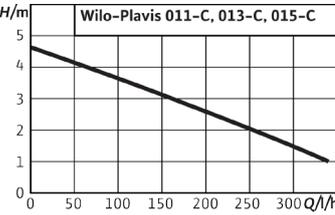
| Series                  | Wilo-Stratos GIGA<br>Wilo-Stratos GIGA-D  | Wilo-Stratos GIGA B   | Wilo-VeroLine-IP-E<br>Wilo-VeroTwin-DP-E  |
|-------------------------|---|---|---|
| Product photo           |    |   |    |
| Construction            | High-efficiency in-line pump (as single or double pump) with EC motor, electronically controlled, in glanded design with flange connection and mechanical seal  | High-efficiency monobloc pump with EC motor and electronic power adjustment in glanded pump design, with flange connection and mechanical seal  | Energy-saving in-line pump/in-line double pump in glanded construction. Version as single-stage low-pressure centrifugal pump with flange connection and mechanical seal  |
| Application             | Pumping of heating water, cold water and water-glycol mixtures without abrasive substances in heating, cold water and cooling systems   | Pumping of heating water, cold water and water-glycol mixtures without abrasive substances in heating, cold water and cooling systems   | Pumping of heating water, cold water and water-glycol mixtures without abrasive substances in heating, cold water and cooling systems   |
| Duty chart              |    |   |    |
| Volume flow $Q_{max}$   | 680 m <sup>3</sup> /h   | 340 m <sup>3</sup> /h   | 170 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 65 m  | 80 m  | 30 m  |
| Technical data          | <ul style="list-style-type: none"> <li>→ Fluid temperature -20 °C to +140 °C</li> <li>→ Mains connection: 3~380 V - 3~480 V (±10 %), 50/60 Hz</li> <li>→ Minimum efficiency index (MEI):</li> <li>→ up to 6,0 kW: MEI ≥ 0,7</li> <li>→ from 11 kW: MEI ≥ 0,4</li> <li>→ Nominal diameter DN 40 to DN 200</li> <li>→ Max. operating pressure 16 bar up to +120 °C, 13 bar up to +140 °C</li> </ul>   | <ul style="list-style-type: none"> <li>→ Fluid temperature -20 °C to +140 °C</li> <li>→ Mains connection: 3~380 V -3~480 V (±10 %), 50/60 Hz</li> <li>→ Minimum efficiency index (MEI):</li> <li>→ up to 6,0 kW: MEI ≥ 0,7</li> <li>→ from 11 kW: MEI ≥ 0,4</li> <li>→ Nominal diameter DN 32 to DN 125</li> <li>→ Max. operating pressure 16 bar up to +120 °C, 13 bar up to +140 °C</li> </ul>  | <ul style="list-style-type: none"> <li>→ Fluid temperature -20 °C to +120 °C</li> <li>→ Mains connection: 3~440 V ±10 %, 50/60 Hz 3~400 V ±10 %, 50/60 Hz 3~380 V -5 %/+10 %, 50/60 Hz</li> <li>→ Minimum efficiency index (MEI) ≥ 0.4</li> <li>→ Nominal diameter DN 32 to DN 80</li> <li>→ Max. operating pressure 10 (16) bar</li> </ul>   |
| Special features        | <ul style="list-style-type: none"> <li>→ Innovative high-efficiency pump for maximum overall efficiency</li> <li>→ High-efficiency EC motor with efficiency class IE5 acc. IEC 60034-30-2</li> <li>→ Optional IF module interfaces for bus communication with building automation</li> </ul>  | <ul style="list-style-type: none"> <li>→ Innovative high-efficiency pump for maximum total-system efficiency, with principal dimensions in accordance with EN 733</li> <li>→ High-efficiency EC motor (efficiency class IE5 acc. IEC 60034-30-2)</li> <li>→ Optional IF module interfaces for bus communication with building automation</li> </ul>   | <ul style="list-style-type: none"> <li>→ Optional interfaces for bus communication using plug-in IF modules</li> <li>→ Simple operation with Green Button Technology and display</li> <li>→ Integrated dual pump management</li> <li>→ Integrated full motor protection with trip electronics</li> <li>→ Motors with efficiency class IE4</li> </ul>  |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Control modes: Δp-c, Δp-v, PID control, n=constant</li> <li>→ Manual functions: E.g. differential pressure setpoint setting, manual control mode, error acknowledgement</li> <li>→ External control functions: E.g. Overriding Off, external pump cycling (double pump operation), analogue input 0-10 V/0-20 mA for constant speed (DDC)</li> <li>→ Remote control via infrared interface (IR-Stick/IR-Monitor), plug-in position for IF modules for connection to building automation</li> </ul> | <ul style="list-style-type: none"> <li>→ Control modes: Δp-c, Δp-v, PID control, n=constant</li> <li>→ Manual functions: E.g. differential pressure setpoint setting, manual control mode, error acknowledgement</li> <li>→ External control functions: E.g. Overriding Off, External pump cycling, analogue input 0-10 V/0-20 mA for constant speed (DDC)</li> <li>→ Remote control via infrared interface (IR-Stick/IR-Monitor), plug-in position for IF modules for connection to building automation</li> </ul> | <ul style="list-style-type: none"> <li>→ Control modes: Δp-c, Δp-v, PID control, n=constant</li> <li>→ Manual functions: E.g. differential pressure setpoint setting, manual control mode, error acknowledgement</li> <li>→ External control functions: E.g. Overriding Off, external pump cycling (double pump operation), analogue input 0-10 V/0-20 mA for constant speed (DDC)</li> <li>→ Remote control via infrared interface (IR-Stick/IR-Monitor), plug-in position for IF modules for connection to building automation</li> </ul> |

| Series                  | Wilo-CronoLine-IL-E<br>Wilo-CronoTwin-DL-E   | Wilo-CronoBloc-BL-E   | Wilo-VeroLine-IPL<br>Wilo-VeroTwin-DPL  |
|-------------------------|--|---|---|
| Product photo           |   |   |    |
| Construction            | Energy-saving in-line pump/in-line double pump in glanded construction. Version as single-stage low-pressure centrifugal pump with flange connection and mechanical seal   | Energy-saving pump in monobloc design in glanded construction. Version as single-stage low-pressure centrifugal pump with flange connection and mechanical seal   | Glanded pump/double pump in in-line design with screwed connection or flange connection   |
| Application             | Pumping of heating water, cold water and water-glycol mixtures without abrasive substances in heating, cold water and cooling systems  | Pumping of heating water, cold water and water-glycol mixtures without abrasive substances in heating, cold water and cooling systems   | Pumping of heating water, cold water and water-glycol mixtures without abrasive substances in heating, cold water and cooling systems   |
| Duty chart              |   |   |    |
| Volume flow $Q_{max}$   | 800 m <sup>3</sup> /h  | 380 m <sup>3</sup> /h   | 245 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 65 m   | 84 m  | 52 m  |
| Technical data          | <ul style="list-style-type: none"> <li>→ Fluid temperature -20 °C to +140 °C</li> <li>→ Mains connection: 3~440 V ±10 %, 50/60 Hz, 3~400 V ±10 %, 50/60 Hz, 3~380 V -5 %/+10 %, 50/60 Hz</li> <li>→ Minimum efficiency index (MEI) ≥ 0.4</li> <li>→ Nominal diameter DN 40 to DN 80</li> <li>→ Max. operating pressure 16 bar up to +120 °C, 13 bar up to +140 °C</li> </ul>   | <ul style="list-style-type: none"> <li>→ Fluid temperature -20 °C to +140 °C</li> <li>→ Mains connection: 3~440 V ±10 %, 50/60 Hz, 3~400 V ±10 %, 50/60 Hz, 3~380 V -5 %/+10 %, 50/60 Hz</li> <li>→ Minimum efficiency index (MEI) ≥ 0.4</li> <li>→ Nominal diameter DN 32 to DN 125</li> <li>→ Max. operating pressure 16 bar up to +120 °C, 13 bar up to +140 °C</li> </ul>   | <ul style="list-style-type: none"> <li>→ Fluid temperature -20 °C to +120 °C</li> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Minimum efficiency index (MEI) ≥ 0.4</li> <li>→ Nominal diameter Rp 1 to DN 100</li> <li>→ Max. operating pressure 10 bar (special version: 16 bar)</li> </ul>   |
| Special features        | <ul style="list-style-type: none"> <li>→ Optional interfaces for bus communication using plug-in IF modules</li> <li>→ Simple operation with Green Button Technology and display</li> <li>→ Integrated dual pump management</li> <li>→ Integrated full motor protection with trip electronics</li> <li>→ Motors with efficiency class IE4</li> </ul>   | <ul style="list-style-type: none"> <li>→ Optional interfaces for bus communication using plug-in IF modules</li> <li>→ Simple operation with Green Button Technology and display</li> <li>→ Integrated full motor protection with trip electronics</li> <li>→ Meets user requirements due to performance and main dimensions in accordance with EN 733</li> <li>→ Motors with efficiency class IE4</li> </ul>   | <ul style="list-style-type: none"> <li>→ High standard of corrosion protection</li> <li>→ Standard condensate drainage holes in motor housings and lanterns</li> <li>→ Series design: motor with one-piece shaft</li> <li>→ Version N: Standard motor B5 or V1 with stainless steel plug shaft</li> <li>→ Bidirectional, force-flushed mechanical seal</li> <li>→ DPL: Main-/standby operation or peak-load operation (via additional external device)</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Control modes: <math>\Delta p</math>-c, <math>\Delta p</math>-v, PID control, n=constant</li> <li>→ Manual functions: E.g. differential pressure setpoint setting, manual control mode, error acknowledgment</li> <li>→ External control functions: E.g. Overriding Off, external pump cycling (double pump operation), analogue input 0-10 V/0-20 mA for constant speed (DDC)</li> <li>→ Remote control via infrared interface (IR-Stick/IR-Monitor), plug-in position for IF modules for connection to building automation</li> </ul> | <ul style="list-style-type: none"> <li>→ Control modes: <math>\Delta p</math>-c, <math>\Delta p</math>-v, PID control, n=constant</li> <li>→ Manual functions: E.g. differential pressure setpoint setting, manual control mode, error acknowledgment</li> <li>→ External control functions: E.g. Overriding Off, analogue input 0-10 V/0-20 mA for constant speed (DDC)</li> <li>→ Remote control via infrared interface (IR-Stick/IR-Monitor), plug-in position for IF modules for connection to building automation</li> </ul> | <ul style="list-style-type: none"> <li>→ Single-stage, low-pressure centrifugal pump in in-line design with</li> <li>→ Mechanical seal</li> <li>→ Flange connection with pressure measuring connection R ½</li> <li>→ Motor with one-piece shaft</li> <li>→ DPL with switchover valve</li> <li>→ Motors with efficiency class IE3 for motors ≥ 0.75 kW</li> </ul>   |

| Series                  | Wilo-CronoLine-IL<br>Wilo-CronoTwin-DL  | Wilo-VeroLine-IPH-W<br>Wilo-VeroLine-IPH-O  | Wilo-CronoBloc-BL  |
|-------------------------|---|---|--|
| Product photo           |    |   |  <span style="background-color: orange; color: white; padding: 2px;">Series extension</span>  |
| Construction            | Glanded pump/double pump in in-line design with flange connection   | Glanded pump in in-line design with flange connection   | Glanded pump in monobloc design with flange connection   |
| Application             | Pumping of heating water, cold water and water-glycol mixtures without abrasive substances in heating, cold water and cooling systems   | IPH-W: For hot water in closed industrial circulation systems, district heating, closed heating systems<br>IPH-O: For heat transfer oil in closed industrial circulation systems  | Pumping of heating water, cold water and water-glycol mixtures without abrasive substances in heating, cold water and cooling systems  |
| Duty chart              |    |   |   |
| Volume flow $Q_{max}$   | 1,170 m <sup>3</sup> /h   | 80 m <sup>3</sup> /h  | 1100 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 108 m   | 38 m  | 158 m  |
| Technical data          | <ul style="list-style-type: none"> <li>→ Fluid temperature -20 °C to +140 °C</li> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Minimum efficiency index (MEI) ≥ 0.4</li> <li>→ Nominal diameter DN 32 to DN 250</li> <li>→ Max. operating pressure 16 bar (25 bar on request)</li> </ul>  | <ul style="list-style-type: none"> <li>→ Fluid temperature IPH-W: -10 °C to +210 °C (at max. 23 bar)</li> <li>→ Fluid temperature IPH-O: -10 °C to +350 °C (at max. 9 bar)</li> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Nominal diameter DN 20 to DN 80</li> </ul> | <ul style="list-style-type: none"> <li>→ Fluid temperature -20 °C to +140 °C</li> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Minimum efficiency index (MEI) ≥ 0.4</li> <li>→ Nominal diameter DN 32 to DN 150</li> <li>→ Max. operating pressure 16 bar (25 bar on request)</li> </ul>   |
| Special features        | <ul style="list-style-type: none"> <li>→ Can be used flexibly in air-conditioning and cooling systems, with application benefits due to direct draining of condensate</li> <li>→ High standard of corrosion protection</li> <li>→ Worldwide availability of standard motors (according to Wilo specifications) and standard mechanical seals</li> <li>→ Main/standby mode or peak-load operation (by means of external auxiliary device)</li> </ul> | <ul style="list-style-type: none"> <li>→ Self-cooled mechanical seal, independent of direction of rotation</li> <li>→ Great variety of applications due to a wide fluid temperature range without additional wearing parts</li> </ul>                                       | <ul style="list-style-type: none"> <li>→ High corrosion protection through cathaphoresis coating of the cast iron components</li> <li>→ Standard condensate drainage holes in the motor housings</li> <li>→ High worldwide availability of standard motors (according to Wilo specifications) and mechanical seals</li> <li>→ Performance and main dimensions in accordance with EN 733</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Single-stage, low-pressure centrifugal pump in in-line design with</li> <li>→ Mechanical seal</li> <li>→ Flange connection with pressure measuring connection R ½</li> <li>→ Lantern</li> <li>→ Coupling</li> <li>→ IEC standard motor</li> <li>→ DL with switchover valve</li> <li>→ Motors with efficiency class IE3 for motors ≥ 0.75 kW</li> </ul>   | <ul style="list-style-type: none"> <li>→ Single-stage, low-pressure centrifugal pump in in-line design with</li> <li>→ Mechanical seal</li> <li>→ Flange connection</li> <li>→ Lantern</li> <li>→ Motor with special shaft</li> </ul>                                       | <ul style="list-style-type: none"> <li>→ Single-stage low-pressure centrifugal pump in monobloc design, with axial suction port and radially arranged pressure port with</li> <li>→ Mechanical seal</li> <li>→ Flange connection with pressure measuring connection R ½</li> <li>→ Lantern</li> <li>→ Coupling</li> <li>→ Motors with efficiency class IE3 for motors ≥ 0.75 kW</li> </ul>         |

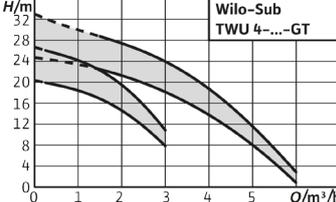
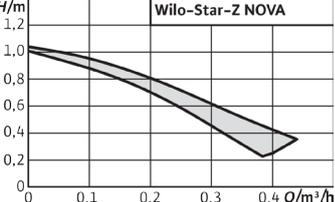
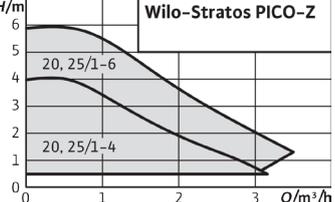
| Series                  | Wilo-BAC  | Wilo-Yonos GIGA-N  | Wilo-Atmos GIGA-N  |
|-------------------------|---|--|--|
| Product photo           |    |    |   |
| Construction            | Glanded pump in monobloc design with screwed connection or Victaulic connection   | Electronically controlled, single-stage low-pressure centrifugal pump with axial suction. Mounted on a baseplate with flange connection and automatic power adjustment.  | Single-stage, low-pressure centrifugal pump with axial suction, mounted on a baseplate.  |
| Application             | For pumping of cooling water, cold water, water-glycol mixtures and other fluids without abrasive substances  | Pumping of heating water (in accordance with VDI 2035), cold water, water-glycol mixtures in heating, cold water and cooling systems. For irrigation, building services, general industry etc.   | Pumping of heating water (in accordance with VDI 2035), cold water, water-glycol mixtures in heating, cold water and cooling systems.  |
| Duty chart              |    |    |   |
| Volume flow $Q_{max}$   | 87 m <sup>3</sup> /h  | 520 m <sup>3</sup> /h  | 1000 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 26 m  | 70 m   | 150 m  |
| Technical data          | <ul style="list-style-type: none"> <li>→ Fluid temperature -15 °C to +60 °C</li> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Minimum efficiency index (MEI) ≥ 0.4</li> <li>→ Nominal diameter G2/G 1½ (only BAC 40.../S) or Victaulic connection Ø 60.3/48.3 mm (BAC 40.../R) Ø 76.1/76.1 mm (BAC 70.../R)</li> <li>→ Max. operating pressure 6.5 bar</li> </ul> | <ul style="list-style-type: none"> <li>→ Fluid temperature -20 °C to +140 °C</li> <li>→ Mains connection: 3~440 V ±10 %, 50/60 Hz, 3~400 V ±10 %, 50/60 Hz, 3~380 V -5 %/+10 %, 50/60 Hz</li> <li>→ Minimum efficiency index (MEI) ≥ 0.4</li> <li>→ Nominal diameter DN 32 to DN 150</li> <li>→ Max. operating pressure 16 bar</li> </ul>  | <ul style="list-style-type: none"> <li>→ Fluid temperature -20 °C to +140 °C</li> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Protection class IP55</li> <li>→ Nominal diameter DN 32 to DN 150</li> <li>→ Max. operating pressure 16 bar</li> </ul>  |
| Special features        | <ul style="list-style-type: none"> <li>→ Pump housing in composite design</li> <li>→ Version with Victaulic or threaded connection (BAC 70/135... only with Victaulic connection)</li> </ul>  | <ul style="list-style-type: none"> <li>→ Efficient pump with IE4 motors</li> <li>→ Cathaphoretic coating of all cast components for high corrosion resistance and long service life</li> <li>→ Standard dimensions in accordance with EN 733</li> <li>→ Easy adjustment and operation with Green Button Technology</li> <li>→ Easy maintenance thanks to user-friendly spacer coupling in back pull-out design</li> <li>→ Optional interfaces for connection to building automation using insertable IF modules</li> </ul> | <ul style="list-style-type: none"> <li>→ Energy-saving thanks to increased overall efficiency through improved hydraulics and the use of IE3 motors</li> <li>→ Cathaphoretic coating of all cast components for high corrosion resistance and long service life</li> <li>→ Universally usable thanks to standardised dimensions, a range of motor options and impellers made of different materials</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Single-stage low-pressure centrifugal pump in monobloc design, with axial suction port and radially arranged pressure port</li> <li>→ Motors with efficiency class IE3</li> </ul>  | <ul style="list-style-type: none"> <li>→ Control modes: Δp-c, PID control, n=constant</li> <li>→ Manual functions: E.g. differential pressure setpoint setting, manual control mode, error acknowledgment</li> <li>→ External control functions: E.g. Overriding Off, analogue input 0-10 V/0-20 mA for constant speed (DDC)</li> <li>→ Remote control via infrared interface (IR-Stick/IR-Monitor), plug-in position for IF modules for connection to building automation</li> </ul>                                      | <ul style="list-style-type: none"> <li>→ Single-stage low-pressure centrifugal pump in monobloc design with coupling, coupling guard, motor and baseplate</li> <li>→ Motors with efficiency class IE3</li> </ul>   |

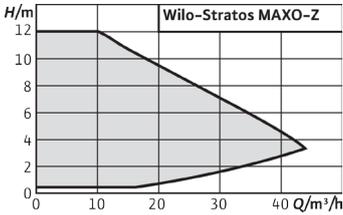
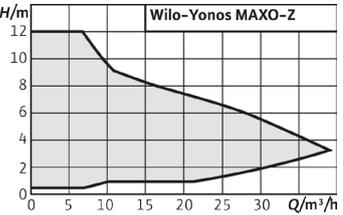
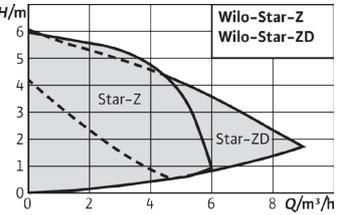
| Series                  | Wilo-CronoNorm-NLG<br>Wilo-VeroNorm-NPG   | Wilo-Atmos TERA-SCH   | Wilo-SCP   |
|-------------------------|---|---|--|
| Product photo           |    |   |   |
| Construction            | Single-stage low-pressure centrifugal pump with axial suction, according to ISO 5199, mounted on a baseplate  | Axially split case pump mounted on a base frame.  | Low-pressure centrifugal pump with axially split housing mounted on a baseplate  |
| Application             | Pumping of heating water, cold water, water-glycol mixtures in municipal water supply, general industry, power stations etc.  | Raw water intake; boosting/transport in water supply systems; pumping of process/cooling water, heating water (in Germany acc. VDI 2035), water-glycol mixtures; irrigation   | Pumping of heating water (acc. VDI 2035), cold water, process water, water-glycol mixtures in heating, cold water and cooling systems.   |
| Duty chart              |    |   |   |
| Volume flow $Q_{max}$   | 2,800 m <sup>3</sup> /h   | 4,500 m <sup>3</sup> /h   | 3,400 m <sup>3</sup> /h  |
| Delivery head $H_{max}$ | 140 m   | 150 m   | 245 m  |
| Technical data          | <ul style="list-style-type: none"> <li>→ Fluid temperature -20 °C to +120 °C (depending on type)</li> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Nominal diameters: DN 150 to DN 500 (depending on type)</li> <li>→ Operating pressure: depending on type and application – up to 16 bar</li> </ul>   | <ul style="list-style-type: none"> <li>→ Fluid temperature -20 °C to +120 °C</li> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Nominal diameters                             <ul style="list-style-type: none"> <li>– Suction side: DN 150 to DN 500</li> <li>– Pressure side: DN 150 to DN 400</li> </ul> </li> <li>→ Max. operating pressure: PN16, PN25</li> </ul>                               | <ul style="list-style-type: none"> <li>→ Fluid temperature -8 °C to +120 °C</li> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Nominal diameters – Suction side: DN 65 to DN 500</li> <li>→ Pressure side: DN 50 to DN 400</li> <li>→ Max. operating pressure: 16 or 25 bar, depending on type</li> </ul>   |
| Special features        | <p>NLG:</p> <ul style="list-style-type: none"> <li>→ Reduced life cycle costs through optimised efficiency</li> <li>→ Mechanical seal independent of the direction of rotation</li> <li>→ Interchangeable casing wear ring</li> <li>→ Permanently lubricated, generously dimensioned roller bearings</li> </ul> <p>NPG:</p> <ul style="list-style-type: none"> <li>→ Suitable for temperatures up to 140 °C</li> <li>→ Back pull-out version</li> </ul> | <ul style="list-style-type: none"> <li>→ Reduced energy costs through high overall efficiency</li> <li>→ Simplified alignment thanks to tolerant coupling and motor adjusting device</li> <li>→ Increased operational reliability thanks to quiet-running hydraulics</li> <li>→ Reduced cavitation tendency through optimised NPSH values</li> <li>→ Also available as potable water version</li> </ul> | <ul style="list-style-type: none"> <li>→ Higher volume flows up to 17,000 m<sup>3</sup>/h on request</li> <li>→ Special motors and other materials on request</li> </ul>   |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Single-stage horizontal spiral housing pump with bearing bracket and exchangeable casing wear rings (NLG only) in process design</li> <li>→ Shaft sealing with mechanical seals in accordance with EN 12756 or stuffing box packing</li> <li>→ Spiral housing with cast pump bases</li> <li>→ Greased grooved ball bearings for bearing of pump shaft</li> <li>→ Motors with efficiency class IE3</li> </ul>   | <ul style="list-style-type: none"> <li>→ Centrifugal axially split case pump, available in single-stage design.</li> <li>→ Deliverable as complete unit or without motor or only pump hydraulics</li> <li>→ Shaft sealing with mechanical seal or stuffing box</li> <li>→ 4- and 6-pole motors; IE3-standard to 1000 kW (IE4 on request)</li> <li>→ Welded steel frame</li> </ul>                       | <ul style="list-style-type: none"> <li>→ 1- or 2-stage, low-pressure centrifugal pump in monobloc design</li> <li>→ Deliverable as complete unit or without motor or only pump hydraulics</li> <li>→ Shaft sealing with mechanical seal or stuffing box packing</li> <li>→ 4-pole and 6-pole motors</li> <li>→ Materials:                             <ul style="list-style-type: none"> <li>→ Pump housing: EN-GJL-250</li> <li>→ Impeller: G-CuSn5 ZnPb</li> <li>→ Shaft: X12Cr13</li> </ul> </li> </ul> |

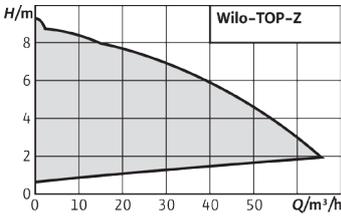
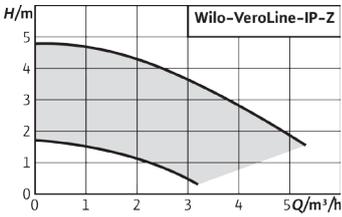
| Series                  | Wilo-SiFlux   | Wilo-Plavis ...-C   | Wilo-SiClean  |
|-------------------------|---|---|---|
| Product photo           |    |    |    |
| Construction            | Fully automatic, ready for connection multi-pump system for high volume flows in heating, cold water and cooling water systems. 3 to 4 electronically controlled in-line pumps switched in parallel   | Automatic condensate lifting unit   | Compact particle separator kit, consisting of mechanical and hydraulic components. Manual emptying of the system  |
| Application             | For pumping heating water, water-glycol mixtures and cooling and cold water without abrasive substances in heating, cold water and cooling water systems  | For pumping condensate out of heat generators with condensing boiler technology, Air-conditioning and cooling systems   | Removes particles from heating systems using natural physical phenomena in commercial properties and for district heating.  |
| Duty chart              |    |   |   |
| Volume flow $Q_{max}$   | 490 m <sup>3</sup> /h   | 330 l/h   | 4 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 55 m  | 4 m   | –   |
| Technical data          | <ul style="list-style-type: none"> <li>→ VeroLine-IP-E or CronoLine-IL-E</li> <li>→ 3~230/400 V, 50 Hz ±10 %</li> <li>→ Fluid temperature: 0 °C to +120 °C</li> <li>→ Pipe connections: DN 125 to DN 300</li> <li>→ Max. permissible operating pressure: 10 bar (IP-E), 16 bar (IL-E)</li> </ul>  | <ul style="list-style-type: none"> <li>→ Mains connection 1~ 100-240 V, 50/60 Hz</li> <li>→ Max. fluid temperature 60 °C</li> <li>→ Protection class IPX4</li> <li>→ Inlet connections 18/40 mm</li> <li>→ Tank volume 0.7 l to 1.6 l</li> </ul>  | <ul style="list-style-type: none"> <li>→ Fluid temperature: 0 °C to +95 °C</li> <li>→ Mains connection: 1~230 V, 50 Hz</li> </ul>   |
| Special features        | <ul style="list-style-type: none"> <li>→ Number of pumps: 2+1 or 3+1 (2 or 3 pumps in operation, 1 standby pump each)</li> <li>→ Quick and easy installation</li> <li>→ Energy-saving: Operation in partial load area according to current needs</li> <li>→ Reliable system thanks to optimally matched components</li> <li>→ Compact design, good accessibility to all components</li> </ul>   | <ul style="list-style-type: none"> <li>→ Reliable level measurement via electrode level switching</li> <li>→ Easy installation thanks to Plug &amp; Pump with adjustable inlet</li> <li>→ Quick and easy maintenance thanks to removable service cap and integrated non-return ball valve</li> <li>→ Energy savings due to low electricity consumption (≤ 20 W)</li> <li>→ Compact, modern construction and quiet operation (≤ 40 dBA)</li> </ul> | <ul style="list-style-type: none"> <li>→ Removal of magnetic and non-magnetic particles from the medium, venting of micro bubbles</li> <li>→ High cleaning efficiency due to physical effects (gravity, filtration...)</li> <li>→ Easy to use due to ease of installation, maintenance, and simplified settings</li> <li>→ Corrosion-resistant thanks to stainless steel particle separator</li> </ul>  |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Automatic pump control via Wilo-Sce</li> <li>→ Parts that come in contact with the fluid are corrosion-resistant</li> <li>→ Base frame made of galvanised steel, with height-adjustable vibration absorbers for insulation against structure-borne noise</li> <li>→ Distributor steel, with corrosion-resistant coating</li> <li>→ Shut-off valves, non-return valve, pressure gauge and premounted seals</li> <li>→ Differential pressure sensor</li> </ul> | <ul style="list-style-type: none"> <li>→ Electric connecting cable with plug (1.5 m)</li> <li>→ Detachable service cap; integrated non-return ball valve</li> <li>→ 013-C and 015-C: Pressure hose (5 m, Ø 8); Alarm cable (1.5 m); Alarm contact (NC/NO contact); Adjustable rubber guide, Ø 2 to Ø 32; Fixation material for wall mounting</li> <li>→ 015-C: granulate chamber including granulate for pH-neutralization</li> </ul>             | <ul style="list-style-type: none"> <li>→ Anti-corrosive, hydraulic components</li> <li>→ Pre-assembled fabric-reinforced connecting hoses</li> <li>→ Pre-assembled venting unit for expulsion of micro bubbles</li> <li>→ Movable magnetic rods for separation of iron oxide particles</li> <li>→ Volume flow limiter</li> <li>→ Manual purge valve for draining of collected particles</li> <li>→ Switchbox for monitoring the circulator</li> </ul> |

| Series                  | Wilo-SiClean Comfort   | Wilo-WEH   | Wilo-WEV   |
|-------------------------|--|--|--|
| Product photo           |   |   |   |
| Construction            | Fully-automatic, compact particle separator consisting of mechanical and hydraulic components. The system is drained automatically.  | Compact pressure keeping system ready for connection for easy installation and commissioning. System comprising mechanical and hydraulic components as well as CE + switchgears.   | Compact pressure keeping system ready for connection for easy installation and commissioning. System comprising mechanical and hydraulic components as well as CE + switchgears.   |
| Application             | Removes particles from heating systems using natural physical phenomena in commercial properties and for district heating  | Pressure keeping system designed to ensure constant and stable pressure in heating and cooling closed loops. For installation in commercial properties (office buildings, hotels,...).   | Pressure keeping system designed to ensure constant and stable pressure in heating and cooling closed loops. For installation in commercial properties (office buildings, hotels,...).   |
| Duty chart              |  |  |  |
| Volume flow $Q_{max}$   | 47 m <sup>3</sup> /h   |  |  |
| Delivery head $H_{max}$ | –  |  |  |
| Technical data          | <ul style="list-style-type: none"> <li>→ Fluid temperature 0 °C to +95 °C</li> <li>→ Mains connection: 3-400 V, 50 Hz</li> </ul>   | <ul style="list-style-type: none"> <li>→ Fluid temperature: 0 °C to + 90 °C</li> <li>→ Mains connection: 1-230 V, 50 Hz</li> <li>→ Mains connection: 3-400 V, 50 Hz</li> <li>→ Max. operating pressure: 6 bar</li> </ul>   | <ul style="list-style-type: none"> <li>→ Fluid temperature: 0 °C to + 90 °C</li> <li>→ Mains connection: 3-400 V, 50 Hz</li> <li>→ Max. operating pressure: 8 bar</li> </ul>   |
| Special features        | <ul style="list-style-type: none"> <li>→ High efficiency via combination of physical effects</li> <li>→ "Plug &amp; Play" design; fully automated operation</li> <li>→ Fully automated and adjustable disposal of collected particles in the desludging tank</li> <li>→ Highly functional thanks to removal of all magnetic and non-magnetic particles, free air and micro bubbles in the fluid, support for the degasification process</li> </ul> | <ul style="list-style-type: none"> <li>→ System ready to connect</li> <li>→ Open tanks range in PPH, light and corrosion proof.</li> <li>→ Easy-to-adjust switchgear including safety features.</li> <li>→ High corrosion resistance materials including 304 stainless steel collectors.</li> <li>→ MHIL pumps with IE2 motor and stainless steel hydraulics</li> <li>→ Possibility to order non-standard versions in MSO</li> </ul> | <ul style="list-style-type: none"> <li>→ System ready to connect</li> <li>→ Open tanks range in PPH, light and corrosion proof.</li> <li>→ Easy-to-adjust switchgear including safety features.</li> <li>→ High corrosion resistance materials including 304 stainless steel collectors.</li> <li>→ MVIL pumps with IE2 motor and stainless steel hydraulics</li> <li>→ Possibility to order non-standard versions in MSO</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Corrosion-resistant, hydraulic components</li> <li>→ Fabric-reinforced hoses connected to inlet and outlet of the particle separator</li> <li>→ Pre-assembled flushing device including electronic drain valve and additional safety valve</li> <li>→ Automatic draining of the particle collection chamber</li> <li>→ SC switchgear</li> </ul>   | <ul style="list-style-type: none"> <li>→ Fully-electronic central control unit with configurable parameters for pressure setting</li> <li>→ MHIL-series multistage pump</li> <li>→ Open composite vessels with excellent resistance to corrosion (to be ordered separately)</li> <li>→ Two pipeworks, one on the pressure side and one on the suction side</li> </ul>  | <ul style="list-style-type: none"> <li>→ Fully-electronic central control unit with configurable parameters for pressure setting</li> <li>→ MVIL-series multistage pump</li> <li>→ Open composite vessels with excellent resistance to corrosion (to be ordered separately)</li> <li>→ Two pipeworks, one on the pressure side and one on the suction side</li> </ul>  |

| Series                  | Wilo-CC/CC-FC/CCe-HVAC system<br>Wilo-SC/SC-FC/SCe-HVAC system   | Wilo-EFC  | 1. Wilo-IR-Stick, IR-Monitor<br>2. Wilo-IF-Modules, Wilo-CIF-Modules   |
|-------------------------|--|---|--|
| Product photo           |   |    |   |
| Construction            | –  | Frequency converter   | –  |
| Application             | Switchgear for controlling 1 to 6 pumps  | Wall-mounted frequency converter for fixed-speed pumps equipped with asynchronous or permanent magnet motors  | 1. Remote control with infrared interface for electronically controlled Wilo pumps<br>2. Wilo-Control products for connecting pumps to building automation   |
| Duty chart              |  |   |  |
| Volume flow $Q_{max}$   | –  | –   | –  |
| Delivery head $H_{max}$ | –  | –   | –  |
| Technical data          | –  | <ul style="list-style-type: none"> <li>→ Max. ambient temperature: 55°C (50°C without derating) up to 90 kW, 50°C (45°C without derating) from 110 kW</li> <li>→ Environment protection class: IP55 up to 90 kW, IP54 from 110 kW</li> </ul>  | –  |
| Special features        | → Special versions on request  | <ul style="list-style-type: none"> <li>→ Flexible and safe application</li> <li>→ Compact design with energy-saving cooling concept to reduce temperature losses</li> <li>→ Integrated energy-efficient harmonic reduction</li> <li>→ Additional energy-saving function in the partial load range of the pump</li> <li>→ Versatile use in pump applications thanks to several connection options and different control modes</li> </ul> | –  |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ CC-HVAC: Control system for 1 to 6 pumps with fixed speed</li> <li>→ CCe-HVAC: Control system for 1 to 6 pumps with integrated speed control or external frequency converter control</li> <li>→ SC-HVAC: Controller for 1 to 4 pumps</li> <li>→ SC and SC-FC for standard pumps with fixed speed</li> <li>→ SCe for electronically controlled pumps or pumps with integrated frequency converter</li> </ul> | <ul style="list-style-type: none"> <li>→ IF modules as an option: Profibus, Ethernet, DeviceNet, Profinet, Modbus</li> </ul>  | <ul style="list-style-type: none"> <li>→ Wilo-IR-Stick/IR-Monitor</li> <li>→ Remote control with infrared interface for electronically controlled Wilo pumps</li> <li>→ Wilo IF modules Stratos/IF modules</li> <li>→ Plug-in modules for BA connection of Stratos, Stratos GIGA/-D/-B, IP-E, DP-E, IL-E/DL-E, BL-E, MHIE, MVIE, Helix VE...</li> <li>→ Wilo-CIF modules</li> <li>→ Plug-in modules for BA connection of Stratos MAXO</li> </ul> |

| Series                  | Wilo-Sub TWU 4 ...-GT  | Wilo-Star-Z NOVA   | Wilo-Stratos PICO-Z  |
|-------------------------|--|--|--|
| Product photo           |   |   |   |
| Construction            | Submersible pump, multistage   | Glandless circulator with screwed connection and blocking-current proof synchronous motor  | Glandless circulator with screwed connection, EC motor and automatic power adjustment  |
| Application             | Water supply from boreholes, wells and rainwater storage for geothermal applications   | Domestic hot water circulation systems in industry and in building services  | Domestic hot water circulation systems in industry and in building services  |
| Duty chart              |   |    |   |
| Volume flow $Q_{max}$   | 6 m <sup>3</sup> /h  | 0.4 m <sup>3</sup> /h  | 3.5 m <sup>3</sup> /h  |
| Delivery head $H_{max}$ | 33 m   | 1.1 m  | 6 m  |
| Technical data          | <ul style="list-style-type: none"> <li>→ Mains connection: 3~400 V, 50 Hz</li> <li>→ Fluid temperature: 3~30 °C</li> <li>→ Max. sand content: 50 g/m<sup>3</sup></li> <li>→ Max. immersion depth: 200 m</li> </ul>   | <ul style="list-style-type: none"> <li>→ Fluid temperature: potable water, max. +95 °C</li> <li>→ Mains connection 1~230 V, 50 Hz</li> <li>→ Screwed connection Rp 1/2</li> <li>→ Max. operating pressure 10 bar</li> </ul>  | <ul style="list-style-type: none"> <li>→ Fluid temperature: drinking water up to water hardness 3.57 mmol/l (20 °dH) max. +70 °C</li> <li>→ Mains connection 1~230 V, 50 Hz</li> <li>→ Screw connection Rp 3/4, Rp 1</li> <li>→ Max. operating pressure 10 bar</li> </ul>  |
| Special features        | <ul style="list-style-type: none"> <li>→ Performance-optimised motors for geothermal applications</li> <li>→ Parts in contact with the fluid are corrosion-resistant</li> <li>→ Integrated non-return valve</li> <li>→ Low wear due to floating impellers</li> </ul> | <ul style="list-style-type: none"> <li>→ Hygienically safe thanks to proven technology</li> <li>→ Improved energy efficiency due to synchronous motor with power consumption of only 3~6 watts and thermal insulation shell as standard</li> <li>→ Quick, easy installation and replacement of common pump types thanks to flexible service motor and Wilo-Connector</li> </ul>                  | <ul style="list-style-type: none"> <li>→ Manual and temperature-controlled mode for optimum operation</li> <li>→ Identification of the thermal disinfection of the drinking water tank</li> <li>→ Display of the current consumption in Watts and the cumulative kilowatt hours or of the current flow and the temperature</li> <li>→ Stainless steel pump housing protects against bacteria and corrosion</li> </ul>                |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Multistage submersible pump with radial or semi-axial impellers</li> <li>→ Integrated non-return valve</li> <li>→ NEMA coupling</li> <li>→ Three-phase motor</li> <li>→ Hermetically sealed motors</li> </ul>               | <ul style="list-style-type: none"> <li>→ Wilo-Connector</li> <li>→ Ball shut-off valve on suction side and non-return valve on pressure side (Star-Z NOVA A, C, T)</li> <li>→ Including plug-in time switch, 1.8 m connection cable (Star-Z NOVA C)</li> <li>→ Star-Z NOVA T incl. timer, thermostatic valve and detection of thermal disinfection, LC display with symbolic language</li> </ul> | <ul style="list-style-type: none"> <li>→ Control mode: Δp-c, temperature-controlled mode</li> <li>→ Temperature control for constant return temperature in drinking water circulation systems</li> <li>→ Thermal disinfection routine</li> <li>→ Reset function for the electricity meter or to factory settings</li> <li>→ "Hold" function (key lock)</li> <li>→ Automatic deblocking function</li> <li>→ Wilo-Connector</li> </ul> |

| Series                  | Wilo-Stratos MAXO-Z  | Wilo-Yonos MAXO-Z  | Wilo-Star-Z<br>Wilo-Star-ZD   |
|-------------------------|--|--|---|
| Product photo           |   |   |    |
| Construction            | Smart glandless circulator with screwed connection or flange connection, EC motor with integrated power adjustment   | Glandless circulator with screwed connection or flange connection, EC motor with automatic power adjustment  | Glandless circulator with screwed connection  |
| Application             | Domestic hot water circulation systems and similar systems in industry and in building services  | Domestic hot water circulation systems in industry and in building services  | Domestic hot water circulation systems in industry and in building services   |
| Duty chart              |   |    |    |
| Volume flow $Q_{max}$   | 44 m <sup>3</sup> /h   | 40 m <sup>3</sup> /h   | 8.5 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 12 m   | 12 m   | 6.0 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Fluid temperature: drinking water max. +80 °C</li> <li>→ Heating water -10 °C to +110 °C</li> <li>→ Mains connection 1~230 V, 50 Hz</li> <li>→ Nominal diameter Rp 1 to DN 65</li> <li>→ Max. operating pressure 10 bar</li> </ul>  | <ul style="list-style-type: none"> <li>→ Permissible temperature range drinking water up to a water hardness of 3.57 mmol/l (20 °dH) max. +80 °C</li> <li>→ Mains connection 1~230 V, 50 Hz</li> <li>→ Nominal diameter Rp 1 to DN 65</li> <li>→ Max. operating pressure 10 bar</li> </ul>   | <ul style="list-style-type: none"> <li>→ Fluid temperature: drinking water up to water hardness 3.2 mmol/l (18 °dH) max. +65 °C</li> <li>→ Mains connection 1~230 V, 50 Hz,</li> <li>→ Screwed connection Rp ½ (¾), Rp 1</li> <li>→ Max. operating pressure 10 bar</li> </ul> |
| Special features        | <ul style="list-style-type: none"> <li>→ Operation by guided application settings with the Setup Guide</li> <li>→ Maximum drinking water hygiene and energy efficiency by the new control function T-const.</li> <li>→ Optimum hygiene support thanks to thermal disinfection.</li> <li>→ Installation comfort by the Wilo-Connector</li> <li>→ Corrosion-resistant pump housing in stainless steel</li> </ul>                                 | <ul style="list-style-type: none"> <li>→ Indication of set delivery head and fault codes</li> <li>→ Quick setting when replacing an uncontrolled standard pump with pre-set speed stages, e.g. TOP-Z</li> <li>→ Electrical connection with Wilo plug</li> <li>→ Collective fault signal ensures system availability</li> <li>→ Corrosion-resistant pump housing in red brass for systems where oxygen entry is possible</li> </ul>   | <ul style="list-style-type: none"> <li>→ All plastic parts that come into contact with the fluid fulfil KTW recommendations</li> </ul>  |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Control mode: Dynamic Adapt plus, Δp-c, Δp-v, n-const, T-const, ΔT-const and Q-const</li> <li>→ Multi-Flow Adaptation</li> <li>→ Remote control via Bluetooth interface</li> <li>→ Selection of application range with Setup Guide</li> <li>→ Heat metering</li> <li>→ Disinfection detection</li> <li>→ Air-venting function</li> <li>→ Retrofittable interface modules for communication</li> </ul> | <ul style="list-style-type: none"> <li>→ Control modes: Δp-c, Δp-v, 3 speed stages</li> <li>→ LED display for setting the required delivery head</li> <li>→ Quick electrical connection with Wilo plug</li> <li>→ Motor protection, fault signal light and contact for collective fault signal</li> <li>→ Corrosion-resistant pump housing in red brass</li> <li>→ Combination flanges PN 6/PN 10 (for DN 40 to DN 65)</li> <li>→ Retrofittable interface module (Connect module) for communication</li> </ul> | <ul style="list-style-type: none"> <li>→ Constant speed or 3 selectable speed stages (Star-Z...-3),</li> <li>→ Quick electrical connection with spring clips</li> <li>→ Star-ZD version as double pump</li> </ul>   |

| Series                  | Wilo-TOP-Z  | Wilo-VeroLine-IP-Z  |
|-------------------------|---|---|
| Product photo           |    |   |
| Construction            | Glandless circulator with screwed connection or flange connection   | Glanded circulator in in-line design with screwed connection  |
| Application             | Domestic hot water circulation systems in industry and in building services   | For pumping drinking water, cold and hot water without abrasive substances, in heating, cold water and cooling water systems  |
| Duty chart              |    |   |
| Volume flow $Q_{max}$   | 65 m <sup>3</sup> /h  | 5 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 9 m   | 4.5 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Fluid temperature: drinking water max. +80 °C (+65 °C for TOP-Z 20/4 and TOP-Z 25/6)</li> <li>→ Mains connection 1~230 V, 50 Hz; 3~400 V, 50 Hz</li> <li>→ Nominal diameter Rp 1 to DN 65</li> <li>→ Max. operating pressure 10 bar</li> </ul> | <ul style="list-style-type: none"> <li>→ Fluid temperature: drinking water up to a water hardness of 4.99 mmol/l (28 °dH) max. +65 °C</li> <li>→ Heating water -8 °C to +110 °C</li> <li>→ Mains connection 1~230 V, 50 Hz, 3~400 V, 50 Hz</li> <li>→ Nominal diameter Rp 1</li> <li>→ Max. operating pressure 10 bar</li> </ul>            |
| Special features        | <ul style="list-style-type: none"> <li>→ Thermal winding contact (WSK) as potential-free contact (depending on type)</li> <li>→ Rotation control lamp indicates the correct direction of rotation (only for 3~)</li> <li>→ Thermal insulation as standard</li> </ul>                    | <ul style="list-style-type: none"> <li>→ High resistance to corrosive fluids due to stainless steel housing and Noryl impeller</li> <li>→ Wide range of applications due to suitability for water hardness up to 5 mmol/l (28 °dH)</li> <li>→ All plastic parts that come into contact with the fluid fulfil KTW recommendations</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Pre-selectable speed stages</li> <li>→ Thermal insulation as standard</li> <li>→ All plastic parts that come into contact with the fluid fulfil KTW recommendations</li> <li>→ Combination flange PN 6/PN 10 (DN 40 to DN 65)</li> </ul>       | <ul style="list-style-type: none"> <li>→ Single-stage, low-pressure centrifugal pump in in-line design with</li> <li>→ Mechanical seal</li> <li>→ Screwed connection</li> <li>→ Motor with one-piece shaft</li> </ul>   |

## Standard glandless circulators for non-EU markets

### Inside the EU\*

According to the ErP Directive (2009/125/EG) with ordinances (EG) 641/2009 and (EG) 622/2012, uncontrolled standard glandless circulators are no longer allowed to be sold in the EU from 1 January 2013 on.

Exceptions to this rule are products, like for example, glandless circulators which are integrated in heat generators. These exceptions apply until the Directive prescribes also the replacement of newly installed heat generators or solar stations from August 2015 on.

### Outside the EU

Pumps of the following series are allowed to be further distributed outside the EU, however in compliance with the legislation in force in these countries.

Star-RS/RSD  
TOP-S/SD  
TOP-RL  
Star-STG



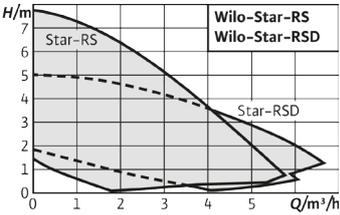
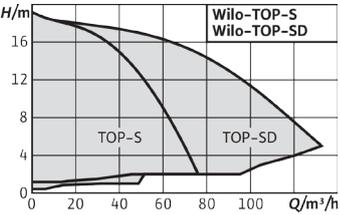
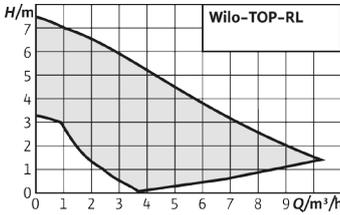
### Note

An energy efficiency evaluation and a CE conformity declaration (CE mark) do no longer exist for these products.

\*Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Great Britain

+ Croatia (EU member from 2013 on), + Turkey (candidate country), + Serbia (candidate country)

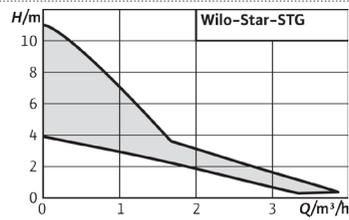
+ 4 countries of the EFTA (European Free Trade Association) Iceland, Norway, Liechtenstein, Switzerland

| Series                  | Wilo-Star-RS<br>Wilo-Star-RSD   | Wilo-TOP-S<br>Wilo-TOP-SD   | Wilo-TOP-RL  |
|-------------------------|---|---|--|
| Product photo           |    |   |   |
| Construction            | Glandless circulator with screwed connection  | Glandless circulator with screwed or flanged connection   | Glandless circulator with screwed or flanged connection  |
| Application             | Hot-water heating systems of all kinds, industrial circulation systems, cold water and air-conditioning systems   | Hot-water heating systems of all kinds, industrial circulation systems, cold water and air-conditioning systems   | Hot-water heating systems of all kinds, industrial circulation systems, cold water and air-conditioning systems  |
| Duty chart              |    |   |   |
| Volume flow $Q_{max}$   | 6.0 m <sup>3</sup> /h   | 130.0 m <sup>3</sup> /h   | 10.0 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 8.0 m   | 19.0 m  | 7.0 m  |
| Technical data          | <ul style="list-style-type: none"> <li>→ Fluid temperature -10 °C to +110 °C</li> <li>→ Mains connection 1~230 V, 50 Hz</li> <li>→ Screw connection Rp ½, Rp 1, Rp 1½</li> <li>→ Max. operating pressure 10 bar</li> </ul>  | <ul style="list-style-type: none"> <li>→ Fluid temperature -20 °C to +130 °C</li> <li>→ Mains connection 1~230 V, 50 Hz (depending on type); 3~400 V, 50 Hz</li> <li>→ Nominal diameter Rp 1 to DN 100</li> <li>→ Max operating pressure 10 bar (optional: 16 bar)</li> </ul>                               | <ul style="list-style-type: none"> <li>→ Fluid temperature -20 °C to +130 °C</li> <li>→ Mains connection 1~230 V, 50 Hz, 3~400 V, 50 Hz</li> <li>→ Nominal diameter Rp 1 to DN 40</li> <li>→ Max operating pressure 10 bar</li> </ul>      |
| Special features        | <ul style="list-style-type: none"> <li>→ Suitable for any installation position with horizontal shaft; terminal box in 3-6-9-12 o'clock position</li> <li>→ Three pre-selectable speed stages for load adaptation</li> <li>→ Easy and safe installation with useful wrench attachment point on the pump housing</li> <li>→ Simplified electrical connection to the terminal box with changeable threaded cable connection used from both sides; quick connection with spring clips</li> </ul> | <ul style="list-style-type: none"> <li>→ Rotation control lamp indicates the correct direction of rotation (only for 3~)</li> <li>→ Manual power adjustment with 3 speed stages</li> <li>→ Pump housing with cataphoretic (KTL) coating protects against corrosion due to condensation formation</li> </ul> | <ul style="list-style-type: none"> <li>→ Collective fault signal as potential-free contact (depending on type)</li> <li>→ Pump housing with cataphoretic (KTL) coating protects against corrosion due to condensation formation</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ 3 manually selectable speed stages</li> <li>→ Wrench attachment point on pump body</li> <li>→ Cable inlet possible from both sides - for easy installation</li> <li>→ Quick electrical connection with spring clips</li> <li>→ RSD version as twin-head pump</li> </ul>  | <ul style="list-style-type: none"> <li>→ Preselectable speed stages for performance adaptation</li> <li>→ Combination flanges PN 6/PN 10 (DN 40 to DN 65)</li> <li>→ Pump housing is KTL-coated</li> <li>→ Thermal insulation shells for heating applications as standard</li> </ul>                        | <ul style="list-style-type: none"> <li>→ Preselectable speed stages for performance adaptation</li> <li>→ Pump housing is KTL-coated</li> <li>→ Combination flange PN 6/PN 10 (DN 40)</li> </ul>   |

**Series**      **Wilo-Star-STG**
**Product photo**


**Construction**      Glandless circulator with screwed connection

**Application**      Circulation in solar thermal and geothermal energy systems

**Duty chart**


**Volume flow  $Q_{max}$**       3.8 m³/h

**Delivery head  $H_{max}$**       11.0 m

**Technical data**

- Fluid temperature -10 °C to +110 °C, in short-term duty (2 h) +120 °C
- Mains connection 1~230 V, 50 Hz
- Screwed connection Rp ½, Rp 1
- Max. operating pressure 10 bar

**Special features**

- Special hydraulics for use in solar thermal and geothermal energy systems
- Pump housing with wrench attachment point
- Pump housing with cathaphoretic (KTL) coating protects against corrosion due to condensate formation

**Equipment/function**

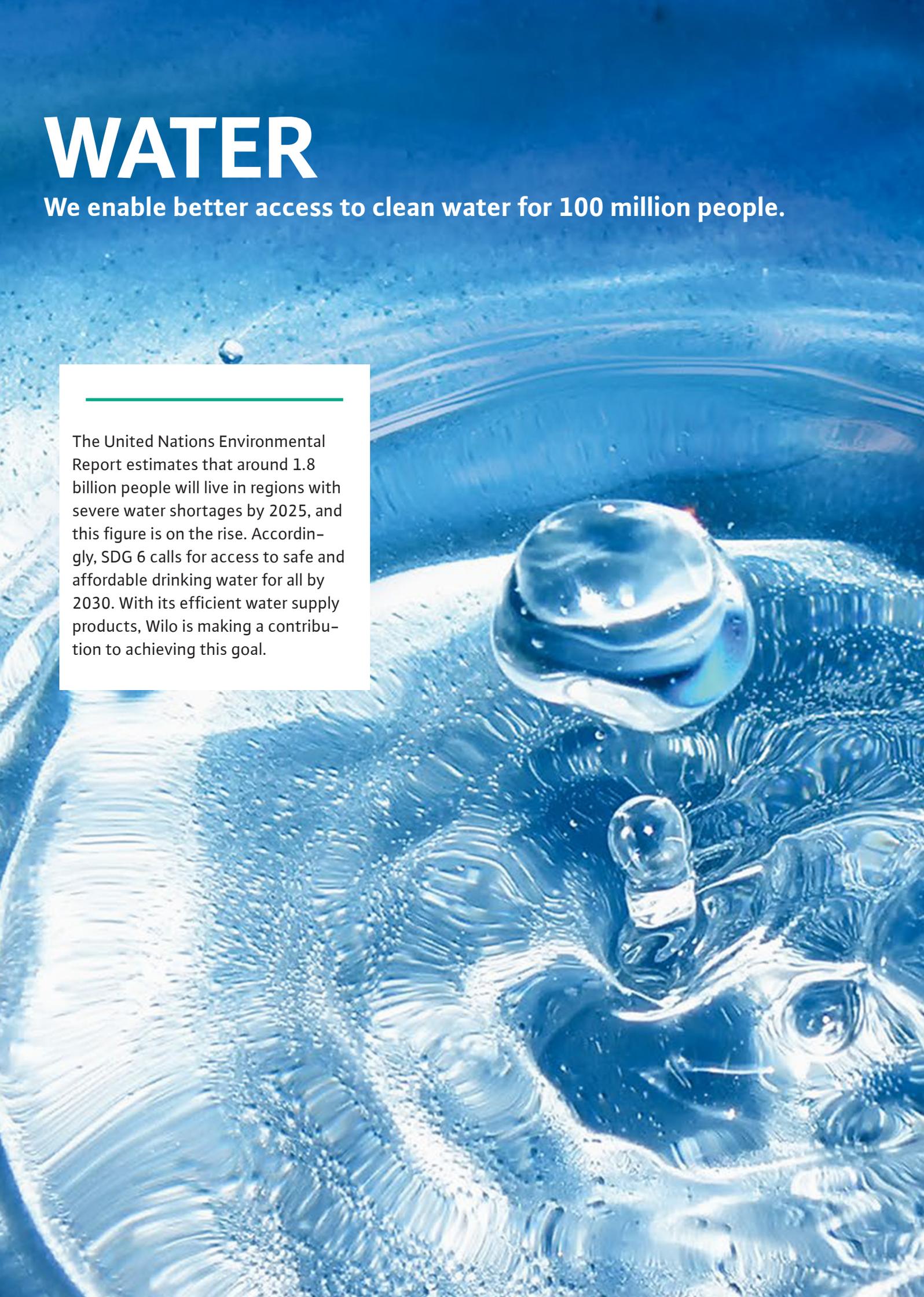
- 3 manually selectable speed stages
- Wrench attachment point on pump housing
- Blocking-current proof motor, motor protection not required
- Cable inlet on both sides for simple installation
- Quick electrical connection with spring clips
- Pump housing with cathaphoretic coating

# WATER

We enable better access to clean water for 100 million people.

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The United Nations Environmental Report estimates that around 1.8 billion people will live in regions with severe water shortages by 2025, and this figure is on the rise. Accordingly, SDG 6 calls for access to safe and affordable drinking water for all by 2030. With its efficient water supply products, Wilo is making a contribution to achieving this goal.





# WILO PROVIDES ENERGY EFFICIENT SOLUTIONS FOR UNITE STUDENTS

Wilo products are in operation in several Unite Students facilities, one of them being Blithehale Court in London – with energy efficient solutions and an extensive service offer, the pump manufacturer ensures a reliable operation within the building.

Bethnal Green, situated north of Whitechapel and Stepney, certainly is an archetypical East End borough. Since London's East End has been booming for years, the district has transformed from a no-go neighbourhood to a hip heartland, with flower markets and boutiques blooming alongside traditional English pubs. Just three minutes' walk from Bethnal Green Underground station, is Blithehale Court, one of Unite Stu-



dents residential sites located across London. Blithehale Court, has given a home to over 300 students each year since 2009. True to the responsible way Unite Students runs its business, the company has established three focus areas of activity to decrease their environmental impact. For example, by reducing water use and wastage and the use of efficient buildings. All existing Unite Students' buildings are designed to reduce their main environmental impacts of energy and carbon, water, resource use and waste.

As the largest manager and developer of purpose-built student accommodation in the UK, Unite Students is – just like Wilo – a pioneer in its industry. The services, people and properties are all designed around detailed research-based insight, to provide tailored solutions to the students.

“What differentiates Wilo is how proactive they are at presenting new innovative products and ideas around energy efficiency” comments James Sprake, Senior Procurement Manager at Unite Students.

## Efficiency survey improves operation

In total, Wilo UK has provided new booster sets for 11 different sites in 2018 – with another 12 sites in the making for 2019 and a potential for this total to increase. “Back then, the customer asked us if we would carry out a survey of all their UK sites and create a condition report for all their pumping assets, which is more than 700”, explains Wayne Atter, Service Director at Wilo UK. “From this report, we created the lifecycle “Road Map” including all asset details, envisaged life expectancy and based on that recommended change out dates and costs.” Those surveys were part of a bigger endeavour, to comply with energy surveys that are part of the mandatory Energy Saving Opportunities Scheme (ESOS).

Wilo's compact pressure boosting system can be used for fully automatic water supply and pressure boosting in residential, commercial and public buildings, such as hotels, hospitals or department stores. With the high-efficiency pump hydraulics of the Helix VE series working in conjunction with IE4 IEC standard motors as well as a super-proportionally wide control range of the frequency converter makes the booster an energy-saving solution. “By optimising our resources efficiently, we were able to combine the project installations with our maintenance activities, thus allowing us to meet the customer's expectations during one visit on site”, continued Wayne Atter from Wilo UK.





UNITE  
STUDENTS

Pizza Hut  
DELIVERY

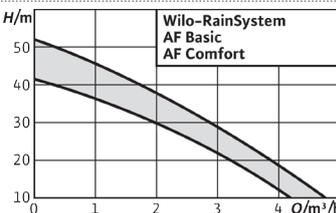
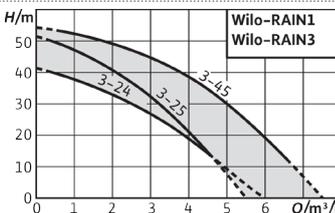
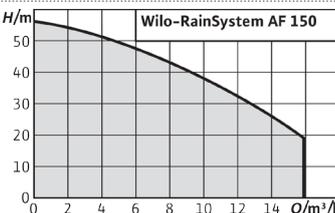
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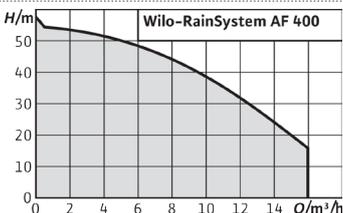
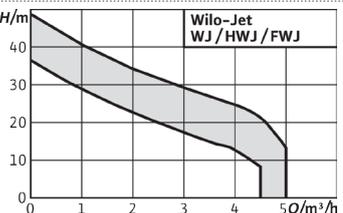
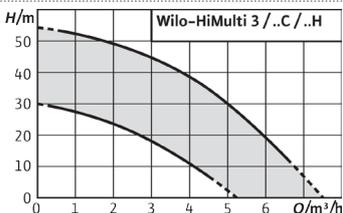
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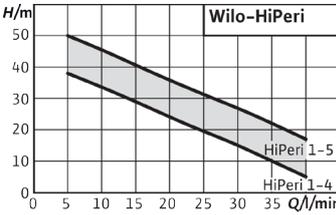
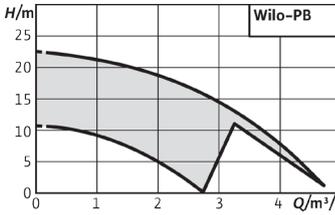
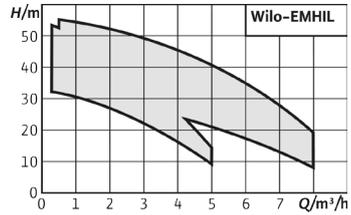
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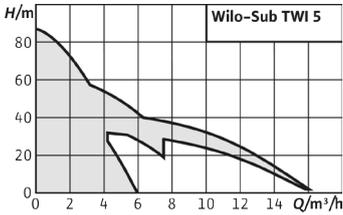
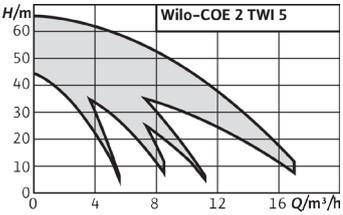
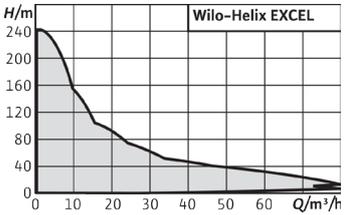
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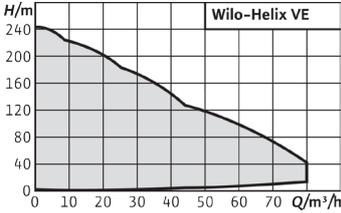
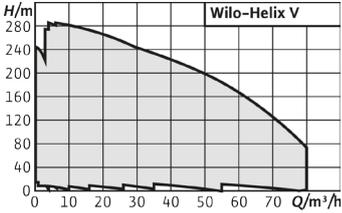
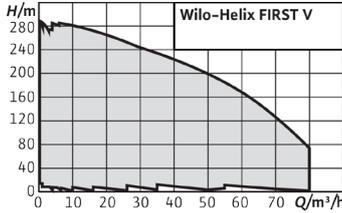
Water supply

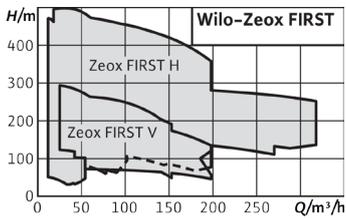
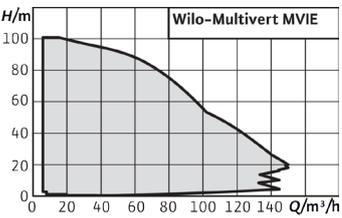
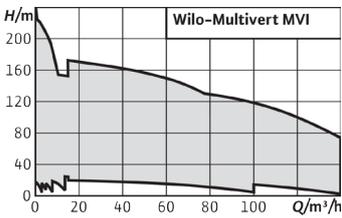
| Series                  | Wilo-RainSystem AF Basic<br>Wilo-RainSystem AF Comfort   | Wilo-RAIN1<br>Wilo-RAIN3   | Wilo-RainSystem AF 150   |
|-------------------------|--|--|--|
| Product photo           |   |    |   |
| Construction            | Ready-to-plug rainwater utilisation system with 1 MultiCargo MC self-priming centrifugal pump  | Ready-to-plug rainwater utilisation system with 1 HiMulti3 P self-priming centrifugal pump   | Automatic rainwater utilisation system with 2 MultiCargo MC self-priming centrifugal pumps   |
| Application             | Rainwater utilisation for saving drinking water in conjunction with rainwater storage tanks or reservoirs  | Rainwater utilisation for saving drinking water in conjunction with rainwater storage tanks or reservoirs  | Rainwater utilisation in multi-family houses and small businesses for saving drinking water in conjunction with rainwater storage tanks or reservoirs  |
| Duty chart              |   |    |   |
| Volume flow $Q_{max}$   | 5 m <sup>3</sup> /h  | 6 m <sup>3</sup> /h  | 16 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 52 m   | 55 m   | 55 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Mains connection 1~230 V, 50 Hz</li> <li>→ Suction head max. 8 m</li> <li>→ Fluid temperature +5 °C to +35 °C</li> <li>→ Max. operating pressure 8 bar</li> <li>→ Replenishment reservoir 11 l</li> <li>→ Protection class IP42/IP54</li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains connection 1~230 V, 50 Hz</li> <li>→ Suction head max. 8 m</li> <li>→ Fluid temperature +5 °C to +35 °C</li> <li>→ Max. operating pressure 8 bar</li> <li>→ Replenishment reservoir 11 l</li> <li>→ Protection class IP X4</li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains connection 1~230 V, 50 Hz</li> <li>→ Suction head max. 8 m</li> <li>→ Fluid temp. +5 °C to +35 °C</li> <li>→ Max. operating pressure 8 bar</li> <li>→ Replenishment reservoir 150 l</li> <li>→ Protection class IP41</li> </ul>   |
| Special features        | <ul style="list-style-type: none"> <li>→ Low-noise, due to encapsulated system (Comfort) and multistage pump</li> <li>→ System fulfils DIN 1989 and EN 1717</li> <li>→ Demand-oriented, flow- and noise-optimised fresh water replenishment</li> <li>→ Media-touched components are corrosion-free</li> <li>→ Automatic support function for evacuation of air (Comfort)</li> </ul>          | <ul style="list-style-type: none"> <li>→ Backflow prevention according to DIN 1989 and EN 1717</li> <li>→ Low noise, encapsulated multistage centrifugal pump</li> <li>→ Ready to plug with variety of hydraulic connections</li> <li>→ Compact modular construction</li> <li>→ Touch screen (RAIN3), user friendly designed interface</li> <li>→ Integrated features: dry-running protection, automatic water periodic refresh, adjustable starting pressure</li> </ul> | <ul style="list-style-type: none"> <li>→ Low-noise due to multistage pumps</li> <li>→ Media-touched components are corrosion-free</li> <li>→ Maximum operational reliability due to fully electronic controller (RCP)</li> <li>→ Demand-oriented fresh water replenishment</li> <li>→ High reliability due to flow-optimised and noise-optimised replenishment reservoir</li> </ul>  |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Connection-ready module mounted on a non-corroding base frame</li> <li>→ Pressure-side pipework Rp 1</li> <li>→ 1.8/3.0 m connection cable and mains plug</li> <li>→ Switchgear Rain Control Basic RCB/Economy RCE with control electronics</li> <li>→ Monitoring of rainwater storage levels</li> <li>→ Connection for overflow warning</li> </ul> | <ul style="list-style-type: none"> <li>→ Connection-ready module on vibration-insulated base frame</li> <li>→ Pressure-side pipework Rp 1</li> <li>→ 1.5 m power supply cable and mains plug</li> <li>→ Menu-prompted operation and display</li> <li>→ Monitoring of rainwater storage levels</li> <li>→ Connection for external failure reporting</li> <li>→ Integrated overflow warning sensor (RAIN3)</li> </ul>  | <ul style="list-style-type: none"> <li>→ Connection-ready module on vibration-insulated tubular frame</li> <li>→ Pressure sided tubing R 1½, pressure vessel, shut-off device</li> <li>→ Pressure gauge 0-10 bar</li> <li>→ Central switchgear (RCP)</li> <li>→ Menu-prompted operation and display</li> <li>→ Pump cycling/test run</li> <li>→ Automatic fault-actuated switchover, peak-load operation, water exchange in replenishment reservoir</li> </ul> |

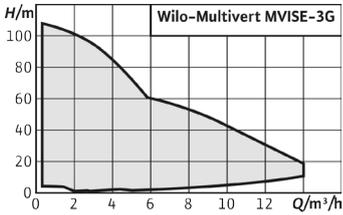
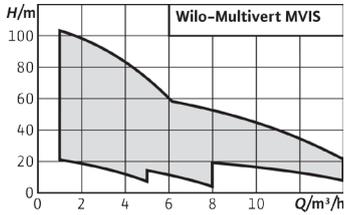
| Series                  | Wilco-RainSystem AF 400   | Wilco-Jet WJ<br>Wilco-Jet HWJ  | Wilco-HiMulti 3 (P)<br>Wilco-HiMulti 3 C (P) / HiMulti 3 H (P)  |
|-------------------------|---|--|---|
| Product photo           |    |   |    |
| Construction            | Automatic rainwater utilisation system with run-down tank and 2 MultiPress MP non self-priming centrifugal pumps  | Self-priming single-stage centrifugal pumps  | Self-priming (version P) and non self-priming multistage pumps and pump systems   |
| Application             | Hybrid system for commercial and industrial rainwater utilisation for saving drinking water in conjunction with rainwater storage tanks or reservoirs   | For pumping water from wells for filling, pumping empty, transferring by pumping, irrigation and sprinkling<br>As emergency pump for overflows   | For domestic potable water supply, sprinkling, irrigation, spraying and rainwater utilisation   |
| Duty chart              |    |    |    |
| Volume flow $Q_{max}$   | 16 m <sup>3</sup> /h  | 5 m <sup>3</sup> /h  | 7 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 55 m  | 50 m   | 55 m  |
| Technical data          | <ul style="list-style-type: none"> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Fluid temp. +5 °C to +35 °C</li> <li>→ Max. operating pressure 10 bar</li> <li>→ Replenishment reservoir 400 l</li> <li>→ Protection class IP54</li> </ul>  | <ul style="list-style-type: none"> <li>→ Mains connection 1~230 V, 50 Hz</li> <li>→ Inlet pressure max. 1 bar</li> <li>→ Fluid temperature +5 °C to +35 °C</li> <li>→ Max. operating pressure 6 bar</li> <li>→ Protection class IP44</li> </ul>    | <ul style="list-style-type: none"> <li>→ Mains connection 1~230 V, 50 Hz</li> <li>→ Inlet pressure max. 3 bar</li> <li>→ Fluid temperature 0 °C to +40 °C (+55 °C for max. 10 minutes)</li> <li>→ Operating pressure max. 8 bar</li> <li>→ Protection class IPX4, IP54</li> </ul>   |
| Special features        | <ul style="list-style-type: none"> <li>→ Low-noise due to multistage pumps</li> <li>→ Media-touched components are corrosion-free</li> <li>→ Maximum operational reliability due to a fully electronic controller (RCH)</li> <li>→ Demand-oriented fresh water replenishment</li> <li>→ Automatic feeding pump control</li> <li>→ System/level control in the low-voltage range</li> </ul>  | <ul style="list-style-type: none"> <li>→ Ideal for portable outdoor applications (hobby, garden)</li> <li>→ HWJ version with diaphragm pressure vessel and pressure switch</li> <li>→ FWJ version with fluid control for system control</li> </ul> | <ul style="list-style-type: none"> <li>→ Easy: Electrical Wilco-connector, on/off switch, enlarged foot fastening</li> <li>→ Efficient and economical: highly efficient hydraulics, extremely compact</li> <li>→ HiMulti 3 C (P): Dry-running protection and automation rotatable by 360° for easier installation</li> <li>→ HiMulti 3 H (P): Automation and fluid hammer protection</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Connection-ready module on vibration-insulated baseplate</li> <li>→ Pressure sided tubing R 1½, pressure vessel, shut-off device</li> <li>→ Pressure gauge 0-10 bar</li> <li>→ Hybrid tank with all connections, calmed inlets and overflow with siphon</li> <li>→ Central switchgear (RCH)</li> <li>→ Pump cycling/test run</li> <li>→ Automatic fault-actuated switchover, peak-load operation, water exchange in replenishment reservoir</li> </ul> | <ul style="list-style-type: none"> <li>→ With or without carrying frame, depending on the version (WJ, FWJ)</li> <li>→ Connection cable with plug</li> <li>→ On/Off switch</li> <li>→ Thermal motor protection switch</li> </ul>                   | <ul style="list-style-type: none"> <li>→ Directly flanged motor</li> <li>→ Thermal motor protection switch for 1~230 V version</li> <li>→ HiMulti 3 C (P): Automatic pump control, low-water cut-out switch</li> <li>→ HiMulti 3 H (P): Pressure switch, diaphragm pressure vessel 50 l/100 l</li> </ul>  |

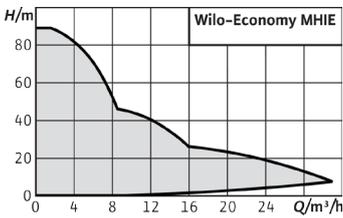
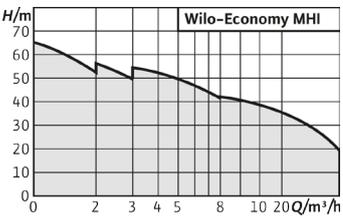
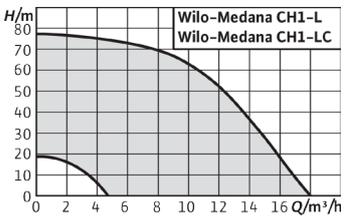
| Series                  | Wilo-HiPeri 1  | Wilo-PB  | Wilo-EMHIL   |
|-------------------------|--|--|--|
| Product photo           |   |   |   |
| Construction            | Non self-priming peripheral pump   | Non self-priming single-stage centrifugal pump of in-line design   | Non self-priming water-supply unit with frequency converter  |
| Application             | For water supply/pressure boosting, raw water intake, sprinkling and spraying, rainwater utilisation   | Automatic water supply/pressure boosting for residential properties from a tank feeding extraction points located beneath  | Water supply<br>Rainwater utilisation<br>Irrigation and spraying   |
| Duty chart              |   |    |   |
| Volume flow $Q_{max}$   | 50 m <sup>3</sup> /h   | 4.8 m <sup>3</sup> /h  | 8 m <sup>3</sup> /h  |
| Delivery head $H_{max}$ | 3 m  | 22 m   | 55 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Mains connection 1~230 V, 50 Hz</li> <li>→ Inlet pressure max. 1.5 bar</li> <li>→ Fluid temperature +5 °C to +60 °C</li> <li>→ Max. operating pressure 6.5 bar</li> <li>→ Suction/pressure side connections: Rp1</li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains connection 1~230 V, 50 Hz</li> <li>→ Suction/pressure side connections: G¾, Rp1, Rp1¼</li> <li>→ Fluid temperature +5 °C to +80 °C</li> <li>→ Max. inlet pressure: 3.0 bar</li> <li>→ Max. operating pressure: 5.0 bar</li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains connection: 1~230 V, 50/60 Hz</li> <li>→ Max. operating pressure: 10 bar</li> <li>→ Fluid temperature: 0 °C to +40 °C</li> <li>→ Max. ambient temperature: 50 °C</li> </ul>   |
| Special features        | <ul style="list-style-type: none"> <li>→ Simple handling thanks to low weight, perfectly suited for permanent operation</li> <li>→ Brass impeller for fluids up to 60 °C</li> <li>→ Efficient thanks to low power consumption at maximum delivery head and volume flow</li> <li>→ Expandable with the electronic pump control Wilo-FluidControl/HiControl 1</li> </ul> | <ul style="list-style-type: none"> <li>→ Stable water pressure due to automatic operation</li> <li>→ High operational reliability and dry-running protection due to the integrated flow switch</li> <li>→ Integrated thermal motor protection as standard</li> <li>→ Extremely low-noise operation</li> <li>→ Corrosion protection through coated pump hydraulics</li> </ul> | <ul style="list-style-type: none"> <li>→ Heavy-duty multistage pump with stainless steel hydraulics</li> <li>→ Easy operation and adjustment: Large display screen; LEDs for status display</li> <li>→ Plug &amp; Pump</li> <li>→ Functions: PID, frost protection, restart after a fault</li> <li>→ Float switch can be connected as an option</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Single-stage circulating pump with a radial impeller</li> <li>→ Can be supplemented by the Wilo-FluidControl resp. HiControl 1</li> </ul>   | <ul style="list-style-type: none"> <li>→ Directly flanged glanded motor</li> <li>→ Shaft sealing with mechanical seal</li> <li>→ Thermal motor protection</li> <li>→ Flow switch, on the pressure side for automatic operation and dry-running protection</li> <li>→ Operating options Auto / Off / Manual</li> </ul>  | <ul style="list-style-type: none"> <li>→ Including 1.4 m mains connection cable and plug</li> <li>→ Including EMC filter</li> <li>→ With built-in pressure and flow controllers</li> </ul>   |

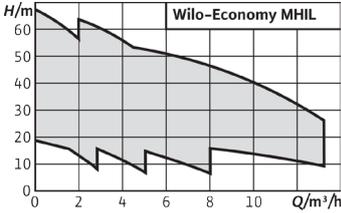
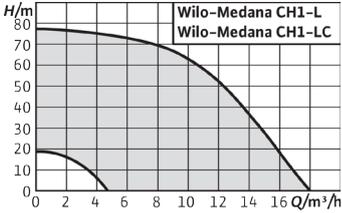
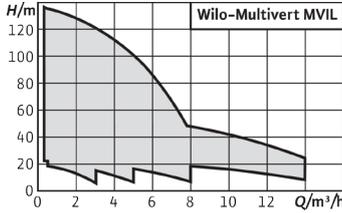
| Series                  | Wilo-Sub TWI 5/TWI 5-SE<br>Wilo-Sub TWI 5-SE PnP   | Wilo-Economy COE-2 TWI 5  | Wilo-Helix EXCEL   |
|-------------------------|--|---|--|
| Product photo           |   |    |   |
| Construction            | Submersible pumps  | Pressure-boosting system with two parallel submersible pumps  | Non self-priming, highly efficient, fully stainless steel high-pressure multistage centrifugal pump with EC motor and integrated high-efficiency drive   |
| Application             | For domestic water supply from wells, rainwater storage tanks, and reservoirs. For irrigation, sprinkling, rainwater utilisation or for pumping out water  | Pressure boosting and water supply in residential applications and for small commercial installations that require compact construction and a low noise level   | Water supply and pressure boosting, Industrial circulation systems, Process water, Closed cooling circuits, Washing systems, Irrigation  |
| Duty chart              |   |   |   |
| Volume flow $Q_{max}$   | 16 m <sup>3</sup> /h   | 17 m <sup>3</sup> /h  | 80 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 88 m   | 68 m  | 240 m  |
| Technical data          | <ul style="list-style-type: none"> <li>→ Mains 3~400 V or 1~230 V ±10% 50 Hz</li> <li>→ Fluid temperature max. +40 °C</li> <li>→ Max. operating pressure 10 bar</li> <li>→ Protection class IP68</li> <li>→ Pressure-side Rp 1¼</li> <li>→ Suction-side (SE version) Rp 1¼</li> </ul>                            | <ul style="list-style-type: none"> <li>→ Mains 3~400 V or 1~230 V ±10% 50 Hz</li> <li>→ Fluid temperature max: +40 °C</li> <li>→ Operating pressure max: 10 bar</li> <li>→ Nominal connection diameters G 2"</li> </ul>   | <ul style="list-style-type: none"> <li>→ Fluid temperature -30 to +120 °C with EPDM (-10 to +90 °C with FKM)</li> <li>→ Max. operating pressure 16/25 bar</li> <li>→ Protection class IP55</li> <li>→ Minimum efficiency index MEI ≥0.7 (Helix EXCEL 16: MEI ≥0.5)</li> </ul>  |
| Special features        | <ul style="list-style-type: none"> <li>→ Ready-to-plug in EM version (1~230 V)</li> <li>→ Pump (housing, stages, impellers) made entirely of stainless steel 1.4301 (AISI 304)</li> <li>→ Self-cooling motor enables installation outside water</li> </ul>   | <ul style="list-style-type: none"> <li>→ Pumps of the TWI 5 series with low noise due to water-cooled motor, between 51 dB (A) and 61 dB (A)</li> <li>→ 2-pump pressure-boosting system in compact design due to vertical pump layout</li> <li>→ Economical system, based on the basic functions of the BC switchgear</li> <li>→ Long service life due to the stainless steel construction of the pumps and the piping</li> </ul> | <ul style="list-style-type: none"> <li>→ High-efficiency EC motor (energy efficiency class IE5 acc. to IEC 60034-30-2)</li> <li>→ Integrated electronic control "High-Efficiency Drive"</li> <li>→ Easy operation thanks to proven Green Button Technology and clear display</li> <li>→ User-friendly cartridge mechanical seal "X-Seal" and spacer coupling (from 5.5 kW)</li> <li>→ Drinking water approval</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Connection cable, 20 m</li> <li>→ TWI 5 version with standard intake strainer</li> <li>→ Variants:</li> <li>→ SE: with lateral inlet connecting piece</li> <li>→ FS: with built-in float switch</li> <li>→ Thermal motor protection for EM version (1~230 V)</li> </ul> | <ul style="list-style-type: none"> <li>→ Intake and outflow collector pipes</li> <li>→ Ball shut-off valves on the suction side and pressure side</li> <li>→ Non-return valve on the pressure side</li> <li>→ 1 manometer</li> <li>→ 2 pressure switches</li> <li>→ BC switchgear</li> </ul>  | <ul style="list-style-type: none"> <li>→ Impellers, stage chambers and pump housing made of stainless steel 1.4301/1.4404 (AISI 304L/AISI 316L)</li> <li>→ Helix EXCEL 2 - 16, PN 16 with oval flanges, PN25 with round flanges</li> <li>→ Helix EXCEL 22 - 36, with round flanges</li> <li>→ EC IE5 motor</li> <li>→ Integrated electronic control</li> </ul>   |

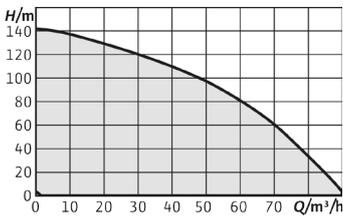
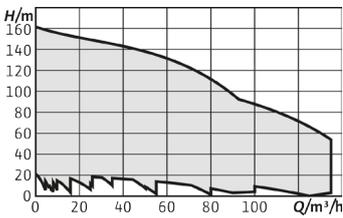
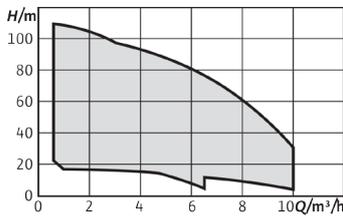
| Series                  | Wilo-Helix VE   | Wilo-Helix V   | Wilo-Helix FIRST V  |
|-------------------------|---|--|---|
| Product photo           |    |   |    |
| Construction            | Non self-priming multistage pump with integrated frequency converter  | Non self-priming multistage pump   | Non self-priming multistage pump  |
| Application             | Water supply and pressure boosting, Industrial circulation systems, Process water, Closed cooling circuits, Washing systems, Irrigation   | Water supply and pressure boosting, Industrial circulation systems, Process water, Closed cooling circuits, Washing systems, Irrigation  | Water distribution and pressure boosting, Industrial circulation systems, Process water, Closed cooling circuits, Washing systems, Irrigation   |
| Duty chart              |    |    |    |
| Volume flow $Q_{max}$   | 80 m <sup>3</sup> /h  | 80 m <sup>3</sup> /h   | 80 m <sup>3</sup> /h  |
| Delivery head $H_{max}$ | 240 m   | 280 m  | 280 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Fluid temperature -30 to +120 °C with EPDM (-10 to +90 °C with FKM)</li> <li>→ Max. operating pressure 16/25 bar</li> <li>→ Max. inlet pressure 10 bar</li> <li>→ Protection class IP55</li> <li>→ Minimum efficiency index MEI ≥0.7 (Helix VE 16: MEI ≥0.5)</li> </ul>  | <ul style="list-style-type: none"> <li>→ Fluid temperature -30 to +120 °C with EPDM (-10 to +90 °C with FKM)</li> <li>→ Max. operating pressure 16/25/30 bar</li> <li>→ Max. inlet pressure 10 bar</li> <li>→ Protection class IP55</li> <li>→ Minimum efficiency index MEI ≥0.7 (Helix V 16: MEI ≥0.5)</li> </ul>               | <ul style="list-style-type: none"> <li>→ Fluid temperature: -20 to +120 °C</li> <li>→ Max. operating pressure: 16/25/30 bar</li> <li>→ Protection class: IP55</li> <li>→ Minimum efficiency index MEI ≥0.7 (Helix FIRST V 16: MEI ≥0.5)</li> </ul>  |
| Special features        | <ul style="list-style-type: none"> <li>→ Multistage, speed-configurable stainless steel high-efficiency pump with 2D/3D hydraulics</li> <li>→ Optimised design for easy operation, transportation and installation with handles, lantern adjustment and rotatable free flanges</li> <li>→ User-friendly display with Green Button Technology and full text menu</li> <li>→ IF plug-in module for quick communication with the BMS</li> <li>→ Drinking water approval</li> </ul> | <ul style="list-style-type: none"> <li>→ Efficiency-optimised, laser-welded 2D/3D hydraulics, flow and degassing optimised</li> <li>→ Corrosion-resistant impellers, guide vanes and stage housings</li> <li>→ Maintenance-friendly design with particularly robust coupling guard</li> <li>→ Drinking water approval</li> </ul> | <ul style="list-style-type: none"> <li>→ Efficiency-optimised, laser-welded, optimised 2D/3D hydraulics</li> <li>→ Corrosion-resistant impellers, guide vanes and stage housings</li> <li>→ Flow and degassing-optimised hydraulic parts</li> <li>→ Reinforced pump housing, flow and NPSH-optimised</li> <li>→ Space-saving and easy maintenance thanks to compact design</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Impellers, stage chambers and pump housing made of stainless steel 1.4301/1.4404 (AISI 304L/AISI 316L)</li> <li>→ Helix VE 2 - 16, PN 16 with oval flanges, PN25 with round flanges</li> <li>→ Helix VE 22 - 36, with round flanges</li> <li>→ IEC standard motor</li> <li>→ Integrated frequency converter</li> </ul>   | <ul style="list-style-type: none"> <li>→ Impellers, stage chambers and pump housing made of stainless steel 1.4301/1.4404 (AISI 304L/AISI 316L)</li> <li>→ Helix V 2 - 16, PN 16 with oval flanges, PN25 with round flanges</li> <li>→ Helix V 22 - 36, with round flanges</li> <li>→ IEC standard motor</li> </ul>              | <ul style="list-style-type: none"> <li>→ Corrosion-resistant impellers, guide vanes and stage housings</li> <li>→ Helix FIRST V 2 - 16, PN 16 with oval flanges, PN25 with round flanges</li> <li>→ Helix FIRST V 22 - 36, with round flanges</li> <li>→ IEC standard motor</li> </ul>  |

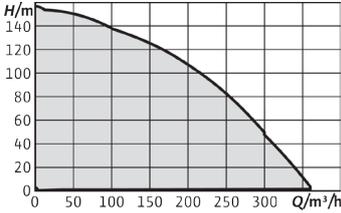
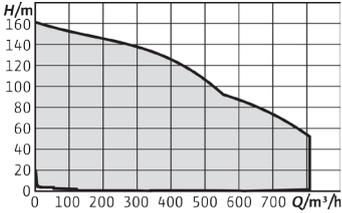
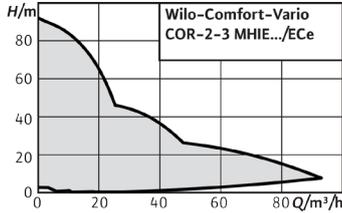
| Series                  | Wilo-Zeox FIRST H<br>Wilo-Zeox FIRST V  | Wilo-Multivert MVIE   | Wilo-Multivert MVI  |
|-------------------------|---|---|---|
| Product photo           |    |    |    |
| Construction            | Non-self-priming, high-efficiency multistage high-pressure centrifugal pump in vertical or horizontal design with off-line connections  | Non self-priming multistage pump with integrated frequency converter  | Non self-priming multistage pump  |
| Application             | Professional irrigation/agriculture<br>Water supply/pressure boosting<br>Firefighting<br>Heating, air conditioning, cooling   | Water supply and pressure boosting,<br>Industrial circulation systems, Process water, Closed cooling circuits, Washing systems, Irrigation  | Water supply and pressure boosting,<br>Industrial circulation systems, Process water, Closed cooling circuits, Washing systems, Irrigation  |
| Duty chart              |    |   |    |
| Volume flow $Q_{max}$   | 280 m <sup>3</sup> /h   | 145 m <sup>3</sup> /h   | 155 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 495 m   | 100 m   | 240 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Fluid temperature: -5 °C to +90 °C</li> <li>→ Max. suction pressure: Zeox FIRST V/.. H: 6/16 bar Max. operating pressure: Zeox FIRST V: 27 bar Zeox FIRST H (DN 65 to DN 1 00): 50 bar; Zeox FIRST H (DN 150): 40 bar</li> <li>→ Protection class: IP55</li> </ul> | <ul style="list-style-type: none"> <li>→ Fluid temperature -15 to +120 °C</li> <li>→ Max. operating pressure 16 bar/25 bar</li> <li>→ Max. inlet pressure 10 bar</li> <li>→ Protection class IP55</li> <li>→ Minimum efficiency index MEI ≥0.4</li> </ul>   | <ul style="list-style-type: none"> <li>→ Fluid temperature -15 to +120 °C</li> <li>→ Max. operating pressure 16/25 bar</li> <li>→ Max. inlet pressure 10 bar</li> <li>→ Protection class IP55</li> <li>→ Minimum efficiency index MEI ≥0.4</li> </ul> |
| Special features        | <ul style="list-style-type: none"> <li>→ High-efficiency hydraulics and high-efficiency IE3 motor</li> <li>→ Standard rinsing device for the sealing system</li> <li>→ Additional flange alignments and stuffing box packing on request</li> <li>→ Bronze impeller on request</li> </ul>                    | <ul style="list-style-type: none"> <li>→ Easy commissioning</li> <li>→ Integrated frequency converter with large control range</li> <li>→ Full motor protection</li> </ul>  | <ul style="list-style-type: none"> <li>→ MVI 70..-95.. in stainless steel with pump housing made of cataphoretic-coated cast iron</li> </ul>  |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ IE3 high-efficiency motor as standard</li> <li>→ Flushing by-pass device to ensure a long service life</li> <li>→ Packing gland on request, exchangeable without disassembling the pump</li> </ul>   | <ul style="list-style-type: none"> <li>→ Stainless steel hydraulics with pump housing made of cast iron</li> <li>→ MVIE 70.. to 95.. PN 16/25 with round flange</li> <li>→ IEC standard motor</li> <li>→ Integrated frequency converter with Green Button Technology and LCD display for status indication</li> </ul> | <ul style="list-style-type: none"> <li>→ MVI 70.. to 95.. PN 16/PN 25 with round flange</li> <li>→ IEC standard motor, 2-pole</li> </ul>  |

| Series                  | RN, HS, IPB, PJ, STD PLURO, FG/FH  | Wilo-Multivert MVISE   | Wilo-Multivert MVIS  |
|-------------------------|--|--|--|
| Product photo           |   |   |   |
| Construction            | High-pressure multistage centrifugal pump in sectional construction, mounted on baseplate  | Non self-priming multistage pump with glandless pump motor and integrated frequency converter  | Non self-priming multistage pump with glandless pump motor   |
| Application             | Metal industry, mine dewatering, desalination plants, boiler supply, firefighting, high-pressure cleaning, water supply  | Water supply and pressure boosting   | Water supply and pressure boosting   |
| Duty chart              |    |   |  |
| Volume flow $Q_{max}$   | 1,000 m <sup>3</sup> /h  | 14 m <sup>3</sup> /h   | 14 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 1800 m   | 110 m  | 110 m  |
| Technical data          | <ul style="list-style-type: none"> <li>→ Permitted temperature range up to +80 °C, or up to +160 °C on request</li> <li>→ Max. operating pressure 180 bar</li> <li>→ Nominal diameter on pressure side DN 32 to DN 250</li> <li>→ 2- or 4-pole 50 Hz motors, 60 Hz on request</li> </ul>   | <ul style="list-style-type: none"> <li>→ Fluid temperature -15 to +50 °C</li> <li>→ Max. operating pressure 16 bar</li> <li>→ Max. inlet pressure 16 bar</li> <li>→ Protection class IP44</li> </ul>   | <ul style="list-style-type: none"> <li>→ Fluid temperature -15 to +50 °C</li> <li>→ Max. operating pressure 16 bar</li> <li>→ Max. inlet pressure 10 bar</li> <li>→ Protection class IP44</li> </ul>   |
| Special features        | <ul style="list-style-type: none"> <li>→ Modular design ensures pump versions in a variety of materials and versions which can be adapted to meet customer demands precisely</li> <li>→ Hydraulic pressure compensation relieves load on bearings and ensures a longer service life</li> <li>→ Multiple optional pressure connections allow different pressures to be supplied from a single pump</li> </ul>   | <ul style="list-style-type: none"> <li>→ Glandless pump technology</li> <li>→ Virtually noiseless operation (up to 20 dB [A] quieter than conventional pumps)</li> <li>→ Space-saving, compact design</li> <li>→ Virtually maintenance-free thanks to a design which does not feature any mechanical seals</li> <li>→ Drinking water approval for all components that come in contact with the fluid (EPDM version)</li> </ul> | <ul style="list-style-type: none"> <li>→ Glandless pump technology</li> <li>→ Virtually noiseless operation (up to 20 dB [A] quieter than conventional pumps)</li> <li>→ Space-saving, compact design</li> <li>→ Virtually maintenance-free thanks to a design which does not feature any mechanical seals</li> <li>→ Drinking water approval for all components that come in contact with the fluid (EPDM version)</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ 2 to 15-stage industrial version</li> <li>→ Screwed segments</li> <li>→ Hydraulic axial compensation</li> <li>→ Shaft sealing with mechanical seal or stuffing box packing</li> <li>→ Optionally with multiple pressure outlets for e.g. fire extinguishing applications</li> <li>→ Supplied as a complete unit: with pump, coupling, motor mounted on baseplate or without motor or as pump only, with free shaft end</li> </ul> | <ul style="list-style-type: none"> <li>→ Multistage, non self-priming, vertical high-pressure centrifugal pump in in-line design</li> <li>→ Glandless three-phase motor with integral water-cooled frequency converter</li> <li>→ Hydraulic connection with oval flanges PN 16. Counter flanges made of stainless steel with female thread, screws and gaskets (scope of delivery)</li> </ul>                                  | <ul style="list-style-type: none"> <li>→ Multistage, non self-priming, vertical high-pressure centrifugal pump in in-line design</li> <li>→ Glandless three-phase motor</li> <li>→ Hydraulic connection with oval flanges PN 16, counter flanges made of stainless steel with female thread, screws and gaskets (scope of delivery)</li> </ul>   |

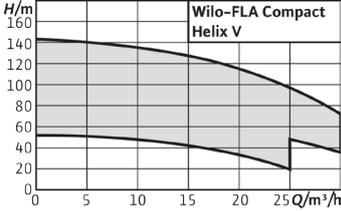
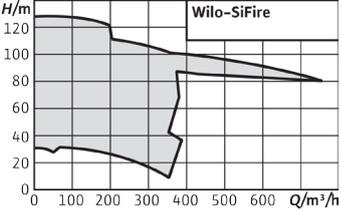
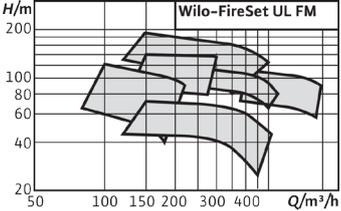
| Series                  | Wilo-Economy MHIE  | Wilo-Economy MHI  | Wilo-Medana CH1-L   |
|-------------------------|--|---|---|
| Product photo           |   |   |    |
| Construction            | Non self-priming multistage pump with integrated frequency converter   | Non self-priming multistage pump  | Multistage, horizontal centrifugal pumps  |
| Application             | Water supply and pressure boosting, Industrial circulation systems, Cooling water circulation systems, Washing systems   | Water supply and pressure boosting<br>Commerce and industry<br>Cooling water circulation systems<br>Washing   | Pumping of process water and drinking water for:<br>irrigation, pressure boosting, industrial applications (e. g. cooling circuits, car wash)   |
| Duty chart              |   |   |    |
| Volume flow $Q_{max}$   | 32 m <sup>3</sup> /h   | 25 m <sup>3</sup> /h  | 18 m <sup>3</sup> /h  |
| Delivery head $H_{max}$ | 88 m   | 70 m  | 78 m  |
| Technical data          | <ul style="list-style-type: none"> <li>→ Fluid temperature -15 to +110 °C</li> <li>→ Max. operating pressure 10 bar</li> <li>→ Inlet pressure max. 6 bar</li> <li>→ Protection class IP54</li> </ul>   | <ul style="list-style-type: none"> <li>→ Fluid temperature -15 to +110 °C</li> <li>→ Max. operating pressure 10 bar</li> <li>→ Inlet pressure max. 6 bar</li> <li>→ Protection class IP54</li> </ul>  | <ul style="list-style-type: none"> <li>→ Mains connection: 1~230 V, 50/60 Hz</li> <li>→ 3~380/400/460 V, 50/60 Hz</li> <li>→ Rated pressure: 10 bar</li> <li>→ Fluid temperature: -20 °C to 120 °C</li> <li>→ Ambient temperature: -15 °C to 50 °C</li> <li>→ Protection class: IPX5</li> </ul> |
| Special features        | <ul style="list-style-type: none"> <li>→ Easy commissioning</li> <li>→ All parts that come in contact with the fluid are made of stainless steel</li> <li>→ Compact design</li> <li>→ Integrated frequency converter</li> <li>→ Full motor protection</li> <li>→ WRAS/KTW/ACS approval for all parts that come in contact with the fluid (EPDM version)</li> </ul> | <ul style="list-style-type: none"> <li>→ All parts that come in contact with the fluid are made of stainless steel</li> <li>→ Compact design</li> <li>→ WRAS/KTW/ACS approval for all parts that come in contact with the fluid (EPDM version)</li> </ul> | <ul style="list-style-type: none"> <li>→ Captive nuts on connections (option)</li> <li>→ Cataphoretic-coated lantern</li> <li>→ Oblong hole for fixation</li> <li>→ Compact design</li> <li>→ ACS approval</li> </ul>   |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Stainless steel in monobloc design</li> <li>→ Threaded connection</li> <li>→ Integrated frequency converter</li> <li>→ Single-phase or three-phase AC motor</li> <li>→ Three-phase version with LCD display for status indication</li> <li>→ Integrated thermal motor protection</li> </ul>                               | <ul style="list-style-type: none"> <li>→ Stainless steel pump in monobloc design</li> <li>→ Threaded connection</li> <li>→ Single-phase or three-phase AC motor</li> <li>→ Single-phase AC motor with integrated thermal motor protection</li> </ul>      | <ul style="list-style-type: none"> <li>→ Pump housing and impellers made of stainless steel</li> <li>→ AC motor: 3~ &gt; 0.75 AC IE3, 3~ &lt; 0.75 AC IE2</li> <li>→ AC motor: 1~ AC IE1/IE2</li> <li>→ Threaded connection</li> </ul>  |

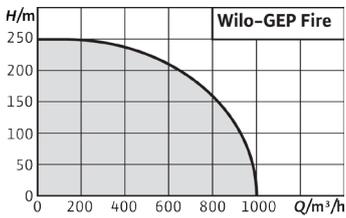
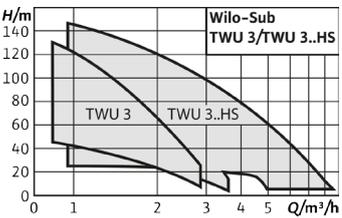
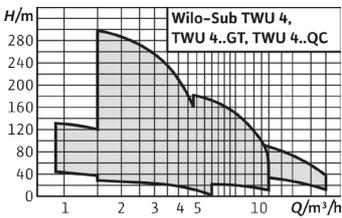
| Series                  | Wilo-Economy MHIL  | Wilo-Medana CH1-LC   | Wilo-Multivert MVIL  |
|-------------------------|--|--|--|
| Product photo           |   |    |   |
| Construction            | Non self-priming multistage pump   | Multistage, horizontal centrifugal pumps   | Non self-priming multistage pump   |
| Application             | Water supply and pressure boosting, Commerce and industry, Washing and spraying systems, Rainwater utilisation, Cooling and cold water circulation systems   | Pumping of process water for: irrigation, pressure boosting, industrial applications (e.g. cooling circuits, car wash)   | Water supply and pressure boosting, Commerce and industry, Washing and spraying systems, Rainwater utilisation, Cooling and cold water circuits  |
| Duty chart              |   |    |   |
| Volume flow $Q_{max}$   | 13 m <sup>3</sup> /h   | 18 m <sup>3</sup> /h   | 13 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 68 m   | 78 m   | 135 m  |
| Technical data          | <ul style="list-style-type: none"> <li>→ Fluid temperature -15 to +90 °C</li> <li>→ Max. operating pressure 10 bar</li> <li>→ Inlet pressure max. 6 bar</li> <li>→ Protection class IP54</li> </ul>                                  | <ul style="list-style-type: none"> <li>→ Mains connection: 1~230 V, 50/60 Hz</li> <li>→ 3~380/400/460 V, 50/60 Hz</li> <li>→ Rated pressure: 10 bar</li> <li>→ Fluid temperature: -20 °C to 90 °C</li> <li>→ Ambient temperature: -15 °C to 50 °C</li> <li>→ Protection class: IPX5</li> </ul> | <ul style="list-style-type: none"> <li>→ Fluid temperature -15 to +90 °C</li> <li>→ Max. operating pressure or max. 10 or 16 bar, depending on type</li> <li>→ Max. inlet pressure 6 or 10 bar, depending on type</li> <li>→ Protection class IP54</li> <li>→ Minimum efficiency index MEI ≥0.4</li> </ul> |
| Special features        | <ul style="list-style-type: none"> <li>→ Impellers and stage chambers made of 1.4301 stainless steel (AISI 304)</li> <li>→ Pump housing made of grey cast iron EN-GJL-250, with cataphoretic coating</li> </ul>                      | <ul style="list-style-type: none"> <li>→ Cataphoretic-coated lantern</li> <li>→ New closed hole fixation for vertical position</li> </ul>  | <ul style="list-style-type: none"> <li>→ Space-saving, compact block design</li> </ul>   |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Pump in monobloc design</li> <li>→ Threaded connection</li> <li>→ Single-phase or three-phase AC motor</li> <li>→ Single-phase AC motor with integrated thermal motor protection</li> </ul> | <ul style="list-style-type: none"> <li>→ Pump housing made of cast iron and impellers made of stainless steel</li> <li>→ AC motor: 3~ &gt; 0.75 AC IE3, 3~ &lt; 0.75 AC IE2</li> <li>→ AC motor: 1~ AC IE1/IE2</li> </ul>  | <ul style="list-style-type: none"> <li>→ Pump in in-line design</li> <li>→ Hydraulics in 1.4301, pump housing in EN-GJL-250</li> <li>→ Oval flange</li> <li>→ Single-phase or three-phase AC motor</li> </ul>  |

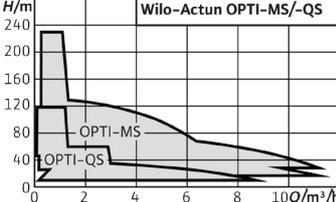
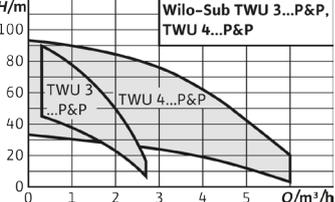
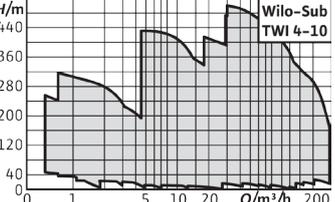
| Series                  | Wilo-SiBoost Smart 1 Helix VE...<br>SiBoost Smart 1 MVISE...   | Wilo-Economy CO-1 MVI(S) .../ER<br>Economy CO-1 Helix V .../CE+  | Wilo-Economy CO/T-1 Helix V .../CE<br>Comfort-Vario COR/T-1 Helix VE ...-GE   |
|-------------------------|--|--|---|
| Product photo           |  Series modification  |   |    |
| Construction            | Water-supply units with a non self-priming, high-pressure multistage centrifugal pump with integrated speed control of the series Helix VE or MVISE  | Water supply systems with a non self-priming, high-pressure multistage centrifugal pump of the series MVI(S), MVI or Helix V   | Water supply systems with system separation and a non self-priming, high-pressure multistage centrifugal pump of the Helix V or VE series   |
| Application             | Full automatic water supply from public water supply network or reservoir<br>For pumping drinking/process water, cooling water, water for firefighting   | Full automatic water supply from public water supply network or reservoir<br>For pumping drinking/process water, cooling water, water for firefighting   | Full automatic water supply from the public water supply network<br>For pumping drinking/process water, cooling water, water for firefighting   |
| Duty chart              |   |    |    |
| Volume flow $Q_{max}$   | 90 m <sup>3</sup> /h   | 135 m <sup>3</sup> /h  | 10 m <sup>3</sup> /h  |
| Delivery head $H_{max}$ | 142 m  | 160 m  | 120 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Max. fluid temperature 50 °C</li> <li>→ Operating pressure 16 bar</li> <li>→ Inlet pressure 6/10 bar</li> <li>→ Protection class IP44/IP54</li> </ul>  | <ul style="list-style-type: none"> <li>→ Mains connection 3~230 V / 400 V, 50 Hz</li> <li>→ Max. fluid temperature 50 °C</li> <li>→ Operating pressure 10/16 bar</li> <li>→ Inlet pressure 6/10 bar</li> <li>→ Switching stage 6/10/16 bar</li> <li>→ Protection class IP41/IP54</li> </ul>  | <ul style="list-style-type: none"> <li>→ Mains connection 3~230 V / 400 V, 50 Hz (other versions on request)</li> <li>→ Max. fluid temperature 40 °C</li> <li>→ Operating pressure 16 bar</li> <li>→ Inlet pressure 6 bar</li> <li>→ Protection class CO/T=IP54, COR/T=IP55</li> </ul>  |
| Special features        | <ul style="list-style-type: none"> <li>→ For systems with MVISE pump applies: Up to 20 dB(A) quieter than comparable systems</li> <li>→ For systems with Helix VE pump</li> <li>→ Optimised hydraulics</li> <li>→ Cartridge mechanical seal</li> <li>→ IE4 standard motor</li> </ul>   | <ul style="list-style-type: none"> <li>→ For systems with MVI(S) pump applies: Up to 20 dB(A) quieter than comparable systems</li> <li>→ For systems with Helix V pump</li> <li>→ Optimised hydraulics</li> <li>→ Cartridge mechanical seal</li> <li>→ IE3 standard motors for Helix V</li> </ul>  | <ul style="list-style-type: none"> <li>→ Compact system, ready for connection, for all applications that require system separation</li> <li>→ High-efficiency pump hydraulics</li> <li>→ Helix V with IE3 standard motors</li> <li>→ Helix VE with IE4 standard motors</li> </ul>   |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ New innovative pressure-variable control</li> <li>→ Components with fluid contact are corrosion-resistant</li> <li>→ Pipework made of stainless steel</li> <li>→ Shut-off device, on the pressure side</li> <li>→ Non-return valve, on the pressure side</li> <li>→ Diaphragm pressure vessel 8 l, PN 16</li> </ul> | <ul style="list-style-type: none"> <li>→ Components with fluid contact are corrosion-resistant</li> <li>→ Base frame with height-adjustable vibration absorbers for insulation against structure-borne noise</li> <li>→ Pipework stainless steel</li> <li>→ Shut-off device, on the pressure side</li> <li>→ Non-return valve, on the pressure side</li> <li>→ Diaphragm pressure vessel 8 l, PN 16, on pressure side</li> </ul> | <ul style="list-style-type: none"> <li>→ PE break tank, atmospherically vented (150 l)</li> <li>→ Components with fluid contact are corrosion-resistant</li> <li>→ Pipework stainless steel</li> <li>→ Shut-off device, on the pressure side</li> <li>→ Non-return valve, on the pressure side</li> <li>→ Break tank with float-valve, -switch</li> <li>→ Diaphragm pressure vessel 8 l, PN 16, on pressure side</li> <li>→ Low-water cut-out switchgear</li> </ul> |

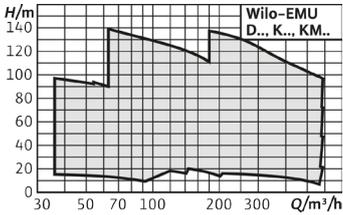
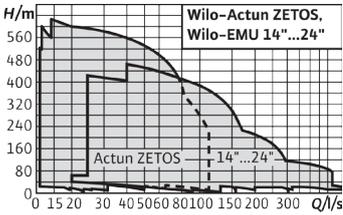
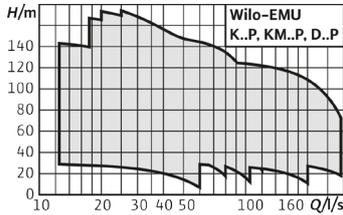
| Series                  | Wilo-SiBoost Smart MVISE<br>SiBoost Smart (FC) Helix V, ..VE, ..EXCEL   | Wilo-Comfort-(N)-COR..MVI(S)..../CC<br>Comfort-COR..Helix V(E)..../CC(e)  | Wilo-Comfort-Vario COR..MHIE../ECe   |
|-------------------------|---|---|--|
| Product photo           |    |   |   |
| Construction            | Highly efficient system with 2 to 4 stainless steel, non self-priming, high-pressure multistage centrifugal pumps (Helix V, VE, EXCEL, MVISE) switched in cascade or synchronous motor speed  | Pressure boosting system with speed control and 2 to 6 non self-priming, stainless steel, high-pressure, multistage centrifugal pumps switched in cascade   | Pressure-boosting system with 2 to 3 non self-priming stainless steel high-pressure multistage centrifugal pumps switched in parallel with integrated frequency converter  |
| Application             | Full automatic water supply in residential/office buildings & industrial systems<br>For pumping drinking/process water, cooling water, water for firefighting   | Full automatic water supply in residential/office buildings & industrial systems<br>For pumping drinking/process water, cooling water, water for firefighting   | Full automatic water supply in residential/office buildings & industrial systems<br>For pumping drinking/process water, cooling water or other industrial water  |
| Duty chart              |    |   |   |
| Volume flow $Q_{max}$   | 360 m³/h  | 800 m³/h  | 102 m³/h   |
| Delivery head $H_{max}$ | 158 m   | 160 m   | 96 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Mains connection                             <ul style="list-style-type: none"> <li>- Helix V: 3~230 V/400 V, 50 Hz</li> <li>- Helix VE &amp; EXCEL: 3~400 V, 50 Hz</li> </ul> </li> <li>→ Max. fluid temperature 70 °C</li> <li>→ Operating pressure 16/25 bar</li> <li>→ Inlet pressure 10 bar</li> <li>→ Protection class IP54</li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains connection 3~230 / 400 V, 50 Hz</li> <li>→ Max. fluid temperature 50 °C</li> <li>→ Operating pressure 10/16 bar</li> <li>→ Inlet pressure 6/10 bar</li> <li>→ Protection class IP54</li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains connection 3~380/400/440 (1~230) V, 50/60 Hz</li> <li>→ Max. fluid temperature 50 °C (70 °C)</li> <li>→ Max. ambient temperature 40 °C</li> <li>→ Operating pressure 10 bar</li> <li>→ Inlet pressure 6 bar</li> <li>→ Protection class IP 54</li> </ul>  |
| Special features        | <ul style="list-style-type: none"> <li>→ High-efficiency pump hydraulics</li> <li>→ Helix V with IE3 standard motors, Helix VE with IE4, Helix EXCEL with High-efficiency EC motor (IE5 acc. to IEC 60034-30-2)</li> <li>→ Hydraulics of entire system are pressure-loss optimised</li> <li>→ Integrated dry-running detection and low water cut-out switch</li> <li>→ Systems with MVISE: Up to 20 dB(A) quieter than comparable systems</li> </ul>                                | <ul style="list-style-type: none"> <li>→ Compact system in accordance of DIN 1988 (EN 806)</li> <li>→ Series with Helix VE integrated frequency converter</li> <li>→ For systems with MVISE pumps: Up to 20 dB(A) quieter than comparable systems</li> </ul>  | <ul style="list-style-type: none"> <li>→ Compact system due to MHIE pumps with air-cooled frequency converters</li> <li>→ Super proportionally large control range</li> <li>→ Integrated full motor protection with thermistor sensor (PTC)</li> <li>→ Integrated dry-running detection with automatic deactivation in the event of low water via the motor control electronics</li> <li>→ Drinking water approval (ACS, KTW, WRAS)</li> </ul>   |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Automatic pump control via Smart Controller SC</li> <li>→ Innovative pressure-variable control for Helix VE, EXCEL, MVISE</li> <li>→ Components with fluid contact are corrosion-resistant</li> <li>→ Shut-off device on suction and pressure sides of each pump</li> <li>→ Non-return valve, pressure sensor, diaphragm pressure vessel 8 I, PN 16, on pressure side</li> <li>→ Low-water sensor standard for VE, EXCEL, MVISE</li> </ul> | <ul style="list-style-type: none"> <li>→ Base-load pump continuous auto controlled via frequency converter in the CC controller</li> <li>→ Components with fluid contact are corrosion-resistant</li> <li>→ Pipework stainless steel 1.4571</li> <li>→ Shut-off device at each pump, on the suction and pressure sides</li> <li>→ Non-return valve, on the pressure side</li> <li>→ Diaphragm pressure vessel 8 I, PN 16, on pressure side</li> <li>→ Pressure sensor, on the discharge side</li> </ul> | <ul style="list-style-type: none"> <li>→ 2-3 MHIE pumps per system</li> <li>→ Infinitely variable control mode via ECe-control with microprocessor and pumps with integrated frequency converters</li> <li>→ Components with fluid contact are corrosion-resistant</li> <li>→ Shut-off valve at each pump, on the suction and pressure sides</li> <li>→ Non-return valve, Pressure sensor, Pressure gauge on pressure side</li> <li>→ Diaphragm pressure vessel 8 I, PN10, on the pressure side</li> </ul> |

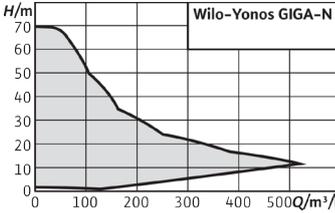
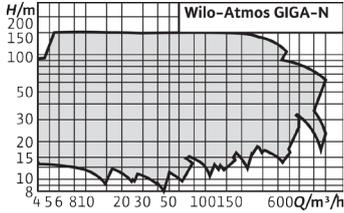
| Series                  | Wilo-Economy CO..MHI (Helix)..ER (CE)<br>Comfort-(N)-CO..MVI(S) or Helix V../CC   | Wilo-ISAR MODH1   | Wilo-FLA  |
|-------------------------|---|---|---|
| Product photo           |   |   |   |
| Construction            | Pressure boosting system with Economy 2 to 4 respectively Comfort 2 to 6 non self-priming, stainless steel, high-pressure, multistage centrifugal pumps switched in cascade   | Pressure-boosting system with 1, 2 or 3 non self-priming stainless steel high-pressure multistage centrifugal pumps switched in parallel  | Pressure boosting system for firefighting applications with 1 to 2 autonomously operating, non self-priming, stainless steel, high-pressure, multistage centrifugal pumps   |
| Application             | Full automatic water supply in residential/office buildings & industrial systems<br>For pumping drinking/process water, cooling water, water for firefighting   | Full automatic water supply from the public water supply network or from a tank. For pumping drinking water, process water, cooling water or other industrial water   | For supply of firefighting water from fire hose reels and exterior floor hydrants in accordance with DIN 14462  |
| Duty chart              |   |   |   |
| Volume flow $Q_{max}$   | 800 m <sup>3</sup> /h   | 51 m <sup>3</sup> /h  | 100 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 160 m   | 68 m  | 159 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Mains connection 3~230 V / 400 V, 50 Hz</li> <li>→ Max. fluid temperature 50 °C</li> <li>→ Operating pressure 10/16 bar</li> <li>→ Inlet pressure 6/10 bar</li> <li>→ Protection class IP54</li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains connection 3~380/400/440 (1~230) V, 50/60 Hz</li> <li>→ Max. fluid temperature 50 °C (70 °C)</li> <li>→ Max. ambient temperature 40 °C</li> <li>→ Operating pressure 10 bar</li> <li>→ Inlet pressure 6 bar</li> <li>→ Protection class IP 54</li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Max. fluid temperature 50 °C</li> <li>→ Max. operating pressure 16 bar</li> <li>→ Inlet pressure 6 bar</li> <li>→ Protection class IP54</li> </ul>  |
| Special features        | <ul style="list-style-type: none"> <li>→ Compact system in accordance of DIN 1988 (EN 806)</li> <li>→ For systems with MVI pumps: Up to 20 dB(A) quieter than comparable systems</li> </ul>   | <ul style="list-style-type: none"> <li>→ High operational reliability with horizontal multistage CH1-L pumps with stainless steel hydraulics</li> <li>→ Easy installation and maintenance thanks to flexibly adjustable connections</li> <li>→ Easy commissioning and operation with the Easy Controller</li> <li>→ Drinking water approval (ACS and KTW)</li> </ul>  | <ul style="list-style-type: none"> <li>→ Compact system in accordance of DIN 14462</li> <li>→ Variants</li> <li>→ Single-pump system</li> <li>→ Double-pump system with redundant single-pump systems in a base frame</li> <li>→ Comes as standard with pump protection by means of minimum volume discharge via bypass circuit without auxiliary energy</li> </ul>   |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Components with fluid contact are corrosion-resistant</li> <li>→ Pipework made of stainless steel 1.4571</li> <li>→ Shut-off device at each pump, on the suction and pressure sides</li> <li>→ Non-return valve, on the pressure side</li> <li>→ Diaphragm pressure vessel 8 l, PN 16, on pressure side</li> <li>→ Pressure sensor, on the discharge side</li> </ul> | <ul style="list-style-type: none"> <li>→ 1, 2 or 3 CH1-L pumps per system</li> <li>→ Components with fluid contact are corrosion-resistant</li> <li>→ Galvanised base frame with vibration absorbers</li> <li>→ Stop valve on every pump on the suction and pressure sides</li> <li>→ Non-return valve, Pressure sensor, Pressure gauge on pressure side</li> <li>→ EC-control with microprocessor in IP54 plastic housing</li> </ul> | <ul style="list-style-type: none"> <li>→ Components that come in contact with fluid are corrosion-resistant</li> <li>→ Pipework made of stainless steel</li> <li>→ Shut-off device at each pump, on the suction and pressure sides</li> <li>→ Non-return valve, on the pressure side</li> <li>→ Diaphragm pressure vessel 8 l, PN 16, on pressure side</li> <li>→ Pressure switch, on the discharge side</li> </ul> |

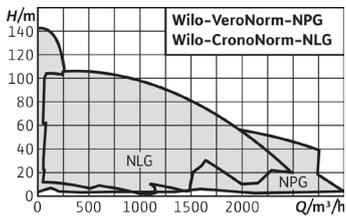
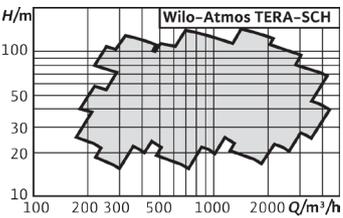
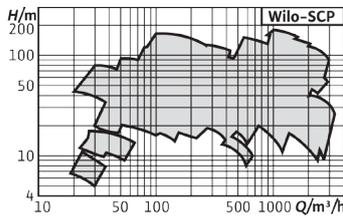
| Series                  | Wilo-FLA Compact   | Wilo-SiFire EN<br>SiFire Easy  | Wilo-FireSet UL FM  |
|-------------------------|--|--|---|
| Product photo           |   |    |    |
| Construction            | Pressure boosting system for firefighting, 1 to 2 autonomously operating, non self-priming, stainless steel, high-pressure, multistage centrifugal pumps with break tank   | Pressure-boosting system for firefighting, 1 or 2 pumps on horizontal base frame – EN 733 – spacer coupling, electro- or diesel motor and multistage, electrical, vertical jockey pump   | Pressure-boosting system for firefighting according to NFPA standards and with UL and FM certifications, consisting of 1 pump with electric or diesel motor and a switchgear on horizontal baseplate.   |
| Application             | For supply of firefighting water from fire hose reels in accordance with DIN 14462   | Full automatic water supply of fire-extinguishing systems with sprinkler system in accordance with EN 12845  | Full automatic water supply for fire-extinguishing systems with sprinklers in domestic, commercial and public buildings, hotels, hospitals, shopping centres, office blocks and industrial buildings.   |
| Duty chart              |   |    |    |
| Volume flow $Q_{max}$   | 30 m <sup>3</sup> /h   | 750 m <sup>3</sup> /h  | 568 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 142 m  | 128 m  | 179 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Fluid temperature max. 50 °C</li> <li>→ Operating pressure up to 16 bar</li> <li>→ Inlet pressure from break tank &lt; 1 bar</li> <li>→ Protection class of operating device IP54</li> <li>→ Round break tank (540 l)</li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains connection 3~400 V, 50 Hz (1~230 V, 50 Hz panel diesel pump)</li> <li>→ Fluid temperature max. +40 °C</li> <li>→ Max. operating pressure 10/16 bar</li> <li>→ Max. inlet pressure 6 bar</li> <li>→ Protection class of the switch cabinet IP54</li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Fluid temperature max. +30 °C</li> <li>→ Ambient temperature max. +5/10 °C to +25 °C</li> <li>→ Operating pressure 16 to 25 bar</li> <li>→ Power 200 kW electric/224 kW diesel</li> <li>→ Protection class IP55 electric/IP54 switchgear</li> </ul>   |
| Special features        | <ul style="list-style-type: none"> <li>→ Compact system with break tank in accordance with DIN 14462</li> <li>→ Variants</li> <li>→ Single-pump system</li> <li>→ Double-pump system with two redundant single-pump systems on a base frame</li> <li>→ Comes as standard with pump protection by means of minimum volume discharge via bypass circuit without auxiliary energy</li> </ul>  | <ul style="list-style-type: none"> <li>→ Compact system (just one base frame) in accordance with EN 12845</li> <li>→ jockey pump for maintaining the required pressure in the system; with automatic start/stop function</li> <li>→ Sized diaphragm at the pump outlet for a minimum bypass line so that the pump is protected at a low volume flow</li> <li>→ The cables are hidden in the construction and are thus protected from shocks or cuts</li> </ul>   | <ul style="list-style-type: none"> <li>→ Certified according to NFPA standards for the highest level of design flexibility</li> <li>→ Robust pumps for a wide field of application and long service life</li> <li>→ Compact design for easy transport, installation and maintenance</li> <li>→ Power reserve for a high level of safety</li> <li>→ Modularity for an individual tailored configuration</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Components with fluid contact are corrosion-resistant</li> <li>→ Pipework stainless steel</li> <li>→ Ball shut-off valve on pressure side</li> <li>→ Gate valve between pump and break tank with free outlet according to EN 13077, type AB according to DIN EN 1717</li> <li>→ Non-return valve, on pressure side</li> <li>→ Diaphragm pressure vessel 8 l, PN16, on pressure side</li> <li>→ Pressure switch, on pressure side</li> </ul> | <ul style="list-style-type: none"> <li>→ A circuit with double pressure switch, pressure gauge, non-return valve, valve for the main and standby pump for an automatic start</li> <li>→ Pipework in steel; painted with epoxy resin. Distributor with flanges</li> <li>→ Shutting gate with safety lock on the pressure side of the pump</li> <li>→ Non-return valve on the pressure side of every pump</li> <li>→ DN2" connection for the priming tank of the pumps</li> <li>→ Pressure measuring on pressure side</li> </ul> | <ul style="list-style-type: none"> <li>→ Pump with split housing</li> <li>→ Flexible bolt coupling or universal joint</li> <li>→ Switchgear with a WiZiTouch controller by Tornatech</li> <li>→ Pressure transducer for automatic starting</li> <li>→ Air vent valve and pressure gauge</li> <li>→ Motor cooling, fuel tank, 2 or 4 batteries for diesel motor</li> </ul>   |

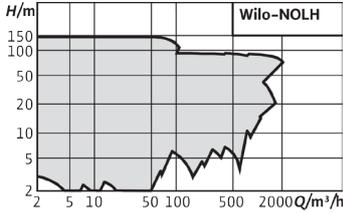
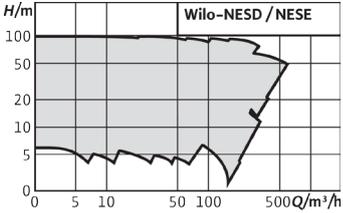
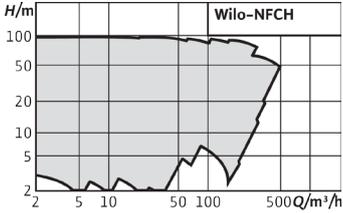
| Series                  | Wilo-GEP Fire   | Wilo-Sub TWU 3<br>Wilо-Sub TWU 3...-HS  | Wilо-Sub TWU 4 .../-...-QC, .../-...-GT   |
|-------------------------|---|---|---|
| Product photo           |    |    |    |
| Construction            | Pressure boosting system for firefighting applications with 1 to 12 multistage centrifugal pumps with/without break tank, with/without housing  | Submersible pump, multistage  | Submersible pump, multistage  |
| Application             | Fire water supply of fire hose reels and exterior floor hydrant systems, for high-rise buildings & large properties-no valves for pressure reduction-plus sprinkler/water spray systems   | For water supply, sprinkling, irrigation with water without long-fibre or abrasive components from boreholes, wells, rainwater storage  | Pumping of water from boreholes, wells, rainwater storage for water supply, sprinkling, irrigation, lowering ground water level   |
| Duty chart              |    |   |    |
| Volume flow $Q_{max}$   | certified up to 1000 m <sup>3</sup> /h  | 6.5 m <sup>3</sup> /h   | 22 m <sup>3</sup> /h  |
| Delivery head $H_{max}$ | 250 m, up to 450 m on request   | 130 m   | 322 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ TÜV, DEKRA, DVGW, SVGW certified</li> <li>→ Hygienic safety by free outlet (EN 1717)</li> <li>→ Stainless steel run-down tank</li> <li>→ Automatic function test up to redundancy stage 3</li> <li>→ Small installation surface min. 0.64 m<sup>2</sup></li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz</li> <li>→ Fluid temperature: 3~35 °C</li> <li>→ Max. sand content: 50 g/m<sup>3</sup></li> <li>→ Max. immersion depth: 150 m</li> </ul>  | <ul style="list-style-type: none"> <li>→ Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz</li> <li>→ Fluid temperature: 3~30 °C</li> <li>→ Max. sand content: 50 g/m<sup>3</sup></li> <li>→ Max. immersion depth: 200 m</li> </ul>  |
| Special features        | <ul style="list-style-type: none"> <li>→ Room air cooling, full fairing</li> <li>→ Split version for installation/transport</li> <li>→ Pressure-maintaining pump or pilot pump as an option</li> <li>→ Combination with industrial water system</li> <li>→ Real pressure method and VR controller for high-rise buildings and large properties</li> <li>→ Monitoring of switchgear and ambient temperature</li> </ul> | <ul style="list-style-type: none"> <li>→ Parts in contact with the fluid are corrosion-resistant</li> <li>→ Integrated non-return valve</li> <li>→ Supply security with constant pressure thanks to extended pump performance due to a higher speed of up to 8,400 rpm (TWU 3/HS)</li> <li>→ Frequency converter with integrated and menu-guided control</li> <li>→ (TWU 3/HS)</li> </ul> | <ul style="list-style-type: none"> <li>→ Parts in contact with the fluid are corrosion-resistant</li> <li>→ Integrated non-return valve</li> <li>→ Low wear due to floating impellers</li> <li>→ Maintenance-friendly motor</li> </ul>  |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Drainage or pump emergency drainage (EN12056) for total volume flow</li> <li>→ Installation possible below backflow level</li> <li>→ No valves for reducing pressure in the main flow of the fire-extinguishing system</li> <li>→ Effective maintenance management and permanent information on the operation via smartphone, tablet or PC</li> </ul>                        | <ul style="list-style-type: none"> <li>→ Multistage submersible pump with radial impellers</li> <li>→ Integrated non-return valve</li> <li>→ NEMA coupling</li> <li>→ Single-phase or three-phase AC motor</li> <li>→ Thermal motor protection for single-phase motor</li> <li>→ HS variant including external or internal frequency converter</li> </ul>                                 | <ul style="list-style-type: none"> <li>→ Multistage submersible pump with radial or semi-axial impellers</li> <li>→ Integrated non-return valve</li> <li>→ NEMA coupling</li> <li>→ Single-phase or three-phase AC motor</li> <li>→ Integrated thermal motor protection for single-phase motor</li> <li>→ Hermetically sealed motors</li> </ul> |

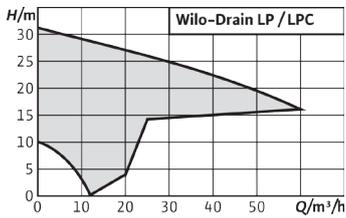
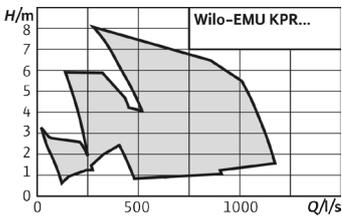
| Series                  | Wilo-Actun OPTI-MS<br>Wilo-Actun OPTI-QS   | Wilo-Sub TWU 3 ... Plug & Pump<br>Wilo-Sub TWU 4 ... Plug & Pump   | Wilo-Sub TWI 4/6/8/10 ...   |
|-------------------------|--|--|---|
| Product photo           |   |    |    |
| Construction            | Submersible pump, multistage; in tie strap version (MSI, QSI) or as a progressive cavity pump (MSH, QSH)   | Water-supply unit with submersible pump, control and complete accessories  | Submersible pump, multistage  |
| Application             | Pumping of water from boreholes, wells, rainwater tanks for water supply, sprinkling, irrigation; For operation with photovoltaic modules  | For water supply, sprinkling, irrigation with water without long-fibre or abrasive components from boreholes, wells, rainwater storage   | Pumping of (drinking) water from boreholes, wells, rainwater storage for water supply, sprinkling, irrigation, lowering ground water level  |
| Duty chart              |   |    |    |
| Volume flow $Q_{max}$   | 11 m <sup>3</sup> /h   | 6 m <sup>3</sup> /h  | 165 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 230 m  | 88 m   | 500 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Operating voltage:                             <ul style="list-style-type: none"> <li>– MSI/MSH: 90–400 VDC or 90–265 VAC</li> <li>– QSI/QSH: 70–190 VDC</li> </ul> </li> <li>→ Fluid temperature max.: 35 °C</li> <li>→ Max. sand content: 50 g/m<sup>3</sup></li> <li>→ Max. immersion depth: 150 m</li> </ul>                              | <ul style="list-style-type: none"> <li>→ Mains connection: 1~230 V, 50 Hz</li> <li>→ Fluid temperature: 3–30 °C</li> <li>→ Max. sand content: 50 g/m<sup>3</sup></li> <li>→ Max. immersion depth TWU 3/TWU 4: 150/200 m</li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains: 1~230 V, 50 Hz (only TWI 4 ...)</li> <li>or 3~400 V, 50 Hz</li> <li>→ Fluid temperature: 3–20 °C or 3–30 °C</li> <li>→ Max. sand content: 50 g/m<sup>3</sup></li> <li>→ Max. immersion depth: 100–350 m</li> </ul>  |
| Special features        | <ul style="list-style-type: none"> <li>→ All parts in contact with the fluid are made of stainless steel</li> <li>→ Integrated non-return valve</li> <li>→ Low wear due to floating impellers</li> <li>→ Types with helical rotor for high head at low speed</li> <li>→ Permanent magnet motor</li> <li>→ Built-in frequency inverter with MPPT function</li> </ul>                    | <ul style="list-style-type: none"> <li>→ Easy installation thanks to pre-mounted and pre-wired components</li> <li>→ Parts in contact with the fluid are corrosion-resistant</li> <li>→ Integrated non-return valve</li> </ul>   | <ul style="list-style-type: none"> <li>→ Corrosion-resistant thanks to stainless steel version</li> <li>→ Flexible installation thanks to vertical and horizontal installation</li> <li>→ Easy installation due to integrated non-return valve</li> <li>→ Large performance range</li> <li>→ ACS approval for TWI 4 for drinking water application</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Type MSI/QSI: Multistage submersible pump with radial impellers in jacket design</li> <li>→ Type MSH/QSH: Hydraulics with helical rotor within double helix rubber stator</li> <li>→ Integrated non-return valve</li> <li>→ Permanent magnet motor, capsulated with water-glycol-filling</li> <li>→ Integrated frequency converter</li> </ul> | <ul style="list-style-type: none"> <li>→ Multistage submersible pump with radial impellers</li> <li>→ Integrated non-return valve</li> <li>→ NEMA coupling</li> <li>→ Single-phase AC motor</li> <li>→ Integrated thermal motor protection</li> <li>→ Dry-running protection (only for TWU 4- ... -P&amp;P with Wilo-Sub-I package)</li> </ul> | <ul style="list-style-type: none"> <li>→ Multistage submersible pump with radial or semi-axial impellers</li> <li>→ Integrated non-return valve</li> <li>→ NEMA coupling</li> <li>→ Single-phase or three-phase AC motor</li> </ul>   |

| Series                  | Wilo-EMU sprinkler pumps   | Wilo-EMU 12" ... 24"<br>Wilo-Actun ZETOS-K  | Wilo-EMU polder pumps   |
|-------------------------|--|---|---|
| Product photo           |   |    |    |
| Construction            | Submersible pump with sectional construction   | Submersible pump with sectional construction  | Polder pump   |
| Application             | Supplying sprinkler systems  | (Drinking) water supply from boreholes, rainwater tanks; for sprinkling/irrigation/pressure boosting; municipal/industrial/geothermal/offshore use  | Drinking/process water from boreholes, rainwater tanks; sprinkling/irrigation/groundwater lowering; municipal/industrial/geothermal/offshore use  |
| Duty chart              |   |   |    |
| Volume flow $Q_{max}$   | 580 m <sup>3</sup> /h  | 2,400 m <sup>3</sup> /h   | 1,200 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 140 m  | 640 m   | 160 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Mains connection: 3~400 V/50 Hz</li> <li>→ Max. fluid temperature: 25 °C or on request</li> <li>→ Max. sand content: 35 g/m<sup>3</sup></li> <li>→ Max. immersion depth: 100 m or 300 m</li> </ul>  | <ul style="list-style-type: none"> <li>→ Mains connection: 3~400 V, 50 Hz</li> <li>→ Max. fluid temperature: 20 ... 30 °C</li> <li>→ Max. sand content: 35 g/m<sup>3</sup> or 150 g/m<sup>3</sup></li> <li>→ Max. immersion depth: 100/300/350 m</li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains connection: 3~400 V, 50 Hz</li> <li>→ Max. fluid temperature: 20 °C</li> <li>→ Minimum flow across outside shroud: not necessary</li> <li>→ Max. sand content: 35 g/m<sup>3</sup></li> <li>→ Max. immersion depth: 300 m</li> </ul>                                  |
| Special features        | <ul style="list-style-type: none"> <li>→ VdS certification</li> <li>→ Sturdy version in cast iron or bronze</li> <li>→ Pressure shroud in corrosion-resistant and hygienic stainless steel version with rubber bearing for minimising noise and vibrations</li> <li>→ VdS certified non-return valve is available as an accessory</li> </ul> | <ul style="list-style-type: none"> <li>→ Pressure shroud in corrosion-resistant and hygienic stainless steel version</li> <li>→ Hydraulic in stainless steel precision casting (Actun ZETOS-K)</li> <li>→ Maintenance-friendly, rewindable motors</li> <li>→ Optionally with Ceram CT coating for increasing the efficiency</li> <li>→ Optionally with ACS approval for drinking water application</li> </ul> | <ul style="list-style-type: none"> <li>→ Deep water lowering thanks to self-cooling motors</li> <li>→ Sturdy version in cast iron or bronze</li> <li>→ Compact construction</li> <li>→ Maintenance-friendly, rewindable motors</li> <li>→ Optionally with Ceram CT coating for increasing the efficiency</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Multistage submersible pump</li> <li>→ Radial or semi-axial impellers</li> <li>→ NEMA coupling (depending on type)</li> <li>→ Three-phase motor for direct or star-delta start</li> <li>→ Rewindable motors</li> </ul>  | <ul style="list-style-type: none"> <li>→ Multistage submersible pump</li> <li>→ Radial or semi-axial impellers</li> <li>→ Hydraulics and motor freely configurable according to power requirements</li> <li>→ Integrated non-return valve</li> <li>→ (depending on type)</li> <li>→ NEMA coupling or standardised connection</li> <li>→ Three-phase motor for direct or star-delta start</li> </ul>           | <ul style="list-style-type: none"> <li>→ Multistage submersible pump</li> <li>→ Semi-axial impellers</li> <li>→ Hydraulics and motor freely configurable according to power requirements</li> <li>→ Three-phase motor for direct or star-delta start</li> <li>→ Motors rewindable as standard</li> </ul>            |

| Series                  | Series VMF, CNE, VAF   | Wilo-Yonos GIGA-N   | Wilo-Atmos GIGA-N   |
|-------------------------|--|---|---|
| Product photo           |   |   |    |
| Construction            | Vertical turbine pumps for dry well installation with submerged axial or semi-axial hydraulics   | Electronically controlled, single-stage low-pressure centrifugal pump with axial suction. Mounted on a baseplate with flange connection and automatic power adjustment.   | Single-stage, low-pressure centrifugal pump with axial suction, mounted on a baseplate.   |
| Application             | Industrial or municipal water supply<br>Irrigation, firefighting<br>Cooling water supply<br>Dewatering, flood control  | Pumping of heating water (in accordance with VDI 2035), cold water, water-glycol mixtures in heating, cold water and cooling systems. For irrigation, building services, general industry etc.  | Pumping of heating water (in accordance with VDI 2035), cold water, water-glycol mixtures in heating, cold water and cooling systems.   |
| Duty chart              |  |   |    |
| Volume flow $Q_{max}$   | 40,000 m <sup>3</sup> /h   | 520 m <sup>3</sup> /h   | 1000 m <sup>3</sup> /h  |
| Delivery head $H_{max}$ | 450 m  | 70 m  | 150 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Permitted temperature range up to 80 °C, or up to 105 °C on request</li> <li>→ Nominal diameter on pressure side DN 100 to DN 2000</li> </ul>   | <ul style="list-style-type: none"> <li>→ Fluid temperature -20 °C to +140 °C</li> <li>→ Mains connection: 3~440 V ±10 %, 50/60 Hz, 3~400 V ±10 %, 50/60 Hz, 3~380 V -5 %/+10 %, 50/60 Hz</li> <li>→ Minimum efficiency index (MEI) ≥ 0.4</li> <li>→ Nominal diameter DN 32 to DN 150</li> <li>→ Max. operating pressure 16 bar</li> </ul>   | <ul style="list-style-type: none"> <li>→ Fluid temperature -20 °C to +140 °C</li> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Protection class IP55</li> <li>→ Nominal diameter DN 32 to DN 150</li> <li>→ Max. operating pressure 16 bar</li> </ul>   |
| Special features        | <ul style="list-style-type: none"> <li>→ Minimum surface area needed</li> <li>→ High hydraulic efficiency</li> <li>→ Submerged pump hydraulics</li> <li>→ Design to order as per customer specifications</li> </ul>  | <ul style="list-style-type: none"> <li>→ Efficient pump with IE4 motors</li> <li>→ Cataphoretic coating of all cast components for high corrosion resistance and long service life</li> <li>→ Standard dimensions in accordance with EN 733</li> <li>→ Easy adjustment and operation with Green Button Technology</li> <li>→ Easy maintenance thanks to user-friendly spacer coupling in back pull-out design</li> <li>→ Optional interfaces for connection to building automation using insertable IF modules</li> </ul> | <ul style="list-style-type: none"> <li>→ Energy-saving thanks to increased overall efficiency through improved hydraulics and the use of IE3 motors</li> <li>→ Cataphoretic coating of all cast components for high corrosion resistance and long service life</li> <li>→ Universally usable thanks to standardised dimensions, a range of motor options and impellers made of different materials</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ For types of installation with pressure port, for concealed floor, floor-mounted or twin-ceiling installation</li> <li>→ Design: As removable or permanent installation</li> <li>→ With axial or semi-axial, single or multistage hydraulics</li> <li>→ Open shaft for bearing lubrication with the fluid, or with shaft trim for separate bearing lubrication</li> <li>→ Drive options: Electric motor, diesel motor or steam turbine</li> </ul> | <ul style="list-style-type: none"> <li>→ Control modes: Δp-c, PID control, n=constant</li> <li>→ Manual functions: E.g. differential pressure setpoint setting, manual control mode, error acknowledgement</li> <li>→ External control functions: E.g. Overriding Off, analogue input 0-10 V/0-20 mA for constant speed (DDC)</li> <li>→ Remote control via infrared interface (IR-Stick/IR-Monitor), plug-in position for IF modules for connection to building automation</li> </ul>                                    | <ul style="list-style-type: none"> <li>→ Single-stage low-pressure centrifugal pump in monobloc design with coupling, coupling guard, motor and baseplate</li> <li>→ Motors with efficiency class IE3</li> </ul>  |

| Series                  | Wilo-CronoNorm-NLG<br>Wilo-VeroNorm-NPG   | Wilo-Atmos TERA-SCH   | Wilo-SCP   |
|-------------------------|---|---|--|
| Product photo           |    |   |   |
| Construction            | Single-stage low-pressure centrifugal pump with axial suction, according to ISO 5199, mounted on a baseplate  | Axially split case pump mounted on a base frame.  | Low-pressure centrifugal pump with axially split housing mounted on a baseplate  |
| Application             | Pumping of heating water, cold water, water-glycol mixtures in municipal water supply, general industry, power stations etc.  | Raw water intake; boosting/ transport in water supply systems; pumping of process/ cooling water, heating water (in Germany acc. VDI 2035), water-glycol mixtures; irrigation   | Pumping of heating water (acc. VDI 2035), cold water, process water, water-glycol mixtures in heating, cold water and cooling systems.   |
| Duty chart              |    |   |   |
| Volume flow $Q_{max}$   | 2,800 m <sup>3</sup> /h   | 4,500 m <sup>3</sup> /h   | 3,400 m <sup>3</sup> /h  |
| Delivery head $H_{max}$ | 140 m   | 150 m   | 245 m  |
| Technical data          | <ul style="list-style-type: none"> <li>→ Fluid temperature -20 °C to +120 °C (depending on type)</li> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Nominal diameters: DN 150 to DN 500 (depending on type)</li> <li>→ Operating pressure: depending on type and application – up to 16 bar</li> </ul>   | <ul style="list-style-type: none"> <li>→ Fluid temperature -20 °C to +120 °C</li> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Nominal diameters <ul style="list-style-type: none"> <li>– Suction side: DN 150 to DN 500</li> <li>– Pressure side: DN 150 to DN 400</li> </ul> </li> <li>→ Max. operating pressure: PN16, PN25</li> </ul>   | <ul style="list-style-type: none"> <li>→ Fluid temperature -8 °C to +120 °C</li> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Nominal diameters – Suction side: DN 65 to DN 500</li> <li>→ Pressure side: DN 50 to DN 400</li> <li>→ Max. operating pressure: 16 or 25 bar, depending on type</li> </ul>   |
| Special features        | <p>NLG:</p> <ul style="list-style-type: none"> <li>→ Reduced life cycle costs through optimised efficiency</li> <li>→ Mechanical seal independent of the direction of rotation</li> <li>→ Interchangeable casing wear ring</li> <li>→ Permanently lubricated, generously dimensioned roller bearings</li> </ul> <p>NPG:</p> <ul style="list-style-type: none"> <li>→ Suitable for temperatures up to 140 °C</li> <li>→ Back pull-out version</li> </ul> | <ul style="list-style-type: none"> <li>→ Reduced energy costs through high overall efficiency</li> <li>→ Simplified alignment thanks to tolerant coupling and motor adjusting device</li> <li>→ Increased operational reliability thanks to quiet-running hydraulics</li> <li>→ Reduced cavitation tendency through optimised NPSH values</li> <li>→ Also available as potable water version</li> </ul> | <ul style="list-style-type: none"> <li>→ Higher volume flows up to 17,000 m<sup>3</sup>/h on request</li> <li>→ Special motors and other materials on request</li> </ul>   |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Single-stage horizontal spiral housing pump with bearing bracket and exchangeable casing wear rings (NLG only) in process design</li> <li>→ Shaft sealing with mechanical seals in accordance with EN 12756 or stuffing box packing</li> <li>→ Spiral housing with cast pump bases</li> <li>→ Greased grooved ball bearings for bearing of pump shaft</li> <li>→ Motors with efficiency class IE3</li> </ul>   | <ul style="list-style-type: none"> <li>→ Centrifugal axially split case pump, available in single-stage design.</li> <li>→ Deliverable as complete unit or without motor or only pump hydraulics</li> <li>→ Shaft sealing with mechanical seal or stuffing box</li> <li>→ 4- and 6-pole motors; IE3-standard to 1000 kW (IE4 on request)</li> <li>→ Welded steel frame</li> </ul>                       | <ul style="list-style-type: none"> <li>→ 1- or 2-stage, low-pressure centrifugal pump in monobloc design</li> <li>→ Deliverable as complete unit or without motor or only pump hydraulics</li> <li>→ Shaft sealing with mechanical seal or stuffing box packing</li> <li>→ 4-pole and 6-pole motors</li> <li>→ Materials: <ul style="list-style-type: none"> <li>→ Pump housing: EN-GJL-250</li> <li>→ Impeller: G-CuSn5 ZnPb</li> <li>→ Shaft: X12Cr13</li> </ul> </li> </ul> |

| Series                  | NOLH  | Series NESD<br>Series NESE  | Series NFCH   |
|-------------------------|---|---|---|
| Product photo           |    |   |    |
| Construction            | Single-stage low-pressure centrifugal pump with axial suction connection and radial, upwards-facing pressure connection, mounted on a baseplate   | Single-stage low-pressure centrifugal pump with axial suction connection and radial, upwards-facing pressure connection mounted on a baseplate  | Single-stage low-pressure centrifugal pump with axial suction connection and radial, upwards-facing pressure connection, mounted on a baseplate   |
| Application             |   | For heat transfer or circulating hot water in industrial processes, for power generation or in building services  | For pumping mineral or synthetic heat carrier fluids up to 350 °C, e.g.: in industrial processes or power generation  |
| Duty chart              |    |   |    |
| Volume flow $Q_{max}$   | 1,800 m <sup>3</sup> /h   | 600 m <sup>3</sup> /h   | 1,000 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 140 m   | 90 m  | 90 m  |
| Technical data          | <ul style="list-style-type: none"> <li>→ Permitted temperature range -20 °C to +120 °C</li> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Nominal diameter on pressure side DN 32 to DN 125</li> <li>→ Max. operating pressure PN 16</li> </ul>  | <ul style="list-style-type: none"> <li>→ Max. permitted fluid temperature</li> <li>→ NESD: 120 °C ... 207 °C; NESE: 0 °C ... 120 °C (40 bar), 120 °C ... 200 °C (35 bar), 200 °C ... 230 °C (32 bar)</li> <li>→ Pressure side-<math>\phi</math>: DN 32 - 125</li> <li>→ Max. operating pressure</li> <li>→ NESD: PN 25; NESE: PN 40</li> </ul>  | <ul style="list-style-type: none"> <li>→ Permitted temperature range: 0 °C ... 120 °C (16 bar), 120 °C ... 300 °C (13 bar), 300 °C ... 350 °C (16 bar)</li> <li>→ Nominal diameter on pressure side DN 32 to DN 125</li> <li>→ Max. operating pressure PN 16</li> </ul>   |
| Special features        | <ul style="list-style-type: none"> <li>→ Impeller diameter is adjusted to the desired duty point</li> <li>→ Many version options for the shaft seal</li> <li>→ 60 Hz or ATEX version on request</li> <li>→ Pumping of clean or slightly muddy fluids without solid material</li> </ul>  | <ul style="list-style-type: none"> <li>→ Impeller diameter is adjusted to the desired duty point</li> <li>→ 60 Hz or ATEX version on request</li> <li>→ Special self-cooling design allows use of an uncooled shaft seal. Additional or external cooling devices are not required</li> </ul>  | <ul style="list-style-type: none"> <li>→ Impeller diameter is adjusted to the desired duty point</li> <li>→ 60 Hz or ATEX version on request</li> <li>→ Self-cooling design with double temperature barrier allows the use of an uncooled shaft seal and reduces heat loss</li> </ul>   |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Dimensions and hydraulic output as per EN 733</li> <li>→ Hydraulics: cast iron (ML) or stainless steel (MX) depending on version</li> <li>→ Sealed by uncooled mechanical seal</li> <li>→ With or without spacer coupling</li> <li>→ 2 or 4-pole IEC standard motor</li> <li>→ Baseplate: steel or cast iron</li> <li>→ Supplied as complete unit with pump, coupling, coupling guard, motor and baseplate <b>or</b> without motor <b>or</b> pump only, with free shaft end</li> </ul> | <ul style="list-style-type: none"> <li>→ Dimensions and hydraulic output as per EN 22858</li> <li>→ Hydraulics in spheroidal cast iron EN-GS400 (MG version)</li> <li>→ Flange according to EN 1092-1</li> <li>→ With or without spacer coupling</li> <li>→ 2 or 4-pole IEC standard motor</li> <li>→ Baseplate: steel or cast iron</li> <li>→ Supplied as complete unit with pump, coupling, coupling guard, motor and baseplate <b>or</b> without motor <b>or</b> pump only, with free shaft end</li> </ul> | <ul style="list-style-type: none"> <li>→ Dimensions and hydraulic output as per EN 733</li> <li>→ Standard mechanical seal corresponding to the heat carrier fluid</li> <li>→ Version with or without spacer coupling</li> <li>→ 2 or 4-pole IEC standard motor</li> <li>→ Supplied as a complete unit with pump, coupling, coupling guard, motor and baseplate <b>or</b> without motor <b>or</b> pump only, with free shaft end</li> </ul> |

| Series                  | Wilo-Drain LP<br>Wilco-Drain LPC  | Wilco-EMU KPR   |
|-------------------------|---|---|
| Product photo           |                                |    |
| Construction            | Non-submersible self-priming drainage pump  | Axial submersible pump for use in pipe chambers   |
| Application             | Pumping of<br>→ Wastewater<br>→ Process water   | Pumping of<br>→ Sewage without faeces (EN 12050-2)<br>→ Wastewater<br>→ Process water   |
| Duty chart              |                                |   |
| Volume flow $Q_{max}$   | 60 m <sup>3</sup> /h  | 4,360 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 29 m  | 8 m   |
| Technical data          | → Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz<br>→ Operation mode: S1<br>→ Fluid temperature: max. 35 °C | → Mains connection: 3~400 V, 50 Hz<br>→ Immersed operating mode: S1<br>→ Max. immersion depth: 20 m<br>→ Fluid temperature: max. 40 °C  |
| Special features        | → Long service life<br>→ Sturdy construction<br>→ Easy operation<br>→ Flexible use                              | → Installation directly in the pressure pipe<br>→ Angle of propeller blades adjustable<br>→ Process security thanks to extensive monitoring devices<br>→ Customised versions are possible |
| Equipment/function      | → Self-priming  | → Heavy-duty version made of cast iron  |

# DIGITALIZATION

Up to 10 MWh Energy Savings per Year and pump.

In order to further improve the system efficiency of its products, Wilo is focusing on digitalisation and began developing and launching smart products, particularly smart pumps, some years ago.

We set high standards for this new product category. Wilo only describes a product as smart when it offers a combination of state-of-the-art sensor technology, innovative control functions, bidirectional connectivity and excellent user friendliness. It goes without saying that the product must also meet and exceed the existing standards in terms of high efficiency and resilience.





# PRESSURE DRAINAGE SYSTEMS WITH NEXOS INTELLIGENCE.

SMART NETWORKING FOR THE POLISH COMMUNITY OF TCZÓW.



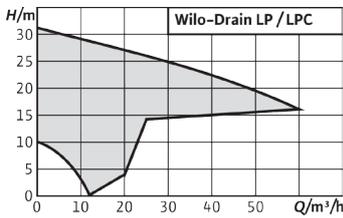
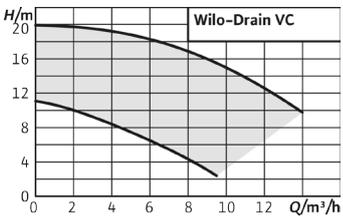
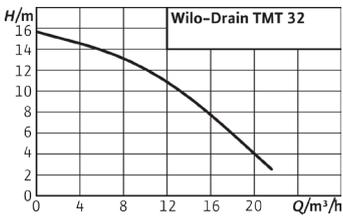


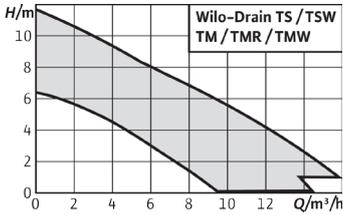
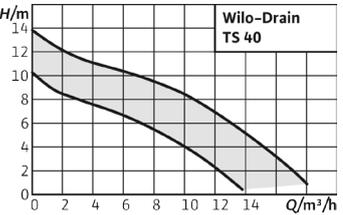
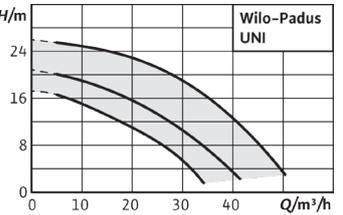
### Using digital technologies efficiently

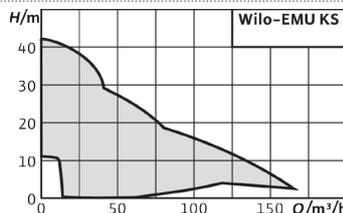
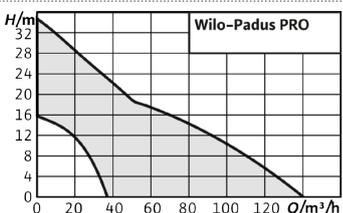
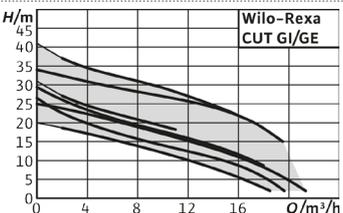
The consistent use of the latest digital technologies and the comprehensive networking of the supply and disposal systems are the key to greater sustainability and efficiency. At the same time, the challenges facing our water systems are increasing: Pumping stations that are in daily use are subject to high loads. High solids content, abrasive or fibrous materials in the water can cause clogging. The intelligent networking of pumps and pump systems is becoming ever more relevant.

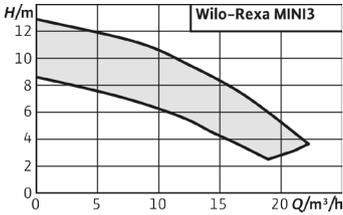
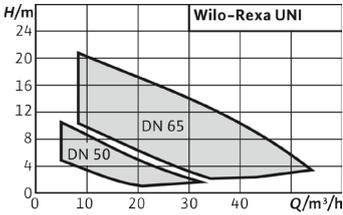
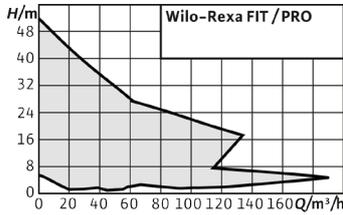
### More efficiency and reliability through Nexos Intelligence

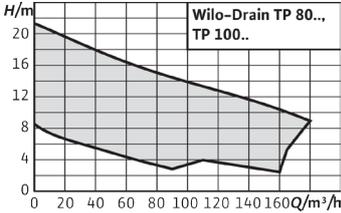
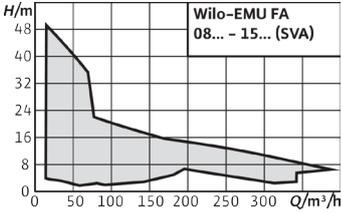
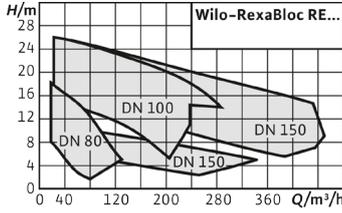
This is also highlighted by the small community of Tczów in Poland. Wilo installed a pressure drainage system here ten years ago. Only once it was in use did it become obvious that one pipe was particularly susceptible to the build-up of deposits or even clogging due to irregular flow rates – which the operator had to rectify at high cost. For this reason, Tczów became the first community to test the pressure drainage system with Nexos Intelligence. Using a piece of software, 185 of the 750 local pumping stations have been digitally connected in an intelligent network. The use of this new control system facilitates a distribution of the peak inflows on days when the system is under heavy load, such as on public holidays. At times when the system is not subject to such heavy loading, the pressure drainage system with Nexos Intelligence ensures that the minimum flow rate of 0.7 m/s is also achieved in the collector pipes to avoid the risk of clogging due to the build-up of deposits. Faults that occur can be detected automatically using the fault patterns and thus the reason for the problem can be identified. This process reduces the response time of the community's maintenance personnel and, as a result, lowers maintenance costs. Smart networking also delivers benefits such as an energy saving of up to 30 % and means that the system can provide daily, monthly or annual statistics for the whole system.

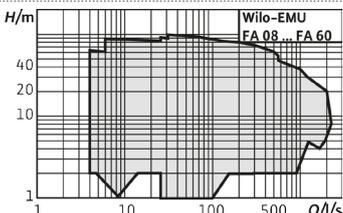
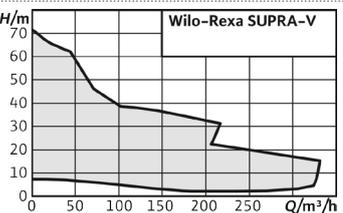
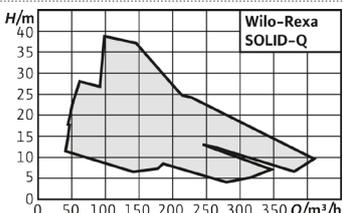
| Series                  | Wilo-Drain LP<br>Wilo-Drain LPC   | Wilo-Drain VC   | Wilo-Drain TMT  |
|-------------------------|---|---|---|
| Product photo           |                                |    |    |
| Construction            | Non-submersible self-priming drainage pump  | Non-submersible pedestal pump with standard motor   | Submersible drainage pump   |
| Application             | Pumping of<br>→ Wastewater<br>→ Process water   | Pumping of<br>→ Wastewater<br>→ Industrial wastewater   | Pumping of<br>→ Wastewater<br>→ Industrial wastewater   |
| Duty chart              |                                |   |    |
| Volume flow $Q_{max}$   | 60 m <sup>3</sup> /h  | 14 m <sup>3</sup> /h  | 22 m <sup>3</sup> /h  |
| Delivery head $H_{max}$ | 31 m  | 20 m  | 15.5 m  |
| Technical data          | → Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz<br>→ Operation mode: S1<br>→ Fluid temperature: max. 35 °C | → Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz<br>→ Operation mode: S1<br>→ Fluid temperature: max. 95 °C   | → Mains connection: 3~400 V, 50 Hz<br>→ Immersed operating mode: S1<br>→ Non-immersed operating mode: S3 25 %<br>→ Max. immersion depth: 7 m<br>→ Fluid temperature: max. 95 °C |
| Special features        | → Long service life<br>→ Sturdy construction<br>→ Easy operation<br>→ Flexible use                              | → For fluids up to 95 °C<br>→ Long service life<br>→ Easy operation thanks to attached float switch<br>→ Long standstill times possible<br>→ Integrated motor protection with thermal relay | → For fluids up to 95 °C<br>→ Sealed cable inlet  |
| Equipment/function      | → Self-priming  | → Attached float switch   | → Housing and impeller made of grey cast iron<br>→ Thermal motor monitoring   |

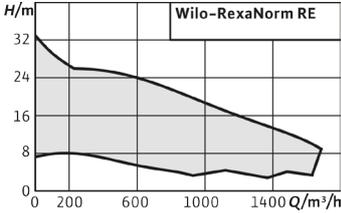
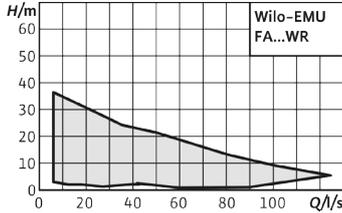
| Series                  | Wilo-Drain TM/TMW/TMR 32<br>Wilo-Drain TS/TSW 32  | Wilo-Drain TS 40  | Wilo-Padus UNI   |
|-------------------------|---|---|--|
| Product photo           |    |    |  <span style="background-color: orange; color: white; padding: 2px;">Series extension</span>  |
| Construction            | Submersible drainage pump   | Submersible drainage pump   | Submersible drainage pump  |
| Application             | Pumping of<br>→ Sewage without faeces and long-fibre components<br>→ Wastewater   | Pumping of<br>→ Sewage without faeces and long-fibre components<br>→ Wastewater   | Pumping of<br>→ Sewage without faeces<br>→ Wastewater<br>→ Aggressive fluids (pH >3.5)   |
| Duty chart              |    |   |   |
| Volume flow $Q_{max}$   | 16 m <sup>3</sup> /h  | 18 m <sup>3</sup> /h  | 50 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 12 m  | 14 m  | 26 m   |
| Technical data          | → Mains connection: 1~230 V, 50 Hz<br>→ Immersed operating mode: S1<br>→ Non-immersed operating mode: S3 25 %<br>→ Max. immersion depth: TM/TMW/TMR = 1 m, TS/TSW = 7 m<br>→ Fluid temperature: max. 35 °C, for short periods up to 3 min. max. 90 °C | → Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz<br>→ Immersed operating mode: S1<br>→ Non-immersed operating mode: S3 25 %<br>→ Max. immersion depth: 5 m<br>→ Fluid temperature: max. 35 °C | → Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz<br>→ Immersed operating mode: S1<br>→ Non-immersed operating mode: S3 10 %<br>– “C” version: S1<br>→ Max. immersion depth: 7 m<br>→ Fluid temperature: max. 40 °C   |
| Special features        | → TMW, TSW with turbulator for constantly clean pump chamber<br>→ No generation of fluid-related odours<br>→ Easy installation<br>→ High operational reliability<br>→ Easy operation  | → Low weight<br>→ Sealing chamber<br>→ Easy operation thanks to attached float switch and plug (A version)  | → Reliability, thanks to corrosion-free hydraulics for various fluids<br>→ Easy installation due to its low weight, integrated capacitor and threaded flange<br>→ Quick maintenance facilitated by direct access to the sealing chamber and pump housing<br>→ Long maintenance intervals thanks to the double mechanical seal and large-volume sealing chamber |
| Equipment/function      | → Motor monitoring via temperature<br>→ Sheath flow cooling<br>→ Hose connection<br>→ Turbulator (TMW, TSW)<br>→ Float switch (depending on type)   | → Ready-to-plug versions also with float switch<br>→ Thermal motor monitoring<br>→ Integrated non-return valve<br>→ Hose connection   | → Thermal motor monitoring<br>→ Single-phase variant with internal capacitor<br>→ A-model with plug and float switch<br>→ VA-model with plug and vertical float switch<br>→ P-model with plug<br>→ Material version “B” for aggressive fluids, e.g. lake/sea water, condensate, distilled water<br>→ “C” version with sheath flow cooling                      |

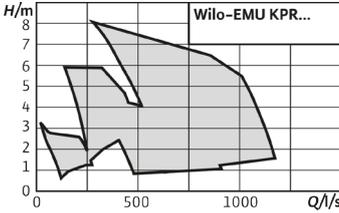
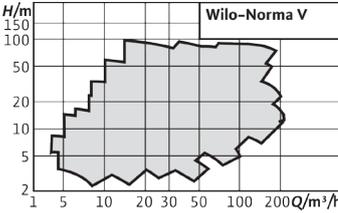
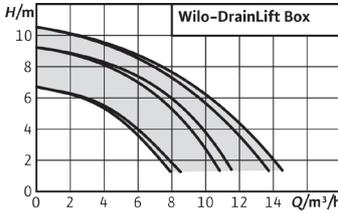
| Series                  | Wilo-EMU KS   | Wilo-Padus PRO   | Wilo-Rexa CUT GI<br>Wilo-Rexa CUT GE   |
|-------------------------|---|--|--|
| Product photo           |    |  <span style="background-color: orange; color: white; padding: 2px 5px; border-radius: 5px;">Series extension</span>  |   |
| Construction            | Submersible drainage pump   | Submersible drainage pump  | Submersible sewage pump with macerator   |
| Application             | Pumping of<br>→ Wastewater  | Pumping of<br>→ Wastewater   | Pumping of<br>→ Sewage containing faeces<br>→ Wastewater   |
| Duty chart              |    |    |   |
| Volume flow $Q_{max}$   | 165 m <sup>3</sup> /h   | 140 m <sup>3</sup> /h  | 21 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 42 m  | 34 m   | 41 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz</li> <li>→ Immersed operating mode: S1</li> <li>→ Non-immersed operating mode: S1</li> <li>→ Max. immersion depth: 20 m</li> <li>→ Fluid temperature: max. 40 °C</li> </ul> | <ul style="list-style-type: none"> <li>→ Mains connection: 3~400 V, 50 Hz</li> <li>→ Immersed operating mode: S1</li> <li>→ Non-immersed operating mode: S1</li> <li>→ Max. immersion depth: 20 m</li> <li>→ Fluid temperature: max. 40 °C</li> </ul>  | <ul style="list-style-type: none"> <li>→ Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz</li> <li>→ Immersed operating mode: S1</li> <li>→ Non-immersed operating mode: S3</li> <li>→ Max. immersion depth: 7 m (CUT GI) or 20 m (CUT GE)</li> <li>→ Fluid temperature: max. 40 °C</li> </ul> |
| Special features        | <ul style="list-style-type: none"> <li>→ Long service life</li> <li>→ Sturdy construction</li> <li>→ Slurping operation possible</li> <li>→ Suitable for continuous duty (S1)</li> <li>→ Ready-to-plug</li> </ul>   | <ul style="list-style-type: none"> <li>→ High reliability in abrasive media thanks to rubber-coated hydraulics and impeller made of hardened chrome steel</li> <li>→ Easy installation thanks to low weight and flexible pressure connection (vertical/horizontal)</li> <li>→ Active cooling for reliable continuous duty, particularly in slurping operation</li> <li>→ Easy maintenance thanks to quick access to wearing parts</li> </ul> | <ul style="list-style-type: none"> <li>→ Low-weight version with stainless steel motor</li> <li>→ Sturdy version in cast iron</li> <li>→ Sealing with two mechanical seals</li> <li>→ Longitudinal watertight cable inlet</li> </ul>   |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Heavy-duty design</li> <li>→ Slurping operation</li> </ul>   | <ul style="list-style-type: none"> <li>→ Sheath flow cooling</li> <li>→ Slurping operation</li> </ul>  | <ul style="list-style-type: none"> <li>→ Internal or external macerator</li> <li>→ Unimpeded flow to the impeller</li> <li>→ Maceration of substances being conveyed</li> <li>→ Sealing chamber with optional external monitoring</li> <li>→ ATEX approval (Rexa CUT GE)</li> </ul>              |

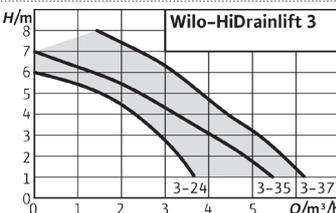
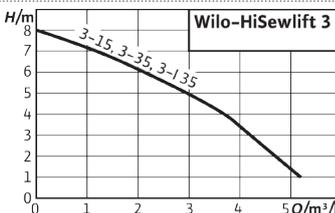
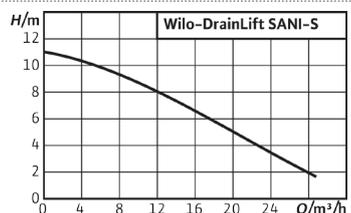
| Series                  | Wilo-Rexa MINI3  | Wilo-Rexa UNI   | Wilo-Rexa FIT<br>Wilo-Rexa PRO   |
|-------------------------|--|---|--|
| Product photo           |   |    |   |
| Construction            | Submersible sewage pump  | Submersible sewage pump   | Submersible sewage pump  |
| Application             | Pumping of<br>→ Sewage without faeces<br>→ Wastewater  | Pumping of<br>→ Sewage containing faeces<br>→ Wastewater<br>→ Aggressive fluids (pH >3,5)   | Pumping of<br>→ Sewage containing faeces<br>→ Wastewater   |
| Duty chart              |   |   |   |
| Volume flow $Q_{max}$   | 23 m <sup>3</sup> /h   | 54 m <sup>3</sup> /h  | 186 m <sup>3</sup> /h  |
| Delivery head $H_{max}$ | 13 m   | 21 m  | 52 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz</li> <li>→ Immersed operating mode: S1</li> <li>→ Non-immersed operating mode: S2-15 min, S3 10 %</li> <li>→ Max. immersion depth: 7 m</li> <li>→ Fluid temperature: max. 40 °C</li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz</li> <li>→ Immersed operating mode: S1</li> <li>→ Non-immersed operating mode: S3 10 %</li> <li>→ Max. immersion depth: 7 m</li> <li>→ Fluid temperature: max. 40 °C</li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz</li> <li>→ Immersed operating mode: S1</li> <li>→ Non-immersed operating mode: S3</li> <li>→ Max. immersion depth: 7 m (FIT) or 20 m (PRO)</li> <li>→ Fluid temperature: max. 40 °C</li> </ul> |
| Special features        | <ul style="list-style-type: none"> <li>→ Best efficiency and high operational reliability thanks to optimized hydraulics</li> <li>→ Easy installation thanks to compact design with integrated condenser, light weight and threaded flange</li> <li>→ Long maintenance intervals thanks to large sealing chamber and double sealing</li> </ul> | <ul style="list-style-type: none"> <li>→ High reliability due to corrosion-free hydraulics for various fluids</li> <li>→ Easy installation thanks to low weight of composite, integrated capacitor and integrated fixations in flanges</li> <li>→ Larger inspection interval thanks to double sealing with large sealing chamber</li> </ul> | <ul style="list-style-type: none"> <li>→ Low-weight version with stainless steel motor or sturdy version in cast iron</li> <li>→ Also with IE3 motor technology (according to IEC 60034-30)</li> <li>→ Motors with S1 operation mode for dry installation available</li> </ul>             |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ AC variant ready-to-plug and with internal capacitor</li> <li>→ A-model including float switch</li> <li>→ Thermal motor monitoring</li> </ul>   | <ul style="list-style-type: none"> <li>→ AC variant with internal capacitor</li> <li>→ A-model with plug and float switch</li> <li>→ P-model with plug</li> <li>→ Material version "B" for aggressive fluids, e.g. lake/sea water, condensate, distilled water</li> <li>→ Thermal motor monitoring</li> </ul>                               | <ul style="list-style-type: none"> <li>→ Thermal motor monitoring</li> <li>→ Motor chamber monitoring (Rexa PRO)</li> <li>→ Sealing chamber with optional external monitoring</li> <li>→ ATEX approval (Rexa PRO)</li> </ul>   |

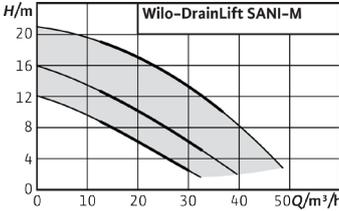
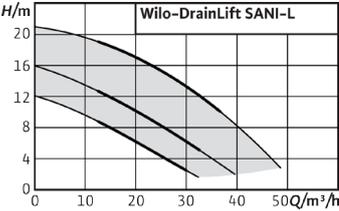
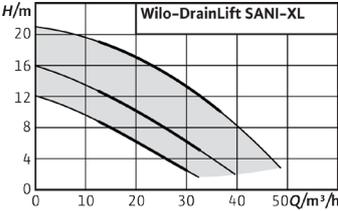
| Series                  | Wilo-Drain TP 80<br>Wilo-Drain TP 100   | Wilo-EMU FA 08 to FA 15<br>(standard pumps)   | Wilo-RexaBloc RE   |
|-------------------------|---|---|--|
| Product photo           |    |    |   |
| Construction            | Submersible sewage pump   | Submersible sewage pump   | Non submersible sewage pump in mono-bloc design  |
| Application             | Pumping of<br>→ Sewage containing faeces<br>→ Wastewater<br>→ Process water   | Pumping of<br>→ Sewage containing faeces<br>→ Wastewater  | Pumping of<br>→ Sewage containing faeces<br>→ Wastewater   |
| Duty chart              |    |   |   |
| Volume flow $Q_{max}$   | 180 m <sup>3</sup> /h   | 380 m <sup>3</sup> /h   | 445 m <sup>3</sup> /h  |
| Delivery head $H_{max}$ | 21 m  | 51 m  | 26 m   |
| Technical data          | → Mains connection: 3~400 V, 50 Hz<br>→ Immersed operating mode: S1<br>→ Non-immersed operating mode: S1<br>→ Max. immersion depth: 20 m<br>→ Fluid temperature: max. 40 °C   | → Mains connection: 3~400 V, 50 Hz<br>→ Immersed operating mode: S1<br>→ Non-immersed operating mode: S2<br>→ Max. immersion depth: 20 m<br>→ Fluid temperature: max. 40 °C                     | → Mains connection: 3~400 V, 50 Hz<br>→ Operating mode: S1<br>→ Fluid temperature: max. 70 °C<br>→ Ambient temperature: max. 40 °C<br>→ Motor efficiency class: IE3, IE4   |
| Special features        | → Self-cooling motor for the use in wet well and dry well installations<br>→ Corrosion-resistant stainless steel motor housing in 1.4404<br>→ Patented non-clogging hydraulics<br>→ Longitudinal watertight cable inlet<br>→ Low weight | → Operationally reliable thanks to Vortex hydraulics and single-channel hydraulics with large, free ball passage<br>→ Process reliability thanks to optional monitoring for the sealing chamber | → High reliability due to oil-filled sealing chamber and additional leakage chamber<br>→ Easy impeller replacement due to "back pull-out" design. This means the motor and the impeller can be removed without needing to dismantle the hydraulics<br>→ Closed bearing bracket design. This means that no oil needs to be drained during dismantling |
| Equipment/function      | → Thermal motor monitoring<br>→ Motor chamber monitoring<br>→ ATEX approval<br>→ Sheath flow cooling  | → Optional external sealing chamber monitoring  | → Optional external sealing chamber monitoring   |

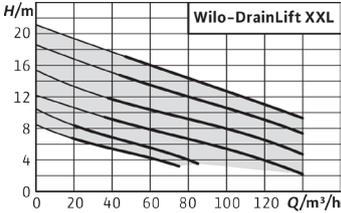
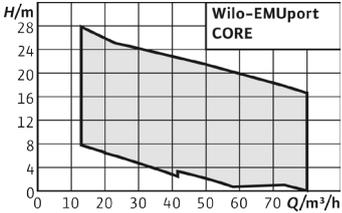
| Series                  | Wilo-EMU FA 08 to FA 60  | Wilo-Rexa SUPRA  | Wilo-Rexa SOLID  |
|-------------------------|--|--|--|
| Product photo           |   |  Series extension   |  Series extension   |
| Construction            | Submersible sewage pump  | Submersible sewage pump  | Submersible sewage pump  |
| Application             | Pumping of <ul style="list-style-type: none"> <li>→ Untreated sewage</li> <li>→ Sewage containing faeces</li> <li>→ Wastewater</li> <li>→ Process water</li> </ul>   | Pumping of <ul style="list-style-type: none"> <li>→ Untreated sewage</li> <li>→ Sewage containing faeces</li> <li>→ Wastewater</li> <li>→ Process water</li> </ul>   | Pumping of <ul style="list-style-type: none"> <li>→ Untreated sewage</li> <li>→ Sewage containing faeces</li> <li>→ Wastewater</li> <li>→ Process water</li> </ul>   |
| Duty chart              |   |    |   |
| Volume flow $Q_{max}$   | 8,679 m <sup>3</sup> /h  | 325 m <sup>3</sup> /h  | 410 m <sup>3</sup> /h  |
| Delivery head $H_{max}$ | 124 m  | 71 m   | 38 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Mains connection: 3~400 V, 50 Hz</li> <li>→ Immersed operating mode: S1</li> <li>→ Non-immersed operating mode:                             <ul style="list-style-type: none"> <li>– S1 with self-cooling motor</li> <li>– S2 with surface-cooled motor</li> </ul> </li> <li>→ Max. immersion depth: 20 m</li> <li>→ Fluid temperature: max. 40 °C</li> </ul> | <ul style="list-style-type: none"> <li>→ Mains connection: 3~400 V, 50 Hz</li> <li>→ Immersed operating mode: S1</li> <li>→ Non-immersed operating mode:                             <ul style="list-style-type: none"> <li>– S1 with self-cooling motor</li> <li>– S2 with surface-cooled motor</li> </ul> </li> <li>→ Max. immersion depth: 20 m</li> <li>→ Fluid temperature: max. 40 °C</li> </ul> | <ul style="list-style-type: none"> <li>→ Mains connection: 3~400 V, 50 Hz</li> <li>→ Immersed operating mode: S1</li> <li>→ Non-immersed operating mode:                             <ul style="list-style-type: none"> <li>– S1 with self-cooling motor</li> <li>– S2 with surface-cooled motor</li> </ul> </li> <li>→ Max. immersion depth: 20 m</li> <li>→ Fluid temperature: max. 40 °C</li> </ul>   |
| Special features        | <ul style="list-style-type: none"> <li>→ Self-cooling motors for the use in wet well and dry well installation</li> <li>→ Process security thanks to extensive monitoring devices</li> <li>→ Enhanced corrosion protection with the optional Ceram coating for a longer lifetime</li> <li>→ Special versions for abrasive and corrosive fluids</li> <li>→ Customised versions are possible</li> </ul>  | <ul style="list-style-type: none"> <li>→ Self-cooling motors for the use in wet well and dry well installation</li> <li>→ Process security thanks to extensive monitoring devices</li> <li>→ Enhanced corrosion protection with the optional Ceram coating for a longer lifetime</li> <li>→ Customised versions are possible</li> </ul>  | <ul style="list-style-type: none"> <li>→ Highest operational reliability and reduced service costs, especially for pumping untreated sewage thanks to the self-cleaning characteristics</li> <li>→ Enhanced corrosion protection with the optional Ceram coating for a longer lifetime</li> <li>→ Optional Digital Data Interface (DDI) with integrated vibration monitor, data logger and web server for convenient system monitoring</li> <li>→ Integration of Nexos Intelligence</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Heavy-duty version made of cast iron</li> <li>→ Optional monitoring for                             <ul style="list-style-type: none"> <li>– motor bearing temperature</li> <li>– motor winding temperature</li> <li>– tightness of motor, terminals and sealing chamber</li> </ul> </li> </ul>   | <ul style="list-style-type: none"> <li>→ Heavy-duty version made of cast iron</li> <li>→ Optional monitoring for                             <ul style="list-style-type: none"> <li>– motor bearing temperature</li> <li>– motor winding temperature</li> <li>– tightness of motor, terminals and sealing chamber</li> </ul> </li> </ul>   | Optional Nexos Intelligence: <ul style="list-style-type: none"> <li>→ Reduced downtime and service call-outs thanks to automatic detection and removal of clogging</li> <li>→ Convenient control and connectivity with the local network via the integrated web server and Ethernet interface with established protocols in the pump</li> <li>→ Increased operational reliability in the event of a failure thanks to the integrated pump control in multiple execution</li> </ul>             |

| Series                  | Wilo-RexaNorm RE   | Wilo-EMU FA... RF   | Wilo-EMU FA... WR   |
|-------------------------|--|---|---|
| Product photo           |   |    |    |
| Construction            | Non submersible sewage pump with standard motor, fully mounted on baseplate  | Submersible sewage pump made of cast stainless steel  | Submersible sewage pump with mechanical stirring apparatus  |
| Application             | Pumping of<br>→ Untreated sewage<br>→ Sewage containing faeces<br>→ Wastewater<br>→ Process water  | Pumping of<br>→ Highly abrasive sewage without long-fibre components<br>→ Sewage containing faeces  | Pumping of<br>→ Highly abrasive sewage without long-fibre components<br>→ Sewage containing faeces  |
| Duty chart              |   |   |    |
| Volume flow $Q_{max}$   | 1,760 m <sup>3</sup> /h  | 72 m <sup>3</sup> /h  | 450 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 32 m   | 27 m  | 36 m  |
| Technical data          | → Mains connection: 3~400 V, 50 Hz<br>→ Operating mode: S1<br>→ Fluid temperature: max. 70 °C<br>→ Ambient temperature: max. 40 °C<br>→ Motor efficiency class: IE3, IE4   | → Mains connection: 3~400 V, 50 Hz<br>→ Immersed operating mode: S1<br>→ Non-immersed operating mode: S2<br>→ Max. immersion depth: 20 m<br>→ Fluid temperature: max. 40 °C | → Mains connection: 3~400 V, 50 Hz<br>→ Immersed operating mode: S1<br>→ Non-immersed operating mode: S2<br>→ Max. immersion depth: 20 m<br>→ Fluid temperature: max. 40 °C |
| Special features        | → Easy impeller replacement due to "back pull-out" design and spacer coupling as standard. Removal of the impeller without dismantling the hydraulics from the pipeline and the motor from the baseplate<br>→ Shut "back pull-out" unit: Dismantling without draining the oil in the sealing chamber | → Sturdy version completely in stainless steel casting 1.4581 for the use in corrosive fluids<br>→ Longitudinal watertight cable inlet                                      | → Mechanical mixing device made of Abrasit material to avoid deposits in the pump chamber<br>→ Longitudinal watertight cable inlet<br>→ Customised versions are possible    |
| Equipment/function      | → Optional thermal motor monitoring<br>→ Optional external sealing chamber monitoring  | → Heavy-duty version made of cast stainless steel<br>→ Optional external sealing chamber monitoring   | → Mechanical stirring apparatus is fastened directly to the impeller<br>→ Mixer head made of Abrasit (chilled cast iron)<br>→ Optional external sealing chamber monitoring  |

| Series                  | Wilo-EMU KPR  | Norma V  | Wilo-DrainLift Box... D<br>Wilо-DrainLift Box... DS   |
|-------------------------|---|--|---|
| Product photo           |    |   |    |
| Construction            | Axial submersible pump for use in pipe chambers   | Non-submersible pedestal pump with standard motor  | Sewage lifting unit for concealed floor installation  |
| Application             | Pumping of<br>→ Sewage without faeces<br>→ Wastewater<br>→ Process water  | Pumping of<br>→ Wastewater<br>→ Industrial wastewater  | Pumping of sewage without faeces  |
| Duty chart              |    |    |    |
| Volume flow $Q_{max}$   | 4,360 m <sup>3</sup> /h   | 200 m <sup>3</sup> /h  | 15 m <sup>3</sup> /h  |
| Delivery head $H_{max}$ | 8 m   | 100 m  | 10.5 m  |
| Technical data          | → Mains connection: 3~400 V, 50 Hz<br>→ Immersed operating mode: S1<br>→ Max. immersion depth: 20 m<br>→ Fluid temperature: max. 40 °C  | → Fluid temperature: max 120 °C<br>→ Pressure connection: DN 32 to DN 100<br>→ Max. operating pressure: 16 bar<br>→ Max. viscosity: 150 cSt  | → Mains connection: 1~230 V, 50 Hz<br>→ Operation mode: S3<br>→ Fluid temperature: max. 35/40 °C<br>→ Pressure port: Ø40 mm<br>→ Gross volume: 113 l<br>→ Switching volume: 22...31 l   |
| Special features        | → Installation directly in the pressure pipe<br>→ Angle of propeller blades adjustable<br>→ Process security thanks to extensive monitoring devices<br>→ Customised versions are possible | → Low-maintenance<br>→ No shaft sealing<br>→ Noise-free suction<br>→ Replaceable IEC standard motor<br>→ Semi-elastic coupling with the VTM version  | → Easy to install due to integrated pump and non-return valve<br>→ Large tank volume<br>→ Easy maintenance<br>→ Pumps with pressure pipe removable<br>→ Stainless steel tile frame with trap  |
| Equipment/function      | → Heavy-duty version made of cast iron  | → Pressure connection above base plate in PN 10/16/25<br>→ Different basic versions: <ul style="list-style-type: none"> <li>– VCS: adjustable baseplate/fixed coupling</li> <li>– VEM: cast iron support/fixed coupling</li> <li>– VTM: bearing block/semi-elastic coupling</li> </ul> → Options: <ul style="list-style-type: none"> <li>– Explosion-proof float switch</li> <li>– External lubrication of bearing</li> <li>– Pressure connection below baseplate</li> </ul> | → Single and double-pump system<br>→ Lifting unit with ready-mounted pump, level control, pressure pipe and integrated non-return valve<br>→ Ready-to-plug system (single-phase version)<br>→ Thermal motor monitoring<br>→ DS version: Double pump system with micro-processor controlled switchgear |

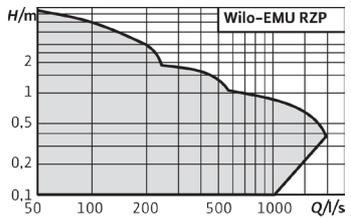
| Series                  | Wilo-HiDrainlift 3   | Wilo-HiSewlift 3   | Wilo-DrainLift SANI-S  |
|-------------------------|--|--|--|
| Product photo           |   |    |   |
| Construction            | Sewage lifting unit  | Sewage lifting unit  | Compact, ready for connection and fully submersible single pump lifting unit   |
| Application             | Pumping of sewage without faeces   | Pumping of sewage containing faeces  | Pumping of sewage containing faeces  |
| Duty chart              |   |    |   |
| Volume flow $Q_{max}$   | 6 m <sup>3</sup> /h  | 5 m <sup>3</sup> /h  | 29 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 8 m  | 8 m  | 11 m   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Mains connection: 1~230 V, 50 Hz</li> <li>→ Operation mode: S3</li> <li>→ Fluid temperature: 35 °C, for short periods (5 min) up to 60/75 °C</li> <li>→ Pressure port: Ø32 mm</li> <li>→ Tank volume: 3.9 ... 16 l</li> <li>→ Switching Volume: 0.7 ... 2 l</li> </ul>  | <ul style="list-style-type: none"> <li>→ Mains connection: 1~230 V, 50 Hz</li> <li>→ Operation mode: S3</li> <li>→ Fluid temperature: max. 35 °C</li> <li>→ Pressure port: Ø32 mm</li> <li>→ Gross volume: 14.4 l; 17.4 l</li> <li>→ Switching Volume: 1 l</li> </ul>  | <ul style="list-style-type: none"> <li>→ Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz</li> <li>→ Operating mode: S3 10%</li> <li>→ Fluid temperature: 3 ... 40 °C, max. 65 °C for 5 min</li> <li>→ Vessel volume: 47 l</li> <li>→ Max. usable volume: 32 l</li> <li>→ Pressure connection: DN 80</li> </ul>  |
| Special features        | <ul style="list-style-type: none"> <li>→ Compact design for the installation into a wet cell or under a shower tray</li> <li>→ Low-noise operation and integrated active carbon filter for a high user comfort</li> <li>→ Reliable performance and low power consumption for an efficient wastewater disposal</li> <li>→ Easy installation with flexible connection possibilities</li> <li>→ Ready for connection</li> </ul> | <ul style="list-style-type: none"> <li>→ Particularly narrow design for an easy front-wall installation</li> <li>→ Low-noise operation and integrated active carbon filter for a high user comfort</li> <li>→ Reliable performance and low power consumption for an efficient sewage disposal</li> <li>→ Easy installation with flexible connection possibilities</li> <li>→ Ready for connection</li> </ul> | <ul style="list-style-type: none"> <li>→ Very easy to install and transport due to space-saving compact construction and very light weight</li> <li>→ Operational reliability provided by the large switching volume, thermal motor protection and mains-independent alarm</li> <li>→ Transparent reservoir cover and cleaning opening in the non-return valve ensure easy maintenance</li> <li>→ Optional Wilo-SmartHome connection for instantaneous notification directly to your mobile phone</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Ready-to-plug</li> <li>→ Thermal motor monitoring</li> <li>→ Level control with pneumatic pressure transducer</li> <li>→ Integrated non-return valves</li> <li>→ Active carbon filter</li> </ul>  | <ul style="list-style-type: none"> <li>→ Ready-to-plug</li> <li>→ Thermal motor monitoring</li> <li>→ Level control with pneumatic pressure transducer</li> <li>→ Integrated non-return valves</li> <li>→ Active carbon filter</li> </ul>  | <ul style="list-style-type: none"> <li>→ Switchgear with mains-independent alarm and collective fault signal</li> <li>→ Ready-to-plug</li> <li>→ Tank with inspection opening and transparent cover</li> <li>→ Analogue level measurement (4 ... 20 mA)</li> <li>→ Non-return valve with inspection opening</li> <li>→ Thermal motor monitoring with bimetallic strip</li> </ul>   |

| Series                  | Wilo-DrainLift SANI-M  | Wilo-DrainLift SANI-L   | Wilo-DrainLift SANI-XL  |
|-------------------------|--|---|---|
| Product photo           |   |    |    |
| Construction            | Ready for connection and fully submersible single pump lifting unit  | Compact, ready for connection and fully submersible double pump lifting unit  | Ready for connection and fully submersible double pump lifting unit   |
| Application             | Pumping of sewage containing faeces  | Pumping of sewage containing faeces   | Pumping of sewage containing faeces   |
| Duty chart              |   |   |    |
| Volume flow $Q_{max}$   | 49 m <sup>3</sup> /h   | 49 m <sup>3</sup> /h  | 49 m <sup>3</sup> /h  |
| Delivery head $H_{max}$ | 21 m   | 21 m  | 21 m  |
| Technical data          | <ul style="list-style-type: none"> <li>→ Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz</li> <li>→ Operating mode: S3 10%/S1</li> <li>→ Fluid temperature: 3 ... 40 °C, max. 65 °C for 5 min</li> <li>→ Vessel volume: 99 l</li> <li>→ Max. usable volume: 74 l</li> <li>→ Pressure connection: DN 80</li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz</li> <li>→ Operating mode: S3 10%/S1</li> <li>→ Fluid temperature: 3 ... 40 °C, max. 65 °C for 5 min</li> <li>→ Vessel volume: 122 l</li> <li>→ Max. usable volume: 91 l</li> <li>→ Pressure connection: DN 80</li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains connection: 3~400 V, 50 Hz</li> <li>→ Operating mode: S3 10%/S1</li> <li>→ Fluid temperature: 3 ... 40 °C, max. 65 °C for 5 min</li> <li>→ Vessel volume: 358 l</li> <li>→ Max. usable volume: 286 l</li> <li>→ Pressure connection: DN 80</li> </ul>  |
| Special features        | <ul style="list-style-type: none"> <li>→ Very easy to install and transport due to compact construction and light weight</li> <li>→ Operational reliability provided by the large switching volume, thermal motor protection and mains-independent alarm</li> <li>→ Universal use thanks to several variants (continuous duty or intermittent periodic duty, version for aggressive fluids)</li> <li>→ Transparent reservoir cover and cleaning opening in the non-return valve ensure easy maintenance</li> </ul> | <ul style="list-style-type: none"> <li>→ Easy installation and transport due to compact construction and light weight</li> <li>→ High operational reliability thanks to the double-pump system, high switching volume, thermal motor protection and mains-independent alarm</li> <li>→ Universal use thanks to several variants (continuous duty or intermittent periodic duty, version for aggressive fluids)</li> <li>→ Transparent reservoir cover and cleaning opening in the non-return valve ensure easy maintenance</li> </ul> | <ul style="list-style-type: none"> <li>→ Easy installation and transport thanks to light weight</li> <li>→ High operational reliability thanks to double-pump system, a very large switching volume, thermal motor protection and mains-independent alarm</li> <li>→ Universal use thanks to several variants (continuous duty or intermittent periodic duty, version for aggressive fluids)</li> <li>→ Transparent reservoir cover and cleaning opening in the non-return valve ensure easy maintenance</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Switchgear with mains-independent alarm and collective fault signal</li> <li>→ Ready-to-plug</li> <li>→ Tank with inspection opening and transparent cover</li> <li>→ Analogue level measurement (4 ... 20 mA)</li> <li>→ Non-return valve with inspection opening</li> <li>→ Thermal motor monitoring with bimetallic strip</li> </ul>   | <ul style="list-style-type: none"> <li>→ Switchgear with mains-independent alarm and collective fault signal</li> <li>→ Ready-to-plug</li> <li>→ Tank with inspection opening and transparent cover</li> <li>→ Analogue level measurement (4 ... 20 mA)</li> <li>→ Non-return valve with inspection opening</li> <li>→ Thermal motor monitoring with bimetallic strip</li> </ul>  | <ul style="list-style-type: none"> <li>→ Switchgear with mains-independent alarm and collective fault signal</li> <li>→ Ready-to-plug</li> <li>→ Tank with inspection opening and transparent cover</li> <li>→ Analogue level measurement (4 ... 20 mA)</li> <li>→ Non-return valve with inspection opening</li> <li>→ Thermal motor monitoring with bimetallic strip</li> </ul>  |

| Series                  | Wilo-DrainLift XXL  | Wilo-EMUport CORE<br>Wilo-EMUport FTS  | Wilo-Separator MONO   |
|-------------------------|---|--|---|
| Product photo           |    |    |    |
| Construction            | Sewage lifting unit<br>Double-pump system   | Sewage lifting unit with solid separation<br>for over-ground and underground installation (in a chamber)   | Oil and grease trap with a monolithic design, for installation in buildings (floor mounted).  |
| Application             | Pumping of sewage containing faeces   | Pumping of sewage containing faeces  | For the separation of vegetable and animal oils and fats from sewage.   |
| Duty chart              |    |    |   |
| Volume flow $Q_{max}$   | 140 m <sup>3</sup> /h   | 80 m <sup>3</sup> /h   | NO VALUE  |
| Delivery head $H_{max}$ | 21 m  | 28 m   | NO VALUE  |
| Technical data          | <ul style="list-style-type: none"> <li>→ Mains connection: 3~400 V, 50 Hz</li> <li>→ Operating mode: S1</li> <li>→ Fluid temperature: max. 40 °C</li> <li>→ Pressure port: DN 80, DN 100</li> <li>→ Gross volume: 400/800 l</li> <li>→ Switching volume: 305 ... 630 l</li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains connection: 3~400 V, 50 Hz</li> <li>→ Operation mode: S1</li> <li>→ Fluid temperature: max. 40 °C</li> <li>→ Pressure port: DN 80, DN 100</li> <li>→ Gross volume: 440 l, 1200 l</li> <li>→ Switching volume: 295 l, 900 l</li> </ul>   | <ul style="list-style-type: none"> <li>→ Tank volume: 500 ... 1740 l</li> <li>→ Grease reservoir volume: 80 ... 400 l</li> <li>→ Sludge trap volume: 200 ... 1000 l</li> </ul>  |
| Special features        | <ul style="list-style-type: none"> <li>→ Flexible use thanks to one or two tanks</li> <li>→ Optimum tank drainage with deep suction function</li> <li>→ Operationally reliable thanks to large performance range and a reliable level detection</li> <li>→ Continuous duty thanks to the use of self-cooling motors</li> </ul>                      | <ul style="list-style-type: none"> <li>→ Long service life and corrosion resistance thanks to PE/PUR material</li> <li>→ Maintenance-friendly as all parts are accessible from outside</li> <li>→ High operational reliability thanks to a pre-filtering of solid matter, the pumps deliver only the cleaned sewage</li> <li>→ Retrofit system for the economic reconstruction of old pump stations</li> </ul> | <ul style="list-style-type: none"> <li>→ Optionally available with fully automatic drainage using pump, refilling with fresh water and optional control panel in the connection box for convenient use</li> <li>→ Odour-proof sealing of the maintenance opening using a quick-action clamp and seal and odourless drainage using the drainage pipe</li> <li>→ Reliable drainage thanks to fail-safe mixing of grease layer for drainage process</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Thermal motor monitoring and leakage detection</li> <li>→ Level control with level sensor</li> <li>→ Menu-guided switchgear with potential-free contact</li> <li>→ Hose connection for venting diaphragm hand pump</li> <li>→ Kit for pressure pipe connection</li> <li>→ Installation material</li> </ul> | <ul style="list-style-type: none"> <li>→ Sewage lifting unit with solid separation system</li> <li>→ Collection reservoir</li> <li>→ 2x solids separation reservoirs</li> <li>→ 2x sewage pumps</li> <li>→ Complete pipework including inlet and pressure connection and non-return valve</li> </ul>   | <ul style="list-style-type: none"> <li>→ Tank</li> <li>→ Mixer</li> <li>→ Tank cover with quick-release clamp and gasket</li> <li>→ Drainage pipe</li> <li>→ Manual water supply</li> <li>→ Operating and maintenance manual</li> </ul> <p>The version for fully automatic operation also contains:</p> <ul style="list-style-type: none"> <li>→ Automatic water supply</li> <li>→ Drainage pump</li> <li>→ Switchgear</li> </ul>                           |

| Series                  | Wilo-Separator MODU  | Wilo-Separator GEO   | Wilo-DrainLift WS 40/50  |
|-------------------------|--|--|--|
| Product photo           |   |    |   |
| Construction            | Oil and grease trap with a segment design, for installation in buildings (floor mounted).  | Oil and grease trap with a monolithic design, for installation in the ground (underground).  | Pump chamber as concealed pumping station or floor-mounted lifting unit  |
| Application             | For the separation of vegetable and animal oils and fats from sewage.  | For the separation of vegetable and animal oils and fats from sewage.  | Pumping of sewage containing faeces that cannot be returned to the sewer system using natural falls.   |
| Duty chart              |  |  |  |
| Volume flow $Q_{max}$   | NO VALUE   | NO VALUE   |  |
| Delivery head $H_{max}$ | NO VALUE   | NO VALUE   |  |
| Technical data          | <ul style="list-style-type: none"> <li>→ Tank volume: 720 ... 2270 l</li> <li>→ Grease reservoir volume: 160 ... 400 l</li> <li>→ Sludge trap volume: 200 ... 1000 l</li> </ul>  | <ul style="list-style-type: none"> <li>→ Tank volume: 500 ... 1740 l</li> <li>→ Grease reservoir volume: 80 ... 400 l</li> <li>→ Sludge trap volume: 200 ... 1000 l</li> </ul>   | <ul style="list-style-type: none"> <li>→ Pressure port:                             <ul style="list-style-type: none"> <li>– DrainLift WS 40/50 Basic: G 2/Ø50mm, G 2½/Ø63 mm</li> <li>– DrainLift WS 40/50: R 1½, R 2</li> </ul> </li> <li>→ Inlet connection: DN 100/150/200</li> <li>→ Gross volume:                             <ul style="list-style-type: none"> <li>– DrainLift WS...E: 255 l</li> <li>– DrainLift WS...D: 400 l</li> </ul> </li> </ul> |
| Special features        | <ul style="list-style-type: none"> <li>→ Optionally available with fully automatic drainage using pump, refilling with fresh water and optional control panel in the connection box for convenient use</li> <li>→ Odour-proof sealing of the maintenance opening using a quick-action clamp and seal plus odourless drainage using the drainage pipe</li> <li>→ Reliable drainage thanks to fail-safe mixing of grease layer for drainage process</li> </ul> | <ul style="list-style-type: none"> <li>→ Optionally available with integrated drainage pipe for odour-free drainage</li> <li>→ Sealable chamber cover in load class B 125 protects against odours and surface water</li> <li>→ Sloping inner tank bottom for easy cleaning and drainage</li> <li>→ Chamber dome with flexible height adjustment to ground surface</li> </ul> | <ul style="list-style-type: none"> <li>→ Pressure-tight pump chamber for floor-mounted or concealed floor installation</li> <li>→ Flexible thanks to freely selectable inlets</li> <li>→ Large tank volume</li> <li>→ WS ... Basic: including pipework, level control, switchgear and pump(s)</li> </ul>   |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Tank</li> <li>→ Mixer</li> <li>→ Tank cover with quick-release clamp and gasket</li> <li>→ Drainage pipe</li> <li>→ Manual water supply</li> <li>→ Operating and maintenance manual</li> </ul> <p>The version for fully automatic operation also contains:</p> <ul style="list-style-type: none"> <li>→ Automatic water supply</li> <li>→ Drainage pump</li> <li>→ Switchgear</li> </ul>                            | <ul style="list-style-type: none"> <li>→ Tank with height-adjustable chamber dome</li> <li>→ Quick-release clamp for chamber dome installation</li> <li>→ Sealable chamber cover, Class B 125/D 400</li> <li>→ Operating and maintenance manual</li> </ul> <p>The enhanced version also contains:</p> <ul style="list-style-type: none"> <li>→ Drainage pipe</li> </ul>      | <p>Wilо sewage pumps which can be used:</p> <ul style="list-style-type: none"> <li>→ DrainLift WS 40: Rexa UNI</li> <li>→ DrainLift WS 50: Rexa CUT</li> <li>→ DrainLift WS 40 Basic: Rexa MINI3</li> <li>→ DrainLift WS 50 Basic: Rexa MINI3/UNI</li> </ul>   |

| Series                  | Wilo-Port 600<br>Wilo-Port 800  | Wilo-DrainLift WS 1100  | Wilo-Flumen OPTI-TR 28-1 ... 40-1<br>Wilo-Flumen EXCEL-TRE 20 ... 40  |
|-------------------------|---|---|---|
| Product photo           |    |   |    |
| Construction            | Pump chamber with synthetic tank, as single or double-pump system   | Pump chamber with synthetic tank, as single- or double-pump system  | Direct driven submersible mixer   |
| Application             | Pumping of sewage containing faeces that cannot be returned to the sewer system using natural falls.  | Pumping of sewage containing faeces that cannot be returned to the sewer system using natural falls.  | Swirling of deposits and solids; destruction of floating sludge layers  |
| Duty chart              |   |   |   |
| Volume flow $Q_{max}$   |   |   | Max. thrust: 200 – 920 N  |
| Delivery head $H_{max}$ |   |   |   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Pressure port: R1¼, R1½</li> <li>→ Inlet connection: DN 100, DN 150, DN 200</li> <li>→ Discharge port pump: R1¼, R1½</li> <li>→ Gross volume: 340 ... 900 l</li> </ul>   | <ul style="list-style-type: none"> <li>→ Pressure port: G2</li> <li>→ Inlet connection: DN 150</li> <li>→ Discharge port: Rp1½, Rp2, Rp2½, DN 80</li> <li>→ Gross volume: 1215 l</li> </ul>                             | <ul style="list-style-type: none"> <li>→ Mains connection: 3~400 V, 50 Hz</li> <li>→ Immersed operating mode: S1</li> <li>→ Max. immersion depth: 20 m</li> <li>→ Fluid temperature: max. 40 °C</li> </ul>  |
| Special features        | <ul style="list-style-type: none"> <li>→ Universal use thanks to chamber extension up to 2.75 m</li> <li>→ Max. operational reliability: anti-buoyant without weights for ground water levels up to the surface of the ground</li> <li>→ Covers up to load class D 400</li> <li>→ Easy maintenance thanks to surface coupling</li> <li>→ Long service life thanks to chamber made of corrosion-free polyethylene</li> </ul> | <ul style="list-style-type: none"> <li>→ Flexible installation</li> <li>→ Anti-buoyant</li> <li>→ High stability</li> </ul>   | <ul style="list-style-type: none"> <li>→ Low clogging rate and reliable operation thanks to optimised hydraulics</li> <li>→ Low-wearing, due to the use of stainless steel precision-cast propellers with the lowest cavitation tendency</li> <li>→ A wide range of possible uses in diverse applications, even at high-interval running times</li> <li>→ Reduction of the energy and operating costs due to the standard use of IE3 motors (EXCEL-TRE) for the best possible thrust coefficient</li> </ul> |
| Equipment/function      | <p>Wilo sewage pumps which can be used:</p> <ul style="list-style-type: none"> <li>→ Drain TMW 32</li> <li>→ Drain TS 40</li> <li>→ Drain TC 40</li> <li>→ Drain STS 40</li> <li>→ Drain MTC</li> <li>→ Rexa CUT</li> </ul>   | <p>Wilo sewage pumps which can be used:</p> <ul style="list-style-type: none"> <li>→ Drain TS 40</li> <li>→ Rexa UNI</li> <li>→ Drain TP 80</li> <li>→ Rexa FIT/PRO</li> <li>→ Drain MTC</li> <li>→ Rexa CUT</li> </ul> | <ul style="list-style-type: none"> <li>→ Stationary installation on wall and floor</li> <li>→ Flexible installation through the use of lowering device or special pipe attachment</li> <li>→ Can be swivelled vertically and horizontally when installed with a lowering device</li> </ul>  |

| Series                  | Wilo-EMU TR/TRE 50-2 to TR 120-1   | Wilo-EMU TR/TRE 212 to TR/TRE 326-3  | Wilo-EMU RZP 20 to RZP 80-2   |
|-------------------------|--|--|---|
| Product photo           |   |   |    |
| Construction            | Submersible mixer with single-stage planetary gear   | Submersible mixer with two-stage planetary gear  | Submersible mixers with housing unit, directly driven or with single-stage planetary gear   |
| Application             | Flow generation, suspension of solids, homogenisation and prevention of floating sludge layers   | Energetically optimised mixing and circulation of activated sludge; generation of flow rates   | <ul style="list-style-type: none"> <li>→ Pumping of large volume flows of wastewater and sewage</li> <li>→ Flow generation in water channels</li> </ul>   |
| Duty chart              |   |  |   |
| Volume flow $Q_{max}$   | Max. thrust: 160 – 6620 N  | Max. thrust: 390 – 4310 N  | 6,800 m <sup>3</sup> /h   |
| Delivery head $H_{max}$ | 1.1 m  |  |   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Mains connection: 3~400 V, 50 Hz</li> <li>→ Immersed operating mode: S1</li> <li>→ Max. immersion depth: 20 m</li> <li>→ Fluid temperature: max. 40 °C</li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains connection: 3~400 V, 50 Hz</li> <li>→ Immersed operating mode: S1</li> <li>→ Max. immersion depth: 20 m</li> <li>→ Fluid temperature: max. 40 °C</li> </ul>   | <ul style="list-style-type: none"> <li>→ Mains connection: 3~400 V, 50 Hz</li> <li>→ Immersed operating mode: S1</li> <li>→ Max. immersion depth: 20 m</li> <li>→ Fluid temperature: max. 40 °C</li> </ul>      |
| Special features        | <ul style="list-style-type: none"> <li>→ Secures your processes. The large planetary gear ensures that the mixing forces are absorbed efficiently.</li> <li>→ Efficient energy usage. The innovative blade geometry and energy-efficient IE3/IE4 motors ensures the best possible specific thrust coefficient.</li> <li>→ Works reliably. Thanks to entwining-free operation with backward-curved incoming flow edge.</li> </ul> | <ul style="list-style-type: none"> <li>→ Efficient energy usage. The innovative blade geometry and energy-efficient IE3/IE4 motors ensure the best possible specific thrust coefficient.</li> <li>→ Consistently reliable. The low-wearing GFK/PA6 propeller is durable and scores with its self-cleaning effect.</li> <li>→ Smooth running thanks to the balanced propeller load, even in high thrust ranges and when incoming flow conditions are unfavourable.</li> </ul> | <ul style="list-style-type: none"> <li>→ Vertical or in-line installation possible</li> <li>→ Self-cleaning propeller to avoid clogging</li> <li>→ Propeller in steel or PUR</li> </ul>                         |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Stationary installation on walls</li> <li>→ Flexible installation via lowering device</li> <li>→ Can be swivelled horizontally when installed with a lowering device</li> <li>→ Installation with stand allows free placement in basin</li> </ul>   | <ul style="list-style-type: none"> <li>→ Installation with stand allows free placement in basin</li> <li>→ Flexible installation</li> </ul>  | <ul style="list-style-type: none"> <li>→ Stationary installation directly on the pipe work</li> <li>→ Flexible installation via lowering device</li> <li>→ Vertical or in-line installation possible</li> </ul> |

| Series                  | Wilo-Vardo WEEDLESS  | Wilo-ELASTOX-D 09  | Wilo-ELASTOX-D 12  |
|-------------------------|--|--|--|
| Product photo           |   |    |   |
| Construction            | Vertical mixer with standard gear motor  | Aeration system consisting of disc diffuser and pipe system to distribute the pressure.  | Aeration system consisting of disc diffuser and pipe system to distribute the pressure.  |
| Application             | Energetically optimised mixing and circulation   | For fine bubble air intake in various fluids such as drainage, sewage or sludge  | For fine bubble air intake in various fluids such as drainage, sewage or sludge  |
| Duty chart              |  |  |  |
| Volume flow $Q_{max}$   | Max. thrust: 6000 N  |  |  |
| Delivery head $H_{max}$ | Max. circulation capacity: 7.5 m <sup>3</sup> /s   |  |  |
| Technical data          | <ul style="list-style-type: none"> <li>→ Propeller diameter: 2.50 m ... 1.50 m</li> <li>→ Diameter of mixer shaft: 70 ... 114 mm</li> <li>→ Shaft length: from 2 m</li> <li>→ Fluid temperature: 3 ... 40 °C</li> </ul>  | <ul style="list-style-type: none"> <li>→ Perforation area: 370 cm<sup>2</sup></li> <li>→ Air load: 1.5 ... 10 Nm<sup>3</sup>/h</li> <li>→ Temperature, air intake: 5 ... 100 °C</li> <li>→ Fluid temperature: 5 ... 35 °C</li> </ul>   | <ul style="list-style-type: none"> <li>→ Perforation area: 650 cm<sup>2</sup></li> <li>→ Air load: 1.2 ... 12 Nm<sup>3</sup>/h</li> <li>→ Temp. Air intake: 5 ... 80 °C</li> <li>→ Fluid temperature: 5 ... 35 °C</li> </ul>   |
| Special features        | <ul style="list-style-type: none"> <li>→ Optimum agitation in basin with square or rectangular floor plan</li> <li>→ Operational reliability owing to wear-resistant propeller</li> <li>→ Easy installation for existing systems</li> <li>→ Floating version for basins with alternating water levels</li> </ul> | <ul style="list-style-type: none"> <li>→ High system efficiency owing to high aeration capacity</li> <li>→ High level of flexibility thanks to the broad control range of the air intake</li> <li>→ Greatest-possible activation density across a large variety of basin geometries</li> <li>→ Long service life thanks to the use of different diaphragm materials</li> </ul> | <ul style="list-style-type: none"> <li>→ The specialised construction prevents the medium from entering the pipe system</li> <li>→ Optimal air intake thanks to three different perforation patterns</li> <li>→ Greatest-possible activation density across a large variety of basin geometries</li> <li>→ Air intake with a very broad control range</li> </ul> |
| Equipment/function      | <ul style="list-style-type: none"> <li>Version with</li> <li>→ Float for floating installation</li> <li>→ Two propeller platforms</li> <li>→ Ex rating</li> <li>→ Integrated frequency converter</li> </ul>  | <ul style="list-style-type: none"> <li>→ Downspout connection</li> <li>→ Main distribution line</li> <li>→ Diffuser line</li> <li>→ End distribution line</li> <li>→ Drainage pipe connection</li> <li>→ Membrane diffuser</li> <li>→ Fastening for pipe system</li> <li>→ Overview and layout</li> </ul>  | <ul style="list-style-type: none"> <li>→ Downspout connection</li> <li>→ Main distribution line</li> <li>→ Diffuser line</li> <li>→ End distribution line</li> <li>→ Drainage pipe connection</li> <li>→ Membrane diffuser</li> <li>→ Fastening for pipe system</li> <li>→ Overview and layout</li> </ul>  |

| Series                  | Wilo-ELASTOX-P   | Wilo-ELASTOX-S  | Wilo-ELASTOX-T  |
|-------------------------|--|---|---|
| Product photo           |   |    |    |
| Construction            | Aeration system consisting of plate diffuser and pipe system to distribute the pressure.   | Aeration system consisting of panel diffuser and pipe system to distribute the pressure.  | Aeration system consisting of tube diffuser and pipe system to distribute the pressure.   |
| Application             | For fine bubble air intake in various fluids such as drainage, sewage or sludge  | For fine bubble air intake in various fluids such as drainage, sewage or sludge   | For fine bubble air intake in various fluids such as drainage, sewage or sludge   |
| Duty chart              |  |   |   |
| Volume flow $Q_{max}$   |  |   |   |
| Delivery head $H_{max}$ |  |   |   |
| Technical data          | <ul style="list-style-type: none"> <li>→ Perforation area: 1200 cm<sup>2</sup></li> <li>→ Air load: 3.0 ... 12 Nm<sup>3</sup>/h</li> <li>→ Temperature, air intake: 5 ... 80 °C</li> <li>→ Fluid temperature: 5 ... 35 °C</li> </ul>   | <ul style="list-style-type: none"> <li>→ Perforation area: 2400 ... 6400 cm<sup>2</sup></li> <li>→ Air load: 2.0 ... 19 Nm<sup>3</sup>/h</li> <li>→ Temperature, air intake: 5 ... 60 °C</li> <li>→ Fluid temperature: 5 ... 35 °C</li> </ul>   | <ul style="list-style-type: none"> <li>→ Perforation area: 640 ... 1600 cm<sup>2</sup></li> <li>→ Air load: 1.5 ... 10 Nm<sup>3</sup>/h*m</li> <li>→ Temperature, air intake: 5 ... 80 °C</li> <li>→ Fluid temperature: 5 ... 35 °C</li> </ul>  |
| Special features        | <ul style="list-style-type: none"> <li>→ Increased operational reliability thanks to lift restriction of the diaphragm</li> <li>→ Greater air intake resulting from the high specific airflow rate</li> <li>→ Low specific piping requirements thanks to paired installation</li> <li>→ High quality and service life of the diaphragms owing to the production of moulded products</li> </ul> | <ul style="list-style-type: none"> <li>→ Optimum energy efficiency thanks to the microperforations and large diaphragm surface</li> <li>→ High system efficiency due to the increased dwell time of the oxygen</li> <li>→ Process reliability provided by the low-wearing, blockage-free diaphragm</li> <li>→ High operational reliability, thanks to division into small aeration fields</li> <li>→ High system control flexibility</li> </ul> | <ul style="list-style-type: none"> <li>• High configuration flexibility as a result of the range of lengths and the broad control range of the air intake</li> <li>• Low-buoyancy behaviour</li> <li>• Low specific piping requirements thanks to paired installation</li> </ul>                          |
| Equipment/function      | <ul style="list-style-type: none"> <li>→ Downspout connection</li> <li>→ Main distribution line</li> <li>→ Diffuser line</li> <li>→ End distribution line</li> <li>→ Drainage pipe connection</li> <li>→ Membrane diffuser</li> <li>→ Fastening for pipe system</li> <li>→ Overview and layout</li> </ul>  | <ul style="list-style-type: none"> <li>→ Downspout connection</li> <li>→ Main distribution line</li> <li>→ Diffuser line</li> <li>→ End distribution line</li> <li>→ Drainage pipe connection</li> <li>→ Membrane diffuser</li> <li>→ Fastening for pipe system</li> <li>→ Overview and layout</li> </ul>   | <ul style="list-style-type: none"> <li>→ Downspout connection</li> <li>→ Main distribution line</li> <li>→ Diffuser line</li> <li>→ End distribution line</li> <li>→ Drainage pipe connection</li> <li>→ Membrane diffuser</li> <li>→ Fastening for pipe system</li> <li>→ Overview and layout</li> </ul> |

## Series

## Wilo-Savus OPTI-DECA

## Product photo



## Construction

A positive control discharge unit that is decoupled from the fluid

## Application

Unit to effectively discharge clear water in SBR systems

## Duty chart

Volume flow  $Q_{max}$ Delivery head  $H_{max}$ 

## Technical data

- Drainage quantity: 200 ... 1000 m<sup>3</sup>/h
  - Discharge pipe: DN 200 ... DN 300
  - Drain pipe: DN 200 ... DN 400
- Drainage quantities greater than 1000 m<sup>3</sup>/h upon request.

## Special features

- Effective and safe clear water removal to ensure the sewage is cleaned to a high quality
- High process reliability owing to permanently installed system which is decoupled from the fluid
- No contamination thanks to process-related cycling of the decanting process
- Individually system-tailored design

## Equipment/function

- Discharge and drainage unit, joint, wall bracket and supports
- Electric winch

# PRACTICAL SUPPORT FOR YOUR DAILY WORK.

## ALWAYS AT YOUR SIDE: WILO SERVICES.

We work hard to make your life easier. That is why our range is not only limited to high-quality products and systems that you can count on at any time. We also provide intelligent services for all project phases, from design and configuration through to commissioning and maintenance. We keep you informed about the very latest technologies and trends and provide attractive options for project financing. We are always available – with personal, competent and local services in over 60 countries and more than 2,500 Wilo engineers worldwide.



## OUR SERVICE FOR YOU – FROM CONSULTING TO MAINTENANCE.

### Wilo-Energy Solutions

For greater economy and sustainability: Wilo-Energy Solutions helps customers be proactive in replacing uncontrolled pumps that are currently in operation with Wilo high-efficiency pumps. This allows you to reduce electricity costs for pumps in your buildings by up to 90 percent. We offer targeted consulting and analysis to give you an overview of potential savings, necessary investments and amortisation periods. And we provide comprehensive support during the transition to high-efficiency technology solutions.

### Try & Buy

Investments require a great deal of planning. Product reliability and efficient operation are always central considerations. But how do you make the right decision? Wilo's unique service can help. Try & Buy allows you to experience the quality of Wilo products for yourself before buying. Test our products\* in your own system, and invest reliably in the future. Please note that Try & Buy is not available in all subsidiaries. Enquire with your local Wilo partner about options for using this service.

### WiloCare

With WiloCare your cost security and operational reliability are ensured. The service package provides you with monthly reports on the current status of your system, energy consumption, possible optimisation measures and pending maintenance intervals. Individual options can be adjusted precisely to your requirements, all at a fixed monthly price. Choose the version that fits you best: Basic, Comfort or Premium.



\*Ask us what series available

## OUR TOOLS AND TRAINING: COMPREHENSIVE AND PRACTICE-ORIENTATED.

We are there for you worldwide, 365 days a year. With over 2,500 technicians, our teams assist you in over 60 countries – not just to meet your needs and requirements but to exceed them whenever possible. A phone call is all it takes and we'll initiate all the necessary steps – quickly, professionally and in direct coordination with you. Our service pledge holds for the entire life cycle of your Wilo products. Because you can always rely on Wilo.

### DESIGN AND SELECTION

We want you to find the perfect solution for your requirements. That's why we provide personal consulting before your purchase to help you find the best and most economical product solution.

#### Our services at a glance:

- On-site support
- Wilo-Select pump design software
- Installation drawings
- Convenient integration of our product data into the BIM model for optimal consulting support
- Efficiency checks to determine the economic efficiency of existing pumps and suitable replacement pumps



### SERVICE

Wilo has a long tradition of collaborating with installers and plant engineers. Service is an essential component of this partnership. We collaborate to develop a service concept tailored to your individual needs – with our expertise and personal consulting, we make sure that the operation of your systems is as energy-efficient, reliable and economical as possible. All the while, our competent Wilo service technicians are ready to assist you with fast, reliable and on-time support.

#### Our services at a glance:

- Rapid repair service
- Commissioning
- Customised, reliable maintenance concepts
- Optimisation and replacement
- Fast spare parts solutions
- Service packages

### TRAINING AND SEMINARS

We want you to be able to use innovative technologies and products from Wilo optimally and integrate them perfectly into your working process. With this goal in mind, we offer expert-led seminars designed for the specific needs and applications of your industry. Expand your knowledge and put our expertise to work for you. Our seminars also give you the opportunity to exchange ideas with industry colleagues. We also develop company seminars for your particular requirements.

#### Our services at a glance:

- Practically orientated product and system seminars
- Instructors with long-term practical experience
- Ideal space for meeting colleagues and exchanging ideas
- Dialogue-based training concepts for active learning
- Wilo-Brain qualification
- System consulting



# GREEN SOLUTIONS FOR A BETTER CLIMATE.





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