

### **General Overview 2023**

Our solutions for Heating, Air conditioning, Cooling, Water supply and Drainage and sewage.

### Move water. Move the future. Join the ecolution.



## innovation ecologic ecolution

revolution economic solution

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For 150 years Wilo has moved water to move towards a better future. We know what it takes to tackle today's challenges and to drive tomorrow's trends. Our products, systems, solutions and services help you to:

- increase operational reliability,
- exceed environmental requirements,
- increase energy efficiency,
- simplify commissioning.

Experience our high-efficiency pumps for residential and commercial buildings. Learn more about intelligent product features like the setting assistant, Multi-Flow Adaptation or continuous temperature monitoring. And see for yourself how easy and convenient remote access is via the Wilo-Assistant app and various communication interfaces – even when you're on the move.

# Join the ecolution.

## Enhance energy efficiency

Optimise the efficiency of your pump system with the "Multi–Flow Adaptation" control mode and save up to 80% energy.



Series	Wilo-Stratos PICO	Wilo-Yonos PICO Wilo-Yonos PICO-D	Wilo-Yonos PICO1.0
Design	Glandless circulator with screwed con- nection, EC motor with automatic power adjustment	Glandless circulator with screwed con- nection, EC motor with automatic power adjustment	Glandless circulator with screwed con- nection, EC motor with 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
Duty chart	H/m 8 /0,5-8 4 /0,5-6 /0,5-6 /0,5-6 /0,5-4	H/m Vonos PICO Vonos PICO-D Vonos PICO-D	H/m 7 6 5 4 3 2 1 0 0 1 2 3 4 2 4 0 0 1 2 3 4 2 0 m <sup>3</sup> /h
Volume flow Q <sub>max</sub>	4.8 m³/h	7 m³/h	4.8 m <sup>3</sup> /h
Delivery head H <sub>max</sub>	8 m	8 m	8 m
Technical data	<ul> <li>→ Fluid temperature -10 °C to +110 °C</li> <li>→ Mains connection 1~230 V, 50/60 Hz</li> <li>→ Energy efficiency index (EEI) ≤ 0.18 (Stratos PICO/0.5-8 ≤ 0.23)</li> <li>→ Screwed connection Rp ½, Rp 1, Rp 1¼</li> <li>→ Max. operating pressure 10 bar</li> </ul>	<ul> <li>→ Fluid temperature -10 °C to +95 °C</li> <li>→ Mains connection 1~230 V, 50/60 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> <li>→ Fluid temperature -10 °C to +95 °C</li> <li>→ Mains connection 1~230 V, 50/60 Hz</li> <li>→ Energy efficiency index (EEI) ≤ 0.20 (Yonos PICO/1-8 ≤ 0.23)</li> <li>→ Protection class IPX4D</li> <li>→ Screwed connection Rp ½, Rp 1, Rp 1¼</li> <li>→ Max. operating pressure 10 bar</li> </ul>
Special features	<ul> <li>→ Easy to operate thanks to setting assistant, large display and Green Button Technology</li> <li>→ Maximum energy efficiency through EC motor, Dynamic Adapt plus and precise settings</li> <li>→ Optional: Operation with mobile devices via Bluetooth with Wilo-Smart Connect module BT</li> <li>→ High level of reliability thanks to self-protection routines such as dryrunning protection and restart</li> <li>→ Monitoring of current flow, delivery head, electricity consumption and kilowatt hours consumed</li> </ul>	<ul> <li>→ Maximum operating convenience with new intelligent settings, intuitive user interfaces and new functions</li> <li>→ Optimised energy efficiency thanks to EC motor technology, precise settings of 0.1 m</li> <li>→ Quick installation/replacement thanks to improved, compact design</li> <li>→ Easier maintenance thanks to au- tomatically and manually triggered restart or pump venting functions</li> </ul>	<ul> <li>Maximum operating convenience with intuitive user interfaces</li> <li>Optimised energy efficiency thanks to EC motor technology, precise settings of 0.1 m and display of current power consumption</li> <li>Quick installation/replacement thanks to improved, optimised design</li> <li>Easy maintenance and high degree of operational reliability due to auto- matically triggered restart or manual air venting function</li> <li>Maximum operational reliability based on proven technology</li> </ul>
Equipment/ function	<ul> <li>Control mode: Dynamic Adapt plus, Δp-v, Δp-c, n-constant</li> <li>Setting assistant for number of radiators or surface area of underfloor heating</li> <li>Automatic setback operation; vent- ing routine; restart and dry-running protection</li> <li>Current values displayed for power consumption, flow, delivery head, speed and energy consumption</li> <li>Function for resetting the electricity meter or restoring factory settings</li> <li>Key lock</li> <li>Wilo-Connectivity interface for exter- nal modules</li> <li>Wilo-Connector</li> </ul>	<ul> <li>Control modes: Δp-c, Δp-v and constant speed (3 characteristic curves)</li> <li>Setting of operating mode according to application, delivery head or constant speed</li> <li>Automatic deblocking function</li> <li>Manual restart and pump venting function</li> <li>LED display for setting the setpoint, displaying current consumption and flow</li> <li>Wilo-Connector</li> <li>Twin-head pump for individual (Δp-c, Δp-v, 3 speed stages) or parallel operation (Δp-c, 3 speed stages)</li> </ul>	<ul> <li>→ Control modes: Δp-c and Δp-v</li> <li>→ Setting of operating mode according to application, delivery head</li> <li>→ Manual air venting function</li> <li>→ Automatic deblocking function</li> <li>→ LED display for setting the setpoint; displaying current consumption, error codes and activated air venting function</li> <li>→ Wilo-Connector</li> </ul>

Series	Wilo-Varios PICO-STG	Wilo-Yonos ECOBMS	Wilo-Stratos MAXO Wilo-Stratos MAXO-D
		to be discontinued	
Design	Glandless circulator with screwed con- nection, EC motor and automatic power adjustment	Glandless circulator with screwed con- nection, EC motor and automatic power adjustment	Smart glandless circulator with screwed connection or flange connection, EC mo- tor with integrated power adjustment
Application	Hot-water heating systems of all kinds, air-conditioning applications, industrial circulation systems, primary circuits of solar and geothermal 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	H/m 14 12 10 15/1-13 15/1	H/m 5 4 3 2 Yonos ECO 25, 30/1-5 BMS 1 0 0 0,5 1,0 1,5 2,0 2,5 Q/m³/h	H/m 16 14 12 14 12 14 12 14 12 14 12 14 12 14 12 14 12 14 14 12 14 14 12 14 14 12 14 14 14 14 14 14 14 14 14 14
Volume flow <i>Q<sub>max</sub></i>	4.4 m³/h	3 m³/h	112 m³/h
Delivery head H <sub>max</sub>	13 m	5 m	16 m
Technical data	<ul> <li>→ Fluid temperature: -20 °C to +110 °C</li> <li>→ Mains connection 1~230 V, 50/60 Hz</li> <li>→ Energy Efficiency Index (EEI): 7 m: ≤ 0.20, 8 m / 13 m: ≤ 0.23</li> <li>→ Screwed connection Rp ½, Rp 1, Rp 1¼</li> <li>→ Max. operating pressure 10 bar</li> </ul>	<ul> <li>→ Fluid temperature -10 °C to +110 °C</li> <li>→ Mains connection: 1~230 V, 50/60 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> <li>→ Fluid temperature -10 °C to +110 °C</li> <li>→ Mains connection: 1~230 V, 50/60 Hz</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> <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 func- tions like air venting</li> </ul>	<ul> <li>→ Potential-free collective fault signal (SSM) for connection to external monitoring unit (e.g. building auto- mation) and control input 0-10 V</li> <li>→ Control cable (4-core, 1.5 m) for con- necting SSM and 0-10 V</li> <li>→ Wilo-Connector</li> <li>→ Thermal insulation as standard</li> <li>→ Pump housing with cataphoretic coating protects against corrosion due to condensation formation</li> </ul>	<ul> <li>Intuitive operation by guided application settings with the setting assistant</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>
Equipment/ function	<ul> <li>Control modes: 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>	<ul> <li>Control modes: Δp-c, Δp-v and manual control mode (n = constant)</li> <li>Control input "Analogue 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 con- necting SSM and 0-10 V</li> <li>Wilo-Connector</li> <li>Deblocking function</li> </ul>	<ul> <li>Control modes: 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 inter- face</li> <li>Selection of application-based pre- settings in the setting assistant</li> <li>Cooling/heat quantity measurement</li> <li>Dual pump management</li> <li>Retrofittable interface modules for communication</li> </ul>

Series	Wilo-Yonos MAXO Wilo-Yonos MAXO-D	Stratos GIGA2.0–I Stratos GIGA2.0–D	Wilo-Stratos GIGA Wilo-Stratos GIGA-D
		Series extension	
Design	Glandless circulator with screwed con- nection or flange connection, EC motor and automatic power adjustment	High-efficiency in-line pump (as single or twin-head pump) with EC motor, elec- tronically controlled, in glanded design with flange connection and mechanical seal	High-efficiency in-line pump (as single or twin-head pump) with EC motor, elec- tronically controlled, in glanded design with flange connection and mechanical seal
Application	Hot-water heating systems of all kinds, air-conditioning systems, closed cooling circuits, industrial circulation 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	H/m 16 14 12 10 10 14 12 10 10 10 10 10 10 10 10 10 10	H/m 35 30 25 20 15 10 50 50 100 150 200 20	H/m 60 50 40 30 20 10 0 100 200 300 400 500 40 500 40 500 40 500 40 500 40 500 40 500 40 500 40 500 40 500 50
Volume flow Q <sub>max</sub>	56 m³/h	260 m³/h	680 m³/h
Delivery head H <sub>max</sub>	16 m	37 m	65 m
Technical data	<ul> <li>→ Fluid temperature -20 °C to +110 °C</li> <li>→ Mains connection 1~230 V, 50/60 Hz</li> <li>→ Energy Efficiency Index (EEI) ≤ 0.20 (EEI ≤ 0.23 for twin-head pumps)</li> <li>→ Nominal diameter Rp 1 to DN 100</li> <li>→ Max. operating pressure 10 bar</li> </ul>	→ Fluid temperature -20 °C to +140 °C → Ambient temperature to +50 °CMains connection: $3\sim440 V \pm 10\%$ , $50/60 Hz$ , $3\sim400 V \pm 10\%$ , $50/60 Hz$ , $3\sim380 V$ -5% +10%, $50/60 Hz- Version M-: 1\sim220 V \dots 240 V\pm 10\%, 50/60 Hz→ Minimum efficiency index (MEI) \ge 0.7→ Nominal diameter DN 40 to DN 125→ Max. operating pressure 16 bar up to+120$ °C, 13 bar up to $+140$ °C	<ul> <li>→ Fluid temperature -20 °C to +140 °C</li> <li>→ Mains connection: 3~380 V - 3~440 V (±10 %), 50/60 Hz</li> <li>→ Minimum efficiency index (MEI): from 11 kW up to 22 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>
Special features	<ul> <li>→ LED display for indication of set delivery head and error 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 cataphoretic (KTL) coating protects against corrosion due to condensation</li> </ul>	<ul> <li>→ High-efficiency EC motor with efficiency class IE5 acc. IEC 60034-30-2</li> <li>→ Optimal control through application-guided setting assistant</li> <li>→ Innovative controlling functions such as Dynamic Adapt plus and Multi-Flow Adaption</li> <li>→ Remote access and multi-pump control via Wilo Net</li> <li>→ Highest operational data transparency for optimisation of the pump and overall system</li> </ul>	<ul> <li>→ Innovative high-efficiency pump for maximum overall efficiency</li> <li>→ High-efficiency EC motor with effi- ciency class IE5 acc. IEC 60034-30-2</li> <li>→ Optional IF module interfaces for bus communication with building automa- tion</li> </ul>
Equipment/ function	<ul> <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 32 to DN 65)</li> <li>→ Retrofitable interface module (Connect module) for connection to building automation</li> </ul>	<ul> <li>Control modes: 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 the field of application in the setting assistant</li> <li>Heating and cooling quantity meas- urement</li> <li>Dual pump management</li> <li>Retrofitable interface modules for communication</li> </ul>	<ul> <li>Control modes: Δp-c, Δp-v, PID control, n-const</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 cyclical pump alteration (twin-head pump operation) analogue input 0-10 V / 0-20 mA for constant speed (DDC)</li> <li>Remote control via infrared interface (IR-Stick), plug position for IF modules for connection to building automation</li> </ul>

Series	Wilo-Stratos GIGA B	Yonos GIGA2.0-I Yonos GIGA2.0-D	Wilo-CronoLine-IL-E Wilo-CronoTwin-DL-E
	Series extension	Series extension	
Design	High-efficiency monobloc pump with EC motor and electronic power adjustment in glanded pump design, with flange con- nection and mechanical seal	In-line pump with high energy efficiency (as single or twin-head pump) with EC motor, electronically controlled in glanded design with flange connection and mechanical seal.	Energy–saving glanded pump (as single or twin–head pump) in in–line design. 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 hot water/cold water/cool- ing systems	Pumping of heating water, cold water and water-glycol mixtures without abrasive substances in heating, cold water and cooling systems
Duty chart	H/m 80 60 40 20 0 100 200 300 400 50/60 Hz 50/60 Hz 40 50/60 Hz 50/60 Hz 40 50/60 Hz 50/60 Hz 50/6	H/m 35 30 25 20 15 10 50 50 100 150 200 250 200 250 200 250 200 250 200 250 200 250 200 250 200 250 200 250 200 250 25	H/m 60 50 40 30 20 CronoLine-IL-E Wilo-CronoTwin-DL-E CronoTwin-DL-E CronoTwin-DL-E 0 0 0 0 0 0 0 0 0 0 0 0 0
Volume flow $Q_{max}$	520 m³/h	260 m³/h	800 m³/h
Delivery head H <sub>max</sub>	92 m	20 m	65 m
Technical data	<ul> <li>→ Fluid temperature -20 °C to +140 °C</li> <li>→ Mains connection: 3~380 V -3~440 V (±10 %), 50/60 Hz</li> <li>→ Minimum efficiency index (MEI): up to 6.0 kW: MEI ≥ 0.7, from 11 kW: MEI ≥ 0.4</li> <li>→ Nominal diameter DN 32 to DN 150</li> <li>→ Max. operating pressure 16 bar up to +120 °C, 13 bar up to +140 °C</li> </ul>	→ Fluid temperature -20 °C to +120 °C → Ambient temperature to +50 °CMains connection 3~440 V ±10 %, 50/60 Hz, 3~400 V ±10 %, 50/60 Hz, 3~380 V -5 % +10 %, 50/60 Hz - Variant M-: 1~220 V 240 V ±10 %, 50/60 Hz → Minimum energy efficiency (MEI): $\ge$ 0.4 → Nominal diameter DN 32 to DN 125 → Max. operating pressure 16 bar up to +120 °C	<ul> <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 200</li> <li>→ Max. operating pressure 16 bar up to +120 °C, 13 bar up to +140 °C</li> </ul>
Special features	<ul> <li>→ Innovative high-efficiency pump for maximum total-system efficiency, with principal dimensions in accord- ance 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> <li>→ High energy efficiency thanks to IE5 EC motor technology and proven pump hydraulics (MEI ≥0.4)</li> <li>→ Easy to use with clear menu naviga- tion, colour display and Green Button Technology</li> <li>→ High reliability thanks to innovative drive technology and proven pump hydraulics</li> <li>→ Ready for integration into building automation systems via analogue and digital interface and CIF module</li> </ul>	<ul> <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> <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 cyclical pump cycling, analogue input 0-10 V / 0-20 mA for constant speed (DDC)</li> <li>Remote control via infrared interface (IR-Stick), plug position for IF modules for connection to building automation</li> </ul>	<ul> <li>→ Control mode: Δp-c, Δp-v, n-const, user-defined PID control</li> <li>→ Dual pump management</li> <li>→ Retrofittable interface modules for communication</li> </ul>	<ul> <li>→ Control modes: Δp-c, Δp-v, PID control, n-const</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 cyclical pump cycling (twin-head pump operation), analogue input 0-10 V /0-20 mA for constant speed (DDC)</li> <li>→ Remote control via infrared interface (IR-Stick), plug position for IF modules for connection to building automation</li> </ul>

Series	Wilo-CronoBloc-BL-E	Wilo-VeroLine-IPL Wilo-VeroTwin-DPL	Wilo-Atmos GIGA-I CronoTwin-DL
	Series extension		NEW OF
Design	Energy-saving pump in monobloc design in glanded construction. Version as single-stage low-pressure centrifugal pump with flange connection and me- chanical seal	Glanded pump/twin-head pump in in-line design with screwed connection or flange connection	Glanded pump (as single pump or twin- head pump) in in-line 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	Pumping of heating water, cold water and water-glycol mixtures without abrasive substances in heating, cold water and cooling systems	Easy maintenance and user-friendly design with optional back pull-out design and cartridge mechanical seal for large pumps
Duty chart	H/m 80 70 60 50 40 30 20 10 50 100 150 200 250 300 Q/m <sup>3</sup> /h	H/m 50 40 30 20 10 0 50 100 150 2000/m³/h	H/m 100 80 60 40 20 0 200 400 60 40 0 200 400 60 80 100 80 100 80 100 80 100 10
Volume flow $Q_{max}$	520 m³/h	245 m³/h	1,170 m³/h
Delivery head H <sub>max</sub>	92 m	52 m	110 m
Technical data	<ul> <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 up to +120 °C, 13 bar up to +140 °C</li> </ul>	<ul> <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>	<ul> <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 up to +120 °C, 13 bar up to +140 °C (25 bar on request)</li> </ul>
Special features	<ul> <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> <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>	<ul> <li>Can be used flexibly in air-conditioning and cooling systems, with applica- tion benefits due to direct draining of condensate</li> <li>High standard of corrosion protection</li> <li>Worldwide availability of standard mo- tors (according to Wilo specifications) and standard mechanical seals</li> <li>Main/standby mode or peak-load op- eration (by means of external auxiliary device)</li> </ul>
Equipment/ function	<ul> <li>Control modes: Δp-c, Δp-v, PID control, n-const</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), plug position for IF modules for connection to building automation</li> </ul>	<ul> <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 ¼</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>	<ul> <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>

Series	Wilo-VeroLine-IPH-W Wilo-VeroLine-IPH-O	Wilo-Atmos GIGA-B	Wilo-BAC
	to be discontinued	Series extension	Series extension
Design	Glanded pump in in–line design with flange connection	Glanded pump in monobloc design with flange connection	Glanded pump in monobloc design with Victaulic connection
Application	IPH–W: For hot water in closed industrial circulation systems, district heating, closed heating systems 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 hot water/cold water/cool- ing systems	For pumping of cooling water, cold water, water-glycol mixtures and other fluids without abrasive substances
Duty chart	H/m 35 30 25 20 15 0 0 10 20 30 40 50 60 Q/m <sup>3</sup> /h	H/m 140 120 100 80 60 40 200 200 400 600 800 Q/m <sup>3</sup> /h	H/m 25 20 15 10 5 0 10 20 30 40 50 60 70 Q/m <sup>3</sup> /h
Volume flow <i>Q</i> <sub>max</sub>	80 m³/h	1010 m	81 m³/h
Delivery head H <sub>max</sub>	38 m	158 m	25 m
Technical data	<ul> <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> <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 up to +120 °C, 13 bar up to +140 °C (25 bar on request)</li> </ul>	<ul> <li>→ Fluid temperature -15 °C +60 °C (BAC70), to +90 °C (BAC50)</li> <li>→ Mains connection 3~400 V, 50 Hz (others on request)</li> <li>→ Minimum efficiency index (MEI) ≥ 0.4</li> <li>→ Victaulic connection: DN 50: 60.3 mm; DN 65: 76.1 mm</li> <li>→ Max. operating pressure 10 bar: BAC50; 6.5 bar: BAC70</li> </ul>
Special features	<ul> <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> <li>→ High corrosion protection through cataphoretic 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 specifica- tions) and standard mechanical seals</li> <li>→ Power and main dimensions in accord- ance with EN 733</li> </ul>	<ul> <li>Pump housing in composit or grey cast iron version</li> <li>Victaulic connection for quick instal- lation</li> <li>Optimised pump dimensions for flex- ibility during replacement</li> <li>High reliability thanks to top-quality mechanical seal and bearing</li> <li>optional: Maximum comfort with electrical connection thanks to quick connection plug</li> </ul>
Equipment/ function	<ul> <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>	Single-stage low-pressure centrifugal pump in monobloc design, with axial suc- tion port and radially arranged pressure port with → Mechanical seal → Flange connection with pressure measuring connection R <sup>1</sup> /8 → Lantern → Pump housing with feet → Coupling → IEC standard motor	<ul> <li>→ Single-stage low-pressure centrifugal pump in monobloc design, with axial suction port and radially arranged pres- sure port</li> <li>→ Motors with efficiency class IE3</li> </ul>

Series	Wilo-Yonos GIGA-N	Wilo-Atmos GIGA-N	Wilo–Atmos GIGA–NHT
			NEW
Design	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	Single-stage, low-pressure centrifugal pump with axial suction, mounted on a baseplate
Application	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 cool- ing systems	Pumping of water in hot-water heating systems, cooling and chilled water circula- tion systems, district heating loops and industrial water cycles up to 200 °C, and in industrial heat carrier oil circuit systems up to 350 °C
Duty chart	H/m 70 60 50 40 30 20 10 0 100 200 300 400 500Q/m³/h	H/m 200 150 100 50 30 20 30 50 30 4,56 810 20 30 50 100150 600Q/m³/h	
Volume flow Q <sub>max</sub>	520 m³/h	1000 m³/h	400 m³/h
Delivery head H <sub>max</sub>	70 m	150 m	100 m
Technical data	<ul> <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> <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>	<ul> <li>→ Fluid temperature:         <ul> <li>-20 °C +350 °C (heat carrier oil);</li> <li>0 °C +200 °C (water)</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 25 bar</li> </ul> </li> </ul>
Special features	<ul> <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 pullout design</li> <li>Optional interfaces for connection to building automation using insertable IF modules</li> </ul>	<ul> <li>Energy-saving thanks to increased overall efficiency through improved hydraulics and the use of IE3 motors</li> <li>Cataphoretic coating of all cast com- ponents for high corrosion resistance and long service life</li> <li>Universally usable thanks to stand- ardised dimensions, a range of motor options and impellers made of differ- ent materials</li> </ul>	<ul> <li>→ Self-cooled design, suitable for high temperature fluids</li> <li>→ Dry running risk minimized by clever sealing chamber design</li> <li>→ Reaching the MEI levels expected in EU markets</li> <li>→ PN 25 pressure rating following the standard EN733.</li> <li>→ Sleeve bearing close to the impeller minimizing the vibration level</li> <li>→ Additional protection of ball bearings by a lip seal</li> </ul>
Equipment/ function	<ul> <li>→ Control modes: Δp-c, PID control, n=constant</li> <li>→ Manual functions: E.g. differential pressure setpoint setting, manual con- trol mode, error acknowledgement</li> <li>→ External control functions: E.g. Over- riding Off, analogue input 0-10 V/0- 20 mA for constant speed (DDC)</li> <li>→ Remote control via infrared interface (IR-Stick), plug-in position for IF modules for connection to building automation</li> </ul>	<ul> <li>→ Single-stage low-pressure centrifu- gal pump in monobloc design with coupling, coupling guard, motor and baseplate</li> <li>→ Motors with efficiency class IE3</li> </ul>	<ul> <li>→ Single-stage low-pressure centrifugal pump as baseplate pump with coupling, coupling guard, motor and baseplate</li> <li>→ Motors with efficiency class IE3</li> <li>→ Completed for low duties by a In-line range for space saving</li> </ul>

Series	Wilo-CronoNorm-NLG Wilo-VeroNorm-NPG	Wilo–Atmos TERA–SCH	Wilo-SCP
Design	Single-stage low-pressure centrifugal pump with axial suction, according to ISO 5199, mounted on a baseplate	Axially spilt case pump mounted on a base frame	Low–pressure centrifugal pump with axi– ally 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 cool- ing systems.
Duty chart	H/m 140 120 100 80 60 40 20 500 1000 1500 2000 Q/m <sup>3</sup> /h	H/m 100 50 30 20 100 200 300 500 1000 2000 Q/m <sup>3</sup> /h	H/m 100 50 4 10 4 10 50 100 50 100 500 100 500 100 500 100 500 5
Volume flow <i>Q<sub>max</sub></i>	2,800 m³/h	4,675 m³/h	3,400 m³/h
Delivery head H <sub>max</sub>	140 m	150 m	245 m
Technical data	<ul> <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> <li>→ Fluid temperature -20 °C to +120 °C</li> <li>→ Mains connection 3~400 V, 50 Hz Nominal diameters</li> <li>- Suction side: DN 150 to DN 500</li> <li>- Discharge side: DN 150 to DN 400</li> <li>→ Max. operating pressure: PN 16, PN 25</li> </ul>	<ul> <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>→ Discharge side: DN 50 to DN 400</li> <li>→ Max. operating pressure: 16 or 25 bar, depending on type</li> </ul>
Special features	<ul> <li>NLG:</li> <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> <li>NPG:</li> <li>→ Suitable for temperatures up to 140 °C</li> <li>→ Back pull-out version</li> </ul>	<ul> <li>Reduced energy costs through high overall efficiency</li> <li>Simplified alignment thanks to toler- ant 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 drinking water version</li> </ul>	<ul> <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> <li>Single-stage horizontal spiral hous- ing pump with bearing bracket and exchangeable casing wear rings (NLG only) in back pull-out 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> <li>Centrifugal axially split case pump, available in single-stage design</li> <li>Deliverable as complete unit or with- out 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> <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:</li> <li>Pump housing: EN-GJL-250</li> <li>Impeller: G-CuSn5 ZnPb</li> <li>Shaft: X12Cr13</li> </ul>

Series	Series NESD Series NESE	Series NFCH	Wilo-SiFlux
Design	Single-stage low-pressure centrifugal pump with axial suction connection and radial, upwards-facing pressure connec- tion mounted on a baseplate	Single-stage low-pressure centrifugal pump with axial suction connection and radial, upwards-facing pressure connec- tion, mounted on a baseplate	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
Application	For heat transfer or circulating hot water in industrial processes, for power genera- tion or in building services	For pumping mineral or synthetic heat carrier fluids up to 350 °C, e.g.: in indus- trial processes or power generation	For pumping heating water, water-glycol mixtures and cooling and cold water with- out abrasive substances in heating, cold water and cooling water systems
Duty chart	H/m 100 50 20 10 50 20 10 50 20 10 50 20 10 50 20 10 50 20 10 50 20 10 50 20 10 50 20 10 50 20 10 50 20 10 50 20 10 50 10 50 10 50 10 50 10 50 10 10 10 10 10 10 10 10 10 1	H/m 100 50 20 10 5 2 2 2 5 10 5 2 2 5 2 2 5 10 50 20 100 500 20 100 500 20 100 100 500 20 100	H/m 50 40 30 20 10 0 100 200 300 400Q/m³/h
Volume flow Q <sub>max</sub>	600 m³/h	1,000 m³/h	490 m³/h
Delivery head H <sub>max</sub>	90 m	90 m	55 m
Technical data	<ul> <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>→ Discharge side-Ø: DN 32 - 125</li> <li>→ Max. operating pressure</li> <li>→ NESD: PN 25; NESE: PN 40</li> </ul>	<ul> <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 discharge side DN 32 to DN 125</li> <li>→ Max. operating pressure PN 16</li> </ul>	<ul> <li>→ VeroLine-IP-E or CronoLine-IL-E</li> <li>→ 3~400 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>
Special features	<ul> <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> <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>	<ul> <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>
Equipment/ function	<ul> <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 or without motor or pump only, with bare shaft end</li> </ul>	<ul> <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 or without motor or pump only, with bare shaft end</li> </ul>	<ul> <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>

Series	Wilo-Sinum	Wilo-Tagus	Wilo-Voda
Design	Pressure-maintaining station with 1 or 2 pumps incl. diaphragm pressure vessel	Pressure step degasser	Air and/or dirt separator
Application	Automatic pressure maintenance, top- ping-up and degassing in closed heating and cooling circuits	Active degassing and automatic refilling in closed heating and cooling systems for combination with diaphragm pressure vessel or pressure–maintaining stations Wilo–Sinum	Air and dirt separation in closed heating and cooling systems
Duty chart			
Volume flow Q <sub>max</sub>			
Delivery head H <sub>max</sub>			
Technical data	→ Mains connection: 230V – 400V, 50Hz → Max. system pressure: 6, 10 and 16 bar → Operating temperature: min. 3 °C –	<ul> <li>→ Mains connection: 230 V, 50 Hz</li> <li>→ Operating temperature: 3 °C – 70 °C</li> <li>→ Max. (feed) supply temperature in the</li> </ul>	<ul> <li>→ Max. working pressure: 10 bar</li> <li>→ Max. fluid temperature: 120°C</li> <li>→ Max. flow velocity: 1.5 m/s</li> </ul>

Delivery head H <sub>max</sub>			
Technical data	<ul> <li>→ Mains connection: 230V - 400V, 50Hz</li> <li>→ Max. system pressure: 6, 10 and 16 bar</li> <li>→ Operating temperature: min. 3 °C - max. 70 °C</li> <li>→ Ambient temperature: 3 °C - 45 °C</li> <li>→ Max. (feed) supply temperature in the system: 120°C</li> <li>→ Tank 100 - 1,000 litres: in accordance with EN 13831 / 1,200 - 10,000 litres: in accordance with AD 2000</li> <li>→ Noise emission: approx. 55 dB(a)</li> </ul>	<ul> <li>→ Mains connection: 230 V, 50 Hz</li> <li>→ Operating temperature: 3 °C - 70 °C</li> <li>→ Max. (feed) supply temperature in the system: 120°C</li> <li>→ Ambient temperature: 3 °C - 45 °C</li> <li>→ Max. pressure (feed) supply pipe: 2 - 8 bar</li> <li>→ Noise emission: approx. 55 dB(a)</li> </ul>	<ul> <li>→ Max. working pressure: 10 bar</li> <li>→ Max. fluid temperature: 120°C</li> <li>→ Max. flow velocity: 1.5 m/s</li> </ul>
Special features	<ul> <li>Easy installation</li> <li>Pressure maintenance within narrow limits +/- 0.2 bar</li> <li>Different operating modes for con- tinuous degassing</li> <li>Low power consumption, long service life</li> <li>Modular design</li> <li>Automatic switching for twin-head pump systems</li> <li>Up to 50% glycol-based antifreeze</li> <li>Flexible connections and hoses</li> <li>Optionally: Integration into Building Management System</li> <li>Optionally: Diaphragm break detector</li> </ul>	<ul> <li>Up to 50% glycol-based antifreeze</li> <li>Continuous degassing and self-controlled topping-up</li> <li>Active degassing by patented PALL ring technology for high ventilation performance</li> <li>Individually adjustable degassing performance through turbo or normal degassing.</li> <li>Low installation effort</li> <li>Completely assembled and ready for connection</li> <li>Compact and robust design</li> <li>Version depending on connection size</li> </ul>	<ul> <li>→ Suitable for addition of up to 50 % glycol-based antifreeze</li> <li>→ Protection against deposits in boilers, pumps and fittings</li> <li>→ Increased performance of the system by eliminating micro bubbles &gt; 15 to 20 µm</li> <li>→ Service life extension of pumps, control units and other system accessories</li> <li>→ Maintenance during operation</li> <li>→ No interruption of operation</li> </ul>
Equipment/ function	<ul> <li>→ 1 or 2 Wilo pumps per station</li> <li>→ Microprocessor control</li> <li>→ Diaphragm pressure vessel in different sizes</li> <li>→ Diaphragm pressure vessel with white epoxy powder coating</li> </ul>	<ul> <li>→ Integrated Wilo pump</li> <li>→ Clear operation via intuitive display</li> <li>→ Assembled and ready for connection</li> </ul>	<ul> <li>→ Separation of air and micro bubbles as well as mud and dirt</li> <li>→ Depending on version: Flange connec- tion PN 16</li> </ul>

Series	Wilo-PlavisC	Wilo-SiClean	Wilo-SiClean Comfort
Design	Automatic condensate lifting unit	Compact particle separator kit, consisting of mechanical and hydraulic components. Manual emptying of the system	Fully-automatic, compact particle separa- tor consisting of mechanical and hydraulic components. The system is drained automatically.
Application	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	Removes particles from heating systems using natural physical phenomena in com- mercial properties and for district heating
Duty chart	H/m 5 4 3 2 1 0 5 5 100 150 200 250 300 Q/h		
Volume flow Q <sub>max</sub>	330 l/h	4 m³/h	47 m <sup>3</sup> /h
Delivery head H <sub>max</sub>	4 m	_	-
Technical data	<ul> <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 I to 1.6 I</li> </ul>	<ul> <li>→ Fluid temperature: 0 °C to +95 °C</li> <li>→ Mains connection: 1~230 V, 50 Hz</li> </ul>	<ul> <li>→ Fluid temperature 0 °C to +95 °C</li> <li>→ Mains connection: 3~400 V, 50 Hz</li> </ul>
Special features	<ul> <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> <li>Removal of magnetic and non-magnetic particles from the fluid, 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>	<ul> <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>
Equipment/ function	<ul> <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-neutralisation</li> </ul>	<ul> <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>	<ul> <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>

Heating, air conditioning, cooling

Series	Wilo-WEH	Wilo-WEV	Wilo-CC/CC-FC/CCe-HVAC system Wilo-SC/SC-FC/SCe-HVAC system
Design	Compact pressure-maintaining system ready for connection for easy installation and commissioning. System comprising mechanical and hydraulic components as well as CE + switchgears.	Compact pressure-maintaining system ready for connection for easy installation and commissioning. System comprising mechanical and hydraulic components as well as CE + switchgears.	
Application	Pressure-maintaining system designed to ensure constant and stable pressure in heating and cooling closed loops. For installation in commercial properties (office buildings, hotels,).	Pressure-maintaining system designed to ensure constant and stable pressure in heating and cooling closed loops. For installation in commercial properties (office buildings, hotels,).	Switchgear for controlling 1 to 6 pumps
Duty chart			

Volume flow $Q_{max}$	-	-	-
Delivery head H <sub>max</sub>	_	_	_
Technical data	<ul> <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> <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> <li>&gt; System ready to connect</li> <li>&gt; Open tanks range in PPH, light and corrosion proof.</li> <li>&gt; Easy-to-adjust switchgear including safety features.</li> <li>&gt; High corrosion resistance materials including 304 stainless steel collectors.</li> <li>&gt; MHIL pumps with IE2 motor and stainless steel hydraulics</li> <li>&gt; Possibility to order non-standard versions in MSO</li> </ul>	<ul> <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>	→ Special versions on request
Equipment/ function	<ul> <li>→ Fully-electronic central control unit with configurable parameters for pres- sure 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 discharge side and one on the suction side</li> </ul>	<ul> <li>→ Fully-electronic central control unit with configurable parameters for pres- sure 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 discharge side and one on the suction side</li> </ul>	<ul> <li>→ CC-HVAC for 1 to 6 pumps with fixed speed</li> <li>→ CCe-HVAC for 1 to 6 pumps with integrated speed control or external frequency converter control</li> <li>→ SC-HVAC for 1 to 4 pumps</li> <li>→ SC and SC-FC for standard pumps with fixed speed</li> <li>→ SCe for electronically controlled pumps</li> </ul>

 <sup>→</sup> SCe for electronically controlled pumps or pumps with integrated frequency converter

Series	Wilo-EFC	1. Wilo-IR-Stick 2. Wilo-IF modules, Wilo-CIF modules	Wilo-Sub TWU 4GT
			Mio 5
Design	Frequency converter		Submersible pump, multistage
Application	Wall-mounted frequency converter for fixed-speed pumps equipped with asyn- chronous or permanent magnet motors	1. Remote control with infrared interface for electronically controlled Wilo pumps 2. Wilo–Control products for connecting pumps to building automation	Water supply from boreholes, wells and rainwater storage for geothermal applica-tions
Duty chart			H/m 32 28 24 26 16 12 8 4 0 0 1 2 3 4 5 Q/m <sup>3</sup> /h
Volume flow <i>Q<sub>max</sub></i>	-	_	6 m³/h
Delivery head H <sub>max</sub>	× –	_	33 m
Technical data	<ul> <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>	_	<ul> <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>
Special features	<ul> <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>	_	<ul> <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>
Equipment/ function	<ul> <li>→ External communication with module (optional): Profibus, DeviceNet, Profi- Net, Ethernet, Modbus</li> <li>→ Additional accessories (optional): dU/ dt filter, sine filter</li> </ul>	<ul> <li>→ Wilo IR-Stick</li> <li>→ Remote control for electronically controlled Wilo pumps with infrared interface</li> <li>→ Wilo-IF module</li> <li>→ Plug-in modules for connecting to building automation: Stratos GIGA2.0-I/-D, Stratos GIGA/-D/-B, Yonos GIGA2.0-I/-D, IP-E/DP-E, IL-E/DL-E/BL-E, MHIE, MVIE, Helix VE.</li> <li>→ Wilo-CIF modules for: Stratos MAXO, Stratos GIGA2.0-I/-D, Yonos GIGA2.0-I/-D, Yonos GIGA2.0-I/-D, Helix2.0 VE, Medana</li> <li>→ Plug-in modules for connecting to building automation of products compatible with CIF module</li> </ul>	<ul> <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>

Series	Wilo-Star-Z NOVA	Wilo-Yonos PICO-Z	Wilo-Stratos PICO-Z
		NEN NEN	NEW
Design	Glandless circulator with screwed con- nection and blocking-current proof synchronous motor	Glandless circulator with screwed con- nection, EC motor and automatic power adjustment	Glandless circulator with screwed con- nection, EC motor and automatic power adjustment
Application	Domestic hot water circulation systems in industry and 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	H/m 1,2 1,0 0,8 0,6 0,4 0,2 0 0,1 0,2 0,3 0,4 0,4 0,4 0,4 0,4 0,4 0,4 0,4	H/m 7 20/0.5-8 20.25 20.	H/m 8 20, 25, 30/0.5-8 6 20, 25, 30/0.5-8 20, 20, 20, 20, 20, 20, 20, 20, 20, 20,
Volume flow <i>Q<sub>max</sub></i>	0.4 m³/h	4.4 m³/h	4.4 m <sup>3</sup> /h
Delivery head H <sub>max</sub>	1.1 m	8 m	8 m
Technical data	<ul> <li>→ Fluid temperature: Drinking water, max. +95 °C</li> <li>→ Mains connection 1~230 V, 50 Hz</li> <li>→ Screwed connection Rp ½</li> <li>→ Max. operating pressure 10 bar</li> </ul>	<ul> <li>→ Fluid temperature +2 °C to +95 °C</li> <li>→ Mains connection 1~230 V, 50/60 Hz</li> <li>→ Protection class IPX4D</li> <li>→ Screwed connection G1, G1¼, G1½</li> <li>→ Max. operating pressure 10 bar</li> </ul>	<ul> <li>→ Fluid temperature +2 °C to +95 °C</li> <li>→ Mains connection 1~230 V, 50/60 Hz</li> <li>→ Protection class IPX4D</li> <li>→ Screwed connection G1¼, G1½, G2</li> <li>→ Max. operating pressure 10 bar</li> </ul>
Special features	<ul> <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 replace- ment of common pump types thanks to flexible service motor and Wilo- Connector</li> </ul>	<ul> <li>Hygienic safety thanks to stainless steel pump housing</li> <li>Energy-saving supply thanks to EC motor</li> <li>High ease of use thanks to Green Button Technology, intuitive user interface and freely selectable control functions</li> <li>Easy maintenance and high degree of operational reliability thanks to automatically and manually triggered restart or pump venting function</li> <li>Current parameters such as flow and power consumption in view at all times via LED display</li> </ul>	<ul> <li>→ Stainless steel pump housing and detection of thermal disinfection for maximum hygiene in the system</li> <li>→ Needs-based, energy-saving supply via temperature-controlled or manual operating mode</li> <li>→ Large colour display, clear settings menu and Green Button Technology for easy operation</li> <li>→ 1-click commissioning via temperature controller as factory setting</li> <li>→ Optional: Communication using exter- nal additional modules</li> </ul>
Equipment/ function	<ul> <li>Wilo-Connector</li> <li>Ball shut-off valve on the suction side and backflow preventer on the discharge side (Star-Z NOVA A, T)</li> <li>Star-Z NOVA T incl. time switch, thermostat and thermal disinfection detection, LCD display with symbolic language</li> </ul>	<ul> <li>→ Control modes: Constant differential pressure (△p-c), constant speed (3 fixed speed stages), constant speed (continuously adjustable)</li> <li>→ Automatic deblocking function</li> <li>→ Manual restart and pump venting function</li> <li>→ LED display for setting the setpoint, displaying current consumption and flow</li> <li>→ Stainless steel pump housing</li> <li>→ Thermal insulation as standard</li> <li>→ Wilo-Connector</li> </ul>	<ul> <li>Control modes: T-const, Δp-c, n-const</li> <li>Temperature control for constant return temperature in drinking water circulation systems</li> <li>Thermal disinfection routine</li> <li>Current values displayed for power consumption, flow, delivery head, speed, temperature and energy con- sumption</li> <li>Function for resetting the electricity meter or restoring factory settings</li> <li>Key lock</li> <li>Wilo-Connectivity interface for exter- nal modules</li> <li>Wilo-Connector</li> </ul>

Series	Wilo-Stratos MAXO-Z	Wilo-Yonos MAXO-Z	Wilo-Star-Z Wilo-Star-ZD
Design	Smart glandless circulator with screwed connection or flange connection, EC mo- tor with integrated power adjustment	Glandless circulator with screwed con- nection or flange connection, EC motor with automatic power adjustment	Glandless circulator with screwed con- nection
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	H/m 12 10 8 6 4 2 0 10 20 30 40 Q/m <sup>3</sup> /h	H/m 12 10 8 6 4 2 0 5 10 15 20 25 30 Q/m <sup>3</sup> /h	H/m 6 5 4 3 2 1 0 2 4 6 5 5 4 3 2 1 0 0 2 4 6 8 2 4 6 8 2 4 0 7 8 10 - Star-Z Wilo-Star-Z Wilo-Star-ZD 10 - Star-ZD 10 - Star-Star-Star-Star-Star-Star-Star-Star-
Volume flow Q <sub>max</sub>	46 m³∕h	49 m³/h	8.5 m³/h
Delivery head H <sub>max</sub>	12 m	16 m	6.0 m
Technical data	<ul> <li>→ Fluid temperature: drinking water max. +80 °C</li> <li>→ Heating water -10 °C to +110 °C</li> <li>→ Mains connection 1-230 V, 50/60 Hz</li> <li>→ Nominal diameter Rp 1 to DN 65</li> <li>→ Max. operating pressure 10 bar</li> </ul>	<ul> <li>→ Permissible temperature range drink- ing water up to a water hardness of 3.57 mmol/l (20 °dH) max. +80 °C</li> <li>→ Mains connection 1~230 V, 50/60 Hz</li> <li>→ Nominal diameter Rp 1 to DN 65</li> <li>→ Max. operating pressure 10 bar</li> </ul>	<ul> <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> <li>Operation by guided application settings with the setting assistant</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> <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> <li>Variants of 16 m pumps with pump housing in stainless steel</li> </ul>	→ All plastic parts that come into contact with the fluid fulfil KTW recommenda- tions
Equipment/ function	<ul> <li>Control modes: 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-based pre- settings in the setting assistant</li> <li>Heat measurement</li> <li>Disinfection detection</li> <li>Pump venting function</li> <li>Retrofittable interface modules for communication</li> </ul>	<ul> <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; for variants of 16 m pumps stainless steel</li> <li>Combination flanges PN 6/PN 10 (for DN 32 to DN 65)</li> <li>Retrofitable interface module (Connect module) for connection to building automation</li> </ul>	<ul> <li>→ Constant speed or 3 selectable speed stages (Star-Z3),</li> <li>→ Quick electrical connection with spring clips</li> <li>→ Star-ZD version as twin-head pump</li> </ul>

Series	Wilo-TOP-Z	Wilo-VeroLine-IP-Z	
Design	Glandless circulator with screwed con- nection 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	H/m 8 6 4 2 0 10 20 30 40 50 Q/m³/h	H/m 5 4 3 2 1 0 0 1 2 3 4 5 $Q/m^3/h$	
Volume flow <i>Q<sub>max</sub></i>	67 m³/h	5 m³/h	
Delivery head H <sub>max</sub>	9 m	4.5 m	
Technical data	<ul> <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 80</li> <li>→ Max. operating pressure 10 bar</li> </ul>	<ul> <li>→ Fluid temperature: drinking water up to a water hardness of 4.99 mmol/1 (28 °dH) max. +65 °C</li> <li>→ Heating water -8 °C to +110 °C</li> <li>→ Mains connection 1~230 V, 50 Hz, 3~230/400 V, 50 Hz</li> <li>→ Nominal diameter Rp 1</li> <li>→ Max. operating pressure 10 bar</li> </ul>	
Special features	<ul> <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> <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> <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 recommenda- tions</li> <li>Combination flange PN 6/PN 10 (DN 40 to DN 65)</li> </ul>	<ul> <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.

<sup>1</sup>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 Wilo-Star-RSD	Wilo-TOP-S Wilo-TOP-SD	Wilo-TOP-RL
Design	Glandless circulator with screwed con- nection	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, air- conditioning systems and closed cooling circuits	Hot–water heating systems of all kinds,air–conditioning systems, closed cooling circuits, industrial circulation systems
Duty chart	H/m 7 5 5 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5	H/m 16 12 8 4 0 20 40 60 80 100 0 20 40 60 80 100 0 0 0 0 0 0 0 0 0 0 0 0	H/m 7 6 5 4 3 2 1 0 0 1 2 3 4 5 6 7 8 9Q/m <sup>3</sup> /h
Volume flow <i>Q<sub>max</sub></i>	6.0 m³/h	130,0 m³/h	10.0 m³/h
Delivery head H <sub>max</sub>	8.0 m	19.0 m	7.0 m
Technical data	<ul> <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> <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> <li>→ Fluid temperature -20 °C to +130 °C</li> <li>→ Mains connection 1~230 V, 50 Hz, 50 Hz</li> <li>→ Nominal diameter Rp 1 to DN 40</li> <li>→ Max. operating pressure 10 bar</li> </ul>
Special features	<ul> <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> <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> <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> <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> <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> <li>→ Pre-selectable speed stages for power adjustment</li> <li>→ Pump housing with cataphoretic coating</li> <li>→ Combination flange PN 6/PN 10 (DN 40)</li> </ul>



# Join the ecolution.

## Exceed environmental requirements

Ensure maximum hygiene via drinking water circulation with continuous temperature monitoring and regular water exchange. Save up to 90% drinking water.



Series	Wilo-RAIN1 Wilo-RAIN3	Wilo-RainSystem AF 150	Wilo-RainSystem AF 400
Product photo			
Design	Ready-to-plug rainwater utilisation system with 1 HiMulti3 P self-priming centrifugal pump	Automatic rainwater utilisation system with 2 MultiCargo MC self-priming cen- trifugal pumps	Automatic rainwater utilisation system with run-down tank and 2 MultiPress MP non-self-priming centrifugal pumps
Application	Rainwater utilisation for saving drinking water in conjunction with rainwater stor- age tanks or reservoirs	Rainwater utilisation in multi-family houses and small businesses for saving drinking water in conjunction with rain- water storage tanks or reservoirs	Hybrid system for commercial and indus– trial rainwater utilisation for saving drink– ing water in conjunction with rainwater storage tanks or reservoirs
Duty chart	$H/m_{50}$ $40$ $32$ $32$ $32$ $32$ $32$ $32$ $32$ $32$	H/m 50 40 30 20 0 0 2 4 6 8 10 12 14 Q/m³/h	H/m 50 40 30 20 10 0 2 4 6 8 10 12 14 Q/m <sup>3</sup> /h
Volume flow Q <sub>max</sub>	6 m³/h	16 m³/h	16 m³/h
Delivery head H <sub>max</sub>	55 m	55 m	55 m
Technical data	<ul> <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 I</li> <li>→ Protection class IPX4</li> </ul>	<ul> <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 I</li> <li>→ Protection class IP41</li> </ul>	<ul> <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 I</li> <li>→ Protection class IP54</li> </ul>
Special features	<ul> <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> <li>Low-noise due to multistage pumps</li> <li>Components that come in contact with the fluid are corrosion-free</li> <li>Maximum operational reliability due to fully electronic controller (RCP)</li> <li>Demand-oriented fresh water replen- ishment</li> <li>High reliability due to flow-optimised and noise-optimised replenishment reservoir</li> </ul>	<ul> <li>Low-noise due to multistage pumps</li> <li>Components that come in contact with the fluid are corrosion-free</li> <li>Maximum operational reliability due to a fully electronic controller (RCH)</li> <li>Demand-oriented fresh water replen-ishment</li> <li>Automatic feeding pump control</li> <li>System/level control in the low-voltage range</li> </ul>
Equipment/ function	<ul> <li>Connection-ready module on vibration-insulated base frame</li> <li>Discharge-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 report- ing</li> <li>Integrated overflow warning sensor (RAIN3)</li> </ul>	<ul> <li>Connection-ready module on vibration-insulated tubular frame</li> <li>Discharge-side pipework R 1½, pres- sure 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>	<ul> <li>Connection-ready module on vibration-insulated baseplate</li> <li>Discharge-side pipework R 1½, pres- sure 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>

Series	Wilo–Jet WJ Wilo–Jet HWJ	Wilo-HiMulti 3 (P) Wilo-HiMulti 3 C (P) /HiMulti 3 H (P)	Wilo-Isar BOOST5
Product photo			
Design	Self-priming single-stage centrifugal pumps	Self-priming (version P) and non-self- priming multistage pumps and pump systems	Plug & Pump self–priming multistage centrifugal home booster
Application	For pumping water from wells for filling, pumping empty, transferring by pump- ing, irrigation and sprinkling. As emergency pump for overflows	For domestic drinking water supply, sprinkling, irrigation, spraying and rain- water utilisation	Water supply, irrigation, rainwater utilisa- tion, raw water intake
Duty chart	H/m 40 30 20 10 0 1 2 3 4 5Q/m <sup>3</sup> /h	H/m 50 40 30 20 10 0 1 2 3 4 5 6 Q/m³/h	H/m 50 40 30 20 0 0 1 2 3 4 5 6 0/m <sup>3</sup> /h
Volume flow Q <sub>max</sub>	5 m³/h	7 m³/h	7.2 m³/h
Delivery head H <sub>max</sub>	50 m	55 m	55 m
Technical data	<ul> <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> <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>	<ul> <li>Mains connection: 1~230 V, 50/60 Hz</li> <li>Perm. fluid temperature: 0 to +40 °C</li> <li>Perm. ambient temperature: 0 to +40 °C</li> <li>Max. permissible operating pressure: 10 bar</li> <li>Max. suction head: 6 m</li> <li>Protection class: IPX4</li> <li>Suction side connection: G 1"</li> <li>Connection on discharge side: G 1"</li> </ul>
Special features	<ul> <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> <li>→ Easy: Electrical Wilo-Connector, on/ off switch, enlarged foot fastening</li> <li>→ Efficient and economical: highly ef- ficient hydraulics, extremely compact</li> <li>→ HiMulti 3 C (P): Dry-running protec- tion and automation rotatable by 360° for easier installation</li> <li>→ HiMulti 3 H (P): Automation and fluid hammer protection</li> </ul>	<ul> <li>Easy installation, thanks to ready-to-plug design</li> <li>Compact and modern design</li> <li>User-friendly operation due to LED display and push buttons</li> <li>Low-noise operation thanks to noise-blocking covers</li> <li>Built-in frequency converter for a comfortable constant pressure control and a soft start</li> <li>Safe operation thanks to extensive integrated protection functions</li> </ul>
Equipment/ function	<ul> <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> <li>→ Directly flanged motor</li> <li>→ Thermal motor protection switch for 1~230 V version</li> <li>→ HiMulti 3 C (P): Automatic pump con- trol, low-water cut-out switch</li> <li>→ HiMulti 3 H (P): Pressure switch, dia- phragm pressure vessel 50 I/100 I</li> </ul>	<ul> <li>→ Directly flanged motor</li> <li>→ Thermal motor protection switch</li> <li>→ Embedded variable speed</li> <li>→ Integrated protection functions (dry- running, overpressure and excessive temperature detection, overcurrent, over- and undervoltage)</li> </ul>

Series	Wilo-HiPeri 1	Wilo-PB BOOST FIRST	Wilo-PB
Product photo			Series modification
Design	Non-self-priming peripheral pump	Non–self–priming single–stage glandless pump	Non–self–priming single–stage centrifugal pump in in–line design
Application	Water supply/pressure boosting, raw water intake, sprinkling and spraying, rainwater utilisation	Automatic water supply/pressure boost– ing in residential properties	Automatic water supply/pressure boost- ing for residential properties from a tank feeding extraction points located beneath
Duty chart	H/m 50 40 30 20 10 0 5 10 15 20 25 30 35 Q//min	H/m 12 10 8 6 4 2 0 0 0,5 1,0 1,5 2,0 2,5Q/m³/h	H/m 25 20 15 10 5 0 0 1 2 3 4 $Q/m^3/h$
Volume flow Q <sub>max</sub>	50 m³/h	2.7 m <sup>3/h</sup>	4.8 m <sup>3</sup> /h
Delivery head H <sub>max</sub>	3 m	12.8 m	22 m
Technical data	<ul> <li>→ Mains connection 1~230 V, 50 Hz</li> <li>→ Max. inlet pressure 1.5 bar</li> <li>→ Fluid temperature +5 °C to +60 °C</li> <li>→ Max. operating pressure 6.5 bar</li> <li>→ Suction/discharge side connections: Rp 1</li> </ul>	<ul> <li>→ Mains connection: 1~230 V, 50 Hz</li> <li>→ Threaded connection: G1</li> <li>→ Fluid temperature: +1 °C to +90 °C</li> <li>→ Ambient temperature: max. 40 °C</li> <li>→ Max. operating pressure: 10 bar</li> <li>→ Flow rate detection: 1.5 L/min</li> <li>→ Noise level: &lt; 43 dBA</li> <li>→ Insulation class: H</li> <li>→ Protection class: IPX4D</li> </ul>	<ul> <li>→ Mains connection 1~230 V, 50 Hz</li> <li>→ Suction/discharge side connections: G ¾, Rp 1, Rp 1¼</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>
Special features	<ul> <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> <li>→ Low power consumption thanks to highly sensitive flow switch and auto- matic control</li> <li>→ Very silent operation due to glandless pump technology</li> <li>→ Compact design for easy replacement</li> <li>→ Easy start thanks to automatic opera- tion and plug-in</li> <li>→ Maintenance-free</li> </ul>	<ul> <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>
Equipment/ function	<ul> <li>→ Single-stage circulator with a radial impeller</li> <li>→ Can be supplemented by the Wilo- FluidControl resp. HiControl 1</li> </ul>	<ul> <li>Automatic operation with flow switch</li> <li>The pump starts and stops depending on the flow rate</li> <li>Low-noise glandless motor</li> <li>Flow swich on the discharge side for automatic operation and dry-running protection</li> <li>Connection cable with pug or Wilo- Connector</li> <li>Thermal motor protection</li> </ul>	<ul> <li>→ Directly flanged glanded motor</li> <li>→ Shaft sealing with mechanical seal</li> <li>→ Thermal motor protection</li> <li>→ Flow switch, on the discharge side for automatic operation and dry-running protection</li> <li>→ Operating options Auto/Off/Manual</li> </ul>



Series	Wilo Helix VE	Wilo-Helix VE 2.0	Wilo Helix V
Product photo	Series modification		
Design	Non-self-priming multistage pump with integrated frequency converter	Highly efficient, non-self-priming high- pressure multistage centrifugal pump in vertical design and in-line connections, equipped with electronically controlled EC motor of energy efficiency class IE5 in accordance with IEC 60034-30-2.	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, heating, washing systems, irrigation	Water supply and pressure boosting, industrial circulation systems, process water, closed cooling circuits, washing systems, irrigation
Duty chart	H/m 240 200 160 120 80 40 0 10 20 30 40 50 60 70 Q/m <sup>3</sup> /h	H/m 240 200 160 120 80 40 0 10 20 30 40 50 60 70 Q/m <sup>3</sup> /h	H/m 280 240 200 160 120 80 40 0 10 20 30 40 50 60 70 Q/m <sup>3</sup> /h
Volume flow Q <sub>max</sub>	80 m³/h	80 m³/h	80 m³/h
Delivery head H <sub>max</sub>	240 m	240 m	280 m
Technical data	<ul> <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> <li>→ Fluid temperature: -30 120 °C</li> <li>→ Motor power (IE5): 0.55 22 kW</li> <li>→ Max. operating pressure: 16/25 bar</li> <li>→ Protection class: IP55</li> <li>→ Minimum efficiency index MEI ≥0.7 (Helix2.0-VE 16: MEI ≥0.5)</li> <li>→ Max. ambient temperature: 50 °C</li> </ul>	<ul> <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>
Special features	<ul> <li>Multistage, speed-configurable stain-less steel high-efficiency pump with 2D/3D hydraulics</li> <li>Optimised design for easy operation, transportation and installation with handles, lantern adjustment and rotat-able free flanges</li> <li>User-friendly display with Green Button</li> <li>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> <li>→ High efficent and corrosion resistant 2D/3D laser welded hydraulics</li> <li>→ Easy connection to building automa- tion via CIF modules</li> <li>→ Available in 1~, up to 2.2 kW</li> <li>→ WRAS-KIWA/UBA/ACS for drinking water approvals</li> </ul>	<ul> <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>
Equipment/ function	<ul> <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, PN16 with oval flanges, PN25 with round flanges</li> <li>Helix VE 22 - 36, with round flanges</li> <li>Helix VE 22 - 36, with round flanges</li> <li>EC standard motor</li> <li>EC motor (IE5) for types with 11 22 kW</li> <li>Integrated frequency converter</li> </ul>	<ul> <li>Orientable 2" coloured LCD display</li> <li>Wilo Green Button Technology and soft button with return function for menue navigation and manual pump setting</li> <li>Green LED indicates pump status</li> <li>Blue LED indicates pump is influenced externally via an interface</li> <li>Volume flow calculation by using dif- ferential pressure sensor</li> <li>Operating statistic data</li> <li>Pump kick function</li> </ul>	<ul> <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, PN16 with oval flanges, PN25 with round flanges</li> <li>→ Helix V 22 - 36, with round flanges</li> <li>→ IEC standard motor</li> </ul>

Series	Wilo-Helix FIRST V	Wilo–Zeox FIRST H Wilo–Zeox FIRST V	Wilo-Multivert MVIE 70, 95
Product photo			Series modification
Design	Non–self–priming multistage pump	Non-self-priming, high-efficiency multi- stage high-pressure centrifugal pump in vertical or horizontal design with off-line connections	Non-self-priming multistage pump with integrated frequency converter
Application	Water distribution and pressure boosting, industrial circulation systems, process water, closed cooling circuits, washing systems, irrigation	Professional irrigation/agriculture Water supply/pressure boosting Firefighting Heating, air conditioning, cooling	Water supply and pressure boosting, industrial circulation systems, process water, closed cooling circuits,washing systems, irrigation
Duty chart	H/m 280 240 240 200 160 120 80 40 0 10 20 30 40 50 60 70 Q/m³/h	H/m 400 300 200 200 200 200 200 200 200 200 2	H/m 100 80 60 40 20 0 20 40 60 80 100 120 140 2/m <sup>3</sup> /h
/olume flow $Q_{max}$	80 m³/h	280 m³/h	145 m³/h
Delivery head H <sub>max</sub>	280 m	495 m	100 m
Technical data	<ul> <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>	<ul> <li>→ Fluid temperature: -5 °C to +90 °C</li> <li>→ Max. suction pressure: Zeox FIRST V/</li> <li> H: 6/16 bar Max. operating pressure:</li> <li>Zeox FIRST V: 27 bar Zeox FIRST H</li> <li>(DN65 to DN100): 50 bar; Zeox FIRST H</li> <li>(DN150): 40 bar</li> <li>→ Protection class: IP55</li> </ul>	<ul> <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>
Special features	<ul> <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>	<ul> <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> <li>→ Easy commissioning</li> <li>→ Integrated frequency converter with large control range</li> <li>→ Full motor protection</li> </ul>
Equipment/ function	<ul> <li>→ Corrosion-resistant impellers, guide vanes and stage housings</li> <li>→ Helix FIRST V 2 - 16, PN16 with oval flanges, PN25 with round flanges</li> <li>→ Helix FIRST V 22 - 36, with round flanges</li> <li>→ IEC standard motor</li> </ul>	<ul> <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, exchange- able without disassembling the pump</li> </ul>	<ul> <li>Stainless steel hydraulics with pump housing made of cast iron</li> <li>MVIE 70 to 95 PN16/25 with round flange</li> <li>IEC standard motor</li> <li>EC motor (IE5) for types with 11 22 kW</li> <li>Integrated frequency converter with Green Button Technology and LCD display for status indication</li> </ul>

Series	Wilo-Multivert MVI 70, 95	Wilo-Medana CV1-L	RN, HS, IPB, PJ, STD PLURO, FG/FH
Product photo			
Design	Non-self-priming multistage pump	Non-self-priming vertical multistage pump in in-line design	High–pressure multistage centrifugal pump in sectional construction, mounted on baseplate
Application	Water supply and pressure boosting, industrial circulation systems, process water, closed cooling circuits, washing systems, irrigation	Water supply and pressure boosting, industrial recirculation systems, process water, closed cooling circuits, fire- extinguishing systems, washing systems, irrigation, rainwater utilisation	Metal industry, mine dewatering, desali- nation plants, boiler supply, firefighting, high-pressure cleaning, water supply
Duty chart	H/m 160 140 120 100 100 100 100 100 100 10	H/m 160 120 80 40 0 5 10 15 20 Q/m <sup>3</sup> /h	
Volume flow Q <sub>max</sub>	140 m³/h	24 m³/h	1,000 m³/h
Delivery head H <sub>max</sub>	172 m	158 m	1800 m
Technical data	<ul> <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>	<ul> <li>→ Fluid temperature of -20 to +120 °C with EPDM</li> <li>→ Ambient temperature of -15 to +50 °C</li> <li>→ Operating pressure max. 10 bar or max. 16 bar</li> <li>→ Max. inlet pressure 6 bar or max. 10 bar</li> <li>→ Protection class IP55</li> </ul>	<ul> <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 discharge side DN32 to DN250</li> <li>→ 2- or 4-pole 50 Hz motors, 60 Hz on request</li> </ul>
Special features	→ MVI 7095 in stainless steel with pump housing made of cataphoretic- coated cast iron	<ul> <li>→ Suitable for drinking water and for special applications due to stainless steel structure</li> <li>→ Space-saving, compact and robust pump design</li> <li>→ Suitable for use in ambient tempera- tures of up to 50 °C and expanded field of application especially for system integration</li> </ul>	<ul> <li>→ Modular design ensures pump versions in a variety of materials and versions which can be adapted to meet custom- er 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>
Equipment/ function	<ul> <li>→ MVI 70 to 95 PN16/PN25 with round flange</li> <li>→ IEC standard motor, 2-pole</li> </ul>	<ul> <li>Pump in in-line design, with a continuous motor pump shaft</li> <li>Hydraulics and pump housing in 1.4301 (AISI 304)</li> <li>Oval flange connection</li> <li>Single-phase or three-phase AC motor</li> <li>Single-phase AC motor equipped with capacitor and built-in thermal motor protection (with automatic restart)</li> </ul>	<ul> <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 bare shaft end</li> </ul>
Series	Wilo-Multivert MVISE	Wilo-Multivert MVIS	Wilo-Economy MHIE
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Product photo			
Design	Non-self-priming multistage pump with glandless pump motor and integrated frequency converter	Non-self-priming multistage pump with glandless pump motor	Non–self–priming multistage pump with integrated frequency converter
Application	Water supply and pressure boosting	Water supply and pressure boosting	Water supply and pressure boosting, in– dustrial circulation systems, cooling water circulation systems, washing systems
Duty chart	H/m 100 80 60 40 20 0 2 4 6 8 10 12 Q/m³/h	H/m 100 80 60 40 20 0 2 4 6 8 10 2 0 2 4 6 8 10 2 0 0 2 4 6 8 10 2 0 0 0 0 0 0 0 0	H/m 80 60 40 20 0 0 4 8 12 16 20 24 Q/m³/h
Volume flow Q <sub>max</sub>	14 m³/h	14 m³/h	32 m³/h
Delivery head H <sub>max</sub>	110 m	110 m	88 m
Technical data	<ul> <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> <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>	<ul> <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>
Special features	<ul> <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> <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> <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>
Equipment/ function	<ul> <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 PN16. Counter flanges made of stain- less steel with female thread, screws and gaskets (scope of delivery)</li> </ul>	<ul> <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 PN16, counter flanges made of stain- less steel with female thread, screws and gaskets (scope of delivery)</li> </ul>	<ul> <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</li> <li>Display for status indication</li> <li>Integrated thermal motor protection</li> </ul>

Series	Wilo-Medana CH3-LE	Wilo-Medana CH1-L	Wilo-Medana CH1-LC
Product photo			
Design	Highly efficient, non-self-priming multistage centrifugal pump in horizontal design, equipped with electronically controlled EC motor of energy efficiency class IE5 in accordance with IEC 60034- 30-2	Non–self–priming Multistage horizontal centrifugal pumps	Non-self-priming Multistage horizonta centrifugal pumps
Application	Water distribution and boosting, water treatment, professional irrigation/agricul- ture, cooling, air conditioning	Pumping of process water and drinking water for: irrigation, pressure boosting, industrial applications (e.g. cooling circuits, car wash)	Pumping of process water for: irrigation, pressure boosting, industrial applications (e.g. cooling circuits, car wash)
Duty chart		H/m 80 60 40 0 5 10 15 20 25Q/m³/h	H/m 80 60 40 20 0 5 10 15 20 25Q/m <sup>3</sup>
Volume flow <i>Q<sub>max</sub></i>	24 m³/h	24 m³/h	18 m³/h
Delivery head H <sub>max</sub>	100 m	69 m	78 m
Technical data	<ul> <li>→ Mains connection: 3~ 380 V440 V 50 Hz/60 Hz; TN,TT, IT</li> <li>→ Motor power: 0.55~4 kW</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: IP55</li> </ul>	<ul> <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: IP55</li> </ul>	<ul> <li>→ Mains connection: 1~230 V, 50/60 H 3~380/440 V, 50/60 Hz TN, TT, IT</li> <li>→ Rated pressure: 10 bar</li> <li>→ Fluid temperature: -20 °C to 90 °C</li> <li>→ Ambient temperature: -15 °C to 50 °</li> <li>→ Protection class: IP55</li> </ul>
Special features	<ul> <li>→ IE5 EC motor and optimized hydraulics</li> <li>→ Intelligent with various control modes (dp-v, dp-c, p-c, n-const, PID)</li> <li>→ Double pump management</li> <li>→ Connection options to BACnet, Mod- bus, CANopen, LON</li> <li>→ WRAS/KTW/ACS approval for hydraulic parts (EPDM version)</li> </ul>	<ul> <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>	<ul> <li>→ Cataphoretic-coated lantern</li> <li>→ New closed hole fixation for vertical position</li> </ul>
Equipment/ function	<ul> <li>2" coloured LCD display with a clearly structured menu navigation</li> <li>LED indicates and operation buttons on panel</li> <li>Integrated DI/DO, AI interfaces on converter</li> <li>Various communication modules (CIF) as optional</li> <li>Stainless steel pump housing and hydraulics</li> </ul>	<ul> <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>	<ul> <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; 0.7 AC IE2</li> <li>→ AC motor: 1~ AC IE1/IE2</li> </ul>

Series	Wilo-SiBoost Smart 1 Helix VE SiBoost Smart 1 MVISE	Wilo-Economy CO/T-1 Helix V Comfort-Vario COR/T-1 Helix VEGE	Wilo-SiBoost Smart MVISE SiBoost Smart (FC) Helix V,VE,EXCEL
Product photo			
Design	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 system separation and a non-self-priming, high- pressure multistage centrifugal pump of the Helix V or VE series	Highly efficient system with 2 to 4 stainless steel, non-self-priming, high- pressure multistage centrifugal pumps (VE, EXCEL, MVISE) switched in cascade or synchronous motor speed
Application	Full automatic water supply from public water supply network or reservoir For pumping drinking/process water, cooling water, water for firefighting	Fully automatic water supply from the public water supply mains. For pumping drinking/process water, cooling water, water for firefighting	Fully automatic water supply in residen- tial/office buildings & industrial systems. For pumping drinking/process water, cool- ing water, water for firefighting
Duty chart	H/m 140 120 100 80 60 40 20 0 10 20 30 40 50 60 70 Q/m³/h	H/m 100 80 60 40 20 0 2 4 6 8 100/m <sup>3</sup> /h	H/m 140 120 100 80 60 40 20 0 50 100 150 200 250 300 Q/m³/h
Volume flow Q <sub>max</sub>	90 m³/h	10 m³/h	360 m³/h
Delivery head H <sub>max</sub>	142 m	120 m	158 m
Technical data	<ul> <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> <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>	<ul> <li>→ Mains connection Helix V, VE, EXCEL, MVISE 3~400 V, 50 Hz</li> <li>→ Max. fluid temperature 50 °C, optional 70 °C</li> <li>→ Operating pressure 16 bar</li> <li>→ Inlet pressure 10 bar</li> <li>→ Protection class IP54</li> </ul>
Special features	<ul> <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> <li>New innovative pressure-variable control for Helix VE</li> <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>	<ul> <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>
Equipment/ function	<ul> <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 discharge side</li> <li>Non-return valve, on the discharge side</li> <li>Diaphragm pressure vessel 8 l, PN16, on the discharge side</li> </ul>	<ul> <li>PE break tank, atmospherically ventilated (150 I)</li> <li>Components with fluid contact are corrosion-resistant</li> <li>Pipework stainless steel</li> <li>Shut-off device, on discharge side</li> <li>Non-return valve, on discharge side</li> <li>Break tank with float-valve and float switch</li> <li>Diaphragm pressure vessel 8 I, PN16, on discharge side</li> <li>Low-water cut-out switchgear</li> </ul>	<ul> <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 dis- charge sides of each pump</li> <li>Non-return valve, pressure sensor, diaphragm pressure vessel 8 l, PN16, on discharge side</li> <li>Low-water sensor standard for VE, EXCEL, MVISE</li> </ul>

→ Low-water sensor standard for VE, EXCEL, MVISE

Series	Wilo-Comfort-CORHelix V(E)/CC(e)	Wilo-Comfort-Vario CORMHIE/ECe	Wilo-Isar MODH1 Wilo-Isar MODV1
Product photo			
Design	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	Pressure-boosting system with 1, 2 or 3 non-self-priming stainless steel high- pressure multistage centrifugal pumps switched in parallel
Application	Fully automatic water supply in residen- tial/office buildings & industrial systems. For pumping drinking/process water, cooling water, water for firefighting	Fully automatic water supply in residen- tial/office buildings & industrial systems. For pumping drinking/process water, cooling water or other industrial water	Fully 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
Duty chart	H/m 160 140 120 100 100 200 300 400 Q/m <sup>3</sup> /h	H/m 80 60 40 20 0 20 40 60 80 60 80 60 80 60 80 60 80 60 80 60 80 60 80 80 80 80 80 80 80 80 80 8	H/m 140 120 120 120 120 120 15ar-MODV1 1-3 120 15ar-MODV1 1-3 120 120 120 120 120 120 120 120
Volume flow Q <sub>max</sub>	450 m³/h	102 m³/h	62 m³/h
Delivery head H <sub>max</sub>	158 m	96 m	158 m
Technical data	<ul> <li>→ Mains connection 3~400 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> <li>→ Mains connection 3~380/400/440 (1~230) V, 50/60 Hz</li> <li>→ Max. fluid temperature 50 °C, optional 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> <li>→ Mains connection 3~380/400/440 V, 50/60 Hz</li> <li>→ Max. fluid temperature 50 °C, option- ally 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 IP54</li> </ul>
Special features	<ul> <li>Compact system in accordance of DIN 1988 (EN 806)</li> <li>Series with Helix VE integrated fre- quency converter</li> <li>For systems with MVIS pumps: Up to 20 dB(A) quieter than comparable systems</li> </ul>	<ul> <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, UBA)</li> </ul>	<ul> <li>High operational reliability with horizontal multistage pumps (Medana CH1-L or Medana CV1-L) with stain- less steel hydraulics</li> <li>Easy installation and maintenance thanks to flexibly adjustable connec- tions</li> <li>Easy commissioning and operation with the Easy Controller</li> <li>Drinking water approval (ACS and UBA)</li> </ul>
Equipment/ function	<ul> <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 discharge sides</li> <li>Non-return valve, on the discharge side</li> <li>Diaphragm pressure vessel 8 l, PN16, on discharge side</li> <li>Pressure sensor, on the discharge side</li> </ul>	<ul> <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 discharge sides</li> <li>Non-return valve, pressure sensor, pressure gauge on discharge side</li> <li>Diaphragm pressure vessel 8 I, PN10, on the discharge side</li> </ul>	<ul> <li>→ 1, 2 or 3 pumps (CH1-L or CV1-L) 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 discharge sides</li> <li>→ Non-return valve, pressure sensor, pressure gauge on discharge side</li> <li>→ EC-control with microprocessor in IP54 plastic housing</li> </ul>

Series	Comfort CO-/COR-MVI/CC	Wilo-Comfort-Vario COR MVIE/SCe Wilo-Comfort-Vario COR 1 MVIEGE	Comfort-Vario COR-1 MHIEGE
Product photo			
Design	Pressure boosting system with 2 to 6 parallel-switched, non self-priming stainless steel high-pressure multistage centrifugal pumps	Pressure boosting system ready for connection with vertically arranged non- self-priming high-pressure multistage centrifugal pumps switched in parallel.	Water-supply unit with a non-self-prim- ing high-pressure multistage centrifugal pump and integrated speed control
Application	Fully automatic water supply and pres- sure boosting in residential, commercial and public buildings, and industrial systems. Pumping of drinking water and process water, cooling water, fire water	Fully automatic water supply and pres- sure boosting in residential, commercial and public buildings, and industrial systems. Pumping of drinking water and process water, cooling water, fire water	Fully automatic water supply and pressure boosting in residential, commercial and public buildings, and industrial systems. Pumping of drinking water and process water, cooling water, fire water
Duty chart	H/m 140 100 100 100 100 100 100 100	H/m 100 80 60 40 20 0 100 200 300 400 500 Q/m/h	H/m 100 80 60 40 20 0 100 200 300 400 500 Q/m <sup>3</sup> /h
Volume flow Q <sub>max</sub>	800	650	34
Delivery head H <sub>max</sub>	160	109	95
Technical data	<ul> <li>→ Mains connection 3~230 V/400 V ± 10%, 50 Hz</li> <li>→ Max. fluid temperature 50 °C, optional 70 °C</li> <li>→ Operating pressure 16 bar</li> <li>→ Inlet pressure 10 bar</li> <li>→ Protection class IP 54 (CC control device)</li> </ul>	<ul> <li>→ Mains connections 3~400 V, 50 Hz, 3~380 V, 60 Hz</li> <li>→ Max. fluid temperature 60 °C, optional 70 °C</li> <li>→ Operating pressure 16 bar</li> <li>→ Inlet pressure 10 bar</li> <li>→ Protection class IP54</li> </ul>	<ul> <li>→ Mains connection 3~400 V, 50 Hz; 3~380/440 V, 60 Hz or, depending on type, also 1~230 V, 50/60 Hz</li> <li>→ Max. fluid temperature 50 °C, optional 70 °C</li> <li>→ Operating pressure 10 bar</li> <li>→ Inlet pressure 6 bar</li> <li>→ Protection class IP 54</li> </ul>
Special features	<ul> <li>→ Easy-to-operate system in accordance with DIN 1988</li> <li>→ 2-6 vertical stainless steel high-pressure centrifugal pumps, switched in parallel, of the MVI series</li> <li>→ Easy-to-use "CC" control device, available with frequency converter for infinitely variable control of the baseload pump with COR systems</li> <li>→ Drinking water approval (ACS, UBA)</li> </ul>	<ul> <li>→ High energy system efficiency thanks to IE4 motor and optimised hydraulics</li> <li>→ Disproportionately large frequency converter control range from 25 Hz up to a maximum of 60 Hz for a large field of application</li> <li>→ High reliability thanks to various pro- tective features</li> <li>→ Easy setting and operation with the SCe switchgear</li> <li>→ Ready for building automation inte- gration via Modbus</li> </ul>	<ul> <li>Sturdy system due to series stainless steel high-pressure multistage centrifugal pumps with air-cooled integrated frequency converter</li> <li>Frequency converter with superproprotionally large control range</li> <li>Integrated full motor protection via PTC</li> <li>Integrated dry-running detection with automatic cut-out in event of low water via performance characteristics of the motor control electronics</li> </ul>
Equipment/ function	<ul> <li>2-6 pumps of the MVI series per system</li> <li>Components that come in contact with fluid are corrosion-resistant</li> <li>Base frame galvanised, with height-adjustable vibration absorbers</li> <li>Check valve at each pump, on the suction and pressure sides</li> <li>Non-return valve, Pressure sensor, Pressure gauge, Diaphragm pressure vessel pressure side</li> <li>Automatic pump control via CC Controller</li> </ul>	<ul> <li>Speed controlled motor via integrated frequency inverter on each pump.</li> <li>SCe control panel at multi pump booster sets.</li> <li>All components in contact with fluid are corrosion resistant.</li> <li>Shut-off valve at each pump, pressure side and suction side</li> <li>Non return valve, pressure side</li> <li>Pressure gauge and pressure sensor, pressure side and suction side</li> <li>Diaphragm pressure vessel 8l, PN 16, pressure side</li> </ul>	<ul> <li>Infinitely variable control mode via integrated frequency converter at the pump</li> <li>All components in contact with fluid are corrosion resistant</li> <li>Shut-off valve, pressure side</li> <li>Non-return valve, pressure side</li> <li>Diaphragm pressure vessel 8 l, PN16</li> </ul>

Series	Wilo-FLA	Wilo-FLA Compact	Wilo-SiFire EN SiFire Easy
Product photo			
Design	Pressure-boosting system for firefighting applications with 1 to 2 autonomously operating, non-self-priming, stainless steel, high-pressure, multistage centrifu- gal pumps	Pressure-boosting system for firefight- ing, 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
Application	For supply of firefighting water from fire hose reels and exterior floor hydrants in accordance with DIN 14462	For supply of firefighting water from fire hose reels in accordance with DIN 14462	Fully automatic water supply of fire-ex- tinguishing systems with sprinkler system in accordance with EN 12845
Duty chart	H/m 140 120 100 80 60 40 20 0 0 10 20 30 40 50 60 70 80 90Q/m³/h	H/m 160 140 120 100 80 60 40 20 00 5 10 15 20 25 Q/m <sup>3</sup> /h	H/m 120 100 80 60 40 20 0 100 200 300 400 500 600 Q/m <sup>3</sup> /h
Volume flow Q <sub>max</sub>	100 m³/h	30 m³/h	750 m³/h
Delivery head H <sub>max</sub>	159 m	142 m	128 m
Technical data	<ul> <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>	<ul> <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 I)</li> </ul>	<ul> <li>→ Mains connection 3~400 V, 50 Hz (1~230 V, 50 Hz switchgear diesel pump)</li> <li>→ Fluid temperature max. +25 °C</li> <li>→ Max. operating pressure 10/16 bar</li> <li>→ Max. inlet pressure 6 bar</li> <li>→ Protection class of the switchgear IP54</li> </ul>
Special features	<ul> <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 protec- tion by means of minimum volume discharge via bypass circuit without auxiliary energy</li> </ul>	<ul> <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> <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 construc- tion and are thus protected from shocks or cuts</li> </ul>
Equipment/ function	<ul> <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 discharge sides</li> <li>Non-return valve, on the discharge side</li> <li>Diaphragm pressure vessel 8 l, PN16, on the discharge side</li> <li>Pressure switch, on the discharge side</li> </ul>	<ul> <li>Components with fluid contact are corrosion-resistant</li> <li>Pipework stainless steel</li> <li>Ball shut-off valve on discharge 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 discharge side</li> <li>Diaphragm pressure vessel 8 l, PN16, on discharge side</li> <li>Pressure switch, on discharge side</li> </ul>	<ul> <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 discharge side of the pump</li> <li>Non-return valve on the discharge side of every pump</li> <li>DN2" connection for the priming tank of the pumps</li> <li>Pressure measuring on discharge side</li> </ul>

Series	Wilo-SiFire FIRST	Wilo-FireSet UL FM	Wilo-GEP Fire
Product photo			
Design	Pressure–boosting system for firefighting in accordance with EN 12845	Pressure-boosting system for firefighting according to NPFA standards and with UL and FM certifications, consisting of 1 pump with electric or diesel motor and a switchgear on horizontal baseplate	Pressure-boosting system for firefight- ing applications with 1 to 12 multistage centrifugal pumps with/without break tank, with/without housing
Application	Fully automatic water supply for fire- extinguishing systems with sprinklers	Fully automatic water supply for fire- extinguishing systems with sprinklers in domestic, commercial and public build- ings, hotels, hospitals, shopping centres, office blocks and industrial buildings	Supply of firefighting water of fire hose reels and exterior floor hydrant systems, for high-rise buildings & large properties – without valves for pressure reduction– as well as sprinkler/water spray systems
Duty chart	H/m 80 60 40 20 0 50 100 150 200 250 Q/m³/h	H/m 200 100 80 60 40 200 50 100 150 200 300 400 Q/m³/h	H/m 250 200 150 100 50 0 200 400 600 800 1000 Q/m³/h
Volume flow Q <sub>max</sub>	320 m³/h	681 m³/h	Certified up to 1000 m³/h
Delivery head $H_{max}$	95 m	179 m	250 m, up to 450 m on request
Technical data	<ul> <li>→ Power supply 3~400 V, 50 Hz (1~230 V, 50 Hz for jockey pump and diesel pump switchgear)</li> <li>→ Fluid temperature max. +25 °C</li> <li>→ Flow from 10 to 320 m<sup>3</sup>/h</li> <li>→ Maximum head 95 m</li> <li>→ Protection class IP55</li> </ul>	<ul> <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 315 kW electric/336 kW diesel</li> <li>→ Protection class IP55 electric/IP54 switchgear</li> </ul>	<ul> <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 redun-dancy stage 3</li> <li>→ Small installation surface min. 0.64 m<sup>2</sup></li> </ul>
Special features	<ul> <li>→ Modular norm pump system with electric or diesel motor for a wide field of applications and high flexibility in designing</li> <li>→ Long lifetime thanks to robust design</li> <li>→ Easy transport, installation and maintenance thanks to an universal baseplate</li> <li>→ Intuitive handling on specific firefight- ing switchgear</li> </ul>	<ul> <li>→ Certified according to NFPA standards for the highest level of design flex- ibility</li> <li>→ Robust pumps for a wide field of ap- plication 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>	<ul> <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>
Equipment/ function	<ul> <li>→ 1 horizontal baseplate pump per system from 32-200 to 100-200 series, with IE3 equivalent standard motor or diesel motor</li> <li>→ Diaphragm, to avoid over heating at zero flow, directly installed on the main pump housing</li> <li>→ Jockey pump from MVIL-1 series</li> <li>→ One controller fixed on robust supports. Model E for electric motor and D for diesel engine, both equipped with a firefighing dedicated controller, plus additional control J for jockey pump, if present</li> </ul>	<ul> <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>	<ul> <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>

Series	Wilo-SiFresh	Wilo-Sub TWU 3 Wilo-Sub TWU 3HS	Wilo-Sub TWU 4,/QC,/GT
Product photo	- NEW		in the second
Design	Ready-to-connect cold water circulation system with integrated circulation pump as well as flushing device	Submersible multistage pump	Submersible multistage pump
Application	Cold water circulation for saving and providing hygienic drinking water in con- junction with flow-through cooling.	For water supply, sprinkling, irrigation with water without long-fibre or abrasive components from boreholes, wells, rain- water storage	Pumping of water from boreholes, wells, rainwater storage for water supply, sprinkling, irrigation, lowering ground water level
Duty chart	H/m 10 8 6 4 2 0 2 4 6 8 10 0/m <sup>3</sup> /h	H/m 140 120 100 80 60 40 20 0 0 1 2 3 4 5 Q/m <sup>3</sup> /h	H/m 280 240 240 1 2 1 2 3 4 5 10 2 2 3 4 5 10 2 2 2 2 2 2 2 2 2 2 2 2 2
Volume flow Q <sub>max</sub>	11 m³/h	6.5 m³/h	22 m³/h
Delivery head H <sub>max</sub>	12 m	130 m	322 m
Technical data	<ul> <li>→ Fluid temperature: drinking water +2 °C to +80 °C</li> <li>→ Mains connection: 1~230 V, 50/60 Hz</li> <li>→ Screwed connection: Rp 3/4"</li> <li>→ Max. operating pressure: 10 bar</li> </ul>	<ul> <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> <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> <li>Continuous temperature monitoring, circulation and individually programmable time intervals for the water exchange ensure highest standard of drinking water hygiene</li> <li>Display of temperature data for the last 24 hours and quantities of water drawn for the last 7 days</li> <li>Optional: can be combined with a cooling system for more efficient temperature maintenance</li> <li>State-of-the-art interfaces that enable integration into the building automation</li> <li>Pre-assembled ball valve for shutting off the water circulation for maintenance tasks</li> </ul>	<ul> <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> <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> <li>Ready-to-connect system with pre- assembled ball valves</li> <li>Menu-guided operation and display</li> <li>Setting of a max. drinking water temperature</li> <li>Setting of a timed flushing interval</li> <li>Integrated temperature sensors for continuous temperature monitoring</li> <li>Retrofittable interface modules for communication and integration into building automation system</li> </ul>	<ul> <li>Submersible multistage 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 inter- nal frequency converter</li> </ul>	<ul> <li>→ Submersible multistage 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-Sub TWU 3 Plug & Pump Wilo-Sub TWU 4 Plug & Pump	Wilo-Sub TWI 4/6/8/10	Wilo-Actun ZETOS-K
Product photo			
Design	Water-supply unit with submersible pump, control and complete accessories	Submersible multistage pump	Submersible pump in cast stainless steel with sectional construction
Application	For water supply, sprinkling, irrigation with water without long-fibre or abrasive components from boreholes, wells, rain- water storage	Pumping of (drinking) water from bore- holes, wells, rainwater storage for water supply, sprinkling, irrigation, lowering ground water level	<ul> <li>Municipal Drinking water and water supply from boreholes and rainwater storage tanks</li> <li>Sprinkling and irrigation Pumping water in industrial applica- tions and for water control</li> <li>Utilisation in geothermal and offshore areas</li> </ul>
Duty chart	H/m 100 Wilo-Sub TWU 3P&P, TWU 4P&P 100 100 100 100 100 100 100 10	H/m 440 360 280 200 120 40 0 0 1 5 10 20 Q/m <sup>3</sup> /h 200	H/m 600 500 400 300 100 50 100 150 200 250 300 350 Q/m³/h
Volume flow Q <sub>max</sub>	6 m³/h	165 m³/h	485 m³/h
Delivery head H <sub>max</sub>	88 m	500 m	640 m
Technical data	<ul> <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> <li>→ Mains: 1~230 V, 50 Hz (only TWI 4) 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>	<ul> <li>→ Max. fluid temperature (hydraulics): 70 °C</li> <li>→ Max. sand content: 150 g/m<sup>3</sup></li> <li>→ Mains connection: 3~400 V, 50 Hz ±10 %</li> <li>→ Max. immersion depth: 100 350 m</li> <li>→ Available motors: Asynchronous and permanent magnetic motors</li> </ul>
Special features	<ul> <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> <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 drinking water application</li> </ul>	<ul> <li>→ Particularly corrosion-resistant thanks to hydraulics comprised entirely of casistainless steel in 1.4408 (AISI 316)</li> <li>→ High wear resistance: max. sand content of 150 g/m<sup>3</sup></li> <li>→ ACS approval for drinking water application</li> </ul>
Equipment/ function	→ Submersible multistage pump with radial impellers	→ Submersible multistage pump with radial or semi-axial impellers → Integrated non-return value	

- → Integrated non-return valve

- → Integrated non-return valve
   → NEMA coupling
   → Single-phase AC motor
   → Integrated thermal motor protection
   → Dry-running protection (only for TWU 4-...-P&P with Wilo-Sub-I package)
- $\rightarrow$  Integrated non-return valve
- → NEMA coupling
   → Single-phase or three-phase AC motor

Series	Wilo-EMU 14" 24"	Wilo-EMU sprinkler pumps	Wilo-EMU polder pumps
Product photo			
Design	Submersible pump with sectional con- struction	Submersible pump with sectional con- struction	Polder pump
Application	<ul> <li>Municipal Drinking water and water supply from boreholes and rainwater storage tanks</li> <li>Sprinkling and irrigation</li> <li>Pumping water in industrial applica- tions and for water control</li> <li>Utilisation in geothermal and offshore areas</li> </ul>	Supply of sprinkler systems	Drinking/process water from boreholes, rainwater tanks; sprinkling, irrigation, groundwater lowering; municipal, indus- trial, geothermal, offshore use
Duty chart	H/m 560 480 400 320 240 160 80 0 20 30 50 100 200 300 Q//s	H/m 140 120 100 80 60 40 30 50 70 100 200 300 Q/m³/h	H/m 140 140 100 100 100 100 100 100
Volume flow $Q_{max}$	2,400 m³/h	580 m³/h	1,200 m³/h
Delivery head H <sub>max</sub>	460 m	140 m	160 m
Technical data	<ul> <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></li> <li>→ Max. immersion depth: 100/300/350 m</li> </ul>	<ul> <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> <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> <li>Pressure shroud in corrosion-resistant and hygienic stainless steel version</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> <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 avail- able as an accessory</li> </ul>	<ul> <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> <li>Submersible multistage pump</li> <li>Radial or semi-axial impellers</li> <li>Hydraulics and motor freely configur- able according to power requirements</li> <li>Integrated non-return valve</li> <li>(depending on type)</li> <li>NEMA coupling or standardised con- nection</li> <li>Three-phase motor for direct or star-</li> </ul>	<ul> <li>→ Submersible multistage 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> <li>→ Submersible multistage pump</li> <li>→ Semi-axial impellers</li> <li>→ Hydraulics and motor freely configur- able according to power requirement</li> <li>→ Three-phase motor for direct or star- delta start</li> <li>→ Motors rewindable as standard</li> </ul>

delta start

 $\rightarrow$  Three-phase motor for direct or star-

Series	Series VMF, CNE, VAF	Wilo-Yonos GIGA-N	Wilo-Atmos GIGA-N
Product photo			
Design	Vertical turbine pumps for dry well instal- lation 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 Irrigation, firefighting Cooling water supply 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 cool- ing systems
Duty chart		H/m 70 60 50 40 30 10 0 100 200 300 400 500Q/m <sup>3</sup> /h	H/m 200 150 100 50 30 20 50 456 810 2030 50 100150 6000/m <sup>2</sup> /n
Volume flow Q <sub>max</sub>	40,000 m³/h	520 m³/h	1000 m³/h
Delivery head H <sub>max</sub>	450 m	70 m	150 m
Technical data	<ul> <li>→ Permitted temperature range up to 80 °C, or up to 105 °C on request</li> <li>→ Nominal diameter on discharge side DN 100 to DN 2000</li> </ul>	<ul> <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> <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> <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> <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> <li>Energy-saving thanks to increased overall efficiency through improved hydraulics and the use of IE3 motors</li> <li>Cataphoretic coating of all cast com- ponents for high corrosion resistance and long service life</li> <li>Universally usable thanks to stand- ardised dimensions, a range of motor options and impellers made of different materials</li> </ul>
Equipment/ function	<ul> <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> <li>Control modes: Δp-c, PID control, n=constant</li> <li>Manual functions: e.g. differential pressure setpoint setting, manual con- trol mode, error acknowledgement</li> <li>External control functions: e.g. Over- riding Off, analogue input 0-10 V/0- 20 mA for constant speed (DDC)</li> <li>Remote control via infrared interface (IR-Stick), plug-in position for IF modules for connection to building automation</li> </ul>	<ul> <li>→ Single-stage low-pressure centrifu- gal pump in monobloc design with coupling, coupling guard, motor and baseplate</li> <li>→ Motors with efficiency class IE3</li> </ul>

Series	Wilo-Atmos GIGA-NF	Wilo-CronoNorm-NLG Wilo-VeroNorm-NPG	Wilo-Atmos TERA-SCH
Product photo	Series extension		
Design	Single-stage, low-pressure centrifugal pump with axial suction in accordance to EN 733 and VdS 2100-7 for installation on a base frame	Single-stage low-pressure centrifugal pump with axial suction, according to ISO 5199, mounted on a baseplate	Axially spilt case pump mounted on a base frame.
Application	Pumping of firefighting water	Pumping of heating water, cold water, water-glycol mixtures in municipal water supply, general industry, power stations etc.	Raw water intake, pressure boosting/ water transport in water-supply units, pumping of process/cooling water, heat- ing water (in Germany acc. VDI 235), water-glycol mixtures, irrigation
Duty chart	H/m 140 120 100 80 60 40 20 0 50 100 150 200 250 9/m³/h	H/m 140 120 100 80 60 40 40 500 1000 1500 2000 Q/m³/h	H/m 100 50 30 20 100 200 300 500 1000 2000 Q/m <sup>3</sup> /h
Volume flow <i>Q<sub>max</sub></i>	295 m³/h	2,800 m³/h	4,675 m³/h
Delivery head H <sub>max</sub>	115 m	140 m	150 m
Technical data	<ul> <li>→ Fluid temperature 20 °C 25 °C</li> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Protection class IP55</li> <li>→ Nominal diameter DN 32 to DN 125</li> <li>→ Max. operating pressure 16 bar</li> </ul>	<ul> <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> <li>→ Fluid temperature -20 °C to +120 °C</li> <li>→ Mains connection 3~400 V, 50 HzNominal diameters</li> <li>– Suction side: DN 150 to DN 500</li> <li>– Discharge side: DN 150 to DN 400</li> <li>→ Max. operating pressure: PN 16, PN 25</li> </ul>
Special features	<ul> <li>→ Reliable, durable, corrosion resistant thanks to cataphoretic coating of all cast components, bronze impeller and stainless steel slip rings</li> <li>→ User-friendly "back pull-out" design for easy maintenance</li> <li>→ Different drives depending on indi- vidual requirements</li> </ul>	<ul> <li>NLG:</li> <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> <li>NPG:</li> <li>→ Suitable for temperatures up to 140 °C</li> <li>→ Back pull-out version</li> </ul>	<ul> <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 drinking water version</li> </ul>
Equipment/ function	<ul> <li>→ Single-stage low-pressure centrifugal pump base plate pump with standard motor (IE3) or diesel engine.</li> <li>→ Base frame made of steel profiles with epoxy paint.</li> </ul>	<ul> <li>Single-stage horizontal spiral hous- ing 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> <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>

Series	Wilo-SCP	NOLH	Wilo-Drain LP Wilo-Drain LPC
Product photo			
Design	Low–pressure centrifugal pump with axi– ally split housing mounted on a baseplate	Single-stage low-pressure centrifugal pump with axial suction connection and radial, upwards-facing pressure connec- tion, mounted on a baseplate	Non–submersible self–priming drainage pump
Application	Pumping of heating water (acc. VDI 2035), cold water, process water, water-glycol mixtures in heating, cold water and cooling systems	For supplying clean or slightly muddy fluids without solid material, e.g.: in industrial processes, non-hygienic food industry, water circulation in the metals industry, heating, cold water and cooling, water systems, or power generation.	Pumping of → Wastewater → Process water
Duty chart	H/m 200 100 50 10 40 50 100 500 1000 Q/m <sup>3</sup> /h	H/m 1500 50 20 100 50 20 2 5 10 50 100 500 2000Q/m³/h	H/m 30 25 20 15 10 5 0 10 20 30 40 50 Q/m³/h
Volume flow Q <sub>max</sub>	3,400 m³/h	1,800 m³/h	60 m³/h
Delivery head H <sub>max</sub>	245 m	140 m	29 m
Technical data	<ul> <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>→ Dlscharge side: DN 50 to DN 400</li> <li>→ Max. operating pressure: 16 or 25 bar, depending on type</li> </ul>	<ul> <li>→ Permitted temperature range -20 °C to +120 °C</li> <li>→ Mains connection 3~400 V, 50 Hz</li> <li>→ Nominal diameter on discharge side DN 32 to DN 125</li> <li>→ Max. operating pressure PN 16</li> </ul>	<ul> <li>→ Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz</li> <li>→ Operation mode: S1</li> <li>→ Fluid temperature: max. 35 °C</li> </ul>
Special features	<ul> <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>	<ul> <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> <li>→ Long service life</li> <li>→ Sturdy construction</li> <li>→ Easy operation</li> <li>→ Flexible use</li> </ul>
Equipment/ function	<ul> <li>→ 1- or 2-stage, low-pressure centrifu- gal pump in monobloc design</li> <li>→ Deliverable as complete unit or with- out 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:</li> </ul>	<ul> <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> </ul>	→ Self-priming

- → Materials:
   → Pump housing: EN-GJL-250
   → Impeller: G-CuSn5 ZnPb
   → Shaft: X12Cr13
- → Baseplate: steel or cast iron
   → Supplied as complete unit with pump, coupling, coupling guard, motor and baseplate or without motor or pump only, with bare shaft end



- $\rightarrow$  Process security thanks to extensive
- monitoring devices
- → Customised versions are possible

Equipment/ function ightarrow Heavy-duty version made of cast iron

# Join the ecolution.

# Enhance operational reliability

Rely on maximum operational safety for your house drainage with the smallest sewage lifting unit with built-in macerator.



Series	Wilo-Drain LP Wilo-Drain LPC	Wilo-Drain VC	Wilo-Drain TMT
Product photo			
Design	Non-submersible self-priming drainage pump	Non-submersible pedestal pump with standard motor	Submersible drainage pump
Application	Pumping of → Wastewater → Process water	Pumping of → Wastewater → Industrial wastewater	Pumping of → Wastewater → Industrial wastewater
Duty chart	H/m 30 25 20 15 10 5 0 10 20 30 40 50 Q/m <sup>2</sup> /b	$H/m_{20}$ $I_{10}$	H/m 16 14 12 10 8 6 4 2 0 0 4 8 12 16 16 16 14 12 10 16 16 16 14 12 10 10 10 10 10 10 10 10 10 10
Volume flow <i>Q<sub>max</sub></i>	60 m³/h	14 m³/h	22 m³/h
Delivery head H <sub>max</sub>	31 m	20 m	15.5 m
Technical data	<ul> <li>→ Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz</li> <li>→ Operation mode: S1</li> <li>→ Fluid temperature: max. 35 °C</li> </ul>	<ul> <li>→ Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz</li> <li>→ Operation mode: S1</li> <li>→ Fluid temperature: max. 95 °C</li> </ul>	<ul> <li>→ Mains connection: 3~400 V, 50 Hz</li> <li>→ Immersed operating mode: S1</li> <li>→ Non-immersed operating mode: S3 25 %</li> <li>→ Max. immersion depth: 7 m</li> <li>→ Fluid temperature: max. 95 °C</li> </ul>
Special features	<ul> <li>→ Long service life</li> <li>→ Sturdy construction</li> <li>→ Easy operation</li> <li>→ Flexible use</li> </ul>	<ul> <li>→ For fluids up to 95 °C</li> <li>→ Long service life</li> <li>→ Easy operation thanks to attached float switch</li> <li>→ Long standstill times possible</li> <li>→ Integrated motor protection with thermal relay</li> </ul>	<ul> <li>→ For fluids up to 95 °C</li> <li>→ Sealed cable inlet</li> </ul>
Equipment/ function	→ Self-priming	→ Attached float switch	<ul> <li>→ Housing and impeller made of grey cast iron</li> <li>→ Thermal motor monitoring</li> </ul>

→ Thermal motor monitoring

General overview - Edition 2023 - 50 Hz - Subject to change without prior notice



Series	Wilo-Padus PRO	Wilo-Rexa MINI3-S	Wilo-Rexa FIT-S
Product photo	wio		
Design	Submersible drainage pump	Submersible sewage pump with macera- tor	Submersible sewage pump with macerator
Application	Pumping of → Wastewater	For pumping in domestic areas of: → Sewage containing faeces → Wastewater (with small amounts of sand and gravel)	For pumping in commercial areas of: → Sewage containing faeces → Wastewater (with small amounts of sand and gravel)
Duty chart	H/m 32 28 24 20 16 12 8 4 0 0 20 40 60 80 100 120 Q/m <sup>3</sup> /h	H/m 24 20 16 12 8 4 0 0 4 8 12 16 Q/m <sup>3</sup> /h	H/m 80 60 40 20 0 4 4 8 12 16 20 <b>Q/m³/h</b>
Volume flow Q <sub>max</sub>	140 m³/h	16.6 m³/h	20 m³/h
Delivery head H <sub>max</sub>	34 m	20.5 m	43 m
Technical data	<ul> <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> <li>→ Mains connection: 1~230 V, 50 Hz oder 3~400 V, 50 Hz</li> <li>→ Operation mode submerged: S1</li> <li>→ Operation mode emerged: S3 20%</li> <li>→ Max. immersion depth: 7 m</li> <li>→ Fluid temperature: max. 40 °C</li> </ul>	<ul> <li>→ Mains connection: 1~230 V, 50 Hz oder 3~400 V, 50 Hz</li> <li>→ Operation mode submerged: S1</li> <li>→ Operation mode emerged: S3 10%</li> <li>→ Max. immersion depth: 7 m</li> <li>→ Fluid temperature: max. 40 °C</li> </ul>
Special features	<ul> <li>High reliability in abrasive media thanks to rubber-coated hydrau- lics and impeller made of hardened chrome steel</li> <li>Easy installation thanks to low weight and flexible pressure connection (ver- tical/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> <li>Excellent anti-clogging reliability due to radial macerator with double shear effect</li> <li>Optimised hydraulics/macerator combination for a wide coverage of delivery head at the lowest power requirement for domestic electrical installations</li> <li>Low overall installation costs thanks to the use of smallest possible piping</li> <li>Easy to use in domestic applications thanks to low weight.</li> <li>Long service life due to high-quality motor with double sealing</li> </ul>	<ul> <li>Excellent anti-clogging reliability due to radial macerator with double shear effect</li> <li>Optimised hydraulics/macerator combination for a wide coverage of the delivery head</li> <li>Low overall installation costs thanks to the use of smallest possible piping</li> <li>Designed for an easy selection covering the needs of various building types</li> <li>Long service life due to high-quality motor with two mechanical seals and optional sealing chamber monitoring</li> </ul>
Equipment/ function	<ul> <li>→ Sheath flow cooling</li> <li>→ Slurping operation</li> </ul>	<ul> <li>→ Radial macerator with double shear effect</li> <li>→ Thermal motor moitoring</li> <li>→ "A" version: with float and plug</li> <li>→ "P" version: with plug</li> </ul>	<ul> <li>→ Radial macerator with double shear effect</li> <li>→ Thermal motor moitoring</li> <li>→ "A" version: with float and plug</li> <li>→ "P" version: with plug</li> </ul>

Series	Wilo-Rexa PRO-S	Wilo-Rexa MINI3	Wilo-Rexa UNI
Product photo			
Design	Submersible sewage pump with macera- tor	Submersible sewage pump	Submersible sewage pump
Application	For pumping in commercial areas of: → Sewage containing faeces → Wastewater (with small amounts of sand and gravel)	Pumping of → Sewage without faeces → Wastewater	Pumping of → Sewage containing faeces → Wastewater → Aggressive fluids (pH >3.5)
Duty chart	H/m 60 50 40 30 20 10 0 4 8 12 16 20 24 28 Q/m <sup>3</sup> /h	H/m 12 10 8 6 4 2 0 5 10 15 20 Q/m <sup>3</sup> /h	H/m 24 20 16 12 8 0 0 10 20 30 40 9 0 10 20 30 40 9 0 10 20 10 20 30 40 9 0 10 10 10 10 10 10 10 10 10 10 10 10 1
Volume flow <i>Q<sub>max</sub></i>	30 m³/h	23 m³/h	54 m³/h
Delivery head H <sub>max</sub>	57 m	13 m	21 m
Technical data	<ul> <li>→ Mains connection: 1~230 V, 50 Hz oder 3~400 V, 50 Hz</li> <li>→ Operation mode submerged: S1</li> <li>→ Operation mode emerged: S3 25%</li> <li>→ Max. immersion depth: 20 m</li> <li>→ Fluid temperature: max. 40 °C</li> </ul>	<ul> <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> <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>
Special features	<ul> <li>Excellent anti-clogging reliability due to radial macerator with double shear effect</li> <li>Optimised hydraulics/macerator combination for a wide coverage of delivery head</li> <li>Low overall installation costs thanks to the use of smallest possible piping</li> <li>Designed for an easy selection covering the needs of various building types</li> <li>Long service life due to high-quality motor with two mechanical seals and optional sealing chamber monitoring</li> </ul>	<ul> <li>Best efficiency and high operational reliability thanks to optimised hydraulics</li> <li>Easy installation thanks to compact design with integrated condensor, light weight and threaded flange</li> <li>Long maintenance intervals thanks to large sealing chamber and double sealing</li> </ul>	<ul> <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>
Equipment/ function	<ul> <li>→ Radial macerator with double shear effect</li> <li>→ Thermal motor monitoring</li> <li>→ Motor thightness monitoring</li> <li>→ Ex approval according to ATEX</li> </ul>	<ul> <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> <li>Thermal motor monitoring</li> <li>Single-phase 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>"C" version with sheath flow cooling</li> </ul>



→ ATEX approval (Rexa PRO)



Series	Wilo-Rexa NORM	Wilo-EMU KPR	Norma V
Product photo	Series extension		U
Design	Non-submersible sewage pump with standard motor, fully mounted on baseplate	Axial submersible pump for use in pipe chambers	Non–submersible pedestal pump with standard motor
Application	Pumping of → Untreated sewage → Sewage containing faeces → Wastewater → Process water	Pumping of → Sewage without faeces → Wastewater → Process water	Pumping of → Wastewater → Industrial wastewater
Duty chart	H/m 32 24 16 0 400 800 1200 Q/m³/h	H/m 7 6 4 3 1 0 5 500 1000 Q//s	H/m 150 50 20 10 50 20 10 50 20 10 50 20 10 20 10 20 10 10 10 10 10 10 10 10 10 1
Volume flow Q <sub>max</sub>	1,660 m³/h	4,360 m³/h	200 m³/h
Delivery head H <sub>max</sub>	32 m	8 m	100 m
Technical data	<ul> <li>→ Mains connection: 3~400 V, 50 Hz</li> <li>→ Operating mode: S1</li> <li>→ Fluid temperature: max. 70 °C</li> <li>→ Ambient temperature: max. 40 °C</li> <li>→ Motor efficiency class: IE3, IE4</li> </ul>	<ul> <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> <li>→ Fluid temperature: max 120 °C</li> <li>→ Pressure connection: DN 32 to DN 100</li> <li>→ Max. operating pressure: 16 bar</li> <li>→ Max. viscosity: 150 cSt</li> </ul>
Special features	<ul> <li>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</li> <li>Shut "back pull-out" unit: Dismantling without draining the oil in the sealing chamber</li> </ul>	<ul> <li>→ Installation directly in the pressure pipe</li> <li>→ Angle of propeller blades adjustable</li> <li>→ Process security thanks to extensive monitoring devices</li> <li>→ Customised versions are possible</li> </ul>	<ul> <li>→ Low-maintenance</li> <li>→ No shaft sealing</li> <li>→ Noise-free suction</li> <li>→ Replaceable IEC standard motor</li> <li>→ Semi-elastic coupling with the VTM version</li> </ul>
Equipment/ function	<ul> <li>→ Optional thermal motor monitoring</li> <li>→ Optional external sealing chamber monitoring</li> </ul>	→ Heavy-duty version made of cast iron	<ul> <li>Pressure connection above baseplate in PN 10/16/25Different basic versions:</li> <li>VCS: adjustable baseplate/fixed coupling</li> <li>VEM: cast iron support/fixed coupling</li> <li>VTM: bearing block/semi-elastic couplingOptions:</li> <li>Explosion-proof float switch</li> <li>External lubrication of bearing</li> <li>Pressure connection below base- plate</li> </ul>

Series	Wilo-DrainLift Box E Wilo-DrainLift Box D Wilo-DrainLift Box DS	Wilo-HiDrainlift 3	Wilo-HiSewlift 3
Product photo	Series extension		
Design	Compact and fully-automatic sewage lifting unit for above-ground and con- cealed floor installation within buildings.	Sewage lifting unit	Sewage lifting unit
Application	For collection and pumping of the follow- ing in domestic areas: → Sewage not containing faeces	Pumping of sewage without faeces	Pumping of sewage containing faeces
Duty chart	H/m 10 8 6 4 2 0 0 2 4 6 8 10 12 14 2 0 0 2 4 6 8 10 12 14 2 0 14 2 14 2 14 2 14 2 14 2 1	<i>H/m</i> 7 5 4 3 2 1 0 1 2 3 -24 3 -35 3 -37 0 0 1 2 3 4 5 <i>Q</i> m <sup>3</sup> /h	H/m 3, 25, 3, 35, 3, 35, 3, 35, 35, 35, 35, 35,
Volume flow Q	18 m³/h	6 m³/h	5 m³/h
Delivery head H <sub>max</sub>	10.5 m	8 m	8 m
Technical data	<ul> <li>Mains connection: 1~230 V, 50 Hz</li> <li>Discharge connection: 40 mm</li> <li>Inlet connection: 110 mm (DN 100)</li> <li>Ventilation connection: 110 mm (DN 100)</li> <li>Tank volume: 113 I</li> <li>Switching volume: 22 30 I</li> <li>Switchgear protection class (for DS version): IP54</li> </ul>	<ul> <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 I</li> <li>→ Switching volume: 0.7 2 I</li> </ul>	<ul> <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  ; 17.4  </li> <li>→ Switching volume: 1  </li> </ul>
Special features	<ul> <li>Easy to install due to integrated pump and non-return valve</li> <li>The large tank volume ensures a low number of switching processes</li> <li>Easy maintenance</li> <li>Stainless steel tile frame with trap (only concealed floor model)</li> </ul>	<ul> <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 waste- water disposal</li> <li>Easy installation with flexible connec- tion possibilities</li> <li>Ready for connection</li> </ul>	<ul> <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>
Equipment/ function	<ul> <li>Single and double-pump system</li> <li>Lifting unit with ready-mounted pump (with thermal motor monitoring), level control, pressure pipe and integrated non-return valve</li> <li>Ready-to-plug system (single-pump system "E" model, double-pump system "D" model)</li> <li>DS model: Double-pump system with micro-processor controlled switchgear</li> </ul>	<ul> <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> <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>

Series	Wilo-DrainLift SANI-S	Wilo-DrainLift SANI-M	Wilo-DrainLift SANI-L
Product photo			
Design	Compact, ready for connection and fully submersible single pump lifting unit	Ready for connection and fully submers- ible single pump lifting unit	Compact, 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	H/m 12 10 8 6 4 2 0 4 8 12 10 10 10 10 10 10 10 10 10 10	H/m 24 20 16 12 8 4 0 10 20 30 40 50 60 70 Q/m <sup>3</sup> /h	<i>H/m</i> 24 20 16 12 8 4 0 0 10 20 30 40 50 60 70 <i>Q/m³/h</i>
Volume flow Q <sub>max</sub>	29 m³/h	77 m³/h	77 m³∕h
Delivery head H <sub>max</sub>	11 m	20 m	20 m
Technical data	<ul> <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>→ Tank volume: 47 I</li> <li>→ Max. usable volume: 32 I</li> <li>→ Pressure connection: DN 80</li> </ul>	<ul> <li>→ Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz</li> <li>→ Operating mode: S3 10% or S1</li> <li>→ Fluid temperature: 3 40 °C, max. 65 °C for 5 min</li> <li>→ Tank volume: 99 I</li> <li>→ Max. usable volume: 74 I</li> <li>→ Pressure connection: DN 80</li> </ul>	<ul> <li>→ Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz</li> <li>→ Operating mode: S3 10% or S1</li> <li>→ Fluid temperature: 3 40 °C, max. 65 °C for 5 min</li> <li>→ Tank volume: 122 I</li> <li>→ Max. usable volume: 91 I</li> <li>→ Pressure connection: DN 80</li> </ul>
Special features	<ul> <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 tank cover and clean- ing opening in the non-return valve ensure easy maintenance</li> </ul>	<ul> <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 vari- ants (continuous/intermittent duty, version for aggressive fluids)</li> <li>→ Transparent tank cover and clean- ing opening in the non-return valve ensure easy maintenance</li> </ul>	<ul> <li>→ Easy installation and transport due to compact construction and light weight</li> <li>→ High operational reliability thanks to the double-pump system, high switch-ing volume, thermal motor protection and mains-independent alarm</li> <li>→ Universal use thanks to several variants (continuous/intermittent duty, version for aggressive fluids)</li> <li>→ Transparent tank cover and cleaning opening in the non-return valve ensure easy maintenance</li> </ul>
Equipment/ function	<ul> <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 bime- tallic strip</li> </ul>	<ul> <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 bime-tallic strip</li> </ul>	<ul> <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 bime- tallic strip</li> </ul>

Series	Wilo-DrainLift SANI-XL	Wilo-DrainLift SANI CUT-S	Wilo-DrainLift SANI CUT-M
Product photo		NEW NEW	NEW
Design	Ready for connection and fully submers- ible double-pump lifting unit	Compact, ready for connection, and fully submersible single pump lifting unit with macerator hydraulics.	Ready for connection and fully submers- ible single-pump lifting unit with macera- tor hydraulics.
Application	Pumping of sewage containing faeces	Pumping of sewage containing faeces	Pumping of sewage containing faeces
Duty chart	H/m 24 20 16 12 8 4 0 10 20 10 10 20 10 20 10 10 20 10 10 10 10 10 10 10 10 10 1	H/m 40 20 10 0 0 4 4 4 4 4 5 4 5 4 5 4 5 5 1 1 1 1 1 1 1 1	H/m 40 20 10 0 0 4 8 12 16 $2/m^3/h$
Volume flow Q <sub>max</sub>	77 m³/h	20 m³/h	20 m³/h
Delivery head H <sub>max</sub>	20 m	41 m	41 m
Technical data	<ul> <li>→ Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz</li> <li>→ Operating mode: S3 10% or S1</li> <li>→ Fluid temperature: 3 40 °C, max. 65 °C for 5 min</li> <li>→ Tank volume: 358 I</li> <li>→ Max. usable volume: 286 I</li> <li>→ Pressure connection: DN 80</li> </ul>	<ul> <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>→ Tank volume: 211</li> <li>→ Max. usable volume: 111</li> <li>→ Pressure connection: DN 32</li> </ul>	<ul> <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>Tank volume: 64 I</li> <li>Max. usable volume: 29 I</li> <li>Pressure connection: DN 32</li> </ul>
Special features	<ul> <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 pro- tection and mains-independent alarm</li> <li>→ Universal use thanks to several vari- ants (continuous/intermittent duty, version for aggressive fluids)</li> <li>→ Transparent reservoir cover and clean- ing opening in the non-return valve ensure easy maintenance</li> </ul>	<ul> <li>→ Very easy to install, also in concealed wall installation, and to transport due to lightweight and space-saving compact construction</li> <li>→ Operational reliability provided by the large switching volume, pump with radial macerator and a switch gear with mains-independent alarm</li> <li>→ Low overall installation costs thanks to the use of smallest possible piping</li> <li>→ Corrosion-free design with engi- neering plastics and stainless-steel guarantee's high reliability</li> </ul>	<ul> <li>Very easy to install and to transport due to lightweight and space-saving compact construction</li> <li>Operational reliability provided by the large switching volume, pump with radial macerator and a switch gear with mains-independent alarm</li> <li>Low overall installation costs thanks to the use of smallest possible piping</li> <li>Corrosion-free design with engineering plastics and stainless-steel guarantee's high reliability</li> </ul>
Equipment/ function	<ul> <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 bime- tallic strip</li> </ul>	<ul> <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</li> <li>Non-return valve</li> <li>Thermal motor monitoring with bime- tallic sensor</li> </ul>	<ul> <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</li> <li>Thermal motor monitoring with bime- tallic sensor</li> </ul>

Series	Wilo-DrainLift SANI CUT-L	Wilo-DrainLift XXL	Wilo-EMUport CORE
Product photo	NEW		wite
Design	Compact, ready for connection, and fully submersible double pump lifting unit with macerator hydraulics.	Sewage lifting unit Double–pump system	Sewage lifting unit with solids separa- tion for floor-mounted and underground installation (in a chamber)
Application	Pumping of sewage containing faeces	Pumping of sewage containing faeces	Pumping of sewage containing faeces
Duty chart	H/m 40 30 20 10 0 0 4 8 12 16 $Q/m^3/h$	H/m 20 16 12 8 4 0 0 20 40 60 80 100 120 9 40 9 8 100 120 9 40 9 8 100 100 100 100 100 100 100 100 100 1	H/m 50 40 30 20 10 0 10 20 30 40 50 60 70 Q/m <sup>3</sup> /h
Volume flow Q <sub>max</sub>	20 m³/h	140 m <sup>3</sup> /h	80 m³/h
Delivery head H <sub>max</sub>	41 m	21 m	55 m
Technical data	<ul> <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>→ Tank volume: 64 I</li> <li>→ Max. usable volume: 29 I</li> <li>→ Pressure connection: DN 32</li> </ul>	<ul> <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 I</li> <li>→ Switching volume: 305 630 I</li> </ul>	<ul> <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 I, 1200 I</li> <li>→ Switching volume: 295 I, 900 I</li> </ul>
Special features	<ul> <li>→ Very easy to install and to transport due to lightweight and space-saving compact construction</li> <li>→ Operational reliability provided by the large switching volume, pump with radial macerator and a switch gear with mains-independent alarm</li> <li>→ Low overall installation costs thanks to the use of smallest possible piping</li> <li>→ Corrosion-free design with engi- neering plastics and stainless-steel guarantee's high reliability</li> </ul>	<ul> <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> <li>Maximum operational safety with separation of solids from the sew- age: Large solids do not have to pass through the pump - no clogging</li> <li>Durable and corrosion-free due to the use of PE and PUR material</li> <li>Easy maintenance, even during opera- tion - thanks to hygienic dry well in- stallation and easy access from outside and individual blocking</li> <li>Future-proof even with increasing solid content in sewage</li> </ul>
Equipment/ function	<ul> <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</li> <li>Thermal motor monitoring with bime- tallic sensor</li> </ul>	<ul> <li>Thermal motor monitoring and leak-age 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> <li>→ Sewage lifting unit with solids 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>

	Wilo-DrainLift WS 40/50	Wilo–Port 600 Wilo–Port 800	Wilo-DrainLift WS 1100
Product photo			
Design	Pump chamber as concealed pumping station or floor-mounted lifting unit	Pump chamber with synthetic tank, as single or double-pump system	Pump chamber with synthetic tank, as single- or double-pump system
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.	Pumping of sewage containing faeces that cannot be returned to the sewer system using natural falls
Volume flow Q <sub>max</sub>			
Volume flow Q <sub>max</sub> Delivery head H <sub>ma</sub>			
	<ul> <li>→ Pressure port:         <ul> <li>DrainLift WS 40/50 Basic: G 2, Ø50 mm/G 2½, Ø63 mm</li> <li>DrainLift WS 40/50: R 1½/R 2</li> <li>→ Inlet connection: DN 100/150/200 Gross volume:             <ul></ul></li></ul></li></ul>	<ul> <li>→ Pressure port: R1¼, R1½</li> <li>→ Inlet connection: DN 100, DN 150, DN 200</li> <li>→ Discharge connection pump: R1¼, R1½</li> <li>→ Gross volume: 340 9001</li> </ul>	<ul> <li>→ Pressure port: G2</li> <li>→ Inlet connection: DN 150</li> <li>→ Discharge connection: Rp1½, Rp2, Rp2½, DN 80</li> <li>→ Gross volume: 1215 I</li> </ul>

Equipment/ function	Wilo sewage pumps which can be used: → DrainLift WS 40: Rexa FIT-S → DrainLift WS 50: Rexa UNI	Wilo sewage pumps which can be used: → Drain TMW 32 → Padus MINI3 → Rexa MINI3	Wilo sewage pumps which can be used: → Padus MINI3 → Rexa UNI → Drain TP 80
	Wilo sewage pumps which are included: $\rightarrow$ DrainLift WS 40 Basic: Rexa MINI3 $\rightarrow$ DrainLift WS 50 Basic: Rexa MINI3/UNI	$ \rightarrow \text{Rexa FIT-S} $ $ \rightarrow \text{Rexa PRO-S} $	<ul> <li>→ Rexa FIT/PRO</li> <li>→ Rexa FIT-S</li> <li>→ Rexa PRO-S</li> </ul>

Series	Wilo-Flumen OPTI-TR 22-1 40-1 Wilo-Flumen EXCEL-TRE 20 40	Wilo-Flumen OPTI-TR 50-3 120-1 Wilo-Flumen EXCEL-TRE 50-3 90-2	Wilo-EMU TR/TRE 216 326-3
Product photo			6.72
Design	Directly driven submersible mixer	Submersible mixer with single-stage planetary gear	Submersible mixer with two-stage plan- etary gear
Application	Swirling of deposits and solids; destruc- tion of floating sludge layers	Flow generation, suspension of solids, homogenisation and prevention of float- ing sludge layers	Energetically optimised mixing and circu- lation of activated sludge; generation of flow rates
Duty chart			
Volume flow Q <sub>max</sub>	Max. thrust: 105 – 950 N	Max. thrust: 160 – 6620 N	Max. thrust: 380 – 4250 N
Delivery head H <sub>max</sub>			
Technical data	<ul> <li>→ Mains connection: 3~400 V, 50 Hz</li> <li>→ Immersed operating mode: 51</li> <li>→ Max. immersion depth: 20 m</li> <li>→ Fluid temperature: max. 40 °C</li> </ul>	<ul> <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> <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> <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>	<ul> <li>Reliable continuous operation thanks to propellers that are non-susceptible to clogging and largely dimensioned gear bearings</li> <li>High operational reliability by using stainless steel investment-cast pro- pellers (TR/TRE 50-3, 60-3, 80-3)</li> <li>Reduction of energy costs due to best thrust to power ratio possible thanks to optimised hydraulics with minimum cavitation tendency and standard- equipped IE3 motor (EXCEL-TRE)</li> <li>Simple adaptation to the load cases due to operation with a frequency converter</li> </ul>	<ul> <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>
Equipment/ function	<ul> <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 hori- zontally when installed with a lowering device</li> </ul>	<ul> <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> <li>→ Installation with stand allows free placement in basin</li> <li>→ Flexible installation</li> </ul>

Series	Wilo-Flumen OPTI-RZP 20 40 Wilo-Flumen EXCEL-RZPE 20 40	Wilo-EMU RZP 50-2 80-2	Wilo-Vardo WEEDLESS
Product photo		Series modification	+
Design	Direct driven submersible mixers with housing unit	Submersible mixers with single–stage planetary gear and housing unit	Vertical mixer with standard gear motor
Application	<ul> <li>→ Pumping of large volume flows of wastewater and sewage</li> <li>→ Flow generation in water channels</li> </ul>	<ul> <li>→ Pumping of large volume flows of wastewater and sewage</li> <li>→ Flow generation in water channels</li> </ul>	Energetically optimised mixing and circulation
Duty chart	H/m 4.4 4.0 Wilo-Flumen OPTI-RZP 2040 Wilo-Flumen EXCEL-RZPE 2040 4.0 OPTI-RZP 2.8 2.4 0 0 EXCEL-RZPE 0.4 0 0 0 0 0 0 0 0 0 0 0 0 0	H/m 2 1 0,5 0,2 0,1 50 100 200 500 1000 Q//s	
Volume flow <i>Q</i> <sub>max</sub>	1,130 m³/h	2,221 – 6,926 m³/h	Max. thrust: 6000 N
Delivery head H <sub>max</sub>	4.9 m	2.6 m	Max. circulation capacity: 7.5 m³/s
Technical data	<ul> <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> <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> <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>
Special features	<ul> <li>Reliable continuous operation due to low clogging propellers and flow hous- ing that is pump in non-clog design.</li> <li>High operational reliability by us- ing stainless steel investment-cast propellers</li> <li>Reduction of energy costs thanks to high pump efficiency and standard IE3 motor (EXCEL-RZPE)</li> <li>Simple adaptation to the system parameters through operation with a frequency converter</li> </ul>	<ul> <li>→ Vertical or in-line installation possible</li> <li>→ Self-cleaning propeller to avoid clog- ging</li> <li>→ Propeller in steel or PUR</li> </ul>	<ul> <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 alter- nating water levels</li> </ul>
Equipment/ function	<ul> <li>→ Stationary installation directly on the pipework</li> <li>→ Flexible installation via lowering device</li> </ul>	<ul> <li>→ Stationary installation directly on the pipework</li> <li>→ Flexible installation via lowering device</li> <li>→ Vertical or in-line installation possible</li> </ul>	Version with → Float for floating installation → Two propeller platforms → Ex rating → Integrated frequency converter

# Join the ecolution.

# Increase energyefficiency

Trust in WiloCare. Our experts always have an overview of the operating status of your Wilo pumps via remote access. We help you to continuously optimise your system and thus save energy.



Wilo-SiBoost Smart Helix EXCEL

# The Wilo-Service A partnership you can rely on



# WHATEVER YOUR PATH LOOKS LIKE: WE'RE GOING WITH YOU.

Wilo has a long tradition of working in partnership with professional installers, system manufacturers and operators. Our Wilo service is an essential component of this partnership: we work with you to develop a service concept tailored to your individual needs. With our expertise and personal consultation we ensure that the operation of your systems is as energy-efficient, reliable and economical as possible. Our professional Wilo service technicians are ready to assist you with fast, reliable and on-time support. In other words, with Wilo as your partner, you can be sure of not only choosing high-quality product solutions, but also benefiting from a comprehensive portfolio of well thought-out services. This means reliable support from Wilo at every step of your project – starting from design and configuration right through to commissioning and maintenance.

We call it: Pioneering for You.

# **The Wilo Service offer:** Versatile and individually accessible.

# **Wilo-Energy Solutions**

Benefit from enormous savings potential by having your pumps checked and optimised in terms of efficiency, energy consumption and performance by a Wilo expert. Optimising or replacing existing systems with new, highly efficient solutions (products, services, know-how) primarily has a positive impact on your operating costs and operational reliability. In addition to the potential energy savings, we also take responsibility in the fight against climate change for future generations as well by being able to directly reduce  $CO_2$  emissions through the application of our high-efficiency products.

# **Wilo Commissioning**

Entrust the Wilo commissioning service with ensuring a smooth process when implementing new systems in your installations. We will happily accompany you throughout the commissioning process of our products and support you step-by-step. You will benefit directly from the advantages of our products and their performance in operation. Our qualified service technicians will familiarise you with all strengths to guarantee a safe and optimal start.

### **Wilo Maintenance**

We offer you a wide range of options for regularly checking the smooth operation of our products and ensure longterm reliability. Choose the scope of services you need from our contract models and match your individual needs to our products.

## WiloCare

With WiloCare, we bundle all our maintenance services into a comprehensive package supplemented by remote maintenance of your system. We can take care of error messages, troubleshooting and optimisation thanks to the data transmitted by your pump or system. This way, we can always ensure optimum operation of the system – quickly, reliably and without complications.

#### **Wilo-Live Assistant**

We prevent downtime and ensure operational reliability of your pumps and systems! Whether it's questions, errors or breakdowns, you can rely on rapid support from a Wilo expert. To provide interactive support, we have introduced facilities for live video chatting with our customers on site. This way, we can help you solve your problems as quickly as possible.

## Our services at a glance:

- → Supervision
- $\rightarrow$  Installation
- Commissioning
- $\rightarrow$  Individual and reliable maintenance concepts
- $\rightarrow$  Optimisation and replacement
- → Competent repair service
- $\rightarrow$  Fast spare parts supply
- → Extended warranty
- → Service packages



# Our tools and trainings: 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:

- $\rightarrow$  On-site support
- → Wilo-Select pump selection 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

# **TRAININGS 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
- ightarrow Ideal space for meeting colleagues and exchanging ideas
- → Dialogue-based training concepts for active learning
- → Wilo-Brain qualification
- → System consulting

# **Pioneering for You**

# Our promise to you.

The Wilo Group is one of the world's leading premium providers of pumps and pump systems for the building services, water management and industrial sectors. In the past decade, we have developed from a hidden champion into a visible and connected champion. Today, Wilo has around 8,200 employees worldwide.

Our innovative solutions, smart products and individual services move water in an intelligent, efficient and climate-friendly manner. We are also making an important contribution to climate protection with our sustainability strategy and in conjunction with our partners. We are systematically pressing ahead with the digital transformation of the Group. We are already the digital pioneer in the industry with our products and solutions, processes and business models.

# Sustainably better.

One of the most important 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 ever more 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.



# Discover our Wilo-World here

www.wilo.com/en/Wilo-World





Pioneering for You

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