

**General overview of OEM Solutions 2021** 

### **OEM Smart Integrated Solutions.**

in heating, cooling, air conditioning & water supply applications.













### Pioneering for You

#### Our promise to you.

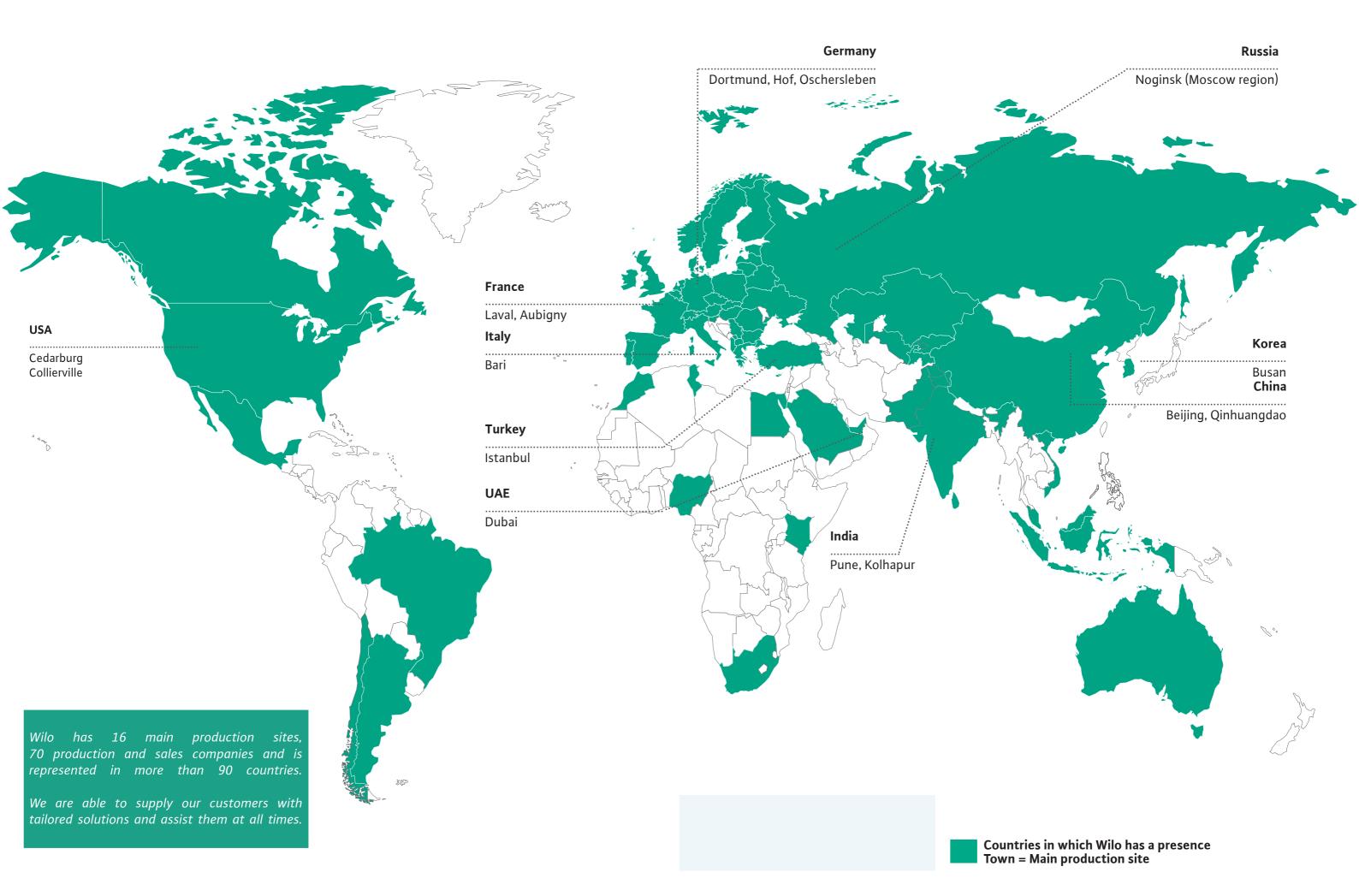
The Wilo Group is one of the world's leading premium providers of pumps and pump systems for the building services, water management and industrial sectors. In the past decade, we have developed from a hidden champion into a visible and connected champion. Today, Wilo has around 8,000 employees worldwide.

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







# Strategic Business Unit OEM

Wilo is a strong partner of leading OEMs and manufacturers of boilers, heat pumps and air conditioning systems in particular. The Wilo Group's pumps and hydraulic systems offer the highest degree of reliability, flexibility and effciency.

OEM customers also benefit from Wilo's many years of experience, detailed knowledge of the market and pronounced application expertise.

The Wilo Group is also a development partner for these customers and sees itself as an innovative forward thinker and a trendsetter.

Taking into account current and future regulatory requirements, Wilo anticipates the new demands of the global market and constantly changing market requirements at an early stage, allowing it to develop and offer future–oriented solutions that are ideally tailored to the specific needs of customers and the market.

Wilo offers a broad range of established, tried-and-tested integrated products and intelligent, individually developed solutions.

#### OEM expert for small circulators for more than 30 years

At Wilo Intec, Group OEM headquarter, located in Aubigny (France), we have an experience of over 30 years in designing and producing small circulators for the integration in our customers' heating & air-conditiong systems.

Our products in the sectors of heating, cooling, air-conditioning, solar thermal energy, geothermal energy and domestic hot water are being constantly adapted to customer wishes and requirements.

In other segments such as water supply, water treatment and industry, we combine our knowledge of the OEM market and its requirements with the large Wilo product offer to provide you up to date solutions which fit your demand.

In all of the segments we are active in, new and powerful pump systems are constantly being further developed and optimised by Wilo engineers, in order to meet the permanently growing and more complex requirements.



We are preferred partner for smart integrated solutions

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12 Your OEM partner

#### **OEM Solutions.**

### We are the partner who develops, with you, the solution you need.

#### Our definition of partnership

Our method of working has always been to be as close to you as possible, in order to familiarise ourselves and fully understand what the issues are in your markets. This is how we attach great importance to knowing every detail of your processes, in order to develop alongside you, the best tailor–made solutions adapted to your needs.

#### **Proximity at all levels**

Because your success is our target, each of us, based on our responsibilities, is committed to meeting the requirements of our partner counterpart.

So, your leaders pursue their visionary goals, your operations managers are assured of smooth processes, your research and development team can count on innovative solutions and your sales team on the most fair prices. Finally, your engineers will be thrilled by the high efficiency of our solutions and your quality management will be guaranteed of reliable processes.

Whether you are an international group or a small or medium-sized enterprise, a contact person will be dedicated to you in order to best meet your requirements.

We are a dedicated team of experienced and skilled employees who make every effort to develop customised solutions and provide products and services all over the world, through our Wilo plants and subsidiaries network.

#### A global organization

Our organization is intended to give you the best support locally and on a worldwide scale. Historically based in Aubigny (France), an OEM team is present in each Wilo subsidiary in the world to work on projects locally and meet the specific needs. Global and local sales management, sales engineering, business support and customer quality are at your disposal wherever you are located.

#### Our areas of expertise

Historically, our expertise has been built in the Heating, Ventilation and Air–Conditioning industry and in the residential building sector. We have now extended our scope of action to other segments such as commercial buildings and industry and developed solutions for applications such as fire–fighting, wind power or water treatment ...

Our knowledge of the OEM market, combined with the expertise of our electronics and motor technology specialists, as well as our innovative research and development teams allow us to offer state-of-the-artsolutions adapted to any systems in various application fields



Condensing boilers



Hot water, steam boilers and CHP



Chillers, cooling towers



Substations



*Non-condensing boilers* 



Hydraulic network maintenance



Renewable



Water treatment



Heat pumps



Industrial cooling



Water distribution, boosting



Fire fighting

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### High-efficiency Solutions.

### From existing modules to custom-developed solutions.

#### Solution designer, solution provider

needs of our customers.

From assembling of existing modules to developing specific components, you can rely on our OEM expert Wilo is perfectly set up to cater to the greatest variety appropriate solution from the beginning of a project holistically. to commissioning,

Wilo develops networked systems that build on

With its pioneering spirit, Wilo creates products and solutions that provide today's market with answers to the complex tasks of tomorrow's building services and industries. To do this, we equip our products with ambient intelligence to create new functionalities.

Our portfolio of products, system solutions and As an innovation leader, we set standards and offer services are systematically tailored to the specific customers around the globe tailored products that quarantee the maximum in terms of reliability, flexibility and energy savings.

teams who will provide assistance in designing the of customer requirements - smartly, efficiently and

sustainable concepts and intelligent technologies.





single application to solutions for specific on-site challenges and, moreover, to full-range solutions for all As a solution provider, Wilo comprehensively handles the needs of its customers from A to Z through its

worldwide expert network.

The building services market is changing. The market demands a shift from individual products for a

Thus, as OEM expert, Wilo is able to customize its pumps to respond to specific demands not only in the fields of buildings' heating but also for other types of applications such as wind turbine cooling, pharmaceutical industry, electronic machine cooling, data center cooling and fire-fighting among others.

Some examples of adjustments we can realize according to your specific needs

Wilo-Helix V



#### For cooling of wind turbine

- Offer dedicated designs to support on and off shore wind turbines
- Adapt mechanical seals based on your water glycol mixture content
- Offer elastomer adjustments (EPDM, FKM).
- Adapt motor power to the expected need of your application
- Offer worldwide certification for adaptation to all market regulations

#### For water treatment

- Adapt mechanical seal design to fluid transferred including ultrapure water with low conductivity
- Offer motor protection and phase separator adapted to inverter external control
- Offer specific bolt design for easier connection and adaptation to your sytem
- Offer material design AISI 304 or 316L



Wilo-Para R Wilo-Para MAXO Wilo-Stratos GIGA 2.0 16 Overview of product range

### **OEM product range**

### for residential buildings

- Heating
- Air conditioning & cooling
- Water Supply

Applications



		Heating			Air conditioning e cooling		Water	Supply
	11111	<u> </u>			*			
	Heating systems	Solar thermal energy systems	Geothermal energy systems	Domestic hot water	Air conditiong systems	Water distribution Boosting	Rainwater utilisation	Page
Wilo-Para, Para SCU, Para SCA	x				X			22
Wilo-Para ST		X						24
Wilo-Para G	X		X		X			24
Wilo-Para STG	x	X	X		X		···	25
Wilo-Para Z				x				25
Wilo-Para R	X		X		X			26
Wilo-Para */H	X		X		X			26
Wilo-Para MAXO	x	X			X			30
Wilo-Para MAXO G	х		x		x			30
Wilo-Para MAXO Z				X				32
Wilo-Para MAXO R	X		х		x			32
Wilo-Yonos PARA High Flow	x	X	x		x			34
Wilo-Stratos PARA	X	X	X	*	x			34
Wilo-Stratos PARA-Z				X				35
Wilo-Medana CH1-L, LC						X	X	38
Wilo-Economy MHIE						X	X	40

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### **OEM** product range

for commercial buildings and industry

- Heating
- Air conditioning & cooling
- Water Supply

**Applications** 



		Heating			AC e	Cooling		Water 9	Supply		
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	Heating systems	Hydraulic network maintenance	Domestic hot water	Industrial heating		AC, Cooling & Process cooling	Water treatment	Water distribution Boosting	Raw water intake	Fire fighting	Page
Wilo-Para MAXO	Х					Х					30
Wilo-Para MAXO G	X					X				-	30
Wilo-Para MAXO Z			X		***************************************			-		•	32
Wilo-Para MAXO R	X					X					32
Wilo-Stratos PARA, Z	X		X			X					35
Wilo-Stratos MAXO, MAXO-D	X				***************************************	X	***************************************	•		•	36
Wilo-Stratos MAXO-Z, Stratos	X		X		•	X					37
Wilo-Medana CH1-L, LC	X	X	x	х		X	X	X	X	X	38
Wilo-Medana CV1-L	Х	X		х		X	х	X		X	40
Wilo-Economy MHIE	X				***************************************	X	X	X		X	40
Wilo-Helix V	X	X	Х	Х		X	Х	X		X	42
Wilo-Helix FIRST V	X	X	Х	х		X	x	X		X	42
Wilo-Helix VE	X			X		X	X	X		X	43
Wilo-Helix EXCEL	X			X		X	X	X			43
Wilo-VeroLine-IPL, DPL	X			X		X					44
Wilo-VeroLine-IP-E, DP-E	X			X		X					45
Wilo-CronoLine-IL, DL	X			X		X					46
Wilo-CronoLine-IL-E, DL-E	X			Х		X				-	47
Wilo-BAC						X					48
Wilo-Atmos GIGA-B	<b>X</b>			X		X					48
Wilo-CronoBloc-BL-E	X			X		X					49
Wilo-Stratos GIGA 2.0	X			<del>-</del>		X				-	50
Wilo-Stratos GIGA, GIGA B	X			<del>-</del>	<u>-</u>	X					51

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#### Wilo-Para

#### The most reliable OEM solution.

The high-efficiency circulator series Wilo-Para is dedicated to heating and air-conditioning applications.

Its compact design and predefined standard settings make commissioning and setup very easy. Wilo-Para is compact and offers a large choice of pump housings and options. This enables a very high integration flexibility.

The Wilo-Para series, especially with its LIN control mode, allows many development opportunities in the field of intelligent functionalities. This new generation of circulators is dedicated to make your life easier.

#### **Special features/benefits:**

- → High integration flexibility due to compatibility with former standard and high-efficiency series and a wide range of specific pump housings
- →Easy installation thanks to a compact and standardised design with front access to signal connector and screws
- →Exists in 3 different control modes to respond better to your specific needs:
- Self-controlled (SC) version allowing several regulation modes and settings, easy to handle thanks to the green push button combined with a LED interface

- External control mode through iPWM signal for direct information on pump status and flow estimation directly from the pump itself
- External LIN control mode allowing many data exchanges between the pump and the appliance to go a step further on digitalisation. Extended functionalities through the LIN extended mode LINX
- →High system protection due to integrated functionalities such as air venting, manual restart as well as reset to factory settings upon control mode



Wilo-Para R



Wilo-Para SC

Wilo-Para with LIN Bus or iPWM

The standard pump housing for heating application is made of cast iron but Wilo also developed a wide range of specific composite pump housings offering a large variety of options such as air venter, flow sensor, safety valve ... to meet as fully as possible any usage requirement.

This wide offer quarantees a high flexibility of integration in many appliances.

Additional pump housings dedicated to domestic hot water application are also available (Wilo-Para Z series)



Inline cast iron pump housing



RSB axial cast iron pump housing



KU composite inline pump housing



RSL composite inline pump housing



BSL composite pump housing



KSL composite pump housing



MSL composite pump housing



NFSL composite pump housing



HU 15 composite pump housing



HU 25 composite pump housing

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Wilo-Para

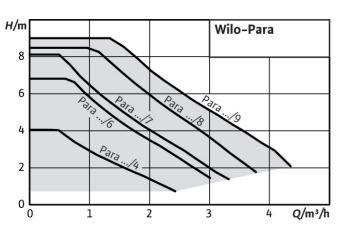
The most reliable OEM solution.





The high-efficiency circulator series Wilo-Para is dedicated to heating and air-conditioning applications. Wilo-Para is compact and offers a large choice of pump housings and options. This enables a very high integration flexibility.

Technical data					
-10°C to +95°C (0°C to +95°C for OEM composite pump housings)					
0 °C to +70 °C					
$\Delta$ p-v, $\Delta$ p-c, constant speed (Manual air venting and manual dejamming function)					
iPWM1 signal, LIN bus					
4/6/7/8/9 m					
130/180 mm DN 15/DN 25/DN 30					
1~230 V, 50/60 Hz					
IPX4D					
10 bar (OEM composite pump housing : 6 bar)					
≤ 0.20 (4/6/7) ≤ 0.21 (8/9)					





#### Wilo-Para SCU

The OEM solution dedicated to low head-loss applications.



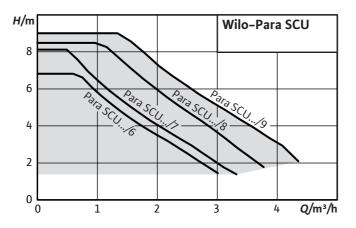




The high-efficiency circulator Wilo-Para SCU is dedicated to low head loss systems in heating applications.

With adjusted predefined settings, commissioning and setup are very easy.

Technical data	
Fluid temperature	-10°C to +95°C (0°C to +95°C for OEM composite pump housings)
Ambient temperature	0°C to +70°C
Self-control mode SCU with green push button	$\Delta$ p–v, $\Delta$ p–c, constant speed (Manual air venting and manual dejamming function)
Hydraulic performance	6/7/8/9 m
Size	130/180 mm DN 15/DN 25/DN 30
Mains connection	1~230 V, 50/60 Hz
Protection class	IPX4D
Max. operating pressure	10 bar (OEM composite pump housing : 6 bar)
EEI	$\leq 0.20 (6/7) \leq 0.21 (8/9)$





Wilo-Para SCA

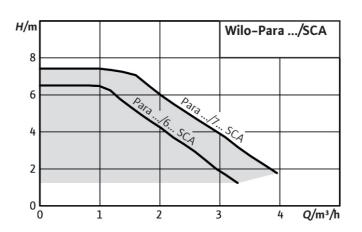
The high efficiency replacement solution.





Thanks to backwards compatibility and full cover of the standard efficiency hydraulic series, this circulator can be easily integrated into existing applications while keeping the benefits of the Wilo-Para series design.

Technical data	
Fluid temperature	-10 °C to +95 °C
Ambient temperature	0 °C to +70 °C
Self-control mode SCA with green push button	Constant speed (Manual air venting, manual dejamming function, EEI mode)
Hydraulic performance	6/7 m
Size	130/180 mm DN 15/DN 25/DN 30
Mains connection	1~230 V, 50/60 Hz
Protection class	IPX4D
Max. operating pressure	10 bar
EEI	≤ 0.20 (6) ≤ 0.21(7)







24 Wilo-Para ST / G / STG / Z



Wilo-Para ST

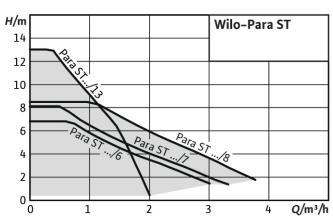
The OEM solution for solar thermal application.



The high-efficiency circulator series Wilo-Para ST is dedicated to solar thermal applications.

Its high static pressure and compatibility with wide temperature variations make this circulator fully adapted to this specific application.

Technical data	
Fluid temperature	-20 °C to +110 °C
Ambient temperature	0°C to +70°C
Self-control mode SC with green push button	$\Delta$ p-v, $\Delta$ p-c, constant speed (Manual air venting and manual dejamming function)
External control mode	iPWM2 signal, LIN bus
Hydraulic performance	6/7/8/13 m
Size	130/180 mm DN 15/DN 25/DN 30
Mains connection	1~230 V, 50/60 Hz
Protection class	IPX4D
Max operating pressure	10 bar
EEI	≤ 0.20 (6/7) ≤ 0.21 (8) ≤ 0.23 (13)





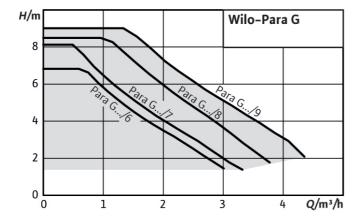
Wilo-Para G

The OEM solution for geothermal application.



The high efficiency circulator Wilo-Para G is dedicated to geothermal applications. The motor housing and the screws are specially designed with corrosion protection. With a minimum fluid temperature of -20°C the circulators are suitable for use in brine circuits.

Technical data	
Fluid temperature	-20 °C to +95 °C
Ambient temperature	0 °C to +70 °C
Self-control mode SC with green push button	$\Delta$ p-v, $\Delta$ p-c, constant speed (Manual air venting and manual dejamming function)
External control mode	iPWM1 signal, LIN bus
Hydraulic performance	6/7/8/9 m
Size	130/180 mm DN 15/DN 25/DN 30
Mains connection	1~230 V, 50/60 Hz
Protection class	IPX4D
Max operating pressure	10 bar
EEI	$\leq 0.20 (6/7) \leq 0.21 (8/9)$





Wilo-Para STG

The highly versatile OEM solution.



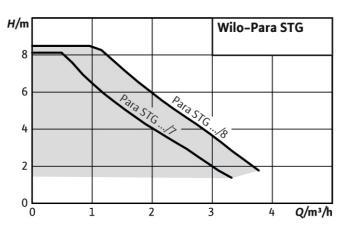






Wilo-Para STG is an hybrid circulator dedicated to a large variety of applications like heating, air conditioning, solar thermal and geothermal applications. This series embeds simultaneously the self-controlled mode functions (SC) and the external control function via both bi-directional iPWM1 & 2 signals.

Technical data	
Fluid temperature	-20 °C to +110 °C
Ambient temperature	0°C to +70°C
Self-control mode SC with green push button	Ext, $\Delta$ p-c, constant speed (Manual air venting and manual dejamming function)
External control mode	iPWM1 and iPWM2 signal
Hydraulic performance	7/8 m
Size	130/180 mm DN 15/DN 25/DN 30
Mains connection	1~230 V, 50/60 Hz
Protection class	IPX4D
Max. operating pressure	10 bar
EEI	$\leq 0.20 (7) \leq 0.21 (8)$





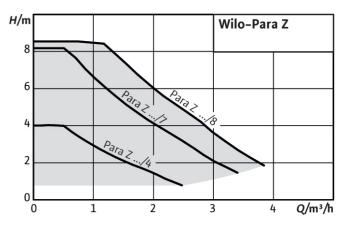
Wilo-Para Z

The OEM solution for domestic hot water applications.



The high-efficiency circulator series Wilo-Para Z is dedicated to domestic hot water applications. It offers a large series of pump housings (bronze, composite, stainless steel) and is specially designed with materials compatible with drinkable & domestic hot water.

Technical data	
Fluid temperature	+3 °C to +85 °C
Ambient temperature	0°C to +70°C
Self-control mode SC with green push button	$\Delta$ p-v, $\Delta$ p-c, constant speed (Manual air venting and manual dejamming function)
External control mode	iPWM2 signal
Hydraulic performance	4/7/8 m
Size	130/180 mm DN 15/DN 25
Mains connection	1~230 V, 50/60 Hz
Protection class	IPX4D
Max. operating pressure	10 bar



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Wilo-Para R

The OEM safe solution.



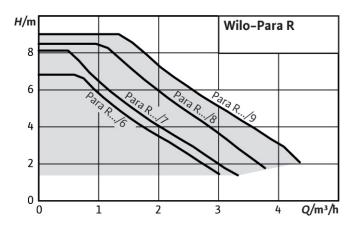






The high efficiency circulator series Wilo-Para R responds perfectly to the new regulation EN 60335-2-40 on A3 refrigerant gases (up to R290) used in Heat Pump applications.

Technical data				
Fluid temperature	-10°C to +95°C (0°C to +95°C for OEM composite pump housings)			
Ambient temperature	0 °C to 70 °C			
Self-control mode SCU with green push button	$\Delta$ p-c, $\Delta$ p-v, constant speed (SC as an option)			
External control mode	iPWM1 signal, LIN			
Hydraulic performance	6/7/8/9 m			
Size	130/180 mm DN 15/DN 25/DN 30			
Mains connection	1~230 V, 50/60 Hz			
Protection class	IPX4D			
Max. operating pressure	10 bar (OEM composite pump housing : 6 bar)			
EEI	$\leq 0.20 (6/7) \leq 0.21 (8/9)$			





#### Wilo-Para \*/H

The valuable solution for heat pump application.

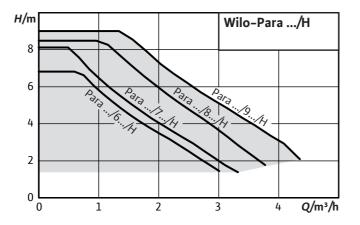






The high efficiency circulator Wilo-Para \*/H offers a valuable protection in case of integration into a heat pump using low flammable refrigerant gas R32.

Technical data	
Fluid temperature	-10°C to +95°C (0°C to +95°C for OEM composite pump housings)
Ambient temperature	0°C to +70°C
Self-control mode SCU with green push button	$\Delta$ p-v, $\Delta$ p-c, constant speed (Manual air venting and manual dejamming function)
External control mode	iPWM1 signal, LIN
Hydraulic performance	6/7/8/9 m
Size	130/180 mm DN 15/DN 25/DN 30
Mains connection	1~230 V, 50/60 Hz
Protection class	IPX4D
Max. operating pressure	10 bar (OEM composite pump housing : 6 bar)
EEI	$\leq 0.20 (6/7) \leq 0.21 (8/9)$



#### **Sustainable OEM solutions**

A considerable portion of global energy consumption is caused by electric pumps. High-efficiency pumps are electronically controlled and adapted to the system's actual requirements. A pump with this technology consumes up to 80 percent

less electricity than a comparable uncontrolled pump.

In this way, our high-efficiency OEM solutions Wilo-Para make a significant contribution to climate protection.

As outstanding example, Wilo-Para R brings an additional contribution as it is designed to be used with refrigerants having a significant low greenhouse gas potential\*\*.

And to complete our offer, we also provide the option "H" on our Wilo-Para range for usage with R32 gas which has a medium global warming potential\*\*.

#### Sustainable and safe

Both circulators respond to the new regulation EN IEC 60335–2–40 with specific requirements for new generations of electrically operated heat pumps. They ensure the protection of the heating or cooling systems against any risk of flammable gas leakage with a protection of the electronics against any fire ignition and a terminal box made of self–extinguising material.

#### 2 solutions for 2 kinds of refrigerant gases

### Wilo-Para R compatible with A3 gases up to R290

The product range Wilo-Para R is specifically designed for applications using high flammable\*\* A3 refrigerants (up to R290 gas).

It is suitable for heat pump systems of all kinds, and for cooling and geothermal applications. The Wilo-Para R ensures that the circulator not be source of potential flammability in case of leakage of gas





Easily recognisable with pictogram R290 on the front plate.



### Wilo-Para\*/H compatible with **R32** gas

The variant "H" is offered as the valuable solution on Wilo-Para range in case of integration into heat pumps or air-conditioning applications using the low flammable\*\* gas R32.

As Wilo-Para R, it offers a valuable protection of the electronics against any fire ignition and a terminal box made of self-extinguising material.





Easily recognisable with pictogram R32 on the front plate.

<sup>\*\*</sup> according to ASHRAE refrigerant gases classification.

28 LIN Bus interface 29



## Welcome to the smart digital solution era.

#### Smart products for smart buildings

Smart homes and intelligently connected buildings are no longer a rarity – they have become the gold standard for all new builds.

The OEM solutions we develop must constantly adapt to meet the needs of manufacturers who integrate more and more digital communication features into their heating or air conditioning equipment. The Wilo-Para range, dedicated to heating equipment for single-family homes and Wilo-Para MAXO designed for higher flow needs in larger buildings, meet these requirements by integrating communication protocols.

With LIN technology, we provide an advanced, robust and reliable solution offering many smart features such as remote control and data sharing (operating status, flow rate, speed, water head and power consumption). This allows diagnosis for predictive maintenance, spare part management and traceability.

#### **Temperature sensor**

The integrated solution for better hydraulic performance

With the LIN advanced solution, the circulator includes an integrated **temperature senso**r which allows it to communicate the medium temperature information to the appliance controller.

The sensor enables a precise measurement and follow up of the temperature and a convenient sensor response time which makes the system management optimal, especially for underfloor heating.

The application is then able to adapt the water flow and/or water head according to the information received from the pump without any additional cable, sensor or connector.



#### Our LIN tools offer

Wilo provides you a full set of documentation and tools, enabling you to understand the benefits of this technology and implement it into your application. And further, we have created a translation guide "LIN Frame Translate" to help your teams in their daily LIN development activities.

We are here to support you along the LIN path and are available for any question you may have. Our contact form is accessible on our website www.wilo-oem.com

#### Discover our tools and documentation on www.wilo-oem.com



LIN Communication Kit Helps implement the Bus interface into your application LIN in a nutshell Gives you answers to all your questions about LIN



LIN Technical guide All you need to know about LIN technology



LIN Frame Translate
Dedicated for electronic
technicians and developers

30 Wilo-Para MAXO/G



### Wilo-Para MAXO/-G/-R/-Z

The most reliable OEM solution for high flow heating applications.







#### **Special features/benefits:**

- $\rightarrow$  Maximum flexibility thanks to the integration of self-control and external control modes:  $\Delta p$ v,  $\Delta p$ -c, n-constant, 0-10V, SSM, PWM, iPWM, Modbus or LIN extended according to series
- → Immediate information on the pump status by green/red LED
- → Maximum convenience for electrical installation thanks to a quick electrical connection plug
- → Easy product identification in OEM environment with all product data displayed on the front
- → Energy savings due to high-efficiency hydraulics and motors



#### Wilo-Para MAXO

Hot-water heating systems of all kinds, solar applications

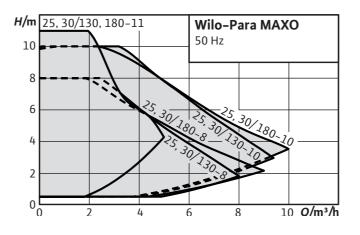






The high-efficiency circulator series Wilo-Para MAXO is the high flow OEM solution for heating and solar applications. Its user-friendly interface makes commissioning, setup and diagnosis very easy.

-20 °C to + 110 °C
-20 °C to + 70 °C
$\Delta$ p-c, $\Delta$ p-v, constant speed
(i)PWM1,(i)PWM2, 0-10 V signal, LIN, Modbus, SSM (collective fault signal)
8/10/11 m
130/180 mm DN 25/DN 30
1~230 V, 50/60 Hz
IPX4D
10 bar
≤ 0.20





#### Wilo-Para MAXO-G

Heat pumps, geothermal and cooling applications

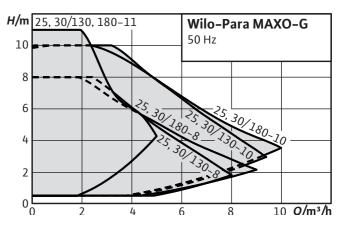






The high-efficiency circulator series Wilo-Para MAXO-G is the high flow OEM solution for heat pumps, including R32 systems, geothermal and cooling applications. Its reinforced protection against corrosion makes it the best solution in presence of condensation.

Technical data	
Fluid temperature	-20°C to + 110°C
Ambient temperature	-20°C to + 70°C
Self-control mode with green push button	$\Delta$ p-c, $\Delta$ p-v, constant speed
External control functions & data exchange	PWM1, PWM2, 0–10 V signal, SSM (collective fault signal)
Hydraulic performance	8/10/11 m
Size	130/180 mm DN 25/DN 30
Mains connection	1~230 V, 50/60 Hz
Protection class	IPX4D
Max. operating pressure	10 bar
EEI	≤ 0.20



32 Wilo-Para MAXO R/Z



Wilo-Para MAXO-R

Heat pumps, geothermal and cooling applications

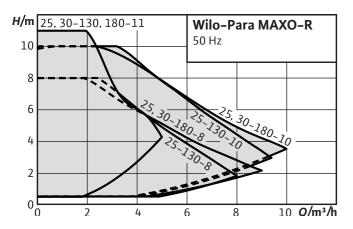






The high-efficiency circulator series Wilo-Para MAXO-R is the high flow OEM safe solution for heat pumps, including R32 and R290 systems, geothermal and cooling applications. Its reinforced protection against corrosion makes it the best solution in presence of condensation.

-20°C to + 110°C -20°C to + 70°C -
-20°C to + 70°C -
_
PWM1,iPWM2, LIN, Modbus,
3/10/11 m
130/180 mm DN 25/DN 30
1~230 V, 50/60 Hz
PX4D
10 bar
≤ 0.20





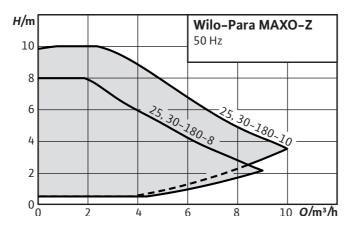
Wilo-Para MAXO-Z

Domestic hot water circulation systems of all kinds



The high–efficiency circulator series Wilo–Para MAXO–Z is the high flow OEM solution for Domestic Hot Water circulation systems. It's compliant with all the main European standards for drinking water (UBA/KTW, ACS, WRAS). Its user–friendly interface makes commissioning, setup and diagnosis very easy.

Technical data	
Fluid temperature	-20°C to + 110°C
Ambient temperature	-20 °C to + 70 °C
Self-control mode with green push button	$\Delta$ p-c, $\Delta$ p-v, constant speed
External control functions & data exchange	(i)PWM1,(i)PWM2, 0-10 V signal, LIN, Modbus, SSM (collective fault signal)
Hydraulic performance	8/10 m
Size	180 mm DN 25/DN 30
Mains connection	1~230 V, 50/60 Hz
Protection class	IPX4D
Max. operating pressure	10 bar





34 Wilo- Yonos PARA High Flow / Wilo-Stratos PARA/Z 35



Wilo-Yonos PARA High Flow

Heating and air conditioning, solar and geothermal energy





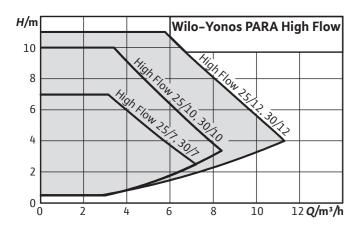




Glandless circulator with cast iron pump housing and threaded connection. High-efficiency motor with automatic power adjustment.

The high efficiency Yonos Para High Flow pump is the perfect solution for replacing the standard pump Wilo-Top S as it avoids any additional balancing.

Technical data	
Fluid temperature	-20 °C to +110 °C
Ambient temperature	0 °C to 65 °C
Self-control mode with green button	$\Delta$ p-v, $\Delta$ p-c, constant speed
External control mode	_
Hydraulic performance	7/10/12 m
Size	180 mm DN 25/DN 30
EEI	≤ 0.20





Wilo-Stratos PARA

Heating and cooling, solar thermal and geothermal energy









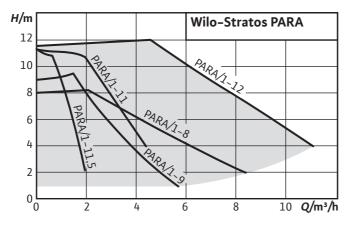




circulator with screwed EC motor with automatic power adjustment. Supplied as standard with cable for easy electrical connection.

The Wilo-Stratos PARA range offers a wide variety of hydraulics and functionalities in order to provide the right solution for each application.

Technical data	
Fluid temperature	-20 °C to +95 °C
Ambient temperature	0 °C to +70 °C
Self-control mode with green button	Δ p-v, Δ p-c
External control mode	0—10 V signal PWM1 and PWM2 signal
Hydraulic performance	8/9/11/11.5/12 m
Size	180 mm (130 mm) DN 25/DN 30
EEI	≤ 0.23





Wilo-Stratos PARA-Z

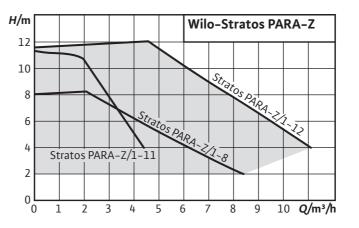
Domestic hot water circulation



Glandless circulator connection. EC motor with automatic power adjustment. Supplied as standard with cable for easy electrical connection.

The Wilo-Stratos PARA Z range offers high performances to OEM domestic hot water applications.

Technical data	
Fluid temperature	-10 °C to +80 °C (+110 °C)
Ambient temperature	0 °C to 65 °C
Self-control mode with green button	Δ p-v, Δ p-c
External control mode	0–10 V signal PWM1 and PWM2 signal
Hydraulic performance	8/11/12 m
Size	180 mm DN 25/DN 30
EEI	≤ 0.23



36 Wilo-Stratos MAXO / D / Z / Wilo-Stratos 37





Heating and cooling, solar thermal and geothermal energy



Wilo-Stratos MAXO-D

The twin model



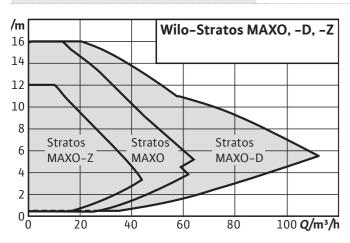






Smart glandless circulator with screwed connection or flange connection, EC motor with integrated power adjustment For hot-water heating systems of all kinds, air-conditioning systems, closed cooling circuits, industrial circulation systems

Technical data	Wilo-Stratos MAXO
	Wilo-Stratos MAXO-D
Fluid temperature	-10 °C to +110 °C
Max. Volume flow Q	112 m³/h
Max. Delivery Head H	16 m
Mains connection	1~230 V, 50/60 Hz
Protection class	IPx4D
Screwed connection or flange connection (depending on type)	Rp 1 to DN 100 twin model: Rp1 to DN 80
Max. operating pressure	10 bar (special version: 16 bar)
Insulation class	F
	Emitted interference in acc. with: EN 61800-3:2004+A1:2012 / residential environment (C1) Interference resistance in acc. with: EN 61800-3:2004+A1:2012 / industrial environment (C2)





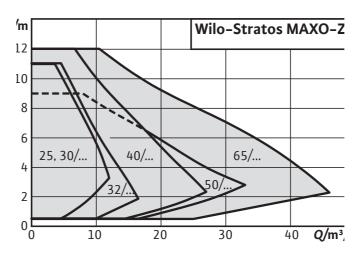
Wilo-Stratos MAXO-Z

Specifically developed for drinking water application



Smart glandless circulator with screwed connection or flange connection, EC motor with integrated power adjustment For domestic hot water circulation systems and similar systems in industry and in building services

Technical data	
Fluid temperature	Drinking water max +80 °C
Max. volume flow Q	46 m³/h
Max. delivery head H	12 m
Mains connection	1~230 V, 50/60 Hz
Nominal diameter	Rp 1 to DN 100
Protection class	IPx4D
Max. operating pressure	10 bar





Wilo-Stratos

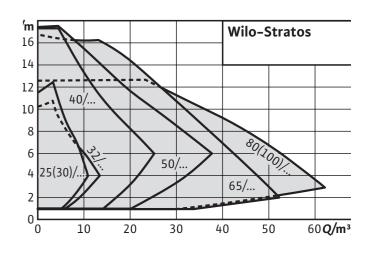
Heating and cooling





Glandless circulator with threaded connection or flange connection, EC motor with automatic power adjustment. For hot-water heating systems of all kinds, air-conditioning systems, closed cooling circuits, industrial circulation systems.

Technical data	
Fluid temperature	–10 °C to +110 °C
Max. volume flow Q	62 m³/h
Max. delivery head H	17.5 m
Mains connection	1~230 V, 50/60 Hz
Control mode	Δ p-v, Δ p-c, Δ p-T, Q-Limit
(green button)	
Protection class	IPx4D
Size	Rp 1 to DN 100
Rated pressure	6/10 bar or 6 bar (special
	version: 10 bar or 16 bar)
EEI	≤ 0.20



38 Wilo-Medana CH1-L/CH1-LC



Wilo-Medana CH1-L

### Wilo-Medana CH

Efficient system integration.

Wilo- Medana CH Heating, air-conditioning & cooling, water supply











Non self-priming horizontal multistage pump

Wilo-Medana is the new generation of horizontal multistage pumps. The pump suits requirements of the OEM market in terms of:

Compactness for an optimized integration in the customer's system

Adaptability as some customizations are possible upon request

Robustness thanks to it compatibility with high temperature or fluid composition and finally Components quality.



**Wilo-Medana CH1-L**Multistage horizontal centrifugal pumps



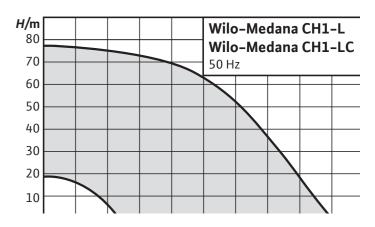
For pumping of process water and drinking water for: irrigation, pressure boosting, industrial applications (e. g. cooling circuits, car wash)

Wilo can offer, as an option, special housing and captive nuts for a quicker and easier pump installation and integration into systems.

Thanks to its drinking water certificate, the Wilo-Medana CH1-L is also suitable for drinking water applications.



For pumping of process water for: irrigation, pressure boosting, industrial applications (e. g. cooling circuits, car wash)



Technical data	Medana CH1-LC
Nominal Pressure	10 bars (STS impellers)
Max. delivery head H	86 m
Max. volume flow Q	20 m³/h
Volume flow series	2-4-6-10 m <sup>3</sup> /h
Motor type / Efficiency	Asynchronous / 3~IE2<0,75 kW>IE3 Asynchronous / 1~IE1/IE2
Motor power	0,37 to 3 kW
Electrical connection	1~230 V, 50 Hz 3~/400/460 V, 50/60 Hz
Protection class (pump)	IPX5
Ambient temperature range	-15°C to +50° C
Fluid temperature range	-20°C to +90°C
Structure	Modular
Drinking water standards	

Technical data	Medana CH1-L
Nominal Pressure	10 bars (STS impellers)
Max. delivery head H	100 m
Max. volume flow Q	20 m³/h
Volume flow series	2-4-6-16 m³/h
Motor type / Efficiency	Asynchronous / 3~IE2<0,75 kW>IE3 Asynchronous / 1~IE1/IE2
Motor power	0,37 to 4.2 kW (5.5 kW with vertical extension)
Electrical connection	1~230 V, 50/60 Hz 3~380/400/460 V, 50/60 Hz
Protection class (pump)	IPX5
Ambient temperature range	-15°C to +50° C (-30° C upon request)
Fluid temperature range	-20°C to +120°C (-30°C upon request)
Structure	Stamped
Drinking water standards	ACS/WRAS/UBA list

40 Wilo-Medana CV1-L / Wilo-Economy MHIE 41



Wilo-Medana CV1-L Heating, air-conditioning & cooling, water supply















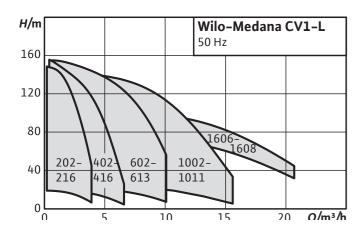






For Water supply and Pressure boosting, Industrial recirculation systems, Process water, Closed cooling circuits, Fireextinguishing systems, Washing systems

Technical data	
Fluid temperature	-20 °C to +120 °C with EPDM
Ambient temperature	–15 to +50°C
Max. volume flow Q	24 m³/h
Max. delivery head H	158 m
Protection class	IP 55
Max. Operating pressure	10 bar or max.16 bar
Max. Inlet pressure	6 bar or max.10 bar





Wilo-Economy MHIE Heating, air-conditioning & cooling, water supply







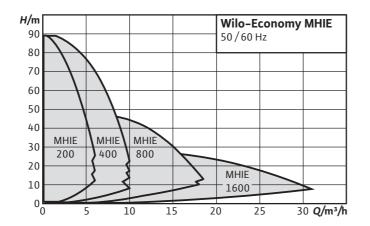


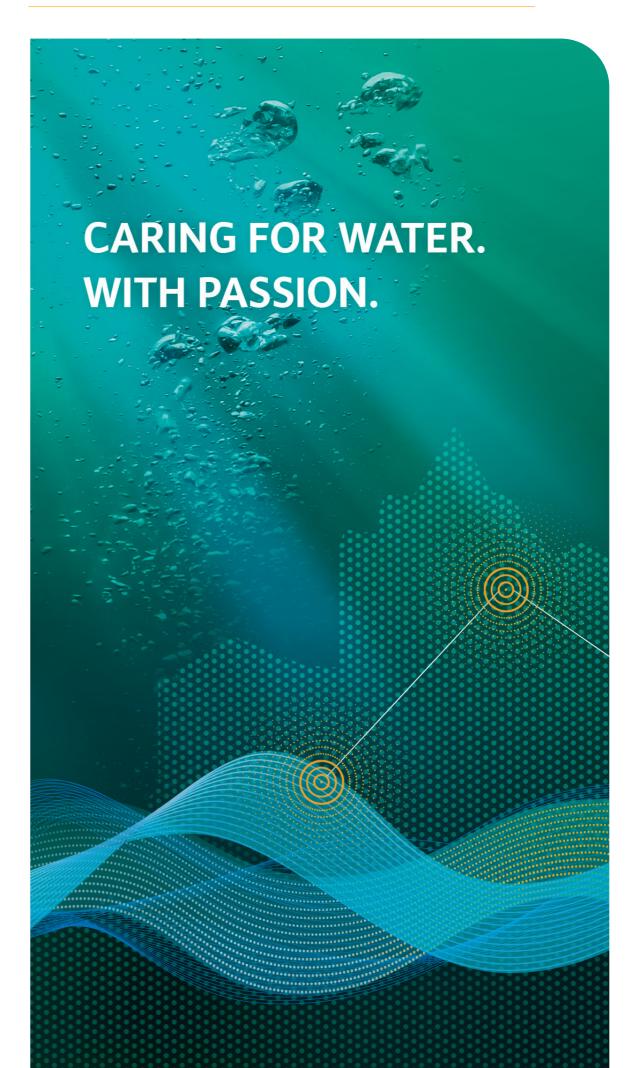


Non self-priming multistage pump with integrated frequency

For Water supply and Pressure boosting, Industrial circulation systems, Cooling water circulation systems, Washing systems

Technical data	
Fluid temperature	-15 °C to +110 °C
Max. volume flow Q	32 m³/h
Max. delivery head H	88 m
Protection class	IP 54
Max. Operating	10 bar
pressure	
Max. Inlet pressure	6 bar





42 Wilo-Helix V / FIRST V / VE / EXCEL 43



Wilo-Helix V Heating, air-conditioning & cooling, water supply









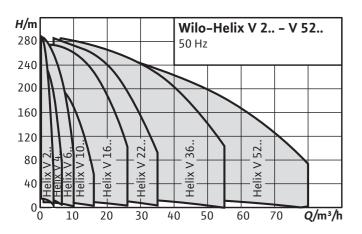




Non self-priming multistage pump

For Water supply and Pressure boosting, Industrial circulation systems, Process water, Closed cooling circuits, Washing systems

Technical data	
Fluid temperature	-30 °C to $+120$ °C with EPDM ( $-10$ °C to $+90$ °C with FKM)
Max. volume flow Q	80 m³/h
Max. delivery head H	280 m
Protection class	IP 55
Max. operating pressure	16/25/30 bar
MEI	≥ 0.7 (Helix V16: MEI ≥ 0.5)





Wilo-Helix FIRST V Heating, air-conditioning & cooling, water supply









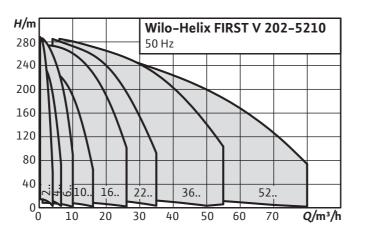




Non self-priming multistage pump

For Water distribution and Pressure boosting, Industrial circulation systems, Process water, Closed cooling circuits, Washing systems

Technical data	
Fluid temperature	-20 °C to +120 °C
Max. volume flow Q	80 m³/h
Max. delivery head H	280 m
Protection class	IP 55
Max. operating	16/25/30 bar
pressure	
MEI	$\geq$ 0.7 (Helix FIRST V16: MEI $\geq$ 0.5)





Wilo-Helix VE Heating, air-conditioning & cooling, water supply





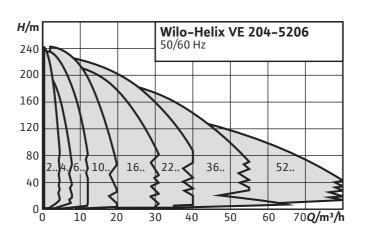




Non self-priming multistage pump with integrated frequency converter

For Water supply and Pressure boosting, Industrial circulation systems, Process water, Closed cooling circuits, Washing

Technical data	
Fluid temperature	-30 °C to $+120$ °C with EPDM ( $-10$ °C to $+90$ °C with FKM)
Max. volume flow Q	80 m³/h
Max. delivery head H	240 m
Protection class	IP 55
Max. operating pressure	16/25 bar
Max. inlet pressure	10 bar
MEI	≥ 0.7 (Helix VE16: MEI ≥ 0.5)





Wilo-Helix EXCEL Heating, air-conditioning & cooling, water supply





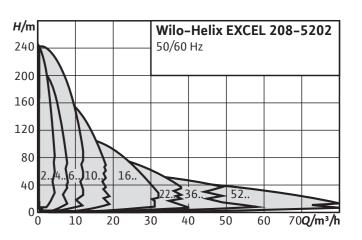
integrated high-efficiency drive.



Non self-priming, highly efficient, fully stainless-steel highpressure multistage centrifugal pump with EC motor and

For Water supply and Pressure boosting, Industrial circulation systems, Process water, Closed cooling circuits, Washing systems

Technical data	
Fluid temperature	-30 °C to $+120$ °C with EPDM $(-10$ °C to $+90$ °C with FKM)
Max. volume flow Q	80 m³/h
Max. delivery head H	240 m
Protection class	IP 55
Size	PN 16 and PN 25
Max. operating pressure	16/25 bar
MEI	≥ 0.7 (Helix EXCEL 16: MEI ≥ 0.5)



44 Wilo-VeroLine-IPL/IP-E/VeroTwin-DPL/DP-E 45



Wilo-VeroLine-IPL Heating , air-conditioning & cooling









Wilo-VeroTwin-DPL
Heating , air-conditioning & cooling





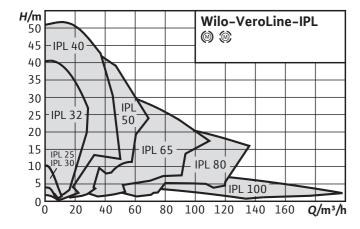


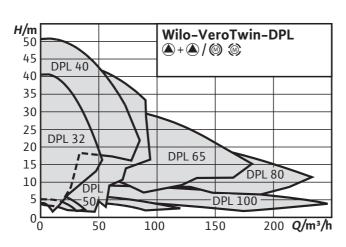
Glanded pump/twin-head pump in inline design with screwed connection or flange connection.

For pumping of heating water, cold water and water-glycol mixtures without abrasive substances in heating, cold water and cooling systems.

Technical data	
Fluid temperature	-20 °C to +120 °C
Max. volume flow Q	195 m³/h
Max. delivery head H	52 m
Mains connection	3~400 V, 50 Hz
Protection class	IP 55
Size	Rp 1 to DN 100
Max. operating	10 bar (special version: 16 bar)
pressure	
MEI	≥ 0.4

Technical data	
Fluid temperature	-20°C to +120°C
Max. volume flow Q	245 m³/h
Max. delivery head H	52 m
Mains connection	3~400 V, 50 Hz
Protection class	IP 55
Size	Rp 1 to DN 100
Max. operating pressure	10 bar (special version: 16 bar)
MEI	≥ 0.4







Wilo-VeroLine-IP-E Heating , air-conditioning & cooling









Wilo-VeroTwin-DP-E Heating , air-conditioning & cooling







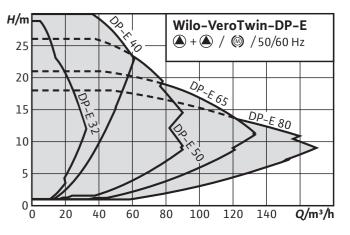
Energy-saving glanded pump (as single or twin-head pump) in in-line design. Version as single-stage low-pressure centrifugal pump with flange connection and mechanical seal.

For pumping of heating water, cold water and water-glycol mixtures without abrasive substances in heating, cold water and cooling systems.

Technical data	
Fluid temperature	-20 °C to +120 °C
Max. volume flow Q	120 m³/h
Max. delivery head H	30 m
Mains connection	3~440 V ±10 %, 50/60 Hz3~400 V ±10 %, 50/60 Hz 3~380 V -5 %/+10 %, 50/60 Hz
Protection class	IP 55
Size	DN 32 to DN 80
Max. operating pressure	10 bar (special version: 16 bar)
MEI	≥ 0.4

H/m 25	Wilo-VeroLine-IP-E / 50/60 Hz
20	<i>(</i> 0
15	1P-E80
10	
5	
0 10 20 30 40 50 6	50 70 80 90 100 <b>Q/m³/h</b>

Technical data	
-luid temperature	-20 °C to +120 °C
Max. volume flow Q	170 m³/h
Max. delivery head H	30 m
Mains connection	3~ 50/60 Hz from 380 V -6% to 440 V +6%
Protection class	IP 55
Size	DN 32 to DN 80
Max. operating oressure	10 bar (special version: 16 bar)
MEI	≥ 0.4



46 Wilo-CronoLine IL / IL-E / CronoTwin-DL / DL-E



Wilo-CronoLine-IL **Heating and cooling** 







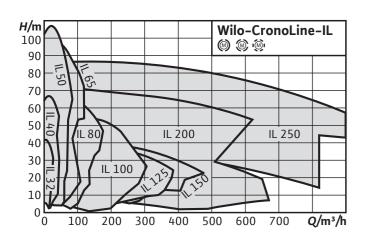
Glanded pump in in-line design with flange connection.

For pumping of heating water, cold water and water-glycol mixtures without abrasive substances in heating, cold water and cooling systems.

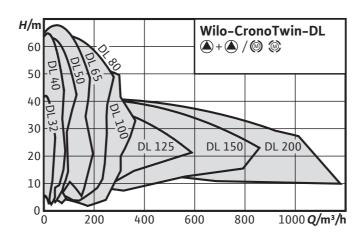
Wilo-CronoTwin-DL

**Heating and cooling** 

Technical data	
Fluid temperature	-20°C to +140°C
Max. volume flow Q	900 m³/h
Max. delivery head H	110 m
Mains connection	3~400 V, 50 Hz
Protection class	IP 55
Size	DN 32 to DN 250
Rated pressure	16 bar up to 120°C
	13 bar up to 140°C
MEI	≥ 0.4



Technical data	
Fluid temperature	-20°C to +140°C
Max. volume flow Q	1,170 m³/h
Max. delivery head H	67 m
Mains connection	3~400 V, 50 Hz
Protection class	IP 55
Size	DN 32 to DN 250
Rated pressure	16 bar up to 120°C
	13 bar up to 140°C
MEI	≥ 0.4





Wilo-CronoLine-IL-E **Heating and cooling** 







Wilo-CronoTwin-DL-E **Heating and cooling** 



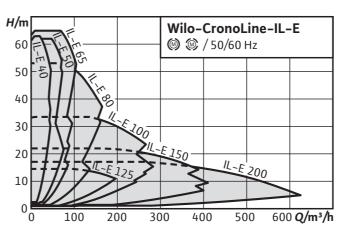




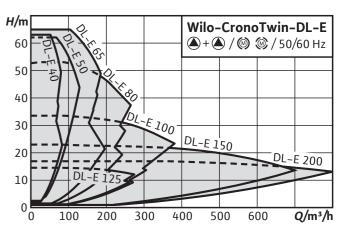
Energy-saving glanded pump in in-line design (as single or twin-head pump) Version as single-stage low-pressure centrifugal pump with flange connection and mechanical seal.

For pumping of heating water, cold water and water-glycol mixtures without abrasive substances in heating, cold water and cooling systems.

Technical data	
Fluid temperature	-20°C to +140°C
Max. volume flow Q	800 m³/h
Max. delivery head H	65 m
Mains connection	3~440 V ±10 %, 50/60 Hz 3~400 V ±10 %, 50/60 Hz 3~380 V -5 %/+10 %, 50/60 Hz
Protection class	IP 55
Size	DN 40 to DN 200
Rated pressure	16 bar up to 120°C 13 bar up to 140°C
MEI	≥ 0.4



Technical data	
Fluid temperature	-20°C to +140°C
Max. volume flow Q	800 m³/h
Max. delivery head H	65 m
Mains connection	3~440 V ±10 %, 50/60 Hz 3~400 V ±10 %, 50/60 Hz 3~380 V -5 %/+10 %, 50/60 Hz
Protection class	IP 55
Size	DN 40 to DN 200
Rated pressure	16 bar up to 120°C 13 bar up to 140°C
MEI	≥ 0.4



48 Wilo-BAC / CronoBloc-BL / BL-E



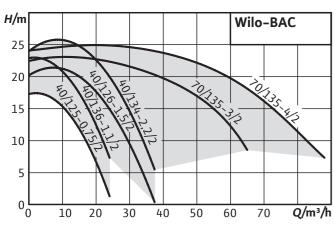
Wilo-BAC Cooling



Glanded pump in monobloc design with screwed connection or Victaulic connection.

For pumping of cooling water, cold water, water–glycol mixtures and other fluids without abrasive substances.

Technical data	
Fluid temperature	–15 °C to +60 °C
Max. volume flow Q	81 m³/h
Max. delivery head H	25 m
Mains connection	3~400 V, 50 Hz
Protection class	IP 54
Size	G2/G 1½ (only BAC 40/S) or Victaulic con- nection Ø 60.3/48.3 mm (BAC 40/R) Ø 76.1/76.1 mm (BAC 70/R)
Rated pressure	6.5 bar
MEI	≥ 0.4





Wilo-Atmos GIGA-B Heating and cooling





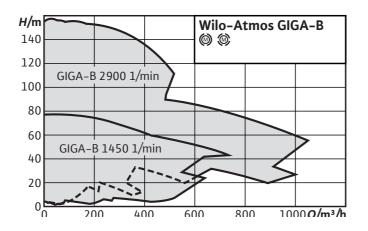




Glanded pump in monobloc design with flange connection.

For pumping of heating water, cold water and water-glycol mixtures without abrasive substances in heating, cold water and cooling systems.

Technical data	
Fluid temperature	-20 °C to +140 °C
Max. volume flow Q	1100 m³/h
Max. delivery head H	158 m
Mains connection	3~400 V, 50 Hz
Protection class	IP 55
Size	DN 32 to DN 150
Rated pressure	16 bar up to +120°C
	13 bar up to +140°C
MEI	≥ 0.4





Wilo-CronoBloc-BL-E **Heating and cooling** 



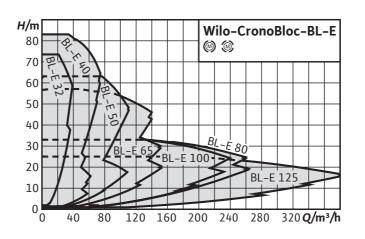




Energy-saving pump in monobloc design in glanded construction. Version as single-stage low-pressure centrifugal pump with flange connection and mechanical seal.

For pumping of heating water, cold water and water-glycol mixtures without abrasive substances in heating, cold water and cooling systems.

Technical data	
Fluid temperature	-20 °C to +140 °C
Max. volume flow Q	380 m³/h
Max. delivery head H	80 m
Mains connection	3~440 V ±10 %, 50/60 Hz, 3~400 V ±10 %, 50/60 Hz, 3~380 V -5 %/+10 %, 50/60 Hz
Protection class	IP 55
Size	DN 32 to DN 125
Rated pressure	16 bar up to +120 °C, 13 bar up to +140 °C
MEI	≥ 0.4







50 Wilo-Stratos GIGA 2.0 / GIGA / GIGA B 51





#### Wilo-Stratos GIGA 2.0

The smart glanded pump for HVAC applications in large buildings.



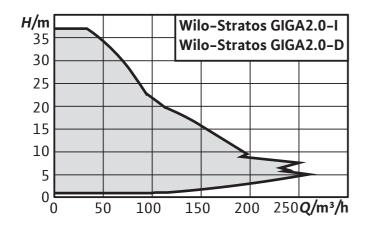




The use of the highly efficient Wilo–Stratos GIGA2.0–I is recommended whenever large volumes of water have to be pumped to great delivery heads. The smart glanded pump in the in–line version offers many interfaces for multiple pump controls, integration into building automation, operating data recording and modern options for mobile access via Wilo–Smart Connect. The Green Button Technology and the large display enable simple, intuitive operation. Using the setting assistant ensures optimal control.

#### Special features/benefits:

- → High-efficiency EC motor with efficiency class IE5 acc. IEC 60034-30-2
- → Optimal control through application guided setting assistant
- → Innovative controlling functions such as Dynamic Adapt plus and Multi-Flow Adaption
- → Remote access and multi-pump control via Wilo Net
- → Highest operational data transparency for optimisation of the pump and overall system



Technical data	
Fluid temperature	-20° C to +140° C
Max. volume flow Q	260 m³/h
Max. delivery head H	37 m
Mains connection	3~400 V - 3~440 V (±10 %) - 3~380 V (+10 %), 50/60 Hz
Protection class	IP 55
Size	DN 40 to DN 125
Max; operating	16 bar up to +120 °C
pressure	13 bar up to +140 °C
MEI	≥ 0.7



Wilo-Stratos GIGA
Heating and cooling



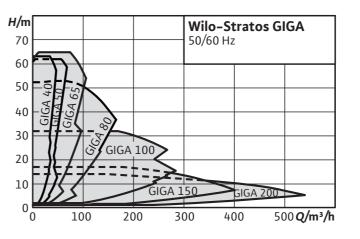




High-efficiency in-line pump (as single or twin-head pump) with EC motor, electronically controlled, in glanded design with flange connection and mechanical seal.

For pumping of heating water, cold water and water-glycol mixtures without abrasive substances in heating, cold water and cooling systems.

Technical data	
Fluid temperature	-20° C to +140° C
Max. volume flow Q	550 m³/h
Max. delivery head H	65 m
Mains connection	3~380 V - 3~480 V (±10 %), 50/60 Hz
Protection class	IP 55
Size	DN 40 to DN 200
Max; operating pressure	16 bar up to +120 °C 13 bar up to +140 °C
MEI	up to 6.0 kW: MEI ≥ 0.7, from 11 kW:MEI ≥ 0.4





Wilo-Stratos GIGA B Heating and cooling



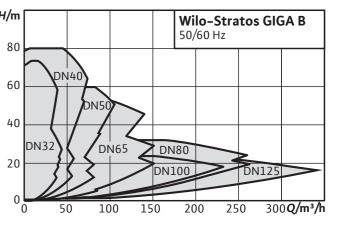


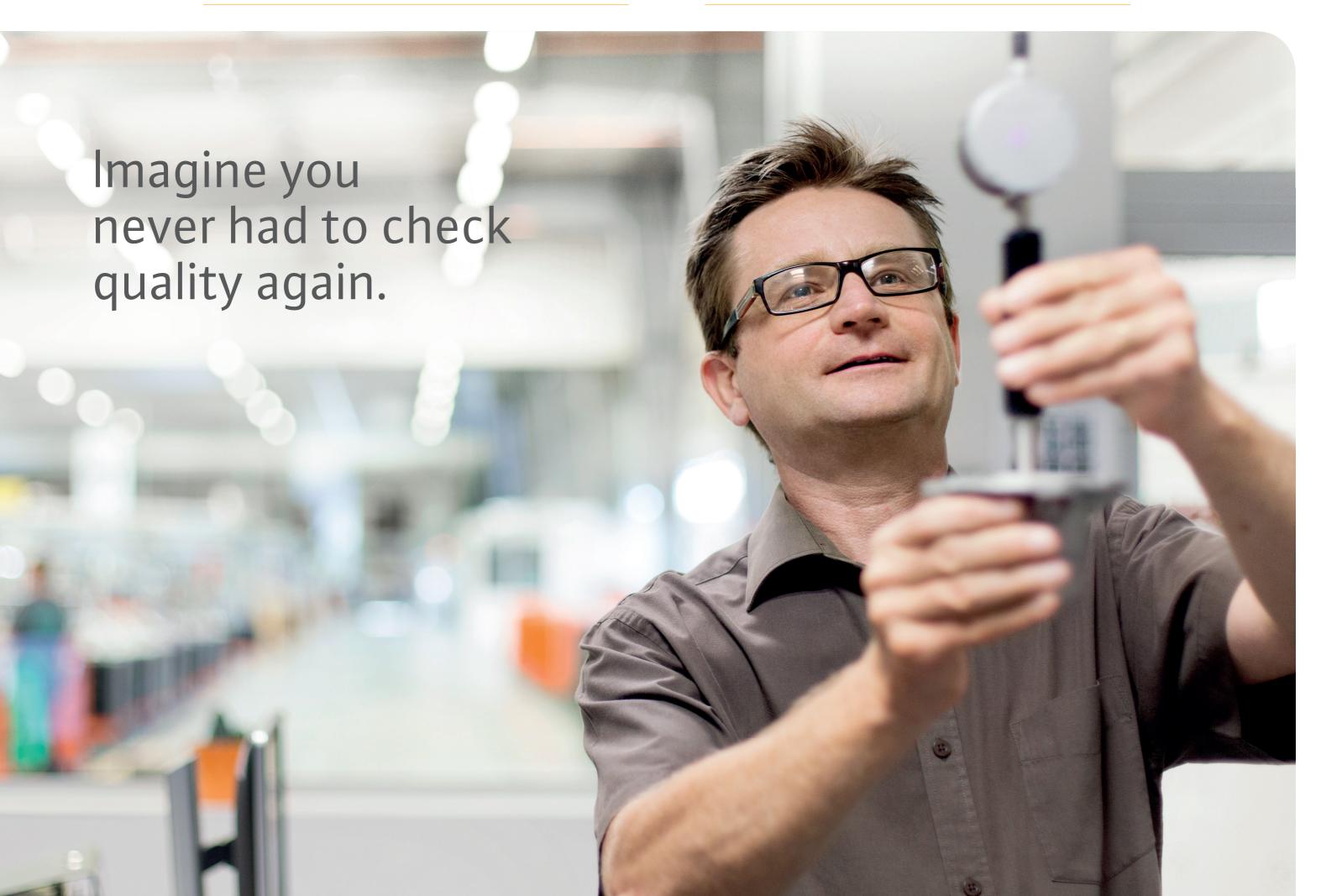


High-efficiency monobloc pump with EC motor and electronic power adjustment in glanded pump design, with flange connection and mechanical seal.

For pumping of heating water, cold water and water-glycol mixtures without abrasive substances in heating, cold water and cooling systems.

Technical data	
Fluid temperature	-20° C to +140° C
Max. volume flow Q	340 m³/h
Max. delivery head H	80 m
Mains connection	3~380 V -3~480 V (±10 %), 50/60 Hz
Protection class	IP 55
Size	DN 32/DN 125
Rated pressure	16 bar up to +120 °C 13 bar up to +140 °C
MEI	up to 6.0 kW: MEI $\geq$ 0.7, from 11 kW: MEI $\geq$ 0.4





54 Operations management 55



### OEM Solutions for operations management.

### Industry 4.0 serving your own supply chain.

We have joined the adventure of the Industry of the Future with projects dedicated to improve daily business and respond better to the market needs.

Performance indicators, digitalization of component traceability are part of the actions already implemented in our production unit in Aubigny (France) to make our internal supply chain more effective and, thus, streamline yours.

We use logistic solutions which enable you to better manage your production processes.

Our strong partnership with carriers who are organized with their own integrated transportation system, allows us to deliver everywhere in Europe. Here again, we are able to follow merchandise from departure to delivery thanks to computerized traceability.

Our worldwide presence through the Wilo subsidiaries allows us to send our products also by sea and air.

### More steps towards the Industry of the Future

Training by cognitive assistance, collaborative robotics, geolocalisation of tools for preventive maintenance are all projects that contribute to modernize and make our production workflow more effective.

Investments such as automated assembly lines and latest–generation robot for acoustic measurements enable us to offer solutions designed with cutting–edge technology.



Use of connected glasses for assisting production units

Our automatic guided vehicles implemented in the production unit of Aubigny (France) improve internal delivery performance and modernise logistics operations.





58 OEM Service offer 59

#### **OEM Solutions Service.**

### A comprehensive service offer



With OEM Solutions as your partner, you can not only be sure of choosing high-quality product solutions, but also of benefiting from a comprehensive, all-round dependable package of well-thought-out services.

This means that we provide you with reliable support in every project phase,

from design and configuration right through to commissioning and maintenance. In short, OEM Solutions is always by your side. In person and on site. We have plenty to offer in this area.

#### **OEM HVAC applications knowledge**

We continuously strive to strengthen our application knowhow in order to understand the application in the overall system instead of just seeing the pump as a component, especially when it comes to complex challenges.

- → Experienced in application know-how, our experts analyse, qualify and validate our products in our customers' applications.
- → With various approved methods, experts check each development step in order to continuously maintain the highest quality level.
- → With our application identity card, we carry out qualification measures together with the customer (noise, acoustics and hydraulics).
- → We also offer EMC measurement to support you in your qualification phase.

#### Prototype offer

We are able to provide you protoypes enabling you to make your own tests on hydraulics.

- → Only two working days are needed to produce prototypes for standard and high-efficiency small circulators.
- → The team works according to the Kaizen philosophy. Its efficiency is based on a Kanban system where the components are available for immediate assembling and delivery to the customer.
- → For multistage pumps, our R&D team is also able to respond to specific technical requests and build prototypes. The standard delivery time for these products is 4 weeks,

depending on the availability of specific components.



#### **OEM Residential and Commercial Solutions expertise**

Based on our solid experience in the OEM HVAC market segment, we offer and share:

- → Basic and advanced knowledge of hydraulics and pumps for HVAC application
- → Basic and advanced knowledge of motor technology and control mode for HVAC Building Services
- → Presentation of our OEM HVAC solutions
- → Training/notes for OEM products in use (trouble shooting)

The training sessions can be organised worldwide, on-site or off-site.

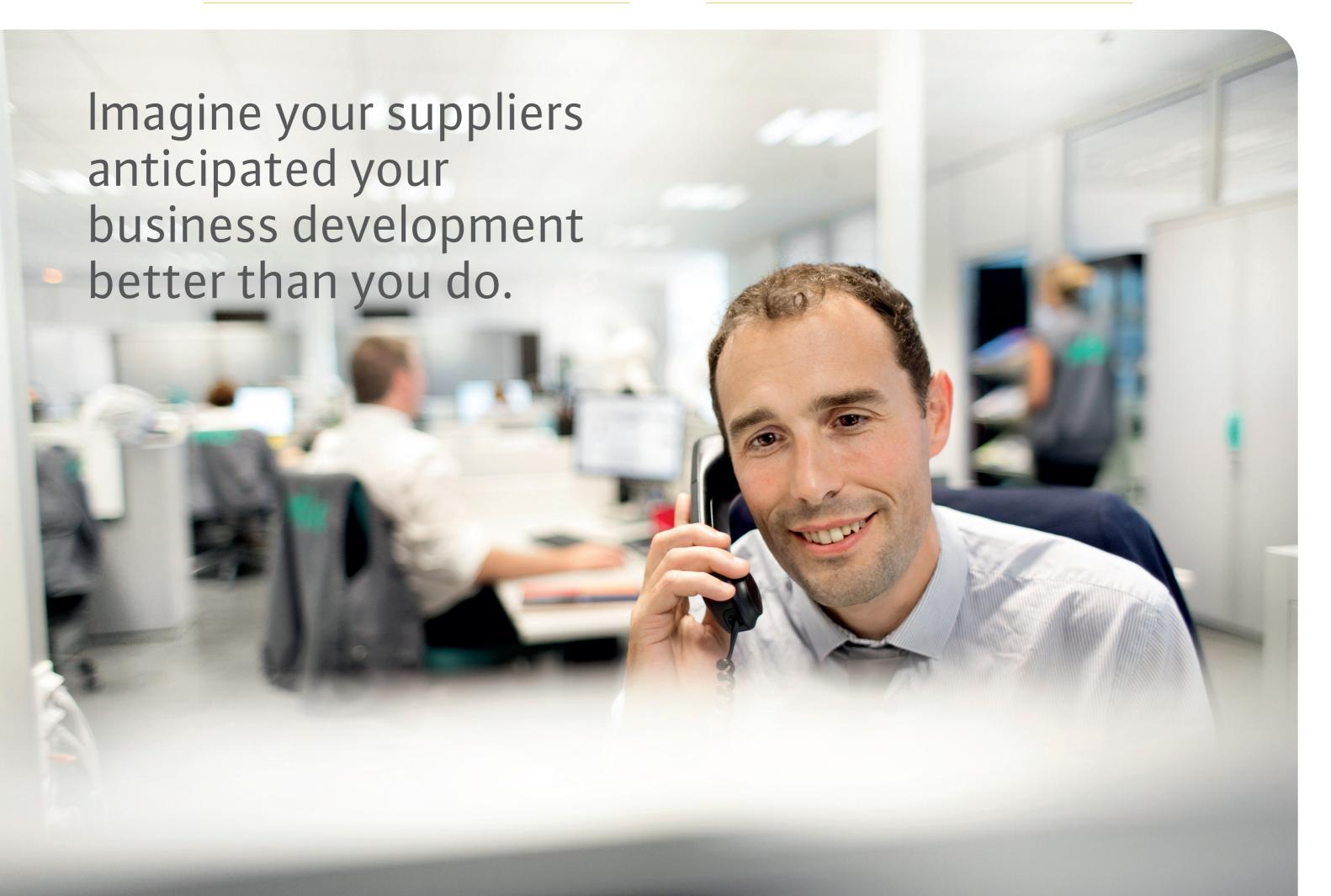


#### Market Intelligence

We continuously monitor market trends to support our customers worldwide.

- →Our figures on the HVAC market trend such as demand, growth, products and innovation all over the world are continuously updated.
- → We share this knowledge, as a partner, to offer state-ofthe-art technology products and give support with any new project.

No matter where our customer needs support or wants to realise a project, being present all over the world allows us to let our customers benefit from our market experience, application know-how and our market analyses.



62 OEM Solutions for industry 63

### OEM Solutions for Industry.

## A tailored solution for any industry application.

Alongside operational reliability and energy efficiency, material quality and the maintenance of standards also have a particular role to play in industry. Digitalisation and need to accelerate the process towards a more environmentally-conscious economy, echo the industrial sector, which must be able to rely on sustainable solutions when choosing its equipment. With the highest quality requirements for our products, Wilo systems offer high efficiency, long service life and operational reliability for a variety of industrial applications.



#### **OEM Solutions for demanding industry applications**

#### High pressure applications

Our pumps are designed also to meet the demand of high pressure applications. We can offer customized solutions depending on your environment:

- →Electrolysis
- →Reverse osmosis
- → Filtration
- →Washing and cleaning
- →Steam boiler feed
- →Industrial processes

#### **Temperature control**

Industrial equipments can generate extreme temperatures that need to be cooled to avoid affecting their durability. Our pumps can allow proper temperature control within cooling systems for:

- →Wind turbines
- →Electronic data processing
- → Medical equipment
- →Industrial cooling

#### **Special installation requirements**

Some installations require a specific pump design. Wilo proposes dedicated adapted pumps and solutions to meet specific industrial requirements:

- →Limited space for installation and maintenance
- →Fire fighting
- →Travelling installations

#### Focus on multistage range and options

Standard multistage products are defined to cover various applications. In order to fully meet your specfic needs and requirements, our OEM team offers and develops customized solutions.

Motors offeral argepanel of possible customizations responding to specific industry requirements and environments.

Motor options on multistage vertical pumps :

- →Special voltages on request
- →UL approved motors for USA and Canada
- →Oversized motors to be used with high viscosity or density fluids
- →4 pole motors
- → Various motor brands
- →Specific protection with regards to the environment

→...

Motor options on multistage horizontal pumps :

- →Thermal protection PTC or PTO
- →Quick power connection
- →Oversized motors to be used with high viscosity or density fluids

→...

In order to adapt the pumps to all the fluids, we offer different seals:

#### Shaft seal options:

- →EPDM or FKM
- →Shaft seals adapted to high viscosity fluid, high temperature fluid, low conductivity ...
- →Possibility to have a cartridge for easy maintenance of the shaft seal

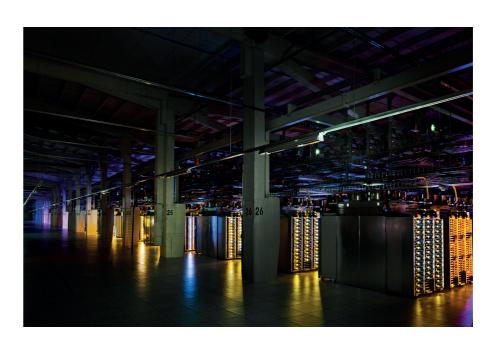
 $\rightarrow$ ...

Other customizations are possible such as:

- →PN16, PN25, Victaulic connections, ...
- →Labs free pumps
- →Atex pumps

→...

The list is not exhaustive. We invite you to consult us for any other requirement you may need.





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