

Wilo Australia - Circulator Pump Range

# **Circulator Pumps**

Recirculation pumps for heating and cooling





# HIGH EFFICIENCY SOLUTIONS FOR INDOOR CLIMATES

Wilo is a premium supplier for building services, water management and industrial applications. We make complex technologies user-friendly, simple to use, energy-efficient and high-performance. At the end of the day, the main focus of everything we do is people. We offer them outstanding products, system solutions and services.

Founded in Dortmund in 1872 as a factory for copper and brass goods, Wilo has evolved from being a local specialist to a global player in the course of its long and successful history. We are well-acquainted with the issues that will shape our future and we are developing technologies to address them. Global mega-trends are having a profound and lasting impact on our lives. As we address these trends, we focus on globalisation, urbanisation, climate change, energy scarcity, water shortage as well as technological progress and digitalisation – important issues for your day-to-day work. And this makes them important to us as well.





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		26-27



Pumps & systems for heating, air conditioning, cooling and domestic hot water



## **EFFICIENT AIR CONDITIONING**

Large buildings that house a variety of applications require highly sophisticated technology and intelligent network-ing. The German Football Museum in Dortmund is a prime example. In addition to the exhibition areas, the building contains a multifunctional arena, several dining areas and a separate floor for events, together extending over 7,700 square metres. The imposing glass front often serves as a canvas for multimedia images and therefore must remain free of condensation. Optimal air conditioning is provided by 21 highly efficient circulators, fully controlled by the building management system. These Wilo pumps ensure resource-efficient operation while maximising potential savings.



# **VERSATILE**

Our solutions make it possible to supply various types of buildings with a pleasant indoor climate and domestic hot water. From single-family houses to rental, administrative and commercial properties such as hospitals, office spaces or hotels.



<b>d</b>	Residential
	Commercial
<u> </u>	Industrial Processes
	Industrial Circulation
1	Booster
111114	Boiler heating
<u> </u>	Sanitary hot water
रेंं	Solar Heating
<b>a</b>	Underfloor heating
	Geothermal heating
榖	Cold water system
(Ac)	Air Conditioning
Cold	Closed cold circuit
*	Grundfos Equivalent replacement models are intended as a guide only. Refer to manufacturer literature for full technical specifications.

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Providing high-efficiency, tailored HVAC solutions in Australia and New Zealand



Head office in Brisbane

Sales offices in NSW, VIC and NZ

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# Non-sanitary Circulator Pumps



# **Wilo-Varios PICO** Glandless circulator with screwed connection, blocking-current proof EC motor and integrated electronic power control







# **Design type**

Glandless circulator with screwed connection, blockingcurrent proof EC motor and integrated electronic power control.

# **Application**

All hot-water heating systems, air-conditioning applications, industrial circulation systems.

# Type key

Example: Wilo-Varios PICO 25/1-7-130

Varios PICO High-efficiency pump (screw-end pump),

electronically controlled

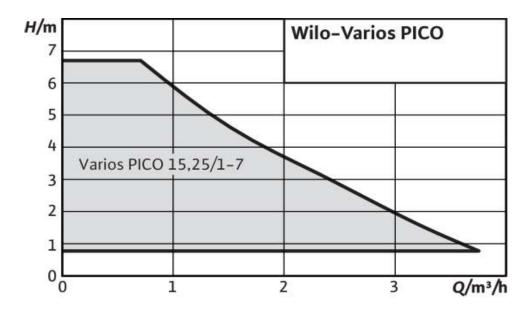
25/ Nominal connection diameter1-7 Nominal delivery head range [m]

**130** Port-to-port length

- → The most compatible replacement solution for all applications thanks to compact construction, new control modes (such as iPWM) and the new Sync function
- → Maximum operating convenience thanks to its LED display and Green Button Technology with a button for control mode and a button for default pump curves
- → Easy installation owing to a compact construction, adjustable electrical connections and maintenance functions such as venting
- → Maximum operational reliability owing to proven technology

Technical Data	
Permissible area of application	
Permissible temperature range – Heating	-10°C to +110°C
Permissible temperature range – Drinking	n/a
Mains connection	1~230 V, 50/60 Hz
Protection class	IP X4D
Screwed connection or flange connection	
Max. operating pressure, standard version	10 bar

Technical Data					
Grey cast iron (EN-GJL-200)					
Polypropylene					
Plastic					
Stainless steel					
Carbon, metal impregnated					



- ightarrow Differential pressure constant ( $\Delta p$ -c), 3 pre-defined pump curves
- ightarrow Differential pressure variable ( $\Delta p$ -v), 3 pre-defined pump curves
- → Constant speed (3 speed stages)
- → External control by iPWM1 or iPWM2 signal

## **Manual functions**

- → Setting the operating mode in accordance with the application
- → Setting of pump output (delivery head)
- → Setting the constant speed
- → Activation of sync function and LED coding
- → Pump venting function
- → Manual restart

# **Automatic functions**

→ Automatic restart

# Signal and display functions

- → Display of selected control mode
- → Display of selected stage of control mode or iPWM type
- → Display of activated sync function and LED coding
- → Status display of the manual restart or pump venting function

- → Wrench attachment point on pump body
- → Electrical connection cable with 3-pole pump plug and Wilo-Connector
- → iPWM connection
- → Pump venting function
- → Pump venting function
- → Manual restart
- → Blocking-current proof motor
- → Particle filter

Technical Data								
Туре	Pipe	Overall Length	Mains Connection	Max. Volume Flow	Max. Delivery Head	Thread	Rated Pressure	Grundfos Equivalent*
Varios PICO 15/1-7	1/2"	130 mm	1~230 V, 50 Hz	61 lpm	7 m	G 1	10 bar	ALPHA1L 15-65 130
Varios PICO 25/1-7-130	1"	130 mm	1~230 V, 50 Hz	61 lpm	7 m	G 1½	10 bar	ALPHA1L 25-65 130
Varios PICO 25/1-7	1"	180 mm	1~230 V, 50 Hz	61 lpm	7 m	G 1½	10 bar	ALPHA1L 15-65 180



# Wilo-Yonos MAXO

# High EC motor with automatic power adjustment









# **Design type**

Glandless circulation pump with threaded connection or flange connection, EC motor with automatic power adjustment.

# **Application**

Hot-water heating systems of all kinds, air-conditioning systems, closed cooling circuits, industrial circulation systems.

# Type key

Example: Wilo-Yonos MAXO 30/0.5-12

Yonos MAXO High-efficiency pump (screw-end or flange-

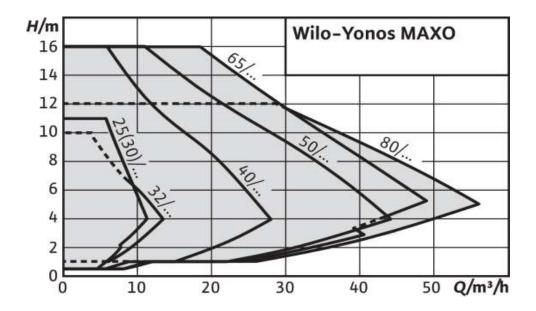
end pump), electronically controlled

30/ Nominal connection diameter 0.5-12 Nominal delivery head range [m]

- → LED display provides complete transparency of set delivery head, speed stage or possible errors
- → Simple adjustment over three speed stages when replacing an uncontrolled standard pump
- → Easier electrical connection using the Wilo plug
- → System availability ensured via collective fault signal
- → Compact and easy to use design and features

Technical Data						
Permissible area of application						
Permissible temperature range – Heating	-20°C to +110°C					
Permissible temperature range – Drinking	n/a					
Mains connection	1~230 V, 50/60 Hz					
Protection class	IP X4D					
Screwed connection or flange connection	(depending on type) Rp 1 to DN 100					
Max. operating pressure, standard version	6/10 bar or 6 bar (special version: 10 bar or 16 bar)					

Technical Data	
Materials	
Pump housing	Grey cast iron (EN-JL-200)
Thermal insulation	Polypropylene
Impeller	Plastic
Shaft	Stainless steel
Bearing	Carbon, metal impregnated



- → ∆p-c for constant differential pressure
- $\rightarrow$   $\Delta$ p-v for variable differential pressure
- → n = constant (3 speed stages)

## **Manual functions**

- → Setting the operating mode
- → Setting of pump output (delivery head)
- → Setting the speed stages

# **Automatic functions**

- → Infinitely variable power adjustment according to the operating mode
- → Deblocking function
- → Soft start
- $\hspace{0.1cm} \rightarrow \hspace{0.1cm} \textbf{Integrated full motor protection}$

# Signal and display functions

- → Collective fault signal (potential-free NC contact)
- → Fault signal light
- → LED segment display for displaying the delivery head and fault codes
- → Display of the configured speed stage (C1, C2 or C3)

- → Wrench attachment point on pump body (for threaded pipe union pumps)
- → Quick electrical connection with Wilo plug. For the connection of the mains and SSM lines, with integrated strain relief
- → For flange-end pumps: Flange versions
- → Standard version for DN 40 to DN 65 pumps: PN 6/10 combination flange (PN 16 flange according to EN 1092-2) for PN 6 and PN 16 counter flanges
- → Standard version for DN 80/DN 100 pumps: PN 6 flange (designed for PN 16 according to EN 1092-2) for PN 6 counter flange

Туре	Pipe	Overall Length	Mains Connection	Max. Volume Flow	Max. Delivery Head	Thread	Rated Pressure	Grundfos Equivalent*
Yonos MAXO 25/0,5-7	1"	180 mm	1~230 V, 50 Hz	136 lpm	7 m	G 1½	10 bar	MAGNA1 25-80
Yonos MAXO 25/0,5-10	1"		1~230 V, 50 Hz	160 lpm	10 m	G 1½	10 bar	MAGNA1 25-100
Yonos MAXO 30/0,5-7	1 1/4"	180 mm	1~230 V, 50 Hz	136 lpm	10 m	G 2	10 bar	MAGNA1 32-40
Yonos MAXO 30/0,5-10	1 1/4"	180 mm	1~230 V, 50 Hz	160 lpm	10 m	G 2	10 bar	MAGNA1 32-60F
Yonos MAXO 30/0,5-12	1 1/4"	180 mm	1~230 V, 50 Hz	200 lpm	12 m	G 2	10 bar	MAGNA1 42-50



# Wilo-Stratos High-efficiency cast iron circulation pump













# **Design type**

Glandless circulation pump with threaded connection or flange connection, EC motor with automatic power adjustment.

# **Application**

Hot-water heating systems of all kinds, air-conditioning systems, closed cooling circuits, industrial circulation systems for commercial applications

# Type key

Example: Wilo-Stratos 30/1-12

**Stratos** High-efficiency pump (screw-end or flange-

end pump), electronically controlled

30/ Nominal connection diameter1-12 Nominal delivery head range [m]

# Special features/product advantages

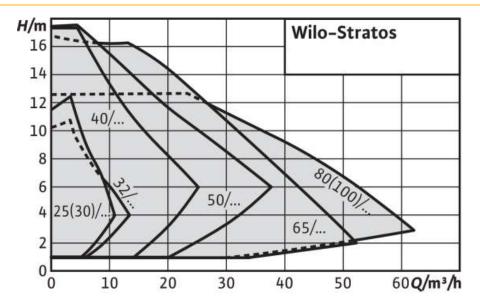
- → Energy savings through greater system efficiency with the Q-Limit function (volume flow limiter)
- → Improved Energy Efficiency Index (EEI) ≤0.20 for all single pumps.
- → Optimised display for better readability and operation
- → Space-saving installation due to compact design and location-dependent LC display
- → Modular concept for connection of all conventional bus systems (e.g. Modbus, BACnet, CAN, LON and PLR)
- → Tried and tested quality and reliability

# Signal and display functions

- → Collective fault signal (potential-free NC contact)
- → Individual run signal (potential-free NO contact) (possible with Stratos IF-Modules)
- → Fault signal light
- → LCD display for indication of pump data and fault codes

Technical Data	
Permissible area of application	
Permissible temperature range – Heating	-10°C to +110°C
Permissible temperature range - Drinking	n/a
Mains connection	1~230 V, 50/60 Hz
Protection class	IP X4D
Screwed connection or flange connection	(depending on type) Rp 1 to DN 100
Max. operating pressure, standard version	6/10 bar or 6 bar (special version: 10 bar or 16 bar)

Technical Data	
Materials	
Pump housing	Grey cast iron with cataphoretic coating
Thermal insulation	Polypropylene
Impeller	Plastic
Shaft	Stainless steel
Bearing	Carbon, metal impregnated



- → Manual control mode (n=constant)
- → ∆p-c for constant differential pressure
- → ∆p-v for variable differential pressure
- ightarrow  $\Delta$ p-T for temperature–controlled differential pressure (programmable via IR–Stick, IR–Monitor, Modbus, BACnet, LON or CAN)
- → Q limit for limiting the maximum volume flow (setting only via IR-stick)

# **Manual functions**

- → Setting the operating mode
- → Differential pressure setpoint setting
- → Setting automatic setback operation
- → Setting the pump ON/OFF
- → Setting the speed (manual control mode)

# → Automatic functions

- → Infinitely variable power adjustment according to the operating mode
- $\hspace{0.1cm} \rightarrow \text{Automatic setback operation}$
- → Deblocking function
- → Soft start
- → Full motor protection with integrated trip electronics

#### **External control functions**

- → "Overriding Off" control input (possible with Stratos IF-Modules)
- → "Overriding Min" control input (possible with Stratos IF-Modules)

- → "Analogue In 0 10 V" control input (remote speed adjustment) (possible with Stratos IF-Modules)
- → "Analogue In 0 10 V" control input (remote setpoint adjustment) (possible with Stratos IF–Modules)

## Data exchange

- → Infrared interface for wireless data exchange with IR-Stick/ IR-Monitor
- → Modbus RTU serial digital interface for connection to building automation BA via RS485 BUS system (possible with Stratos IF-Modules)
- → BACnet serial digital interface MS/TP Slave for connection to building automation BA via RS485 BUS system (possible with Stratos IF–Modules)
- → CAN serial digital interface for connection to building automation BA via CAN BUS system (possible with Stratos IF-Modules)
- → LON serial digital interface for connection to a LONWorks network (possible with Stratos IF–Modules)
- → PLR serial digital interface for connection to BA via Wilo interface converter or company-specific coupling modules (possible with Stratos IF-Modules)

## Dual pump management (double pump or 2 x single pumps)

- → Main/standby operation (automatic fault-actuated switchover/time-dependent pump cycling): various combinations with Stratos IF-Modules (accessories) possible
- → Parallel operation (efficiency-optimised peak load activation and deactivation): various combinations with Stratos IF-Modules (accessories) possible

Technical Data								
Туре	Pipe	Overall Length	Mains Connection	Max. Volume Flow	Max. Delivery Head	Thread	Rated Pressure	Grundfos Equivalent*
Stratos 25/1-8	1"	180 mm	1~230V 50 Hz	146 lpm	7.7 m	G 1½	10 bar	MAGNA3 25-80
Stratos 30/1-10	1 1/4"	180 mm	1~230V 50 Hz	133 lpm	10.8 m	G 2	16 bar	MAGNA3 32-50
Stratos 32/1-10	DN32	220 mm	1~230V 50 Hz	191 lpm	10.8 m	DN 32	6 /10/16 bar	
Stratos 40/1-8	DN40	220 mm	1~230V 50 Hz	283 lpm	8.4 m	DN 40	6 /10/16 bar	
Stratos 40/1-12	DN40	250 mm	1~230V 50 Hz	376 lpm	12.8 m	DN 40	6/18 bar	MAGNA3 40-120F
Stratos 65/1-12	DN65	340 mm	1~230V 50 Hz	775 lpm	10.3 m	DN 65	16 bar	MAGNA3 65-120F
Stratos 100/1-12	DN100	360 mm	1~230V 50 Hz	898 lpm	12.7 m	DN 100	6 /10/16 bar	MAGNA3 100-120F





# Sanitary Circulator Pumps



# Wilo-Star-Z NOVA Sanitary hot water circulation pump





# **Design type**

Glandless circulation pump with screwed connection and blocking-current proof synchronous motor

# **Application**

Domestic hot water circulation systems in industry and building services

# Type key

**Example:** Wilo-Star-Z NOVA

**Star-Z** Domestic hot water circulation pump, glandless

pump

**NOVA** Type designation

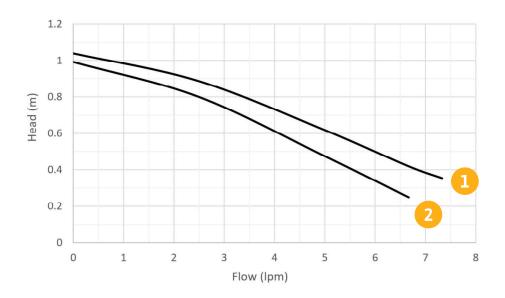
A with ball shut-off valve and non-return valve
B with ball shut-off valve, non-return valve and

T plug-in time switch

- → Low power consumption of just 3 to 5 W thanks to synchronous motor
- → Extended field of application for hard water: up to 3.57mmol/l (20 °dH)
- → Quick, toolless electrical connection thanks to the Wilo-Connector
- → Reliable protection from bacteria and corrosion due to the use of high-quality materials for a longer service life
- → Flexible service motor: fast replacement of all common pump types

Technical Data	
Permissible area of application	
Permissible temperature range – Heating	+2 °C to +110 °C
Permissible temperature range – Drinking	up to 20 °dH: max. $+65$ °C, in short–time duty (2 h) up to $+70$ °C
Mains connection	1~230 V, 50/60 Hz
Protection class	IP 42
Screwed connection or flange connection	Rp ⅓
Max. operating pressure, standard version	10 bar

Technical Data	
Materials	
Pump housing	Brass (CuZn40Pb2)
Impeller	E Plastic (PPO)
Shaft	Ceramic
Bearing	Carbon, synthetic resin impregnated



## **Automatic functions**

- → Time switching function for programming of 3 switch-on or switch-off times (Z 15 TT only)
- → Temperature control for maintaining a constant return temperature in the domestic hot water circulation system (Z 15 TT only)
- → Thermal disinfection routine (detection and support of thermal disinfection of the domestic hot water tank) (only Z 15 TT)
- → Blocking protection (Z 15 TT only)

# Signal and display functions

LCD screen for display of pump data and fault codes (Z 15 TT only)

- → Quick electrical connection with Wilo-Connector
- → Integrated ball shut-off valve on the suction side (Star-Z NOVA A, Star-Z-NOVA C only)
- → Integrated non-return valve on the pressure side (Star-Z NOVA A, Star-Z-NOVA C only)
- → Blocking current-proof motor
- → Plug-in time switch (only Star-Z NOVA C)
- ightarrow 1.8 m connecting cable with shock-proof plug (only Star-Z NOVA C)
- → Thermal insulation as standard

	Technical Data								
	Туре	Pipe	Overall Length	Mains Connection	Max. Volume Flow	Max. Delivery Head	Thread	Rated Pressure	Grundfos Equivalent*
1	Star-Z NOVA	1/2"	84mm	1~ 230V 50 Hz	7.4 lpm	1 m	G 1	10 bar	
2	Star-Z NOVA T	1/2"	138mm	1~ 230V 50 Hz	6.7 lpm	1 m	G 1	10 bar	COMFORT 15-14



# Wilo-Stratos PICO-Z Stainless steel high-efficiency circulator pump









# **Design type**

Glandless circulation pump with screwed connection, blocking-current proof EC motor and integrated electronic power control.

# **Application**

Sanitary water circulation systems in the industry and building services.

# Type key

Example: Wilo-Stratos PICO-Z 20/1-4

**Stratos PICO** High-efficiency pump (screw-end pump),

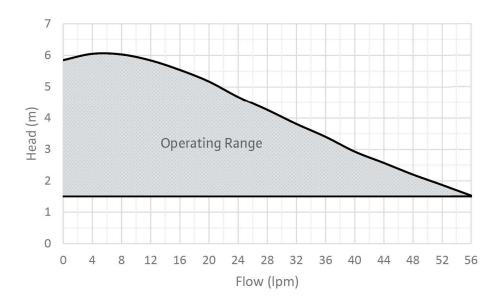
electronically controlled

Z
20/
Nominal connection diameter
1-4
Nominal delivery head range [m]

- → Stainless steel design suitable for potable water application
- ightarrow Constant pressure or temperature control modes available
- → Displays current power consumption and cumulative kilowatt hours
- → Suitable for retrofitting out asynchronous circulator pumps
- → Both models 1~230V 50Hz- fitted with Australian lead and plug for immediate connection

Technical Data	
Permissible area of application	
Permissible temperature range – Heating	Up to 3.57 mmol/ $1$ (20 °dH): +2 °C to +70 °C in short- time duty (4 h): +2 °C to +75 °C
Permissible temperature range – Drinking	N/A
Mains connection	1~230 V, 50 Hz
Protection class	IP X4D
Threaded connection	Rp ¾ and Rp 1
Max. operating pressure, standard version	10 bar

Technical Data	
Materials	
Pump housing	Stainless steel
Impeller	Plastic
Shaft	Stainless steel
Bearing	Carbon, synthetic resin impregnated



- $\rightarrow$   $\Delta$  p-c for constant differential pressure
- → Temperature-controlled mode

#### **Manual functions**

- → Setting the operating mode
- → Setting of pump output (delivery head)
- $\rightarrow$  Setting the minimum temperature
- → Setting of the minimum flow
- → Reset function for resetting the electricity meter
- → Reset function for resetting to factory settings
- → "Hold" function (key lock) for disabling the settings

## **Automatic functions**

- → Infinitely variable power adjustment according to the operating mode
- → Temperature control for maintaining a constant return temperature in the domestic hot water circulation system
- → Thermal disinfection routine (detecting and supporting the thermal disinfection of the domestic hot water storage tank)
- → Automatic deblocking function

# Signal and display functions

- → Display of the current power consumption in W
- → Display of the cumulative kilowatt hours in kWh
- → Display of effective flow in m3/h
- → Display of the current temperature in °C
- → Indication of fault signals (error codes)

- → Wrench attachment point on pump body
- → Quick electrical connection with Wilo-Connector
- → Blocking-current proof motor
- → Particle filter
- → Thermal insulation as standard

Technical Data								
Туре	Pipe	Overall Length	Mains Connection	Max. Volume Flow	Max. Delivery Head	Thread	Rated Pressure	Grundfos Equivalent*
Stratos-PICO-Z 20/1-6	3/4"	150 mm	1~230 V, 50 Hz	58 lpm	6 m	G 1¼	10 bar	ALPHA1 20-60
Stratos-PICO-7 25/1-6	1"	180 mm	1~230 V 50 Hz	58 lpm	6 m	G 1½	10 har	AI PHA1 25-60



# Wilo-Yonos MAXO Z High EC motor with automatic power adjustment











# **Design type**

Glandless circulator with threaded connection or flange connection, EC motor with automatic power adjustment.

# **Application**

Domestic hot water circulation systems in industry and building services.

# Type key

Example: Wilo-Yonos MAXO-Z 30/0.5-12

Yonos MAXO High-efficiency pump (screw-end or flange-

end pump), electronically controlled

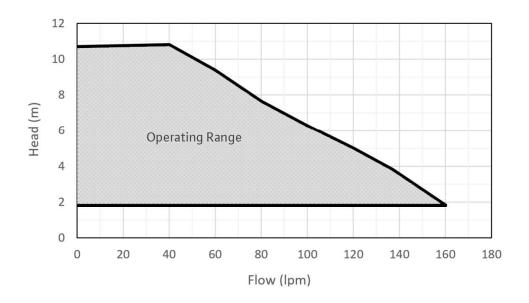
**Z** Single pump for domestic hot water circulation

30/ Nominal connection diameter0.5-12 Nominal delivery head range [m]

- → High drinking water hygiene ensured through collective fault signal
- → Energy-saving due to high-efficiency hydraulics and synchronous motor
- → Complete transparency of the delivery head, speed and possible faults thanks to its LED display
- → Simple adjustment over three speed stages using the green Knob when replacing an uncontrolled standard pump
- → Easier electrical connection thanks to the Wilo-Plug
- → Compact design and proven user-friendliness

Technical Data	
Permissible area of application	
Permissible temperature range – Heating	-10 °C to +110 °C
Permissible temperature range – Drinking	up to 3.57 mmol/l (20 °dH): 0 °C to $+80$ °C
Mains connection	1~230 V, 50 Hz
Protection class	IPX4D
Screwed connection or flange connection	(depending on type) Rp 1 to DN 65
Max. operating pressure, standard version	6/10 bar (special version: 16 bar)

Technical Data	
Materials	
Pump housing	Pump housing made of red brass
Impeller	Plastic
Shaft	Stainless steel
Bearing	Carbon



- $\rightarrow$   $\Delta$  p-c for constant differential pressure
- → ∆p-v for variable differential pressure
- → n = constant (3 speed stages)

# **Manual functions**

- → Setting the operating mode
- → Setting of pump output (delivery head)
- → Setting the speed stages

## **Automatic functions**

- → Infinitely variable power adjustment according to the operating mode
- → Deblocking function
- → Soft start
- → Integrated full motor protection

# Signal and display functions

- → Collective fault signal (potential-free NC contact)
- → Fault signal light
- $\rightarrow$  LED segment display for displaying the delivery head and error codes
- → Display of the configured speed stage (C1, C2 or C3

- → Quick electrical connection with Wilo plug. For the connection of the mains and SSM lines, with integrated strain relief
- → For flange-end pumps: Flange versions
- ightarrow Standard version for DN 40 to DN 65 pumps: Combination flange PN 6/10 for counter flanges PN 6 and PN 10

Technical Data								
Туре	Pipe	Overall Length	Mains Connection	Max. Volume Flow	Max. Delivery Head	Thread	Rated Pressure	Grundfos Equivalent*
Yonos MAXO-Z 25/0,5-10	1"	180 mm	1~230 V, 50 Hz	171 lpm	11 m	G 1½	10 bar	MAGNA1 25-80
Yonos MAXO-Z 30/0,5-12	1 1/4"	180 mm	1~230 V, 50 Hz	200 lpm	12 m	G 2	10 bar	MAGNA1 32-100



# Wilo-Stratos-Z High-efficiency bronze circulation pump













# **Design type**

Glandless circulation pump with screwed connection, blocking-current proof EC motor and integrated electronic power control.

# **Application**

Sanitary water circulation systems in the industry and building services.

# Type key

Example: Wilo-Stratos-Z 25/1-8

**Stratos** High-efficiency pump (screw-end or flange-end

pump), electronically controlled

**Z** Single pump for domestic hot water circulation

25/ Nominal connection diameter1-8 Nominal delivery head range [m]

# Special features/product advantages

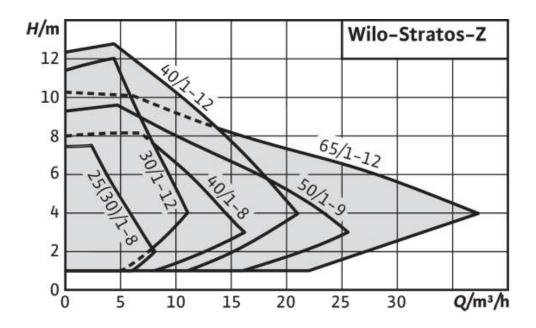
- → Energy savings through greater system efficiency with the Q-Limit function (volume flow limiter)
- → Constant pressure, variable pressure or temperature control modes available
- → Modular concept for connection of all conventional bus systems (e.g. Modbus, BACnet etc)
- → Corrosion resistant pump housing
- $\rightarrow$  Full motor protection with integrated trip electronics

# Signal and display functions

- → Collective fault signal (potential-free NC contact)
- → Individual run signal (potential-free NO contact) (possible with Stratos IF-Modules)
- → Fault signal light
- → LCD display for indication of pump data and fault codes

Technical Data	
Permissible area of application	
Permissible temperature range – Heating	-10 °C to +110 °C
Permissible temperature range – Drinking	-10 °C to +110 °C
Mains connection	1~230 V, 50/60 Hz
Protection class	IP X4D
Screwed connection or flange connection	(depending on type) Rp 1 to DN 65
Max. operating pressure, standard version	standard version: 6/10 bar (special version: 16 bar)

Technical Data	
Materials	
Pump housing	Red brass
Impeller	Plastic
Shaft	Stainless steel
Bearing	Carbon, synthetic resin impregnated



- → Manual control mode (n=constant)
- → Δp-c for constant differential pressure
- → Δp-v for variable differential pressure
- Δp-T for temperature-controlled differential pressure (programmable via IR-Stick, IR-Monitor, Modbus, BACnet, LON or CAN)
- → Q limit for limiting the maximum volume flow (setting only via IR-stick)

## **Manual functions**

- → Setting the operating mode
- → Differential pressure setpoint setting
- → Setting automatic setback operation
- → Setting the pump ON/OFF
- → Setting the speed (manual control mode)

# **Automatic functions**

- $\rightarrow$  Infinitely variable power adjustment according to the operating mode
- $\rightarrow \text{Automatic setback operation}$
- → Deblocking function
- → Soft start
- → Full motor protection with integrated trip electronics

# **External control functions**

 "Overriding Off" control input (possible with Stratos IF-Modules)

- → "Overriding Min" control input (possible with Stratos IF-Modules)
- → "Analogue In 0 10 V" control input (remote speed adjustment) (possible with Stratos IF-Modules)
- → "Analogue In 0 10 V" control input (remote setpoint adjustment) (possible with Stratos IF-Modules)

## Data exchange

- → Infrared interface for wireless data exchange with IR-Stick/ IR-Monitor
- → Modbus RTU serial digital interface for connection to building automation BA via RS485 BUS system (possible with Stratos IF-Modules)
- → BACnet serial digital interface MS/TP slave for connection to building automation BA via RS485 BUS system (possible with Stratos IF-Modules)
- → CAN serial digital interface for connection to building automation BA via CAN BUS system (possible with Stratos IF-Modules)
- → LON serial digital interface for connection to a LONWorks network (possible with Stratos IF-Modules)
- → PLR serial digital interface for connection to BA via Wilo interface converter or company-specific coupling modules (possible with Stratos IF-Modules)
- → Dual pump management (double pump or 2 x single pumps)
- Main/standby operation (automatic fault-actuated switchover/time-dependent pump cycling): various combinations with Stratos IF-Modules (accessories) possible
- → Parallel operation (efficiency-optimised peak load activation and deactivation): various combinations with Stratos IF-Modules (accessories) possible

Technical Data								
Туре	Pipe	Overall Length	Mains Connection	Max. Volume Flow	Max. Delivery Head	Thread	Rated Pressure	Grundfos Equivalent*
Stratos-Z 25/1-8	1"	180	1-230V 50Hz	123 lpm	8 m	G 1½	16 bar	MAGNA3 25-80N
Stratos-Z 30/1-12	1 1/4	180	1-230V 50Hz	177 lpm	12 m	G 2	16 bar	MAGNA3 32-100N
Stratos-Z 40/1-12	1 1/4	250	1-230V 50Hz	376 lpm	12 m	DN 40	16 bar	MAGNA3 40-120N





# Wilo-Star-Z Sanitary hot water circulation pump







# **Design type**

Glandless circulator with screwed connection

# **Application**

Sanitary hot water circulation systems in the industry and building services.

# Type key

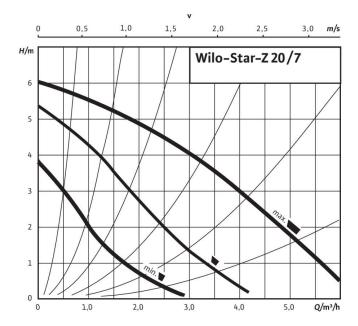
Example: Wilo-Star-Z 20/7-3
Star Standard pump
Z Circulator

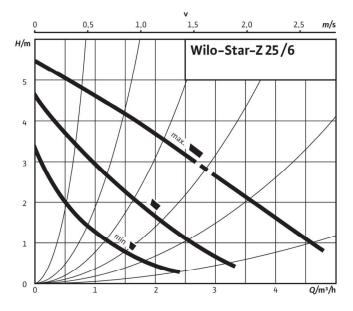
20/ Nominal connection diameter7-3 Nominal delivery head [m]

- → Star-Z 20/7-3 features sanitary stainless steel pump housing - AS4020 Certified
- → Star Z 25/6-3 supplied with bronze housing
- → AC pumps with electrical quick connection
- → All plastic parts that come into contact with the fluid fulfil KTW recommendations

Technical Data	
Permissible area of application	
Permissible temperature range – Heating	+2 °C to +110 °C
Permissible temperature range – Drinking	+up to 3.21 mmol/l (18 $^{\circ}$ dH): max. +65 $^{\circ}$ C, in short-time duty (2 h) up to +70 $^{\circ}$ C
Mains connection	1~230 V, 50 Hz, or 3~400 V, 50 Hz for the Star-Z 25/2 DM
Protection class	IP44
Screwed connection or flange connection	Rp ¾ and Rp 1
Max. operating pressure, standard version	10 bar

Technical Data	
Materials	
Pump housing	Bronze, stainless steel
Impeller	Plastic
Shaft	Ceramic
Bearing	Carbon, synthetic resin- impregnated





→ Speed stage switching (Star-Z...-3 only)

# **Manual functions**

→ Setting of the speed stages (3 speed stages with Star-Z...-3 pumps)

- $\rightarrow$  Wrench attachment point on the pump body (Star-Z 25 only)
- $\rightarrow$  Cable inlet possible from both sides (Star-Z 20/..., Star-Z 25/... only)
- → Quick connection with spring clips
- → Blocking-current proof motor

Technical Data								
Туре	Pipe	Overall Length	Mains Connection	Max. Volume Flow	Max. Delivery Head	Thread	Rated Pressure	Grundfos Equivalent*
Star-Z 20/7-3	3/4"	150mm	1~ 230V 50 Hz	91 lpm	6 m	G 1¼	10 bar	UPS20-60N
Star-Z 25/6-3	1"	180mm	1~ 230V 50 Hz	80 lpm	6 m	G 1½	10 bar	UPS25-60N



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