

Series overview

Series	Wilo-Stratos-ZD	Wilo-Star-Z	Wilo-Star-ZD
Product photo			
Duty chart			
Application	Secondary hot water circulation systems of all kinds, hot-water heating systems of all kinds, air conditioning, closed cooling circuits, industrial circulating systems	Potable water circulation systems in industry and building services.	Potable water circulation systems in industry and building services.
Design	Glandless circulation double pump with flange connection, EC motor and automatic power adjustment	Glandless circulation pump with threaded connection	Glandless circulation double pump with threaded connection; preselectable speed stages for power adjustment
Q _{max}	26 m ³ /h	4.8 m ³ /h	4.8 m ³ /h
H _{max}	10 m	6 m	6 m
Special features/ product advantages	<ul style="list-style-type: none"> • Maximum efficiency due to ECM technology • Front operation and access to the terminal space, variable installation positions, display independent of position. • Simple installation due to PN 6/PN 10 combination flanges (with DN 32 to DN 40) • Automatic adjustment of the pump output in volume-flow-variable secondary hot water circulation systems with thermostatically controlling line shut-off valves • System expansion by means of retrofittable interface modules for communication: Modbus, BACnet, LON, CAN, PLR etc. • Integrable dual pump management due to retrofittable Stratos IF-Modules for: <ul style="list-style-type: none"> - Main/standby operation with fault-dependent switchover - Efficiency-optimised peak-load operation • Remote control via infrared interface (IR stick/IR monitor) 	<ul style="list-style-type: none"> • AC pumps with electrical quick connection • All plastic parts that come into contact with the fluid fulfil KTW recommendations • Thermal insulation as standard for Star-Z 15 TT. • Star-Z 15 TT with integrated timer and thermostat, LC display with symbolic language, red button technology and automatic detection of the thermal disinfection of the warm secondary hot water tank, as well as ball shut-off valve on the suction side and non-return valve on the pressure side. 	<ul style="list-style-type: none"> • Double pump for individual or parallel operation • Suitable for any installation position with horizontal shaft; terminal box in 3-6-9-12 o'clock positions • Internal bypass circulation, which prevents Legionella growth in the standby unit • Increased reliability in individual operation due to the constant availability of a standby unit ready for operation
Further information	Wilo online catalogue at www.wilo.com	Series information from page 367 Wilo online catalogue at www.wilo.com	Wilo online catalogue at www.wilo.com

Series description Wilo-Star-Z



Design

Glandless circulation pump with threaded connection

Application

Potable water circulation systems in industry and building services. This circulator is suitable for drinking water only.

Type key

Example:	Wilo-Star-Z 20/1 Wilo-Star-Z 15 TT
Star	Standard pump
Z	Circulation pump
20/	Nominal connection diameter
1	Nominal delivery head [m]
TT	with built-in time switch and temperature control (only Z 15 TT)
EM	AC motor (1~)
DM	Three phase motor (3~)
-3	3 speed stages

Special features/product advantages

- AC pumps with electrical quick connection
- All plastic parts that come into contact with the fluid fulfil KTW recommendations
- Thermal insulation as standard for Star-Z 15 TT.
- Star-Z 15 TT with integrated timer and thermostat, LC display with symbolic language, red button technology and automatic detection of the thermal disinfection of the warm secondary hot water tank, as well as ball shut-off valve on the suction side and non-return valve on the pressure side.

Technical data

Approved fluids (other fluids on request)

Potable water and water for food-processing companies in accordance with TrinkwV 2001 (drinking water ordinance)	•
--	---

Permitted field of application

Temperature range for applications in secondary hot water circulation systems at maximum ambient temperature of +40°C	2 ... +65 °C
Max. permitted total hardness in potable water circulation systems	3.21 mmol/l (18 °dH)

Electrical connection

Mains connection	1~230 V, 50 Hz 3~400 V, 50 Hz (DM version)
------------------	---

Motor/electronics

Motor protection	Not required (blocking-current proof)
Emitted interference	EN 61000-6-3
Interference resistance	EN 61000-6-2
Protection class	IP 42
Insulation class	F

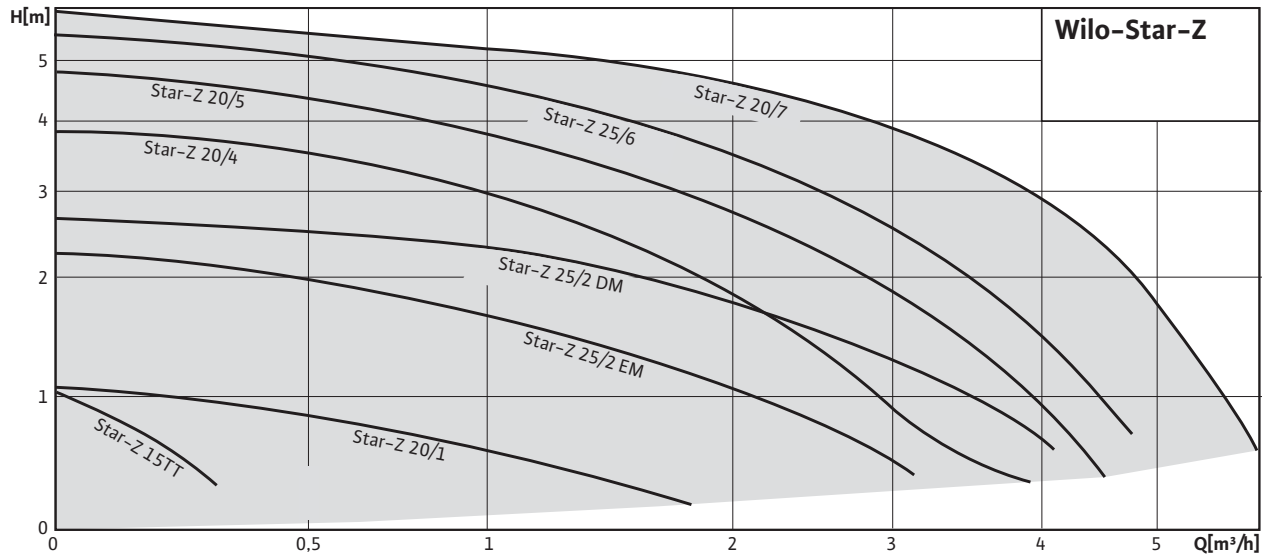
• = appropriate, - = not appropriate

Secondary hot water

Standard glandless pumps

Series description Wilo-Star-Z

Pump curves



Equipment/function

Operating modes

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

Manual functions

- Setting of the speed stages (1 speed stage, 3 speed stages with Star-Z...-3 pumps)

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 secondary hot water circulation system (Z 15 TT only)
- Thermal disinfection routine (detection and support of thermal disinfection of the warm secondary hot water tank) (only Z 15 TT)
- Blocking protection (only Z 15 TT)

Signal and display functions

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

Equipment

- Wrench attachment point on the pump body (Star-Z 25 only)
- Cable inlet possible from both sides (Star-Z 20/..., Star-Z 25/... only)
- Quick connection with spring clips
- Blocking current-proof motor
- Integrated non-return valve on the pressure side (only Star-Z 15 TT)
- Integrated ball shut-off valve on suction side (only Star-Z 15 TT)
- Including time switch (only Z 15 TT)

Scope of delivery

- Pump
- Including seals for threaded connection
- Including installation and operating instructions
- Including thermal insulation (Star-Z 15 TT only)

Accessories

- Screwed connections
- Adapter fittings
- Thermal insulation shells for Star-Z 20, 25
- Special brass inserted parts for screw-end pumps:
 - Male thread/inner soldering connection
- Wilo-S1R-h switchgear plug-in module for Star-Z 20/1, Z 25/2 EM (single-phase version)
- Wilo-SK 601N switchgear in connection with Wilo-SK 602N (as contactor) for Star-Z 25/2 DM (three-phase version)
- Wilo-SK 601N switchgear for timed On/Off switching for Star-Z 20, 25

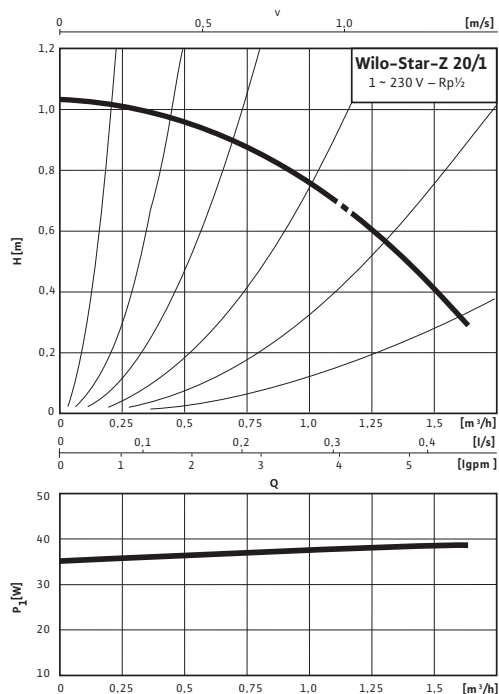
Secondary hot water

Standard glandless pumps

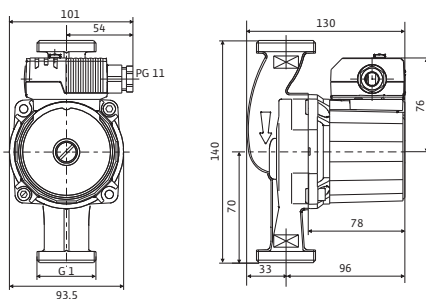
Wilo-Star-Z 20/1

Pump curves

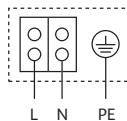
Single-phase current



Dimension drawing



Terminal diagram



Blocking current-proof motor
Single-phase motor (EM) 2-pole - 1~230 V, 50 Hz
 With built-in capacitor

Technical data

Type	Star-Z 20/1
Art no.	4028111
Rated pressure	PN 10
Threaded pipe union	Rp ½
Mains connection	1~230 V, 50 Hz
Speed range n	1700–2700 rpm
Power consumption P_1	36 – 38 W
Current consumption I	max. 0.18 A
Weight approx. m	2.2 kg
Minimum suction head at 40 / 65 / 110 °C	0.5 / 3 / 10 m

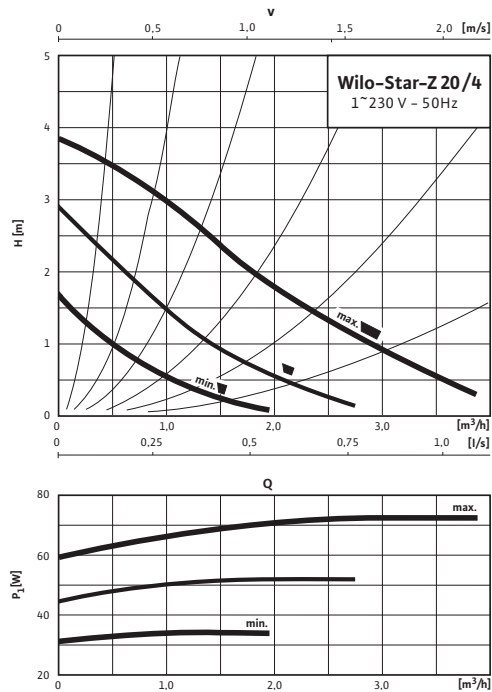
Materials

Pump housing	Red brass (CC 499K) according to DIN 50930–6 in accordance with Drinking Water Ordinance
Impeller	Plastic (PPO)
Pump shaft	Oxide ceramic, brown (Al ₂ O ₃)
Bearing	Carbon, synthetic resin impregnated

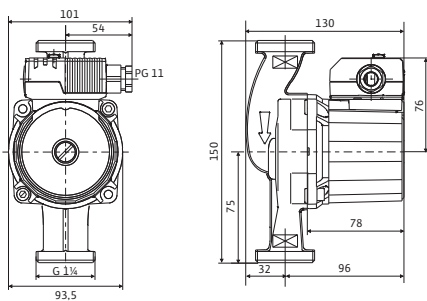
Wilo-Star-Z 20/4-3

Pump curves

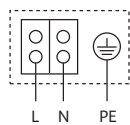
Single-phase current



Dimension drawing



Terminal diagram



Blocking current-proof motor
Single-phase motor (EM) 2-pole - 1~230 V, 50 Hz
 With built-in capacitor

Technical data

Type	Star-Z 20/4-3
Art no.	4081193
Rated pressure	PN 10
Threaded pipe union	Rp ½
Mains connection	1~230 V, 50 Hz
Speed range <i>n</i>	1700-2600 rpm
Power consumption P_1	29 - 71 W
Current consumption <i>I</i>	max. 0.31 A
Weight approx. <i>m</i>	2.4 kg
Minimum suction head at 40 / 65 / 110 °C	0 / 3 / 10 m

Materials

Pump housing	Red brass (CC 491K) according to DIN 50930-6 in accordance with TrinkwV (Drinking Water Ordinance)
Impeller	Plastic (PPO)
Pump shaft	Oxide ceramic, brown (Al ₂ O ₃)
Bearing	Carbon, synthetic resin impregnated

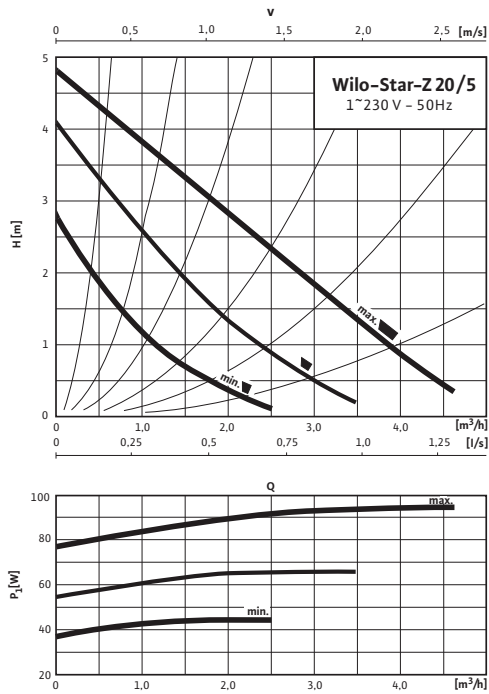
Secondary hot water

Standard glandless pumps

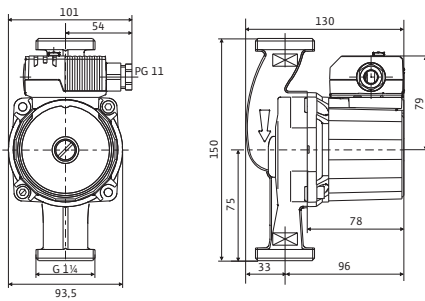
Wilo-Star-Z 20/5-3

Pump curves

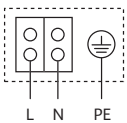
Single-phase current



Dimension drawing



Terminal diagram



Blocking current-proof motor

Single-phase motor (EM) 2-pole - 1~230 V, 50 Hz

With built-in capacitor

Technical data

Type	Star-Z 20/5-3
Art no.	4081198
Rated pressure	PN 10
Threaded pipe union	Rp 1/2
Mains connection	1~230 V, 50 Hz
Speed range <i>n</i>	2000-2600 rpm
Power consumption <i>P</i> ₁	43 - 93 W
Current consumption <i>I</i>	max. 0.40 A
Weight approx. <i>m</i>	2.5 kg
Minimum suction head at 40 / 65 / 110 °C	0 / 3 / 10 m

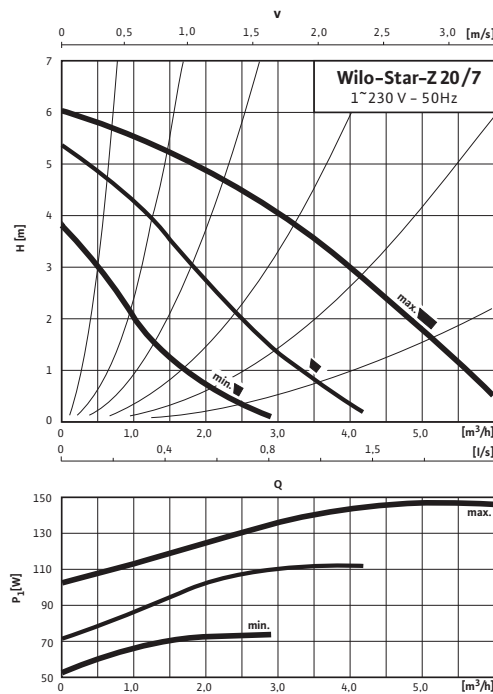
Materials

Pump housing	Red brass (CC 491K) according to DIN 50930-6 in accordance with TrinkwV (Drinking Water Ordinance)
Impeller	Plastic (PPO)
Pump shaft	Oxide ceramic, brown (Al ₂ O ₃)
Bearing	Carbon, synthetic resin impregnated

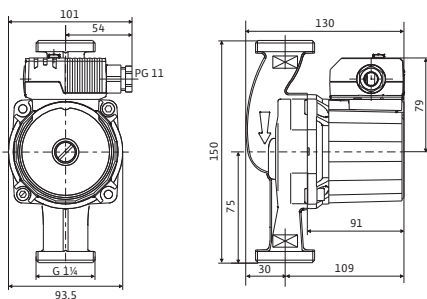
Wilo-Star-Z 20/7-3

Pump curves

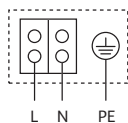
Single-phase current



Dimension drawing



Terminal diagram



Blocking current-proof motor

Single-phase motor (EM) 2-pole - 1~230 V, 50 Hz

With built-in capacitor

Technical data

Type	Star-Z 20/7-3
Art no.	4081203
Rated pressure	PN 10
Threaded pipe union	Rp 1/2
Mains connection	1~230 V, 50 Hz
Speed range <i>n</i>	2000-2700 rpm
Power consumption P_1	52 - 146 W
Current consumption <i>I</i>	max. 0.65 A
Weight approx. <i>m</i>	2.9 kg
Minimum suction head at 40 / 65 / 110 °C	0 / 3 / 10 m

Materials

Pump housing	Red brass (CC 491K) according to DIN 50930-6 in accordance with TrinkwV (Drinking Water Ordinance)
Impeller	Plastic (PPO)
Pump shaft	Oxide ceramic, brown (Al ₂ O ₃)
Bearing	Carbon, synthetic resin impregnated

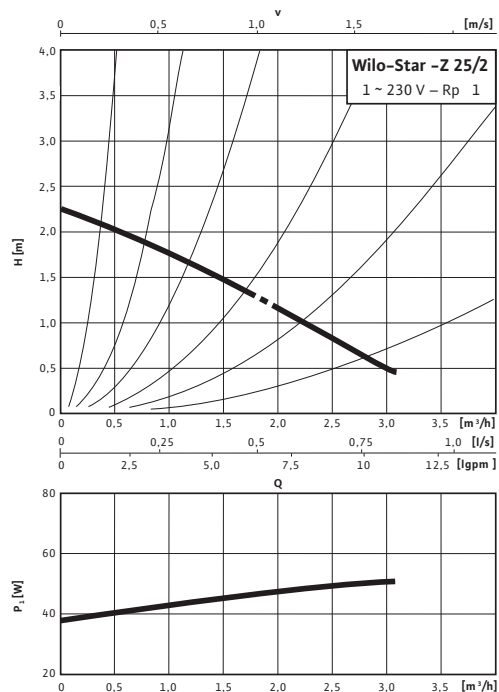
Secondary hot water

Standard glandless pumps

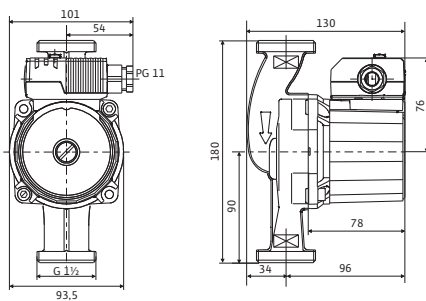
Wilo-Star-Z 25/2 (1~230 V)

Pump curves

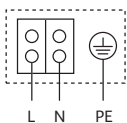
Single-phase current



Dimension drawing



Terminal diagram



Blocking current-proof motor

Single-phase motor (EM) 2-pole – 1~230 V, 50 Hz

With built-in capacitor

Technical data

Type	Star-Z 25/2 EM
Art no.	4029062
Rated pressure	PN 10
Threaded pipe union	Rp 1
Mains connection	1~230 V, 50 Hz
Speed range n	1700–2700 rpm
Power consumption P_1	max. 46 W
Current consumption I	max. 0.22 A
Weight approx. m	2.4 kg
Minimum suction head at 40 / 65 / 110 °C	0.5 / 3 / 10 m

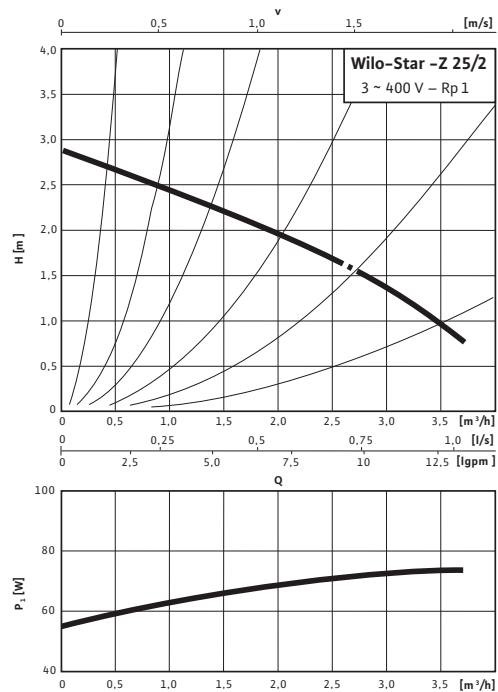
Materials

Pump housing	Red brass (CC 499K) according to DIN 50930–6 in accordance with Drinking Water Ordinance
Impeller	Plastic (PPO)
Pump shaft	Oxide ceramic, brown (Al ₂ O ₃)
Bearing	Carbon, synthetic resin impregnated

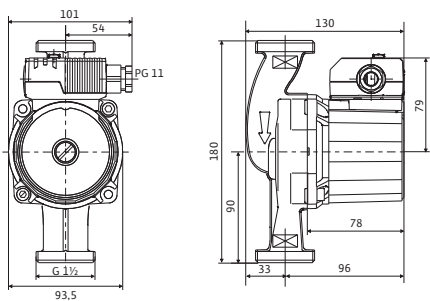
Wilo-Star-Z 25/2 (3~400 V)

Pump curves

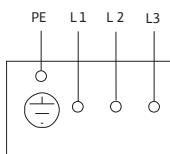
Three-phase current



Dimension drawing



Terminal diagram 3~400 V



Three-phase AC motor (DM), 2-pole- 3~400 V, 50 Hz

Technical data

Type	Star-Z 25/2 DM
Art no.	4037124
Rated pressure	PN 10
Threaded pipe union	Rp 1
Mains connection	3~400 V, 50 Hz
Speed range n	1700-2700 rpm
Power consumption P_1	55 - 72 W
Current consumption I	max. 0.16 A
Weight approx. m	2.6 kg
Minimum suction head at 40 / 65 / 110 °C	0.5 / 3 / 10 m

Materials

Pump housing	Red brass (CC 499K) according to DIN 50930-6 in accordance with Drinking Water Ordinance
Impeller	Plastic (PPO)
Pump shaft	Oxide ceramic, brown (Al ₂ O ₃)
Bearing	Carbon, synthetic resin impregnated

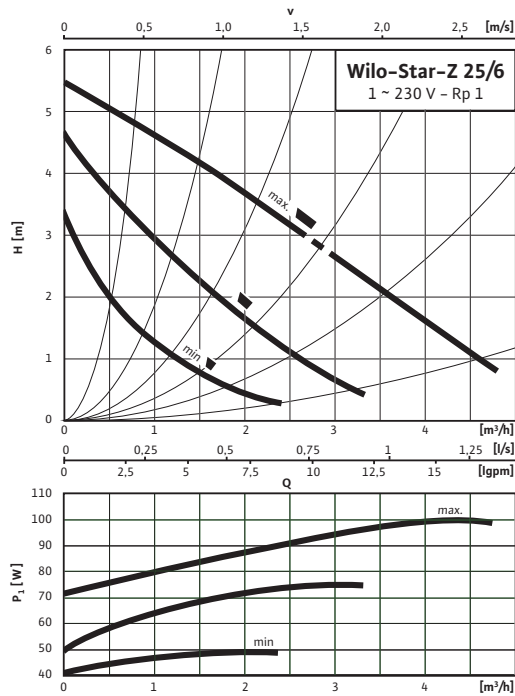
Secondary hot water

Standard glandless pumps

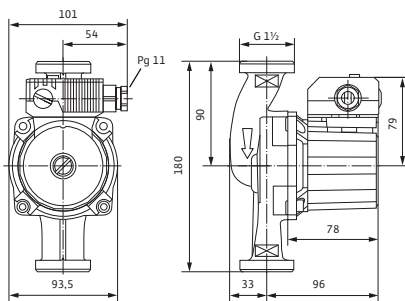
Wilo-Star-Z 25/6-3

Pump curves

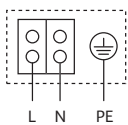
Single-phase current



Dimension drawing



Terminal diagram



Blocking current-proof motor

Single-phase motor (EM) 2-pole - 1~230 V, 50 Hz

With built-in capacitor

Technical data

Type	Star-Z 25/6-3
Art no.	4047573
Rated pressure	PN 10
Threaded pipe union	Rp 1
Mains connection	1~230 V, 50 Hz
Speed range n	1700-2700 rpm
Power consumption P_1	49 / 74 / 99 W
Current consumption I	0.22 - 0.43 A
Weight approx. m	2.7 kg
Minimum suction head at 40 / 65 / 110 °C	0.5 / 3 / 10 m

Materials

Pump housing	Red brass (CC 499K) according to DIN 50930-6 in accordance with Drinking Water Ordinance
Impeller	Plastic (PPO)
Pump shaft	Oxide ceramic, brown (Al ₂ O ₃)
Bearing	Carbon, synthetic resin impregnated