



## Data sheet

### Hydraulic data

Maximum operating pressure $P_N$	10 bar
Delivery head for $Q_{min}$ $H_{Q_{min}}$	1.0 m
Max. volume flow $Q_{max}$	1.6 m <sup>3</sup> /h
Min. fluid temperature $T_{min}$	2 °C
Max. fluid temperature $T_{max}$	65 °C
Min. ambient temperature $T_{min}$	0 °C
Max. ambient temperature $T_{max}$	40 °C
Max. permitted total water hardness	3.21 mmol/l (18°dH)

### Motor data

Mains connection	1~230 V, 50 Hz
Rated current $I_N$	0.14 A
Power consumption $P_{1 max}$	30 W
Emitted interference	EN 61000-6-3
Interference resistance	EN 61000-6-2
Protection class motor	IP44
Insulation class	F
Threaded cable connection	1 x PG11
Motor protection	no

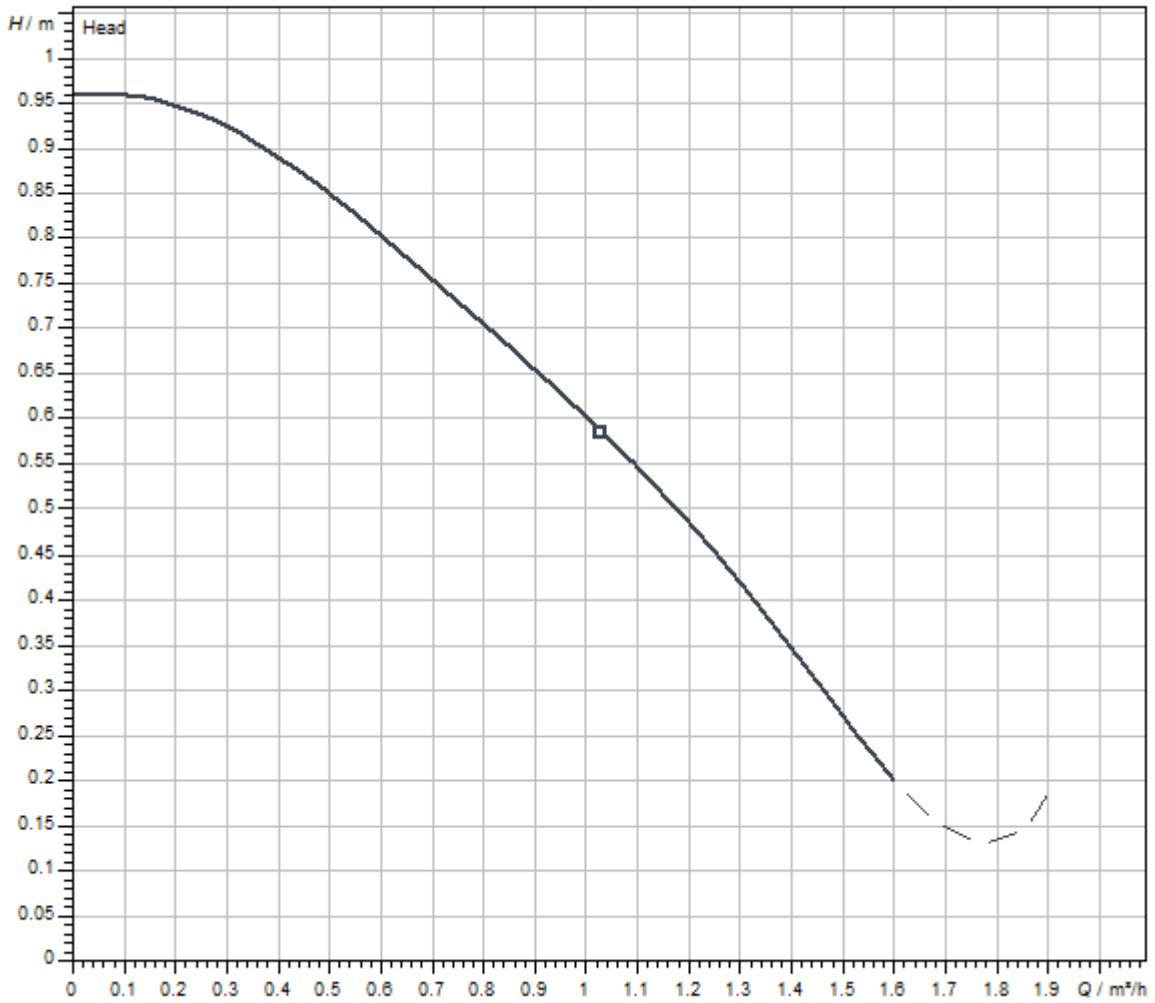
### Materials

Pump housing	Bronze, CC499K
Impeller	PPE-GF30
Shaft	Oxide ceramic
Bearing	Carbon, synthetic resin-impregnated

### Installation dimensions

Pipe connection on the suction side $DN_s$	G 1
Pipe connection on the discharge side $DN_d$	G 1
Port-to-port length $L_0$	140 mm

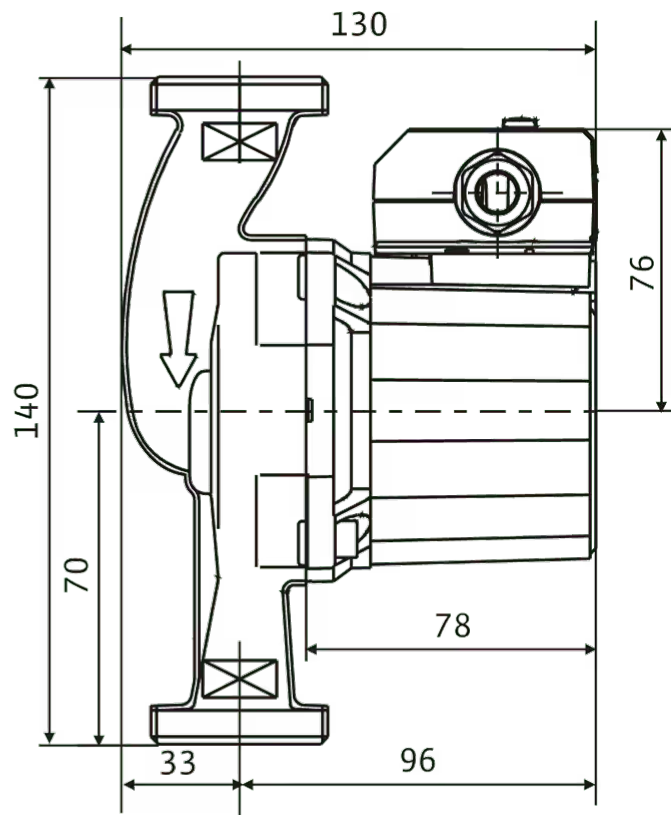
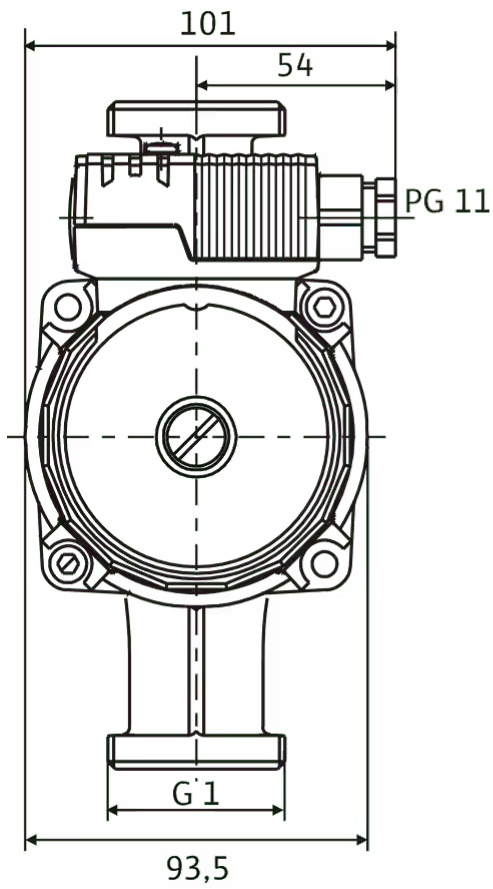
Pump curves



Fluid media	Water 100 %
Fluid temperature $T$	20.00 °C
speed at duty point $n_{hydr. @ OP}$	2,900 1/min

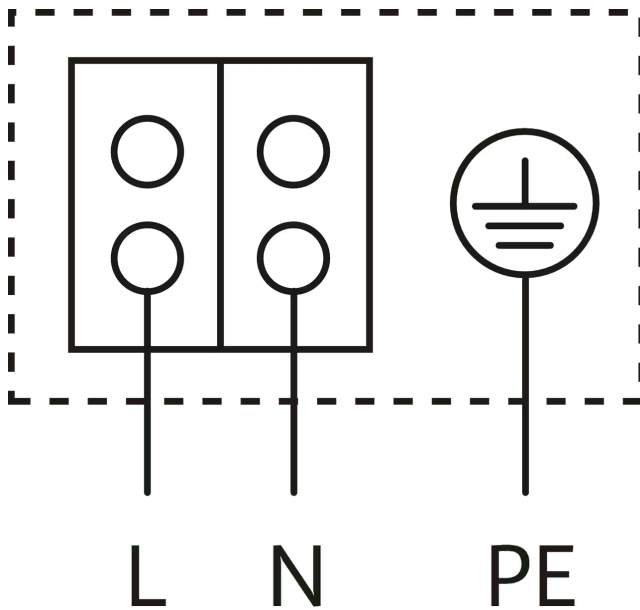
Dimensions and dimensions drawings

Star Z



## Wiring diagram

## Star-E




Blocking current-proof motor

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

With built-in capacitor

## Ordering information

## Product data

Brand	Wilo
Product description	Star-Z 20/1
Article number	<b>4028111</b> 
EAN number	4016322364214
Colour	Green
Minimum order quantity	1
Date of sales availability	2010-01-01

## Packaging

Packaging type	Cardboard box
Packaging property	Sales packaging
Pieces per pallet	256
Number per layer	32

## Dimension, weight

Length with packaging	147 mm
Length <i>L</i>	134 mm
Height with packaging	100 mm
Height <i>H</i>	94 mm
Width with packaging	187 mm
Width <i>W</i>	149 mm
Gross weight, approx. <i>m</i>	2.3 kg
Net weight, approx. <i>m</i>	2.2 kg

## Tender text

This circulator is suitable only for drinking water.

Domestic hot water circulator, constant-speed glandless pump for pipe installation. Blocking-current proof motor.

Pump housing made of bronze, impeller made of fibreglass-reinforced plastic, ceramic shaft with resin-impregnated carbon friction bearings.

## Operating Data

Max. fluid temperature $T_{\max}$	65 °C
Min. fluid temperature $T_{\min}$	2 °C
Min. ambient temperature $T_{\min}$	0 °C
Max. ambient temperature $T_{\max}$	40 °C
Temperature range at max. ambient temperature +40 °C $T$	+2...+65
Maximum operating pressure $PN$	10 bar
Max. permitted total water hardness	3.21 mmol/l (18°dH)

## Motor data

Emitted interference	EN 61000-6-3
Interference resistance	EN 61000-6-2
Mains connection	1~230 V, 50 Hz
Power consumption $P_{1 \max}$	30 W
Rated current $I_N$	0.14 A
Protection class motor	IP44
Threaded cable connection	1 x PG11


## Materials

Pump housing	Bronze, CC499K
Impeller	PPE-GF30
Shaft	Oxide ceramic
Bearing	Carbon, synthetic resin-impregnated

## Installation dimensions

Pipe connection on the suction side $DNs$	G 1
Pipe connection on the discharge side $DNd$	G 1
Port-to-port length $L0$	140 mm

## Ordering information

Brand	Wilo
Product description	Star-Z 20/1
Net weight, approx. $m$	2.2 kg
Article number	<b>4028111</b> 

## Mechanical accessories

### Pipe installation

#### Screwed connections/adapters

Screwed connection R ½ / Ø 15 i x G 1, 96 Set	112047493
Screwed connection R ½ / Ø 15 i x G 1, 1 Set	4092743

### Thermal insulation

#### Size 14 thermal insulation shell

Thermal insulation shell (Size 14)	4046444
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## Electrical accessories

### Pump control

#### Timer switch SK 601N

Switchgear SK 601N	2120443
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## Services

With Wilo as your partner, you can not only be sure of choosing high-quality product solutions, but also of benefiting from a comprehensive, worry-free package of well thought-out services. We collaborate to develop a service concept tailored to your individual needs; with our expertise and personal consultancy, we make sure that the operation of your systems is as energy-efficient, reliable and economical as possible. All the while our competent Wilo service technicians are ready to assist you with fast, reliable and on-time support.

### Recommended services

Wilo-Live Assistant Service	2216415
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System Optimisation Glandless pumps	2219250
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Energy Solutions Glandless pumps	2219285
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### More suitable services

Extended Warranty Glandless pumps	2219589
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Supervision Glandless pumps	2219320
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Installation Glandless pumps	2219355
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Commissioning Glandless pumps	2219390
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Maintenance BASIC Glandless pumps	2219530
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Maintenance COMFORT Glandless pumps	2219416
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Maintenance PREMIUM Glandless pumps	2219545
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Repair Glandless pumps	2219609
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