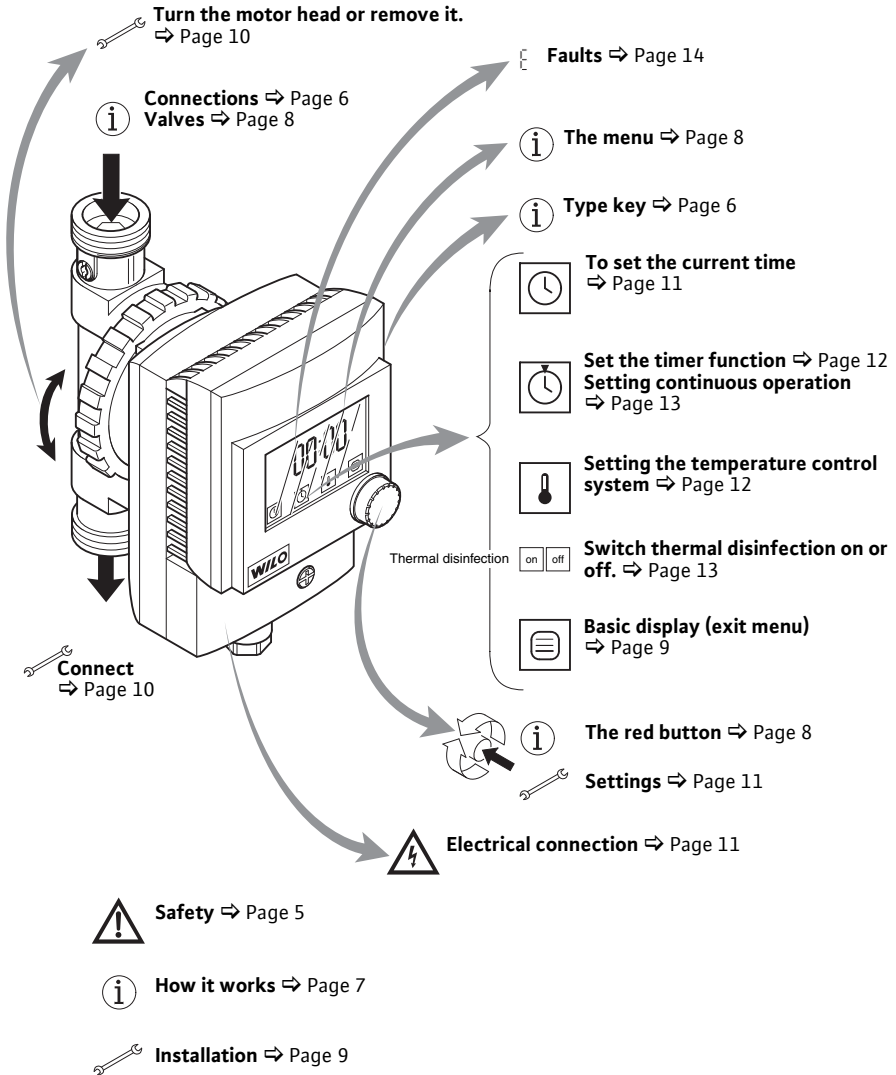


Wilo-Star-Z 15 TT



en Installation and operating instructions
fr Notice de montage et de mise en service
nl Inbouw- en bedieningsvoorschriften
es Instrucciones de instalación y funcionamiento
it Istruzioni di montaggio, uso e manutenzione
pt Manual de Instalação e funcionamento
el Οδηγίες εγκατάστασης και λειτουργίας
sv Monterings- och skötselanvisning

da Monterings- og driftsvejledning
hu Beépítési és üzemeltetési utasítás
pl Instrukcja montażu i obsługi
cs Návod k montáži a obsluze
ru Инструкция по монтажу и эксплуатации
lv Uzstādīšanas un ekspluatācijas instrukcija
sl Navodila za vgradnjo in obratovanje



Turn the motor head or remove it.
⇒ Page 10

i Connections ⇒ Page 6
Valves ⇒ Page 8

{ Faults ⇒ Page 14

i The menu ⇒ Page 8

i Type key ⇒ Page 6

To set the current time
⇒ Page 11

Set the timer function ⇒ Page 12
 Setting continuous operation
⇒ Page 13

Setting the temperature control
system ⇒ Page 12

Thermal disinfection on | off
Switch thermal disinfection on or
off. ⇒ Page 13

Basic display (exit menu)
⇒ Page 9

i The red button ⇒ Page 8

Settings ⇒ Page 11

Electrical connection ⇒ Page 11

Safety ⇒ Page 5

i How it works ⇒ Page 7


Installation ⇒ Page 9


Connect
⇒ Page 10


2 Safety


- About these instructions*
- Read through these instructions completely before attempting installation. Non-observance of the safety instructions can result in risk of injury to persons and damage to pump/unit.
 - When the installation work is complete, pass on the instructions to the end user.
 - Keep the instructions near the pump. They can be used as a reference if problems occur later.
 - We accept no liability for damage resulting from failure to follow these instructions.

Safety information Important safety information is identified in the instructions as follows:

 **Danger:** Indicates a danger to life due to electrical voltage.

 **Warning:** Indicates possible danger to life or risk of injury.

 **Caution:** Indicates possible risks to the pump or other items.

 **Note:** Highlights tips and information.

Qualification The pump must only be installed by qualified personnel. The power may only be connected by qualified personnel.

Regulations The current version of the following regulations must be observed when installing the equipment:

- Accident prevention regulations
- DVGW worksheet W551 (in Germany)
- VDE 0370/Part 1
- Other local regulations (e.g. IEC, VDE, etc.)

Conversion, spares The pump must not be technically modified or converted. Only use original spares.

Transport Unpack and check the pump and all accessories upon receipt. Report any damage that has occurred in transit immediately. Despatch the pump in the original packing only.

- Electricity** There is a danger of an electric shock when dealing with electricity. Therefore,
- switch off the power before working on the pump and make sure that it cannot be switched on again accidentally.
 - Do not kink or nip the power cable or let it come into contact with heat sources.
 - The pump must be protected against drips with IP 42 protection. Protect the pump against water spray. Do not immerse in water or other fluids.

3 Technical data

3.1 Type key

Star-Z	Series: Standard drinking water circulation pump, glandless pump
15	Nominal width of the connecting pipe (mm)
TT	Timer, thermostat

3.2 Connections

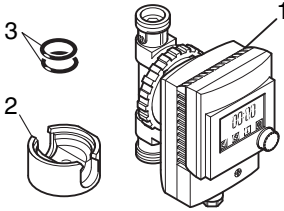
Star-Z 15 TT	Screwed connection: 20 (R1)
--------------	-----------------------------

3.3 Data

Star-Z 15 TT	
Mains voltage	1 ~ 230 V / 50 Hz
Protection class	IP 42
Nominal width of connecting pipe	R1
Installation length	140 mm
Max. admissible operating pressure	10 bar (1000 kPa)
Permitted fluid temperature range	2 °C to 65 °C, in short-term operation up to 2 hours 70 °C

See name plate or Wilo catalogue for further information.

3.4 Scope of supply



- 1 Pump, ready for connection, with 1.8 m cable and shock-proof power plug
- 2 Thermal insulation shell
- 3 2 flat gaskets
- 4 Installation and operating instructions (not illustrated)

4 How it works

4.1 Application

This circulator is suitable for drinking water only.

4.2 Functions

Timer function



Up to 3 switch-on/switch-off times can be programmed with the timer function.

Works setting: 24 hours continuous operation

Temperature control system



The temperature control system keeps the water in the return circuit at the set temperature. To achieve this, the pump is switched on and off automatically.

This function ensures that

- from a set temperature of more than 55 °C, the danger of germs forming in the circulation system is reduced (DVGW requirement),
- lime deposits are reduced,
- the power consumption is reduced.

Works setting: temperature control system switched off.



Note: The timer function and temperature control system can be operated together. The timer takes priority. If both functions are activated, there is no temperature control during the switch-off period.

Thermal disinfection

Thermal disinfection on off

The boiler heats up periodically to approximately 70 °C for thermal disinfection purposes. If the thermal disinfection function is activated, the pump recognises this from an increase in temperature to more than 68 °C. Irrespective of the timer function, it then runs continuously for approximately 2 hours and then switches off again.

Note: A learning phase starts after the thermal disinfection function is activated. In this case, the pump switches itself on for 10 minutes every 20 minutes. If the temperature increases, the time is stored and the pump continues running until the next increase in temperature. The interval between these two temperature increases is stored as the frequency for the thermal disinfection process. Changes in the times are recognised automatically.

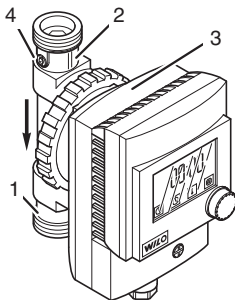
Works setting: Thermal disinfection switched off.

Protection in the event of power failure

If there is a power failure, the pump settings will be retained for up to 3 hours. When first installed, this is only guaranteed after an operating time of 24 hours.

Valves

The pump is equipped with a non-return valve (1) on the discharge side and with a stop valve (2) on the intake side. To replace the motor head (3), simply close the stop valve at the rotating slot (4). The motor head can then simply be unscrewed ⇒ Page 10.









Blocking protection









If the pump is switched off via the timer function, it switches on automatically for 10 seconds every 60 minutes. This automatic function cannot be switched on or off.

4.3 The menu

The red button All menu settings are made using the red button:

- | | | |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> • Press for > 5 seconds
Call up the menu. |  |
|  | <ul style="list-style-type: none"> • Press briefly
Select menu items and confirm the parameters input. |  |
|  | <ul style="list-style-type: none"> • Turn
Set menu items and set parameters. |  |

Symbols The following symbols are displayed in the menu:

• Menu clock Set the current time	
• Menu timer function Set the parameters.	
- Set the 3 possible switch-on times.	1 on 2  3
- Set the 3 possible switch-off times.	1 off 2  3
- Timer function switched off.	
- Timer function switched on.	
• Menu temperature control Set the parameters.	
- Switch thermal disinfection on/off.	Thermal disinfection <input type="checkbox"/> on <input type="checkbox"/> off
• Basic display (exit menu) The following are displayed alternately on the basic display:	
- time and set temperature of the temperature control system.	11:30 65 °C
- Thermal disinfection ON (does not appear if the thermal disinfection is switched off)	Thermal disinfection
-	

5 Installation



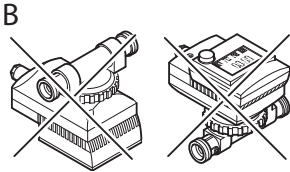
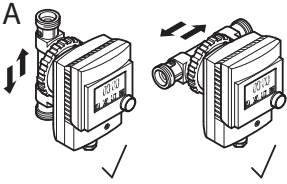
Danger: Before starting work, make sure that the pump has been disconnected from the power supply.

5.1 Mechanical installation

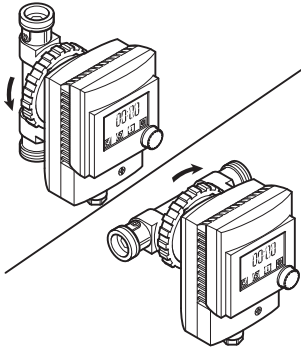
Installation site Choose a weatherproof, frost-free, dust-free and well-ventilated room for the installation. Make sure that the installation site is easily accessible.



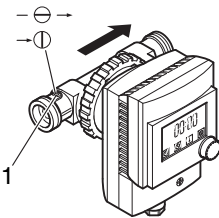
Caution: Dirt can cause pump failure. Flush the pipe system before installation.



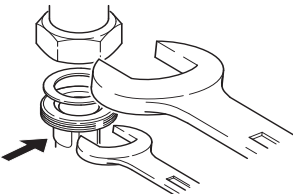
Turn the motor head or remove it.



Open the stop valve



Connect



Note: The stop valve and non-return valve are already installed. No other stop valves are necessary.

1. Prepare the installation site so that the pump can be installed without being exposed to mechanical stresses.

2. Choose the right installation position – only as illustrated in (Fig. A).
The arrow on the back of the housing indicates the direction of flow.

3. Undo the cap nut – unscrew it completely if necessary.

Caution: Do not damage the housing and seal. Replace damaged seal.

4. Turn the motor head so that the cable screw connection points downwards.

Caution: If the cable screw connection is in the wrong position, water can penetrate into the pump and destroy the motor or the electronics.

5. Tighten the cap nut again.

6. Turn the slot (1) with a screwdriver so that it is parallel to the direction of flow.

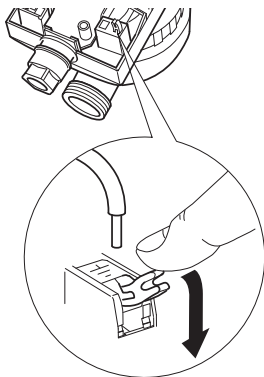
Note: To close the slot, position it so that it lies across the direction of flow.

7. Fit the thermal insulation shell.

8. Connect the pipework.

Caution: In the case of the versions with check valve and non-return valve, these are already pre-assembled with a tightening torque of 15 Nm (hand-tight). If the tightening torque is too high, this will destroy the valve screw connection and the O-ring.
When installing the valve, use a wrench to prevent it from turning!

5.2 Electrical connection



⚠ Danger: Only a qualified electrician may work on the electrical connection. Before connecting, make sure that the connecting cable is dead.

i Note: So that the pump functions can be fully used, the pump needs a permanent power supply. Do not connect the pump to a boiler control system.

The pump is fitted with a cable and shock-proof power plug so that it is ready to connect. Proceed as follows if the connecting cable has to be changed:



1. Install a permanent connecting cable with an o.d. of 5–8 mm, complete with plug device or all-pole switch (with a contact opening width of at least 3 mm).
2. Open the terminal box.
3. Guide the connecting cable through the cable connection and strip approximately 5 mm.
4. Secure the cores with the cable clips.
L phase, N neutral conductor, Ⓛ earth
5. Firmly tighten the cable connection.
6. Close the terminal box.
7. Set parameters → Page 11.

5.3 Filling and ventilation


1. Fill the system.
2. The pump vents automatically. The pump will not be damaged if it runs dry briefly.























6 Settings

6.1 To set the current time







		1. 5 sec. ↓		
↻		2. Select clock (flashes).	+	5 sec. ↓
↻	12:	3. Set the hours.	+	↓
↻	:45	4. Set the minutes.	+	↓
↻		5. Select the basic display.	+	↓





6.2 Set the timer function

 **Note:** There is no automatic summer/winter time switch-over.


		1. 5 sec. 		
		2. Select timer function (flashes).	+	5 sec. 
		3. Select (flashes).	+	
	1 	4. Set hours for the first switch-on time.		
	-- : --	Means: timer switched off.	+	
	1 	5. Set minutes for the first switch-on time.		
	1 	6. Set hours for the first switch-off time.		
	1 	7. Set minutes for the first switch-off time.		
	AA2	Warns against a non-DVGW compliant setting and appears if the switch-off time is more than 8 hours.		
		8. Repeat steps 4 to 7 for switch-on and switch-off times 2 and 3.		
		9. Select the basic display.	+	











6.3 Setting the temperature control system

		1. 5 sec. 		
		2. Select control system (flashes).	+	5 sec. 
	65 °C	3. Set temperature. Selection range 40–70 °C.		
	On	Means that the temperature control system is switched off. The pump continues to run independently of the return temperature.	+	

AA1	Warns against a non-DVGW compliant setting and appears if the temperature is below 55 °C.		
 Thermal disinfection on off	4. Switch thermal disinfection on or off.	+	
	5. Select the basic display.	+	


6.4 Setting continuous operation

1. 5 sec. 


	2. Select timer function (flashes).	+	5 sec. 
	3. Select (flashes) to switch off the timer function.	+	
	4. Select control system (flashes).	+	5 sec. 
On	5. Select to switch off the temperature control system.		
 Thermal disinfection on off	6. Select "off" (flashes) to switch off the thermal disinfection function.	+	
	7. Select the basic display.	+	

7 Maintenance

To clean Clean the outside of the pump with a slightly moistened cloth only. Do not use detergents.

 **Caution:** Never clean the display with aggressive fluids, which may scratch it or make it blind.

To replace the motor head

 **Warning:** When the motor head is removed, hot fluid may spurt out at high pressure. Allow the pump to cool down first. Close the stop valves before removing the motor head.

To replace the motor head ⇨ Page 10.

8 Spares

Order the service motor from a trade specialist.

9 Faults

Faults, displays	Cause	Remedy
00:00	Time not set.	Set clock.
	Power failure longer than 3 hours.	Set clock, create secure power supply if necessary.
E 36	Electronic fault, module defective.	Have the motor head replaced by a specialist ⇨ Page 10.
E 38	Temperature sensor defective	Have the motor head replaced by a specialist ⇨ Page 10.
AA 1	Temperature control setting not DVGW-compliant.	Set temperature above 55 °C.
AA 2	Switch-off time not DVGW-compliant.	Set switch-off time to less than 8 hours.
No display.	Power supply interrupted.	Restore power supply.
Additional display symbols are shown.	Frequency superimposed when operating in an industrial environment or near radio transmitters.	This fault does not affect the pump function.
Pump does not start.	Power supply interrupted, short circuit or fuses defective.	Have the power supply checked by a qualified electrician.
	Timer function has switched off automatically.	Check the timer function setting ⇨ Page 12.
	Motor is blocked, e.g. by deposits from the water circuit.	Have a specialist remove the pump ⇨ Page 10.
Pump making noises.	Motor scraping, e.g. through deposits from the water circuit.	The movement of the impeller is restored by turning it and flushing out the dirt.
	Running dry, too little water.	Check the stop valves; they must be completely open.



Note: If you cannot remedy the fault, contact the trade.

Disposal

Avoid damage to the environment

- Do not dispose of the pump in household waste.
- Recycle the pump.
- If in doubt, contact local authorities and specialist waste management companies.



Note: For further information on recycling, see www.wilo-recycling.com.

EG KONFORMITÄTSERKLÄRUNG
EC DECLARATION OF CONFORMITY
DECLARATION DE CONFORMITE CE

Als Hersteller erklären wir hiermit, dass die Nassläufer-Umwälzpumpen der Baureihe
We, the manufacturer, declare that these glandless circulating pump types of the series
Nous, fabricant, déclarons que les types de circulateurs de la série

Wilo-Star-Z 15 TT

(Die Seriennummer ist auf dem Typenschild des Produktes angegeben / The serial number is marked on the product site plate / Le numéro de série est inscrit sur la plaque signalétique du produit)

in der gelieferten Ausführung folgenden einschlägigen Bestimmungen entsprechen :
In their delivered state comply with the following relevant directives :
dans leur état de livraison sont conformes aux dispositions des directives suivantes :

- Niederspannungsrichtlinie 2006/95/EG**
- Low voltage 2006/95/EC**
- Basse tension 2006/95/CE**

- Elektromagnetische Verträglichkeit-Richtlinie 2004/108/EG**
- Electromagnetic compatibility 2004/108/EC**
- Compatibilité électromagnétique 2004/108/CE**

und entsprechender nationaler Gesetzgebung,
and with the relevant national legislation,
et aux législations nationales les transposant,

sowie auch den Bestimmungen zu folgenden harmonisierten europäischen Normen :
comply also with the following relevant harmonized European standards :
sont également conformes aux dispositions des normes européennes harmonisées suivantes :

EN 60335-2-51

EN 61000-6-1:2007
EN 61000-6-2:2005
EN 61000-6-3+A1:2011
EN 61000-6-4+A1:2011

Dortmund,



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