Table of Contents

1 Declaration of Conformity 21
2 Safety Instructions 22
2.1 General 22
2.2 Identification of symbols in the operating instructions 22
2.3 Personnel qualification 23
2.4 Danger of not observing safety instructions 24
2.5 Safety-conscious work 24
2.6 Safety instructions for the operator 24
2.7 Safety instructions for installation and maintenance work 25
2.8 Unauthorised conversion and production of spare parts 25
2.9 Unpermitted operation 26
3 Transport and Storage 26
4 Intended Use 27
5 Information About the Product 27
5.1 Technical data go.future Z+ 27
5.2 Scope of delivery 28
6 Description of the Pump 28
7 Pump Settings and Output 29
7.1 Temperature control without time switch function 29
7.2 Timer mode (temperature control with adjustable timer function) 30
7.3 Smart mode 30
7.4 Temperature setting 30
7.5 Time setting 31
7.6 Setting the speed level 31
8 Installation 32
9 Electrical Connection 33
9.1 Assembling the power plug 34
10 Filling and Venting the System 34
11 Service and Maintenance 35
12 Faults, Causes and Remedies 35
13 Disposal 37

EC Declaration of Conformity

Name of the issuer:	**Wita Sp. z o.o. 86-005 Białe Błota, Zielonka ul. Biznesowa 22**
Subject of the declaration:	**circulation pump**
Type:	**go.future**
Design:	**Z+**

We declare with sole responsibility that the products specified above, to which this EU Declaration of Conformity refers, fulfil the following standards and guidelines:

Electromagnetic Compatibility Directive 2014/30/EU
EN 55014-1 : 2006 + A1 : 2009 + A2 : 2011
EN 55014-2 : 1997 + A1 : 2001 + A2 : 2008
EN 61000-3-2 : 2014
EN 61000-3-3 : 2013
Low Voltage Guideline 2014/35/EU
EN 16297-1 : 2012
EN 60335-2-51 : 2003 + A1 : 2008 + A2 : 2012
RoHS 2011/65/EU

This declaration is submitted for and on behalf of the manufacturer by:

Frank Kerstan
Management

Zielonka, 04.05.2021

2 Safety Instructions

2.1 General

These installation and operating instructions are a part of the product, and contain basic information that must be observed during installation, operation and maintenance. For this reason, the installer and specialist personnel or operators must read these instructions prior to set-up.
Please observe both the general safety instructions listed under section 2 and the special safety instructions detailed in the other sections.
A copy of the EC Declaration of Conformity is provided with these instructions. This declaration shall be deemed void in the event of a modification that has not been agreed with us.

2.2 Identification of notes in the operating instructions



**General hazard symbol
Warning! Danger of personal injury!
Observe the relevant accident prevention regulations.**



Warning! Danger from electrical voltage! Prevent hazards arising from electrical energy. Observe the instructions in local or general regulations (e.g. IEC, VDE, etc.), and those of the local energy supplier.

Note

This symbol indicates useful information for handling the product. It indicates potential difficulties and aims to ensure safe operation.

Signs attached directly on the product, such as:
- direction of rotation arrow
- type plate
- identification of connections must be strictly observed and kept in an easily legible state.

2.3 Personnel qualification

The personnel used for mounting, operation and maintenance must have relevant qualifications. Areas of responsibility and monitoring of personnel must be guaranteed by the owner/operator. If personnel do not have the necessary know-how, they must be trained or instructed accordingly. This device can be used by children at or above the age of 8 years, as well as by persons with reduced physical, sensory or mental capabilities, or who lack experience and knowledge, if they are supervised or have been instructed concerning the safe use of the device and if they understand the hazards arising from its use. Children may not play with the device. Cleaning and maintenance operations may not be carried out by children without supervision.



2.4 Danger of not observing safety instructions

Not observing the safety information can endanger persons, the environment and the system. Not observing the safety instructions shall result in the loss of any and all claims to warranty.
Potential dangers include:

- Hazards to persons through electrical and mechanical effects.
- Failure of important system functions.
- Hazard to the environment from escaping fluids resulting from a leak.
- Failure of prescribed repair and maintenance work.

2.5 Safety-conscious working

Observe the safety instructions detailed in this manual, along with the current national accident prevention regulations. Should the system operator also have their own internal regulations, these must also be observed.

2.6 Safety instructions for the operator

- Any existing touch guard protecting moving parts may be neither removed nor shut down while the system is in operation.
- In the event of a fluid leak, any fluids must be collected or diverted in a way that prevents hazards to persons and the environment from arising.
- Prevent hazards arising from electrical energy.

- Observe the instructions in local or general regulations (e.g. IEC, VDE, etc.), and those of the local energy supplier.



- In the event of hazards arising from the system due to contact with hot or cold parts, these parts must be fitted with a touch guard.
- Keep flammable substances away from the product.

2.7 Safety instructions for installation and maintenance work

The system operator is responsible for ensuring that all installation and maintenance work is carried out by qualified personnel. These persons must also have familiarised themselves in advance with the product using the operating instructions. Conducting work on the pump is only permitted when the system is shut down.
Ensure that the device is securely disconnected from the power supply. Disconnect the device plug to achieve this.
Prescribed instructions for shutting down the device can be found in the operating instructions. All protective mechanisms, such as a touch guard, must be correctly reattached after work.

2.8 Unauthorised conversion and production of spare parts

Modification or conversion of the product is only permitted after prior consultation with the manufacturer. Only use original spare parts for repairs. Only use accessories that have been approved by the manufacturer. The manufacturer shall bear no liability for any consequences resulting from the use of other parts.

2.9 Unpermitted operation

Modification or conversion of the product is only permitted after prior consultation with the manufacturer. Only use original spare parts for repairs. Only use accessories that have been approved by the manufacturer.
The manufacturer shall bear no liability for any consequences resulting from the use of other parts.



3 Transport and Storage

After receiving the product, inspect it immediately for damage caused in transport. Should you detect any transport damage, assert a claim with the haulier.

Incorrect transport and storage can lead to personal injury or damage to the product.

- **Protect the product against frost, moisture and damage during transport and storage.**
- **Only carry the pump by the pump housing, and never by the connection cable or terminal box.**
- **If the packaging weakens due to moisture, this can lead to the pump falling out and causing severe injury.**

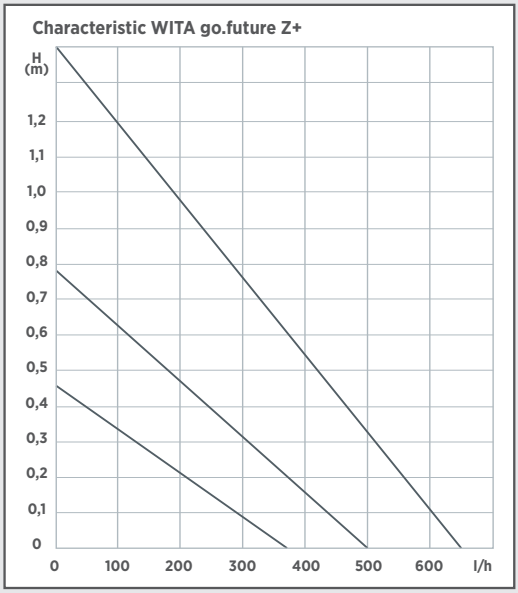


4 Intended Use

This domestic water pump is used to circulate hot water in one- and two-family houses with a cable length of up to 50m. The circulation pump ensures that hot water is readily available when it is needed. The pump can control the temperature of the warm water and make it available throughout the day, or for adjustable periods of time.

5 Information About the Product

5.1 Technical data go.future Z+



Maximum delivery height	1,4 m
Maximum flow	650 l/h
Power consumption P1 (W)	2,5 – 7,0
Supply voltage	230V AC (187-253 VAC) 50Hz (60Hz)
Emission- sound pressure level	LB ≤ 40dBA, test method GB29529
Degree of protection	IP44
Operation ambient temperature	0 to 40 °C
Media temperature	+5 to 65°C

Maximum system pressure	10 bar (1 MPa)
Minimum inlet water pressure	0,005 MPa
Approved pumping media	clean drinking water up to < 20° dH particle-free, fiber-free and pH-neutral
Dimensions	81 mm x 81 mm x 131 mm (L x B x H)
Weight	1,2 kg
Connections	IG ½"

Attention!
Impermissible fluids can destroy the pump and cause personal injury. It is essential to take the manufacturer's information and safety data sheets into account!

Note

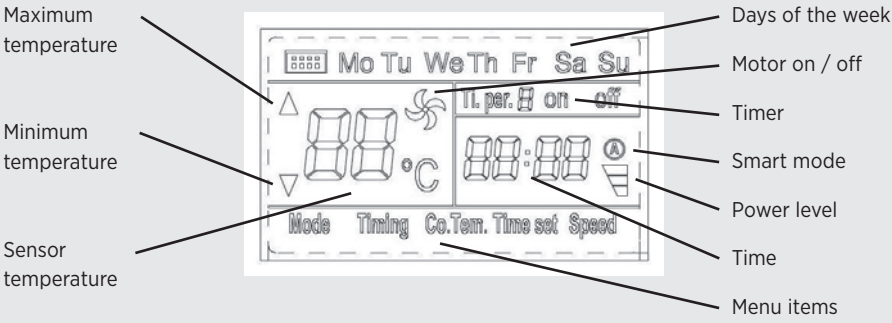
5.2 Scope of delivery

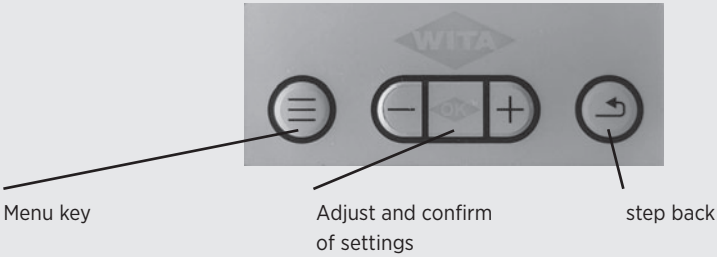
- Original installation and operating instructions
- Pump
- 2 flat gaskets
- Insulation
- Power plug

6 Description of the Pump

In an average household, around 10 to 20% of the energy consumption is caused by common standard pumps. The go.future Z+ pump can reduce energy consumption by up to 80% compared to a standard circulation pump, whilst maintaining the same level of hydraulic power.

7 Pump Settings and Output





Types of operation of the pump

The pump has three different operating modes.

1. Temperature control without time switch function
2. Timer mode (temperature control with adjustable timer function)
3. Smart mode (temperature control with preset timer values)

The pump can also be operated without a temperature sensor. The pump then runs in the set operating level without temperature monitoring. In this case, no temperature is shown in the display.

7.1 Temperature control without time switch function

After switching on, the "mode" symbol lights up at the bottom left of the display. The pump runs in this operating mode 24 hours a day. When the temperature of the water in the pipeline is lower than the set start temperature, the pump is switched on until the temperature of the water in the pipeline has reached the set stop temperature.

Press the left menu button to enter the selection mode. In the lower part of the display flashes to indicate the current standard mode "mode", press the button "OK" to go directly to the temperature control mode. When the word "fashion" ends flashing and permanently lit, the setting is complete. The temperature range can be changed as described in chapter 7.4.

7.2 Timer mode (temperature control with adjustable timer function)

When the timer mode is switched on, the "timer" symbol lights up. For every day of the week three switch-on and switch-off times can be set. The pump is switched on at the set time, if the temperature of the tap water is lower than the set start temperature, and runs until the temperature of the tap water reaches the set stop temperature.
To set the time periods, proceed as follows:
Press the left menu button " ☰ " to enter the selection mode, press the "+" "-" - button to enter the timer mode ("Timing" is then displayed). To press The OK button. The timer symbol stops flashing and the day of the week flashes. Choose Use the "+" "-" buttons to select the day of the week for which you want to set the times. To confirm You this with OK. The number “1” flashes after “Ti per”. This is the first program slot for the Times can be set. You can now press the "+" "-" buttons two more Select further program positions. Confirm the program location you want to change with OK. Now use the "+" "-" buttons to set the hours for the switch-on time. Press it this with OK. The minutes are now flashing and can be changed. Confirm with OK. Now the hours for the switch-off time flash. After setting, confirm again with "OK".
You can now set the minutes for the switch-off time. Confirm again with "OK". Now The day of the week flashes again and you can change the settings for the other days of the week make. The settings are applied after approx. 10 seconds without pressing a button. The pump automatically switches to normal operation, initially runs for approx. 5 minutes and then operates with the set times. If the stop temperature is not reached within the set time window, the pump continues to run for another 30 minutes. This is to ensure that the water in the circulation line reaches ever higher temperatures even if the time windows are too short. You can change the times at any time as described.

7.3 Smart mode

Press and hold the Menu button " ☰ " for 3 seconds to turn on Smart mode. After switching on, the automatic symbol (Ⓐ) lights up and the pump runs by default in the set temperature range for three periods: 6:00-9:00, 11:00-13:00, 21: 00-23: 00. If the temperature of the tap water is lower than the set start temperature, the electric pump is switched on and runs until the temperature of the tap water has reached the set stop temperature. The time setting can be adjusted become. To do this, follow these steps:
With the smart mode switched on (the (Ⓐ) symbol lights up) press the left menu button " ☰ ", to enter the selection mode, press the "+" "-" button to switch to the timer mode ("Timing" is then displayed). Press the OK button. The timer symbol stops to flash and the day of the week flashes. Use the "+" "-" buttons to select the day of the week for which you want to set times. Confirm this with OK. "Ti per" flashes behind the number "1". This is the first program position for which times can be set. you you can now select two further program positions by pressing the "+" "-" buttons.

Confirm the program location you want to change with OK. Now use the "+" "-" buttons set the hours for the switch-on time. Activate this with OK. Now the lights are flashing minutes and can be changed. Confirm with OK. The hours for the switch-off time will now flash.
After setting, confirm again with "OK". Now you can spend the minutes set the switch-off time. Confirm again with "OK". The day of the week and will now flash again You can make the settings for the other days of the week. After about 10 seconds the settings are adopted without pressing a button. The pump automatically switches to normal operation, initially runs for approx. 5 minutes and then operates with the set times. If the stop temperature is not reached within the set time window, the pump continues to run for another 30 minutes. This is to ensure that the water in the circulation line reaches ever higher temperatures even if the time windows are too short. You can change the times change at any time as described. To exit smart mode, press Menu button " ☰ " again for 3 seconds. This switches the pump from Smart mode to Timer mode.

7.4 Temperature setting

The stop temperature and the start temperature of the pump can be changed. The stop temperature is at least 2 ° C higher than the start temperature, and the temperature setting range is 20 - 60 ° C.
Setting start temperature, stop temperature:
Press the menu button " ☰ " at the bottom left to enter the selection mode. To press Then press the "+" "-" buttons until "Co.Tem" is displayed, then press "OK" to enter the Temperature setting mode. In the temperature setting mode, you can press Use the "OK" button to switch between the start and stop temperatures.
Pressing the "+" "-" keys changes the start or stop temperature, this symbol "▲" means that the stop temperature is set, if this symbol "▼ " is displayed, it means that the start temperature is set. After a waiting time of approx. 7 seconds, the pump switches to normal operation and the Pump works in the set temperature range.

7.5 Time setting

Press the menu button " ☰ " at the bottom left to enter the selection mode, press Press the "+" "-" button until you reach the "Time Set" menu item, then press the "OK" button to return to Time setting. First the day of the week flashes in the display, press Press the "+" "-" button to set the day of the week for which the settings are made should be. Press the "OK" button to set the day of the week. Press the "+" "-" buttons to set the current hour. Continue with the "OK" button. Press the "+" "-" buttons to set the current minute. Continue with the "OK" button. "Time set" flashes and after approx. 10 seconds the pump switches to normal operation. The current time is now set.

7.6 Setting the speed level



The pump has three power levels.
The set level is shown in the display by these three bars.
The more bars that are displayed, the higher the set output
Level 1 corresponds to 80% speed
Level 2 corresponds to 90% speed
Level 3 corresponds to full speed
Setting the speed control:
Press the menu button " ☰ " at the bottom left to enter the selection mode, press Press the "+" "-" button until the "Speed" menu item is displayed. Press the "OK" button to To get to the level setting, press the "+" "-" button for the level setting. Finally press the OK button. "Speed" flashes and switches after approx. 10 seconds the pump to normal operation. The desired level is now set.

8 Installation

The circulating pump is installed in the pipeline and as a rule, directly upstream of the service water reservoir in such a way that the water from the last tap is pumped back to the reservoir through the circulating pipeline. A check valve must be installed on the pump's discharge side (primary side) to prevent pump backflow when the tap is opened. Assemble the pump with the horizontally positioned pump motor when the power is shut off (the arrow on the pump housing shows the direction of flow). Ensure when performing the heat insulation work that the pump motor and the electronic housing are not insulated. The temperature sensor has to be mounted on the return flow pipe (circulation pipe).

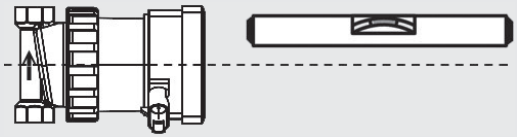
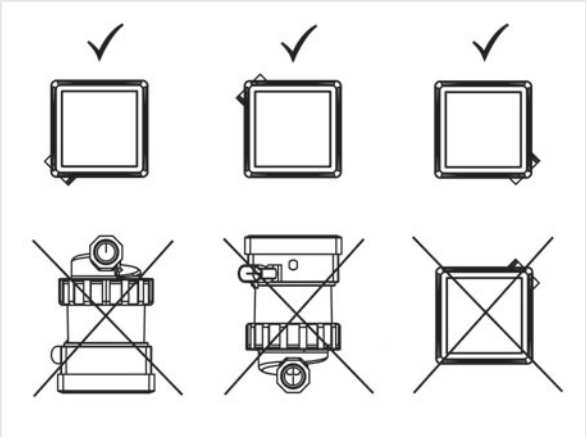


Fig. 1

Install the device with the power supply disconnected and with the pump motor lying horizontally (the arrow on the pump housing shows the direction of flow)(Fig. 1).
When performing insulation work, ensure that the pump motor and the electronics housing are not covered in insulation.
Observe the permissible mounting positions:



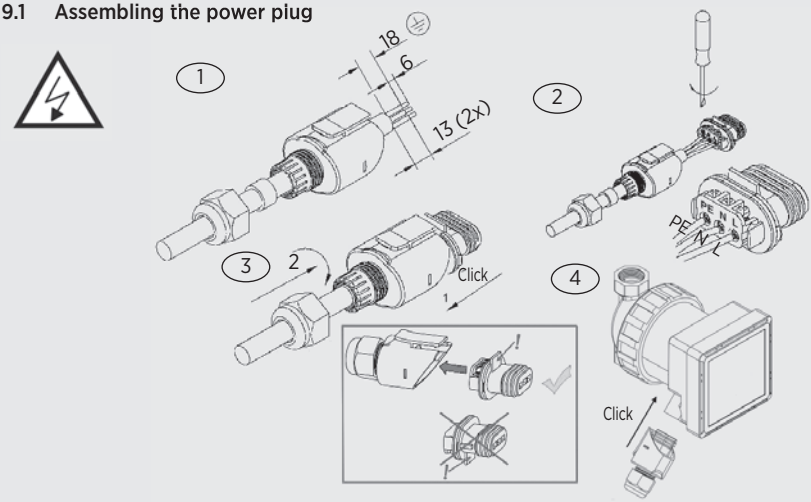
9 Electrical connection

Warning: Risk of death!

**Improper installation and improper electrical connection can present a fatal hazard.
Hazards posed by electrical power must be eliminated.**

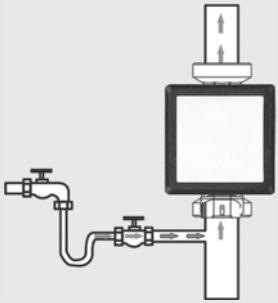
- **Only have installation and electrical connection performed by a specialist and in line with the valid regulations (e.g. IEC, VDE, etc.)!**
- **The current type and voltage must correspond with the information on the type plate.**
- **Observe the specifications of local energy supplier!**
- **Observe accident prevention regulations!**
- **Never pull on the power cable**
- **Do not bend the cable**
- **Do not place any objects on the cable**
- **When using the pump in systems at temperatures over 90 °C, use a connection line that is suitably heat resistant.**
- **Hazards such as sharp edges and burrs arise during installation.**
- **When transporting the pump, never hold it by the power cable.**
- **The pump could cause an injury if it falls.**

9.1 Assembling the power plug



Connect the power cable to the pump as shown. **Caution: Line voltage!** Observe the required protective measures, national body regulations and local provisions at all times. The cable cross-section may no smaller than 0.75 mm². Use ferrules if using fine-wire cables.

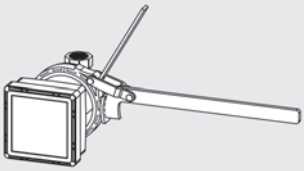
10 Filling and Venting the System



The system must be thoroughly flushed before the pump is started up to prevent contaminants or foreign bodies from remaining in the system.
Fill and vent the system correctly.
Incomplete venting can lead to noises in the pump and system.

Note

Warning! Risk of burns!
The entire pump can be very hot, depending on the operating state of the system.

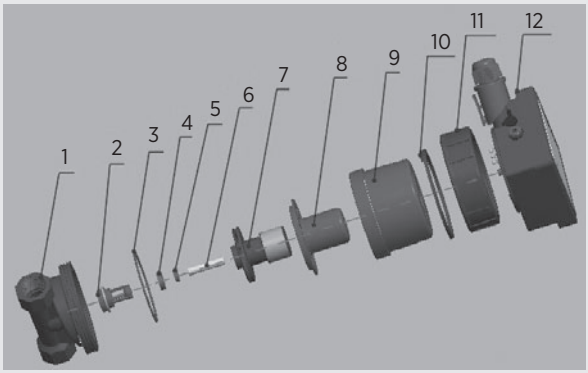


Tighten the union nut with 30 Nm torque.
Use filter wrench.

11 Service and Maintenance

The pump is almost maintenance-free. If the pump has not been in operation for a long time, or that If the system is heavily soiled, the rotor can block. This is indicated by flashing the top LED displayed.
By removing the pump head (loosen the union nut and remove the pump head) the impeller is accessible and can be removed. This can solve a blockage and / or the pump should be cleaned. Then tighten the union nut with a torque of 30 Nm. Disconnect the system from the power supply and counteract before maintenance, cleaning and repair work Secure unauthorized restart. At high water temperatures and system pressures Let the pump cool down beforehand. There is a risk of scalding!

1. Pump head
2. Support column
3. O-ring seal
4. Thrust bearing housing
5. Ceramic shaft
6th wave
7. Impeller
8. Shielding sleeve
9. Plastic engine gasket
10. O-rings
11. Circlip
12. Housing for electronics



12 Faults, Causes and Remedies

Maintenance work or repair attempts may only be undertaken by qualified persons.
Switch off the power to the system before performing maintenance, cleaning or repair work, and secure it against unauthorised reactivation. Allow the pump to cool down in the event of high temperatures and system pressures. **There is a risk of scalds!**

Error or code display	Possible causes	Remedie
Pump does not supply indicator does not light up	Error in the power supply	Check the mains voltage on the pump. If necessary, switch on the circuit breaker again. Perform reset * If the error persists, the pump must be replaced.
The pump is running but does not supply water	Air in the system	vent the system (see capture 10)
	Valve closed	open the valve
Noise in the system	Air in the system	vent the system (see capture 10)
	Pump performance to high	check the pump settings
E1	short circuit tempersture sensor	Reports in the event of a short circuit in the temperature sensor the pump fails and stops operating. Within 10s after the error has been corrected a normal operation resumed.
No temperature display	Temperature sensor not connected or defective	Insert temperature sensor plug into pump socket; replace sensor. (The pump can also be operated without the sensor. Then it works without temperature monitoring in the set stage).
E3, E4, E5	electronic error	Perform reset * If the error persists, the pump must be replaced.
E6	rotor blocked	If the pump is blocked, the motor will stop, to prevent further damage. After 5 successive start attempts, the pump will stop and the error will be displayed. Maintenance has to be carry out (see chapter 11 in the instructions). If the error persists, the pump must be replaced
E7	electronic error	Perform reset * If the error persists, the pump must be replaced.
E9	over voltage protection	When the supply voltage is higher than 253V the motor stops and the error will be displayed. When the main voltage is normal again, the pump return back to normal operation after a maximum of 10 s
Ea	low voltage protection	When the supply voltage is lower than 187V the motor stops and anerror is displayed. When the mains voltage is normal again, the pump returns back to normal operation after a maximum of 10 s.
Eb	electronic error	Perform reset * If the error persists, the pump must be replaced.

* Reset function
Press the plus and minus buttons simultaneously for 5s to restore the factory settings. The clock is set back to Tuesday 8:00 a.m.

Special operating conditions

1. Limit for continuous operation
   The maximum running time of the pump is 30 minutes, after that it goes into a 5-minute idle state above. If the start conditions (temperature, timer "on") are met, it will run back again.

2. Frost protection
   When the water temperature is lower than 5 degrees, the water flow is circulated to ensure that the pipeline does not freeze. In this case the pump will run for 5 minutes at low speed. As soon as 10 ° C is reached on the circulation line, the frost protection function is activated stopped.

3. Descaling protection
   If the engine has not been in operation for more than 24 hours, it will run at the lowest for 10 seconds speed operated. This ensures that the pump rotor is not caused by limescale build-up blocked.

13 Disposal

Note

Dispose of the pump and/or parts in an environmentally conscious way.
To do this, please contact a public or private disposal organisation.
A list of the materials used in our products is provided in the download area of our website. (www.wita.de)