

# TACOFLOW2 PURE 15 / 20

DHW CIRCULATION PUMPS FOR POTABLE WATER SYSTEMS



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## INSTALLATION AND OPERATING INSTRUCTIONS

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**CE**  
**KONFORMITÄTSERKLÄRUNG**  
**DECLARATION OF CONFORMITY**  
**DECLARATION DE CONFORMITE**

**Wir**  
**We**  
**Nous**

Taconova Group AG

(Name des Anbieters) (supplier's name) (nom du fournisseur)

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**erklären in alleiniger Verantwortung, dass das Produkt**  
**declare under our sole responsibility that the product**  
**declarons sous notre seule responsabilite que le produit**

**TacoFlow2 Pure**

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Typen: 302.2316.000 // 302.3316.000 // 302.2316.702 // 302.2316.705  
Nennweiten: 15-10/65 DN15 // 20-09/110 DN20

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(Bezeichnung Typ oder Modell, Los-, Chargen- oder Seriennummer)  
(name, type or model, lot, batch or serial number)  
(nom, type ou modele, no de lot, d'echantillon ou de serie)

**auf das sich diese Erklärung bezieht, mit der/den folgenden Norm(en) oder normativen Dokument(en) übereinstimmt**  
**to which this declaration relates is in conformity with the following standard(s) or other normative document(s)**  
**auquel se réfère cette déclaration est conforme à la (aux) norme(s) ou autre(s) document(s) normatif(s)**

EN 60335-2-51:2003 + A1:2008 + A2:2012 // EN 60335-1:2012 // 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

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(Titel und/oder Nummer sowie Ausgabedatum der Norm(en) oder der anderen normativen Dokumente)  
(title and/or number and date of issue of the standard(s) or other normative document(s))  
(titre et/ou no et date de publication de la (des) norme(s) ou autre(s) document(s) normatif(s))

**Gemäss den Bestimmungen der Richtlinie(n),**  
**following the provisions of Directive(s),**  
**conformement aux dispositions de(s) directive(s)**  
(falls zutreffend) (if applicable) (le cas echeant)

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2014/30/EU ElectroMagnetic Compatibility Directive (EMCD)  
2014/35/EU Low Voltage Directive (LVD)  
2011/65/EU Restriction of the use of certain hazardous substances Directive (RoHs)  
2012/19/EU waste electrical and electronic equipment (WEEE)


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(Ort und Datum der Ausstellung) (Name und Unterschrift oder gleichwertige Kennzeichnung des Befugten)  
(Place and date of issue) (name and signature or equivalent marking of authorized person)  
(Lieu et date) (nom et signature du signataire autorise)

Seebach, den 30.09.2019



Andrin Stump  
Head Product Development



René Freudrich  
Head Product Management

## 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

If the pump is disconnected from the power supply, wait at least 1 minute before reactivating. Otherwise, the pump's inrush current limit has no effect, which can lead to functional errors or damage to any connected heating controller.

The pump's operational safety can only be ensured if it is used as intended. Please observe section 4 of these operating instructions here.

Ensure compliance with the limit values detailed in the technical data.



## 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.**





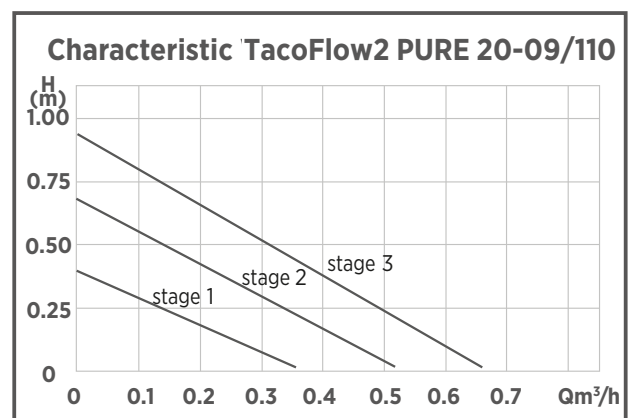
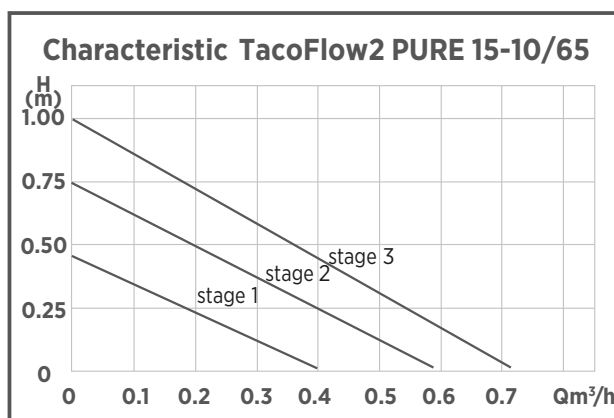
## 4 Intended Use

The service water pump is used for circulation in single and two-family houses with a pipe length of up to 50m.



## 5 Information About the Product

### 5.1 Technical data TacoFlow2 PURE 15 / 20



	TacoFlow2 PURE 15-10/65	TacoFlow2 PURE 20-09/110
<b>Max. pump lift</b>	1.0 m	0.9 m
<b>Max. flow rate</b>	700 l/h	650 l/h
<b>Connection size</b>	½" female thread	1 ¼" male thread
<b>Installation lengths</b>	65 mm	110 mm
<b>Weight</b>	0.985 kg	1.25 kg
<b>Power consumption P1 (W)</b>	2.5 - 8	
<b>Supply voltage</b>	1 x 230V 50Hz	
<b>Emission sound pressure level</b>	< 40dB(A)	
<b>Protection rating</b>	IP 42	
<b>Heat class</b>	TF 65	
<b>Ambient temperature</b>	0°C to 40°C	
<b>Media temperature</b>	+5 to 65°C	
<b>Max. system pressure</b>	10 bar (1MPa)	
<b>Permitted pumping media</b>	drinking water to < 20° dH	

**Caution!**

**Unpermitted pumping media can destroy the pump and cause personal injury.**

**Respect the manufacturer's information and safety data sheets!**

**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 TacoFlow2 PURE 15/20 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

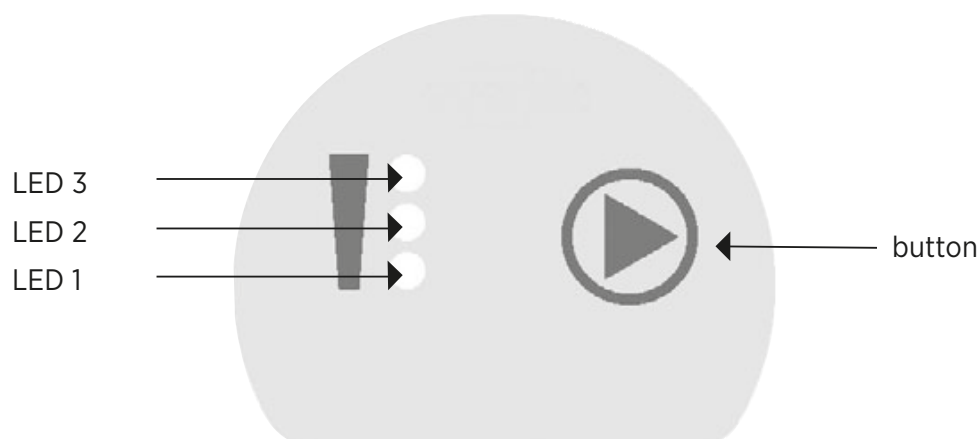
After connecting of the pump with the power supply LED lights on the control panel are showing the selected level.

For level 1 – the first LED lights up, for level 2 – the first and the second LED are glowing, for level 3 – all three LED's are illuminating.

By pressing of the button all levels will be switched continuously.

The pump can be optimally adapted to the system by selecting of the most appropriate curve.

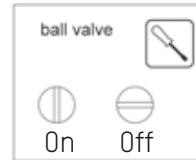
Three flashing LED lights signals an error.



## 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.

In the lower part of the TacoFlow PURE 20-09/110 a non-return valve and a ball valve is already integrated.



A shutoff valve is installed on the pump's

inlet side (secondary side) to make servicing easier. 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.

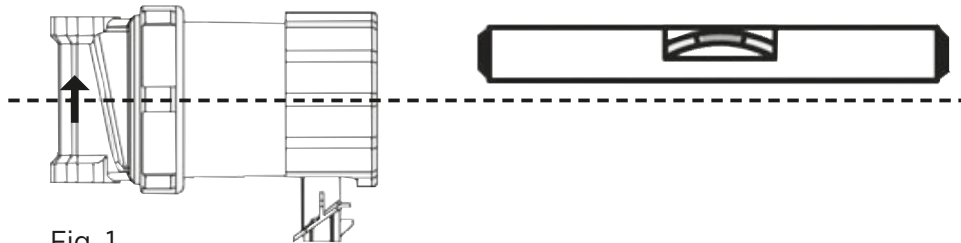
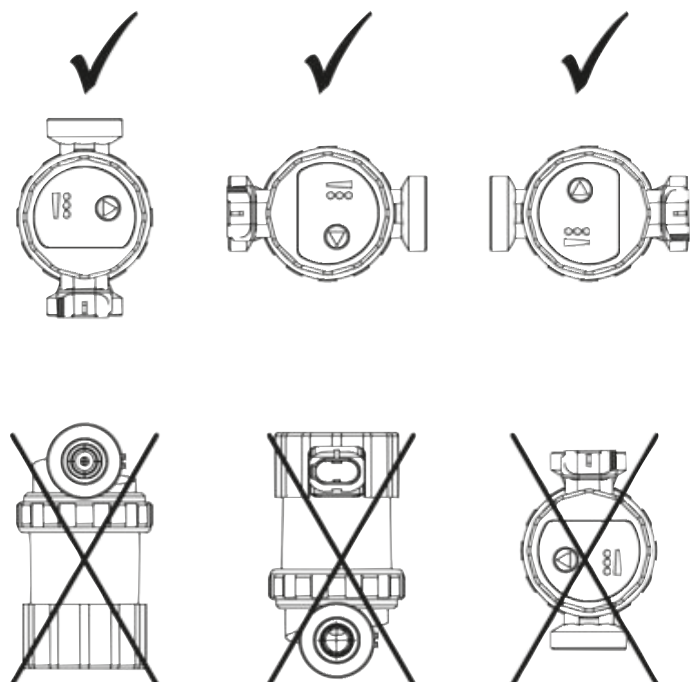


Fig. 1

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

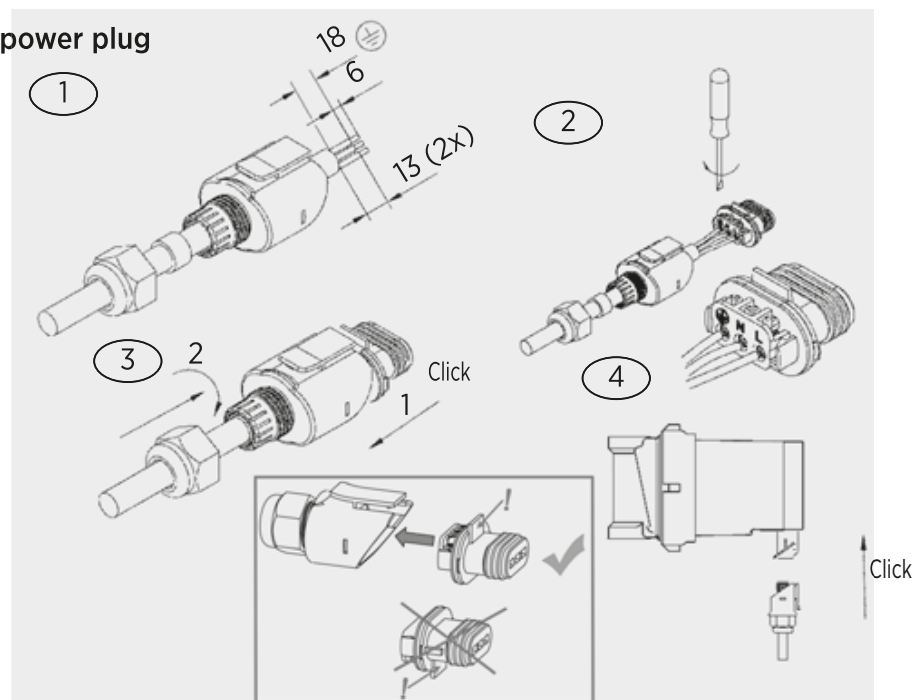
**Warning: Risk of death!**

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.

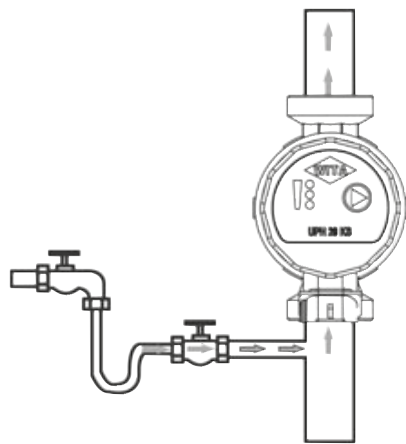
### 9.1 Assembling the power plug



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 mm<sup>2</sup>. 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.

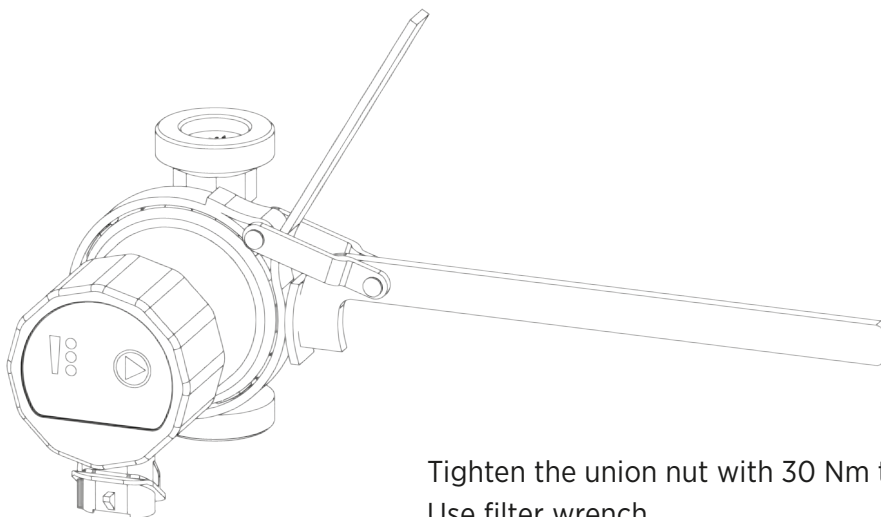
Fill and vent the system correctly. To vent the pump, loosen the indicated screw by turning it anti-clockwise. **Caution!** Hot water may escape here, depending on the system's operating state. Then tighten the union nut with 30 Nm torque. Afterwards, you can start the pump in the desired mode. Incomplete 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

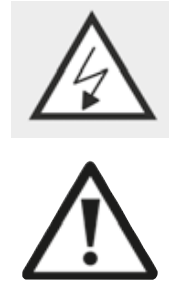
The pump is nearly free of maintenance. If the pump was not working for a longer time or the system is heavily contaminated could the rotor be blocked. It will shown by flashing of three LED lights.

By removing of he motor head ( loosening the union nut and remove the motor head ) the impeller is accessible and can be also removed. By doing this the blockade can be solved and / or the pump can be cleaned.

Tighten the union nut with 30 Nm torque.

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!**



## 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 indication or Error code in the display of the pump	possible causes	remedy
The pump does not supply display does no lit	faulty voltage supply	check the power supply If necessary, switch on the protective switch again. Voltage reset necessary - disconnect the pump from the power supply and wait approx. 1 minute Is the error still existing the pump must be replaced
The pump is running but no water will be supplied	Air in the system	bleed the system ( see chapter 10 in the manual )
	Valve closed	Open the Valve
Noises in the system	Air in the system	bleed the system ( see chapter 10 in the manual )
	Capacity of the pump too high	check the pump settings
The three LED's are flashing twice the pump will try to start again	Rotor blocked	Maintenance necessary ( see chapter 11 in the manual ) Is the error still existing the pump must be replaced
All three LED's are flashing	overtemperature	sink the temperature in the system Press any key or disconnect the pump for minimum 1 minute from the power supply Is the error still existing the pump must be replaced
	electronic error	replace the pump

**Please contact a specialist technician should it not be possible to eliminate the fault.**

## 13 Disposal

Do not dispose of the pump and/or individual parts in household waste!  
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.

**Note**



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