POL-EKO®

Instruction manual

Safety shower test unit

Model: **TU**

Before using the equipment, please read carefully this instruction manual!

Version 1.4

Issued 21.08.2025

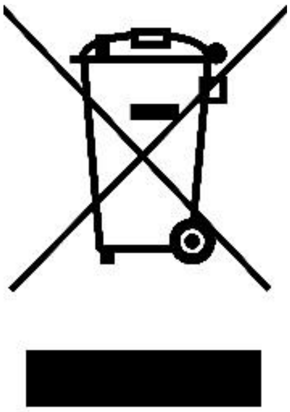
PN-EN ISO 9001

ISOCERT CERTYFIKAT

Manufacturer's address:
POL-EKO sp.k.
ul. Kokoszycka 172 C
44-300 Wodzisław Śląski
Kraj pochodzenia: Polska

As a manufacturer, we inform you that we took the necessary measures to ensure that this device fully meets your expectations and is reliable for a long period of use. Due to the continuous improvement of our products, as well as the expansion of our offer, any suggestions regarding additional functions and equipment functioning are welcome. Visit our homepage www.pol-eko.com.pl

Equipment disposal



This equipment is marked with the crossed out wheeled bin symbol to indicate that this equipment must not be disposed of with unsorted waste. Instead it's your responsibility to correctly dispose of your equipment at lifecycle -end by handling it over to an authorized facility for separate collection and recycling. It's also your responsibility to decontaminate the equipment in case of biological, chemical and/or radiological contamination, so as to protect from health hazards the persons involved in the disposal and recycling of the equipment. For more information about where you can drop off your waste of equipment, please contact your local dealer from whom you originally purchased this equipment.

By doing so, you will help to conserve natural and environmental resources and you will ensure that your equipment is recycled in a manner that protects human health.

Thank you!

Contents:

1. INTENDED USE AND DEVICE DESCRIPTION

The safety shower calibrator is a mobile device designed for periodic verification of functionality. It is suitable for most safety showers (with available head diameter up to 150mm) and hand-held eyewashers (with available diameter up to 110mm).

According to the recommendations of the standards, testing should be carried out at least once a month, and the required minimum volume flow is:

- 30 l/min for safety showers,
- 6 l/min for eye washers.

The device consists of:

- tank made of transparent PVC (with 0-120 l graduation), placed on a mobile frame with wheels,
- Two funnels: a large one (extending to a height of 2.30 m) for testing showers, and a smaller one - for testing eyewashers,
- integrated submersible pump for quick emptying of the tank.

The device makes it possible to both measure the amount of water and visually assess its quality. Compact design and simple operation make the device ideal for industrial plants, laboratories and anywhere where regular testing of emergency equipment is required.

Any use not in accordance with the intended purpose and the guidelines set forth in this manual constitutes improper use.

2. OPERATING ENVIRONMENT

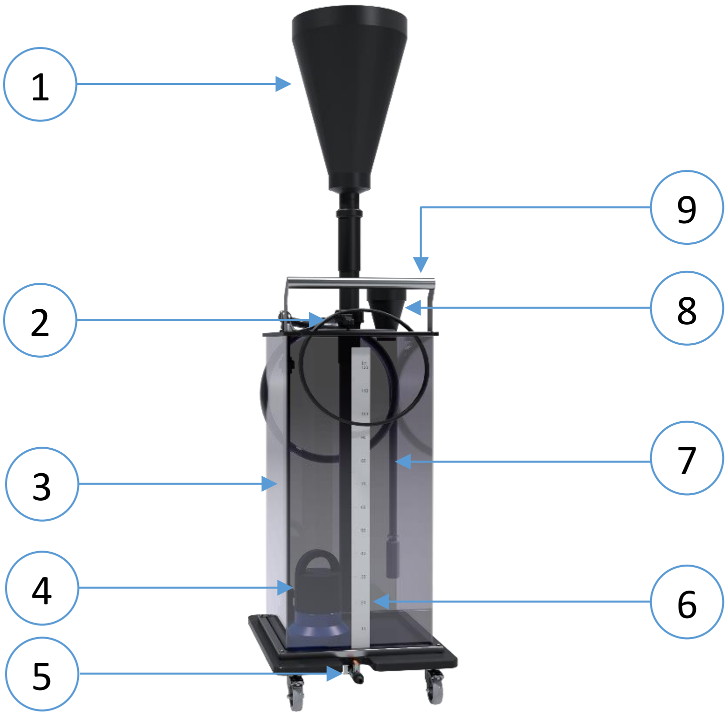
- Ambient temperature: 5–35°C
- Relative humidity: up to 80% (condensation-free)
- Surface protected against rolling

3. TRANSPORT AND STORAGE

- Transport in an upright position.
- The handle of the device is for pulling or pushing only.
- **Do not use the handle to lift the device.**
  - If it is necessary to move, the person lifting can assist with the handle, but must at the same time support the device from underneath.
- Protect the unit from moisture, frost and mechanical impact.

4. COMPONENTS OF THE DEVICE

The components of the device are shown in the figure



1. large funnel
2. plug and power cord
3. water tank made of transparent PVC on wheels with brakes
4. integrated electric pump
5. drain valve
6. tank scale from 0 to 120 liters
7. drain hose (2 m) for emptying the water tank
8. small funnel
9. handle

5. SAFETY INSTRUCTIONS

WARNING!

Before commissioning the Safety Shower Calibrator, it is imperative that you:

- **DO NOT START** the pump without water (dry) - this risks permanent damage to the pump,
- **DO NOT** leave the unit unattended during operation,
- **USE ONLY** with an outlet protected by a **30 mA RCD circuit breaker**,
- **DO NOT EXCEED** the permissible water temperature: **max 35°C,**
- **DO NOT** use the unit to pump water intended for human consumption.

Disregarding the above recommendations may result in: **health risks, damage to the device, or violation of regulatory compliance.**

WARNING!

DANGER OF ELECTRIC SHOCK

- ELECTRIC PUMP

- **USE ONLY:** a power outlet equipped with a working residual current device (RCD 30 mA).
- **CHECK:** that the power cord and plug are in good working condition, without cracks or abrasions.
- **PROTECT:** against accidental flooding, jerking or crushing of the cable.
- **DO NOT**: run the pump in the presence of damaged insulation or without grounding.
- **DO NOT:** allow the user to come into contact with standing water near the power plug.

Failure to heed the warning may cause **damage to the equipment, as well as serious injury or electrocution with possible fatal consequences.**

6. OPERATION OF THE DEVICE

The Safety Shower Calibrator is compatible with emergency showers with head diameters up to 150mm and hand-held eye washers with diameters up to 110mm. Operation of the device is simple and allows for quick flow test and water quality assessment.

6.1. Preparing for the test

1. Place the unit in the test position – directly under the emergency shower head.
2. Lock the transport casters to prevent the unit from moving.
3. Adjust the height of the large telescopic funnel to match the shower head level (maximum 2.30 m).
   To raise or lower the funnel, rotate it gently while simultaneously pulling it upward or pushing it downward (Fig. 1a).
   Alternatively, insert the eyewash lance into the smaller funnel (Fig. 1c and 1d).
4. Ensure the tank is empty and ready for use (Fig. 1b).
5. Prepare a timer and a protocol or note to record the results (Note: these items are not included in the scope of delivery).

6.2. Conducting the test

1. Activate the emergency shower or eyewash station following safety procedures.
2. Observe the water stream entering the transparent tank.
3. Turn off the emergency shower or eyewash station after the designated time (in the standard/ procedure) has elapsed. (The kit does not include a timer).
4. Read the flow volume using the tank scale (range: 0–120 liters).
5. Visually inspect the water for clarity and note any visible contamination.

6.3. Emptying the tank

After completing the test (Fig. 3):

1. Retract the large telescopic funnel back to its initial position.
2. Move the unit near a suitable drain (e.g., sink or floor drain).
3. Connect the discharge hose to the sewage outlet.
4. Plug the pump into a socket equipped with an RCD (residual current device, 30 mA).
5. Switch on the pump – the discharge will begin automatically.
6. After the main volume of water has been pumped out (to approx. 2 mm level), turn off the pump and prepare for manual draining of the remaining water.
7. Open the ball valve located at the base of the tank to drain any remaining water into the drain (Fig. 4). The valve is closed when the handle is perpendicular to the valve body.

   To open it, rotate the handle 90° toward the inside of the unit, so it becomes parallel to the valve. Open the valve slowly to avoid splashing.

8. Close the drain valve after use by turning the handle 90° to the closed position, then clean the tank (see section 7).

6.4. Additional information

- The volume measurement indicator has an indicative function - it is not calibrated for accurate laboratory measurements.
- The device is mainly made of transparent polyvinyl chloride (PVC) - avoid mechanical impact, exposure to high temperatures and chemicals incompatible with PVC.
- Hoses should be rolled up on the brackets provided for them.
- Do not leave water in the tank for long periods of time - empty and clean the device after each use.

Figure 1: How to use the device

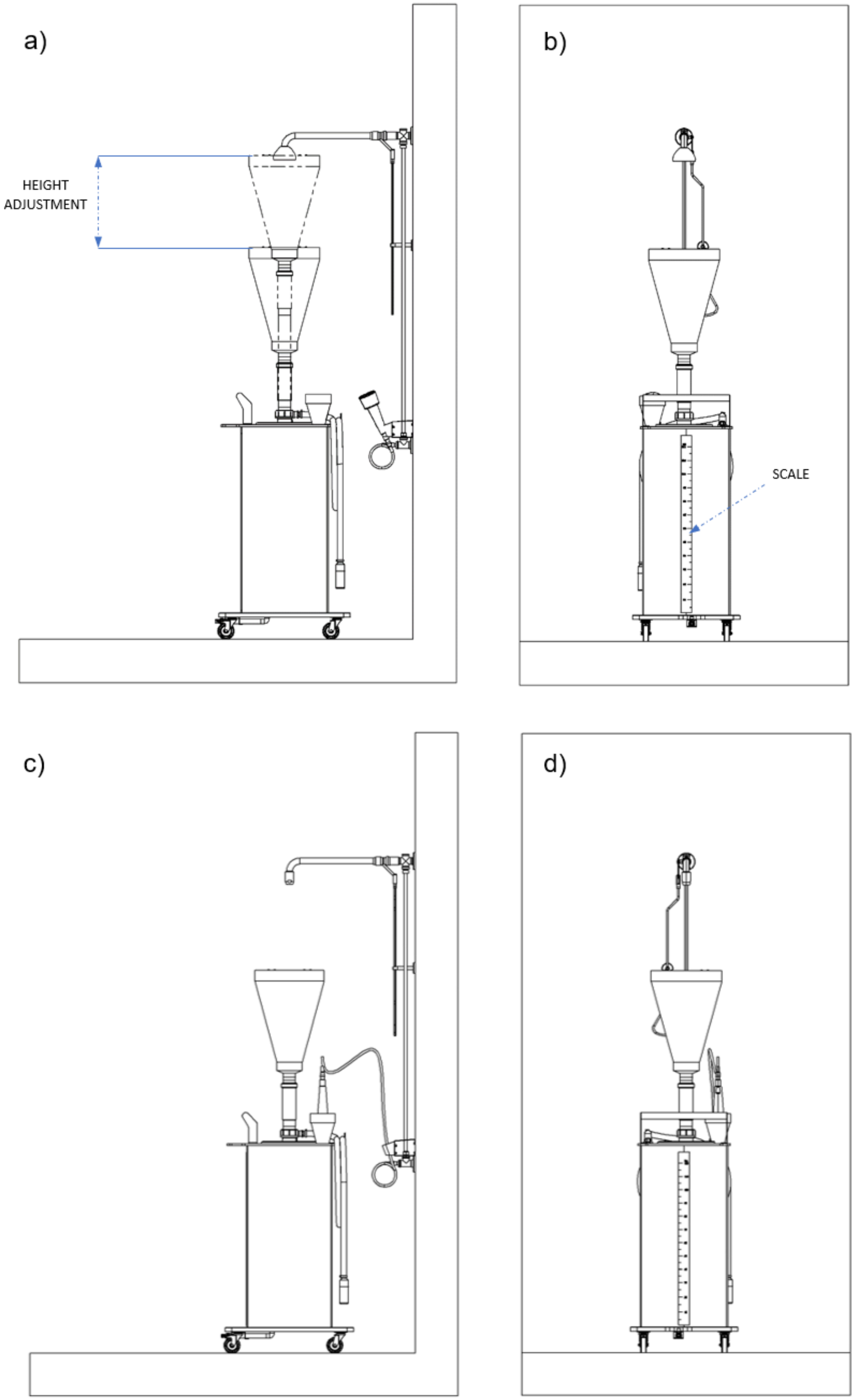


Figure 2: Dimensions of the large funnel

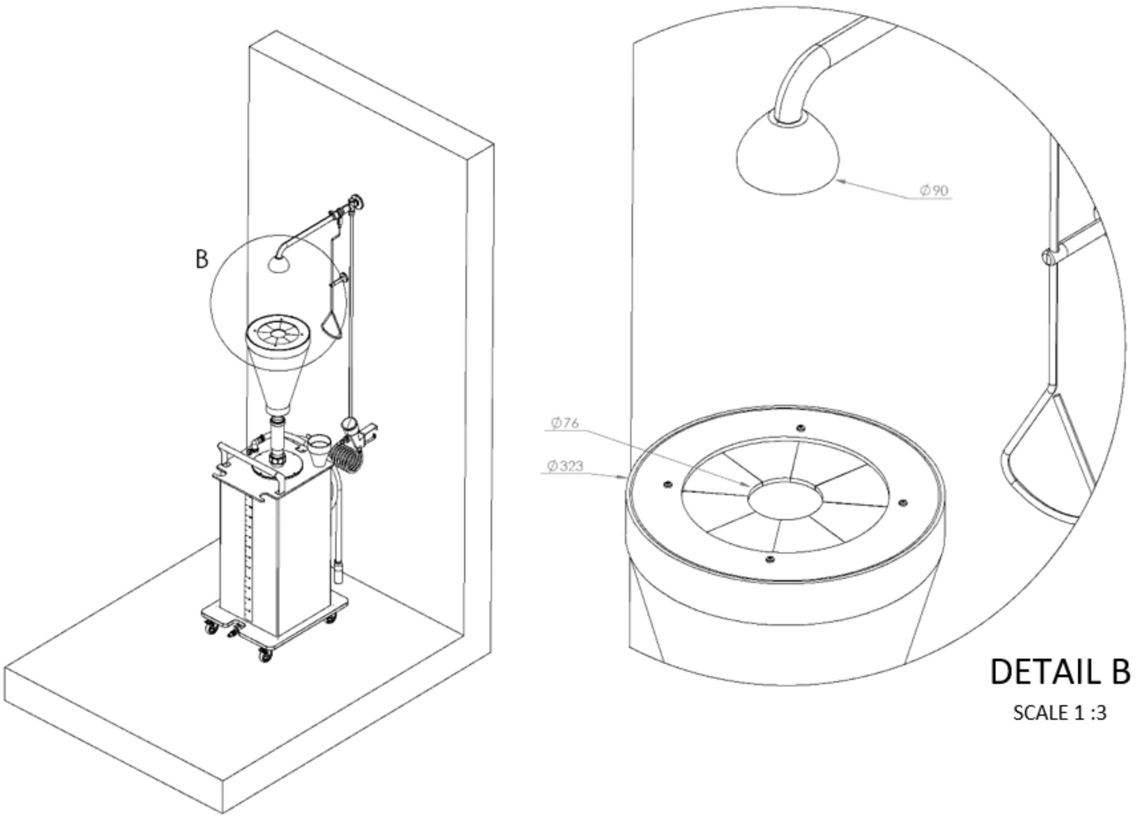


Figure 3: Draining

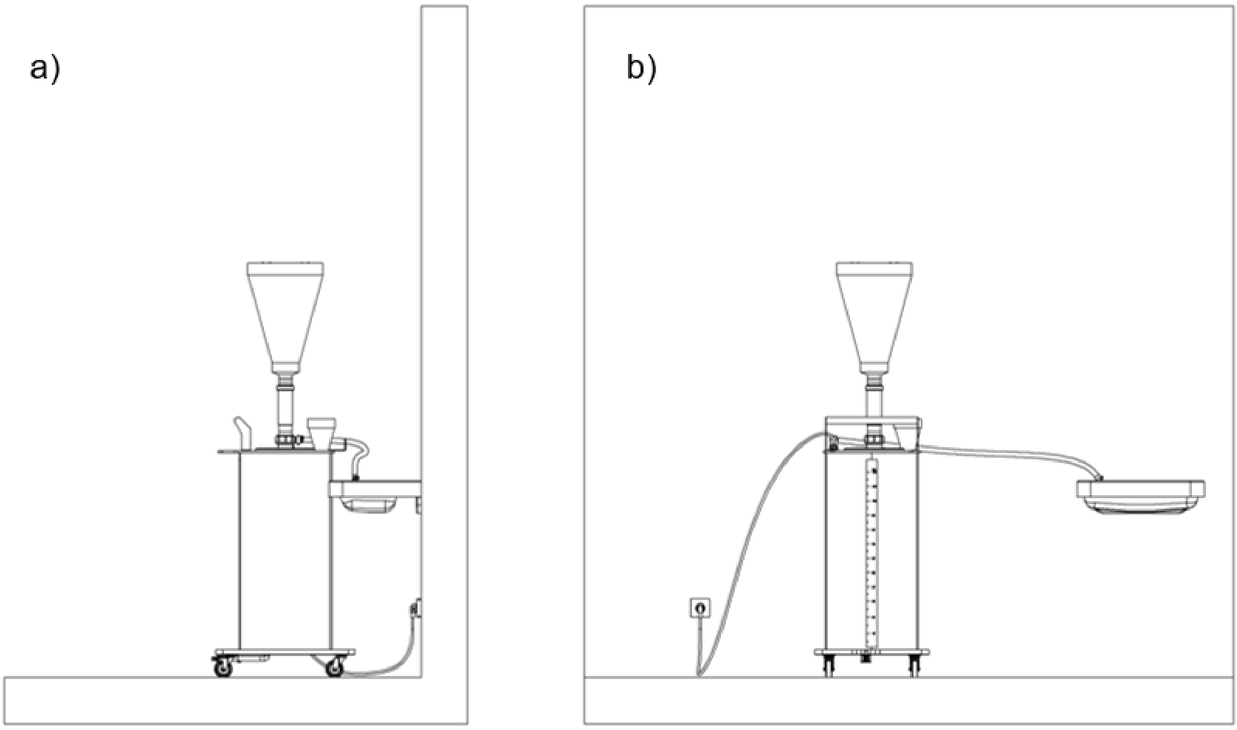
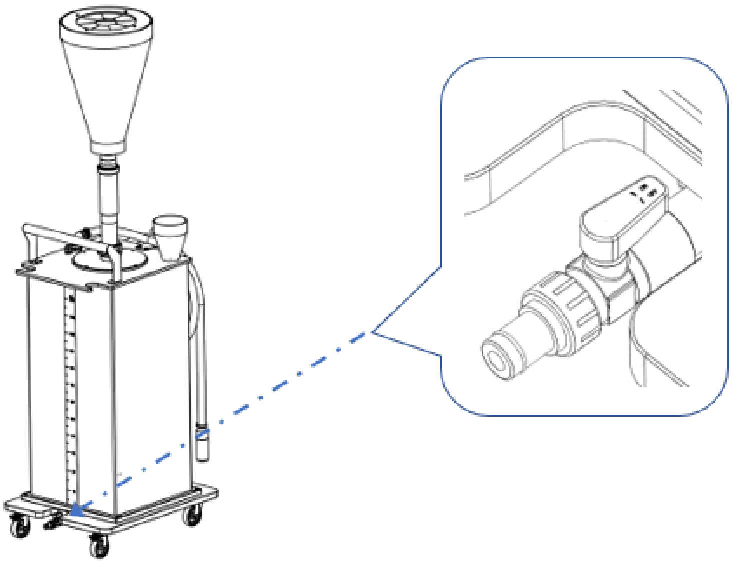


Figure 4: Final emptying of the tank via the drain valve (open position illustrated)

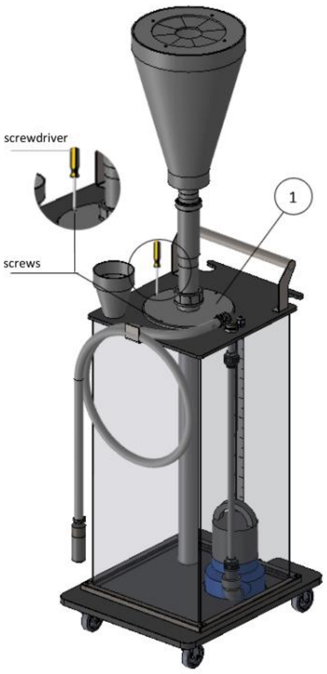


7. CLEANING AND MAINTENANCE

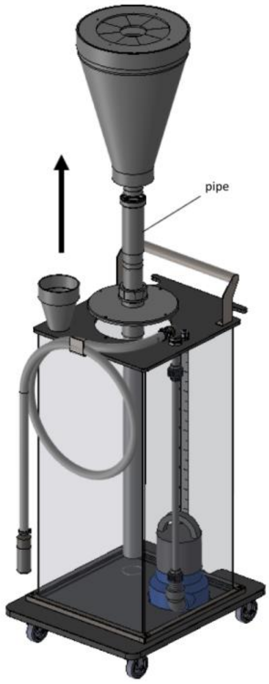
Before starting the cleaning process, make sure that the tank has been emptied of the majority of water using the pump. Then disconnect the device from the power supply and secure the electrical socket against water ingress. Wait approximately 5 minutes after the pump has stopped operating.

Carry out maintenance operations according to the following procedure and manufacturer's recommendations.

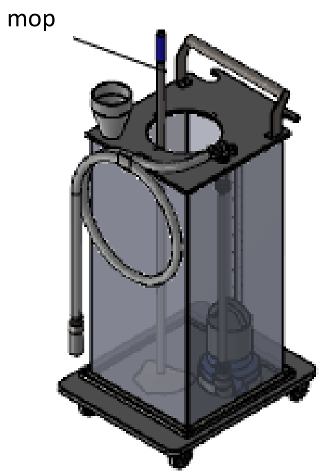
1. To remove item 1, remove 4 screws.

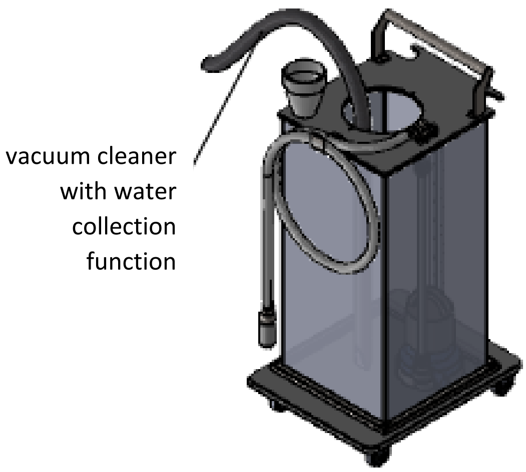


2. Pull the tube upward until it completely slides out of the tank.



3. Remove the remaining water from the tank using the drain valve (see Section 6, Fig. 4), a mop, or a vacuum cleaner with a water collection function.
4. Wipe the bottom and walls of the tank with a microfiber cloth or mop to prevent residue buildup.
5. Repeat steps 1 and 2 in reverse order to restore functionality.



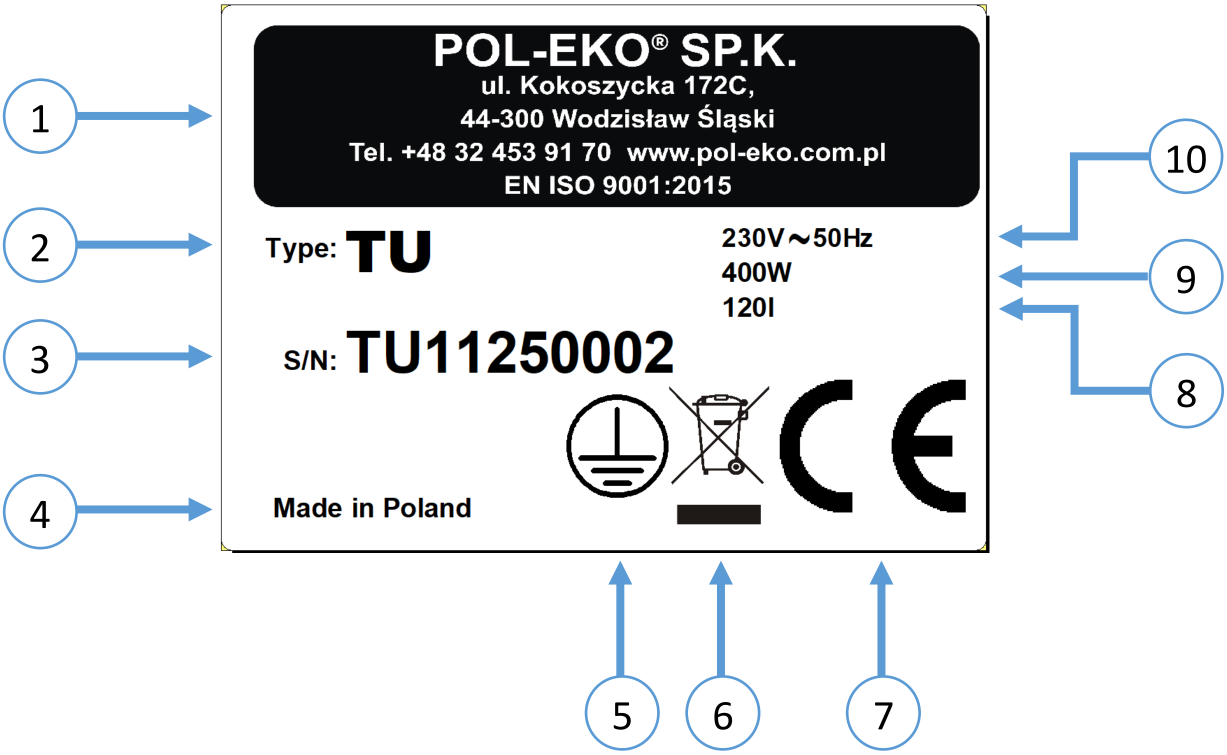


Recommended cleaning frequency:

- After each use - emptying and wiping the interior.
- Once a month - visual inspection of the components (funnel, hose, fixing screws, lid).
- Every 6 months - general inspection (e.g., screw clearance, tightness of PVC components, condition of the pump).

8. PRODUCT IDENTIFICATION LABEL

Below is a sample product identification label:



1. manufacturer's data
2. type of unit
3. serial number
4. country of origin
5. degree of protection against electric shock (class I: protection against indirect contact)
6. marking for treatment of used equipment according to the WEEE directive2
7. CE marking, as confirmation of compliance with EU directives
8. calibrator tank capacity
9. rated power
10. permissible range of values of supply voltage and frequency

9. TECHNICAL DATA

Parameter		Value
Device model		TU
Tank capacity		120 l (material: transparent PVC)
Power supply for the electric pump		230 V AC
Mains frequency		50 Hz
Rated power		400 W
Ingress protection rating of the tank housing		The tank housing has no IP rating (open design)
Ingress protection rating of the pump		IPX8
Length of the power cord		10 m
Ingress protection rating of the power switch		IP44
External dimensions [mm]	**Width:**	600
	Depth:	500
	Height:	1780
Available diameter of the large funnel [mm]		up to 150
Available diameter of the small funnel [mm]		up to 110
Weight of the device [kg]		30

NOTES:
Please also pay attention to the technical data provided in the attached pump manual.

The operating manual for the GÜDE GFS 401 S pump and its EU Declaration of Conformity can be found on the manufacturer's website: https://www.guede.com

10. DECLARATION OF CONFORMITY

CE

DEKLARACJA ZGODNOŚCI UE

EU DECLARATION OF CONFORMITY

POL-EKO®

Produkt:	***Product:***
Kalibrator pryszniców bezpieczeństwa	*Safety shower test unit*
Model:	***Model:***
TU	
w wersjach:	***in version:***
-	
Nazwa i adres producenta:	***Name and address of the manufacturer:***
POL-EKO A.Polok-Kowalska sp.k. ul. Kokoszycka 172 C, 44-300 Wodzisław Śląski Polska/Poland	
Niniejsza deklaracja zgodności wydana zostaje na wyłączną odpowiedzialność producenta.	***This declaration of conformity is issued under the sole responsibility of the manufacturer.***
Wymieniony powyżej przedmiot niniejszej deklaracji jest zgodny z odnośnymi wymaganiami unijnego prawodawstwa harmonizacyjnego:	***The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:***
LVD 2014/35/UE EMC 2014/30/UE RoHS 2011/65/UE & 2015/863UE WEEE 2012/19/UE	LVD 2014/35/EU EMC 2014/30/EU RoHS 2011/65/EU & 2015/863EU WEEE 2012/19/EU
Odniesienia do odnośnych norm zharmonizowanych, które zastosowano lub do innych specyfikacji technicznych, w stosunku, do których deklarowana jest zgodność:	***References to the relevant harmonised standards used or references to the other technical specifications in relation to which conformity is declared:***
LVD	PN-EN 61010-1:2011

Wodzisław Śląski 25.06.2025

Podpis / Signature:

Dawid Rybarz
Dyrektor Techniczny (CTO)