

SOLES WASHER

No. 550201

USER'S INSTRUCTIONS

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1. Purpose

Single footwear washer is used for mechanical cleaning of working footwear soles, particularly in meat processing plants. The washer's additional equipment enables washing footwear uppers.

2. Technical Details

Dimensions :	Length	- 650 mm
	Width	- 560 mm
	Height	- 1150 mm
Installed power :	0.25 kW	
Supply voltage :	3 x 380 V	
Diameter of water connection :	G $\frac{1}{2}$ "	
Diameter of sewage outlet :	50 mm	
Water demand:	ca. 3.2 l/min	
Maximal temp. for the operation of water injector:	+ 50 °C	

3. Structure

The washer's structure is shown in drawing 1.

The chief part of the washer is its body (1) made of acid resistant steel where the remaining parts have been installed. To the side wall of the body, a handle (2) is welded as a properly shaped pipe the end of which is fitted with a switch (3). At the top surface of the body, there is a container basket (4) made of bars where an extra container with a cleaning or disinfecting agent may be placed. The body is supported on four adjustable legs (5). The polyamide fibre brush (6) driven by a gear-motor (8) constitutes the working element of the washer. During the washing process, shoes are supported on the shoe support (7) which prevents footwear from being dragged into the working space of the washer and ensures alignment of the brush. The water system of the washer is composed of commercial connecting parts, joined by means of flexible conduits, its basic elements are: water connection (11), electromagnetic valve (9), spraying pipes (10). Through the spraying pipes, water is supplied to the working space of the washer (sprayed on the brush). The electromagnetic valve controls water supply when the washer is in operation. Water used in the process is channelled to the sewage system through a drain (12). A detergent or disinfecting agent is carried from the tank through the injector (13) built in the water system. The washer's electrical system is fitted inside the body. The machine is supplied with the cord L = 4 linear metres with a 16 A/380 V socket complete with five pins.

4. Installation

Install the washer as per a separate technological design of the site.

To install the washer, connect it to:

- water system using a flexible conduit, connection diameter: G ½"
- sewage system (ensure connection tightness)
- wiring system, 3 x 380 V socket – **5-LEAD FEEDER**
- **SOCKET SECURED WITH A DIFFERENTIAL CURRENT SWITCH**

The machine should be connected to the wiring system in such a way so that proper rotary motion of brushes is ensured: to the right.

5. Operation

To wash footwear, a worker has to put his/her feet on the shoe support in the working area of the washer. The chief working part – brush driven by a gear-motor – is actuated by the control system when the user closes the control circuit by pressing the switch with the thumb.

At the same time when the brush is actuated, the solenoid valve is opened. This allows water to be supplied to the spraying pipe. The water flow causes the injector to be actuated and the washing agent to be sucked from the tank. The water sprayed onto the brush facilitates the washing process and makes it easier to remove the dirt.

5.1.1 Operation of the Control System

The control system of the washer uses a FT22 switch which causes current to pass through the coil of the K1 contactor (on the control board) and the contacts of the contactor to close. When the contacts of the contactor are closed, supply voltage is applied to the motor (motion of the cleaning brush) and to the coil of the solenoid valve – flow of the washing liquid. The washer is disconnected by releasing the switch.

The engine circuit is secured against short-circuiting with the following fuses: F1, F2, F3, the control circuit (feeding transformer) is secured with F4 and F5 fuses and the solenoid valve with an F6 fuse.

In order to ensure safety of use, control voltage reduction below 24 V is used (by means of a feeding transformer).

The schematic diagram of the control motherboard is shown in drawing 2 whereas drawing 3 presents the main current circuit.

6. Cleaning and Maintenance

6.1 Cleaning

For hygienic reasons, it is necessary to clean the washer every day. Its structure enables to remove brushes and prepare for cleaning without any additional tools.

Steps while cleaning the machine:

- shut water supply and turn off the main power supply
- lift the grate which covers the brush
- remove the brush by lifting it up
- where more dirt has gathered in the washer tub, remove by hand
- place the brush for around 15 min. in a 2% solution of a washing liquid and subsequently rinse thoroughly. Repeat this until dirt and fat has been entirely removed.
- wipe the switch button with a soft cloth only without using any detergents
- when washed, put the brush in its proper place in the washer tub
- turn on the main power supply and water connection
- press the switch several times to check if the machine works properly

Do not:

- use for cleaning washing equipment and its high-pressure parts
- use chlorine-containing detergents for washing metal parts

6.2. Maintenance

After each single cleaning of the machine, check all of its parts in terms of their functioning and material wear as well as checking the machine tightness.

In order to wash soles efficiently, the brushes should have suitable length of the bristle: it should protrude 20 mm above the grate covering it. If this is not so, it means that the brush needs replacing.

Repairs and overhauls may be carried out solely by a trained and authorized person.

Give periodical overhauls every 1,000 h by first unplugging the washer from the power supply network. An overhaul should consist of:

- assessment of the condition and lubrication of the motor bearings if necessary

- checking the oil level in the gear-motor (as per the Engineering Documentation of the gear-motor)
- checking the solenoid valve (if necessary, disassemble the valve head and remove all deposit)

If water hardness is very high or the water has high ferric content, the valve should undergo an overhaul every 500 h.

Periodically (as per relevant regulations), inspect the condition and resistance of the wiring system insulation as well as the effectiveness of neutral grounding.

7. Industrial Safety

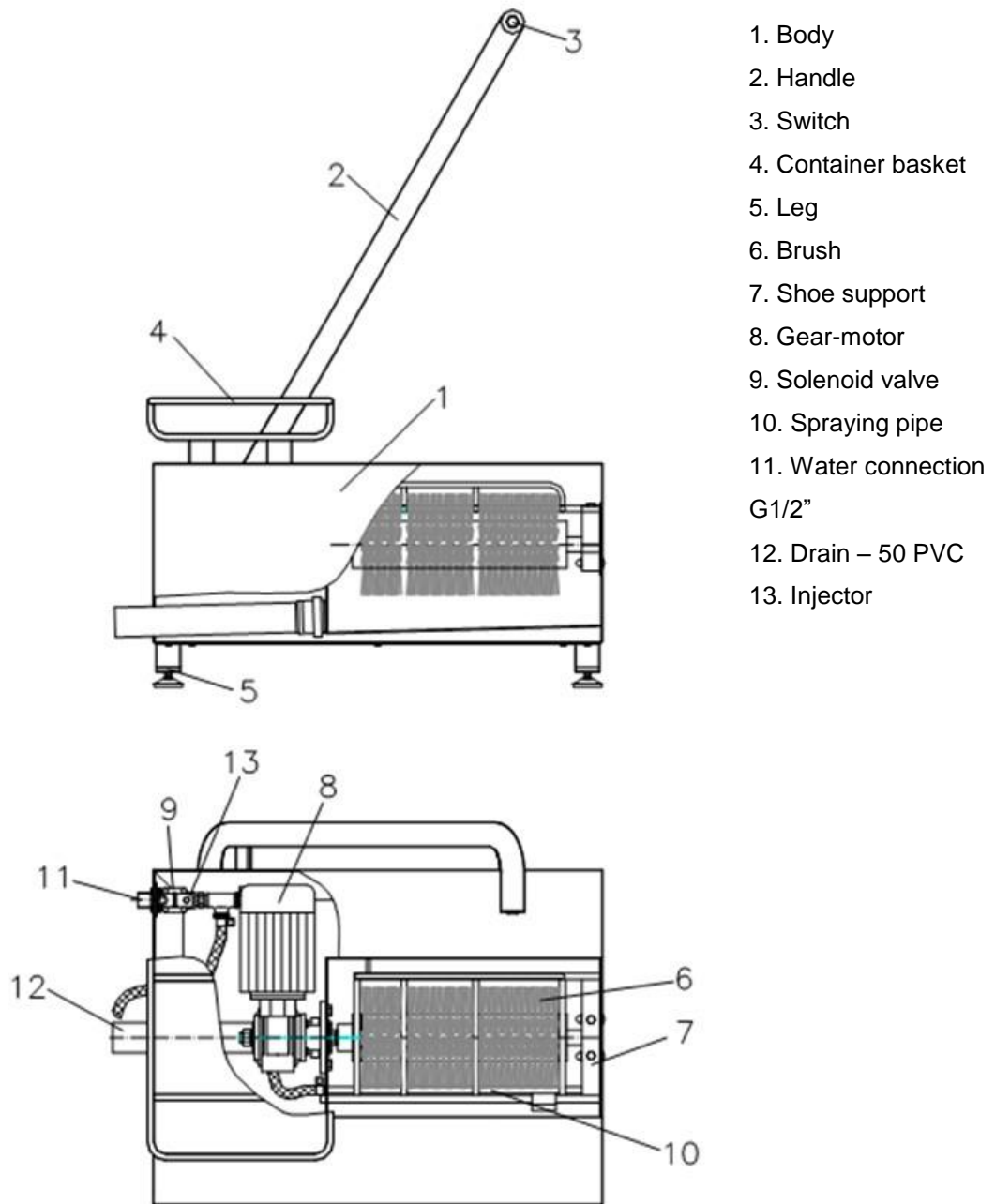
General industrial safety regulations apply.

In particular, follow the principle that the washer is only meant to wash working footwear.

8. Guarantee

Statutory guarantee period for this kind of devices applies.

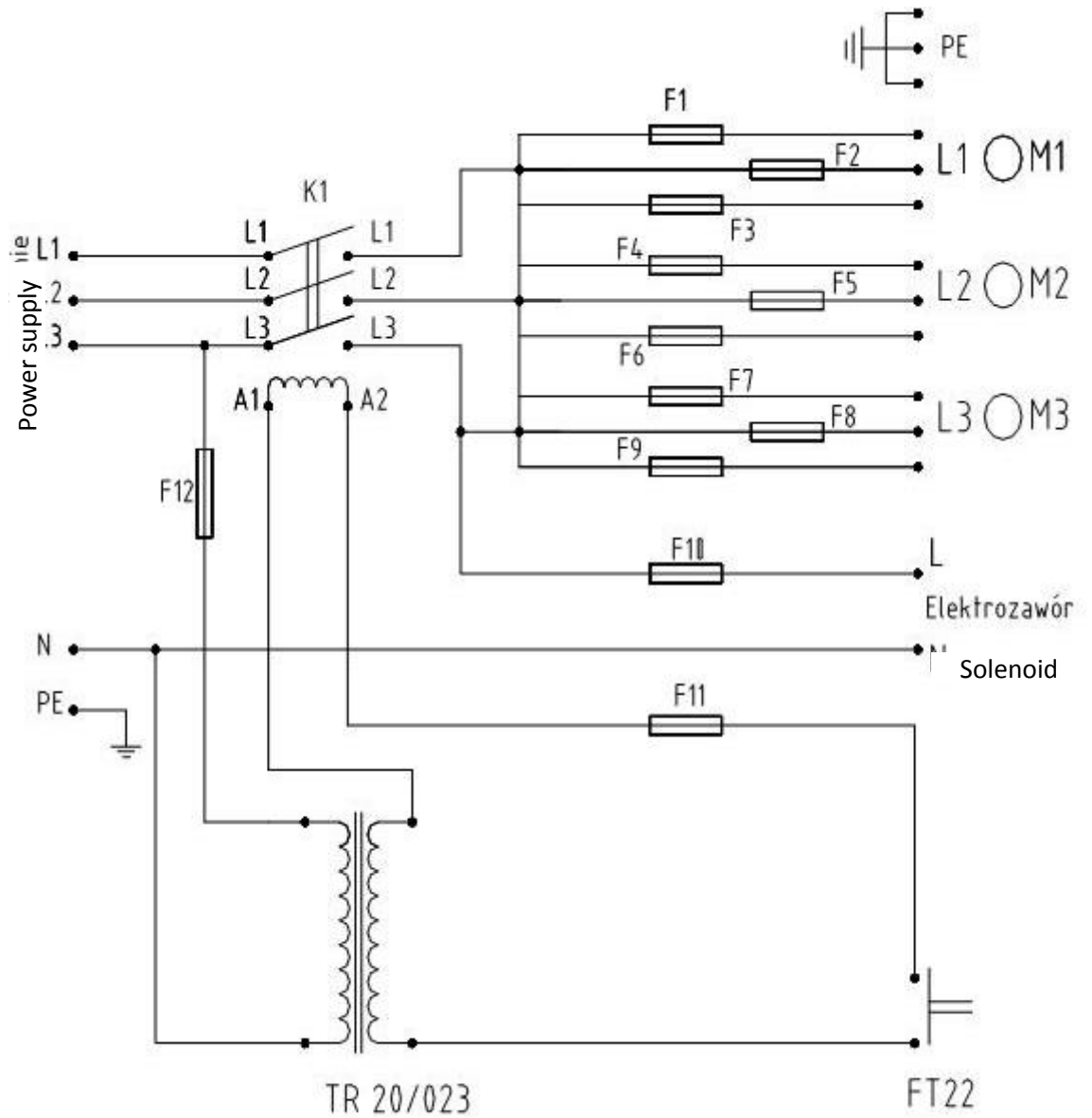
Failing to comply with the rules specified herein may result in losing the guarantee rights.



1. Body
2. Handle
3. Switch
4. Container basket
5. Leg
6. Brush
7. Shoe support
8. Gear-motor
9. Solenoid valve
10. Spraying pipe
11. Water connection
G1/2"
12. Drain – 50 PVC
13. Injector

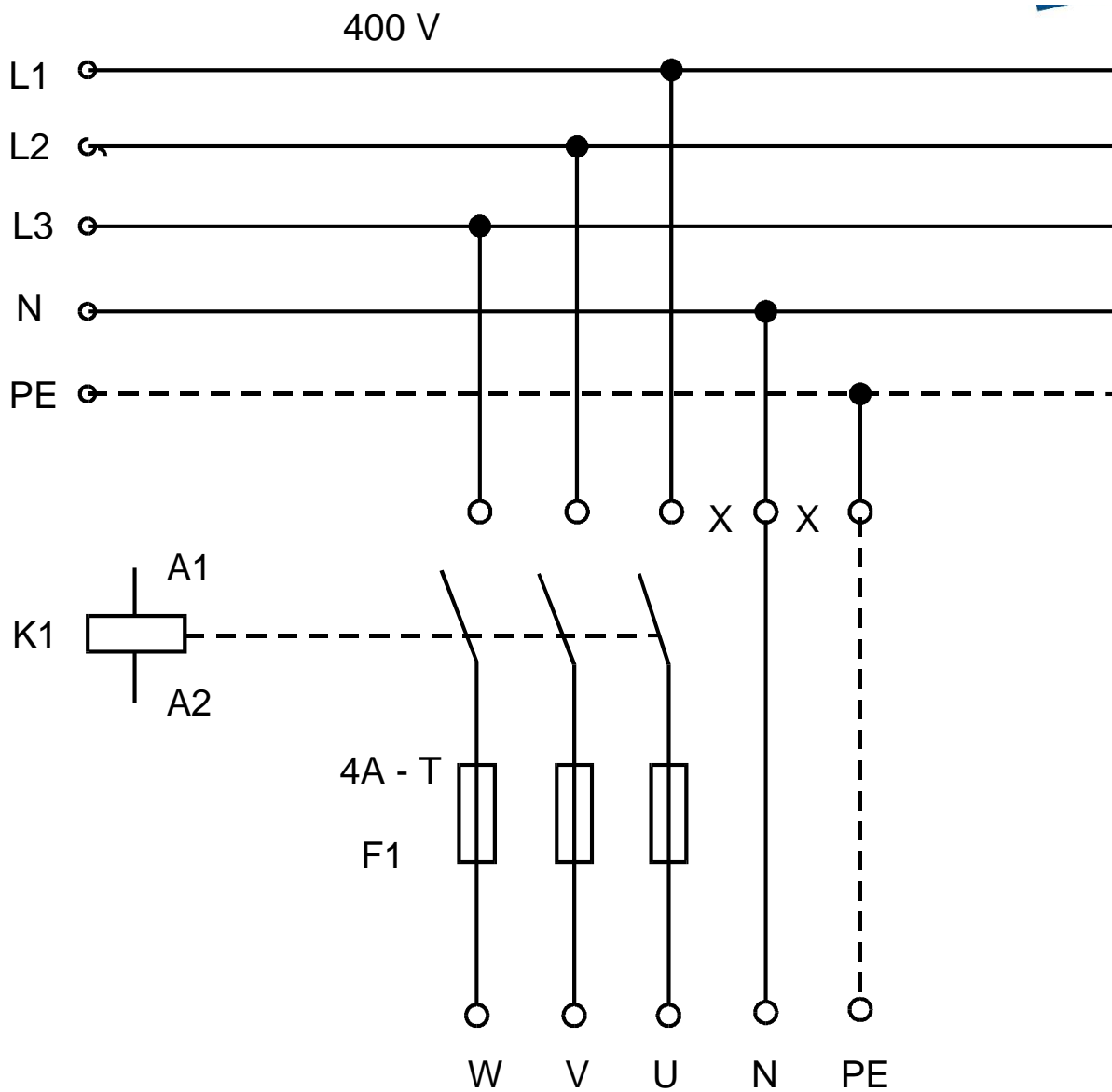
Drawing 1

CONTROL MOTHERBOARD
SCHEMATIC DIAGRAM



Drawing 2

MAIN CURRENT CIRCUIT



Drawing 3