

# Neptun BC1

## IMPORTANT – READ FIRST

**Only put the machine into operation once you have read and understood the operating manual. We shall be happy to answer any questions you may have.**

HEUTE® boot and sole cleaning machine Neptun BC1 cleans and disinfects dirty soles of working and safety shoes and boots. HEUTE® boot and sole cleaning machines are built and tested in accordance with the latest safety regulations. The faultless functionality and operational assurance of the device can only be guaranteed if the generally applicable safety precautions and device-specific safety information in this operating manual are observed during use. The guarantee is not valid in relation to damages caused by a failure to observe this operating manual. The manufacturer assumes no liability for personal injury or damage to property arising as a result of this. In the event of problems please contact our service department immediately.

## Intended use

HEUTE® boot and sole cleaning machine Neptun BC1 is used to clean closed shoes and boots outside by means of electrical driven brushes.

Other use is not permitted! Only use the spare parts approved for use with the machines by the manufacturer. Operation is only permissible in closed rooms whilst observing the specifications mentioned in the "Safety instructions" section.

Use in potentially explosive environment is not permitted.

## Foreseeable misuse

The boot and sole cleaning machine is not suitable for use as follows:

- Cleaning and care of human body parts and objects that are not parts of a shoe.
- Use as a tool for working on surface finishes
- Use with the addition of corrosive fluids

## Safety instructions



Read this operating manual carefully and follow our advices for starting and for use.

The machine must not be changed or modified because this can lead to risks such as a short circuit, electric shock, fire. Maintenance and repairs must be carried out exclusively by authorised persons with the use of original parts.

The use of non-original spare parts or the implementation of unauthorised modifications to the machine will result in cancellation of the declaration of conformity issued by the manufacturer/distributor and CE sign as well.

Use the machine only in closed rooms.

Operation is only permissible at ambient temperatures between 0° C and 40° C.

The machine is not suitable for permanent operation. It is essential to consider the time of duration (KB) mentioned under section technical data - see page 14.



Do not continue to use the machine if the cleaning brushes are worn. This can result in damaging the shoes. The brushes must be replaced by a qualified person.



The design complies with protection class IP55. The voltage supply is 3-phase 400 V + grounding, power 0,55 kW. Observe the specific data provided on the manufacturer's type plate!



During use, the motors can heat up to temperatures of up to 90° C. Do not touch the motors without safety gloves.



Use by children, in particular when unattended, must be excluded. Ensure that any contact between (household) animals and the machine is excluded.

For safety reasons please pay attention that during use of the roller brushes no laces and straps will touch the ground.

These can be caught by the roller brushes, which could cause injuries and damage of the shoes/boots.



Always disconnect the mains plug prior to cleaning, service and repair work. Do not continue to use the machine if the machine or the control cabinet with cabling, the water pipe and water drain are damaged.



Ensure that the installation is at ground level.

Enter and use the machine only with closed shoes/boots appropriate for wet cleaning.

Slip danger - pay attention to slippery ground in front of and besides the machine caused by splashing water.

Do not touch rotating brushes.

Never drink the water out off the machine or the detergent liquid out of the container (option).

Excessive application pressure during use of the brushes can lead to damage of shoes/boots!

Stop using the machine in case that brushes stops and potential foreign objects cause malfunction.

The operator is responsible for all personal injury and damage to property that arises due to unintended use, faulty machine connections and/or operating errors.

When in commercial facilities observe the safety ordinance applicable on site as well as the accident prevention regulations issued by the union of professional associations for electrical systems and equipment.

## Welcome

Dear Customer, we would like to thank you for purchasing one of our HEUTE industrial boot and sole cleaning machines. You have purchased a quality product, which – if used correctly – will provide many years of satisfaction.

This operating manual is a constituent of the machine. It contains important information on commissioning, operation and maintenance. Please store this operating manual for future reference!

## Scope of delivery

Boot and sole cleaning machine, control cabinet, operating manual

## Declaration of conformity

The manufacturer herewith confirms that the following machine of type Neptun BC1 complies with the directives listed below:

- Machinery Directive (2006/42/EC)

Authorized representative Steffen Moersch,  
contact details (see address of manufacturer)



Christian Löwe, Managing director  
Maschinenfabrik HEUTE GmbH & Co. KG

## Environmental protection

### Disposal of transport packaging

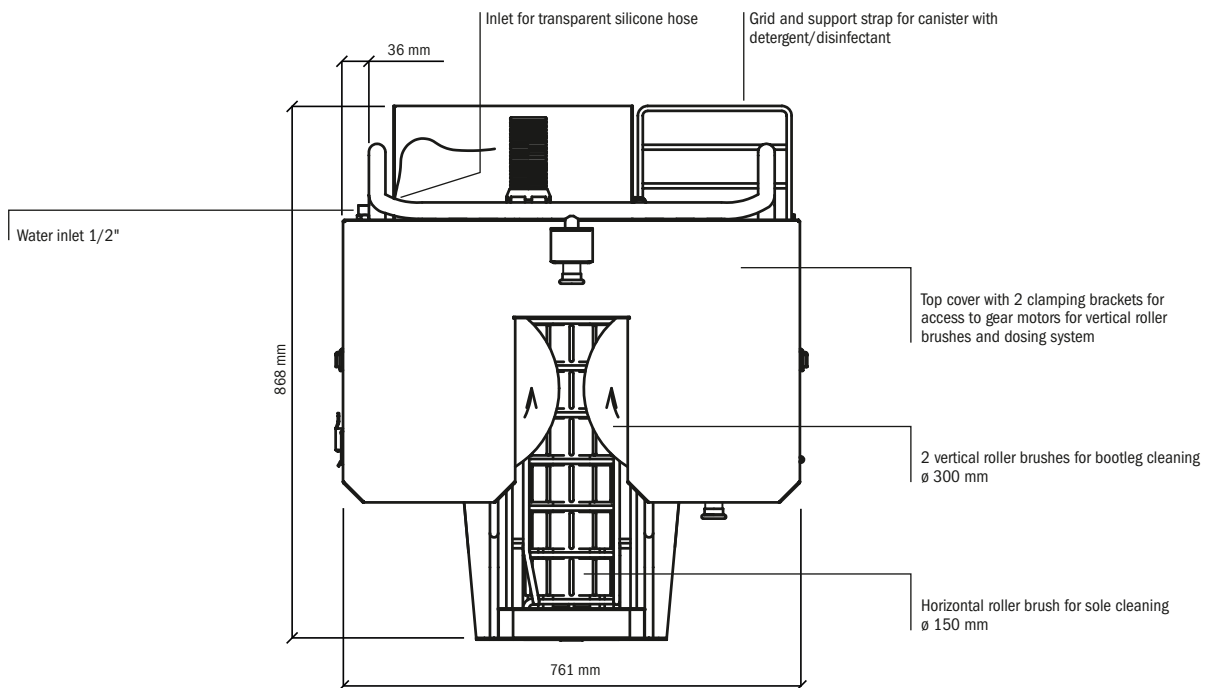
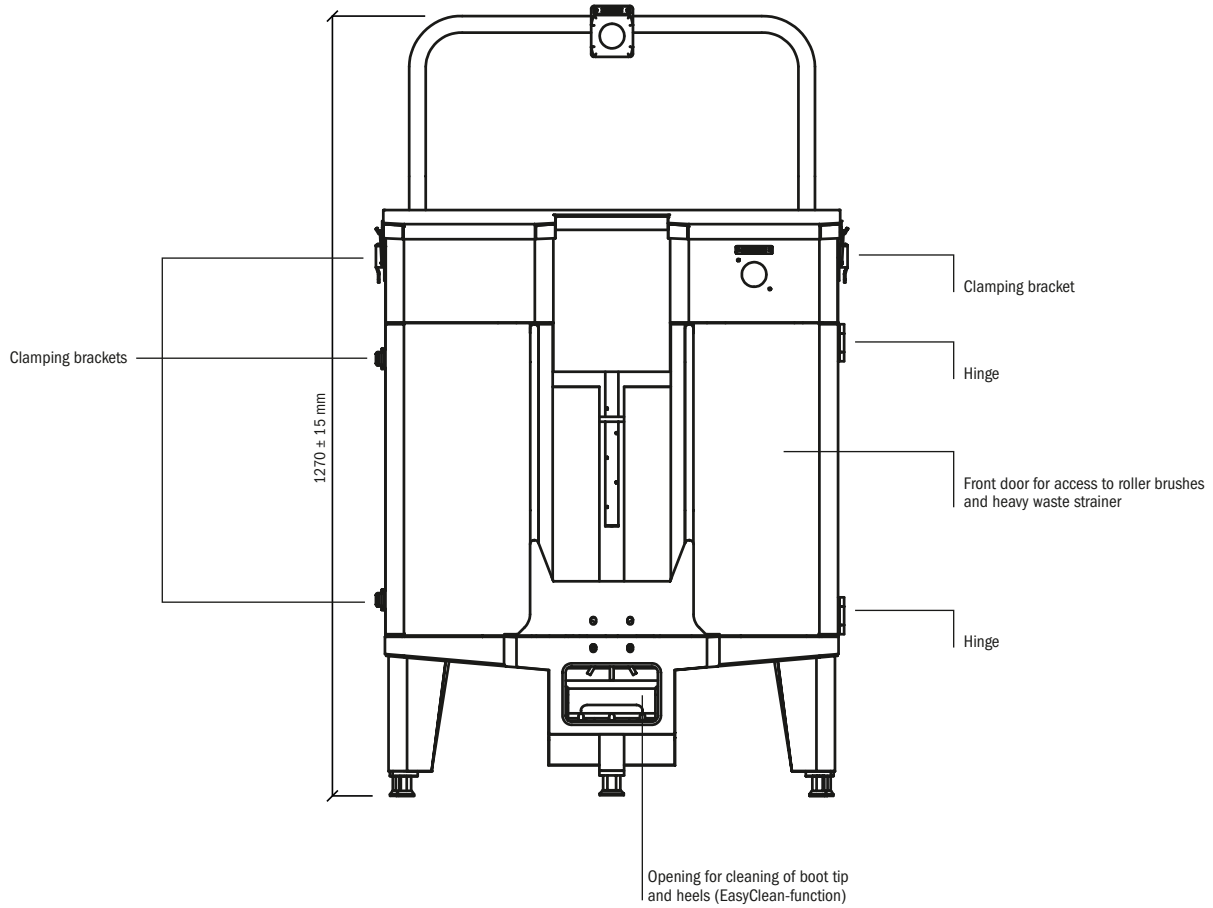
The packaging materials in which your machine is supplied are environmentally friendly and recyclable. Please help by disposing of the packaging in an environmentally friendly manner. The packaging must not be given to children to play with. There is a risk of suffocation due to the folding box and plastic film.

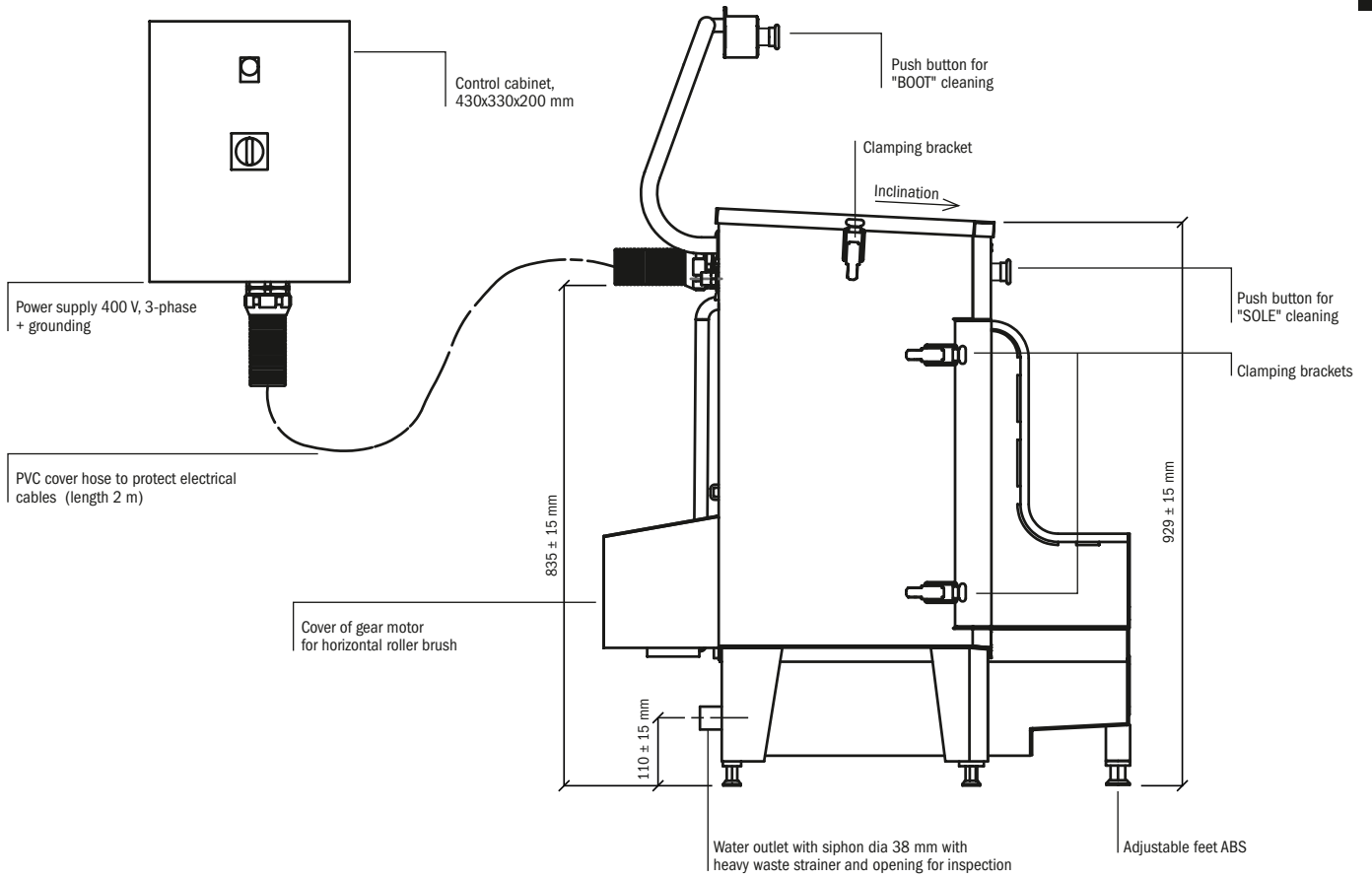
### Disposal of the product

Old devices that are no longer in use are not worthless waste. Valuable raw materials can be recovered through environmentally friendly disposal. Please inform yourself of the current disposal methods by contacting the person responsible within your company or your local authority

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## Installation and commissioning

### General information

Please follow below mentioned advices to protect the stainless steel housing of the boot and sole cleaning machine during storing, before installation, commissioning and use.

- Protect the machine against environmental influences like rain, sunshine and frost. Use the machine only in closed rooms.
- To avoid contact corrosion (e.g. steel spans, tools used for steel treatment) the surface of the machine must not be in touch with other kind of steels

### Transport and assembly

Weight of the machine is about 140 kg. Due to the heaviness transportation and unpacking should be done by 2 workers using suitable means of transport.

Only use the machine in closed rooms. When choosing the place of installation please consider the necessary space 765 x 875 mm, availability of waterinlet and -outlet, as well as power supply (more details see section **Installation and commissioning**). Control cabinet has to be fixed at suitable place on the wall. The ground must be level and slip protected. To ensure stability level out any uneven floor areas by adjusting the feet under help of a spirit level.

### Water connection

- Inlet dia. 1/2"
- Advised operating pressure: 3 bar
- Maximum operating pressure: 6 bar
- Operating temperature between 30 °C and 50 °C (water temperatur more than 60 °C will damage the brush)
- Water flow rate: about 5 l/min with 3 bar (adjustable valve at the machine)

The machine is not equipped with an upstreamed return valve and water filtre. If necessary return valve and water filtre have to be installed before the unit. The requested water quantity can be individually adjusted – see sector **Operation** > *adjustment of water quantity*.

Put the detergent canister (not belonging to the machine) at suitable place (Fig. 1).



Fig. 1

### Waste water connection

- Outlet ø 38 mm (Fig .2)



Fig. 2

### Electrical connection

- 3-phase 400 V + grounding, power 0,55 kW
- Connection to the clamps in the control cabinet (see sector **Technical data** > *configuration of clamps*)



**Take care that available voltage in your country is corresponding to machine's voltage!**



**Machine's power supply must be electrically protected against indirect contacts!**

- High sensitive difference power protection device max. 30 mA.
- This protection must be provided by the house installation and is not supplied with the machine.
- The control cabinet should be mounted approx. 1,2 m above floor level.
- Turn-on and check rotating direction of the brushes.

### Precaution while commissioning



Never remove or block the position switch on the housing, which is active when the front door is closed. When opening the door during operation it will automatically turn off the water and power supply and will stop rotation of the brushes.



The installation works for the water supply could cause soiling which can block the pipes, nozzles, dosing device and could damage the solenoid valves. It is important that the machine is free of metal and plastic parts, before it is connected to the electric circuit.

## Operation

### How to clean

- Cleaning of bootlegs - attention, not suitable for shoes - with vertical roller brushes in combination with horizontal sole cleaning brush (Fig. 3).
- Cleaning of shoes with horizontal roller brush (Fig. 4)
- Cleaning of boot tip by means of separate cleaning opening underneath of horizontal roller brush - EasyClean function (Fig. 5)
- Supply of water and detergent, dosage by mixture in the dosing system



### Adjustment of water quantity - access

The handwheel (valve) for adjusting the water quantity is located on the top. Remove the cover by opening 2 clamping brackets - no tools needed (Fig. 6)



### Adjustment of water quantity

The requested water quantity is adjustable by the valve (Fig. 7). The medium position allows a water flow of about 5 litres/minute.





### Use of boot cleaning function

The boot cleaning function is activated by the push button marked with "BOOT" located at the hand rail. 3 roller brushes are rotating and start cleaning the bootleg (2 vertical brushes ) and the sole (1 horizontal brush), (Fig. 8).

The push button "BOOT" causes:

- Rotation of 3 roller brushes (each roller brush is powered by an own gear motor)
- Solenoid valve of the dosing system opens and starts spraying water and detergent on the rotating roller brushes.

Release push button to stop the boot cleaning process.



### Use of sole cleaning function

The sole cleaning function is activated by the push button marked with "SOLE" located at the front side (Fig. 9).

The push button "SOLE" causes:

- Rotation of horizontal roller brush for sole cleaning (roller brush is powered by a gear motor)
- Solenoid valve of the dosing system opens and starts spraying water and detergent on the rotating roller brush.

Release push button to stop the sole cleaning process.



### Non usage for longer time

If you know that the machine will not be used for longer time (e.g. annual holidays), we advise to rinse the dosing system through in advance to avoid blockage of dosing system.

## Service and maintenance

Service and maintenance should be carried out only by customer service technicians. To secure optimal functioning of the boot and sole cleaning machine, it should be controlled in regularly intervals. HEUTE® sole cleaning machines are service reduced and reliable. However, there are some components which will wear after long period of time and/or reduce the cleaning result.



Unplug the power supply at the control cabinet prior to all repairs.



Before any action stop water supply.



Drain the transparent silicone hose of the dosing system.



Rinse through the dosing system to remove residues.



In case of unintended opening of the front door the roller brushes stop automatically and the solenoid valve will close the water supply.

### Control

The machine should be controlled regularly. Take care if components are damaged or worn and if the machine achieves the necessary cleaning result. Foreign objects may not be nearby the roller brushes.

### Cleaning

The intervals of cleaning depends on local circumstances. The more dirt occurs the shorter should be the cleaning intervals. Don't forget to clean the dosing system regularly.

The mixture of used disinfectant and detergent should correspond with local regulations of hygiene and cleanness.

### Maintenance

Neptun BC1 boot and sole cleaning machine is service reduced and reliable. However, there are some components which will wear after long period of time and/or reduce the cleaning result, e.g. roller brushes.

Overused roller brushes are visible by bent down and too softy bristles.

Suitable spare parts are available from your local dealer or from manufacturer.

Advices to change spare parts please read more in section "**Service and maintenance**".



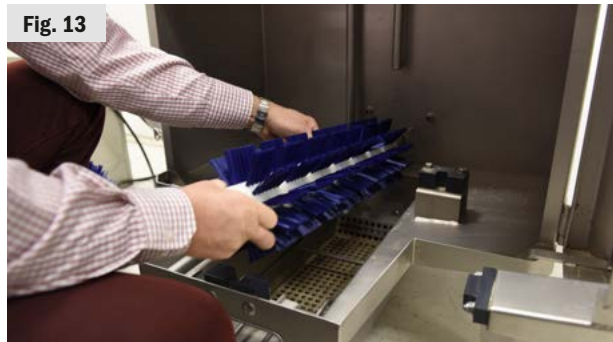
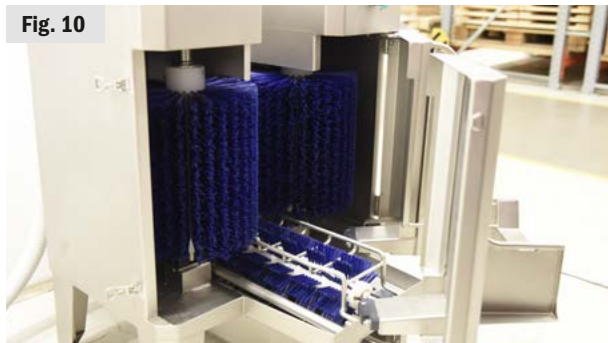
## Recommended service intervals

Below mentioned intervals are based on our experience. However, any single case could vary from each other. That is the reason why you have to adapt the intervals according to your own experience.

Service	Interval
Control	once a week
Cleaning of surfaces	once a week
Cleaning of heavy waste strainer	once a week
Cleaning of brushes	once a month
Cleaning of dosing system	once a month, strictly when changing the medium
Change of roller brush	every 5-7 years, earlier when worn

## Change of roller brushes

1. Open the clamping brackets placed on left side and open the front door – no tools required (Fig. 10).
2. Vertical roller brushes (for boot cleaning): Touch plastic housing of the roller brushes on top and on bottom and pull the down side slowly in your direction (Fig. 11). The roller brushes are driven by a cross-pin.
3. Horizontal roller brush: After having removed the 2 vertical brushes, touch the grid with both hands (Fig. 12) and pull it slowly in your direction. Remove horizontal brush by pulling it up (Fig. 13). The roller brush is driven by a cross-pin.
4. Assembling happens in reversed order. After installation of horizontal brush pay attention that the grid has been inserted. It is essential that the cross-pin of all brushes should be in the right position that the brushes will fit properly.



## Cleaning of surfaces

The surface is made of stainless steel type 304.

Cleaning should be done by intensive water rinsing.

Avoid following:

- contact with carbon steel
- use of steel sponge, grinding powder
- use of chlorine products and bleaching agent

## Cleaning and access to heavy waste strainer

Remove roller brushes first – see section **"Service and maintenance"** > **Change of roller brushes**.

Lift up the heavy waste strainer to remove (Fig. 14). Insertion is reversed order.



## Cleaning of roller brushes

Cleaning of roller brushes should be done by intensive water rinsing or by soaking in suitable detergent. Never use chlorine products and bleaching agent. Use of high pressure cleaner is strictly forbidden.

Overused roller brushes are visible by bent down and too softy bristles.

## Disassembling of brush axle

1. Remove roller brush (see section **"Service and maintenance"** > *Change of roller brushes*)
2. Remove inbus screw placed at the long side in front of the brush with suitable tool (Fig. 15)
3. Remove snap ring located at front side of the brush with suitable tool and pull off the distance washer (Fig. 16)
4. Now the brush can be pulled off the axle (Fig. 17)
5. When assembling put the pin in the center position of the brush, fix the inbus screw, insert distance washer ( $\varnothing$  30 mm) and snap ring.

Fig. 15

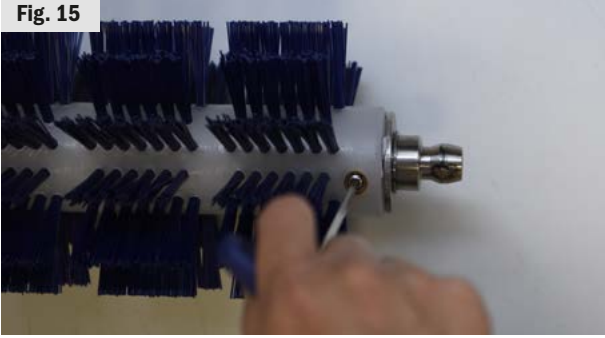


Fig. 16

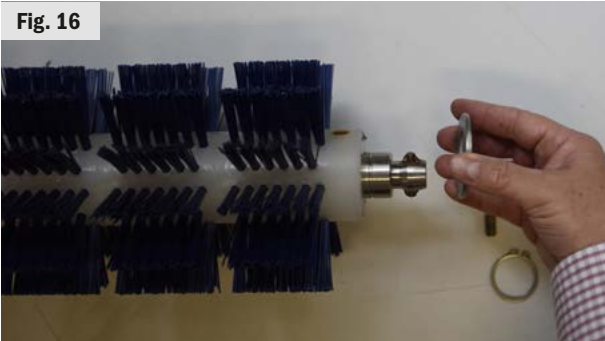
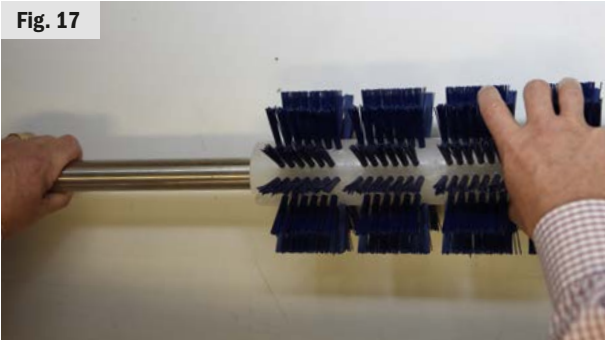


Fig. 17



## Access to the gear motor - horizontal brush (sole cleaning)

Just remove the cover at the rear side of the machine vertical up. No tools required (Fig. 18)

Fig. 18



## Access to the gear motors - vertical brushes (boot cleaning)

Open both clamping brackets (placed at left and right side) and remove the top cover vertical up - no tools required (Fig. 19) Each of the 2 vertical brushes for the boot cleaning function is powered by a separate gear motor (Fig. 20).

Fig. 19



Fig. 20



**Dosing system – access**

Open both clamping brackets (placed at left and right side) and remove the top cover vertical up - no tools required (Fig. 21) The dosing system is placed freely accessible in the corner (Fig. 22).



Fig. 21



Fig. 22

**Dosing system**

The dosing system prepares the mixture of water and detergent/ disinfectant in a certain proportion. This proportion will be determined by the installed nozzle. To achieve optimal function use products having the same viscosity than water. Don't use crystallised detergent/ disinfectant.

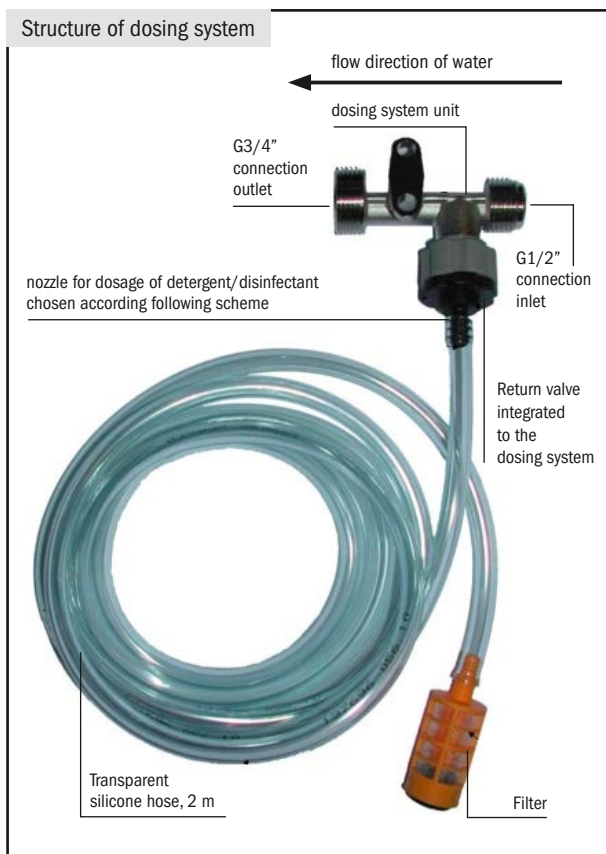
The dosage of detergent/ disinfectant is done by nozzles in different sizes - supplied with the machine (Fig. 23). To achieve the desired concentration choose the corresponding nozzle (see below scheme). The indications should be treated as guideline to find the requested concentration. Achieving optimal dosing results, tests should be made.

The transparent nozzle is a stopper.



Fig. 23

Colour of nozzle	Admixture of detergent/ disinfectant
without	22,00 %
grey	21,20 %
black	21,00 %
beige	17,00 %
red	12,20 %
white	9,00 %
blue	7,60 %
light brown	5,20 %
green	4,10 %
orange	3,10 %
dark brown	2,50 %
yellow	1,90 %
turquoise	1,10 %
purple	0,94 %
pink	0,35 %
transparent	0,00 % (used as stopper)



1. Have a look at the structure of dosing system - see section **"Service and maintenance"** > Dosage > Structure of dosing system.
2. Loose the transparent silicone hose by turning from the return valve.
3. Plug the chosen nozzle with the narrow side on to the return valve.
4. Plug transparent silicone hose on to the return valve. Take care that the hose is wholly plugged and is not bended.



## Dosing system – activation

Activation of detergent/disinfectant happens by water rinse of the system

- 1.** During initial operation put the filter device located at the end of the transparent silicone hose into the detergent canister (Fig. 24) – not belonging to the machine.  
Detergent/disinfectant should not contain chlorine bleaching ingredients because it could damage the surface, brushes and other components.
- 2.** Turn on the machine by pressing the push button until the dosing medium has reached the level of the mixing tap (Fig. 25). To achieve optimal function and mixture use products having the same viscosity than water (water = viscosity of 1). Media having higher viscosity (semifluid) could cause problems.

Fig. 24



Fig. 25

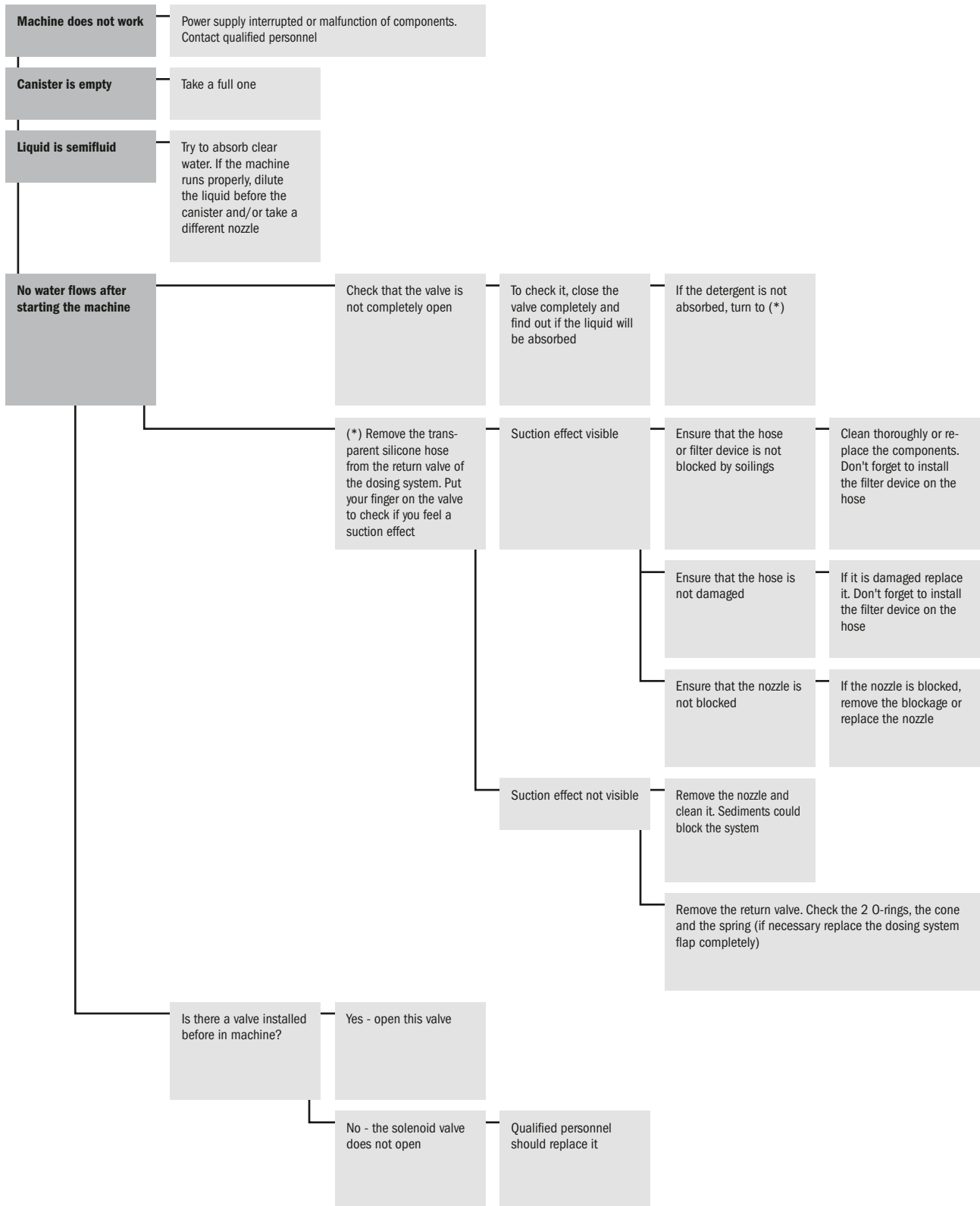


## Dosing system – rinsing

We recommend to rinse the system for the detergent / disinfectant regularly. However, basically when changing the detergent / disinfectant canister or during maintenance work cleaning should be done. Put the transparent silicone hose with filter device into a canister with clear water and start the machine for 20-30 seconds.

Sediments and foreign objects could cause damage to the machine. If the machine has not been used for a longer time we advise to check that transparent silicone hose and filter device are free of sediments. Just in case rinse the dosing system with clear water.

# Trouble-shooting only by qualified personnel



## Trouble-shooting only by qualified personnel

### ? Machine operates without water

! Water supply is closed or interrupted

✓ Check water supply

### ? Machine does not drain off waste water

! Water outlet is blocked

✓ Check water outlet - if necessary remove blockage

### ? Motor stops or runs improperly

! Foreign objects inside

✓ Unplug immediately the machine from power supply. Search and remove foreign objects (turn roller brushes)

### ? Machine makes much noise during operation

! Foreign objects inside

✓ Unplug immediately the machine from power supply. Search and remove foreign objects (turn roller brushes)

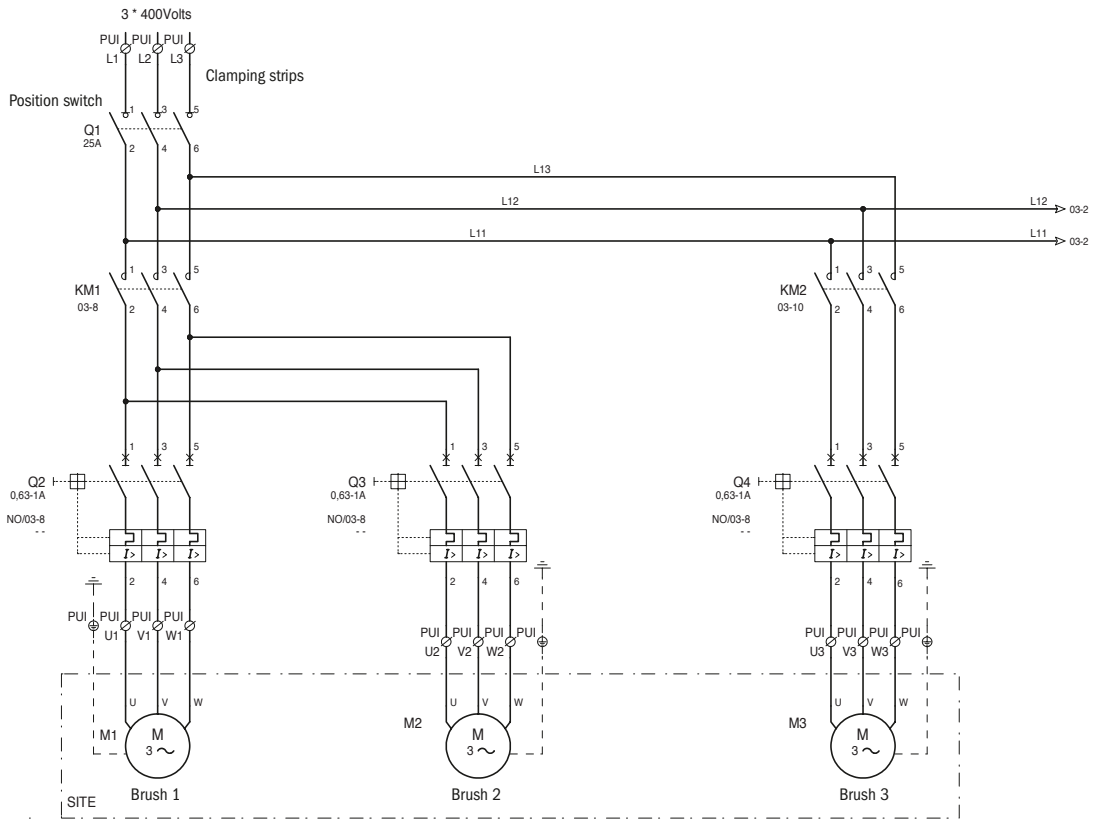
or

! Check correct installation of roller brushes

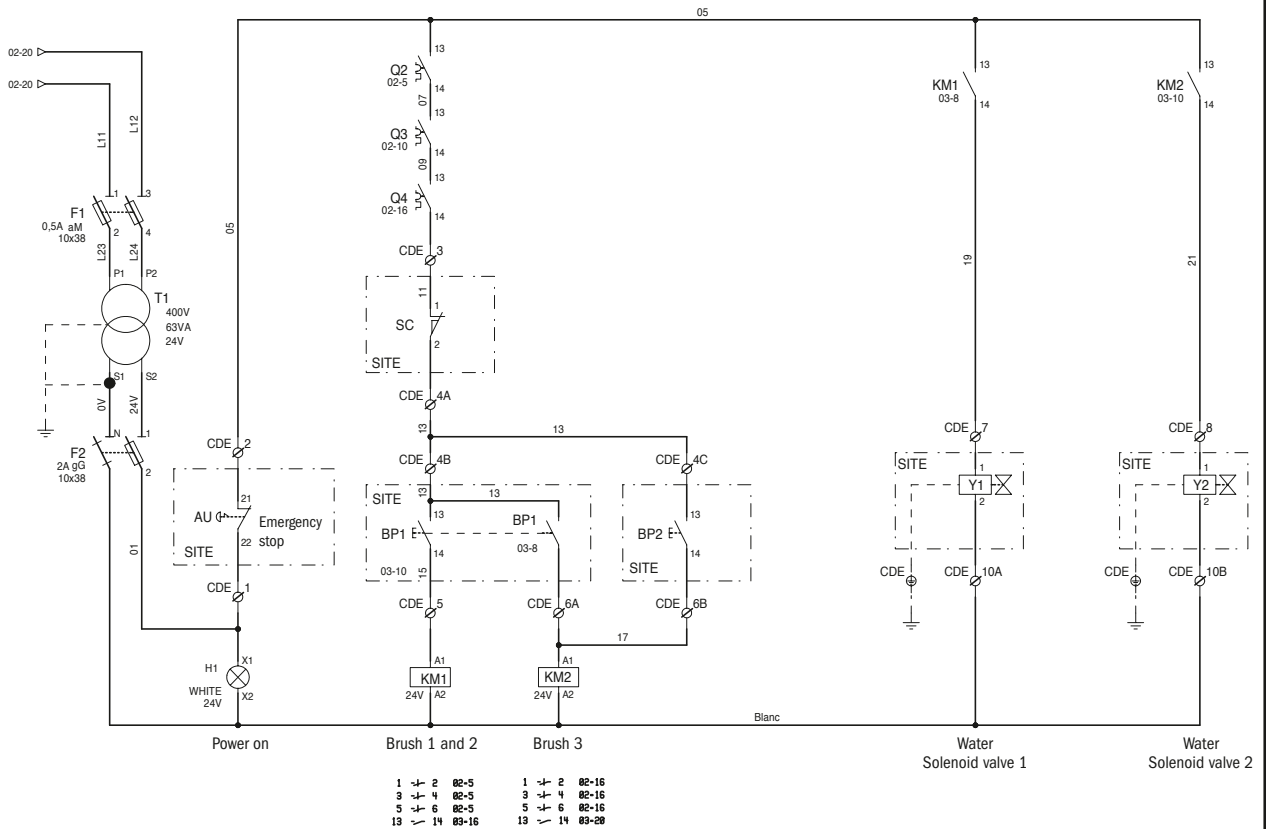
## Technical data:

Dimensions:	76 cm x 87 cm x 127 cm (width x depth x height)
Weight:	140 kg
Connection load:	3-phase 400 V + grounding
Power:	0,55 kW
Protection category:	IP55
Short term operation time (KB):	8 min
Noise emission:	less than 80 dB(A)

Wiring diagram I

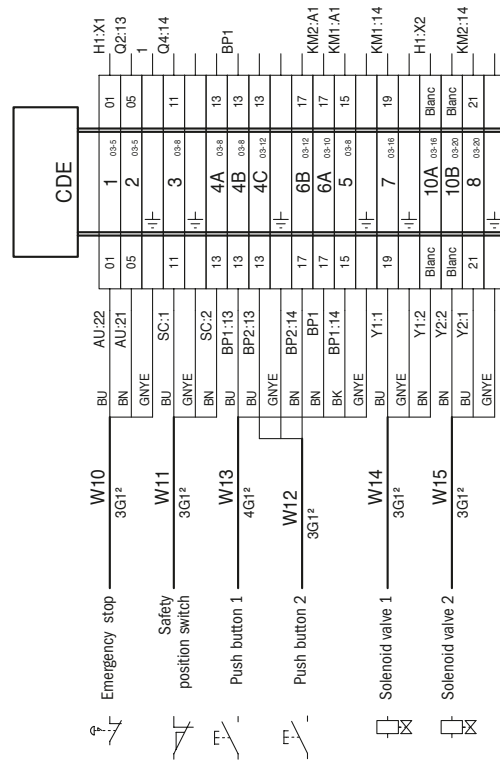
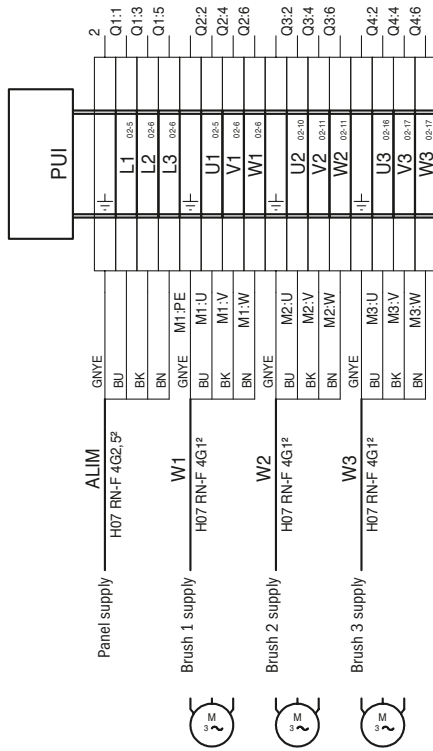


Wiring diagram II

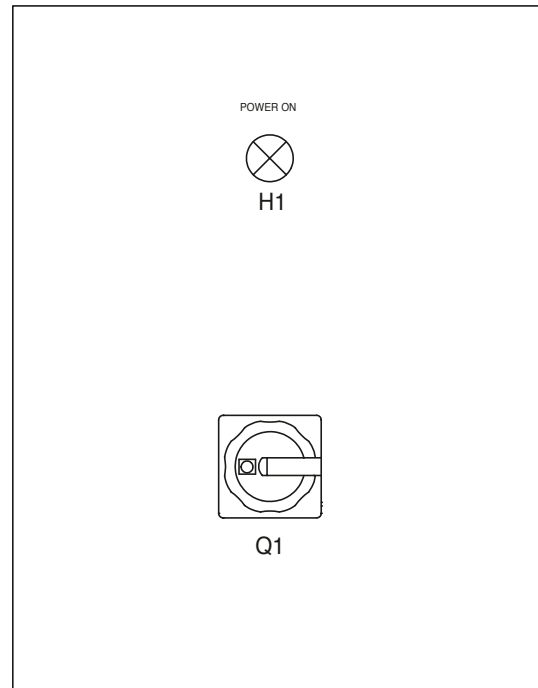
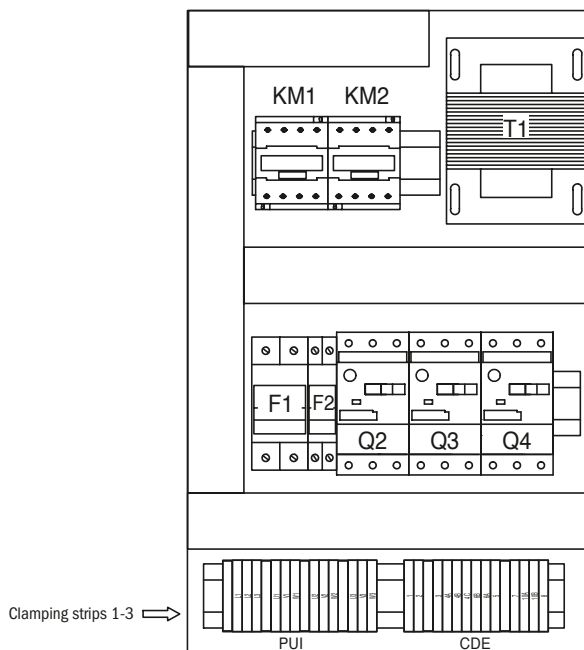


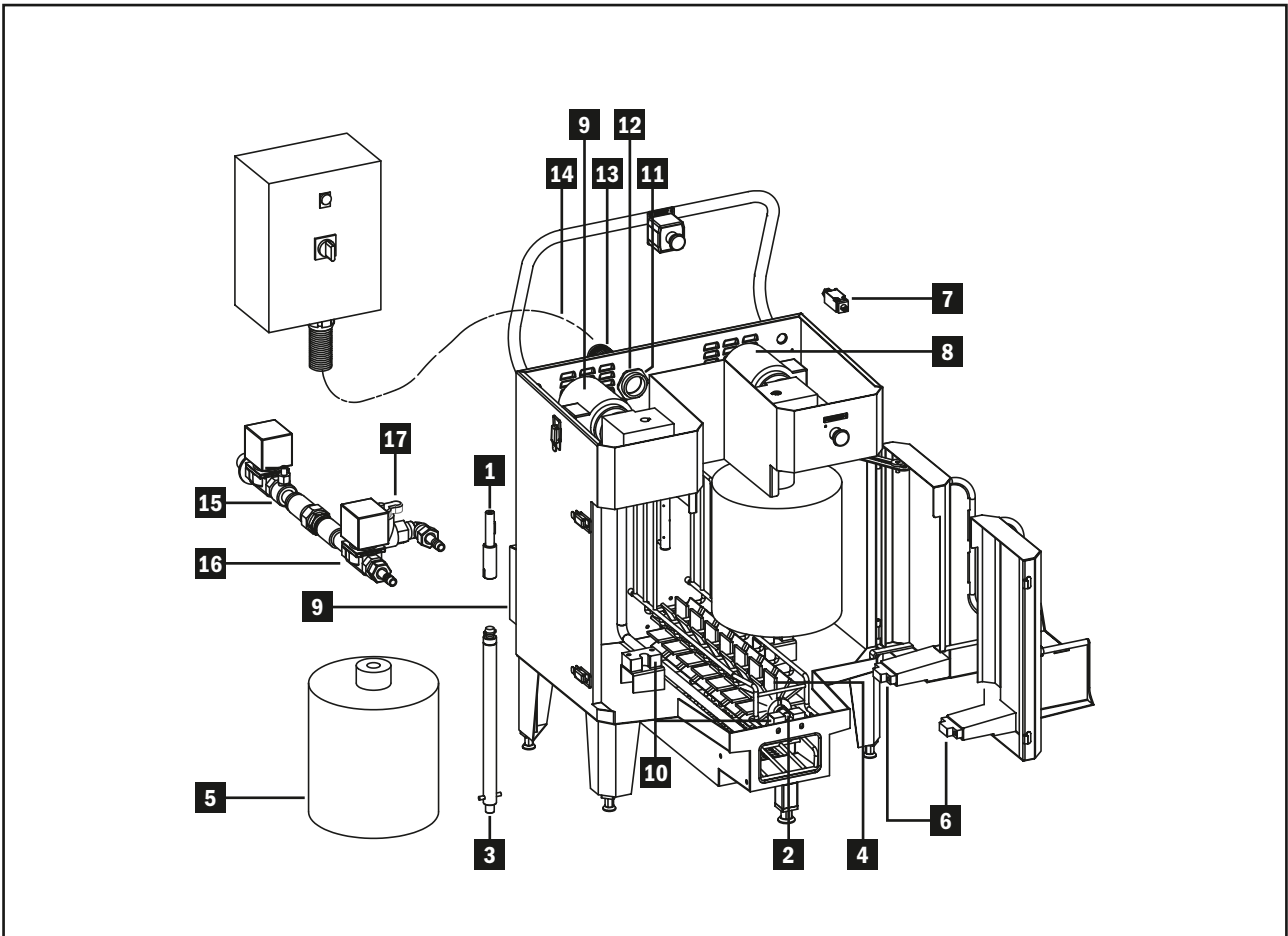


### Configuration clamping strip I



### Configuration clamping strip II





Item	Article	Article No.
1	Coupling stainless steel	06800201
2	Axle stainless steel for horizontal roller brush. $\varnothing$ 150 x 558 mm	06800202
3	Axle stainless steel for vertical roller brush, $\varnothing$ 300 x 395 mm	06800203
4	Roller brush horizontal $\varnothing$ 150 mm, length 558 mm - PBT-blue	06800204
5	Roller brush vertical $\varnothing$ 300 mm, Länge 395 mm - PBT-blue	06800205
6	Stop Nylatron GSE	06800206
7	Position switch	06800207
8	Gear motor MB2101 M50C LS63	06800208
9	Gear motor MB2101 M50C LS63	06800209
10	Bearing Nylatron GSE	06800210
11	Nut Perfect CEPFV36	06800211
12	Gasket for connection piece PG36	06800212
13	Connection piece PG36, grey	06800213
14	PVC cover hose, GP 40x46-2-ig = length 2 m	06800214
15	Dosing device chromed brass, $\varnothing$ 2,6 mm	06800215
16	Solenoid valve 24V-50 Hz-NF-1/2", $\varnothing$ 11,5 mm	06800216
17	Valve to adjust water quantity, brass, 1/2"	06800217

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