NT 65/2 Tact²
NT 75/2 Tact² Me
Service Manual

1 Preface

Good service work requires extensive and practice-oriented training as well as well-structured training materials.
Hence we offer regular basic and advanced training programmes covering the entire product range for all service engineers.
In addition to this, we also prepare service manuals for important appliances - these can be initially used as instruction guides and later on as reference guides.
Apart from this, we also regular information about product enhancements and their servicing.

If you should require supplements, have corrections or questions regarding this document, please address these citing the following subject to:
international-service@de.kaercher.com

Subject:	***Fall 111302***

The responsible product specialist will take care of your issue.

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2 Safety instructions

2.1 Hazard levels

⚠ Danger
Immediate danger that can cause severe injury or even death.
⚠ Warning
Possible hazardous situation that could lead to severe injury or even death.
Caution
Possible hazardous situation that could lead to mild injury to persons or damage to property.
Note
indicates useful tips and important information.

3 Technical Features

3.1 General

- Wet/dry vacuum cleaner to clean floors and walls for commercial use at construction sites, industrial sites and workshops.
- Storage surface for tools on the suction head.
- Container capacity: 65 Liter
- Drain hose for liquids.

3.2 Filter and vacuum system

- Closeable paper filter bag for dust-free disposal.
- Suction hose connection (DN 40) with bayonet system.
- Tact² filter cleaning technology (Triggered Air Draft Cleaning Technology). Switchable fully automatic filter cleaning.
- Electronic fill level monitoring (in wet vacuum mode) switches the turbine off automatically when the max. liquid fill level is reached.

3.3 Electrical system

- 2 engines: 1380 Watts
- 10 m mains cable.
- Bypass suction turbine.

3.4 Tools used

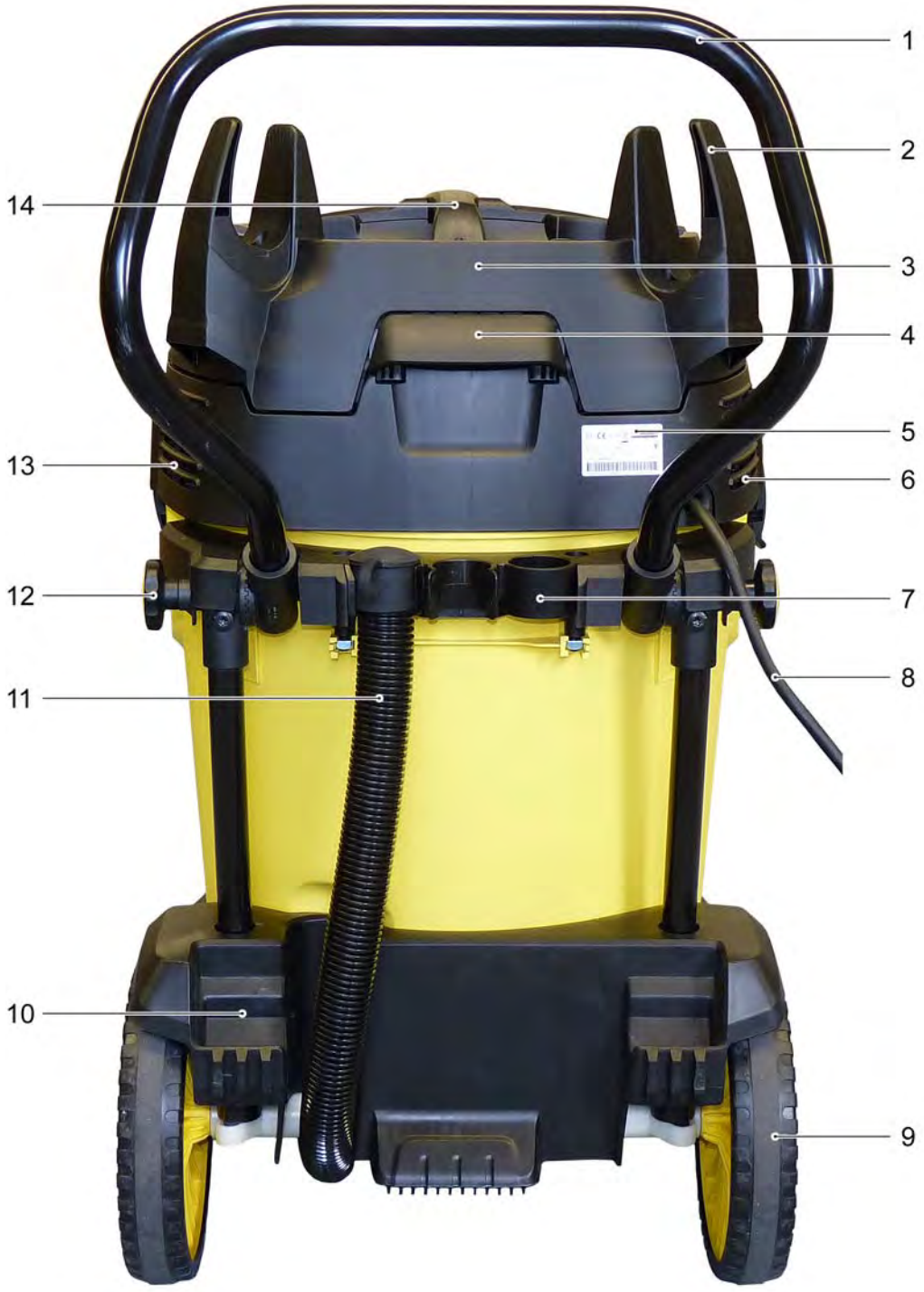
- Torx T20
- Torx T15
- Flat pliers

4 Parts of the system

4.1 Front view

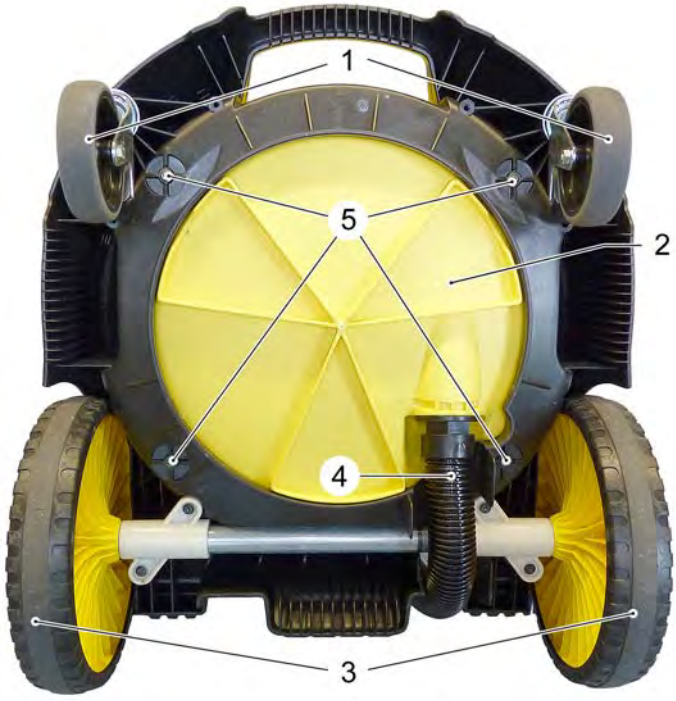
1 Push handle
2 Cable / hose hooks (2x)
3 Storage area
4 Suction head
5 Air outlet, working air
6 Star handle screw (2x), pushing handle attachment
7 Lock, suction head
8 Dirt receptacle
9 Impeller (2x)
10 Steering roller (2x)
11 Handle
12 Suction hose connection with bayonet system.
13 Air input
14 Power switch
15 Carrying handle

4.2 Rear view



1 Push handle
2 Cable / hose hooks (2x)
3 Filter cover
4 Handle to open the filter cover
5 Nameplate
6 Air outlet, working air
7 Accessory compartment
8 Power cord
9 Impeller (2x)
10 Pickup for floor nozzle
11 Drain hose
12 Star handle screw (2x), pushing handle attachment
13 Air outlet, working air
14 Carrying handle

4.3 View from below

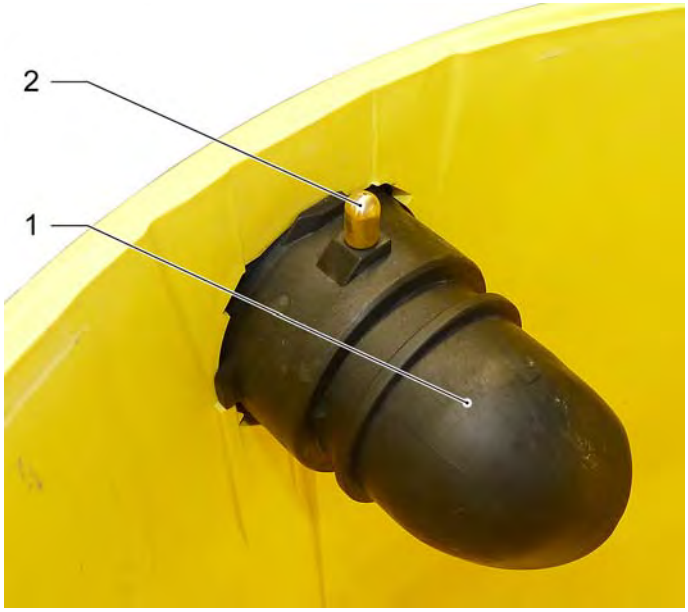


1 Swivel casters
2 Dirt receptacle
3 Running wheels
4 Drain hose
5 Fastening screws, waste container

4.4 View of inside of waste container

1 Dirt receptacle
2 Drain opening, wastewater
3 Suction air guide
4 Ground contact (not Tc models)

4.4.1 Ground contact on the suction air guidance



1 Suction air guide
2 Ground contact (not Tc models)

During vacuuming, there can be electrostatic charges on the appliance in some circumstances. A ground contact is installed on the suction air guidance to deviate these charges.
In order to prevent charging of the vacuuming accessories, an electrical conductive suction hose is connected.

4.5 Power switch

1 Position "1" - appliance turned on
2 Position "0" - appliance turned off
3 Appliance switched on and Tact filter cleaning activated

4.6 Suction head (view from below)

1 Rubber foam string
2 Container lock latch, right
3 Right electrode
4 Flat fold filter
5 Left electrode
6 Container lock latch, left
7 Ground contact (not Tc models)

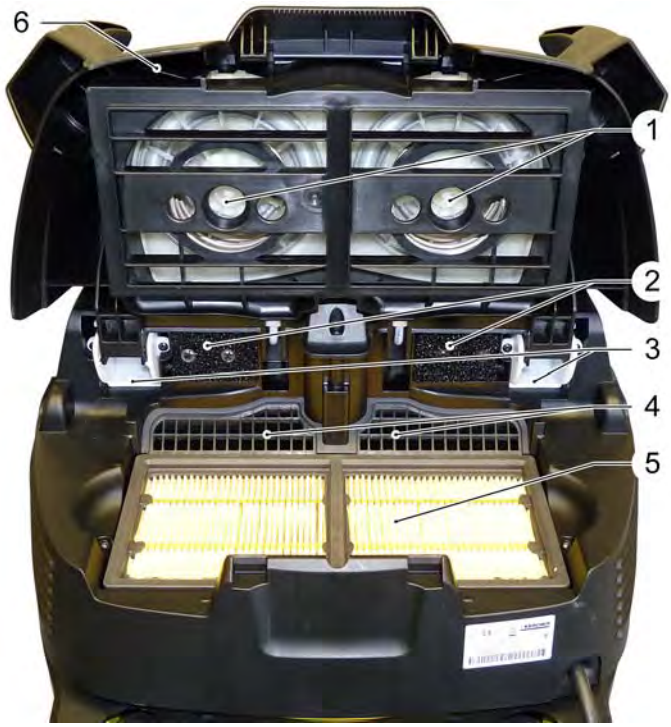
➔ Replace the moss rubber string, grounding contact if necessary.

4.6.1 Electrode overflow protection

Note

The appliance will switch off immediately if the container is filled with enough fluid so that it touches both electrodes. This is not the case, if non-conductive fluids such as oils, greases and drilling emulsions are vacuumed up.
The filling level must be continuously monitored and the container must be emptied in time.
As an option, an upgrade kit "non-conductive media", part number 2.642-602.0, is offered. The switching off is done via a floater switch.

4.7 Suction head, filter cover opened



1 Tact² filter cleaning system
2 Rough dirt filter
3 Joint holder, filter cover
4 Air input
5 Flat fold filter
6 Filter cover

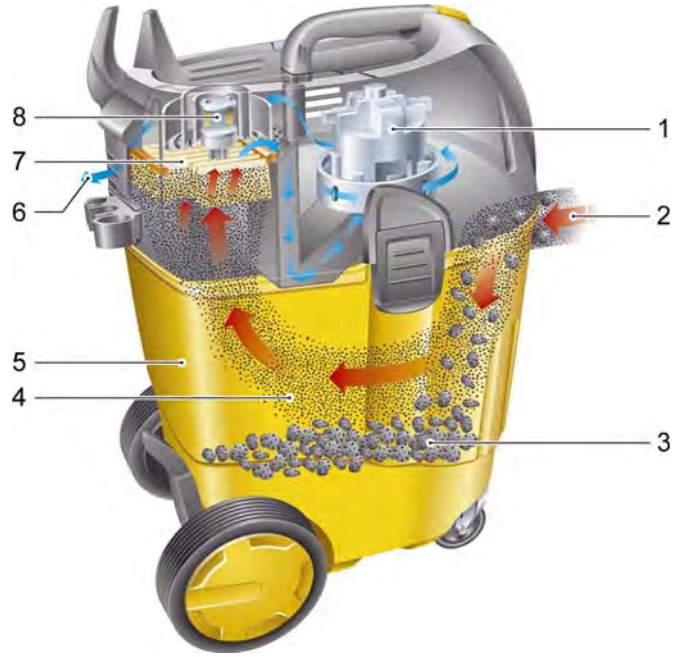
The Tact filter cleaning system is integrated into the filter cover.

Note

For wet and dry vacuuming, the flat fold filter must always be installed.
After the wet vacuuming has ended, the flat fold filter must be dried.
To vacuum fine dust, you must use an additional paper filter bag or a membrane filter (special accessory). These must always be removed prior to wet vacuuming.

5 Function

5.1 Suction system

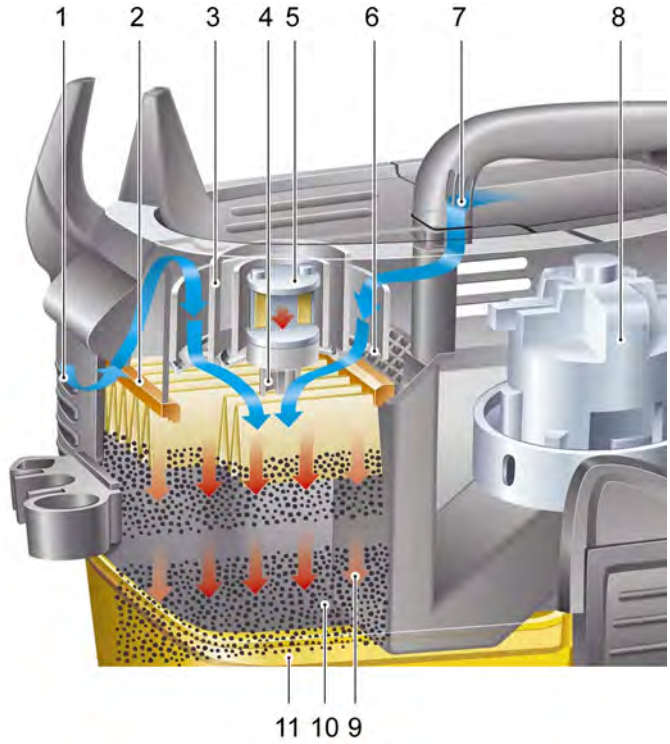


Sample graphic with a simple Tact filter cleaning system

1 Suction turbine
2 Air input
3 Coarse dirt
4 Fine dust
5 Dirt receptacle
6 Air outlet
7 Flat fold filter
8 Tact filter cleaning system

The air flows from the air input through the waste container and flat fold filter via the suction turbine to the exterior.

5.2 Tact filter cleaning system



Sample graphic with a simple Tact filter cleaning system

1 Air input
2 Flat fold filter
3 Magnet-holder
4 Spring
5 Electric solenoid
6 Valve disks
7 Air input on the handle
8 Suction turbine
9 Air stream
10 Fine dust
11 Dirt receptacle

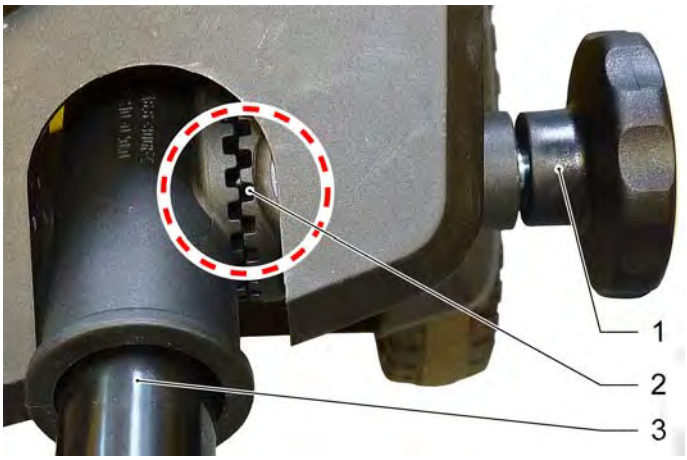
When vacuuming larger volumes of fine dust, the flat fold filter plugs up fast. When the Tact filter cleaning system is turned on, electro-magnets open the diaphragms, so that an air flow can clean off the flat fold filter via sudden pressure reversal.
It is recommended to switch off the Tact filter cleaning system while vacuuming coarse dirt and liquids.

Note

The Tact filter cleaning system can only be switched on/off when the vacuum is switched on.

5.3 Adjusting the pushing handle

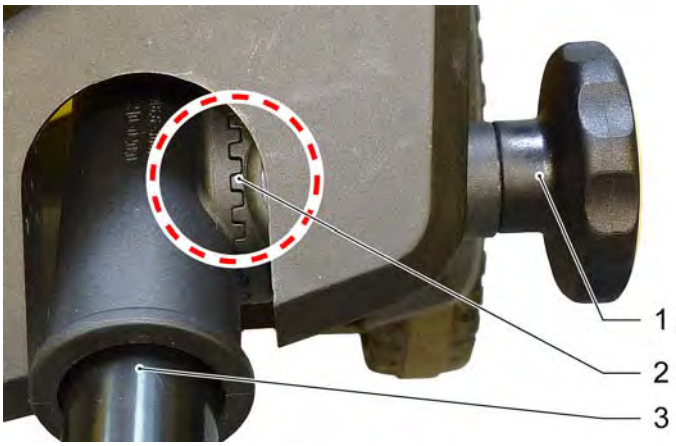
The pushing handle can be adjusted via the settings on the pushing handle lock in the incline.



1 Star handle screw
2 Pushing handle, open
3 Push handle

➔ Loosen the star handle screw.

➔ Change the incline of the pushing handle.



1 Star handle screw
2 Pushing handle lock, closed
3 Push handle

➔ Close the star handle screw. The pushing handle setting is locked.

6 Basic settings and service procedures

⚠ Danger

First pull out the plug from the mains before carrying out any tasks on the machine.

6.1 Replace the electro-magnet of the Tact filter cleaning system

1 Filter cover
2 Covering lid
3 Cover, PCB
4 Fastening screws, cover PCB
5 Fastening screws, carrying handle
6 Fastening screws, filter cover

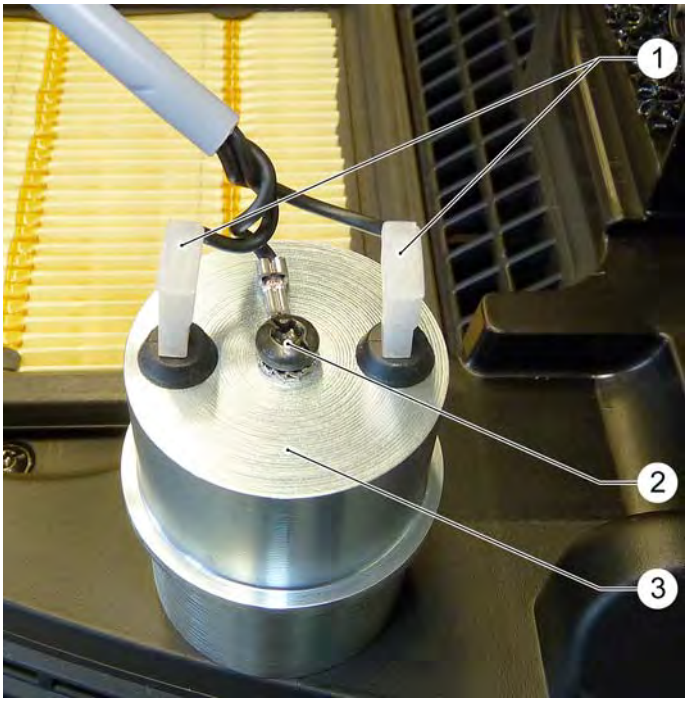
➔ Remove the fastening screws from the filter cover.

➔ Fold the filter cover open toward the top.

1 Magnets of the Tact filter cleaning system

1 Magnet
2 Tact filter cleaning system

➔ Remove the magnets of the Tact filter cleaning system.



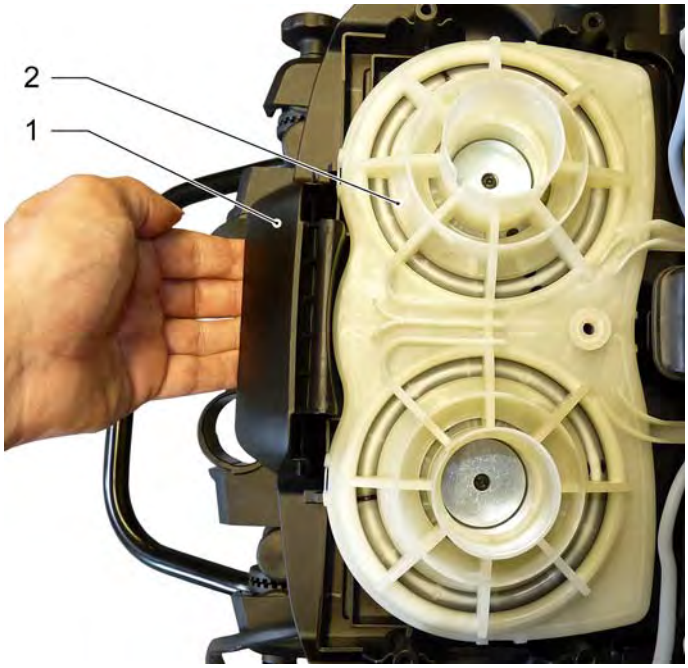
1 Plug contacts
2 Fastening screw for middle connection (ESD deviation of ground)
3 Magnet

➔ Unplug the plug contacts from the magnet.
➔ Unscrew the fastening screw and remove the connection.
➔ Replace defective magnet.
➔ Install the new magnet in reverse order.

➔ Insert the connecting cables of the magnets into their intended cable guides.

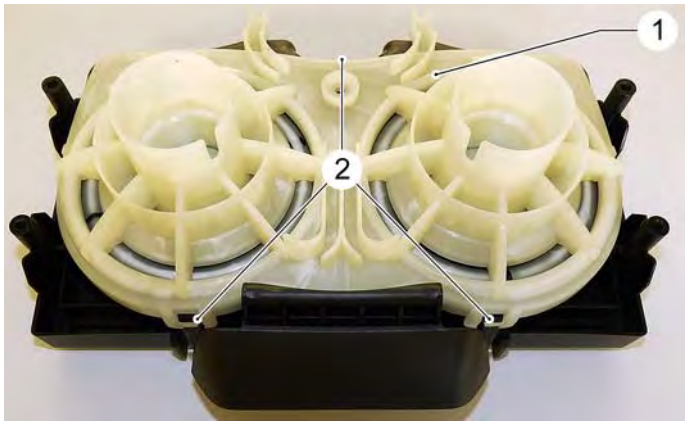
6.2 Replace the Tact filter cleaning system

➔ Remove the filter cover and remove the magnets, as described in the chapter "Replacing the electromagnet of the Tact filter cleaning system".

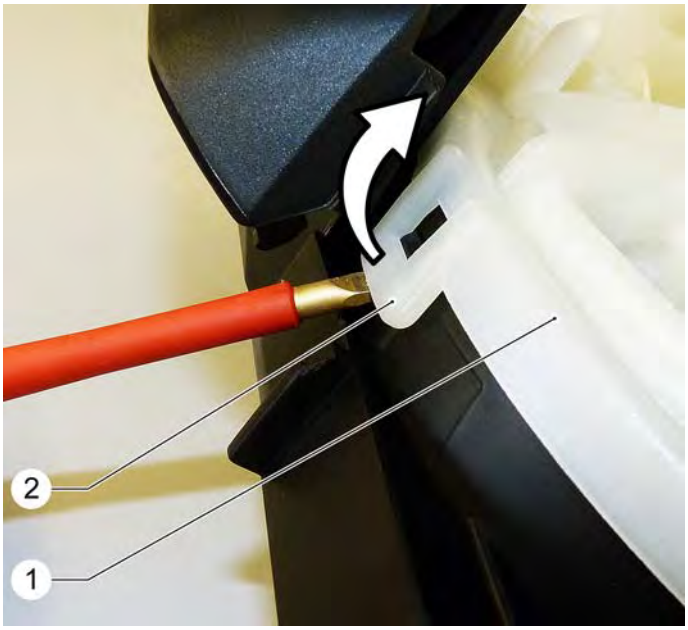


1 Handle to unlock the filter cover
2 Tact filter cleaning system

➔ Press the unlocking lever for the filter cover upward to unlock and remove it.

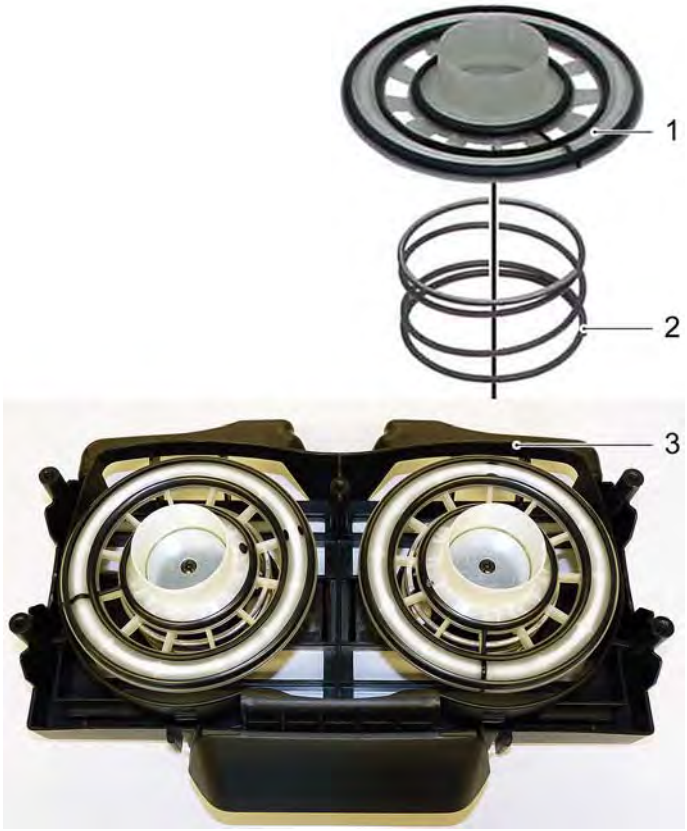


1 Casing top, Tact filter cleaning system
2 Clip-on locks



1 Casing top, Tact filter cleaning system
2 Clip-on lock

➔ Open all three clip-on locks using a screwdriver.
➔ Remove the top part of the casing.



1 Valve disks
2 Spring, large
3 Filter cover with Tact filter cleaning system

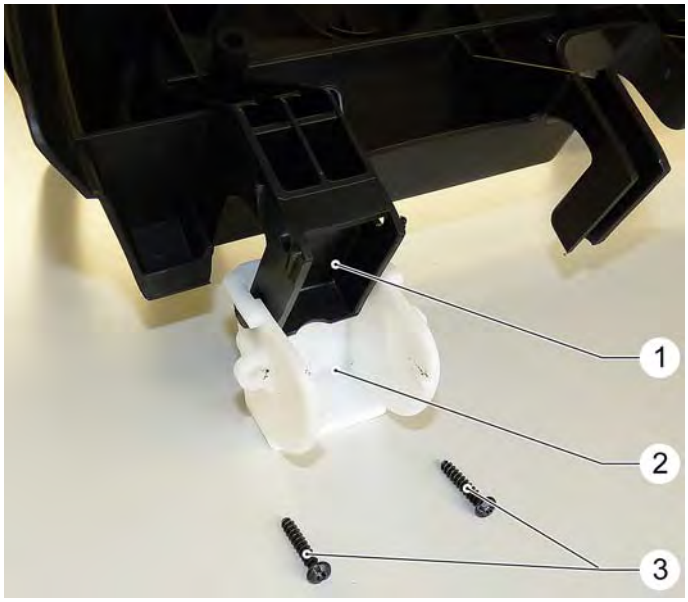
➔ Remove the Tact filter cleaning system and replace it.
➔ Install the new Tact filter cleaning system in reverse order.
➔ Insert the magnets as described in the chapter "Replacing the electro-magnet of the Tact filter cleaning system".

6.3 Replace the filter cover

➔ Remove the fastening screws from the filter cover as described in the chapter "Replacing the electro-magnet of the Tact filter cleaning system".

1 Joint holder
2 Fastening screws, joint holder
3 Filter cover

➔ Unscrew the fastening screws on the joint holder.
➔ Remove the filter cover with the joint holders.



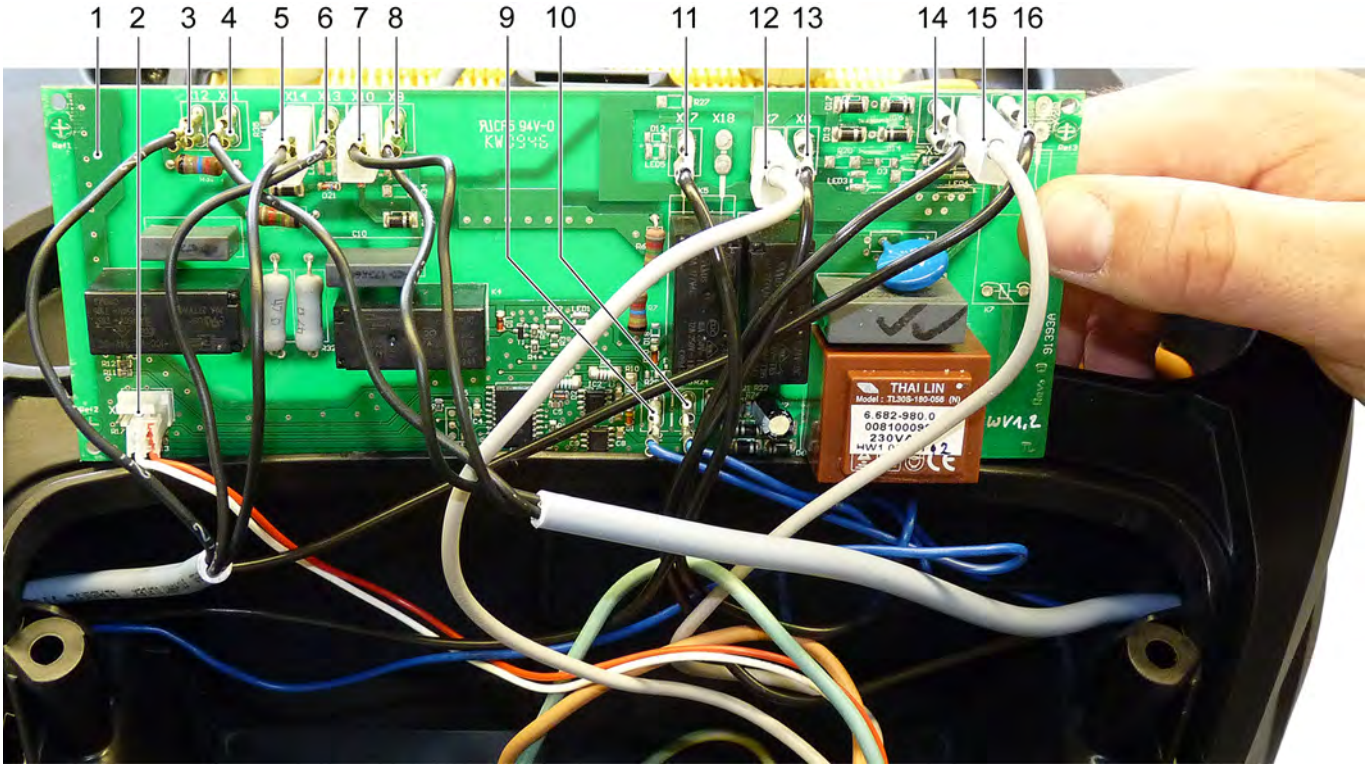
1 Joint angle on the filter cover
2 Joint holder
3 Fastening screws, joint holder

➔ Remove the joint holder and install it on the new filter cover.
➔ Install the new filter cover in reverse order.

6.4 Replace the circuit board

1 Cover, PCB
2 Fastening screws, cover PCB

➔ Unscrew locking screws.
➔ Remove the lid.
➔ Pull the circuit board out toward the top.



1		Control chip
2	X4	Mains plug
3	X12	Electric solenoid
4	X11	Electric solenoid
5	X14	Electric solenoid
6	X13	Electric solenoid
7	X10	Electric solenoid
8	X9	Electric solenoid
9	X3	Electrodes, overflow protection
10	X2	Electrodes, overflow protection
11	X17	Suction turbine
12	X7	Power switch
13	X8	Suction turbine
14	X5	Suction turbine
15	X6	Power switch
16	X19	Suction turbine

➔ Disconnect all connecting cables from the circuit board.
➔ Replace the circuit board.
➔ Connect the new circuit board as per the circuit diagram.

6.5 Voltage measurements on the PCB

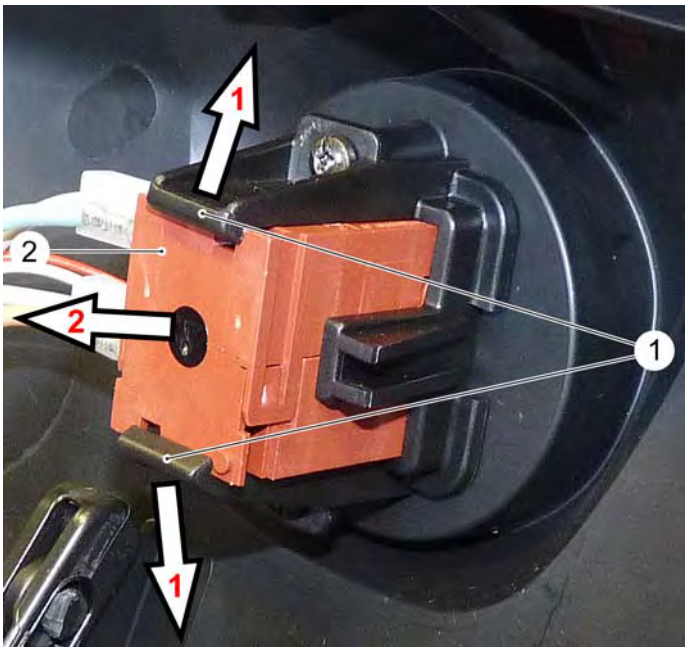
The indication "position" refers to the position indications in the table "Replacing the PCB".

Measurement on the contact	Position	**What is measured?**	**Nominal measuring value***
X4 (PIN1 + PIN2)	2	Potential-free switch contact "closer" from the appliance switch PIN1 + PIN2	5 Vdc
X6 + X7	12 + 15	Mains voltage from the appliance switch	230 Vac
X9 + X10	7 + 8	Electro-magnet 1	208 Vdc
X13 + X14	5 + 6	Electro-magnet 2	208 Vdc
X5 + X8	13 + 14	Suction turbine 1	230 Vac
X17 + X19	11 + 16	Suction turbine 2	230 Vac
X2 + X3	9 + 10	Electrodes	5 Vdc (apply R = 47 kOhm, the suction turbines switch off after 1 second)
X11 + X12	3 + 4	ESD deviation ground electro-magnet 1 + 2	0 V

*Tolerance for all voltages +/- 5%

6.6 Replace appliance switch

➔ Open the cover of the PCB as described in the chapter "Replacing the PCB".

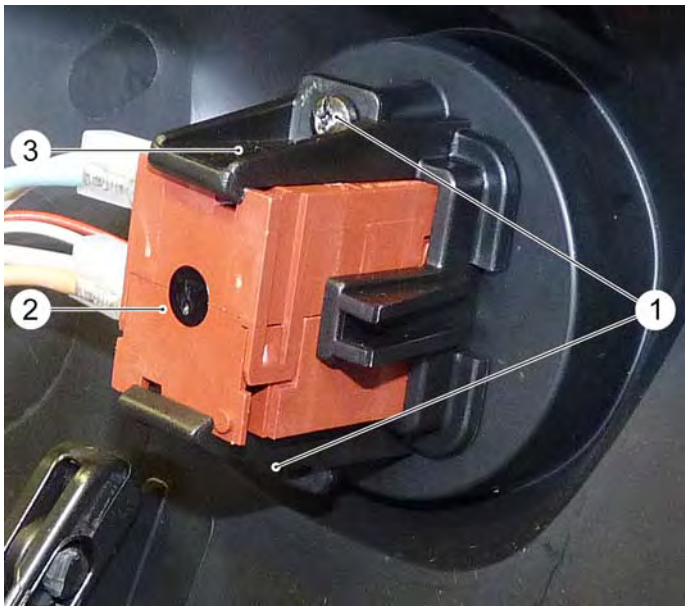


1 Holding clamps, appliance switch
2 Power switch

➔ Carefully push the holding clamps apart.
➔ Pull the appliance switch from its holder.
➔ Pull the connecting cable out on the appliance switch.
➔ Install the new appliance switch in reverse order.

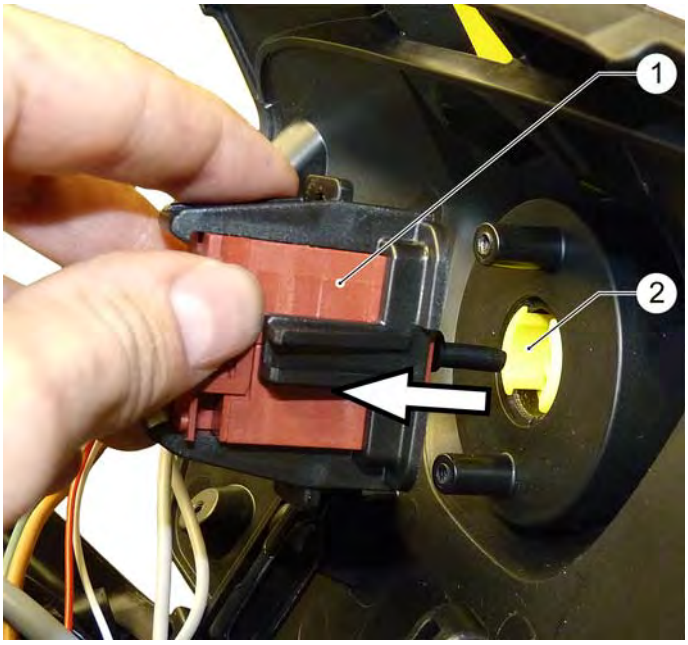
6.7 Replace the switch knob on the appliance switch.

➔ Open the cover of the PCB as described in the chapter "Replacing the PCB".



1 Fastening screws, holder
2 Power switch
3 Bracket

➔ Unscrew locking screws.



1 Power switch
2 Switch knob

➔ Remove the holder with the appliance switch from the switch knob.

1 Switch knob
2 Pliers

➔ Press the side portions on the switch knob together using a pliers.

➔ Remove the switch knob from the cover and replace it.

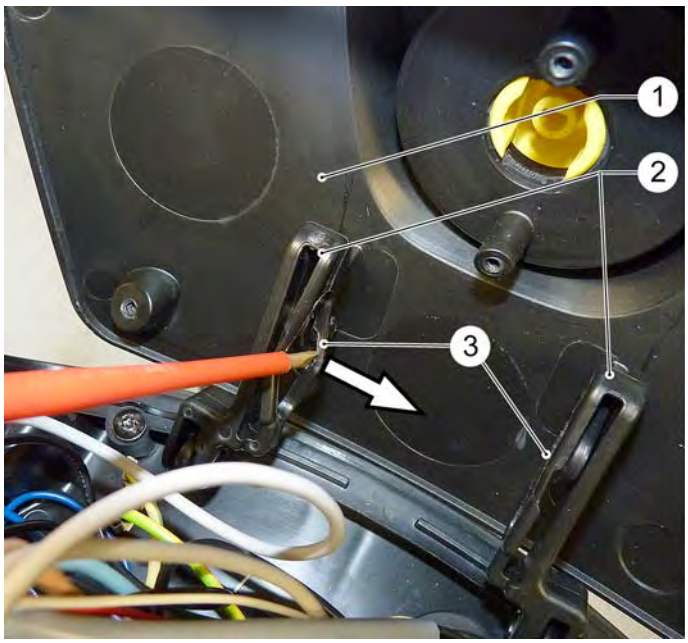
➔ Press the new switch knob into the switch knob opening.

➔ Install the holder with the switch in reverse order.

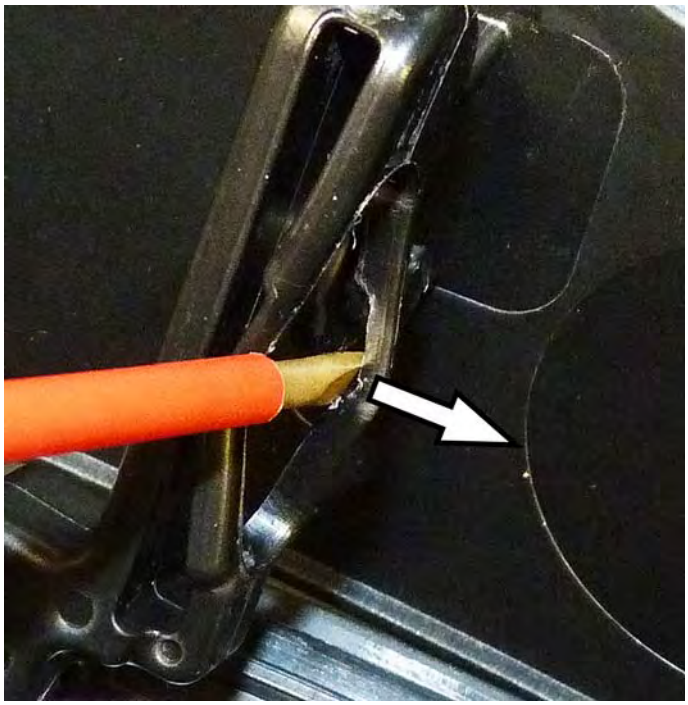
6.8 Replacing the cover of the PCB

➔ Open the cover of the PCB as described in the chapter "Replacing the PCB".

➔ Remove the appliance switch as described in the chapter "Replacing the appliance switch".



1 Cover, PCB
2 Holder, cover
3 Interior bar on holder

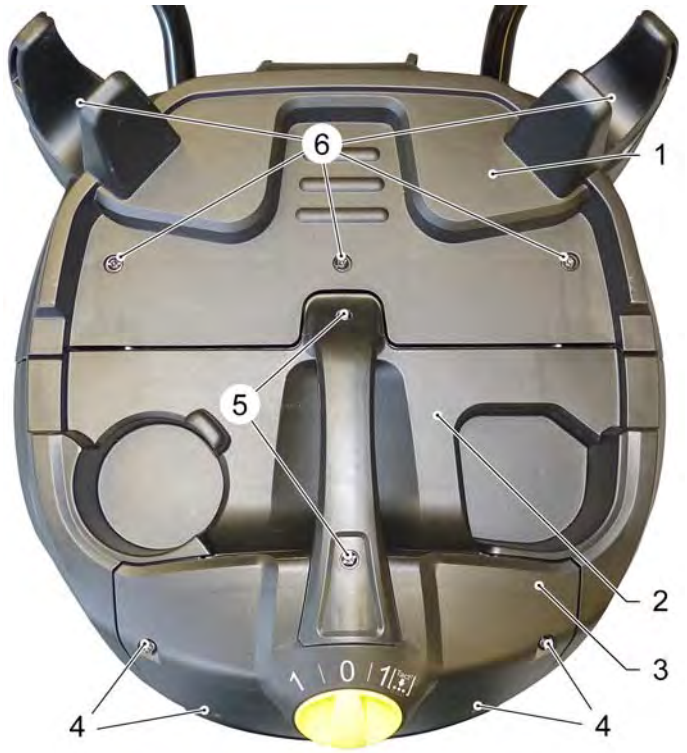


➔ Press the inner bars on the holder toward the inside.

➔ Remove the lid.

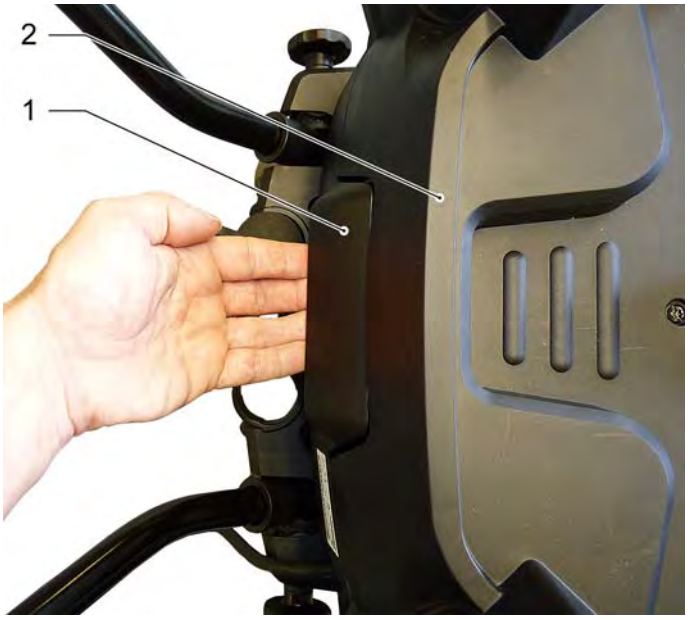
➔ Install the new cover in reverse order.

6.9 Replacing the suction turbines



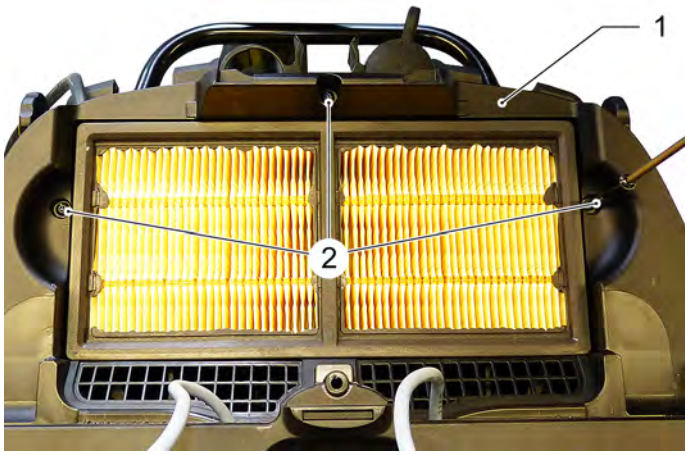
1 Filter cover
2 Covering lid
3 Cover, PCB
4 Fastening screws, cover PCB
5 Fastening screws, carrying handle
6 Fastening screws, filter cover

➔ Unscrew the fastening screws for the carrying handle.
➔ Remove the carrying handle.
➔ Unscrew the fastening screws on the cover of the PCB.
➔ Open the cover.



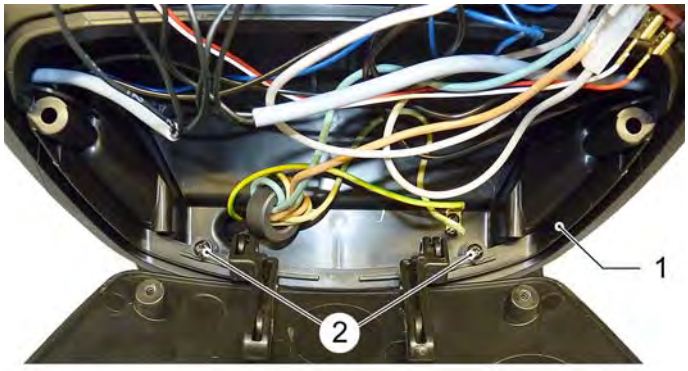
1 Handle on the filter cover
2 Filter cover

➔ Lift the handle on the filter cover upward and open the filter cover.



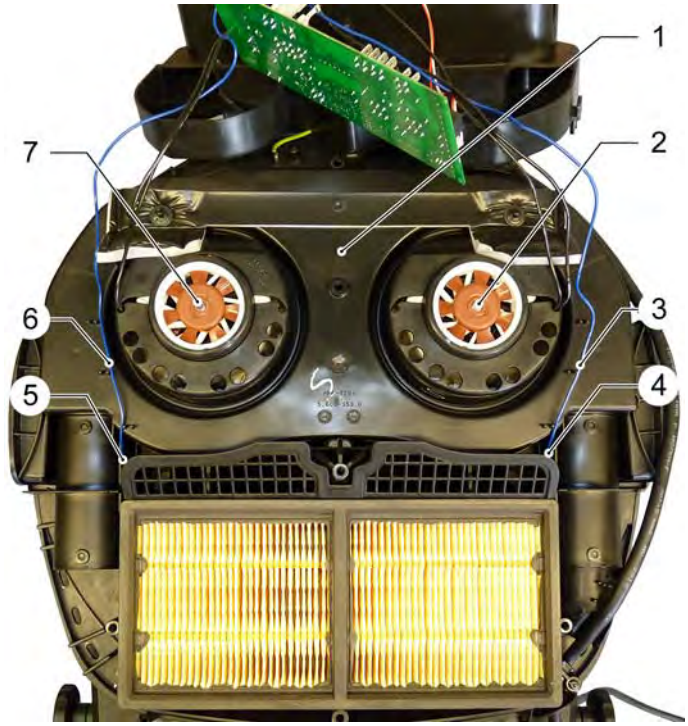
1 Housing top
2 Fastening screws, casing top

➔ Unscrew locking screws.



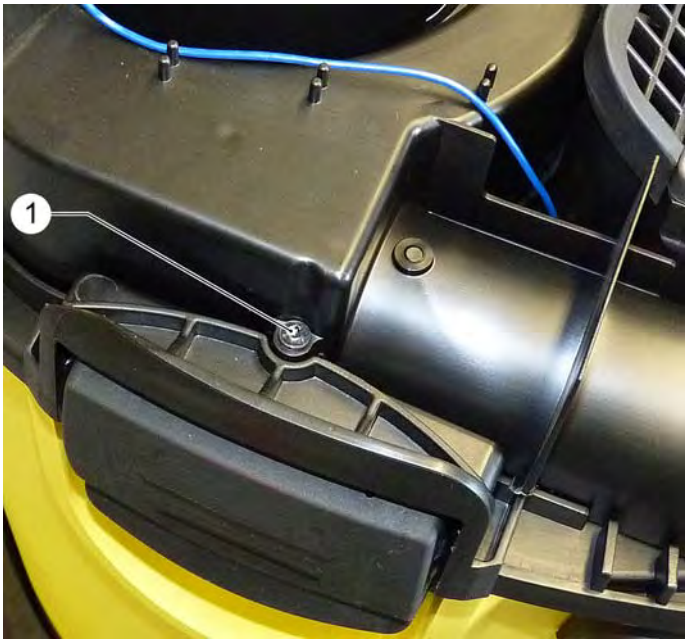
1 Housing top
2 Fastening screws, casing top

➔ Unscrew locking screws.
➔ Remove the top part of the casing.

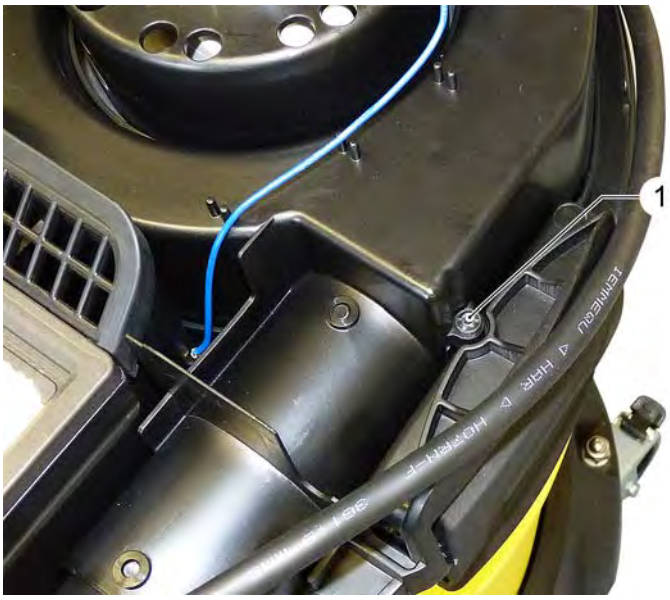


1 Suction turbine housing
2 Suction turbine, right
3 Connecting cable, electrode overflow fuse, right

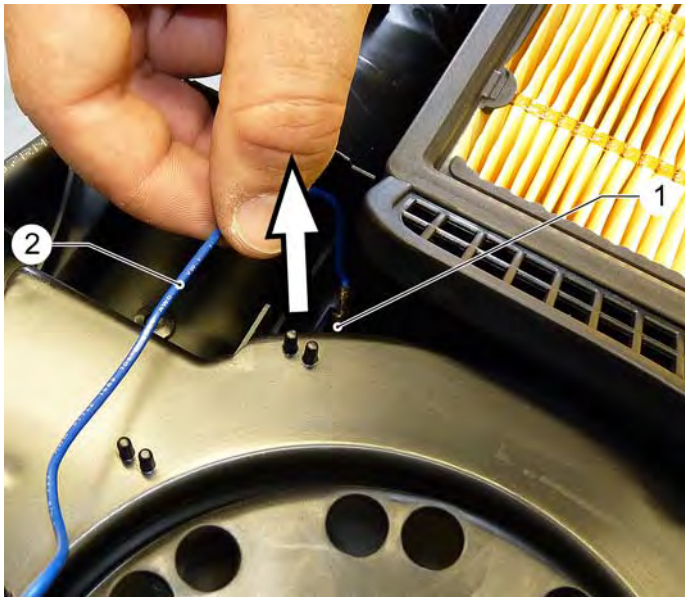
4 Electrode overflow protection, right
5 Electrode overflow protection, left
6 Connecting cable, electrode overflow fuse, left
7 Suction turbine, left



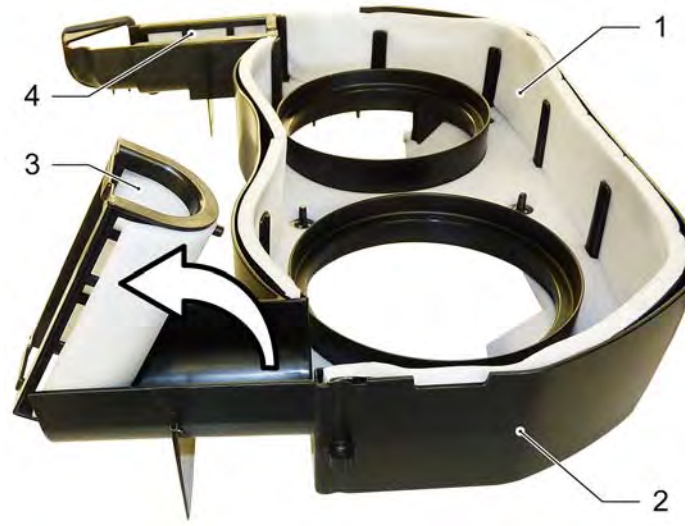
1 Fastening screws, left, suction turbine housing
➔ Loosen the fastening screw.



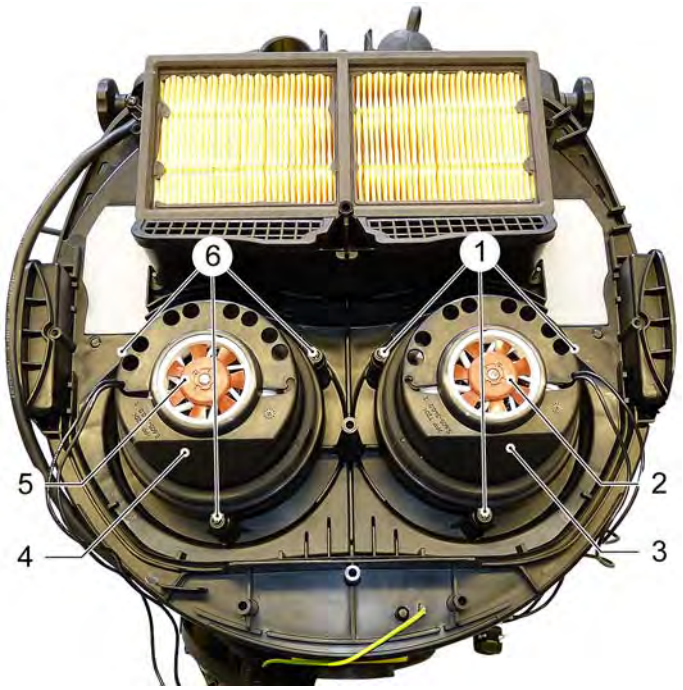
1 Fastening screws, right, suction turbine housing
➔ Loosen the fastening screw.



1 Electrode overflow protection
2 Connecting cable, electrode overflow protection
➔ Remove both cables from the electrodes.
➔ Remove the suction turbine casing.

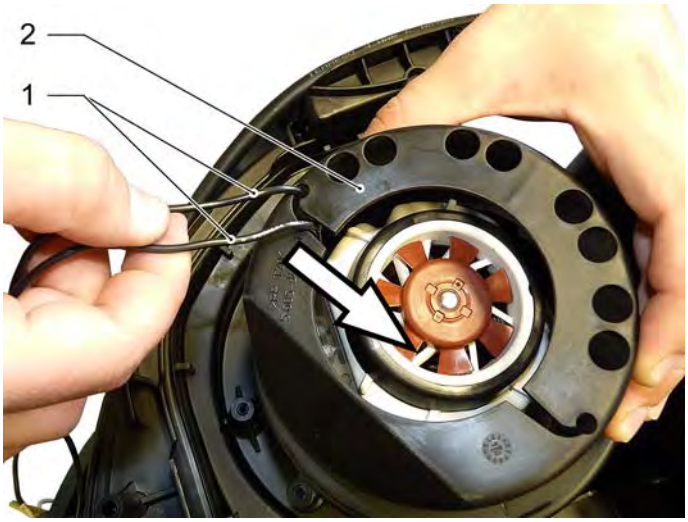


1 Sound proofing
2 Suction turbine housing
3 Removable muffler element (sound-proofing), left
4 Removable muffler element (sound-proofing), right



1 Fastening screws, left suction turbine holder
2 Suction turbine, left
3 Suction turbine holder, left
4 Suction turbine holder, right
5 Suction turbine, right
6 Fastening screws, right suction turbine holder

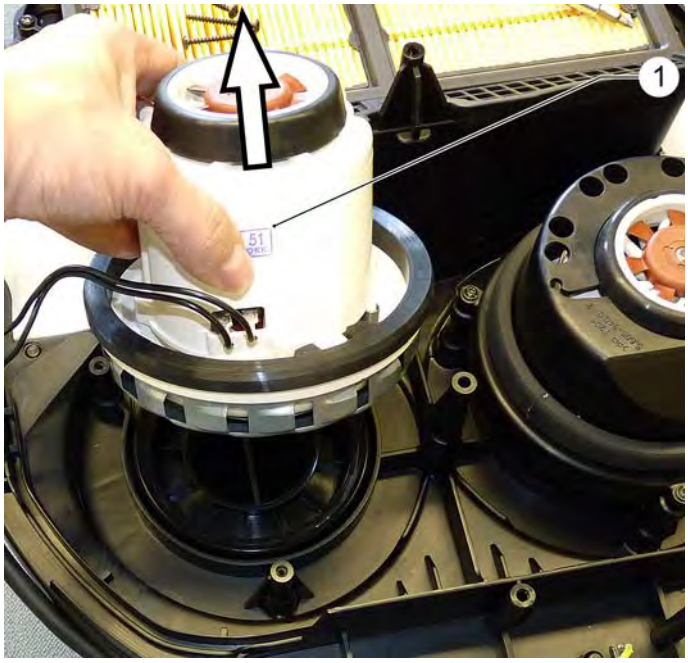
➔ Unscrew the fastening screws of the respective suction turbine holder.



1 Connecting cable, suction turbine
2 Suction turbine holder

➔ Disconnect the connecting cables from the suction turbine on the PCB and thread it out of the suction turbine holder.

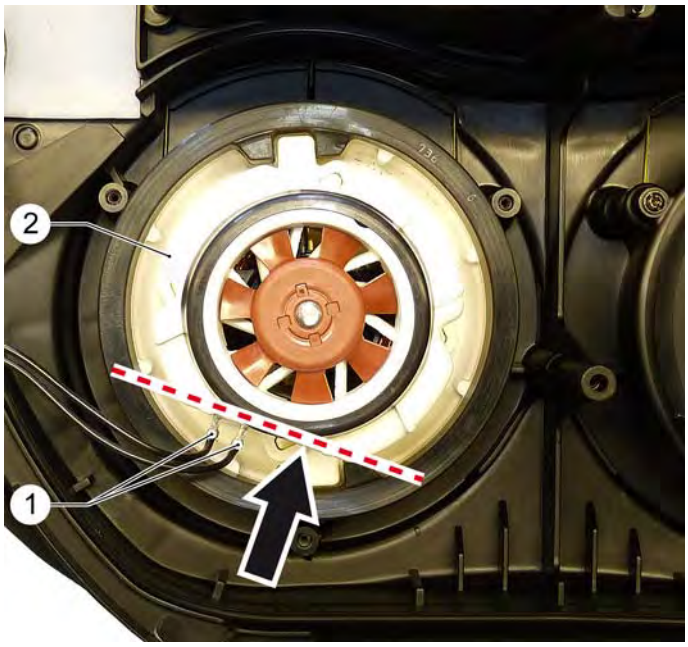
➔ Remove the suction turbine holder.



1 Suction turbine

➔ Remove the suction turbine and replace it.

➔ Install the new suction turbine in reverse order.



1 Connecting cable, suction turbine
2 Suction turbine

➔ Ensure that the suction turbine is seated correctly prior to attaching the suction turbine cover.
The suction turbine must be inserted as shown in the illustration.

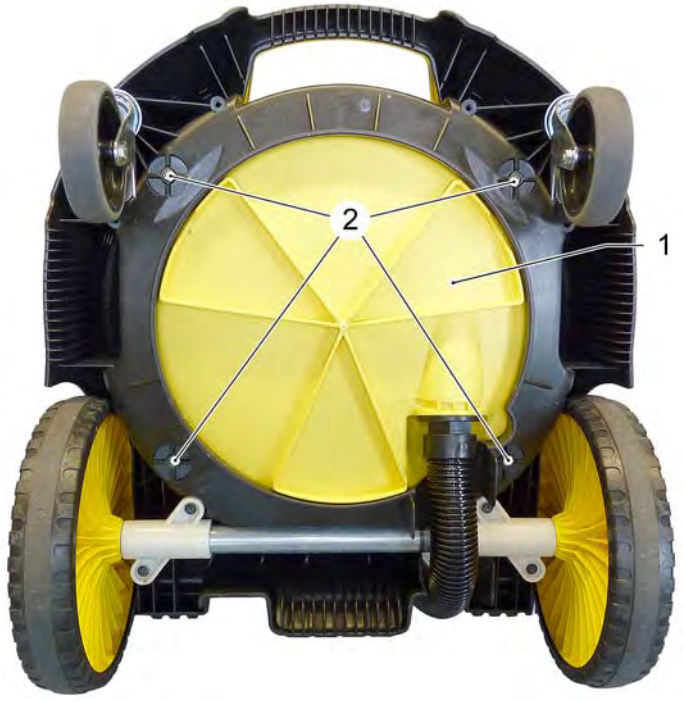
6.10 Replacing the mains cable

➔ Remove the casing top as described in the chapter "Replacing the cover of the PCB".

1 Cord grip
2 Power cord
3 Fastening screws, traction relief

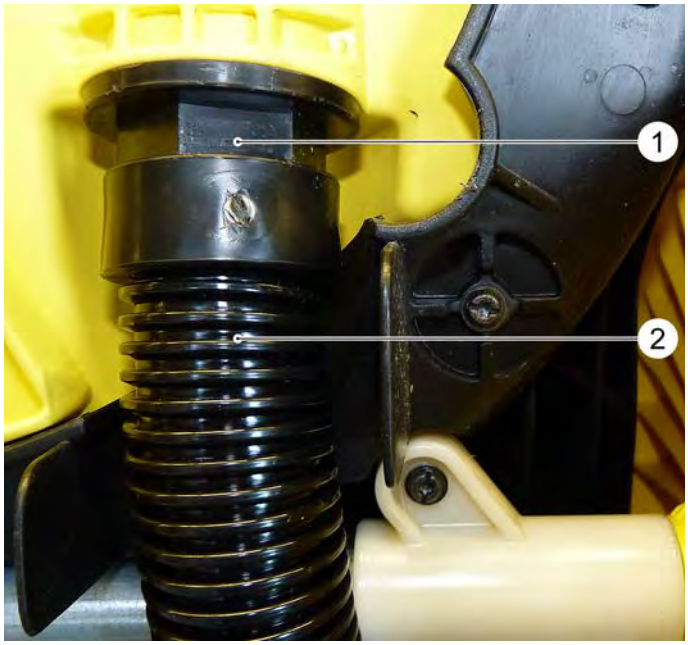
➔ Unscrew the fastening screws of the traction relief.
➔ Disconnect the connecting cable of the mains cable on the PCB and on the appliance switch.
➔ Replace the mains cable.
➔ Install the new mains cable in the reverse order.

6.11 Replace the waste container



1 Dirt receptacle
2 Fastening screws, waste container

➔ Unscrew the fastening screws on the waste container.

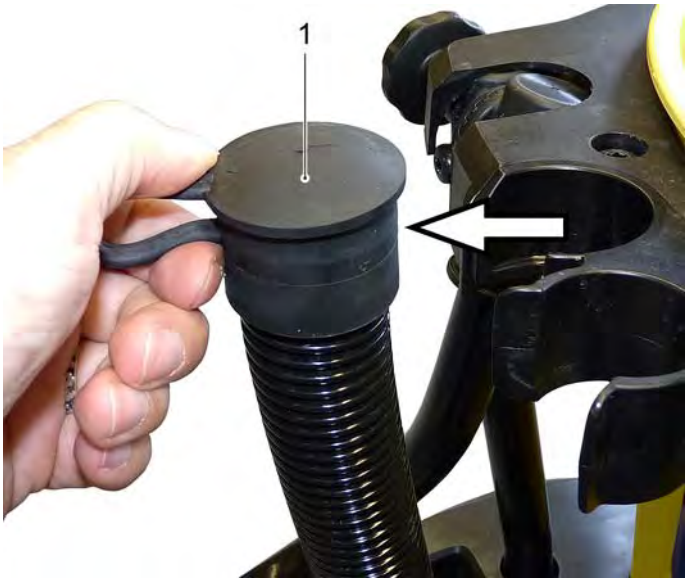


1 Hex on the drain hose
2 Drain hose

➔ Unscrew the drain hose from the waste containers at the hex.
➔ Install the new waste container in reverse order

6.12 Replace drain hose.

➔ Unscrew the drain hose from the waste container as described in the chapter "Replacing the waste container".



1 Drain hose

➔ Remove the drain hose from the support and replace it.

➔ Install the new drain hose in reverse order.

6.13 Replacing the steering roller

1 Nut, steering roller

2 Steering roller

➔ Loosen the nut.

➔ Remove the steering roller toward the bottom and replace it.

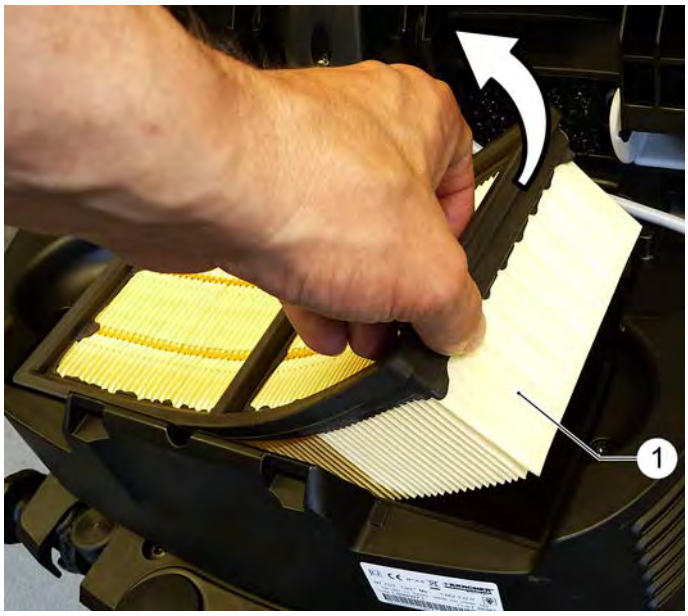
➔ Install the new steering roller in reverse order.

7 Maintenance and care

⚠ Danger

First pull out the plug from the mains before carrying out any tasks on the machine.

7.1 Exchanging the flat pleated filter



1 Flat fold filter

➔ Open filter door.

➔ Replace the flat pleated filter.

➔ Close the filter door, it must lock into place.

7.2 Clean the electrodes overflow fuse.

➔ Release and remove the suction head.

➔ Clean the electrodes.

➔ Insert and lock the suction head.

8 Troubleshooting

⚠ ***Danger***

First pull out the plug from the mains before carrying out any tasks on the machine.

8.1 Suction turbine does not run

➔ Turn on the appliance.
➔ Container (in wet vacuuming mode) is full. Empty the container.
➔ Check cables, plugs and mains supply.
➔ Check/replace the appliance switch.
➔ Check/clean the electrode overflow fuse.
➔ Check/replace the suction turbine.
➔ Check/replace the PCB.

8.2 The suction turbine will not switch off during wet vacuum cycles when the container is full.

➔ Check/clean the electrode overflow fuse.
➔ Check the fluid level with non-conductive fluid. Upgrade kit for "non-conductive media" (2.641-560.0).
➔ Check/replace the PCB.

8.3 Suction turbine turns off

➔ Empty the container.

8.4 Suction turbine does not start again after the container has been emptied

➔ Turn off the appliance and wait for 5 seconds, turn it on again after 5 seconds.
➔ Clean the electrodes as well as the space between the electrodes.

8.5 Suction capacity decreases

➔ Remove blockages in the suction nozzle, suction tube, suction hose, or flat pleated filter.
➔ Switch the Tact filter cleaning system on/off or replace it.
➔ Exchange the paper filter bag.
➔ Ensure the filter cover properly locks into place.
➔ Check suction system to see if there are any leaks/repair leaks.
➔ Clean or replace the membrane filter (special accessory).
➔ Replace the flat pleated filter.

8.6 Dust comes out while vacuuming

➔ Check for proper installation of the flat pleated filter.
➔ Replace the flat pleated filter.

8.7 Automatic shut-off (wet vacuum cleaning) does not react

➔ Check/clean the electrode overflow fuse.
➔ Continuously check the filling level in case of non-conductive liquid.

8.8 Automatic filter cleaning is not working

➔ Filter cover not properly closed / close properly. The filter cover must audibly lock into place.
➔ Check suction system to see if there are any leaks/repair leaks.
➔ Check/correct the correct positioning of the flat fold filter filter.
➔ Check for leaks between the suction head and the waste container/repair leaks.
➔ Suction hose is not connected.

8.9 Automatic filter cleaning cannot be switched off

➔ Check/replace the Tact filter cleaning system ON/OFF switch.
➔ Check/replace the PCB.

8.10 Automatic filter cleaning cannot be switched on

➔ Check/replace the Tact filter cleaning system ON/OFF switch.
➔ Check/replace the PCB.

9 Technical specifications

Appliance type	Appliance no.:	Circuit diagram	Operating instructions	Spare parts list
NT 65/2 Tact² *EU	1.667-230.0	0.089-252.0	5.963-532.0	5.971-131.0
NT 65/2 Tact² Tc *EU	1.667-231.0	0.089-252.0	5.963-672.0	5.971-245.0
NT 75/2 Tact² Me *EU	1.667-232.0	0.089-252.0	5.963-532.0	5.971-131.0
NT 75/2 Tact² Me Tc *EU	1.667-233.0	0.089-252.0	5.963-672.0	5.971-243.0

The status of the attached circuit diagram represents the creation date of the service manual. This circuit diagram is not updated. When working on the device, please always use the current circuit diagram in Kärcher-Inside.

9.1 Special tools

There are no special tools necessary.

9.2 Tightening torques

No data.

10 Circuit diagram