

**NT 27/1, -Advanced,
NT 27/1 Me, -Me Advanced
NT 48/1
Service Manual**



Contents

1	Preface	3
2	Safety instructions	3
2.1	Hazard levels	3
3	Technical Features	3
3.1	Proper use	3
3.2	General	3
3.3	Filter and vacuum system	3
3.4	Electrical system	3
4	Parts of the system	4
4.1	View of NT 27/1	4
4.2	View of NT 48/1	5
4.3	Suction head removed	6
4.4	Dirt water drain hose on the NT 48/1	6
5	Basic settings and service procedures	7
5.1	Remove cartridge filter	7
5.2	Replace seal	7
5.3	Remove the swimmer	7
5.4	Separate the suction turbine casing from the suction head casing	8
5.5	Replace appliance switch	8
5.6	Replacing the suction turbine	9
5.7	Replacing the abrasive coals of the suction turbine	11
6	Circuit diagram	12
6.1	Circuit diagram 0.088-563.0	12
7	Troubleshooting	13
8	Specifications	13
9	Special tools	13

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:	Case 106770
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The responsible product specialist will take care of your issue.

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Alfred Kärcher GmbH Co. KG
P O Box 160
D - 71349 Winnenden
www.kaercher.com

2 Safety instructions

2.1 Hazard levels

Note

Indicates useful tips and important information about the product.

3 Technical Features

3.1 Proper use

- The machine is meant for dry and wet cleaning of floors and walls.
- This appliance is suited for the commercial use, e.g. in hotels, schools, hospitals, factories, shops, offices, and rental companies.

3.2 General

- Storage compartments for tools on the suction head.
- Container capacity:
 - NT 27/1 = 27 Liter
 - NT 48/1 = 48 Liter
- Clip system for rapid change or connection of accessories.
- Chassis:
 - NT 27/1 = five swivel casters
 - NT 48/1 = two swivel casters, two impellers
- All around ramming protection.
- On the models NT 27/1, NT 27/1 Advanced and NT 48/1, the dirt containers are made of plastic.
- On the models NT 27/1 ME and NT 27/1Me Advanced, the dirt containers are made of stainless steel.

3.3 Filter and vacuum system

- Suction hose connection with bayonet system.
- Additional paper filter bag to vacuum fine dust with closable suction opening for dust-free disposal.
- Cartridge filter, must always be installed during dry vacuuming.
- The models NT 27/1 and NT 27/1 Me are equipped with a standard cartridge filter.
- The models NT 27/1 Advanced, NT 27/1 Me Advanced and NT 48/1 are equipped with a cartridge filter with a larger surface.

3.4 Electrical system

- 1,380 Watts maximum pickup.
- 7.5 m mains cable.
- Bypass suction turbine.

4 Parts of the system

4.1 View of NT 27/1



- 1 Clip system
- 2 Handle
- 3 Suction hose
- 4 Carrying handle
- 5 Cable hook
- 6 Storage compartment for tools
- 7 Lock for suction head (2x), (as of July 2008)
- 8 Lock for suction head (2x)
- 9 Accessory mount
- 10 Dirt receptacle
- 11 Swivel casters (5x)
- 12 Floor nozzle
- 13 Suction tubes 2 x 0.5 m
- 14 Bayonet connector at suction hose
- 15 Suction hose connection

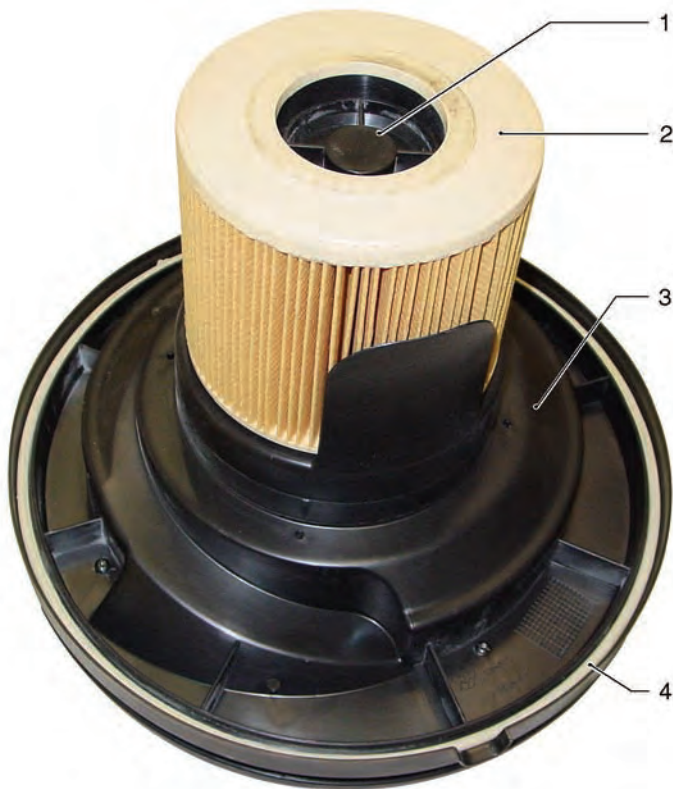
- 16 Suction head
- 17 Appliance switch (S1)

4.2 View of NT 48/1



- | | | | |
|----|---|----|-----------------------------------|
| 1 | Carrying handle | 14 | Bayonet connector at suction hose |
| 2 | Cable hook | 15 | Suction hose connection |
| 3 | Storage compartment for tools | 16 | Suction head |
| 4 | Lock for suction head (2x), (as of July 2008) | 17 | Appliance switch (S1) |
| 5 | Intake for dirt water drain hose | | |
| 6 | Lock for suction head (2x) | | |
| 7 | Dirt water drain hose | | |
| 8 | Dirt receptacle | | |
| 9 | Accessory mount | | |
| 10 | Impeller (2x) | | |
| 11 | Guiding roll with fixed position brake | | |
| 12 | Steering roller | | |
| 13 | Suction hose | | |

4.3 Suction head removed



→ Open the locks on the suction head and remove the suction head (3) from the dirt container (6).



- 1 Fastening nut, cartridge filter
- 2 Cartridge filter
- 3 Suction head
- 4 Seal
- 5 Suction air guide
- 6 Dirt receptacle
- 7 Suction hose connection

4.4 Dirt water drain hose on the NT 48/1



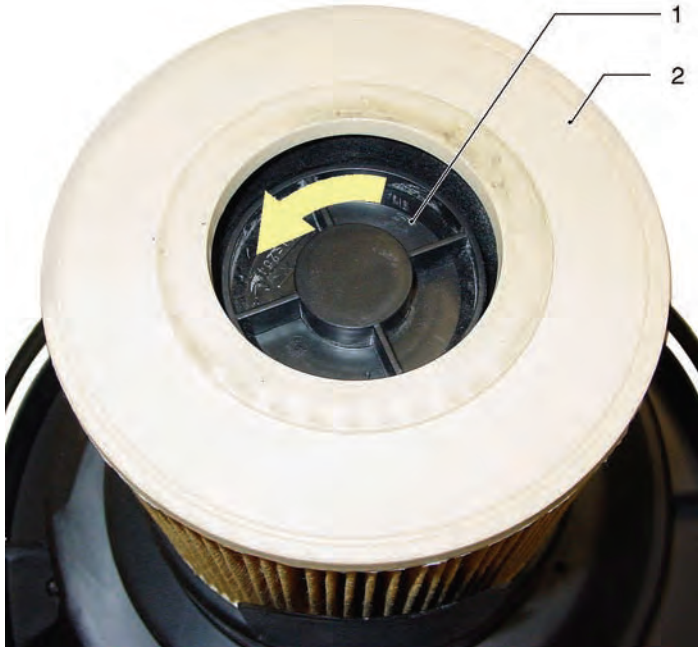
The NT 48/1 is equipped with a dirt water drain hose (2). The dirt water can be drained from the dirt container into a drain chute via this dirt water drain hose.

- Pull the dirt water drain hose (2) off of the intake (1) and place it into a drain chute.
- Let the dirt water drain completely.
- After emptying, reinsert the dirt water drain hose (2) into the intake (1).

- 1 Intake for dirt water drain hose
- 2 Dirt water drain hose

5 Basic settings and service procedures

5.1 Remove cartridge filter



After a certain amount of use, the cartridge filter is dirty and must be cleaned or replaced as needed.

- Remove the suction head (see chapter 4.2).
- Unscrew the fastening nut (1).
- Remove the cartridge filter (2) toward the top.
- Install the cleaned or new cartridge filter in reverse order.

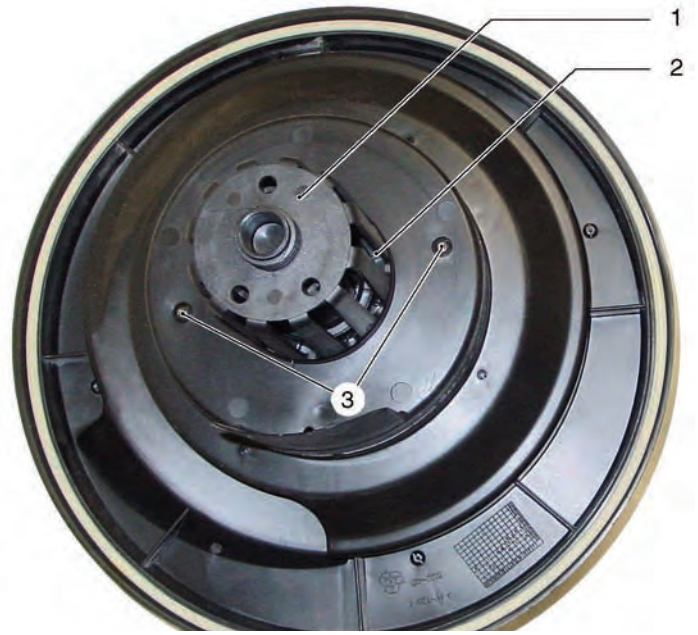
5.2 Replace seal



The seal (arrow) in the suction head can be replaced as follows if needed.

- Remove the suction head (see chapter 4.2).
- Remove the seal from the suction head and insert new seal.

5.3 Remove the swimmer



Remove the swimmer as follows to clean it.

- Remove the cartridge filter (see chapter 5.1).
- Remove the fastening screws (3).



- Remove the swimmer casing (1).
- Remove the swimmer (2) from the swimmer casing. The swimmer can now be cleaned or replaced if necessary.

Note

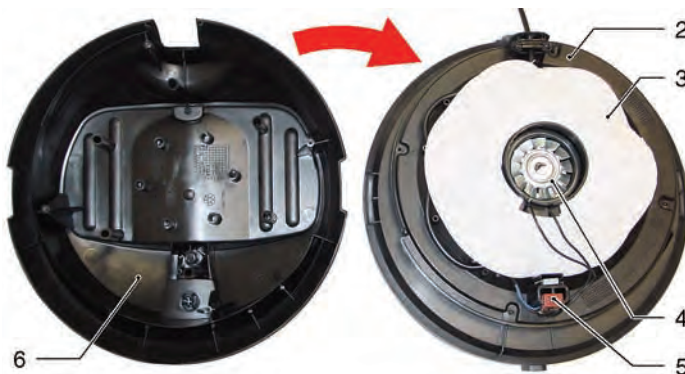
When installing the swimmer (2) make sure that the open side of the swimmer is located inside the swimmer casing. If the swimmer (2) is inserted the wrong way, it will lose its efficiency. This can cause damages to the appliance.

- 1 Swimmer casing
- 2 Float
- 3 Fastening screws (2x), swimmer casing

5.4 Separate the suction turbine casing from the suction head casing



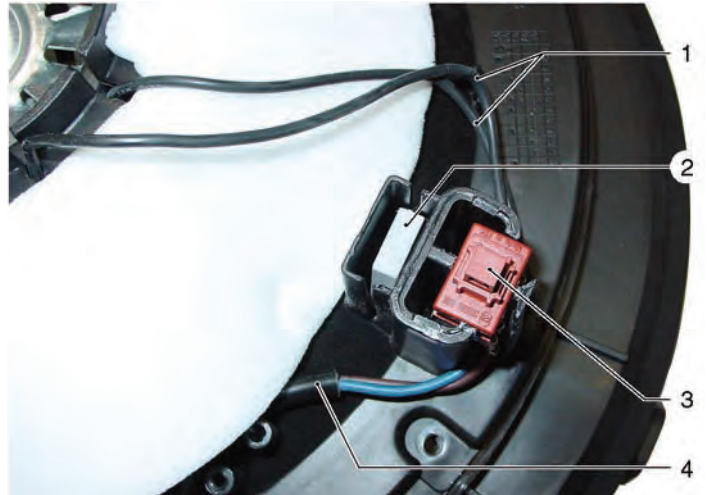
- Remove the suction head (see chapter 4.2).
- Remove the fastening screws (1).



- Remove the suction turbine casing (2) from the suction head casing (6).

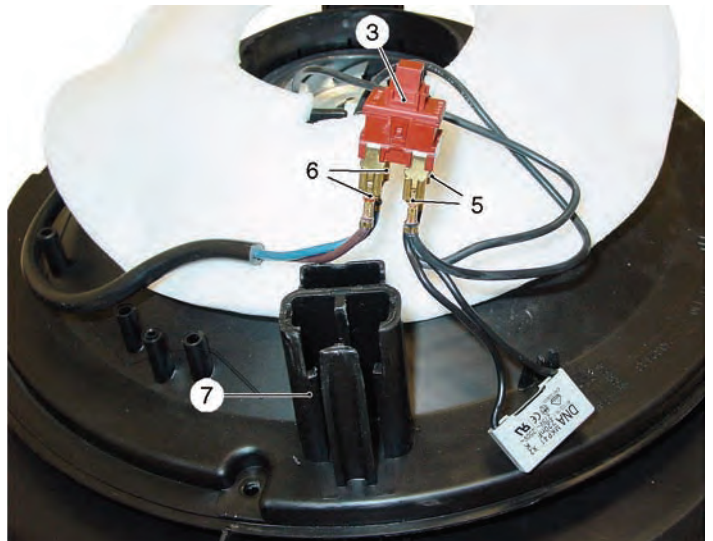
- 1 Fastening screws (4x), suction turbine casing
- 2 Suction turbine housing
- 3 Insulation
- 4 Suction turbine (M1)
- 5 Appliance switch (S1)
- 6 Suction head casing

5.5 Replace appliance switch



If the appliance switch (3) is defective, it can be replaced as follows.

- Separate the suction turbine casing from the suction head casing (see Chapt. 5.4).

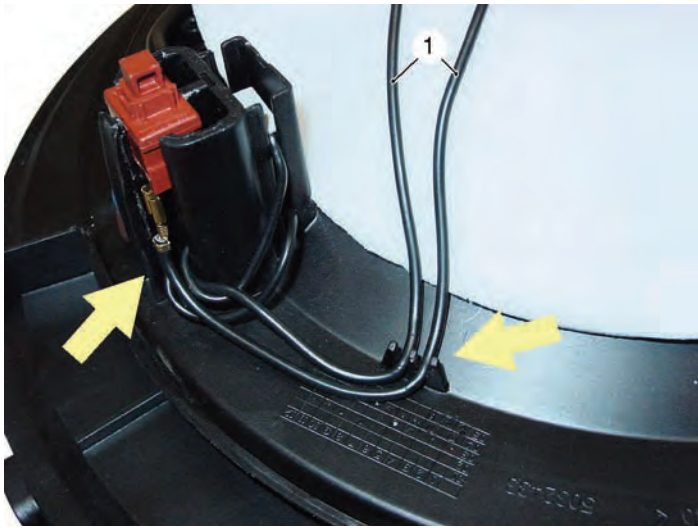


- Pull the appliance switch (3) out of the holder (7).
- Pull all four connector plugs (5, 6) off of the appliance switch (3).
- Install the new appliance switch in reverse order.

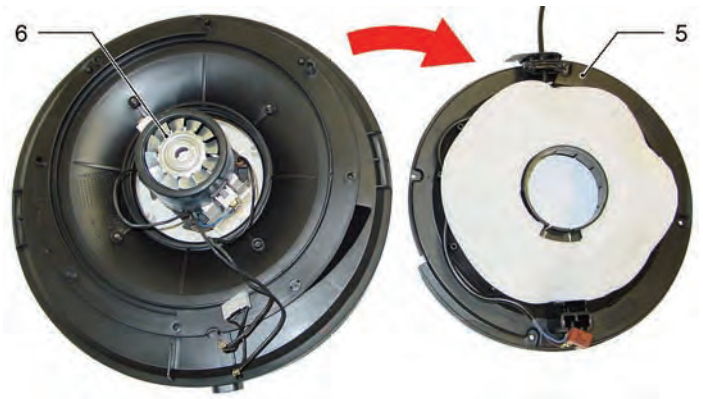
Note

When installing the appliance switch, make sure that all connecting cables are routed in their respective cable guides (arrows) and that the de-interference capacitor (2) is installed in the holder (7).



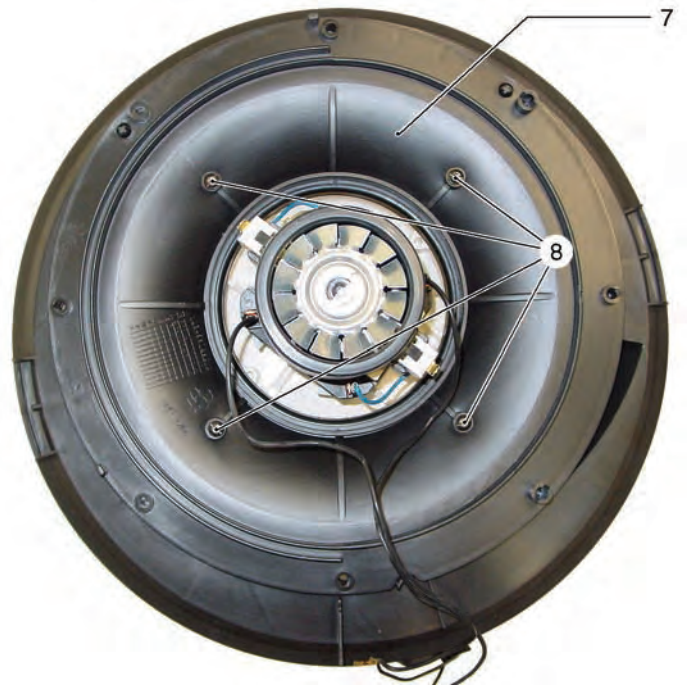


→ Pull the connecting cable of the suction turbine out of the cable slots (arrows).



→ Remove the cover (5) from the suction turbine casing.

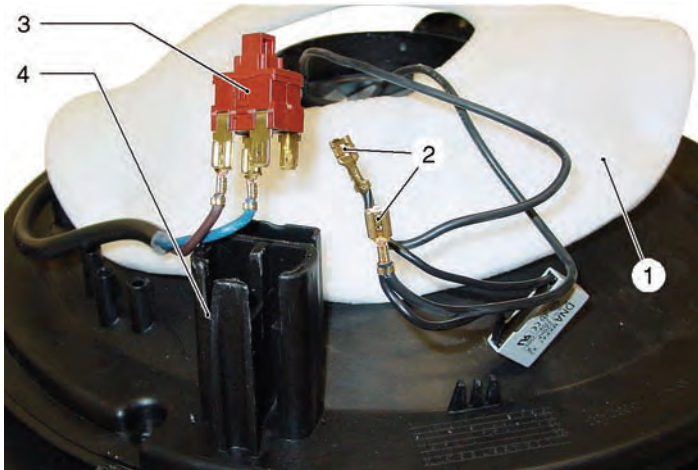
- 1 Connecting cable, suction turbine (M1)
- 2 De-interference capacitor (C1)
- 3 Appliance switch (S1)
- 4 Mains cable
- 5 Connector plug (2x), suction turbine and de-interference capacitor
- 6 Connector plug (2x), mains cable
- 7 Bracket



→ Remove the fastening screws (8) of the suction channel cover (7).

→ Remove the suction channel cover (7).

5.6 Replacing the suction turbine

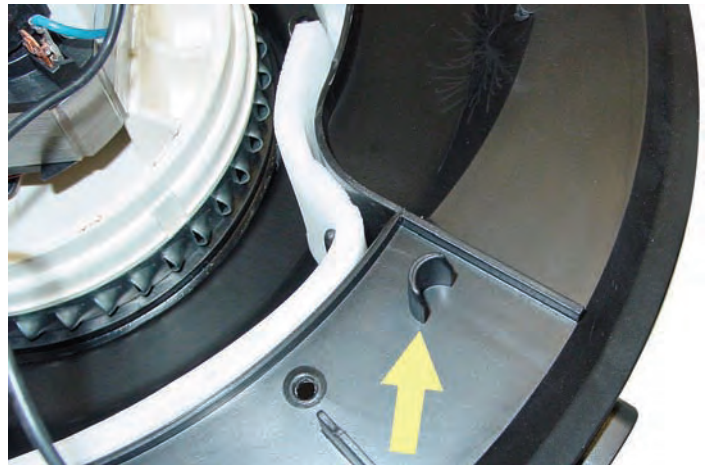
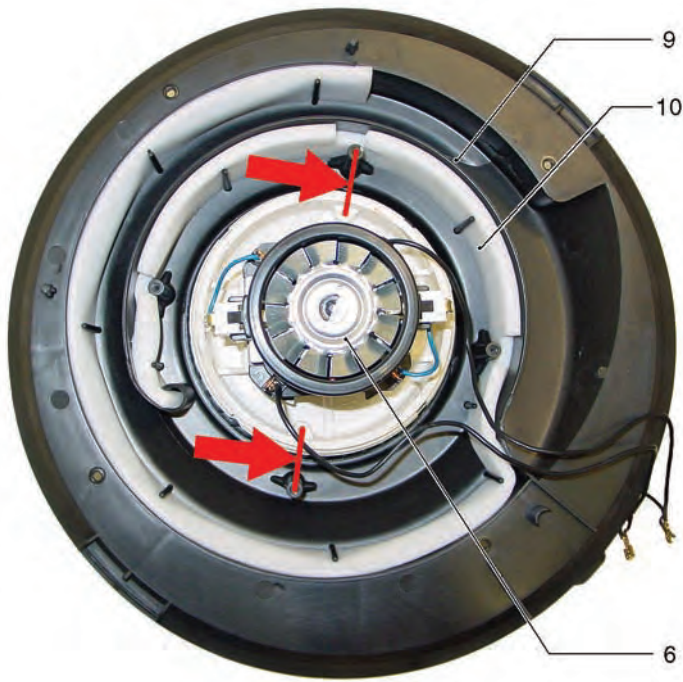


→ Separate the suction turbine casing from the suction head casing (see Chapt. 5.4).

→ Pull the appliance switch (3) out of the holder (4).

→ Pull the connecting cable (2) of the suction turbine (6) off of the appliance switch (3).





There is a semi-circular stop in the suction turbine casing.

→ Place the suction channel cover (7) on the suction turbine casing, so that the semi-circular stop of the suction turbine casing rests in the semi-circular recess of the suction channel cover (7).

→ The suction turbine (6) can be removed for cleaning or replacement.

Note

When installing the suction turbine, watch for correct placement. The protrusions on the suction turbine must be aligned with the screw heads (see arrows).

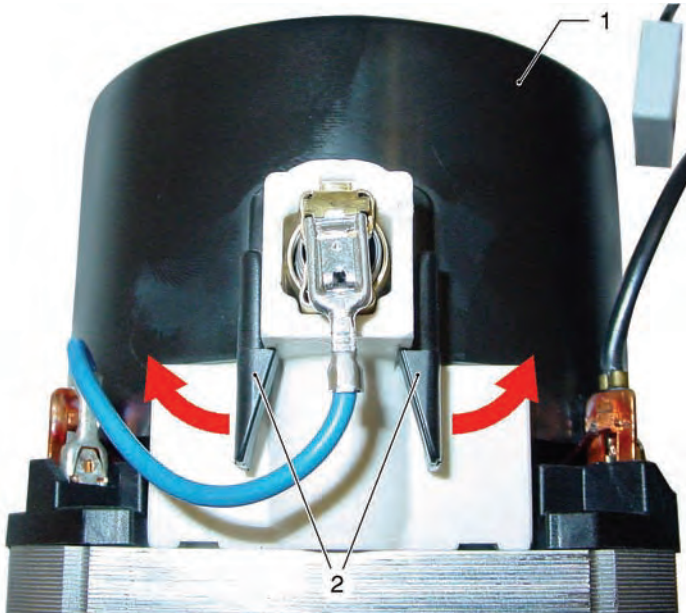
Observe the following when installing the suction channel cover (7):

- 1 Insulation
- 2 Connecting cable, suction turbine (M1)
- 3 Appliance switch (S1)
- 4 Bracket
- 5 Cover
- 6 Suction turbine (M1)
- 7 Suction channel cover
- 8 Fastening screws (4x), suction channel cover
- 9 Suction channel
- 10 Insulation



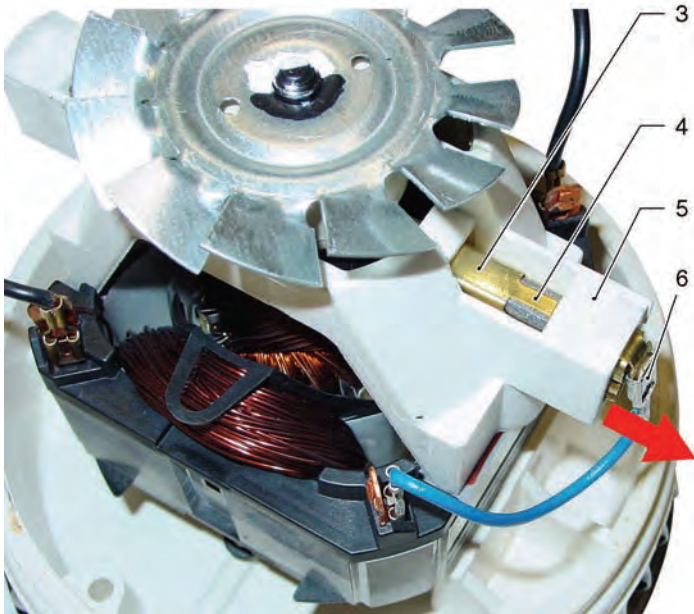
The suction channel cover (7) has a semi-circular recess on its edge.

5.7 Replacing the abrasive coals of the suction turbine



If the abrasive coals on the suction turbine (M1) are worn, they can be replaced as follows.

- Press the locking noses (2) on both sides of the cover (1) slightly toward the outside and remove the cover (1) toward the top.



- Pull off the connector plug (6).
- Press the safety flag (4) down and pull the abrasive coal (3) out of the abrasive coal chute (5).
- Install the new abrasive coal in reverse order.

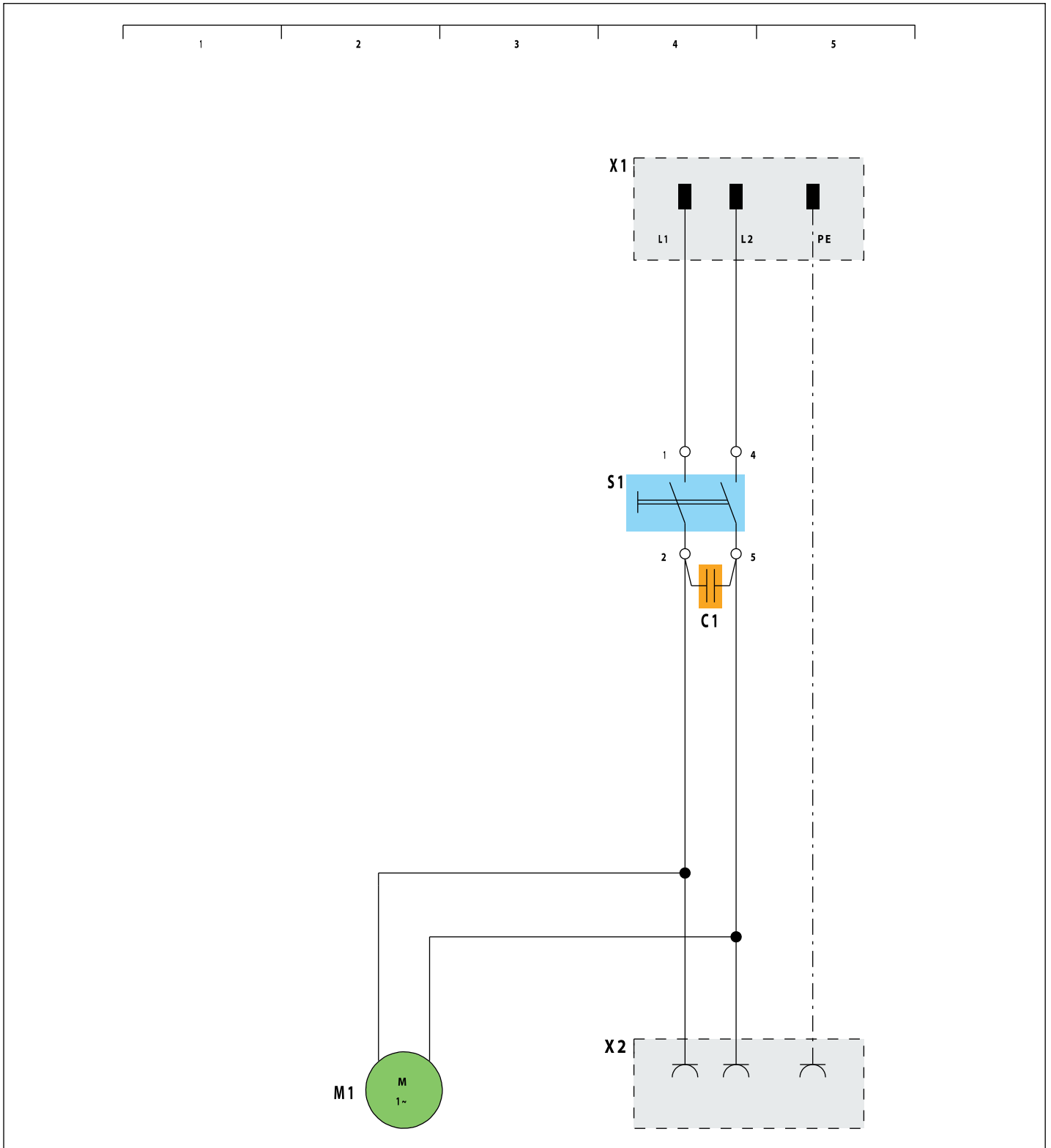
Note

After inserting the new abrasive coal into the abrasive coal chute, the safety flag must be bent slightly toward the top. This secures the abrasive coal from inadvertently slipping out of the abrasive coal chute.

- 1 Cover
- 2 Locking noses (4x)
- 3 Abrasive coal (2x)
- 4 Safety flag
- 5 Abrasive coal chute
- 6 Connection plug

6 Circuit diagram

6.1 Circuit diagram 0.088-563.0



C1	De-interference capacitor
M1	Suction turbine
S1	Power switch
X1	Mains plug
X2	Socket (TE version only)

7 Troubleshooting

Malfunction	Remedial action	
Suction turbine does not run	Turn on the machine.	
	Check cables, plugs, fuse, and socket.	
	Check/replace the appliance switch.	S1
	Check/replace the suction turbine.	M1
Vacuum turbine is running but the machine is not sucking in dust/dirt	Float is blocking the suction channel/empty dirt container.	
Suction capacity decreases	Dirt container full/empty.	
	Suction head not closed properly/close properly.	
	Check the suction nozzle, the suction pipe, suction hose and cartridge filter for obstructions/clear if necessary.	
	Exchange the paper filter bag.	
	Check suction system to see if there are any leaks/repair leaks.	
	Cartridge filter is defective/replace.	
Dust comes out during the vacuuming	Dirt container or paper filter bag full/empty or replace paper filter bag.	
	Check the correct installation of the cartridge filter/correct.	
	Cartridge filter is defective/replace.	

8 Specifications

Appliance type	Appliance no.	Circuit diagram	operating instructions	Spare parts list
NT 27/1	1.428-501.0	0.088-563.0	5.960-508.0	5.970-057.0
NT 27/1 Advanced	1.428-511.0	0.088-563.0	5.960-508.0	5.970-057.0
NT 27/1 Me	1.428-101.0	0.088-563.0	5.960-508.0	5.970-057.0
NT 27/1 Me Advanced	1.428-111.0	0.088-563.0	5.960-508.0	5.970-057.0
NT 48/1	1.428-601.0	0.088-563.0	5.961-555.0	5.970-447.0

The technical specification sheet and the circuit diagram will be included in the next version of the spare parts CD (DISIS) and in the Intranet.

The operating instructions and the spare parts list can be requested in paper form with the respective part numbers from our spare parts service department.

9 Special tools

Description	Part number
Not required	