KÄRCHER

New Unit Information

NT 35/1 Eco, Eco Te, Eco M, Eco H

1.184-...

NT 45/1 Eco, Eco Te, Eco M, Eco H

1.145-...

NT 55/1 Eco, Eco Te, Eco M, Eco H

1.146-...

New Unit Information 04.2007 **5.906-314.0**

General

– Wet/dry vacuum cleaner for cleaning floor and wall surfaces for commercial use in hotels, schools, hospitals, factories, stores, offices, etc.
– Storage area for tools on the suction head.
– Tank volume:

NT 35/1 Eco	=	35 l
NT 45/1 Eco	=	45 l
NT 55/1 Eco	=	55 l

Eco M and H versions only:

– Wet/dry vacuum cleaner for cleaning floor and wall surfaces for commercial use in contracting trades (installers, carpenters), construction industry/trades, automobile industry, chemical and pharmaceutical industry.

NT 55/1 Eco only:

– Drain hose to empty liquids.
– Push handle.
– Swivel caster brackets as impact guard.

Filter and vacuum system

– Paper filter bag that can be closed for dust-free disposal.
– Suction hose connection (DN 35) with bayonet system.
– TACT Filter cleaning technology (Triggered Air draft Cleaning Technology). Automatic add-on filter cleaning.
– Electronic level control (in the wet vacuum mode) automatically switches the turbine of when reaching the maximum liquid filling level.

Eco M version only:

– Selector switch, adjustable to the hose diameter (21, 27 and 35 mm).
– Automatic air velocity monitor with warning signal.
– Eco flat pleated filter, dust classification M.

  Additional paper filter bag or diaphragm filter (optional accessories) must be used prior to vacuuming fine dust, such as:
– Granulates, sanding dust and sawdust (metal, plastic, ceramic, paint and wood dust), etc.

Eco H version only:

– Selector switch, adjustable to the hose diameter (21, 27 and 35 mm).
– Automatic air velocity monitor with warning signal.
– Eco flat pleated filter, dust classification H.

  Additional paper filter bag or diaphragm filter (optional accessories) must be used prior to vacuuming carcinogenic fine dust, such as:
– Lead, carbon, tar, nickel, quartz dust, asbestos of low tarif storage heating, asbestos insulation and fire protection walls, Eternit roofing plates, etc.

Electrics

– Motor:

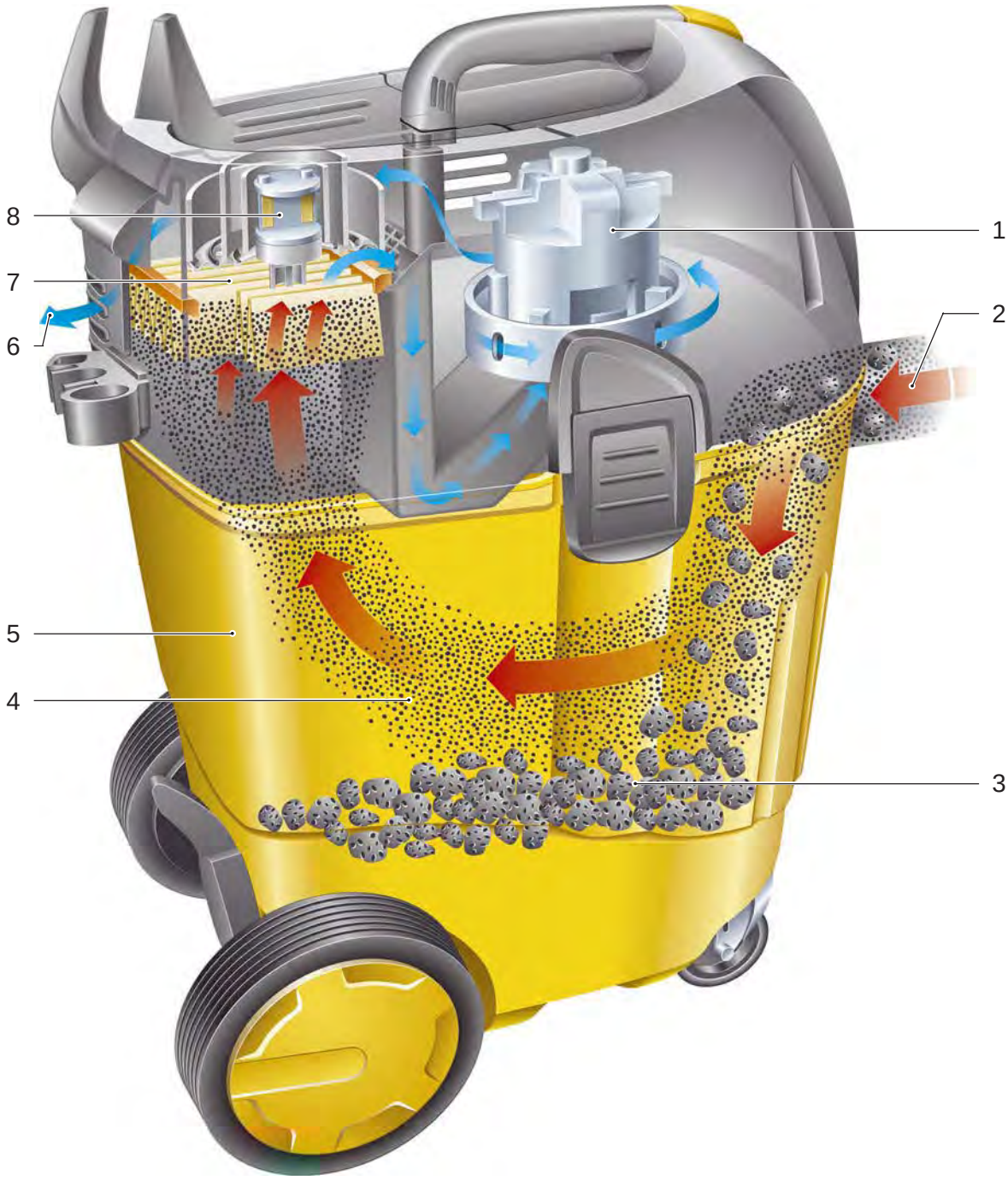
  Eco, Eco Te, Eco M versions: 1380 watts

  Eco H version: 1000 watt
– 7.5 m mains cable
– Bypass suction motor.

Eco Te, M, H versions only:

– Plug socket with micro switch on the plug socket cover and standby function for the connection of an electrical tool.
– Switch on/off electronics: The suction motor only engages at a start-up delay of 0.5 seconds and disengages at a holding period of 12-15 seconds when working with an electronic tool.
– Switch on/standard accessory switch off electronics with control light (LED) for standby operation.
– Continuous speed control.
– Anti-static system for the deflection of static charges.

Vacuum system: Suction feed operation



1 Suction motor (M1)
2 Air inlet
3 Coarse dirt
4 Fine dust
5 Dirt container
6 Air discharge
7 Flat pleated filter
8 TACT Filter cleaning system (Triggered Air draft Cleaning Technology)

The air flows from the air inlet (2) through the dirt container (5) and the flat pleated filter (7) via the suction motor (1) outside (6).

Front view of the NT 45/1 Eco and Eco Te

Te Version

Front view of the NT 45/1 Eco and Eco Te

1 Cable / hose hook (2x):
2 Storage area
3 Filter cover
4 Air discharge, working air
5 Air inlet, motor cooling air
6 Locking device, suction head
7 Dirt container
8 Wheel (2x)
9 Swivel caster (2x)
10 Suction hose connection with bayonet locking system.
11 Suction head
12 ON/OFF (S3) switch, TACT filter cleaning system
13 Unit switch (S1)
14 Fresh air for TACT filter cleaning
15 Carrying handle
16 Control light (H1), plug socket (Te Version)
17 Speed control (N2), seamless (Te Version)
18 Plug socket (X2) (Te Version)

Speed control (Eco Te, M, H versions)

The suction performance can be adjusted for the use of various electrical tools due to the seamless speed control (17) (60 - 100%).

Plug socket (Eco Te, M, H versions)

Electrical tools with a connected load of 100 - 2200 watts can be connected to the plug socket (18). The vacuum cleaner is in the standby mode and the control light (16) is illuminated as soon as the electrical tool is plugged in. The vacuum cleaner is switched on and off via the electrical tool.

The start of the vacuum cleaner is delayed by approx. 0.5 seconds when switching on the electrical tool. The vacuum cleaner operates approx. another 15 seconds after switching off the electrical tool. This guarantees that the suction hose is completely emptied.

Rear view of the NT 45/1 Eco and Eco Te

1 Cable / hose hook, right
2 Accessories holder
3 Mains connection cable
4 Holder for the floor tool
5 Wheel, right
6 Wheel, left
7 Air discharge, working air
8 Handle on the filter cover
9 Cable / hose hook, left

Front view of the NT 55/1 Eco and Eco Te

Te Version

Front view of the NT 55/1 Eco and Eco Te

1 Push handle
2 Cable / hose hook (2x):
3 Storage area
4 Filter cover
5 Air discharge, working air
6 Air inlet, motor cooling air
7 Locking device, suction head
8 Dirt container
9 Wheel (2x)
10 Swivel caster (2x)
11 Ram protector
12 Suction hose connection with bayonet locking system.
13 Suction head
14 ON/OFF (S3) switch, TACT filter cleaning system
15 Unit switch (S1)
16 Fresh air for TACT filter cleaning
17 Carrying handle
18 Control light (H1), plug socket (Te Version)
19 Speed control (N2), seamless (Te Version)
20 Plug socket (X2) (Te Version)

Speed control (Eco Te, M, H versions)
Description on page 5.

Plug socket (Eco Te, M, H versions)
Description on page 5.

Rear view of the NT 55/1 Eco and Eco Te

1 Push handle
2 Cable / hose hook, right
3 Cable hook, on the right on the accessories holder
4 Accessories holder
5 Mains connection cable
6 Holder for the floor tool
7 Wheel, right
8 Wheel, left
9 Waste water drain hose
10 Cable hook, on the left on the accessories holder
11 Air discharge, working air
12 Handle on the filter cover
13 Cable / hose hook, left

Front view of the NT 35/1 Eco M

Front view of the NT 35/1 Eco M

1 Cable / hose hook (2x):
2 Storage area
3 Filter cover
4 Air discharge, working air
5 Suction, suction motor cooling
6 Locking device, suction head
7 Dirt container
8 Wheel (2x)
9 Swivel caster (2x)
10 Retaining plug, suction hose connection
11 Warning label, reference to dust classification M
12 Suction hose connection with bayonet locking system.
13 Suction head
14 Control light (H1), plug socket (Te Version)
15 Selector switch, hose diameter 21mm, 27 mm, 35 mm / automatic air velocity control
16 Speed control (N2), seamless (Te Version)
17 Plug socket (X2)
18 ON/OFF (S3) switch, TACT filter cleaning system
19 Unit switch (S1)
20 Fresh air for TACT filter cleaning
21 Carrying handle

Speed control (Eco Te, M, H versions)

Description on page 5.

Plug socket (Eco Te, M, H versions)

Description on page 5.

Selector switch, hose diameter / automatic air velocity control

Various hose diamters can be connected to a suction hose connection via a tool sleeve (see page 33, item 1). The selector switch(15) can be adjusted to the hose diameters of 21 mm, 27 mm and 35 mm. If the wrong hose diamter is set or if the filter is jammed, the air velocity drops below 20 m/sec. and the automatic air velocity responds, a warning tone sounds.

Warning label (11)

The warning label (11) points out that hazardous dust of dust classification M may be located in the dirt container (7).

Front view of the NT 35/1 Eco H

Front view of the NT 35/1 Eco H

1 Cable / hose hook (2x):
2 Storage area
3 Filter cover
4 Decal, information concerning the suitability to vacuum asbestos
5 Air discharge, working air
6 Suction, suction motor cooling
7 Locking device, suction head
8 Dirt container
9 Wheel (2x)
10 Swivel caster (2x)
11 Retaining plug, suction hose connection
12 Warning label, reference to dust classification H
13 Suction hose connection with bayonet locking system.
14 Suction head
15 Control light (H1), plug socket (Te Version)
16 Selector switch, hose diameter 21mm, 27 mm, 35 mm / automatic air velocity control
17 Speed control (N2), seamless (Te Version)
18 Plug socket (X2)
19 ON/OFF (S3) switch, TACT filter cleaning system
20 Unit switch (S1)
21 Fresh air for TACT filter cleaning
22 Carrying handle

Speed control (Eco Te, M, H versions)

Description on page 5.

Plug socket (Eco Te, M, H versions)

Description on page 5.

Selector switch, hose diameter / automatic air velocity control

Description on page 11.

Adhesive label (4)

Information that the unit is suitable to vacuum asbestos dust.

Warning label (12)

The warning label (12) points out that hazardous dust of dust classification H may be located in the dirt container (8).

View from above

1 Suction head, upper housing
2 TACT upper housing (on the filter cover)
3 Fastening screws (5x), suction head, upper housing
4 Fastening screws (4x), TACT upper housing

Note
The filter cover of the H versions must also be secured by a screw (see arrow for the location) and can only be opened with a suitable tool.

Container, view from inside

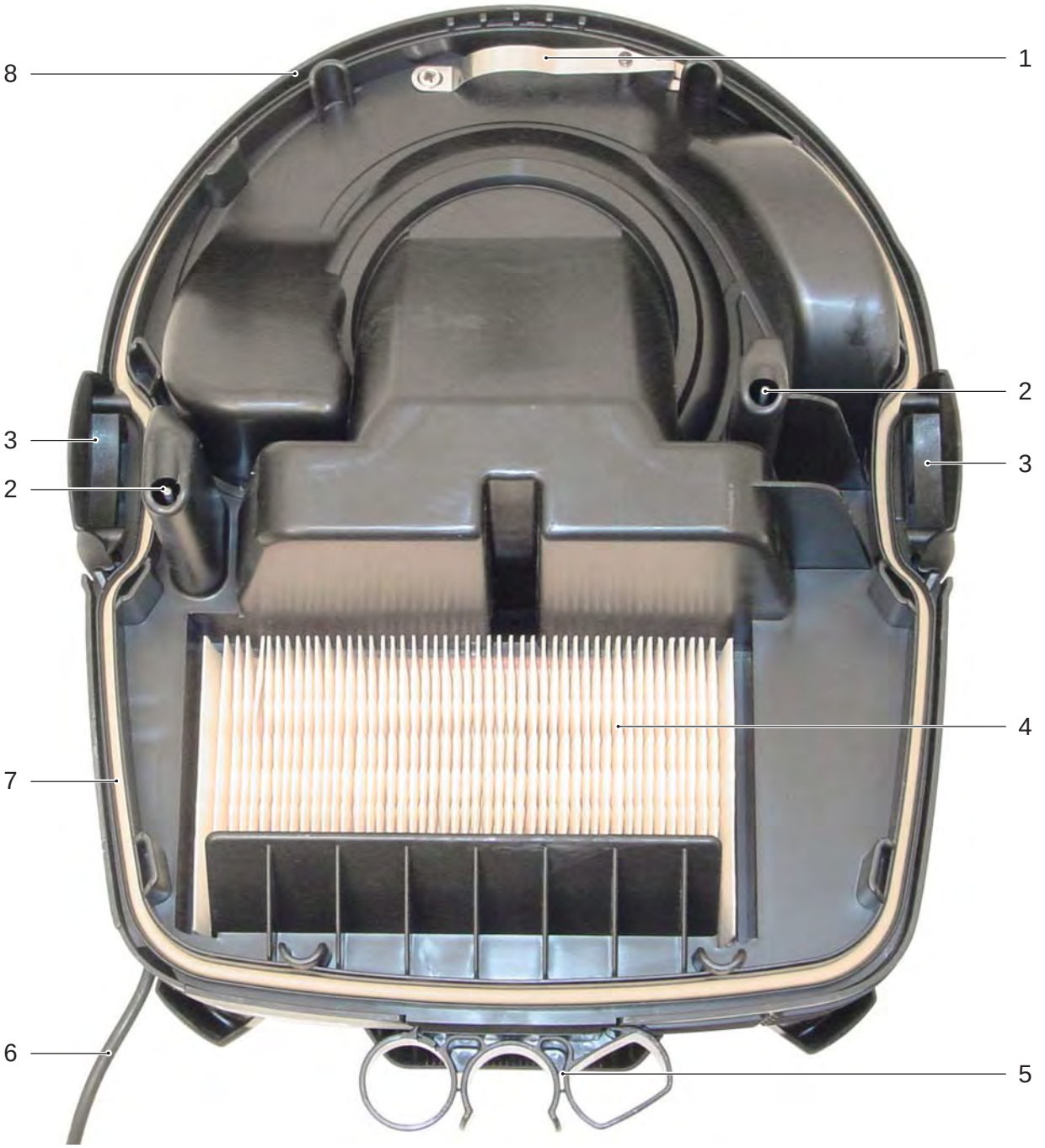
1 Dirt container
2 Ground contact (anti-static, for Eco Te, M, H versions)
3 Intake air duct

Anti-static (Te, M and H versions)

Electrostatic charges may develop in the unit when vacuuming under certain conditions. A ground contact (2) is attached to the intake air duct (3) to divert these charges.

An electrically conductive suction hose (option) can be connected to prevent charging the vacuum accessories.

Suction head, view from below



1 Ground contact (anti-static, for Eco Te, M, H versions)
2 Electrodes (B1), overflow protection (2x)
3 Container lock
4 Flat pleated filter
5 Accessories holder
6 Mains connection cable
7 Seal
8 Suction head, upper housing

Note
The unit switches off automatically when the container is filled with liquid until it contacts both electrodes (2). This is not the case, if non-conductive liquids such as oils, grease and drill emulsions are vacuumed.

The filling level must be continuously checked and the container must be emptied in time.

An accessory kit „non-conductive media“ with the part number 2.641-560.0 is offered as an option. It is switched off by a float switch.

Suction head, filter cover open

1 Handle on the filter cover
2 Filter cover
3 Housing, TACT filter cleaning system
4 Air inlet
5 Flat pleated filter

Replace filter

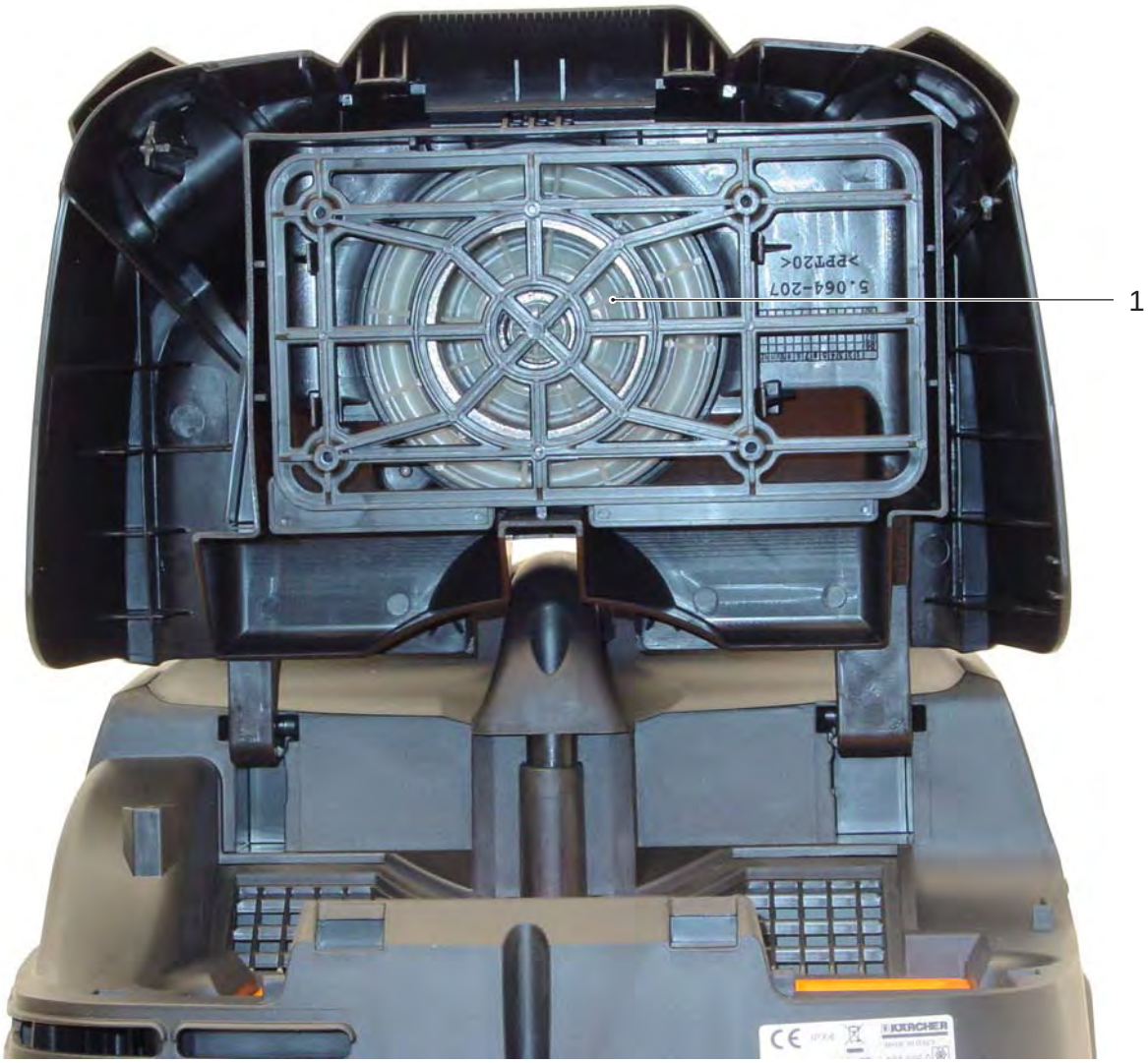
– Open the filter cover (2) on the handle (1).
– Pull the flat pleated filter (5) upward and out.
– Reinsert the new filter and verify the proper seating of the filter.
– The filter cover (2) must audibly snap in when closing.

Note
The flat pleated filter must always be installed when wet and dry vacuuming.

The flat pleated filter must be cleaned and dried after finishing wet vacuuming.

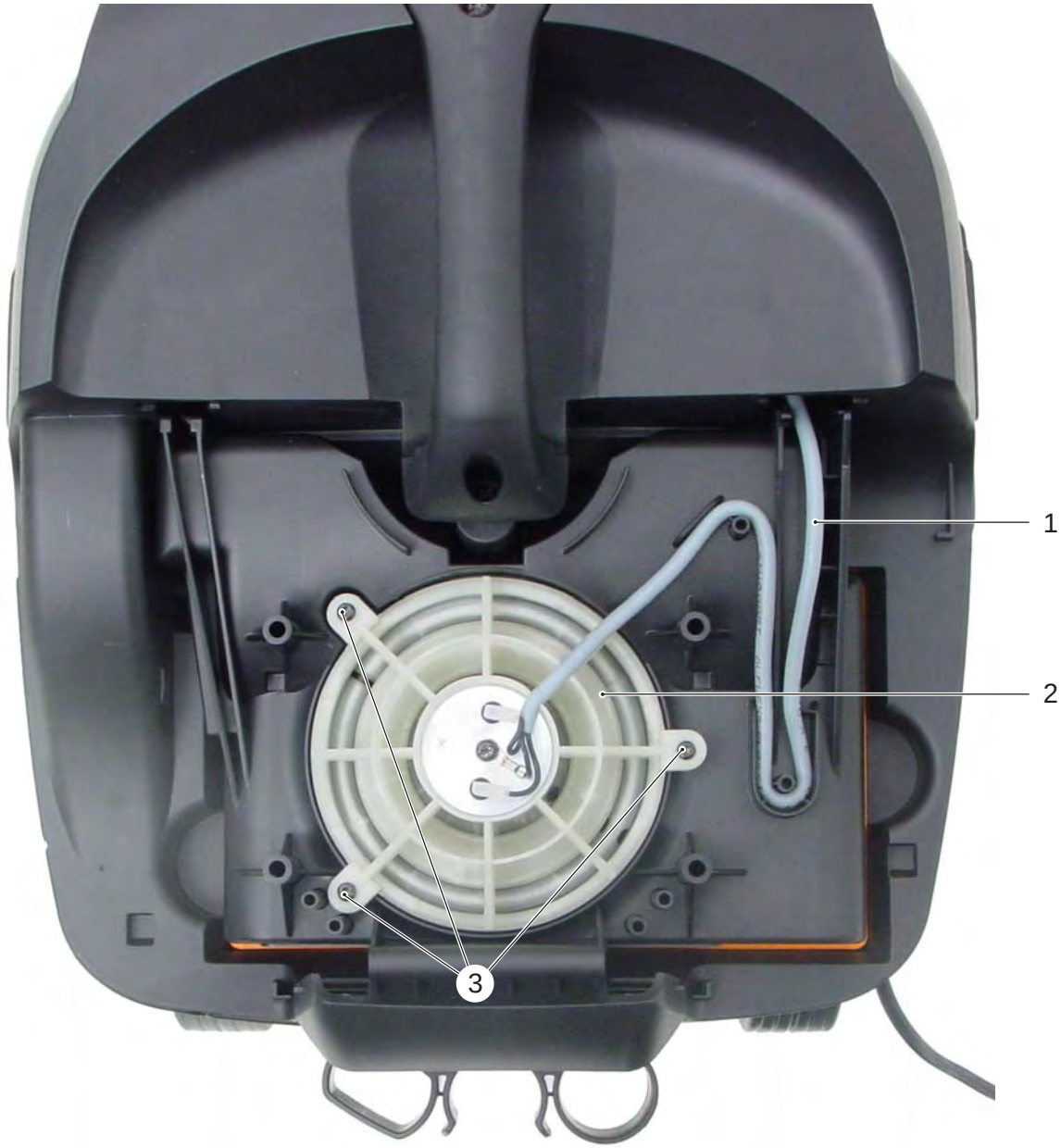
A paper filter bag or a diaphragm filter (optional accessories) must also be used when vacuuming fine dust. These must always be removed prior to wet vacuuming.

Suction head, filter cover open



1 TACT filter cleaning system

TACT Filter cleaning system (Triggered Air draft Cleaning Technology), cover removed



1 Connecting cable on the TACT electromagnet
2 TACT filter cleaning system
3 Retaining screws (3x)

Remove TACT filter cleaning system

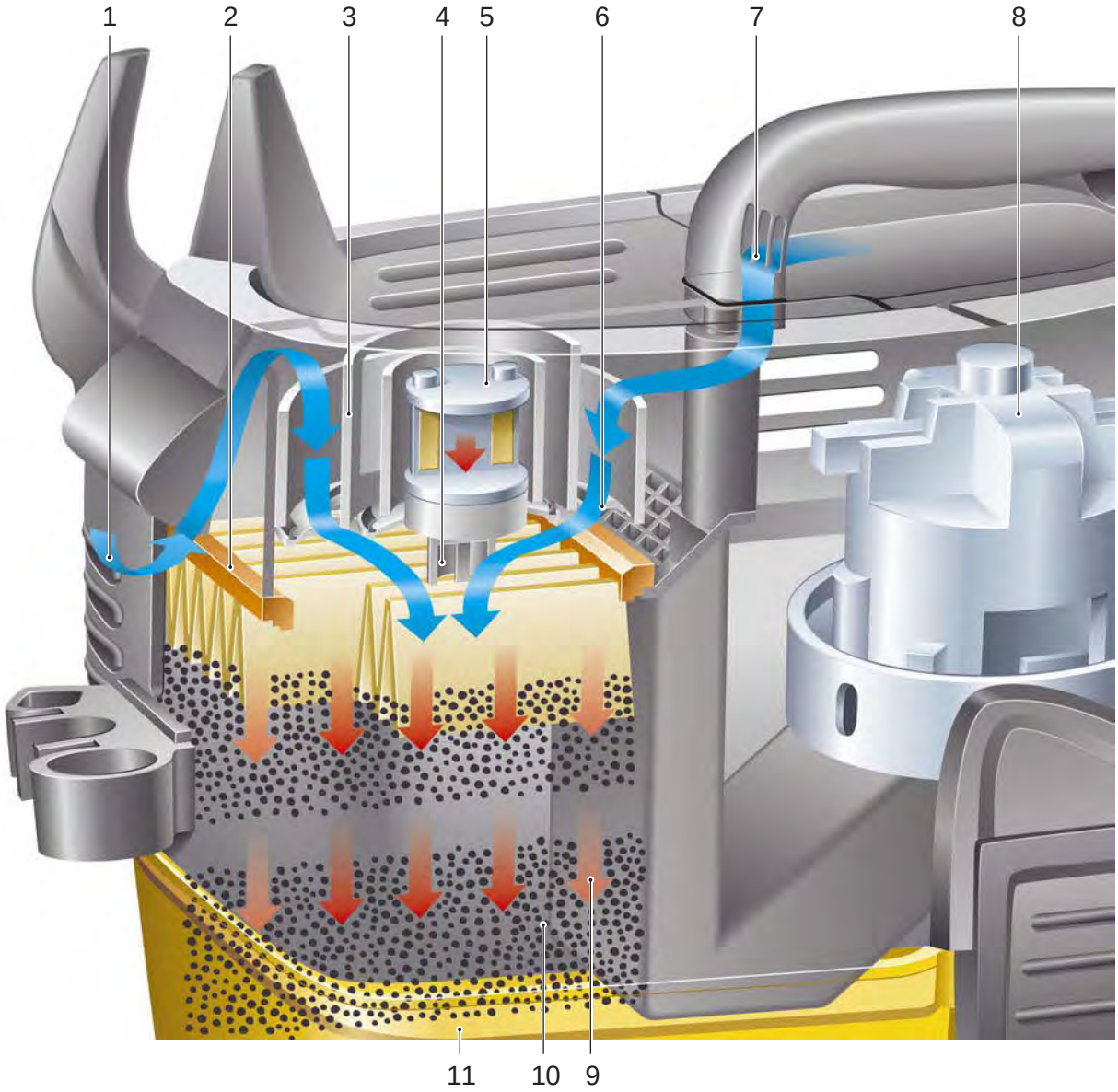
– Remove retaining screws (see page 14, item 4).
– Remove the TACT upper housing (see page 14, item 2).
– Remove the retaining screws (3).
– Remove the connection cable.
– Assembly to be completed in reverse sequence.

Note
The connecting cable (1) must be assembled when the filter cover is open in order to prevent tensile loads on the connecting cable (1).

TACT Filter cleaning system (Triggered Air draft Cleaning Technology)

1 Connecting cable on the TACT electromagnet
2 Electromagnet (L1)
3 Retaining screws (3x)
4 Magnetic holder
5 O-seal
6 Valve disk
7 Spring
8 Spring

TACT Filter cleaning system (Triggered Air draft Cleaning Technology), function diagram



1 Air inlet
2 Flat pleated filter
3 Magnetic holder
4 Spring
5 Electromagnet (L1)
6 Valve disk
7 Air inlet at the handle
8 Suction motor (M1)
9 Air flow
10 Fine dust
11 Dirt container

Note
The TACT filter cleaning system can only be switched on/off with the vacuum cleaner turned on.

The flat pleated filter quickly jams when vacuuming large fine dust quantities. The electromagnet (5) opens the diaphragm (6) every 15 seconds when the TACT filter cleaning system is switched on, so that an air flow cleans the flat pleated filter due to a sudden pressure return.

Switch on the TACT filter cleaning system:

– Press the ON/OFF switch (see page 4, item 12 and page 7, item 14). The control light in the switch is illuminated in green.

Switch off the TACT filter cleaning system:

– Again press the ON/OFF switch (see page 4, item 12 and page 7, item 14). The control light in the switch goes out.

It is recommended to switch off the TACT filter cleaning system when vacuuming coarse dirt and liquids.

Upper housing is removed from the suction head (Eco version)

1 Upper housing, suction head
2 Connecting cable on the TACT electromagnet
3 Container closure (2x)
4 TACT filter cleaning system
5 Flat pleated filter
6 Air inlet
7 Air discharge
8 Suction motor (M1)
9 Printed circuit board (N1)
10 Unit switch (S1)
11 ON/OFF (S3) switch, TACT filter cleaning system

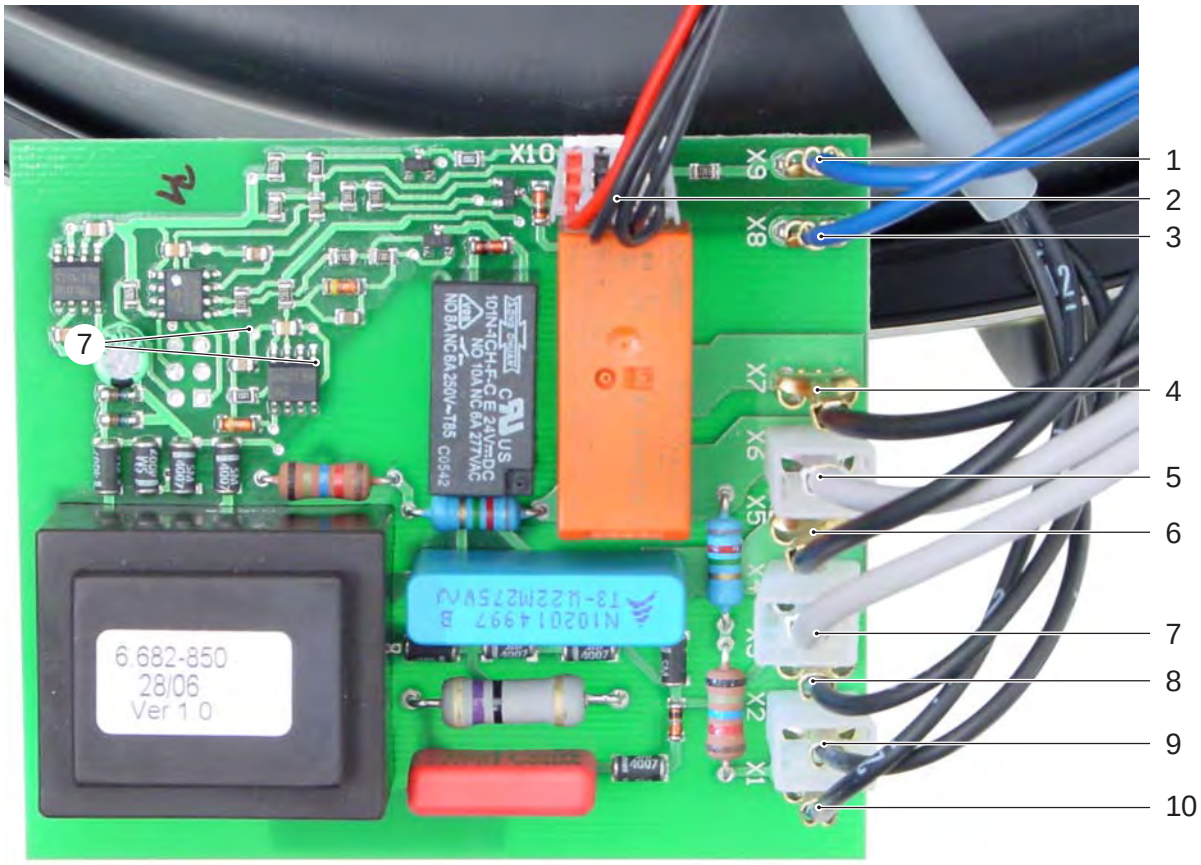
Remove the upper housing from the suction head

– Remove retaining screws (see page 14, item 3).
– Remove the upper housing (1).
– Assembly to be completed in reverse sequence.

Upper housing is removed from the suction head (Eco version)

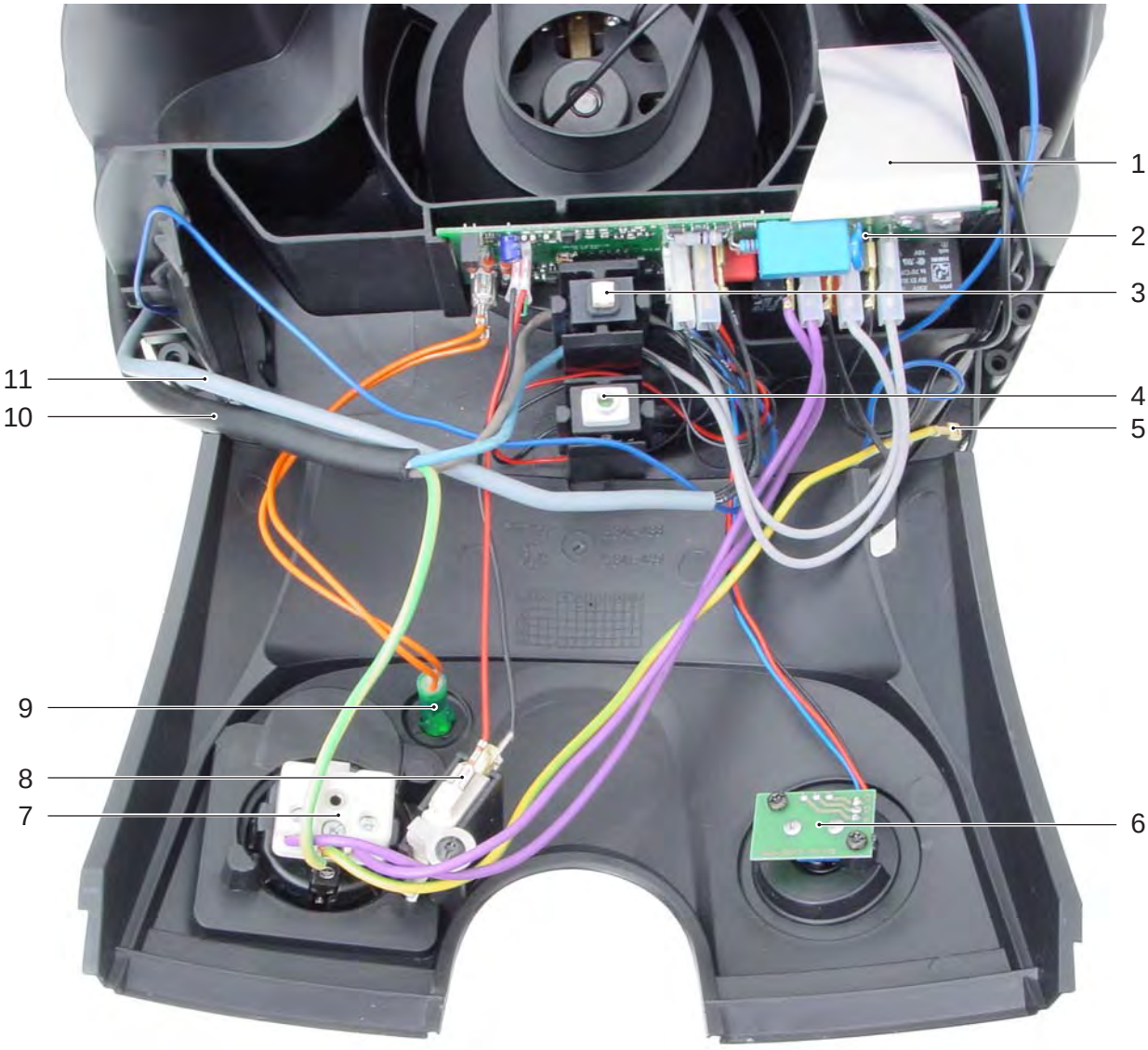
1 Printed circuit board (N1)
2 Unit switch (S1)
3 ON/OFF (S3) switch, TACT filter cleaning system
4 Connecting cable on the TACT electromagnet
5 Mains connection cable

Printed circuit board (N1) (Eco version)



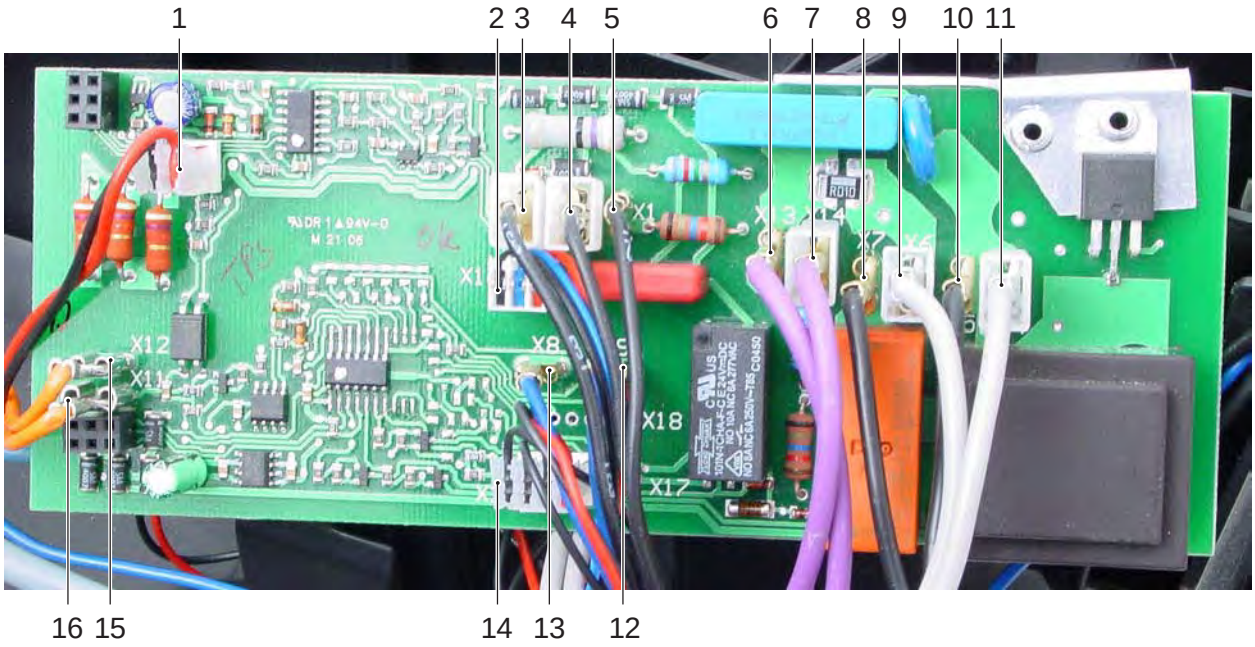
1 Terminal strip (X9), electrodes (B1), overflow protection
2 Terminal strip (X10), ON/OFF (S3) switch, TACT filter cleaning system
3 Terminal strip (X8), electrodes (B1), overflow protection
4 Terminal strip (X7), suction motor (M1)
5 Terminal strip (X6), unit switch (S1)
6 Terminal strip (X5), suction motor (M1)
7 Terminal strip (X4), unit switch (S1)
8 Terminal strip (X3), electromagnet (L1)
9 Terminal strip (X2), electromagnet (L1)
10 Terminal strip (X1), electromagnet (L1)

Upper housing is removed from the suction head (Eco Te version)



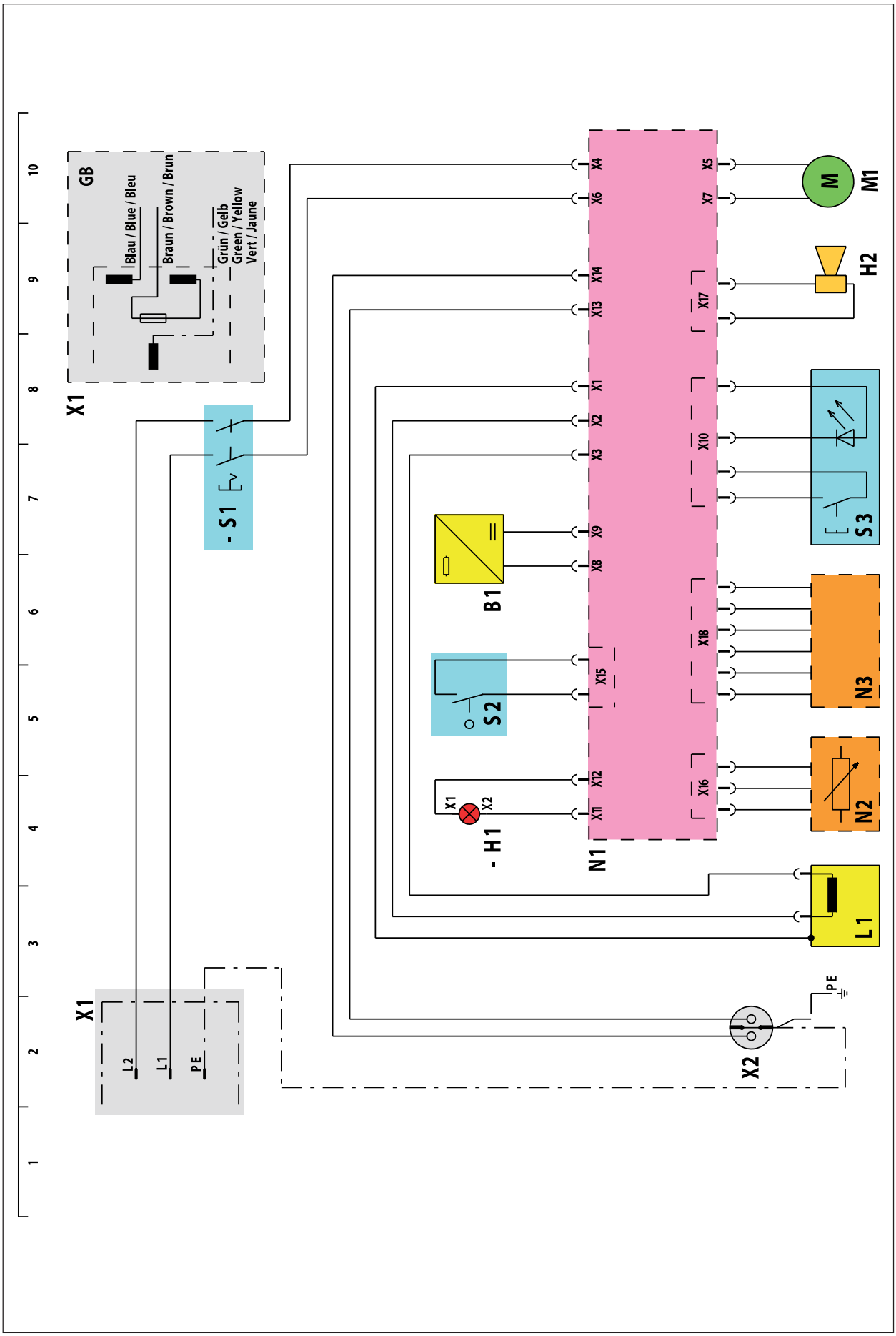
1 Cooling fin
2 Printed circuit board (N1)
3 Unit switch (S1)
4 ON/OFF (S3) switch, TACT filter cleaning system
5 Grounding, dirt container
6 Speed control (N2), seamless
7 Plug socket (X2)
8 Micro-switch (S2), standby mode
9 Control light (H1), plug socket
10 Mains connection cable
11 Connecting cable on the TACT electromagnet

Printed circuit board (N1) (Eco Te, M, H versions)



1 Terminal strip (X15), micro-switch plug socket (S2)
2 Terminal strip (X10), ON/OFF (S3) switch, TACT filter cleaning system
3 Terminal strip (X3), electromagnet (L1)
4 Terminal strip (X2), electromagnet (L1)
5 Terminal strip (X1), electromagnet (L1)
6 Terminal strip (X13), plug socket (X2)
7 Terminal strip (X14), plug socket (X2)
8 Terminal strip (X7), suction motor (M1)
9 Terminal strip (X6), unit switch (S1)
10 Terminal strip (X5), suction motor (M1)
11 Terminal strip (X4), unit switch (S1)
12 Terminal strip (X9), electrodes (B1), overflow protection
13 Terminal strip (X8), electrodes (B1), overflow protection
14 Terminal strip (X16), speed control (N2)
15 Terminal strip (X12), control light (H1), plug socket
16 Terminal strip (X11), control light (H1), plug socket

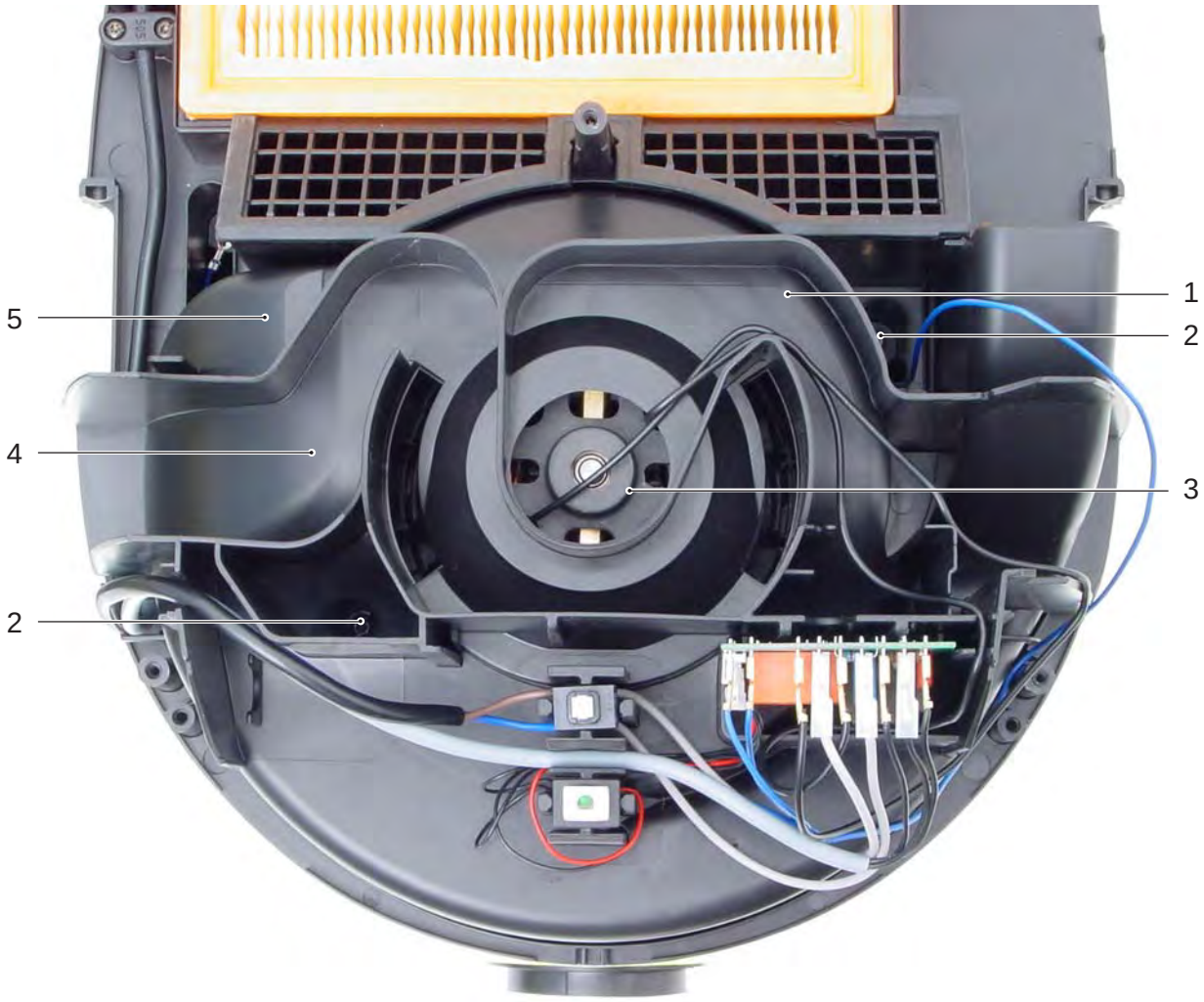
Circuit diagram 0.088-841.0



Circuit diagram 0.088-841.0

B1 Electrodes, overflow protection
H1 Control light, plug socket (Te, M and H versions)
H2 Horn (only Eco M and H versions)
L1 Electromagnet
M1 Suction motor
N1 Printed circuit board
N2 Speed control, seamless (Te, M and H versions)
N3 Selector switch suction hose (only Eco M and H versions)
S1 Unit switch
S2 Micro-switch, standby mode (Te, M and H versions)
S3 ON/OFF switch, TACT filter cleaning system
X1 Mains plug
X2 Plug socket (Te, M and H versions)

Suction motor housing

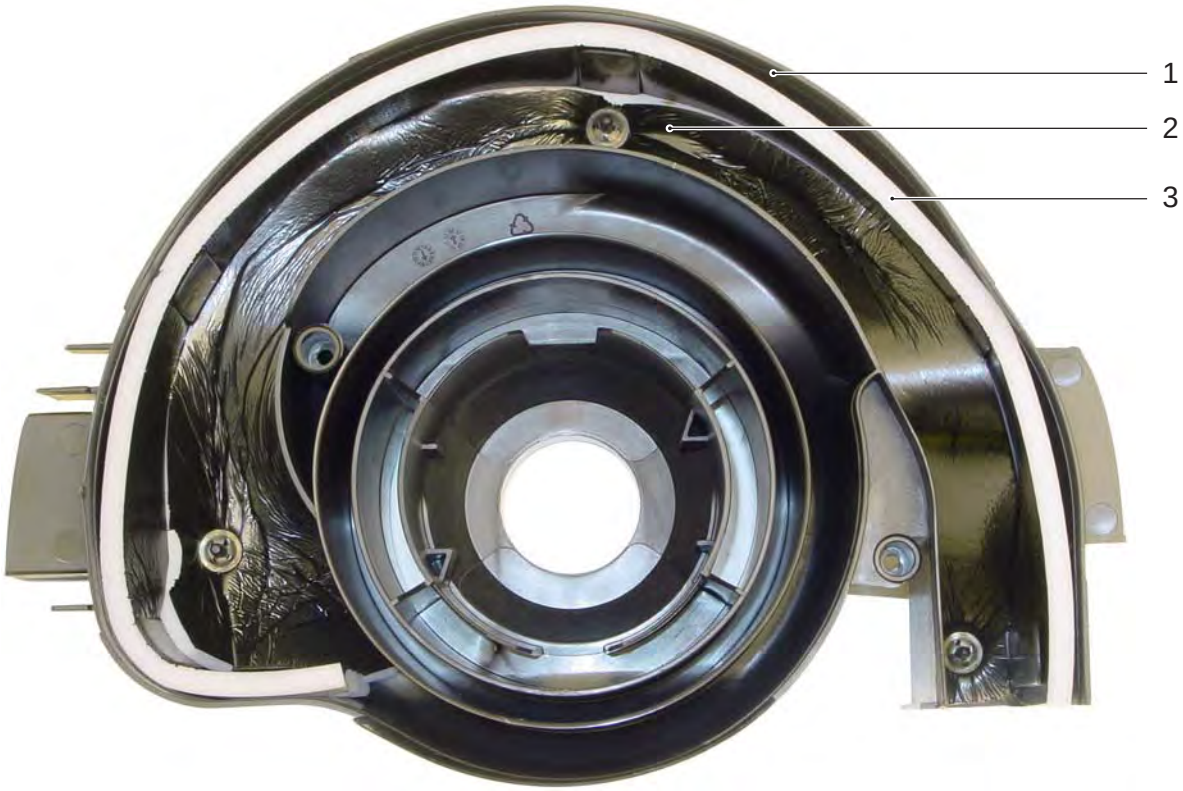


1 Air duct, motor cooling air intake
2 Retaining screws (2x), upper part of suction motor
3 Suction motor (M1)
4 Air duct, motor cooling air exhaust air
5 Suction motor housing

Separate suction motor housing from the upper housing

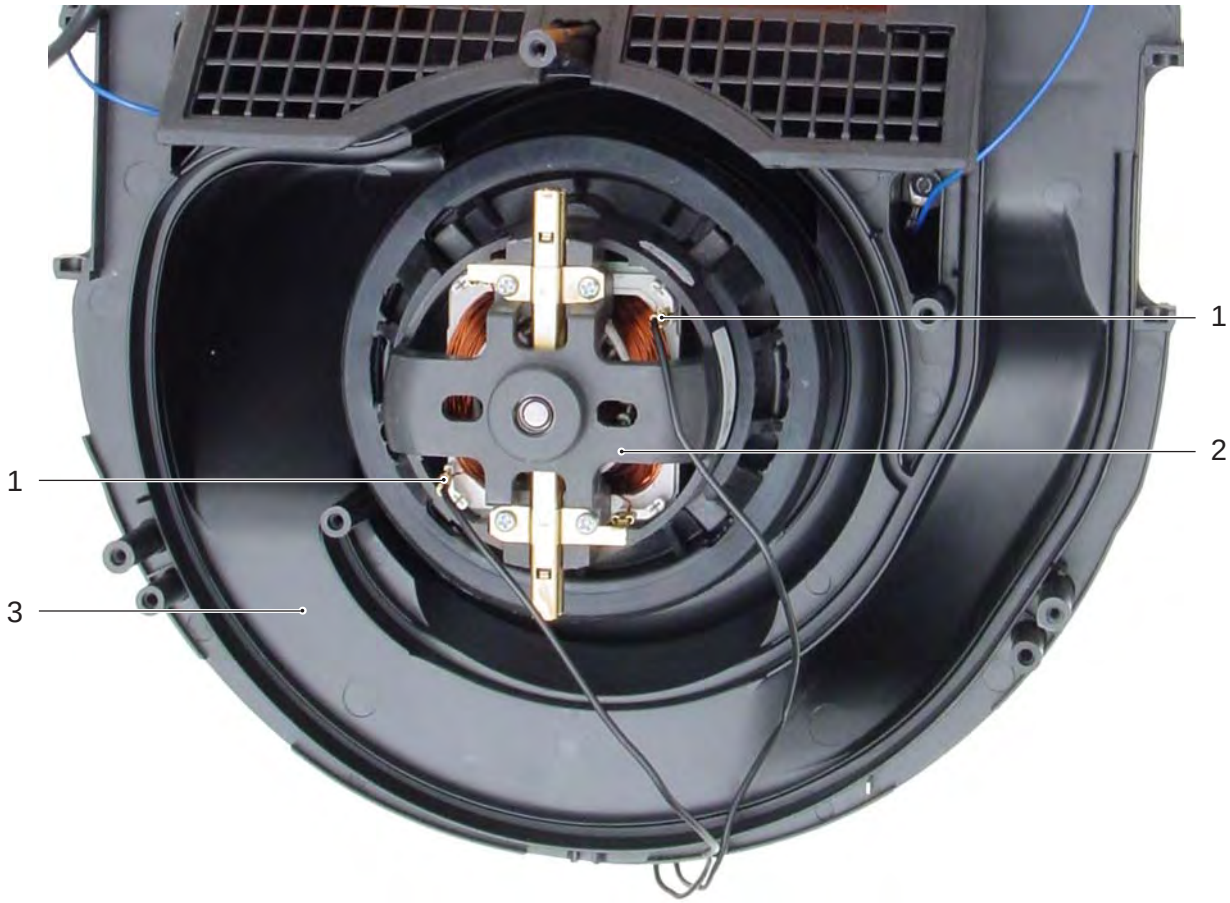
– Remove the retaining screws (2).
– Remove the suction motor housing (5)
– Assembly to be completed in reverse sequence.

Suction motor housing



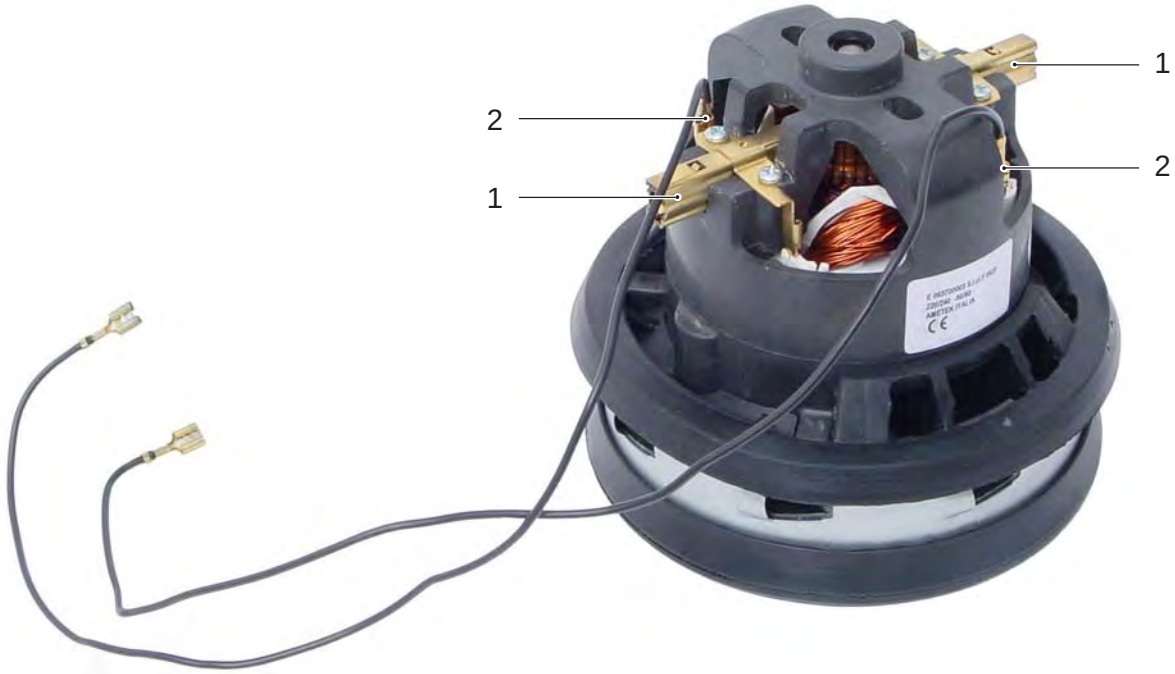
1 Suction motor housing
2 Air duct
3 Blanket insulator

Suction motor (M1)



1 Connection cable, suction motor
2 Suction motor (M1)
3 Air duct

Suction motor (M1)



1 Carbon brushes
2 Cable connection, suction motor

Accessories

1 Tool sleeve for hose connection sizes of 21 mm, 27 mm (Eco Te, M, H versions only)
2 Crevice tool
3 Suction pipes, metal (2 x 0.5 m)
4 Rubber lip (for wet vacuuming)
5 Brush strip (for dry vacuuming)
6 Wet/dry floor tool, 300 mm

Troubleshooting

Malfunctions	Solution
Suction motor is not operating	– Container (in the wet vacuum mode) is full/empty. – Check cable and voltage supply. – Check/replace the unit switch (S1). – Check/clean the electrode overflow protection (B1). – Check/replace plug socket (X2) – Check/replace micro-switch (S2) on the plug socket (X2). – Check/replace suction motor (M1). – Check/replace printed circuit board (N1).
The suction motor will not switch off during wet vacuuming, if the container is full	– Check/clean the electrode overflow protection (B1). – Check the filling level of non-conductive liquids. Use accessory kit „non-conductive media“ (2.641-560.0). – Check/replace printed circuit board (N1).
Suction motor switches off during wet vacuuming	– Empty container.
Suction motor does not start after emptying the container	– Switch off the unit and switch it on again after 5 seconds. – Check/clean the electrode overflow protection (B1).
The suction force decreases	– Switch on/check/replace the TACT filter cleaning system. – Filter cover is not properly closed/close properly. – Check/remove jams from suction tool, suction tube, suction hose and flat pleated filters. – Replace paper filter bag. – Check/remove leaks from vacuum system. – Replace the defective flat pleated filter. – Clean/replace diaphragm filter (optional accessories).
Dust escapes when dry vacuuming	– Check/correct correct installation of flat pleated filter. – Replace the defective flat pleated filter.
The automatic filter cleaning (TACT) is not working	– Filter cover is not properly closed/close properly. – Check/remove leaks from vacuum system. – Check/correct correct installation of flat pleated filter. – Check/remove leaks between the blower head and the container. – Suction hose is not connected/connect (maximum diameter DN 50). – Speed control is incorrectly set when using the suction hose diameter via DN 35/suction performance setting is at max. (only Te, M and H versions).
The automatic filter cleaning (TACT) cannot be switched off	– Check/replace switch (S3). – Check/replace printed circuit board (N1).
The automatic filter cleaning (TACT) cannot be switched on	– Check/replace switch (S3). – Check/replace printed circuit board (N1).

Troubleshooting

Malfunctions	Solution
Electrical tool is not working	– Electrical tool does not have the specified performance data (100 watts, max. 2200 watts). Check electrical tool. – Check the electrical tool for function/replace. – Check function/replace micro-switch (S2) on the plug socket (X2). – Check/replace printed circuit board (N1).
Warning tone of the air velocity monitor sounds (only M and H versions)	– Wrong setting on the selector switch for hose diameter/ reset. – Filter is jammed / clean/replace.

Technical specifications

Unit type	Unit No.	Circuit diagram	Operating instructions	Spare parts list
NT 35/1 Eco	1.184-800.0	0.088-841.0	5.961-692.0	5.970-656.0
NT 35/1 Eco Te	1.184-806.0	0.088-841.0	5.961-692.0	5.970-658.0
NT 35/1 Eco M	1.184-807.0	0.088-841.0	5.961-692.0	5.970-716.0
NT 35/1 Eco H	1.184-808.0	0.088-841.0	5.961-692.0	5.970-770.0
NT 45/1 Eco	1.145-800.0	0.088-841.0	5.961-692.0	5.970-511.0
NT 45/1 Eco Te	1.145-806.0	0.088-841.0	5.961-692.0	5.970-612.0
NT 45/1 Eco M	1.145-807.0	0.088-841.0	5.961-692.0	5.970-613.0
NT 45/1 Eco H	1.145-808.0	0.088-841.0	5.961-692.0	5.970-768.0
NT 55/1 Eco	1.146-800.0	0.088-841.0	5.962-067.0	5.970-677.0
NT 55/1 Eco Te	1.146-802.0	0.088-841.0	5.962-067.0	5.970-677.0
NT 55/1 Eco M	1.146-803.0	0.088-841.0	5.962-067.0	5.970-719.0
NT 55/1 Eco H	1.146-804.0	0.088-841.0	5.962-067.0	5.970-771.0

The technical data sheet and the circuit diagram will be included in the next issue of the spare parts CD-ROM (DISIS) and are also available in kaercher-inside (https://kaercher-inside.com).

Special tool

No special tools are required.

Tightening torque

No details.

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