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244 DAN DRYER Turbo (with nozzle) Maintenance and service manual



Version history

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Preface

Thank you for purchasing your equipment from DAN DRYER A/S and congratulations on your new hand dryer. If you use and maintain your hand dryer according to our manual, it will work to your satisfaction for many years.

General

The hand dryer must only be installed and used in accordance with these instructions and safety precautions. All service staff who work with installation, servicing and repair of the machine must have read and understood this manual. If you have questions concerning the use or maintenance of your machine, you are welcome to contact us.

Intended product use

The hand dryer is designed for installation in indoor public or private restrooms and may only be used for hand drying.

The supplier's product liability:

DAN DRYER A/S accepts no responsibility if the machine is installed, used, modified or composed otherwise than specified in this manual.

Note !!!

The machine is designed for indoor use only.

Warning !!!

If the hand dryer is not installed and connected properly it can be dangerous to use due to the risk of electric shock. Always follow the installation instructions in this manual. All service staff who work with servicing and repairing of the machine must have read and understood this manual.

Warning !!!

During cleaning, inspection, service etc. the hand dryer must always be disconnected from the power supply.


Safety Precautions:

Maintenance work requiring dismantling of the machine must only be carried out by staff with proper training so the work can be carried out in a secure manner.

Safety Precautions:

Check before use that:

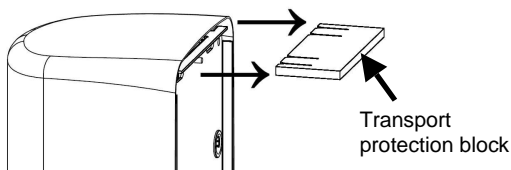
- the hand dryer is securely attached to the wall.
- the hand dryer is properly cleaned.
- the hand dryer is not damaged or otherwise in disorder.

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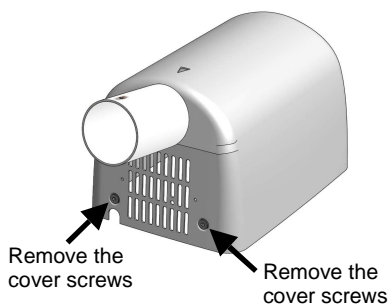
Installation and connection:

To protect the user against electric shock, it is important that the hand dryer is connected to the earth wire. For fixed installation, connect via circuit breaker.

1. Remove transport protection block prior to installation.

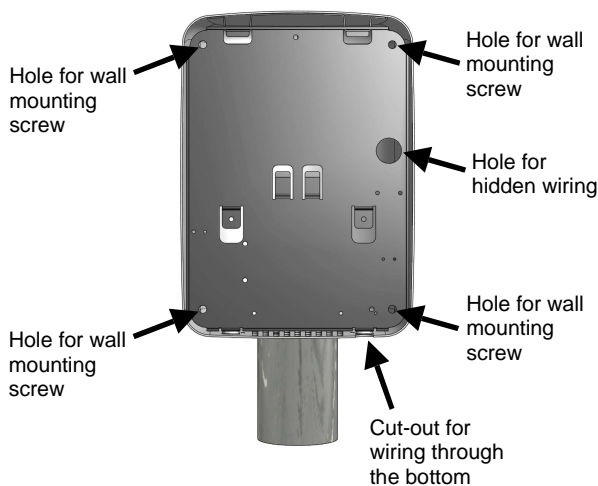


2. Remove the two cover screws at the bottom of the cover using the supplied special Allen key. Carefully remove the housing from the base plate.



Do not lift the hand dryer by the electrical parts during installation.

3. Attach the base plate to the wall using appropriate screws in the four mounting holes. Wiring can be hidden behind the machine or may alternatively be fed through the bottom of the cover.



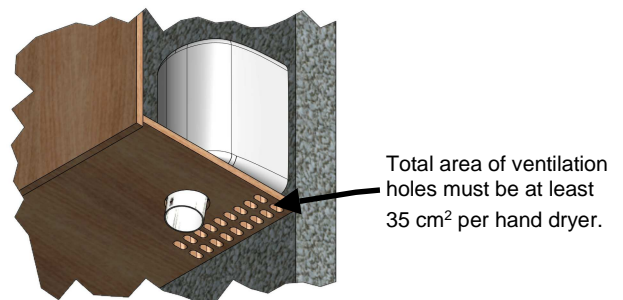
4. Connect wires as follows:

- A. Connect the live wire (red or brown) to the terminal block marked "L".
- B. Connect the neutral wire (blue or black) to the terminal block marked "N".
- C. Connect the green and yellow earth wire to the screw marked "⊕".

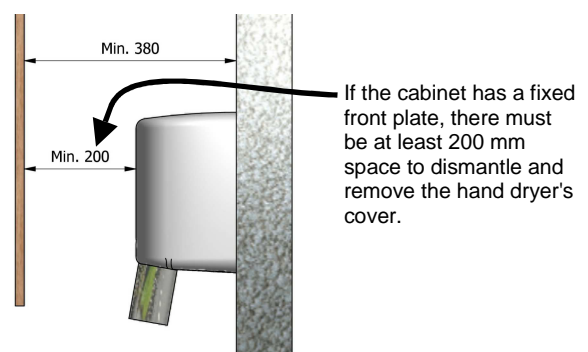
5. Remount the cover using the two cover screws at the bottom of the cover and test run the hand dryer.


If the machine is mounted in an enclosed cabinet, it is important to be aware of the following requirements:

The turbo hand dryer sucks a large amount of air during operation. It is therefore important that the cabinet/housing has ventilation holes of at least 35 cm² for each hand dryer.



If the hand dryer is installed in an enclosed cabinet it is important that there is enough space to remove the hand dryer's cover so the machine is easily accessible for cleaning or servicing.



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Sensing range adjustment:

The sensing range of the hand dryer is pre-set by the manufacturer.

We recommend that the sensing range is NOT adjusted by the user.

If you wish to modify the sensing range anyway, please proceed according to the following instructions:

1. Cut off the power supply to the hand dryer
2. Remove the cover by loosening the Allen screws at the bottom of the housing. This can be done with the special Allen key originally supplied with your hand dryer.
3. The sensing range adjusting screw is located as shown in Fig. 1.

Use a tiny screwdriver to carefully turn the adjusting screw.

- a. Turn clockwise to lengthen the sensing range.
- b. Turn counter-clockwise to shorten the sensing range.

4. Remount housing and test run the hand dryer.

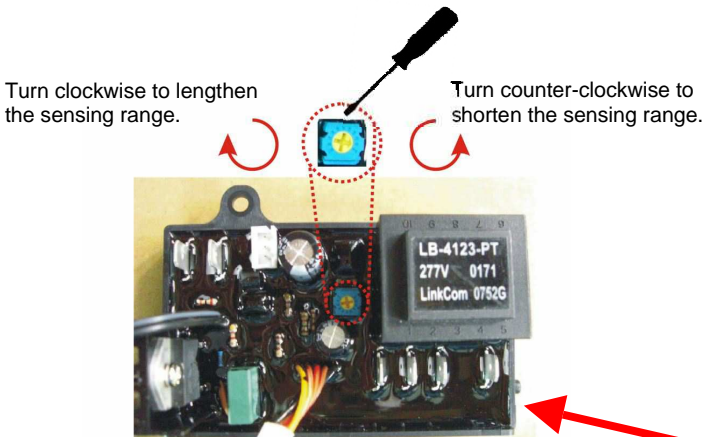
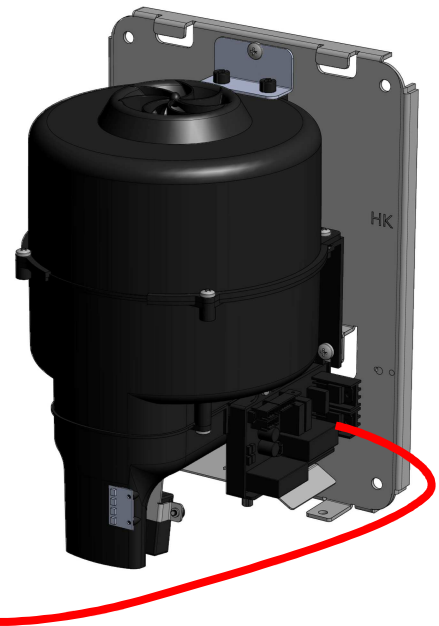
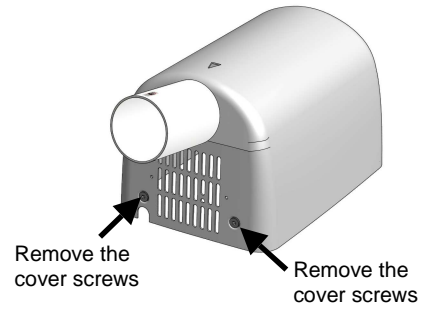


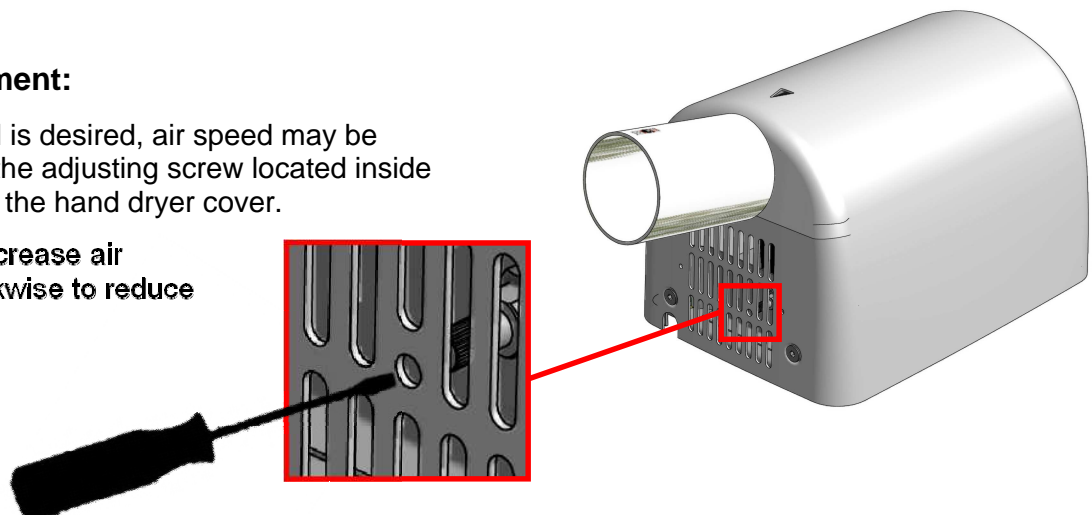
Fig. 1




Air speed adjustment:

If a lower noise level is desired, air speed may be adjusted by turning the adjusting screw located inside and at the bottom of the hand dryer cover.

Turn clockwise to **increase** air speed and anti-clockwise to **reduce** air speed.



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Regular maintenance:

To ensure a continued satisfactory function of the hand dryer it is recommended regularly to remove dust etc. from the machine.

The frequency of cleaning depends on the environment in which the hand dryer is installed and how often it is used.

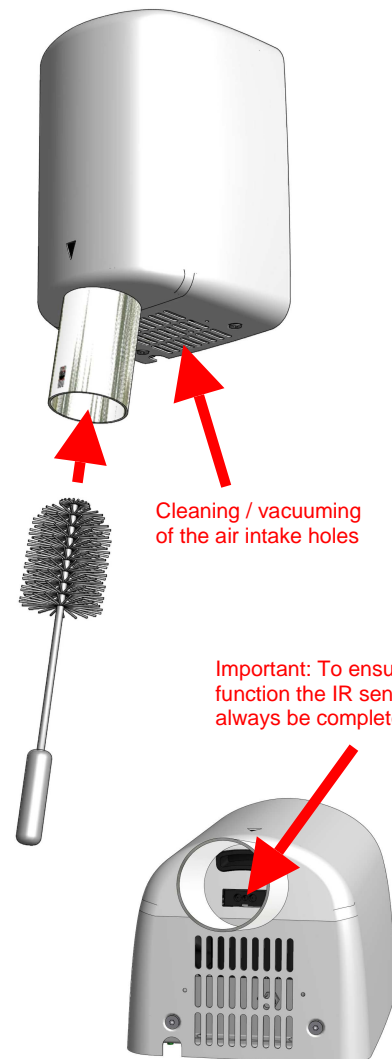
If the machine is used often cleaning is recommended at least once a month.

- Exhaust pipe and sensor must be cleaned with a damp brush (available from DAN DRYER)
- Cleaning / vacuuming of the air intake holes in the hand dryer's cover and any air intake holes in the cabinet / furniture.

If the machine is rarely used, we recommend cleaning once every 6 months.

- Exhaust pipe and sensor must be cleaned with a damp brush (available from DAN DRYER)
- Cleaning / vacuuming of the air intake holes in the hand dryer's cover and any air intake holes in the cabinet / furniture.

In the event that the machine is used extensively and the environment is very dusty, it may be necessary to clean the inside of the machine regularly. See more in the section "Cleaning the inside of the machine"




Trouble shooting:

Problem:	Solution:
Hand dryer does not start:	<ul style="list-style-type: none"> • Check the 230V power supply. • Check IR sensor for dirt or damages. • Check that all electrical connections, wires etc. are intact. • If none of the above actions corrects the problem, it is either the IR sensor, the coal brushes or the timer that causes the problem and must be replaced.
Blows cold air only:	<ul style="list-style-type: none"> • Heating element unit has been overheated and must be replaced. • Timer is defective and must be replaced.
Poor air flow:	<ul style="list-style-type: none"> • Dirt and dust in inlet and outlet impair the air flow. Clean the machine and cabinet in accordance with the section "Regular maintenance"
Other problems not covered by this guide:	<ul style="list-style-type: none"> • If the problem is not resolved by the above actions the entire hand dryer unit must be sent for repair to DAN DRYER or replaced with a new one.

IMPORTANT:

If the unit is returned to DAN DRYER it must be accompanied by a detailed description of the problem.

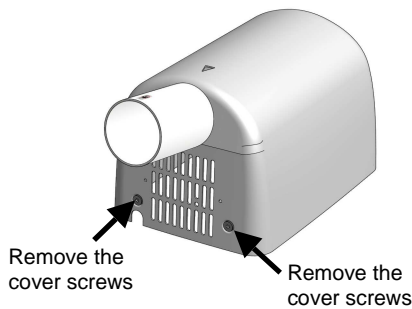
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Cleaning the inside of the machine

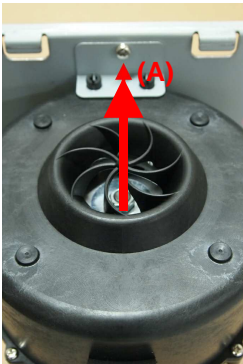
Warning !!!

During cleaning and service the hand dryer must always be disconnected from the power supply.

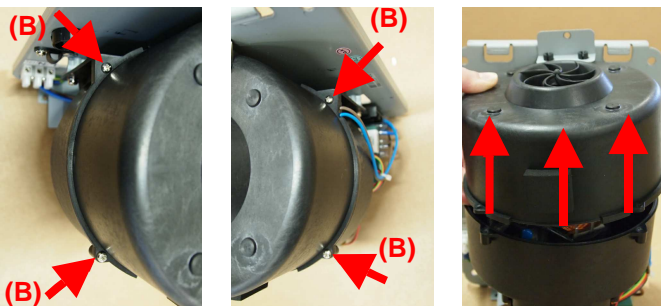
1. Disassemble cover by removing the two cover screws at the bottom of the housing. Use the special Allen key which was originally supplied with the hand dryer.



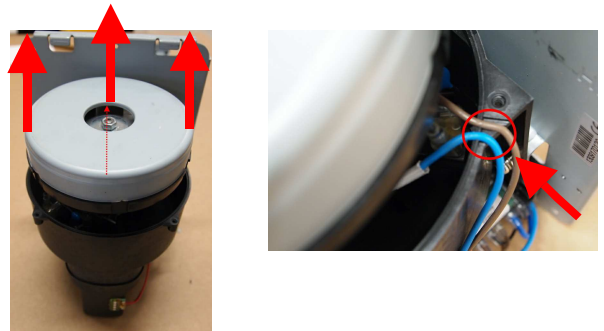
2. Disassemble angle bracket by removing the screw (A)



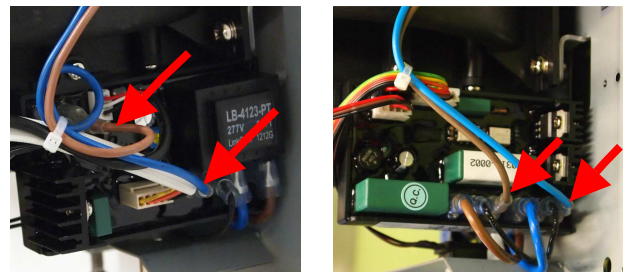
3. Remove the four screws (B). Disassemble the top half of the motor housing



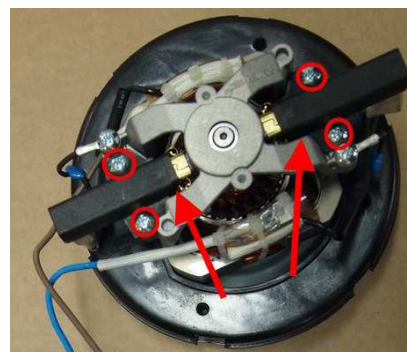
4. Carefully lift up the motor whilst taking note how the motor was positioned inside the housing and how the motor wires are placed in the protective grooves (C)




5. Disconnect motor wires from the timer unit (appearance depends on the timer type). Place the motor on a table upside-down.



6. Check whether carbon brushes are worn down and need to be replaced. If so, disassemble by removing the screws and by disconnecting wires from carbon brush terminals.



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Cleaning the inside of the machine

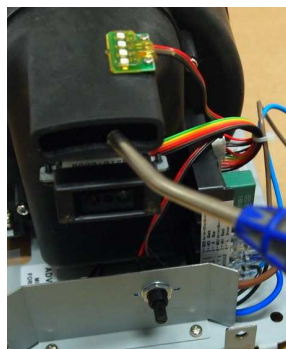
7. Use compressed air (max. 8 bar) to remove dirt and carbon dust from the motor and motor housing. If compressed air is not available, parts may be cleaned with a soft brush or gently with a vacuum cleaner.



8. Lift the large rubber gasket out of the top of the motor housing. Clean it and degrease with alcohol. Clean the small rubber gasket placed at the bottom of the motor housing in the same manner.



9. The heating element is placed at the bottom of the motor housing. Clean it using compressed air (max. 8 bar). Blow from both sides, and be careful not to damage the heating element.



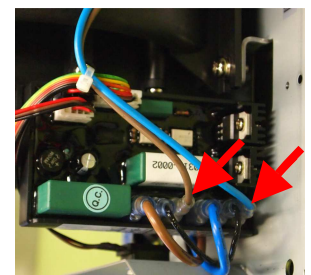
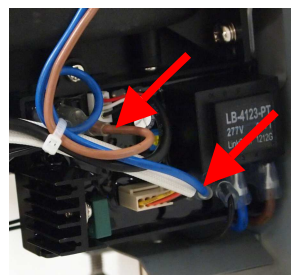
10. Put the small rubber gasket back in place at the bottom of the fan housing. Be careful not to turn it upside down, cf. photo ref. 11.




11. Put the motor back in the bottom part of the fan housing. Make sure that the motor rests properly between the two "forks" and on the small rubber gasket.



12. Reconnect motor wires to the timer unit (appearance depends on the timer type). Please be careful not to damage wires.



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Cleaning the inside of the machine

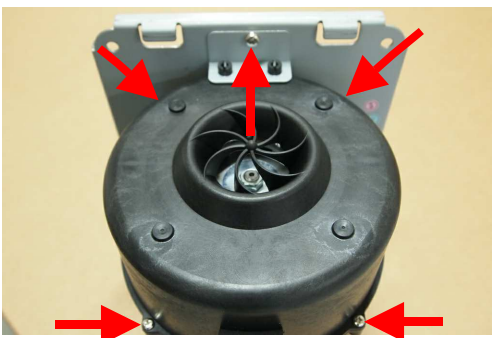
13. Put the large rubber gasket back on top of the motor.



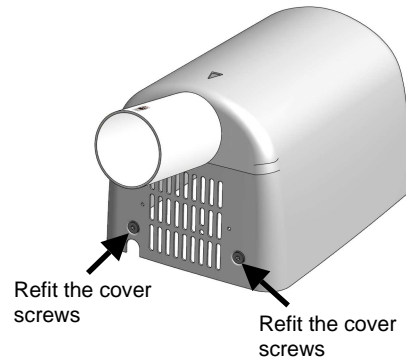
14. Reassemble the top half of the motor housing. Make certain that motor wires are safely placed in the protective groove.




15. Assemble the top of the fan housing onto the bottom part by tightening the four screws. Be careful not to overtighten. Fix angle bracket to base plate of the motor



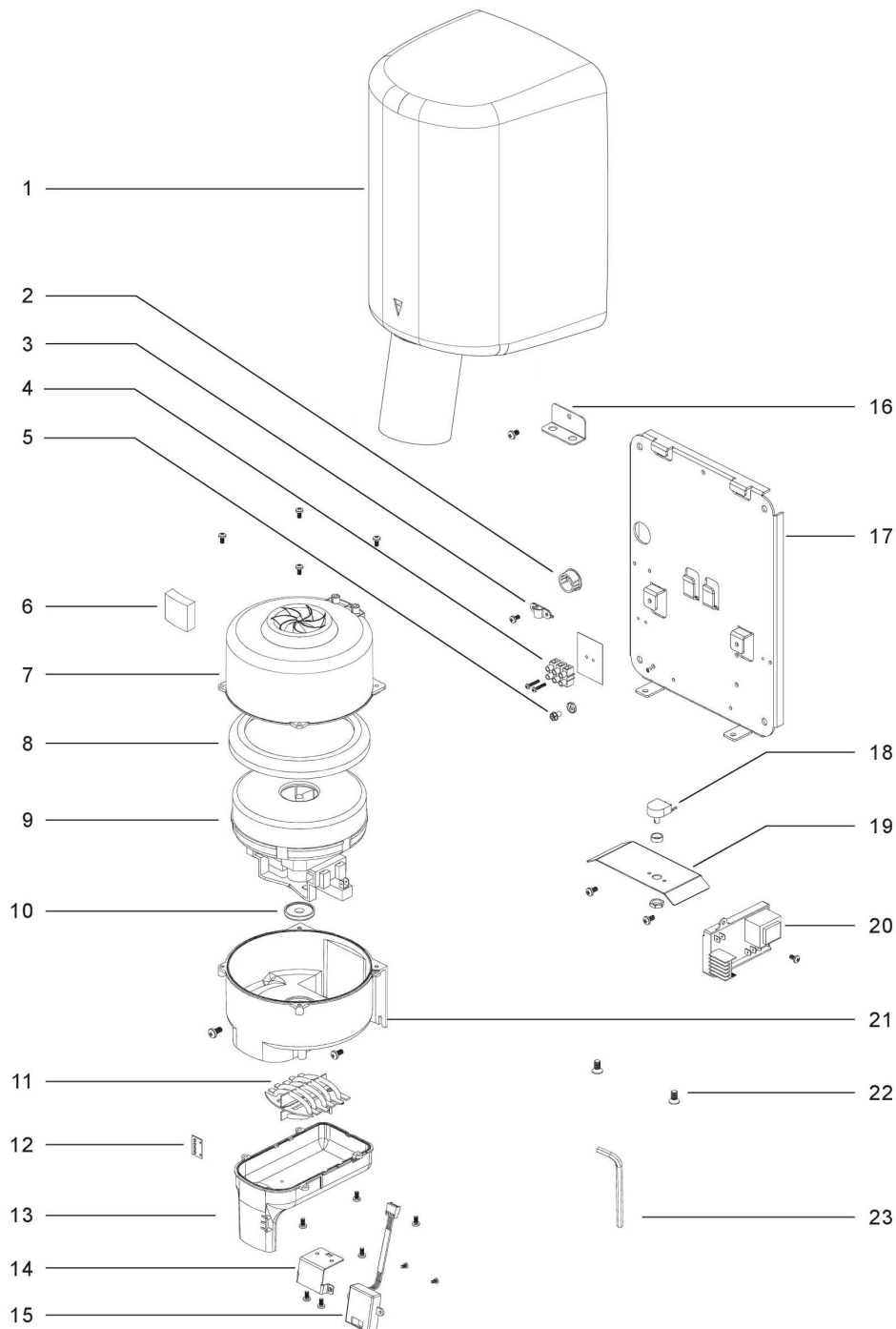
16. Reassemble hand dryer cover.




17. Reconnect power supply and test run dryer.

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Spare parts



- | | |
|---|--|
| 1. Housing | 12. LED unit |
| 2. Bushing for hole for cable entry | 13. Air outlet |
| 3. Tensile relief clamp | 14. Mounting bracket for sensor |
| 4. Terminal block | 15. Sensor |
| 5. Earth screw | 16. Mounting bracket for fan housing |
| 6. Shock absorber | 17. Base plate |
| 7. Fan housing, top | 18. Potentiometer |
| 8. Rubber gasket for fan housing (large) | 19. Mounting bracket for potentiometer |
| 9. Motor, 700 W | 20. Timer |
| 10. Rubber gasket for fan housing (small) | 21. Fan housing, bottom part |
| 11. Heating element, 900 W | 22. Housing screw (2 pcs.) |
| | 23. Allen key for housing screws |

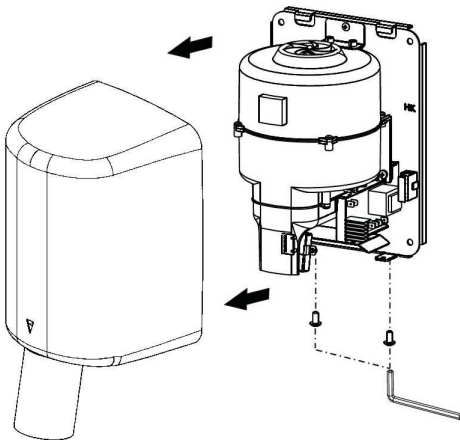
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Carbon brush replacement

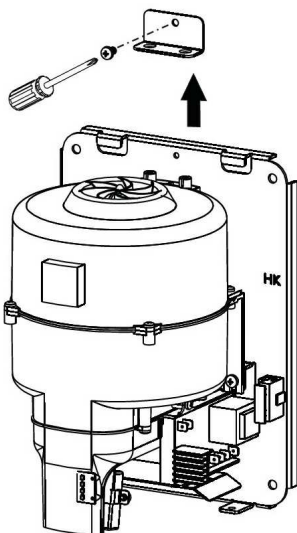
Warning !!!

During cleaning and service the hand dryer must always be disconnected from the power supply.

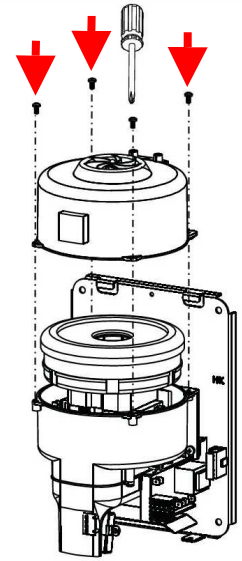
1. Disconnect power supply.
2. Disassemble cover by removing the two cover screws at the bottom of the housing. Use the special Allen key which was originally supplied with the hand dryer.



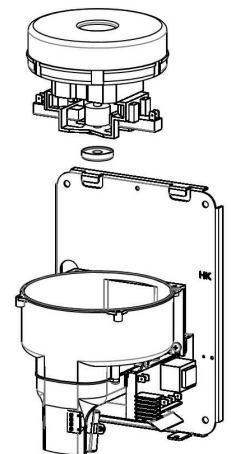
3. Disassemble angle bracket.



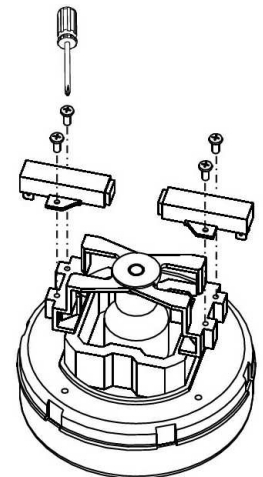
4. Loosen the 4 screws on the fan housing and disassemble fan housing lid.




5. Gently lift up the motor. Be careful not to damage motor wiring.



6. Loosen carbon brush wiring.
7. Loosen the 2 x 2 screws, allowing for the worn brushes to be disassembled from the motor.
8. Assemble new carbon brushes and reassemble screws and wires.



9. Reassemble all components and test run hand dryer.

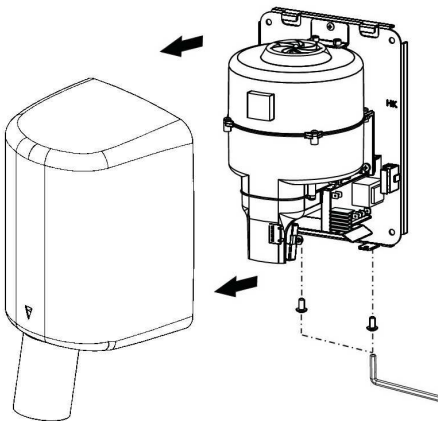
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Heating element replacement

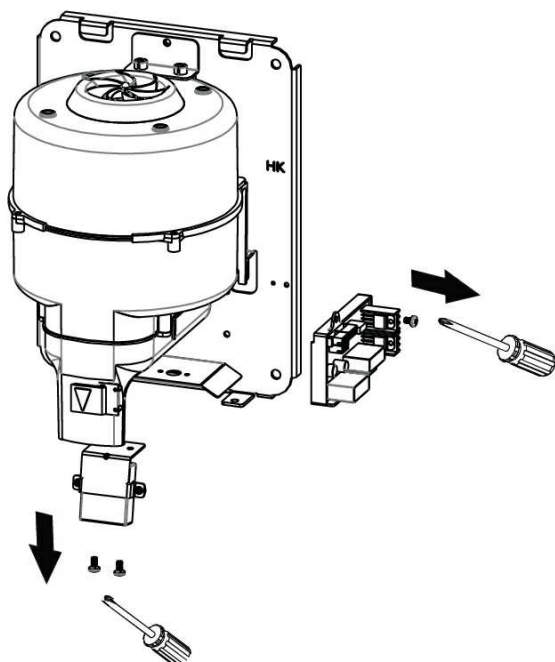
Warning !!!

During cleaning and service the hand dryer must always be disconnected from the power supply.

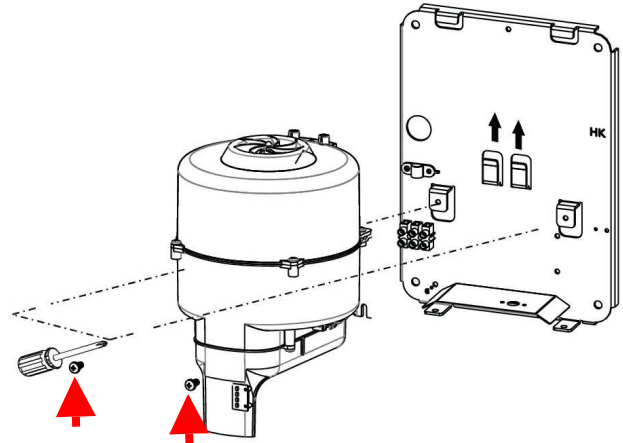
1. Disconnect power supply.
2. Disassemble cover by removing the two cover screws at the bottom of the housing. Use the special Allen key which was originally supplied with the hand dryer.



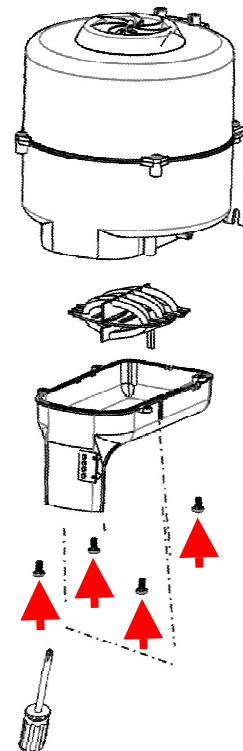
3. Disconnect wires from timer unit.
4. Disassemble sensor bracket and timer unit from fan housing.




5. Loosen the two screws and dismount fan housing from base plate.



6. Loosen the screws and disassemble air outlet from fan housing.
7. Disassemble heating element from air outlet.
8. Assemble new heating element and reassemble all other components.



9. Reassemble all components and test run hand dryer.

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Technical specifications

Power supply: 220 - 240 V 50-60Hz

Power consumption: 1600 W

Thermal cut-out: 142 C

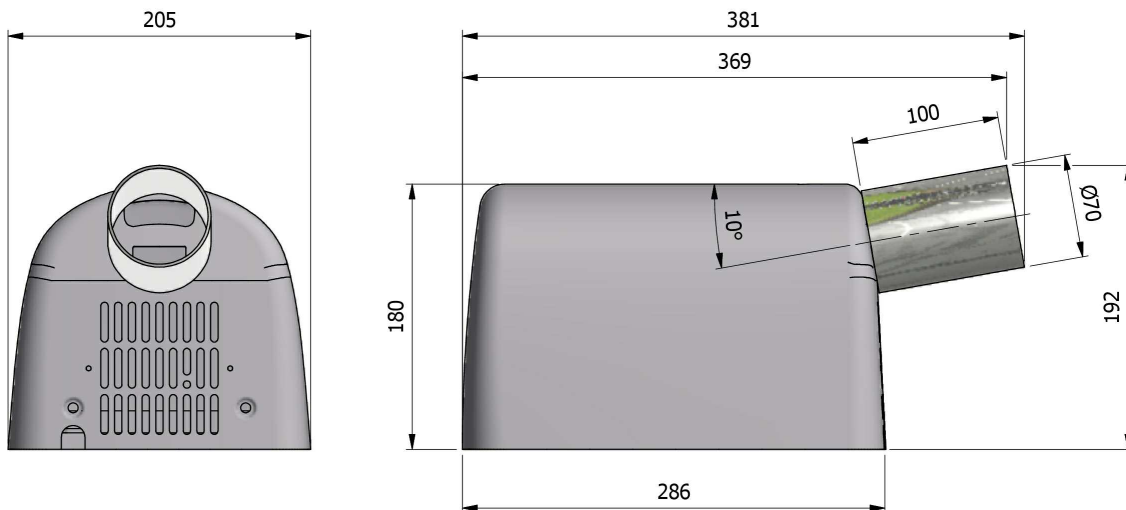
IP rating: IPX1

CE labeled according to relevant EN standards in the directives 2004/108 / EC (EMC) and 2006/95 / EC (Low Voltage).

Expected total lifetime

- Expected lifetime of hand dryer (before replacing the brushes): 216.000 hand dryings
- Expected lifetime of hand dryer (after replacing the brushes): 108.000 hand dryings.
- Expected total lifetime of hand dryer before disposal: 324.000 hand dryings.

Dimensions:



Wiring chart:

