

HILTI

DD-WMS 100

English



1 Information about the documentation

1.1 About this documentation

- Read this documentation before initial operation or use. This is a prerequisite for safe, trouble-free handling and use of the product.
- Observe the safety instructions and warnings in this documentation and on the product.
- Always keep the operating instructions with the product and make sure that the operating instructions are with the product when it is given to other persons.

1.2 Explanation of signs used

1.2.1 Warnings

Warnings alert persons to hazards that occur when handling or using the product. The following signal words are used in combination with a symbol:



DANGER! Draws attention to imminent danger that will lead to serious personal injury or fatality.



WARNING! Draws attention to a potential hazard that could lead to serious personal injury or fatality.



CAUTION! Draws attention to a potentially dangerous situation that could lead to minor personal injury or damage to the equipment or other property.

1.2.2 Symbols in the documentation

The following symbols are used in this document:



Read the operating instructions before use



Instructions for use and other useful information

1.2.3 Symbols in the illustrations

The following symbols are used in illustrations:



These numbers refer to the corresponding illustrations found at the beginning of these operating instructions.

3

The numbering reflects the sequence of operations shown in the illustrations and may deviate from the steps described in the text.



Item reference numbers are used in the **overview illustrations** and refer to the numbers used in the **product overview section**.



These characters are intended to specifically draw your attention to certain points when handling the product.

1.3 Product-dependent symbols

1.3.1 Symbols on the product

The following symbols are used:



Do not lift by crane

1.4 Product information

Hilti products are designed for professional use and may be operated, serviced and maintained only by trained, authorized personnel. This personnel must be informed of any particular hazards that may be encountered. The product and its ancillary equipment can present hazards if used incorrectly by untrained personnel or if used not in accordance with the intended use.

The type designation and serial number are stated on the rating plate.

- ▶ Write down the serial number in the table below. You will be required to state the product details when contacting Hilti Service or your local Hilti organization to inquire about the product.

Product information

Water management system	DD-WMS 100
Generation	01
Serial no.	

1.5 Declaration of conformity

We declare, on our sole responsibility, that the product described here complies with the applicable directives and standards. A copy of the declaration issued by the certification department can be found at the end of this documentation.

The technical documentation is filed and stored here:

Hilti Entwicklungsgesellschaft mbH | Tool Certification | Hiltistrasse 6 | 86916 Kaufering, Germany

2 Safety

2.1 Important safety instructions

WARNING! READ ALL INSTRUCTIONS. Failure to follow all instructions listed below can result in electric shock, fire and/or serious injury. KEEP THESE INSTRUCTIONS IN A HANDY YET SECURE PLACE.

2.2 General safety instructions

In addition to the safety instructions given in the various sections of these operating instructions, the following points must be strictly observed at all times.

- ▶ Read all the instructions. Failure to follow all the instructions listed below may result in electric shock, fire and/or serious injury.
- ▶ If the appliance is used in conjunction with an electric tool, read and follow the operating instructions for the electric tool and all the warnings.
- ▶ Modification of the appliance is not permitted.
- ▶ Use the right appliance for the job. Do not use the appliance for purposes for which it was not intended. Use it only as directed and when in faultless condition.
- ▶ Before beginning work with the appliance, find out how to operate it correctly and about any hazards associated with the materials it will be picking up and how these materials can be disposed of.
- ▶ Take the influences of the surrounding area into account. Do not use the appliance where there is a risk of fire or explosion.
- ▶ The appliance may only be used by persons who are familiar with it, have been trained on how to use it safely and who understand the resulting hazards. The appliance is not intended for use by children.
- ▶ Store appliances in a secure place when not in use. When not in use, appliances must be stored in a dry, high place or locked away out of reach of children.

2.3 Electrical safety

- ▶ The plug on the supply cord of the appliance must match the outlet. Do not change the plug in any way. Do not use adapter plugs with earthed (grounded) appliances. Unmodified plugs and matching outlets reduce risk of electric shock.
- ▶ Insert the plug in a suitable earthed/grounded power outlet which has been correctly and safely installed and is in compliance with local regulations. If you are in doubt about the effectiveness of the power outlet's earth/ground connection, have it checked by a qualified specialist.
- ▶ Avoid body contact with earthed or grounded surfaces such as pipes, radiators, cookers, stoves and refrigerators. There is an increased risk of electric shock if your body is grounded.
- ▶ Do not expose the appliance to rain. Water entering an electric appliance will increase the risk of electric shock.
- ▶ Check to ensure that the supply cord does not lie in a puddle of water.
- ▶ Check the appliance's supply cord at regular intervals and have it replaced by **Hilti Service** if damage is found. Check extension cords at regular intervals and replace them if found to be damaged.
- ▶ Do not touch the supply cord or extension cord if they are damaged while working. Disconnect the supply cord plug from the power outlet. Damaged supply cords or extension cords present a risk of electric shock.

- ▶ The electric supply cord may be replaced only with a cord of the type specified in the operating instructions.
- ▶ Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the appliance. Keep the cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- ▶ When operating an electric appliance outdoors, use only extension cords of a type suitable for outdoor use. Use of an extension cord suitable for outdoor use reduces the risk of electric shock.
- ▶ In the event of an interruption in the electric supply, switch the appliance off and unplug it from the power outlet.
- ▶ Use the power outlet on the appliance only for the purposes described in the operating instructions.
- ▶ Never operate the appliance when it is dirty or wet. Dust (especially dust from conductive materials) or dampness adhering to the surface of the appliance may, under unfavorable conditions, lead to electric shock. Dirty or dusty appliances should thus be checked by **Hilti Service** at regular intervals, especially if used frequently for working on conductive materials.

2.4 Personal safety

- ▶ Stay alert, watch what you are doing and use common sense when working with the product. Do not use the appliance while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating the appliance may result in serious personal injury.
- ▶ The user and any other persons in the vicinity must wear suitable eye protection, a hard hat, ear protection, protective gloves, safety footwear and breathing protection while the appliance is in use or while maintenance work on it is being carried out.
- ▶ Engage the wheel brakes so that the appliance stands securely. If the wheel brakes are disengaged the appliance may run away out of control.
- ▶ If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of a vacuum cleaner can reduce dust-related hazards.

2.5 Safety instructions for vacuum cleaners

- Before beginning work with the appliance, the operating personnel must be informed about how to operate it correctly and about any hazards associated with the materials it will be picking up and how these materials can be disposed of safely.
- Use of the appliance for cleaning down persons or animals is not permissible.
- Do not use the appliance for continuous, stationary operation in automatic or semi-automatic systems.
- Do not stand on top of the appliance (do not use it as a substitute for a ladder).
- Do not use the appliance under water.

2.6 The material picked up

- ▶ Do not use the appliance to pick up flammable or explosive dusts (magnesium or aluminum dust etc.) or dusts that present a health hazard. Do not use the appliance to pick up materials with a temperature of over 60 °C (e.g. glowing cigarettes, hot ash).
- ▶ Do not use the appliance to pick up flammable, explosive or aggressive liquids (coolants and lubricants, gasoline, solvents, acids (pH < 5), alkalis (pH > 12.5), etc.).
- ▶ Switch the appliance off immediately if foam or liquids escape from it.
- ▶ Wear protective gloves when using the appliance to pick up hot materials up to a temperature of 60 °C.
- ▶ When working with mineral drilling slurry, wear protective clothing and avoid skin contact with the slurry (pH > 9: caustic).
- ▶ Avoid contact with alkaline or acidic liquids. If contact accidentally occurs, rinse with water. In the event of the liquid coming into contact with the eyes, rinse the eyes with plenty of water and consult a doctor.
- ▶ A Dust Class M appliance is suitable for picking up dry, non-flammable dusts, liquids, wood chips and hazardous dusts with an exposure limit value of $\geq 0.1 \text{ mg/m}^3$. The appliance must be equipped with a suitable filter corresponding to the hazard classification of the dusts to be picked up.

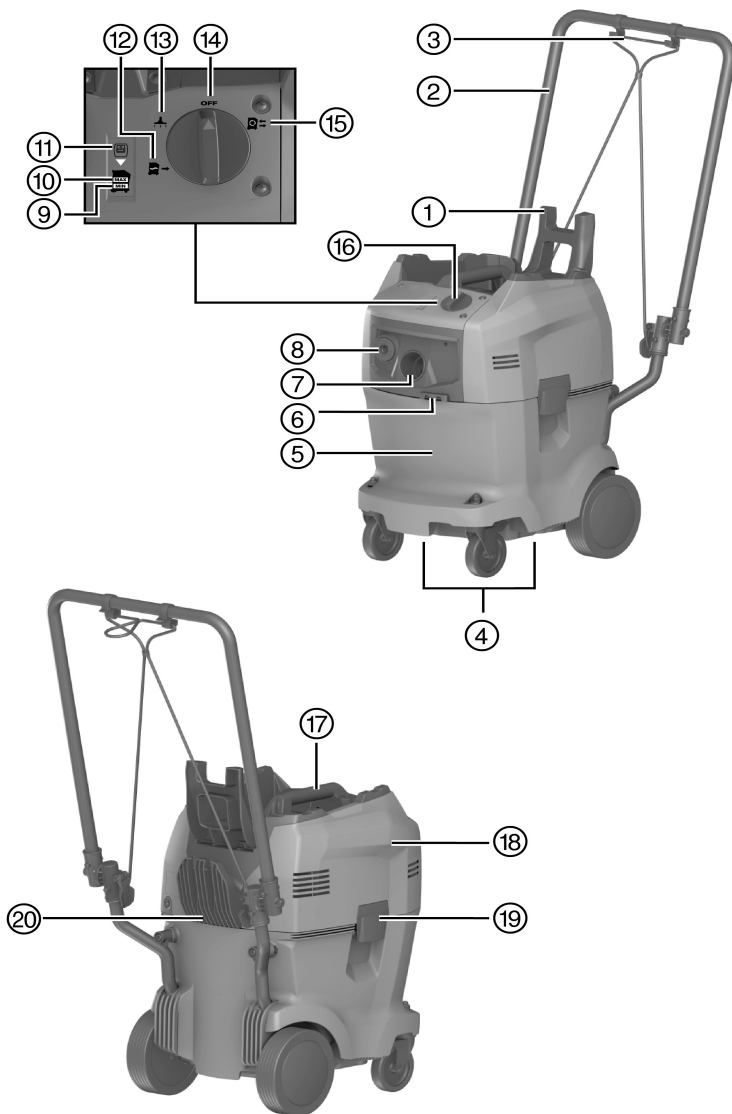
2.7 Use and care of the appliance

- ▶ Never leave the appliance unattended.
- ▶ Do not deactivate the filter cleaning system when picking up hazardous dusts, especially when the appliance is used in conjunction with electric tools that generate dust.
- ▶ Protect the appliance from frost.
- ▶ Clean the water level limiting device regularly with a brush, in accordance with the instructions, and check it for signs of damage.

- ▶ When fitting the top section of the appliance, take care to avoid pinching your fingers or damaging the supply cord. This presents a risk of injury or damage.
- ▶ Check the appliance and its accessories for any damage. Guards, safety devices and any slightly damaged parts must be checked carefully to ensure that they function faultlessly and as intended. Check that moving parts function faultlessly, without sticking, and that no parts are damaged. In order to ensure faultless operation of the appliance, all parts must be fitted correctly and must meet the necessary requirements.
- ▶ Have the appliance serviced by a qualified repair person using only genuine Hilti spare parts. The safety of the appliance can thus be maintained.
- ▶ Always unplug the supply cord from the power outlet when the appliance is not in use (during breaks), before cleaning and maintenance and before changing the filter or accessories. This preventive safety measure reduces the risk of starting the appliance accidentally.
- ▶ Never pull the appliance by the supply cord to a new working position. Do not run the wheels of the appliance over the supply cord.
- ▶ Do not transport the appliance by crane.
- ▶ Close the hose inlet socket with the cap before transporting the appliance and when it is not in use.

3 Description

3.1 Overview of the product



- ① Toolbox retaining bar
- ② Handlebar
- ③ Ratchet strap
- ④ Gripping areas

- ⑤ Water and waste material container
- ⑥ Hook for the ratchet strap
- ⑦ Suction hose inlet fitting
- ⑧ Water supply hose outlet fitting

- | | | | |
|---|-------------------------------------|---|------------------|
| ⑨ | “Water level too low” warning lamp | ⑮ | “Recycling” mode |
| ⑩ | “Water level too high” warning lamp | ⑯ | Control switch |
| ⑪ | “No filter” warning lamp | ⑰ | Grip |
| ⑫ | “Water supply” mode | ⑱ | Top section |
| ⑬ | “Vacuum cleaner” mode | ⑲ | Catch |
| ⑭ | “Off” mode | ⑳ | Supply cord hook |

3.2 Intended use

The DD-WMS 100 electrically-powered water management system is designed for use with water-cooled diamond coring machines.

Use the DD-WMS 100 to pick up and collect drilling slurry, to recycle the water and to supply water to diamond core drilling machines.

This appliance is suitable for commercial use, e.g. in hotels, schools, hospitals, factories, shops, offices and by rental companies.

The appliance can be operated in the following modes:




- **Recycling**
Water supply to diamond core drilling machines plus simultaneous vacuum removal and filtering of drilling slurry.
- **Water supply mode**
Water supply to diamond core drilling machines without vacuum removal.
- **Vacuum cleaner**
Small cleaning jobs.

3.3 Items supplied

1 DD-WMS 100 water recycling system, 1 suction and water supply hose set with connectors, 1 filter bag and 1 operating instructions.

You can find other system products approved for use with your product at your local **Hilti** Center or online at: www.hilti.group.

3.4 Control switch

Status	Meaning
OFF	Off
	Recycling mode
	Water supply mode
	Vacuum cleaner mode

3.5 Indicators

LED	Meaning
MIN	The water level is too low. Fill the water and waste material container up to the MAX mark.
MAX	The water level is too high. Switch to water supply mode until the indicator goes out.

LED	Meaning
	No filter Fit the filter bag fitted correctly.

4 Technical data

4.1 Technical data



Note

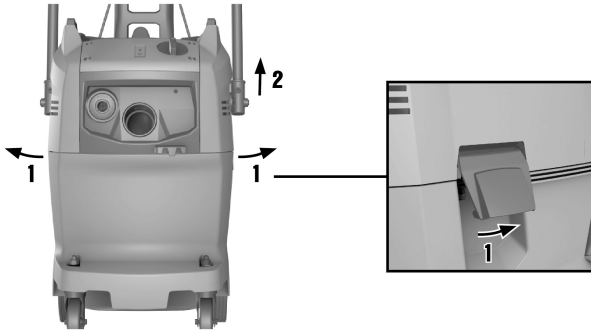
For details of the rated voltage, current, frequency and/or input power, please refer to the power tool's country-specific type identification plate.

When powered by a generator or transformer, the generator or transformer's power output must be at least twice the rated input power shown on the rating plate of the power tool. The operating voltage of the transformer or generator must always be within +5% and -15% of the rated voltage of the power tool.

	DD-WMS 100
Protection class	I
Protection class	IPX4
Weight in accordance with EPTA procedure 01/2003	43.4 lb (19.7 kg)
Operating temperature	37 °F ... 104 °F (3 °C ... 40 °C)
Recommended temperature range for transport and storage (without water in the container)	-13 °F ... 158 °F (-25 °C ... 70 °C)
Suction hose length	16 ft (5 m)
Pressure hose length	16 ft - 9 in (5.1 m)
Supply cord length	15 ft - 9 in (4.8 m)
Container capacity	32 ℓ
Water capacity	14 ℓ
Volumetric flow rate (air)	≤ 74 ℓ/s
Water flow rate	≤ 3 ℓ/min
Water pressure	≤ 7 bar

5 Before use

5.1 Filling the water and waste material container



1. Open the two catches.
2. Remove the filter bag. → page 10
3. Fill the water container with water up to the **MAX** mark.



Note

When the “**Water level too high**” warning lamp lights, the appliance cannot be operated. The water and waste material container must be filled for the “Water supply” and “Recycling” modes.

4. Insert the filter bag. → page 8
5. Fit the top section of the appliance onto the water and waste material container.
6. Close the two catches.

5.2 Fitting the filter bag



Note

A filter must be fitted for the **Vacuum cleaner** and **Recycling** modes.



1. Open the two catches.
2. Lift the top section of the appliance away from the water and waste material container.
3. Attach the filter to the filter holder.
4. Fit the top section of the appliance onto the waste material container.
5. Close the two catches.

5.3 Connecting the hose set to the diamond coring machine



1. Connect the suction hose to the suction hose inlet fitting.
2. Connect the water supply hose to the water supply hose outlet fitting.
3. Connect the other end of the suction hose to the water collector of the diamond core drilling machine.



Note

Use the tapered adapter if necessary.

4. Connect the other end of the water supply hose to the diamond core drilling machine.

6 Operation

6.1 Switching the appliance on



CAUTION

Risk of injury through incorrect operation.

- ▶ The appliance may be operated only by authorized, trained personnel. This personnel must be specially informed of any possible hazards.



WARNING

Risk of hazards through use of the product not as directed.

- ▶ This appliance is not suitable for picking up hazardous dust.



CAUTION

Risk of hazards through use of the product not as directed.

- ▶ Use the power outlet on the appliance only for the purposes described in these operating instructions.

WARNING! Risk of damage to the equipment or other property.

- ▶ Switch the product off immediately if foam or liquid escapes from it.



WARNING

Danger of electric shock! Carrying out care and maintenance while the supply cord is connected to the power outlet presents a risk of serious injuries including burns.

- ▶ Always unplug the supply cord before carrying out all care and maintenance tasks.

1. Connect the hose set to the diamond coring machine. → page 9
2. Set the control switch to the desired operating mode.

- If the following equipment exists, also take this action:

Option: Vacuum cleaner mode

- ▶ Set the control switch to **Vacuum mode**.



Note

The water management system is designed to be used only for small vacuum cleaning jobs such as cleaning up the working area. Do not use this appliance in vacuum cleaner mode for system applications in combination with electric tools.

- If the following equipment exists, also take this action:

Option: Water supply

- ▶ Set the control switch to the **Water supply** position.
- ▶ Open the water valve on the diamond core drilling machine.
 - ◀ The water supply is controlled by the water valve on the diamond core drilling machine.

- If the following equipment exists, also take this action:

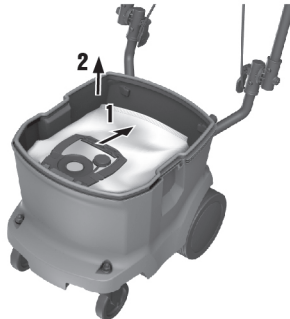
Option: Recycling

- ▶ Set the control switch to the **Recycling** position.
 - ◀ Vacuum removal begins.
- ▶ Open the water valve on the diamond core drilling machine.
 - ◀ The water supply is controlled by the water valve on the diamond core drilling machine.

6.2 Switching off the water management system

- ▶ Set the control switch to **OFF**.

6.3 Removing the filter bag



- Open the two catches.
- Lift the top section of the appliance away from the water and waste material container.



Note

Sharp or pointed objects that have pierced through the filter bag may present a risk of injury. Check to ensure that the filter bag has not been pierced by sharp or pointed objects. Carefully remove the filter bag from the filter bag holder in the water and waste material container.

- Close the filter bag with the cap that's attached to the bag.
- Remove the filter bag.
- Fit the top section of the appliance onto the waste material container.
- Close the two catches.

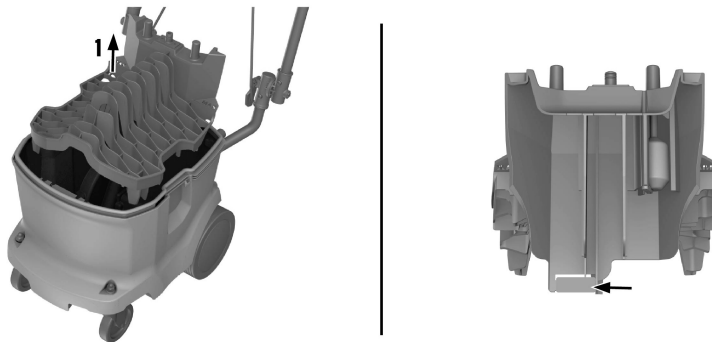
6.4 Emptying the waste material container

- Open the two catches.
- Lift the top section of the appliance away from the water and waste material container.
- Remove the filter bag. → page 10
- Empty the waste material container.

5. Clean the water and waste material container.
6. Insert the filter bag. → page 8
7. Fit the top section of the appliance onto the waste material container.
8. Close the two catches.

7 Care and maintenance

7.1 Checking the prefilter



1. Remove the filter bag holder.
2. Check whether the prefilter is clogged.
3. If the prefilter is clogged, clean it with fresh water.



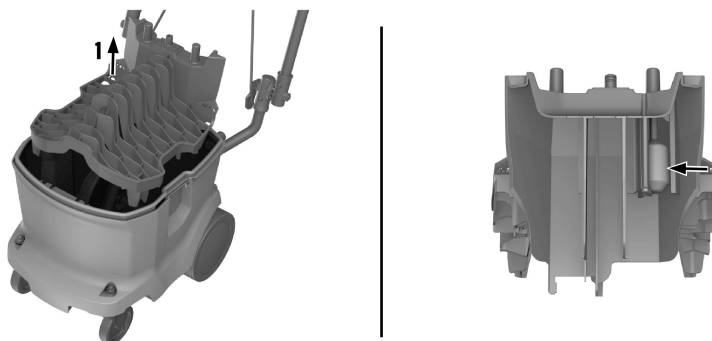
Note

Alternatively, a brush or compressed air can be used to clean the prefilter.

7.2 Checking the float level

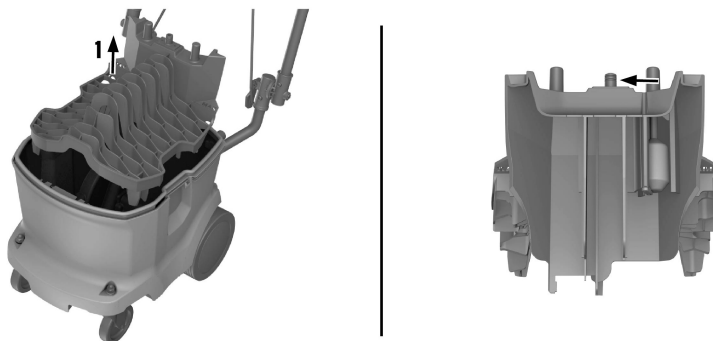
WARNING! Risk of damage to the equipment or other property.

- ▶ Check and clean the water level monitoring system at regular intervals. Switch the product off immediately if signs of damage are found.



1. Remove the filter bag holder.
2. Check that the float is free to move.
3. Clean the float if it does not move freely.

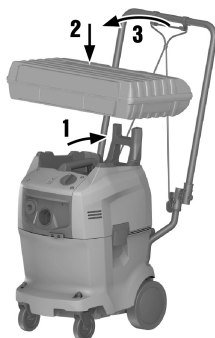
7.3 Checking the seal on the filter support



1. Check that the seal on the filter support is clean.
2. If the seal on the top section is dirty, clean it with a cloth.
3. Grease the seal.

8 Transport and storage

8.1 Stacking toolboxes for transport



1. Raise the toolbox retaining bar.
2. Stack the toolboxes with their grips placed over the toolbox retaining bar.



Note

The toolbox retaining bar must project beyond topmost toolbox.
The maximum permissible additional load is 25 kg.

3. Attach the ratchet strap to the ratchet strap hook.
4. Use the ratchet strap to secure the toolboxes and prevent them slipping out of place.

8.2 Storage

- ▶ Store the vacuum cleaner in a secure, dry place where it is inaccessible to unauthorized users.


9 Troubleshooting

If the trouble you are experiencing is not listed in this table or you are unable to remedy the problem by yourself, please contact **Hilti** Service.

9.1 Troubleshooting

Trouble or fault	Possible cause	Action to be taken
The MIN indicator lights and a warning tone is emitted.	Too little water in the water and waste material container.	▶ Fill the water and waste material container. → page 8
The MAX indicator lights.	Too much water in the water and waste material container.	▶ Switch to Water supply mode until the MAX indicator goes out.
	The float is stuck.	▶ Check the float level. → page 11
The No filter indicator lights.	The filter bag is missing or is not fitted correctly.	▶ Insert the filter bag. → page 8
The connection between the water hose and the appliance is stiff to operate.	The connecting nipple is dry and/or dirty.	▶ Grease the O-ring and the recess.
The filter bag holder is pulled up when the top section of the appliance is lifted	Internal water connector parts are dry and/or clogged.	▶ Check the seal on the filter support. → page 12
No water or too little water flows although there is adequate water in the container.	The prefilter is blocked.	▶ Check the prefilter. → page 11
	The water hose connector nipple is blocked.	▶ Use a pin to clear the hole in the nipple.
	The mesh filter on the drilling machine water connection is clogged.	▶ Clean the mesh filter with a brush.
No suction or reduced suction performance.	The filter bag is clogged.	▶ Change the filter bag.
The flow indicator sight glass is dirty.	Dirt deposits.	▶ Unscrew the flow indicator and clean it.
The appliance doesn't start in REC or VAC mode.	The float is stuck.	▶ Check the float level. → page 11

10 Disposal

 Most of the materials from which **Hilti** tools and appliances are manufactured can be recycled. The materials must be correctly separated before they can be recycled. In many countries, your old tools, machines or appliances can be returned to **Hilti** for recycling. Ask **Hilti** Service or your Hilti representative for further information.



- ▶ Disposal of electric tools or appliances together with household waste is not permissible.

11 Manufacturer's warranty

- ▶ Please contact your local **Hilti** representative if you have questions about the warranty conditions.

This Product is Certified
Ce produit est homologué
Producto homologado por
Este producto está registrado





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Hilti = registered trademark of Hilti Corp., Schaan



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