

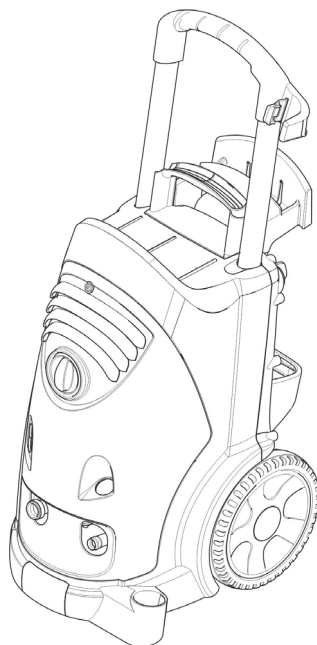
# KÄRCHER

makes a difference

**HD 7/11-4 M**

English

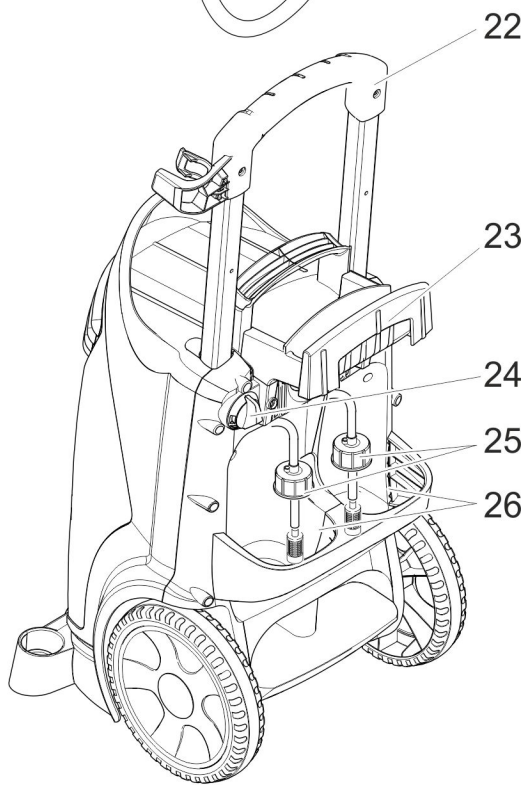
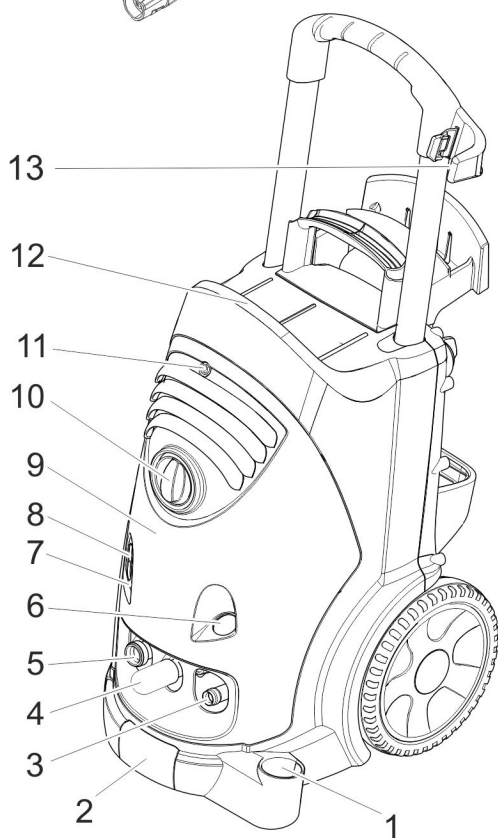
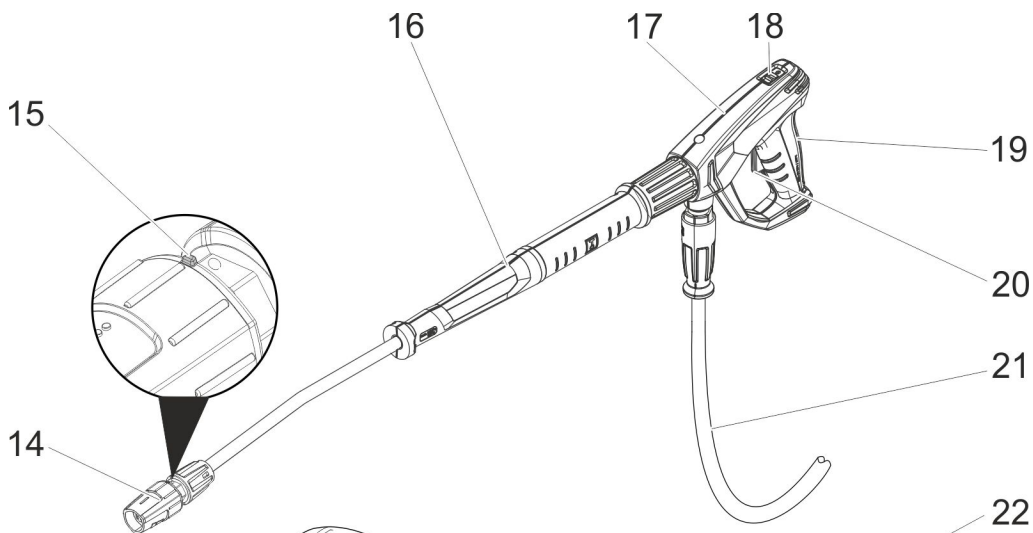
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Please read and comply with these original instructions prior to the initial operation of your appliance and store them for later use or subsequent owners.

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## Device elements

Please unfold the front picture side

- 1 Storage compartment for nozzles
- 2 Handle
- 3 High-pressure connection EASY!Lock
- 4 Pressure/ quantity regulation
- 5 Water connection
- 6 Manometer
- 7 Oil level indicator
- 8 Oil tank
- 9 Cover
- 10 Power switch
- 11 Fastening screw for device hood
- 12 Storage compartment for hoses
- 13 Trigger gun storage clip
- 14 Nozzle
- 15 Marking of the nozzle
- 16 Spray lance EASY!Lock
- 17 Trigger gun EASY!Force
- 18 Safety catch
- 19 Trigger
- 20 Safety lever
- 21 High pressure hose EASY!Lock
- 22 Push handle
- 23 Cable clamp

- 24 Dosage valve for detergent
- 25 Detergent suction hose with filter and screw-on lid
- 26 Bottle holder for detergent

## Colour coding

- The operating elements for the cleaning process are yellow.
- The controls for the maintenance and service are light gray.

## Safety instructions

- Before first start-up it is definitely necessary to read the operating instructions and safety indications Nr. 5.951-949.0!
- Please follow the national rules and regulations for fluid spray jets of the respective country.
- Please follow the national rules and regulations for accident prevention of the respective country. Fluid spray jets must be tested regularly and the results of these tests must be documented in writing.
- The appliance/accessories must not be modified.

## Hazard levels

### **⚠ DANGER**

*Pointer to immediate danger, which leads to severe injuries or death.*

### **⚠ WARNING**

*Pointer to a possibly dangerous situation, which can lead to severe injuries or death.*

### **⚠ CAUTION**

*Pointer to a possibly dangerous situation, which can lead to minor injuries.*

### **ATTENTION**

*Pointer to a possibly dangerous situation, which can lead to property damage.*

## Symbols on the machine



*High-pressure jets can be dangerous if improperly used. The jet may not be directed at persons, animals, live electrical equipment or at the appliance itself.*

*According to applicable regulations, the appliance must never be used on the drinking water net without a system separator. A suitable system separator by KÄRCHER or alternatively a system separator according to EN 12729 type BA must be used.*



*Water that was flowing through a system separator is considered non-drinkable.*

### ⚠ CAUTION

*Always connect the system separator to the water supply, never directly to the appliance!*

## Proper use

Use this high pressure cleaner exclusively for

- Cleaning using low pressure jet and detergent (for e.g. for cleaning machines, cars, buildings, tools),
- For cleaning using high pressure jet without detergent (for e.g. for cleaning facades, terraces, garden appliances).

For stubborn dirt, we recommend the use of the dirt blaster as a special accessory.

HD...Plus includes a dirt remover as part of standard delivery.

### Quality requirements for water:

#### ATTENTION

*Only clean water may be used as high pressure medium. Impurities will lead to increased wear and tear or formation of deposits in the appliance.*

*If recycled water is used, the following limit values must not be exceeded.*

pH value	6,5...9,5
electrical conductivity *	Conductivity fresh water +1200 µS/cm
settleable solids **	< 0,5 mg/l

total suspended solids ***	< 50 mg/l
Hydrocarbons	< 20 mg/l
Chloride	< 300 mg/l
Sulphate	< 240 mg/l
Calcium	< 200 mg/l
Total hardness	< 28 °dH < 50 °TH < 500 ppm (mg CaCO <sub>3</sub> /l)
Iron	< 0,5 mg/l
Manganese	< 0,05 mg/l
Copper	< 2 mg/l
Active chloride	< 0,3 mg/l
free of bad odours	
* Maximum total 2000 µS/cm	
** Test volume 1 l, settling time 30 min	
*** no abrasive substances	

## Safety Devices

Safety devices serve for the protection of the user and must not be put out of operation or bypassed with respect to their function.

### Overflow valve with pressure switch

While reducing the water supply/quantity regulation at the pump head, the overflow valve opens and part of the water flows back to the pump suck side.

If the pulling lever on the trigger gun is released the pressure switch turns off the pump, the high-pressure jet is stopped. If the pulling lever is pulled the pump is turned on again.

When the maximum operating over pressure is exceeded, the overflow valve opens and the water flows back to the pump inlet. The overflow valve and pressure switch are set and sealed at the factory. Setting only by customer service.

## Environmental protection



The packaging material can be recycled. Please do not throw the packaging material into household waste; please send it for recycling.



Old appliances contain valuable materials that can be recycled; these should be sent for recycling. Batteries, oil, and similar substances must not enter the environment. Please dispose of your old appliances using appropriate collection systems.

Electrical and electronic devices often contain components which could potentially pose a danger to human health and the environment if handled or disposed of incorrectly. However, these components are necessary for the proper operation of the device. Devices marked with this symbol must not be disposed of with regular household rubbish.

### Notes about the ingredients (REACH)

You will find current information about the ingredients at:

[www.kaercher.com/REACH](http://www.kaercher.com/REACH)

## Before Startup

### Unpacking

- Check the contents of the pack before unpacking.
- In case of transport damage inform vendor immediately.

### Check oil level

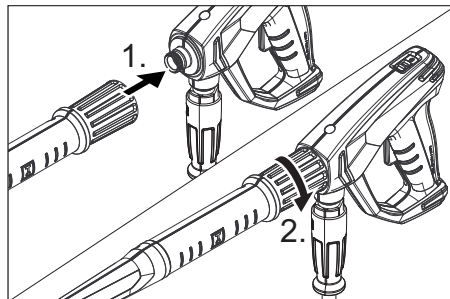
- ➔ Read the oil level display when the device is not running. The oil level must be above the two pointers.

### Activate deaeration of oil container

- ➔ Unscrew the fastening screws of the device hood; remove the device hood.
- ➔ Cut off tip of oil container cover
- ➔ Fasten the device hood.

## Attaching the Accessories

**Note:** The EASY!Lock system joins components with a quick-fasten thread solidly and securely with just one turn.



- ➔ Mount the nozzle on the spray lance (marking on the adjustment ring at the top) and hand-tighten it (EASY!Lock).
- ➔ Join the spray lance with the trigger gun and tighten until hand-tight (EASY!Lock).
- ➔ Join the high-pressure hose with trigger gun and high-pressure connection of the appliance and tighten until hand-tight (EASY!Lock).

## Start up

### ⚠ WARNING

*Risk of injury! Appliance, accessories, supply lines and connections must be in fault-free condition. If they are not in a perfect state then the appliance must not be used.*

### Electrical connection

### ⚠ DANGER

*Danger of injury by electric shock.*

- *It is imperative to connect the appliance to the electric mains by means of a plug. It is forbidden to permanently connect the appliance to the power supply. The plug serves for the disconnection from the mains.*
- *The appliance may only be connected to alternating current.*
- *The highest allowed net impedance at the electrical connection point (refer to technical data) is not to be exceeded. In case of confusion regarding the power*

*impedance present on your connection, please contact your utilities provider.*

- *The plug and coupling of the extension cable used must be watertight.*
- *Use the extension cord that has an adequate cross-section (see "Technical Data") and unwind it fully from the cable drum.*

For connection values, see type plate/technical data.

- ➔ Unwind the mains cable and place it on the floor.
- ➔ Insert the mains plug into a socket.

## Water connection

### Connection to the water supply

#### ⚠ **WARNING**

Observe regulations of water supplier.

*According to applicable regulations, the appliance must never be used on the drinking water net without a system separator. A suitable system separator by KÄRCHER or alternatively a system separator according to EN 12729 type BA must be used.*

*Water that was flowing through a system separator is considered non-drinkable.*

#### ⚠ **CAUTION**

*Always connect the system separator to the water supply, never directly to the appliance!*

For connection values refer to technical specifications.

- ➔ Connect the supply hose (minimum length 7.5 m, minimum diameter 1") to the water connection point of the appliance (such as the tap).

#### **Note:**

The supply hose is not included.

- ➔ Open the water supply.

### Drawing in water from open reservoirs

- ➔ Screw the suction hose (order no. 4.440-270.0) onto the water connection.
- ➔ Connect filter (order-no. 4.730-012.0) to suction hose.
- ➔ Deaerate the appliance:  
Unscrew the nozzle.  
Switch on the appliance and let it run until the water exiting is bubble-free.

At the end let the appliance run for approx. 10 seconds - then switch off. Repeat the procedure for a couple of times.

- ➔ Switch off the appliance and fit the nozzle again.

## Operation

#### ⚠ **DANGER**

*Risk of explosion!*

*Do not spray flammable liquids.*

*If the appliance is used in hazardous areas (e.g. filling stations) the corresponding safety regulations must be observed.*

*Risk of injury! Hold the hand spray gun and the spray pipe firmly with both hands.*

*Risk of injury! The trigger and safety lever may not be locked during the operation.*

*Risk of injury! Contact Customer Service if the safety lever is damaged.*

*Risk of injury from high-pressure water jet. Slide the safety catch on the trigger gun forward before performing any work with the appliance.*

#### ⚠ **CAUTION**

*Clean engines only at places with corresponding oil separators (environmental safety).*

#### **ATTENTION**

*Risk of blocking. Place the nozzles in the accessory compartment with their joint pointing upward.*

### Opening/closing the trigger gun

- ➔ To open the trigger gun: Actuate the safety lever and trigger.
- ➔ To close the hand spray gun: Release the safety lever and trigger.

### High pressure operation

#### **Note:**




The appliance is equipped with a pressure switch. The motor starts up only when the trigger gun is open.

- ➔ Set the appliance switch to "I".
- ➔ Release the trigger gun. To do so, push the safety catch towards the back.
- ➔ Open the hand spray gun.

- Set working pressure and flow rate through turning (runless) at the pressure- and amount regulation (+/-).

### Select spray type

- Close the hand spray gun.
- Turn the casing of the nozzle till the desired symbol matches the marking.

	High pressure circular spray (0°) for specially stubborn dirt
	Flat low pressure spray (CHEM) for operating using detergents or cleaning at low pressure.
	High pressure flat spray (25°) for large dirt areas

### Operation with detergent

#### ⚠ WARNING

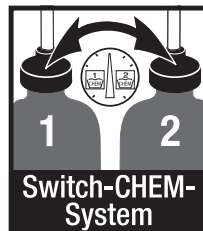
*Unsuitable detergents can cause damage to the appliance and to the object to be cleaned. Use only those detergents that have been approved by Kärcher. Observe the dosage and other instructions provided with these detergents. For considerate treatment of the environment use detergent economically.*

*Follow the safety instructions for using detergents.*

Kärcher detergents ensure smooth functioning. Please consult us or ask for our catalogue or our detergent information sheets.

- Place the detergent bottle into the bottle holder on the appliance or place a detergent container next to the appliance.. Two different detergents can be simultaneously placed into the appliance.
- Pull the detergent suction hose out and immerse it into the detergent bottle or container.
- Screw the lid onto the bottle or the container.
- Set nozzle to "CHEM".

- Set the detergent dosing valve to the desired detergent and concentration.



### Recommended cleaning method

- Spray the detergent sparingly on the dry surface and allow it to react, but not to dry.
- Spray off loosened dirt with the high-pressure ray.
- After operations, dip the filter in clear water. Turn the dosing valve to the highest detergent concentration. Start the appliance and rinse for one minute.

### Interrupting operation

- Close the hand spray gun. The appliance switches off.
- Open the hand spray gun. The appliance will switch on again.

### Turn off the appliance

- Shut off water supply.
- Open the hand spray gun.
- Switch on the pump with the power switch and allow to run for about 5-10 seconds.
- Close the hand spray gun.
- Set the appliance switch to "0/OFF".
- Pull main plug out of socket with dry hands only.
- Remove water connection.
- Activate hand spray gun until device is pressure less.
- Secure the trigger gun. To do so, push the safety catch towards the front.

### Storing the Appliance

- Insert the hand-spray gun in the holder.
- Wind up the high-pressure hose and hang it over the hose storage.
- Wind the connection cable around the cable holder.
- Fasten the plug with the mounted clip.

## Frost protection

### **ATTENTION**

*Frost will destroy the not completely water drained device.*

Store the appliance in a frost free area.

### **If you cannot store it in a frost-free place:**

- Drain water.
- Pump in conventional frost protection agents through the appliance.

### **Note:**

Use normal glycol-based anti-freezing agents for automobiles.

Observe handling instructions of the anti-freeze agent manufacturer.

- Operate device for max. 1 minute until the pump and conduits are empty.

## Transport

### **△ CAUTION**

*Risk of personal injury or damage! Mind the weight of the appliance during transport.*

### **ATTENTION**

*Protect the trigger from damage during transport.*

- Pull the device behind you at the handle for transporting it over longer distances.
- Push the handle downward to carry the appliance. To carry, hold the appliance at the handles and not at the pushing handle.
- Prior to transporting the appliance in horizontal position, remove the detergent bottles from the bottle holder and close them.
- When transporting in vehicles, secure the appliance according to the guidelines from slipping and tipping over.

## Storage

### **△ CAUTION**

*Risk of personal injury or damage! Consider the weight of the appliance when storing it.*

This appliance must only be stored in interior rooms.

## Care and maintenance

### **△ DANGER**

*Risk of injury by inadvertent startup of appliance and electrical shock.*

*Prior to all work on the appliance, switch off the appliance and pull the power plug.*

### **Note:**

Used oil must only be disposed of by the designated collection points. Please turn in used oil there. Polluting the environment with used oil is prosecutable.

## Safety inspection/ maintenance contract

You can sign with your dealer a contract for regular safety inspection or even sign a maintenance contract. Please take advice on this matter.

## Before each use

- Check connection cable for damages (risk of electrical shock); get the damaged connection cable replaced immediately by an authorised customer service person/ electrician.
- Check the high pressure hose for damages (risk of bursting). Please arrange for the immediate exchange of a damaged high-pressure hose.
- Check appliance (pump) for leaks. 3 drops per minute are permitted and can come out from the lower side of the appliance. Call Customer Service if there is heavy leakage.

## Weekly

- Check oil level Please contact Customer Service immediately if the oil is milky (water in oil).
- Clean the sieve in the water connection.
- Clean filter at the detergent suck hose.

### **HD 9/20-4 only:**

Clean the fine filter.

- Unpressurize the appliance.
- Unscrew the fastening screws of the device hood; remove the device hood.



- Unscrew lid with filter.
- Clean the filter with clean water or compressed air.
- Reinstall in reverse sequence.

### Every 500 operating hours, at least annually

- Have the maintenance of the device performed by the customer service.
- Oil change.

### Oil change

#### Note:

See "Specifications" for oil volume and type.

- Unscrew the fastening screws of the device hood; remove the device hood.
- Remove the lid of the oil container.
- Tilt the appliance forward.
- Drain the oil in a collection basin.
- Fill in new oil slowly; air bubbles should go out.
- Attach the lid of the oil container.
- Fasten the device hood.

## Troubleshooting

### ⚠ **DANGER**

*Risk of injury by inadvertent startup of appliance and electrical shock.*

- *Prior to all work on the appliance, switch off the appliance and pull the power plug.*
- *Get the electrical components checked and repaired only by authorised customer service persons.*
- *Contact an authorised customer service person in case of problems not mentioned in this chapter or if you are in doubt or when you have been explicitly asked to do so.*

### Appliance is not running

- Check connection cable for damages.
- Check the supply voltage.
- Turn device switch on "0" and let engine cool off for min. 5 minutes.  
If malfunction still occurs, have device checked by customer service.
- Call Customer Service in case of electrical defects.

### Pressure does not build up in the appliance

- Set nozzle to "High pressure".
- Clean the nozzle.
- Replace the nozzle.
- Deaerate the appliance (see "Start-up")
- Check water supply level (refer to technical data).
- Clean the sieve in the water connection.
- Check all inlet pipes to the pump.
- Contact Customer Service if needed.

### Pump leaky

3 drops per minute are permitted and can come out from the lower side of the appliance. Call Customer Service if there is heavy leakage.

- With stronger leak, have device checked by customer service.

### Pump is vibrating

- Check suction pipes for water and detergent and ensure that they are leak-proof.
- Close dosing valve for detergent to operate the machine without detergent.
- Deaerate the appliance (see "Start-up")
- Contact Customer Service if needed.

### Detergent is not getting sucked in

- Set nozzle to "CHEM".
- Check/ clean detergent suction hose with filter.
- Open or check/clean detergent dosing valve.
- Contact Customer Service if needed.

## Accessories and Spare Parts

Only use original accessories and spare parts, they ensure the safe and trouble-free operation of the device.

For information about accessories and spare parts, please visit [www.kaercher.com](http://www.kaercher.com).

## Warranty

The warranty terms published by the relevant sales company are applicable in each country. We will repair potential failures of your appliance within the warranty period free of charge, provided that such failure is caused by faulty material or defects in manufacturing. In the event of a warranty claim please contact your dealer or the nearest authorized Customer Service centre. Please submit the proof of purchase.

## EU Declaration of Conformity

We hereby declare that the machine described below complies with the relevant basic safety and health requirements of the EU Directives, both in its basic design and construction as well as in the version put into circulation by us. This declaration shall cease to be valid if the machine is modified without our prior approval.

**Product:** High pressure cleaner

**Type:** 1.524-xxx

**Relevant EU Directives**

2006/42/EC (+2009/127/EC)

2014/30/EU

2000/14/EC

**Applied harmonized standards**

EN 60335-1

EN 60335-2-79

EN 55014-1: 2006+A1: 2009+A2: 2011

EN 55014-2: 1997 + A2: 2008

EN 61000-3-2: 2006+A1: 2009+A2: 2009

EN 61000-3-3: 2006

EN 62233: 2008

HD 6/16:

EN 61000-3-11: 2000

**Applied conformity evaluation method**

2000/14/EC: Appendix V

**Sound power level dB(A)**

Measured: 83

Guaranteed: 86

The undersigned act on behalf and under the power of attorney of the company management.



H. Jenner

CEO



S. Reiser

Head of Approbation

Authorised Documentation Representative  
S. Reiser

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Winnenden, 2016/11/01

## Technical specifications

<b>Main Supply</b>		
Voltage	V	230...240
Current type	Hz	1~ 50
Motor rpm	1/min	1400
Connected load	kW	3,0
Protection (slow, char. C)	A	13
Type of protection		IPX5
Maximum allowed net impedance	Ohm	0.294+j0.184
Extension cord 30 m	mm <sup>2</sup>	2,5
<b>Water connection</b>		
Max. feed temperature	°C	60
Min. feed volume	l/h (l/min)	700 (11,7)
Suck height from open container (20 °C)	m	0,5
Max. feed pressure	MPa	1
<b>Performance data</b>		
Operating pressure of water (using standard nozzle)	MPa	3...11
Size of standard nozzle		053
Max. operating over-pressure	MPa	20
Flow rate	l/h (l/min)	300...700 (5...11,7)
Detergent suck in	l/h (l/min)	0...40 (0...0,7)
Max. recoil force of trigger gun	N	30
<b>Values determined as per EN 60335-2-79</b>		
Hand-arm vibration value		
Hand spray gun	m/s <sup>2</sup>	1,5
Spray lance	m/s <sup>2</sup>	2,6
Uncertainty K	m/s <sup>2</sup>	0,3
Sound pressure level L <sub>pA</sub>	dB(A)	69
Uncertainty K <sub>pA</sub>	dB(A)	3
Sound power level L <sub>WA</sub> + Uncertainty K <sub>WA</sub>	dB(A)	86
<b>Fuel</b>		
Amount of oil	l	0,5
Oil grade		SAE 0W40
<b>Dimensions and weights</b>		
Length	mm	554
Width	mm	509
Height	mm	1000
Weight (without accessories)	kg	47,5



<http://www.kaercher.com/dealersearch>

