

 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.

- Before first start-up it is definitely necessary to read the operating instructions and safety indications Nr. 5.951-949.0!
- In case of transport damage inform vendor immediately.
- Check the contents of the pack before unpacking. For scope of delivery see illustration 1.

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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.

Please do not release engine oil, fuel oil, diesel and petrol into the environment. Protect the ground and dispose of used oil in an environmentally-clean manner.

Notes about the ingredients (REACH)

You will find current information about the ingredients at:
www.kaercher.com/REACH

Danger or 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.

Device elements

Illustration 1

- 1 High pressure hose EASY!Lock
- 2 Cable clamp
- 3 Pouring vent for fuel
- 4 Filling level display
- 5 Storage compartment for nozzles
- 6 Power supply
- 7 High-pressure pump
- 8 Water supply set
- 9 High pressure connection EASY!Lock (HDS 5/xx U only)
- 10 Storage for spray pipe
- 11 Water connection with filter
- 12 Support
- 13 Output opening of the high pressure hose (HDS 5/xx U only)
- 14 Carrying handle
- 15 Cover
- 16 Power switch
- 17 Burner
- 18 Hose storage (HDS 5/xx U only)
- 19 Hose drum (HDS 5/xx UX only)
- 20 Detergent suction hose with filter
- 21 Support for spray lance
- 22 Nameplate
- 23 Cover lock
- 24 Hand crank for hose drum (HDS 5/xx UX only)
- 25 Push handle
- 26 Marking of the nozzle
- 27 Triple nozzle EASY!Lock
- 28 Spray lance EASY!Lock
- 29 Trigger gun EASY!Lock
- 30 Safety latch of the hand spray gun
- 31 Safety lever
- 32 Triggering lever

Colour coding

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

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. The high pressure cleaner must only be used while standing.

Device with hose drum:



Risk of burns on account of hot surfaces!

Proper use

- Cleaning of: Machines, Vehicles, Structures, Tools, Facades, Terraces, Gardening tools, etc.
- The high pressure cleaner must only be used while standing.
- Never leave the appliance unattended as long as it is in operation.

⚠ DANGER

Risk of injury! Follow the respective safety regulations when operating at gas stations or other dangerous areas.

Please do not let mineral oil contaminated waste water reach soil, water or the sewage system. Perform engine cleaning and bottom cleaning therefore only on specified places with an oil trap.

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 and accessories.

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 ₃ /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 instructions

- 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 heating appliance of the machine is an ignition plant. All national laws and regulations about heating systems must also be followed.
- The appliance/accessories must not be modified.

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.

Pressure switch

The pressure switch turns the device off when the handgun is closed and switch on when the handgun is opened.

Safety valve

- The safety valve opens in case of excessive pressure in the boiler or if the overflow valve or the pressure switch is broken.
- The safety valve is set by the manufacturer and sealed. Setting only by customer service.

Water shortage safeguard

The water shortage safeguard prevents the burner to be turned on when there is water shortage.

Temperature stop for exhaust gases

The temperature stop switches off the machine when the waste gases have reached very high temperatures.

Winding protection contact

The winding protection contact in the motor winding of the pump drive switches off the engine when there is a thermal overload.

Safety catch

The safety catch on the trigger gun prevents the appliance from being switched on unintentionally.

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.

Install the hand-spray gun, the jet pipe, the nozzle and the high pressure hose

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

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

- ➔ Appliance without hose drum:
Join the high-pressure hose with trigger gun and high-pressure connection of the appliance and tighten until hand-tight (EASY!Lock).
- ➔ Device with hose drum:
Join the high pressure hose with trigger gun and tighten until hand-tight (EASY!Lock).

Refill fuel

⚠ **DANGER**

Danger of explosion! Only refill diesel oil or light fuel oil. The operation with bio diesel as per EN 14214 (starting at an outside temperature of 6 °C) is possible. Inappropriate fuels, e.g. petrol, must not be used.

ATTENTION

Risk of damage! Never operate device with an empty fuel tank. The fuel pump will otherwise be destroyed. This also applies to cold water operation.

- ➔ Open fuel filler cap.
- ➔ Refill fuel.
- ➔ Close tank lock.
- ➔ Wipe off spilled fuel.

Fill/replace detergent container

⚠ **DANGER**

Risk of injury!

- Use Kärcher products only.
- Under no circumstances vacuum solvents (petrol, acetone, diluting agent etc.).
- Avoid eye and skin contact.
- Observe safety and handling instructions by the detergent manufacturer.

Kärcher offers an individual cleaning and care appliances program.

Your dealer will consult you gladly.

- ➔ Fill/replace external detergent container.

Water connection

⚠ **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. Ensure that the connection of your building



water installation on which the high-pressure cleaner is operated is equipped with a system separator pursuant to EN 12729 Type BA.

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

- ➔ Attach supply hose (minimum length 7.5 m, minimum diameter 1/2") to the water supply set by means of a hose clamp.
- ➔ Connect the supply hose to the water connection point of the machine and at the water supply point (for e.g. a tap).

Note: The supply hose and the hose clamp are not included in the scope of delivery.

Suck in water from vessel

- ➔ Connect suction hose (minimum diameter 1/2") with filter (accessory) to the water connection point.
- Max. suck height: 0.5 m

⚠ **DANGER**

Risk of personal injury or damage! Never suck in water from a drinking water container. Never suck in liquids which contain solvents like lacquer thinner, petrol, oil or unfiltered water. The sealings within the device are not solvent resistant. The spray mist of solvents is highly inflammable, explosive and poisonous.

Power connection

- For connection values, see technical data and type plate.
- The electrical connections must be done by an electrician according to IEC 60364-1.
- ➔ Set the appliance switch to "0/OFF".
- ➔ Plug in the mains plug.

⚠ DANGER

Risk of injury on account of electric shock!

- Unsuitable electrical extension cables can be hazardous. Only use electrical extension cables outdoors which have been approved and labelled for this purpose and have an adequate cable cross-section.
- Always unwind extension lines completely.
- The plug and coupling of the extension cable used must be watertight.

ATTENTION

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.

Operation

⚠ DANGER

Danger of explosion! Do not spray flammable liquids.

⚠ DANGER

Risk of injury! Never use the appliance without the spray lance attached. Check and ensure proper fitting of the spray lance prior to each use. The screw connection of the spray lance must be finger-tight.

⚠ DANGER

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

⚠ DANGER

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

⚠ DANGER

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

ATTENTION

- Risk of damage! Never operate device with an empty fuel tank. The fuel pump will otherwise be destroyed. This also applies to cold water operation.
- Risk of damage! Never operate the appliance without a filter in the water connection.
- Risk of damage! Do not place any objects (hose, etc.) on or over the chimney.

- Device with hose drum:
Risk of damage. Always unwind high-pressure hose completely.

Open/close the hood

Illustration **2**

- Unlock the hood lock using a screwdriver, pivot the appliance hood forward and unhook it.

Illustration **3**

- Hook in the appliance hood (see arrows), pivot it up and lock in the hood lock.

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.

Replace the nozzle

⚠ DANGER

Risk of injury! Switch the appliance off prior to replacing nozzle and activate hand spray gun until device is pressureless.

- Secure the trigger gun. To do so, push the safety catch towards the front.
- Replacing the nozzle.

Operating modes

Illustration **4**

0/OFF = Off

- 1 Operating with cold water
- 2 Operating with hot water

Turning on the Appliance

- Set appliance switch to desired operating mode.

The device starts briefly and turns off, as soon as the working pressure is reached.

- Release the trigger gun. To do so, push the safety catch towards the back.

When activating the hand spray gun the device switches back on.

Note: If no water comes out of the high pressure nozzle, vent pump.

Vent pump:

- With open hand spray gun turn device on and off multiple times with the device switch.

Note: By dismantling the spray lance from the hand spray gun, the venting process is accelerated.

Interrupting operation

- Release the pulling lever; the device will switch off.
Secure the trigger gun. To do so, push the safety catch towards the front.
- Release the trigger gun. To do so, push the safety catch towards the back.
Release the pulling lever again; the device will switch on again.

Select spray type

- Close the hand spray gun.
- Secure the trigger gun. To do so, push the safety catch towards the front.
- 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

- For considerate treatment of the environment use detergent economically.
- The detergent must be suitable for the surface to be cleaned.

Illustration 5

- Take out detergent suck hose.
- Turn filter on the detergent suction hose in order to dispense the detergent.
- Suspend end of suction hose in a container filled with detergent.
- Set nozzle to "CHEM".

Cleaning

- Set the detergent concentration according to the surface to be cleaned.

Note: To prevent damage due to too much pressure, always position high pressure ray first from a greater distance towards object to be cleaned.

Recommended cleaning method

- Loosen the dirt:
- Spray detergent economically and let it work for 1...5 minutes but do not let it dry up.
- Remove the dirt:
- Spray off loosened dirt with the high pressure jet.

Operating with cold water

Removal of light contaminations and clear rinse, i.e.: Gardening tools, terrace, tools, etc.

- Set the appliance switch to "1".

Operating with hot water

⚠ **DANGER**

Scalding danger!

- Set the appliance switch to "2".

After operation with detergent

- Completely close the filter at the detergent suction hose (-).
- Set the appliance switch to "1".
- Open the hand spray gun and rinse the appliance for at least 1 minute.

Turn off the appliance

⚠ **DANGER**

Danger of scalding from hot water! After operation with hot water, the device must be operated with openend handgun with cold water for at least two minutes.

- 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.
- Appliance without hose drum:
Wind up the high-pressure hose and hang it over the hose storage.
- Device with hose drum:
Wind up the high-pressure hose on the hose drum. Push in the handle of the crank to block the hose drum.
- Wind the connection cable around the cable holder.
- Fasten the plug with the mounted clip.

Frost protection

ATTENTION

Risk of damage! Frost will destroy the appliance if the water has not been completely drained.

- Store in a frost free area.

If the device is connected to a chimney, the following must be observed:

ATTENTION

Threat of damage by penetrating cold air through the chimney.

- Disconnect device from chimney when outside temperature drops below 0 °C. If it is not possible to store frost free, shut down device.

Shutdown

For longer work breaks or if a frost free storage is not possible:

- Drain water.
- Flush device with anti-freeze agent.

Dump water

- Screw off water supply hose and high pressure hose.

Illustration **6**

- Lay the appliance on its rear.

- Operate the appliance for a max. of 1 minute with cold water until the pump and conduits are empty.

Flush device with anti-freeze agent

Note: Observe handling instructions of the anti-freeze agent manufacturer.

- Fill commercial grade anti-freeze into the water connection.
- Switch on appliance (without heater) till the appliance has been completely rinsed.

A certain corrosion protection is achieved with this as well.

Storage

⚠ CAUTION

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

Transport

⚠ DANGER

Risk of injury! Risk of tipping with high inclines, if the inclination is too large to the side and with unstable surfaces.

- The appliance should only be used on gradients of max. 2%.
- Only use the machine on sound surfaces.

ATTENTION

Protect the trigger from damage during transport.

⚠ CAUTION

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

- Lay the appliance on its rear prior to transporting it and drain the residual water.
- Pull the device behind you at the carrying handle for transporting it over longer distances
- To carry, hold the appliance by the handles and the pushing handle.
- When transporting in vehicles, secure the appliance according to the guidelines from slipping and tipping over.

Care and maintenance

⚠ DANGER

Risk of injury by inadvertent start-up of appliance and electric shock. Prior to all work on the appliance, switch off the appliance and pull the power plug.

- 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.
- Allow device to cool down.

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.

Maintenance intervals

Weekly

- Clean filter in the water connection.

Monthly

- Clean filter at the detergent suck hose.

Every 500 operating hours, at least annually

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

Maintenance Works

Note: It is not necessary to perform an oil change on the high-pressure pump.

Clean filter in the water connection.

- Remove the filter.
- Clean filter in water and reinstall.

Clean filter at the detergent suck hose

- Clean filter in water and reinstall.

Troubleshooting

⚠ DANGER

Risk of injury by inadvertent start-up of appliance and electric shock. Prior to all work on the appliance, switch off the appliance and pull the power plug.

Appliance is not running

- No power
 - Check power connection/conduit.
- Engine overload/overheat
 - Set the appliance switch to "0/OFF".
 - Allow device to cool down.
 - Turn on the appliance.
 - If malfunction still occurs, have device checked by customer service.
- The exhaust temperature limiter has been triggered, heating coil is sooted.
 - Have device de-sooted by customer service.
- The exhaust temperature limiter has been triggered, exhaust temperature too high.
 - Set the appliance switch to "0/OFF".
 - Allow device to cool down.
 - Only in devices with manual reset: Illustration 7
 - Press reset button of the exhaust temperature limiter.
 - Turn on the appliance.
 - If malfunction still occurs, have device checked by customer service.

Device is not building up pressure

- Air within the system
 - Vent pump:
 - With open hand spray gun turn device on and off multiple times with the device switch.
- Note:** By dismantling the spray lance from the hand spray gun, the venting process is accelerated.
- Fill/replace external detergent container if empty.
 - Check connections and conduits.

- Filter in the water connection is dirty
- ➔ Clean filter.
- Amount of water supply is too low.
- ➔ Check water supply level (refer to technical data).
- Water tap is closed.
- ➔ Open tap.

Device continuously turns on and off while hand spray gun is open

- Air within the system
- Vent pump:
- ➔ With open hand spray gun turn device on and off multiple times with the device switch.

Note: By dismantling the spray lance from the hand spray gun, the venting process is accelerated.

- High-pressure nozzle clogged
- ➔ Clean the nozzle.
- Heating coil has heavy calcium deposits
- ➔ Have the device decalcified by customer service.

Device turns on and off while hand spray gun is closed

- Leak in the high pressure system
- ➔ Check high pressure system and connections for tightness.

Device leaks, water drips from the bottom of the device

- Pump leaks, safety valve not tight.
- Note:** 3 drops/minute are allowed.
- ➔ With stronger leak, have device checked by customer service.

Device is not sucking in detergent

- Nozzle is set to "High pressure"
- ➔ Set nozzle to "CHEM".
- External detergent container is empty.
- ➔ Fill/replace external detergent container.
- Filter at the detergent suction hose dirty
- ➔ Clean filter.

Illustration **8**

- Backflow valve stuck
- ➔ Remove the detergent hose and loosen the backflow valve using a blunt object.

Burner does not start

- Fuel tank empty.
- ➔ Refill fuel.
- Water shortage
- ➔ Check water supply, check connections.
- Water flow temperature too hot.
- ➔ Fill in water with a max. temperature of 30°C.

Illustration **9**

- Fuel filter dirty
- ➔ Change fuel filter.

Customer Service

If malfunction can not be fixed, the device must be checked by customer service.

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.

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.

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: 1.064-xxx

Relevant EU Directives

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

2000/14/EC

2014/30/EU

Applied harmonized standards

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

EN 55014-2: 2015

EN 60335-1

EN 60335-2-79

EN 61000-3-2: 2014

HDS 5/11, HDS 5/13:

EN 61000-3-3: 2013

HDS 5/15:

EN 61000-3-11: 2000

Applied conformity evaluation method

2000/14/EC: Appendix V

Sound power level dB(A)

HDS 5/11 U, HDS 5/15:

Measured: 91

Guaranteed: 94

HDS 5/11 UX, HDS 5/13:

Measured: 91

Guaranteed: 93

5.957-976

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


H. Jenner
CEO


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Winnenden, 2016/01/01

Technical specifications

		HDS 5/11			HDS 5/13			HDS 5/15		
Main Supply										
Voltage	V	220	230	240	220	230	240	220	230	240
Current type	Hz	1~ 50			1~ 50			1~ 50		
Connected load	kW	2.2			2.6			2.7		
Protection (slow)	A	16	16	13	16	16	13	16	16	13
Type of protection	--	IPX5			IPX5			IPX5		
Protective class	--	I			I			I		
Maximum allowed net impedance	Ohm	--			--			(0.380+j0.237)		
Water connection										
Max. feed temperature	°C	30			30			30		
Min. feed volume	l/h (l/min)	500 (8.3)			550 (9.2)			500 (8.3)		
Suck height from open container (20 °C)	m	0.5			0.5			0.5		
Max. feed pressure	MPa (bar)	0.6 (6)			0.6 (6)			0.6 (6)		
Inlet hose diameter (min.)	Inch	1/2			1/2			1/2		
Inlet hose length (min.)	m	7.5			7.5			7.5		
Performance data										
Water flow rate	l/h (l/min)	450 (7.5)			500 (8.3)			450 (7.5)		
Operating pressure of water (using standard nozzle)	MPa (bar)	11.0 (110)			12.5 (125)			15.0 (150)		
Max. excess operating pressure (safety valve)	MPa (bar)	16.5 (165)			18.0 (180)			20.0 (200)		
Max. operating temperature of hot water	°C	80			80			80		
Detergent suck in	l/h (l/min)	0-33 (0-0.6)			0-33 (0-0.6)			0-33 (0-0.6)		
Burner performance	kW	26			29			26		
Maximum consumption of heating oil	kg/h	2.7			3.1			2.7		
Max. recoil force of trigger gun	N	18.1			21.4			20.8		
Size of standard nozzle (UX)	--	032 (033)			034			028		
Values determined as per EN 60335-2-79										
Noise emission										
Sound pressure level L_{pA}	dB(A)	76			76			77		
Uncertainty K_{pA}	dB(A)	3			3			3		
Sound pressure level L_{WA} + Uncertainty K_{WA} (UX)	dB(A)	94 (93)			93			94		
Hand-arm vibration value										
Hand spray gun	m/s ²	2.4			1.0			0.9		
Spray lance	m/s ²	1.4			1.1			1.1		
Uncertainty K	m/s ²	0.3			0.3			0.3		
Fuel										
Fuel	--	Fuel oil EL or Diesel			Fuel oil EL or Diesel			Fuel oil EL or Diesel		
Amount of oil	l	0.1			0.1			0.2		
Oil grade	Engine oil 15W40	Order no. 6.288-050.0			Order no. 6.288-050.0			Order no. 6.288-050.0		
Dimensions and weights										
Length x width x height (UX)	mm	618 x 618 x 994 (1163)			618 x 618 x 994 (1163)			618 x 618 x 994 (1163)		
Typical operating weight (UX)	kg	70 (72)			74 (76)			76 (78)		
Fuel tank	l	6.5			6.5			6.5		