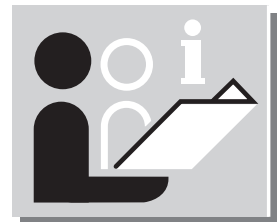


HD 3.0/20-4M Ea



IMPORTANT SAFETY INSTRUCTIONS

WARNING!

When using this product basic precautions should always be followed, including the following:

- Read all the instructions before using the product.
- To reduce the risk of injury, close supervision is necessary when a product is used near children.
- Know how to stop the product and bleed pressures quickly. Be thoroughly familiar with the controls.
- Stay alert – watch what you are doing.
- Do not operate the product when fatigued or under the influence of alcohol or drugs.
- Keep operating area clear of all persons.
- Do not overreach or stand on unstable support. Keep good footing and balance at all times.
- Follow the maintenance instructions specified in the manual.
- This Product Is Provided With A Ground Fault Circuit Interrupter Built Into The Power Cord Plug. If Replacement Of The Plug Or Cord Is Needed, Use Only Identical Replacement Parts.
- Risk of Injection or Injury – Do Not Direct Discharge Stream At Persons.
- High pressure jets can be dangerous if misused. The jet must not be directed at persons, animals, electrical devices, or the machine itself.
- Wear safety goggles.
- Do not use acids and solvents in this product. These products can cause physical injuries to the operator and irreversible damage to the machine.
- To reduce the risk of electrocution, keep all connections dry and off the ground. Do not touch plug with wet hands.

- The Trigger Gun Safety Lock PREVENTS the trigger from accidentally being engaged. This safety feature DOES NOT lock trigger in the ON position.
- Do not use extension cord with this unit.

GROUNDING INSTRUCTIONS

This product must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DANGER

Improper connection of the equipment-grounding conductor can result in a risk of electrocution. Check with a qualified electrician or service personnel if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the product - if it will not fit the outlet, have a proper outlet installed by a qualified electrician. Do not use any type of adapter with this product.

GROUND FAULT CIRCUIT INTERRUPTER PROTECTION

This product is supplied with a Ground Fault Circuit Interrupter (GFCI) built into the power cord plug. This device provides additional protection from the risk of electric shock. If power is interrupted in the line, the GFCI will automatically re-close the circuit to the load after power is restored. Depending on the GFCI model, it may be necessary to manually operate the reset button to restore power to the GFCI load circuit. If replacement of the plug or cord is needed use identical replacement parts.

WATER SUPPLY (Cold Water Only)

CAUTION

When connecting the water inlet to the water supply mains, local regulations of your water company must be observed. In some areas the unit must not be connected directly to the public drinking water supply. This is to ensure that there is no feedback of chemicals into the water supply. Direct connection via a receiver tank or backflow preventer, for example, is permitted.

Dirt in the feed water will damage the unit. To avoid this risk, we recommend fitting a water filter.

- Garden hose must be at least 1 inch in diameter.
- Flow rate of water supply must not fall below 2.6 GPM (gallons per minute).
- Flow rate can be determined by running the water for one minute into an empty 5-gallon container.
- The water supply temperature must not exceed 140°F/60°C.
- Never use the pressure washer to draw in water contaminated with solvents, e.g. paint thinners, gasoline, oil, etc.
- Always prevent debris from being drawn into the unit by using a clean water source.

CANADA:

WARNING

Do not spray electrical apparatus and wiring.

Do not use with flammable liquids and toxic chemicals.

Injection hazard: equipment can cause serious injury if the spray penetrates the skin. do not point the gun at anyone or any part of the body. In case of penetration seek medical aid immediately.

This system is capable of producing 13700 kPa /2000 PSI to avoid rupture and injury, do not operate this pump with

components rated less 13700 kPa /2000 PSI working pressure (including but not limited to spray guns, hose and hose connections).

Before servicing, cleaning or removing any parts, shut off power and relieve pressure.

Extension Cords

- Use only 3-wire extension cords that have 3-prong grounding-type plugs and 3-pole cord connectors that accept the plug from the product.
- Up to 100 ft = 10/3 AWG;
- Use only extension cords that are intended for outdoor use. These extension cords are identified by the marking "Acceptable for use with outdoor appliances; store indoors while not in use."
- Use only extension cords having an electrical rating not less than the rating of the product.
- Do not use damaged extension cords.
- Examine extension cord before using and replace if damaged.
- Do not abuse extension cord and do not yank on any cord to disconnect.
- Keep cord away from heat and sharp edges.
- Always disconnect the extension cord from the receptacle before disconnecting the product from the extension cord.
- If you are using an extension cord, it should always be completely unwound from the cable drum.

WARNING

To reduce the risk of electrocution, keep all connections dry and off the ground. Do not touch plug with wet hands.

SAVE THESE INSTRUCTIONS!!

Dear Customer,



Please read and comply with these instructions prior to the initial operation of your appliance. Retain these operating instructions for future reference or for subsequent possessors.

Unit components

Please fold out illustration page at the front

- 1 Nozzle rest
- 2 Handle
- 3 High-pressure outlet
- 4 Water connection
- 5 Manometer
- 6 Oil level display
- 7 Oil reservoir
- 8 Hood
- 9 Unit switch
- 10 Fastening screw for hood
- 11 Hose rest
- 12 Handgun support
- 13 Nozzle
- 14 Marking of the nozzle
- 15 Spray lance
- 16 Pressure/flow control
- 17 Hand-held spray gun
- 18 Safety catch of hand-held spray gun
- 19 Lever of hand-held spray gun
- 20 High-pressure hose
- 21 Push-handle
- 22 Cable holder
- 23 Detergent metering valve
- 24 Detergent suction hose with filter and screw cap
- 25 Bottle holder for detergent

For your safety

Before you use the cleaner for the first time, read these operating instructions and take special note of the accompanying booklet "Safety Instructions for High-Pressure Cleaners" No. 5.951-949.

Use of the cleaner

Use this unit exclusively for

- cleaning with high-pressure jet and detergent (e.g. cleaning of machines, vehicles, buildings, tools),
- cleaning with high-pressure jet without detergent (e.g. cleaning facades, terraces, gardening equipment).

For stubborn dirt we recommend the dirt blaster as an optional accessory (for HD ... Plus included in the delivery).

Safety features

Overflow valve with pressure switch

On reducing the flow rate with the pressure and flow control, the relief valve opens and part of the water runs back to the suction side of the pump.

If the lever of the hand-held spray gun is released, the pressure switch switches the pump off. If the lever is retracted, the pressure switch switches the pump on again.



Safety valve

The safety valve opens when the admissible operating excess pressure is exceeded; the water flows back to the pump suction side.

Overflow valve, pressure switch and safety valve are present in the factory and are sealed.

Adjustments are made only by Customer Service.

Protection of the environment, disposal

	<p>The packaging material can be recycled. Please do not place the packaging into the ordinary refuse for disposal, but arrange for the proper recycling.</p>
	<p>Old appliances contain valuable materials that can be recycled. Please arrange for the proper recycling of old appliances. Batteries, oil, and similar substances must not enter the environment. Please dispose of your old appliances using appropriate collection systems.</p>

Preparing the unit for use

Unpack the unit

- When unpacking the unit, check the contents of the packaging. If there has been any damage in transit inform the dealer.
- Do not dispose of the packaging with the household rubbish, hand it in at the appropriate collection point for recycling.

Check the oil level

- Read the oil level displayed while unit is at a standstill. The oil level must be above the two indicators.

Activate the oil reservoir vent

- Unscrew the fastening screw of the hood and remove the hood.
- Cut off the tip on the cover to the oil reservoir.
- Fasten the unit cover.

Mount the accessories

- Mount nozzle on the spray lance (see markings on the top of the setting ring).
- Fit the spray lance to the hand-held spray gun with pressure and flow control.

For appliances without hose reel:

- Screw on high-pressure hose to the high-pressure outlet.

For appliances with hose reel:

- Insert the crank handle in the hose reel shaft, until it snaps into position.
- It is advisable to lay the high-pressure hose out in a straight line before reeling it up.
- Wind the high-pressure hose up in even layers on the hose reel by turning the crank handle.
Select the rotational direction so that the high-pressure hose does not kink.

Switching on the unit

Electrical connection



Caution!

The voltage specified on the model rating plate must correspond to the voltage supplied.



Caution!

The maximum tolerable mains impedance at the electrical contact point (see Technical Data) must not be exceeded.



Caution!

Use if required an extension cable with sufficient cable cross-section (refer technical details) and always fully unroll the cable from the cable drum. For connected loads see model rating plate/Technical Specifications.



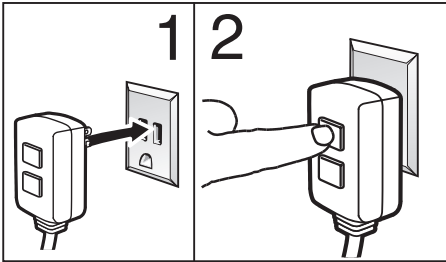
Caution!

It is essential that the unit is connected to the power supply by means of a plug. An inseparable connection to the power supply is prohibited. The plug is used to disconnect from the mains.

GFCI INSTRUCTIONS

- **STEP 1:** Plug the Ground Fault Circuit Interrupter (GFCI) into a working outlet.
- **STEP 2:** Press "TEST", then press "RESET" to assure proper connection to power.

Note: The actual appearance of the GFCI may be different from this illustration.



Water connection/Suction feed operation

Connection to water main

Caution! Pay attention to the regulations of the water supply company; according to DIN 1988, the unit may not be connected direct to the public drinking water supply. A short-term connection via a non-return valve (Order no. 6.412-578) is allowed.

For connected loads see Technical Specifications.

- Connect a supply hose (not supplied) to the water outlet on the unit and to the water inlet (e.g. water tap).
- Open water inlet.

Suctioning water from an open container

- Screw on the suction hose (order no. 4.440-270) on the water connection.
- Attach the filter (order no. 4.730-012) at the suction hose.
- Vent the unit before using.
- To evacuate air from the unit, unscrew the nozzle and leave the unit running until wa-

ter exits with no air bubbles. If necessary allow unit to continue running for 10 seconds and then switch off. Repeat this procedure several times.

- Switch off the unit and screw the nozzle back on.

Operating the unit

Danger! Observe the relative safety regulations when using the unit at filling stations or other high-risk areas.

Caution! Only clean engines in places which have appropriate oil separators (protection of the environment).

Caution! Only wash animals with the low-pressure fan jet (see "Selecting the type of spray").

Operating with high pressure

The unit is equipped with a pressure switch. The motor only starts up when the lever is retracted.

- Unwind the high-pressure hose fully from the cable drum.
- Set the unit switch to "I".
- Unlock the hand-held spray gun and retract the lever of the gun.
- Adjust operating pressure and flow rate (+/-) by rotating the pressure/flow control (indefinitely variable).

Selecting the type of spray

The handgun must be closed.

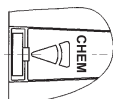
- Rotate the housing of the nozzle until the desired symbol corresponds with the marking.
- Select pencil jet or fan jet by contactless changeover: rotate the spray lance, which is pointing down at an angle of approx. 45°, to the left or right.

Explanation of the symbols



High-pressure pencil jet (0°), for particularly stubborn accumulation of grime.

High-pressure fan jet (25°), for dirt accumulation over a large surface.



Low-pressure fan jet (CHEM) for operation with detergent or for cleaning at low pressure.


Operating with detergent

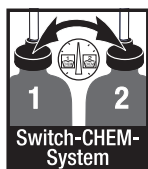


Caution!

Unsuitable detergents can harm the cleaner and the object which is to be cleaned. Use only detergents which are released by Kärcher. Proportions of detergent to be used and accompanying instructions should be noted carefully. Use detergents sparingly out of consideration for the environment.

Kärcher cleaning agents guarantee trouble-free operation. Please seek advice or ask for our catalogue of information sheets on cleaning agents.

- Put the detergent bottle into the bottle holder at the appliance or place detergent can next to the appliance. Two different detergents can be placed in the appliance at the same time.
- Pull out the cleaning agent suction hose and immerse the filter in the cleaning agent canister.
- Screw on the screw cap on the bottle or can.
- Set nozzle to .



Set the detergent dosage valve to the desired detergent and the desired concentration.

Recommended cleaning methods

- Spray detergent with low pressure jet sparingly over the dry surface to be cleaned and let it take effect but not dry out.

- Spray off (rinse off) the loosened dirt using the high-pressure spray.
- After use immerse filter in clean water. Turn metering valve to maximum cleaning agent concentration setting. Start unit and rinse through for one minute.

Interrupting the operation

- Release lever of the handgun, the unit switches off. Retract lever again and the unit switches on again.

Switching the unit off

- Set unit switch to "0" and pull out power plug.
- Close water inlet.
- Retract lever until the unit is without pressure.
- Actuate the handgun's safety catch to secure the handgun lever from accidentally being triggered.

Transporting the cleaner

- To transport the appliance over long distances use the push handle to pull the appliance.
- When carrying the appliance always use the handle, not the push handle.
- Prior to a transport in the horizontal position remove the detergent bottles from the bottle holder and close them.

Storing the cleaner

- Place the handgun in the support.
- Reel in the high-pressure hose and hang it over the hose rest.

or

- Wind the high-pressure hose on to the hose reel. Push in the crank handle to lock the hose drum.
- Wind the connection cable around the cable holder.
- Fix the plug using the installed clip.

Frost protection



Caution!

Frost will destroy a unit that is not completely empty of water! Store the unit where it will be free of frost.

If storage away from frost is not possible:

- Drain off the water and rinse the unit through with anti-freeze.
- Leave the unit to dry for max. 1 minute.
- Use the standard glycol-based anti-freezes for cars.
- Follow the handling instructions of the anti-freeze manufacturer.

Care and maintenance



Danger!

Before any care and maintenance work on the unit draw out the mains plug.



Caution!

When changing the oil, dispose of any waste oil only at authorised collection points.

Safety inspection/Maintenance contract

You can arrange with your dealer to have a regular safety inspection carried out or to have a maintenance contract. Please seek advice.

Before each use

- Check connecting cable for damage (risk of getting an electric shock), have a damaged connecting cable replaced without delay by authorised Customer Service personnel or an electrician.
- Check high-pressure hose for damage (danger of explosion), replace a damaged high-pressure hose without delay.
- Check unit (pump) for any leaks. Three drops per minute are allowable and can appear on the underside of the unit. Seek the help of Customer Service if leaks are more serious.

Every week

- Check oil level in oil reservoir: if the oil is milky (water in oil), seek the help of Customer Service immediately.
- Clean the strainer in the water connection.
- Clean the filter at the suction hose for detergent.

Annually or after 500 operating hours

- Change the oil
 - For oil quantity and type see Technical Specifications.
 - Undo the fastening screw, remove the hood, remove the oil tank cover, tilt unit.
 - Drain oil into a suitable container.
 - Fill slowly with fresh oil; air bubbles have to escape.
 - Attach the oil tank cover.

Troubleshooting



Danger!

Before any repair work is undertaken, switch the unit off and pull out the power plug. Have electrical components checked and repaired only by authorised Customer Service personnel.

For faults which are not identified in this chapter, or when in doubt or when expressly instructed to do so, consult authorised Customer Service personnel.

Unit does not work

- Check connecting cable for damage.
- Check the mains voltage.
- Consult Customer Service if there is an electrical fault.

Unit does not come up to pressure

- Set nozzle to "high pressure".
- Clean/replace nozzle.
- Evacuate air from the cleaner (see Switching on the unit).
- Clean the strainer in the water connection.
- Check water inlet volume (see Technical Specifications).
- Check all supply lines to the pump for leaks or obstructions.
- Seek the help of Customer Service if necessary.

Pump is leaky

- Three drops per minute are allowable and can appear on the underside of the unit. Seek the help of Customer Service if leaks are more serious.

Pump makes a knocking noise

- Check all supply lines as well as the detergent system for leaks.
- Close the cleaning agent metering valve when running the unit without cleaning agent.
- Evacuate air from the cleaner (see Switching on the unit).
- Seek the help of Customer Service if necessary.

Detergent is not being drawn in

- Set nozzle to "Chem".
- Check detergent suction hose with filter for leaks or obstructions and clean it if necessary.
- Open detergent metering valve or check it for leaks/remove obstruction.
- Seek the help of Customer Service if necessary.

Spare parts

You will find a list of spare parts at the end of these operating instructions.

Warranty

The warranty terms issued by our authorised marketing company are valid in every country. We remedy any fault in the unit free of charge within the warranty period providing the cause of the fault proves to be a material or manufacturing error.

Should you wish to call upon the guarantee, please apply to your dealer or nearest authorised Customer Service centre taking along also the accessories and bill of sale.

Technical Specifications

Mains connection

Voltage	V	220...240
Type of current	Hz	1~60
Rotation speed	1/min	1680
Connected load	hp/kW	4,7/3,5
Supply fuse (delayed-action, char. C)	A	20
Max. tolerable mains impedance	Ω	–
Extension cable 30 m	AWG/mm ²	10/2,5

Water connection

Supply temperature max.	°F/°C	140/60
Supply volume min.	gpm / l/min	2,6/10
Supply hose – minimum length	m	7,5
Supply hose – minimum diameter	Zoll	1
Suction height from an open container 20 °C	m	0,5
Supply pressure max.	psi/MPa	145/1

Performance data

Operating pressure	psi/MPa	435...2000 3...13,7
Max. operating overpressure (safety valve)	psi/MPa	2200/15,2
Flow rate	gpm / l/min	1,3...3 4,9...11,3
Detergent intake	gpm / l/min)	0,18/0,7
Recoil force of the handgun	N	30

Sound emission

Sound pressure level (EN 60704-1)	dB (A)	69
Garanted sound pressure level (2000/14/EC)	dB (A)	84

Vibrations of unit / total of vibration (ISO 5349)

Handheld gun	m/s ²	2,0
Spray lance	m/s ²	1,9

Dimensions

Length	mm	554
Width (MX)	mm	509
Height	mm	1000
Weight without accessories	kg	43
Weight without accessories, MX	kg	45
Oil quantity, pump	l	0,5
Oil type, pump		SAE 15W40

