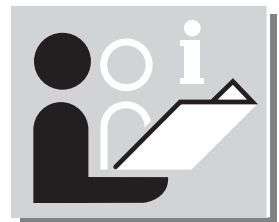


## HD 10/25 S USA



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**English**



**Français**

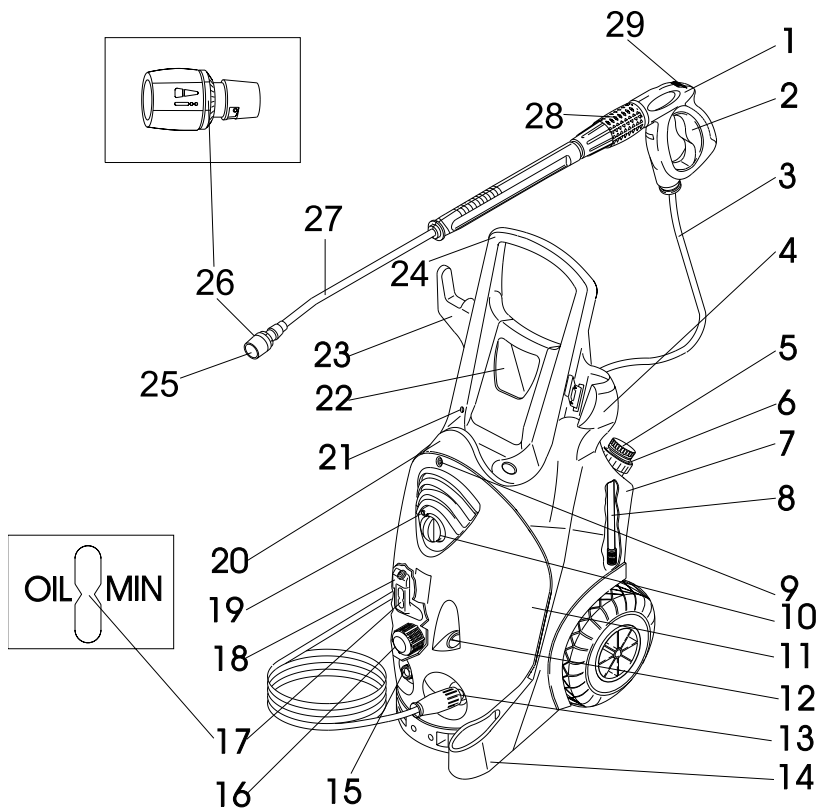


**Español**





# HD 10/25 S USA



## IMPORTANT SAFETY INSTRUCTIONS

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

1. Read all the instructions before using the product.
2. To reduce the risk of injury, close supervision is necessary when a product is used near children.
3. Know how to stop the product and bleed pressures quickly. Be thoroughly familiar with the controls.
4. Stay alert - watch what you are doing.
5. Do not operate the product when fatigued or under the influence of alcohol or drugs.
6. Keep operating area clear of all persons.
7. Do not overreach or stand on unstable support. Keep good footing and balance at all times.
8. Follow the maintenance instructions specified in the manual.

"This Product Shall Only Be Connected To A Power Supply Receptacle Protected By A Ground Fault Circuit Interrupter."

"WARNING - Risk of Injection or Injury - Do Not Direct Discharge Stream At Persons."

## 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 adaptor with this product.

## GROUND FAULT CIRCUIT INTERRUPTER PROTECTION

To comply with the National Electrical Code (NFPA 70) and to provide additional protection from the risk of electric shock, this pressure washer should only be connected to a receptacle that is protected by a ground fault circuit interrupter (GFCI).

## 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. Use only extension cords that are intended for outdoor use. These extension cords are identified by a 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.

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

**WARNING** - To reduce the risk of fire, electric shock or injury:

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 250000 kPa. To avoid rupture and injury, do not operate this pump with components rated less than 250000 kPa working pressure (including but not limited to spray guns, hose and hose connections.)

Before servicing, cleaning, or removal of any part, shut off power and relieve pressure.

High Pressure. Keep clear of nozzle.

Close cover before operating machine.

Warning: If connection is made to a potable water system, the system shall be protected against backflow.

This appliance is intended for commercial use.

Do not spray electrical apparatus and wiring.

This machine has been designed for use with cleaning chemicals supplied or recommended by the manufacturer. The use of other cleaning chemicals may affect the operation of the machine and void the warranty.

## SAVE THESE INSTRUCTIONS.

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## Unit components

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Please fold out illustration page at the front

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

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## For your safety

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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.

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## Use of the cleaner

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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.

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## Safety features

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### Relief 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.

The overflow valve and pressure switch have been set and sealed at the factory.

Adjustments are made only by Customer Service.

## 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.
- Lock cable clincher into bore lateral to the handle.
- Tighten the high-pressure hose accordingly.

## 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 an extension cable with a sufficient cable cross-section (see Technical Specifications) and unwind it fully 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.*

### 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 suction hose with filter (Order no. 4.440-238) to the water outlet.
- Vent the unit before using.
- To evacuate air from the unit, unscrew the nozzle and leave the unit running until water exits with no air bubbles.
- 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.

- Set the unit switch to "I". The indicator light will go green.
- 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 (infinitely variable).
- At the lowest flow rate the waste heat from the motor will heat the water to approx. 15 °C.

## Selecting the type of spray

The handgun must be closed.

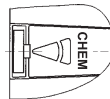
- Rotate the housing of the nozzle until the desired symbol corresponds with the marking.
- Select pencil jet or fan jet by contactless changeover: rotate the spray lance, which is pointing down at an angle of approx. 45°, to the left or right.

### 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.

- Fill detergent reservoir.
- Set nozzle to .
- Set the detergent metering valve to the desired concentration.

Concentration of detergent when flow at maximum:

Position of metering valve	1	3	5	7
	0.5 %	2.5 %	5.0 %	7.0 %

### 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.
- When you have finished the operation, set detergent metering valve to "0" and switch the unit on for about 1 minute and rinse it clear of detergent.

## Interrupting the operation

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

## Availability time

Within the availability time, the unit starts when the hand-held spray gun is opened. The indicator light will go green.

If the spray gun remains closed for 30 minutes, the availability time ends. The indicator light will flash green.

## Reset availability time

- Switch off the unit switch.
- Wait a moment.
- Switch the unit back on again.

Customer Service can change the unit to permanent operation.

## 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.
- Push safety catch of the hand-held spray gun forward to lock the lever of the gun from being actuated inadvertently.



### Danger!

*Risk of scalding due to hot water. Residual water contained in the switched off unit can heat up. When removing the hose from the water inlet, the heater water can spurt out and cause scalds. Do not remove the hose until the unit has cooled down.*

## Transporting the cleaner

- To transport the cleaner over relatively long stretches, take hold of it by the handle and pull it along behind you.
- Empty the detergent reservoir before transporting it horizontally.

## Storing the cleaner

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

or

- Coil the connecting cable round the cable/hose rest.

## 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:

- Empty the detergent tank (see care and maintenance/As and when required).
- 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 fine filter.
  - Unpressurize unit.
  - Unscrew the fastening screw of the hood and remove the hood.
  - Unscrew the cover with filter.
  - Clean the filter with clean water or compressed air.
  - Reassemble in the reverse order.
- 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, unscrew the front oil drain plug on the motor housing.
  - Drain oil into a suitable container.
  - Screw in the oil drain plug.
  - Fill slowly with fresh oil; air bubbles have to escape.

## As and when required

- Emptying and cleaning the detergent tank
  - Pull out the screw cap and hose for the detergent tank.
  - Place the unit on its rear.
  - Empty and clean the detergent tank.

## 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.*

### **Indicator light**

The indicator light shows the operating status (green) and faults (red).

To reset:

- Switch off the unit switch.
- Wait a moment.
- Switch the unit back on again.

### **Operating status display**

- Constant green light:
  - Unit is operational.
- 1 x flashing green:
  - Operational readiness expired after 30 minutes.
  - The unit switched off after 30 minutes of permanent operation (safety feature in the case of a burst high-pressure hose).

### **Fault display**

- 1 x flashing red:
  - High-pressure side leaking. Check high-pressure hose, hose connections and hand-held spray gun for leaks.
- 2 x flashing red:
  - Motor too hot. Switch off the unit switch. Leave unit to cool down. Switch the unit back on again.
- 3 x flashing red:
  - Fault in the power supply. Check the mains connection. Check supply fuses.
- 4 x flashing red:
  - Current consumption too high. Consult Customer Service

### **Unit does not work**

- Availability time has run out. The indicator light will flash green. Switch the unit off and then on again.
- Check connecting cable for damage.
- Consult Customer Service if there is an electrical fault.

### **Unit does not come up to pressure**

- Set nozzle to "high pressure".
- Clean/replace nozzle.
- Clean the fine filter, replace if required.
- Evacuate air from the cleaner (see Switching on the unit).
- 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.
- Evacuate air from the cleaner (see Switching on the unit).
- Clean the fine filter.
- 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.
- Clean/renew non-return valve in detergent suction-hose connection.
- Open detergent metering valve or check it for leaks/remove obstruction. Also clean the venting orifice in the housing.
- Seek the help of Customer Service if necessary.

## Spare parts

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

## Warranty

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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.

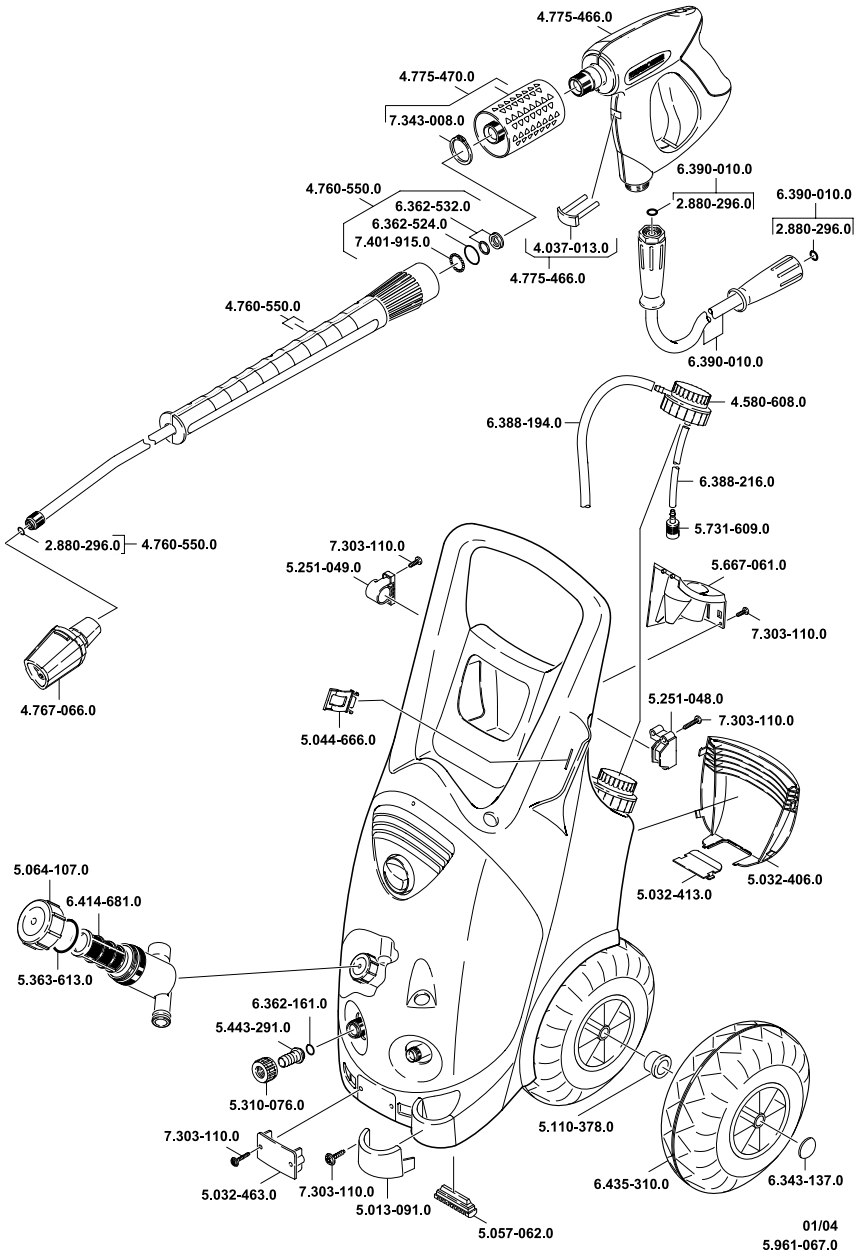
The warranty only becomes operative when your dealer has completed the reply card accompanying the sale of the unit, has stamped and signed it and you have then sent the reply card to the marketing company in your country.

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

<b>HD 10/25 S USA</b>		
<b>Mains connection</b>		
Voltage	V	460
Type of current	Hz	3 ~ 60
Connected load	HP	10
Supply fuse (delayed-action, char. C)	A	16
Max. tolerable mains impedance	$\Omega$	(0.145 + j0.090)
Extension cable 10 m	mm <sup>2</sup>	2.5
Extension cable 30 m	mm <sup>2</sup>	4
<b>Water connection</b>		
Supply temperature max.	°F	140
Supply volume min.	gpm	5.3
Supply hose – minimum length	m	7.5
Supply hose – minimum diameter	inches	3/4
Suction height from an open container 20 °C	m	0.5
Supply pressure max.	psi	145
<b>Performance data</b>		
Operating pressure	psi	435 – 3190
Max. operating overpressure (safety valve)	psi	3480
Flow rate	gpm	2.2 – 4.5
Detergent intake	gpm	0 – 0.3
Recoil force of the handgun	N	62
<b>Sound emission</b>		
Sound pressure level (EN 60704-1)	dB (A)	72
Garanted sound pressure level (2000/14/EC)	dB (A)	87
<b>Vibrations of unit / total of vibration (ISO 5349)</b>		
Handheld gun	m/s <sup>2</sup>	2.2
Spray lance	m/s <sup>2</sup>	2.0
<b>Dimensions</b>		
Length	mm	560
Width	mm	500
Height	mm	1090
Weight without accessories	kg	62
Reservoir capacity, detergent	l	6
Oil quantity, pump	l	1.2
Oil type, pump		SAE 90

# HD 10/25 S USA



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