

High-Pressure-Cleaning-Systems



Operating Instruction Series KD 4x4

KD 823 - KD 940 - KD 1140

KD 1340 - KD 1540 - KD 1840



Designation	KD 823	KD 940	KD 1140	KD 1340	KD 1540	KD 1840	Einheit
Operating pressure:							
Standard nozzle:	2504	2504	2504	2506	2507	2507	
Operating nozzle:	135	190	250	180	280	220	bar
max. pressure:	160	230	280	200	300	250	bar
max. reaction force:	33	47	59	62	98	104	N
Discharge capacity:							
Infinitely variable (water)	12	14	16	22	25	30	l/min
Temperature:							
max. delivery temperature:	60	60	60	60	60	60	°C
Electrical input:							
Voltage (frequency):	1~230	3~400(50)	3~400(50)	3~400(50)	3~400(50)	3~400(50)	V (Hz)
Connected Load (Protection):	3.1 (16)	5.0 (10)	7.9 (20)	7.9 (20)	14.0 (35)	14.0 (35)	kW (A)
Protection class:	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	
Dimensions:							
Length x Width x Hight	100x60x97	100x60x97	100x60x97	100x60x97	100x60x97	100x60x97	cm
Weight:							
Net weight without accessories:	80	87	98	98	125	125	kg

Warning! Observe Operating Instruction and Safety regulation for commissioning of the High Pressure Cleaner. The machine apply the CE-Regulations.

High-Pressure-Cleaning-Systems

1. Total View of the Machine and Description



01 Chemical Dosing Valve
 02 Heavy Duty Switch
 03 Unloader Valve
 04 Brass piston pump
 05 Rubber Wheels

06 AC power cable
 07 Pressure indication
 08 Water inlet
 09 Storage Facility for cable
 10 Rotary-Nozzle

11 Hose Reel c/w. foldable Handle
 12 Chemical suction hose c/w. filter
 13 Trigger-Gun
 14 Chassis with water tank

2. General Safety Regulation

1. **Only** specially trained and qualified personnel are allowed to perform the maintenance and repair activities.
2. The Jet must **not** be directed to persons or animals. Keep out of the reach of children.
3. **Never** clean the Unit with Jet or Waterbeam.
4. Do **not** point Jet to electrical facility power outlet.
5. Check electrical cable prior to use.
6. Please read the Safety regulation "Safety instruction for " H.P. Cleaner (included in the packing).

3. Utilization

The High Pressure Cleaner series KD 4x4 are used for cleaning tasks in the areas as follows:

- Industry
- Agriculture
- Buildings (e.g. facades)
- Construction companies
- Car dealer ships, transport companies and shippers, rail and bus companies
- Sanitary facilities, airports, etc.

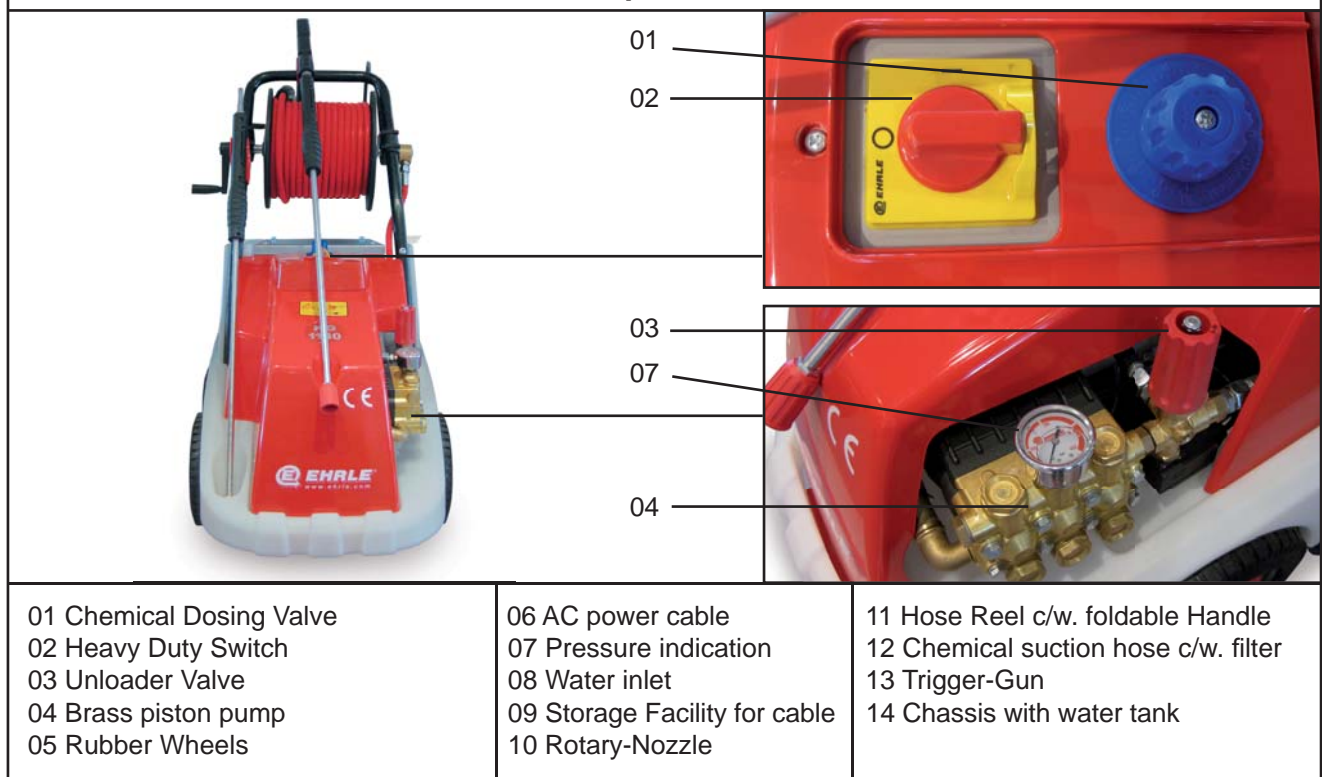
The easy operatable and adjustable High Pressure Cleaner, e.g. setting the water temperature, mixing and diluting the cleaning detergent, adjusting the operating pressure and special nozzles ensure optimum cleaning for difficult tasks like tenacious encrusted contaminations.

4. Commisioning

1. Before unpacking the High Pressure Cleaner check the package for damages caused during shipment.
2. Check also unpacked High Pressure Cleaner for damages. Check for leaked oil.
3. If the High Pressure Cleaner is damaged, please contact immediately your sales agency and carrier.
4. For environment protection discard the packing material not simply with the house-hold waste. Take the packing materials to the appropriate collection areas for recycling.

High-Pressure-Cleaning-Systems

5. Total View of the Machine and Description



- 01 Chemical Dosing Valve
- 02 Heavy Duty Switch
- 03 Unloader Valve
- 04 Brass piston pump
- 05 Rubber Wheels

- 06 AC power cable
- 07 Pressure indication
- 08 Water inlet
- 09 Storage Facility for cable
- 10 Rotary-Nozzle

- 11 Hose Reel c/w. foldable Handle
- 12 Chemical suction hose c/w. filter
- 13 Trigger-Gun
- 14 Chassis with water tank

6. Commissioning and Operating

1. Set ON / OFF switch (02) to position "0".
2. Assemble the Rotary-Nozzle (10) to H.P. trigger gun (13).
3. Assemble H.P. hose to the H.P. trigger gun (13).
4. Assemble the water supply hose to the water inlet (08) to the H.P. Cleaner.
5. Connect the AC power cable (06) to the AC power

Attention: By using a AC power extension cable please use a right cross wire section.

6. Open the water supply shut off valve.
7. Set ON / OFF (02) to position "1".

Voltage compare with type plate.

8. Adjust the Unloader valve (03) to the desired pressure.

9. By using cleaning detergent (chemicals): Put chemical suction hose (12) in a cleaning detergent container. Chemical Dosing Valve (01) open.

Attention: In case of an empty Detergent-Container the Unit can draw air and get damaged.

7. Decommissioning

1. Set ON / OFF (02) to position "0" and remove the AC power cable (06) from the AC power outlet.
2. Close the water supply shut off valve.
3. Pull the trigger gun (13) until the H.P. cleaner is pressureless.
4. After finishing the work assemble the accessories to the accessory mounting support.

8. Maintenance and Repair

1. Only specially trained and qualified personnel are allowed to perform the maintenance and repair activities. Always disconnect electrical power cable of the High Pressure Cleaner from the facility AC power outlet before starting with the maintenance and repair activities.
2. In case the Oil-Level is below "MIN" on the Dipstick, the oil has to be filled up or replaced. Clean water-inlet Filter. Clean Chemical-Intake Filter.
3. Weekly maintenance: Check weekly or after approx. 40 hours of operation the oil level in the gear box of the high pressure pump via the oil filler cap (with integrated oil dipstick) through the oil sight glass. Change low quality oil (milky etc.).
4. Six monthly or on condition: Replace six monthly or on condition the high pressure nozzle. Disassemble unloader valve and lubricate the corresponding parts.
5. Yearly maintenance or after 500 operating hours: The High Pressure Cleaner has to be checked every year according to „Guidelines for liquid sprayers“ by specially trained and qualified personnel.

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9. Total View of the Machine and Description

	11	
	12	
	08	
	09	
	06	
01 Chemical Dosing Valve 02 Heavy Duty Switch 03 Unloader Valve 04 Brass piston pump 05 Rubber Wheels		06 AC power cable 07 Pressure indication 08 Water inlet 09 Storage Facility for cable 10 Rotary-Nozzle 11 Hose Reel c/w. foldable Handle 12 Chemical suction hose c/w. filter 13 Trigger-Gun 14 Chassis with water tank

10. Maintenance and Repair

1. Troubleshooting by specially trained and qualified operating personnel. In case of defective components, units or other complex failures contact the authorized service.
2. High Pressure Cleaner doesn't start:
 - Supply voltage (mains) is not provided.
 - AC power cable is defective.
 - High Pressure Cleaner motor is overheated. Allow the motor cooling down. Then switch on the High Pressure Cleaner again.
3. High Pressure Cleaner doesn't reach the operating pressure:
 - Chemical Dosing Valve is open and attach air. Nozzle clean or change.
 - Filter in the water inlet is contaminated.
 - Water supply flow rate is too low.
 - The high pressure pump supply lines are leaked or blocked.
 - Unloader-valve is not set to maximum.
4. High Pressure pump leaks
 - For the activated high pressure pump are three drops per minute permissible. In case of more serious leakage contact the authorized customer service.
5. High Pressure pump knocks:
 - Chemical Dosing Valve close.

- Check all supply lines, even the detergent system, for leaks.
- Deaerate the unit.
- If required contact the authorized customer service.

11. EC-Declaration of Conformity



EC-Declaration of Conformity

The Manufacturer declares, that the: Product: High-Pressure Cleaner, coldwater
 Type: Series KD 4*4
 Serial-No.: _____
(see Machine type-plate filled up by Customer)

meets the following EC-Guidelines:
 EC - Guidelines of Mechanical Machinery (98/37/EU)
 EC - Guidelines EMV (89/336 EWG) - replaced by 91/263/EWG, 92/31/EWG, 93/68/EWG
 EC-Guidelines for Noise-Emissions (2000/14/EU)

Applied harmonized standards in particular: DIN EN 60335-1 DIN EN 60335-2-79
 DIN EN 55 014-1: 2000 + A1:2000
 DIN EN 55014-2: 1997
 DIN EN 61000-3-2: 2000
 DIN EN 61000-3-3: 1995 + A1: 2001

Emission-Levels Series KD4x4 KD 823 KD 1140 KD 1340 KD1540 KD 1840
 Measured: 87 dB(A) 88 dB(A) 88 dB(A) 90 dB (A) 91 dB(A)
 Guaranteed: 89 dB(A) 90 dB(A) 90 dB(A) 92 dB (A) 93 dB(A)

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It is guaranteed by internal regulations that standard Units meet always the demands of EC-regulations and applied standard.

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