

kraenzle®

EN **Operating manual**

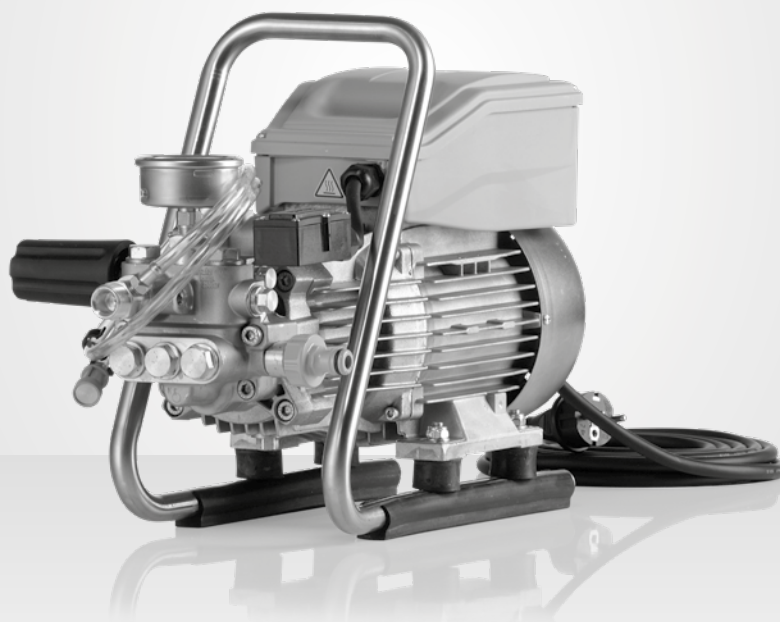
High-pressure cleaner

HD 9/80

HD 9/80 TS

HD 12/130

HD 12/130 TS



www.kraenzle.com



Dear customer,

we would like to congratulate you on the purchase of your new high-pressure cleaner and thank you for your confidence in our products!

Your choice has fallen on an absolute quality product! Kränzle high-pressure cleaners are characterized by their convenient and compact design as well as their high suitability for everyday use.

Highest precision and dimensional accuracy in addition to a technology package consisting of a multitude of details mark the difference when it comes to performance, safety and durability.

In order to facilitate handling of the high-pressure cleaner, the following pages are intended to further explain its use. The illustrations may be subject to deviation depending on the type of equipment or accessory of high-pressure cleaner purchased by you.

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Safety notes

User operating the high-pressure cleaner should wear the necessary protective clothing, i.e. waterproof clothing, rubber boots, safety goggles, ear protection headwear etc. It is prohibited to use the high-pressure cleaner in close vicinity to people lacking suitable protective clothing.

Use of high-pressure cleaners may result in aerosols being generated. An aerosol is a mixture of floating solid or liquid particles in a gas. Inhaling aerosol particles may cause damage to health. Employers are under obligation to carry out a hazards assessment in order to determine the necessary protective measures to prevent inhalation of aerosols as governed by the surface due to be cleaned in each case. Respiratory masks, Class FFP 2 or higher, are suitable for protection against aqueous aerosols.

Whenever the high-pressure cleaner is left unattended, the mains disconnect switch must always be switched off.

Do not spray against matter containing asbestos or other hazardous substances!

Never spray flammable liquids or liquids containing solvents such as paint thinners, petrol, oil or similar liquids! Explosion hazard due to spraying such materials!

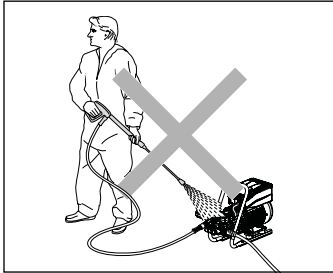
Due to the high-pressure jet, damage may occur on the objects to be cleaned, e.g. car tires; therefore, a minimum distance of 30 cm is to be kept!

Prior to putting the high-pressure cleaners into operation, check its components (High-pressure hose, power supply cables, safety trigger gun) for any damage. Replace defect or damaged components!

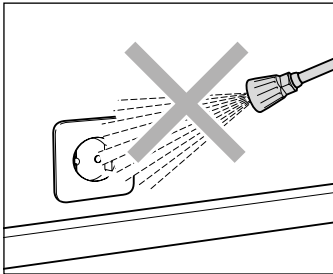
Only use high-pressure hoses, couplings and fittings recommended by Kränzle. Only these accessories ensure safety of the equipment.

If use is made of an extension cable, this must be suitable for outdoor use. In addition care needs to be taken to ensure that the cable is kept dry and that it is situated above the ground. We recommend the use of a cable drum capable of keeping the socket at least 60 mm above the ground.

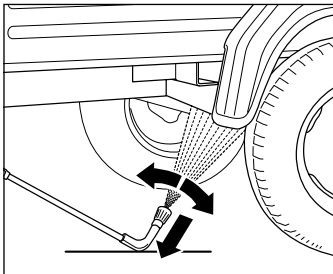
Safety notes - This is prohibited!



Never direct the high-pressure jet at the high-pressure cleaner itself! The high-pressure cleaner may not be placed within reach of the high-pressure jet spray mist!

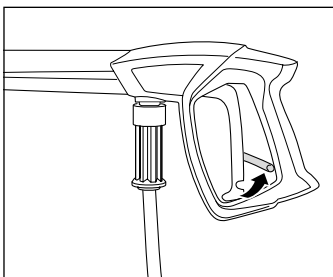


Never direct the high-pressure jet at power sockets or any other electrical installations! Within the working area, all live parts are to be protected from both water jet and spray mist.



Always pay attention to the underbody lance resting on the surface! Bear in mind when using a curved or angled spraying lance that there is a significant amount of torque in the recoil!

(The underbody lance is available as optional accessory).

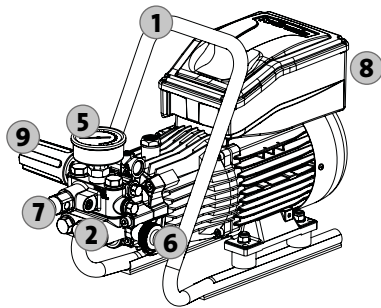


Apply the safety catch on the safety trigger gun after each use in order to prevent unintentional spraying!

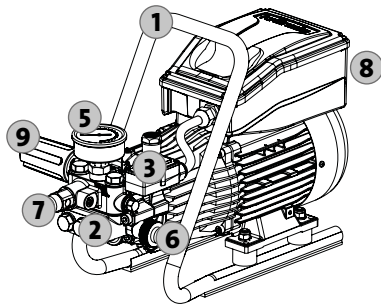
Description of high-pressure cleaner

Design:

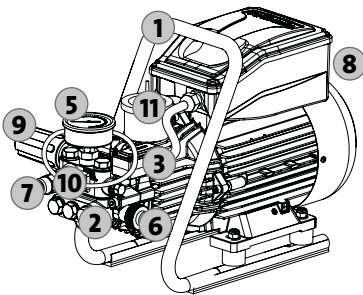
The HD 9/80, HD 9/80 TS, HD 12/130 and the HD 12/130 TS are portable type high-pressure cleaners. Please see construction scheme for more details.



HD 9/80

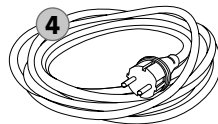


HD 9/80 TS



HD 12/130 TS

1. Shaped handle
2. Pump head made of special brass
3. Start/Stop switch
(HD 9/80 TS, HD 12/130 TS)
4. Power supply cable with
mains plug
5. Large stainless steel
pressure gauge
6. Supply including water inlet
filter
7. Pump outlet / high-pressure
hose connection
8. On/Off switch with
motor protection
9. Infinitely variable pressure
and quantity regulation
10. Cleaning agent injection hose
11. Oil cup



Intended use

This high-pressure cleaner is to be used solely for high-pressure water jet cleaning applications without detergents or low-pressure cleaning work with detergents (e.g. with a foam injector or washing brush).



Environmental, refuse disposal and water protection regulations must be observed!

Inspections

The high-pressure cleaner must be inspected according to the “Guidelines for Liquid Spray Devices” at least once every 12 months by a qualified person, to ensure that continued safe operation is guaranteed. The results of the inspection are to be recorded in writing (see Inspection reports).

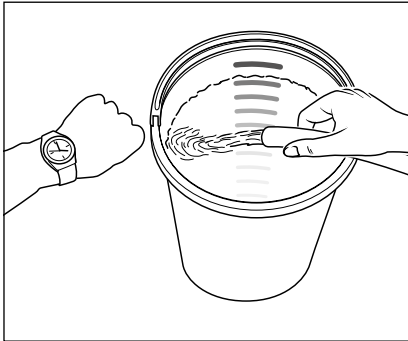


High-pressure cleaners used for commercial purposes have to be checked by a qualified person at least every 12 months!

Accident prevention

The high-pressure cleaner is designed for accidents to be impossible if used correctly. The user is to be notified of the risk of injury from hot machine parts and the high-pressure jet. The “Guidelines for Liquid Spray Devices” must be complied with.

Please note: Lack of water



Lack of water occurs more often than you probably believe. The more powerful a high-pressure cleaner is the greater is the danger that a lack of water occurs. If there is only an insufficient amount of water available, cavitation (water-gas mixture) arises inside the high-pressure pump, which is normally noticed too late or even not at all. **The high-pressure pump will be destroyed.** Please check the available quantity of water by filling a bucket with liter scale for one minute.

Required minimum quantity of water (see technical data).



If the metered quantity of water is too small, you have to use a different water connection, guaranteeing the necessary output. Lack of water leads to an accelerated wear of the joints (no warranty).



Never let the high-pressure pump run dry for more than 60 seconds.

Water supply



Please pay attention to the regulations of your waterworks company! In accordance with DIN EN 61770, the high-pressure cleaner may not be directly connected to the public drinking water supply lines. A brief connection however is permissible according to DVGW (German Association for Gas and Water Affairs) if a non-return valve with tube ventilator (Kränzle item no.: 410164) is built into the water supply. **Once the water has passed through the non-return valve it is no longer considered as drinking water.** Also indirect connection to the public drinking water supply lines is permissible by way of free emission in accordance with EN 61 770; e.g. by using a reservoir with a float valve. Direct connection to a non-drinking water supply line is permissible.

Water and cleaning system

Water must be supplied to the high-pressure pump under pressure or directly sucked in out of a pressureless container. The water is then forced under pressure by the high-pressure pump to the lance. The high-pressure jet is formed by the nozzle at the end of the lance.



Environmental, refuse disposal and water protection regulations must be observed!

Safety jet pipe with safety trigger gun (HD 9/80, HD 12/130)

The high-pressure cleaner can only be operated when the trigger of the safety deactivation trigger gun's trigger is actuated. When the trigger is pulled, the safety deactivation trigger gun opens. The liquid is then transported to the nozzle. The spray pressure increases and quickly reaches the operating pressure. When the trigger is released, the safety deactivation trigger gun closes and any further spraying of liquid from the safety jet pipe is prevented. The stainless steel pressure gauge must show 0 bar. The increase in pressure when the safety deactivation trigger gun is closed causes the pressure control valve-safety valve to open. The high-pressure pump remains switched on and continues to operate unpressurized via the bypass. When the trigger gun with safety catch is opened, the pressure control valve/safety valve closes, the motor is started and the high-pressure pump resumes pressure spraying from the safety jet pipe with the selected operating pressure.

Safety jet pipe with safety trigger gun (HD 9/80 TS, HD 12/130 TS)

The high-pressure cleaner can only be operated when the trigger of the safety deactivation trigger gun's trigger is actuated. When the trigger is pulled, the safety trigger gun opens. The liquid is then transported to the nozzle. The spray pressure increases and quickly reaches the operating pressure. When the trigger is released, the safety trigger gun closes and any further spraying of liquid from the safety jet pipe is prevented. The stainless steel pressure gauge must show 0 bar. The increase in pressure when the safety trigger gun is closed causes the pressure control valve/safety valve to open. The motor is switched off by the pressure switch. When the safety trigger gun is opened, the pressure control valve/safety valve closes, the motor is started and the high-pressure pump resumes pressure spraying from the safety jet pipe with the selected operating pressure.

High-pressure hose and spray device

The high-pressure hose and spray device which are part of the HD 9/80, HD 9/80 TS, HD 12/130 and the HD 12/130 TS equipment, are made of high quality material and engineered to conform with the operating conditions of the high-pressure cleaner and are duly labeled.



If replacement parts are required, only such parts that are authorized by the manufacturer may be used. The warranty is automatically void if spare parts of third-party providers are used! The high-pressure hose and spray device must be connected in a pressure-tight manner (without leakage).

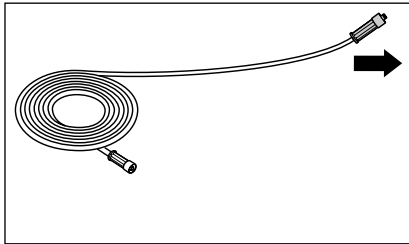


The high-pressure hose may not be driven over, pulled excessively, or twisted. The high-pressure hose may under no circumstances be pulled over sharp edges. Defective high-pressure hoses must not be repaired (acc. to DIN 20022) but have to be replaced by new hoses approved by the manufacturer.

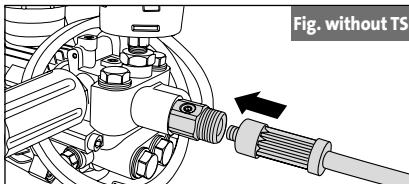


Prior to putting the high-pressure cleaner into operation make sure that all safety instructions be observed.

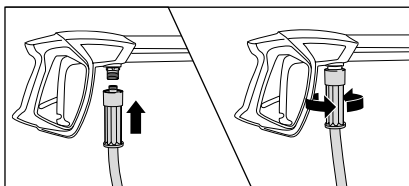
Putting into operation



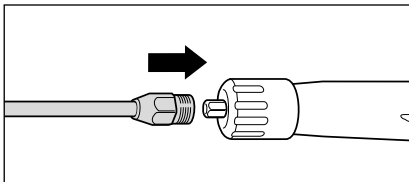
2. Unwind high-pressure hose straight and without nooses. (When using high-pressure hose extensions take care that the max. length of 20 m is not exceeded!) The high-pressure hose may leave signs of abrasion on some floors. Alternatively, please also find non-marking high pressure hoses in our range.



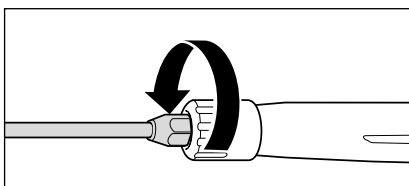
3. Plug screw high-pressure hose included in scope of delivery at pump outlet and tightly screw pressure-tight.



4. Tightly screw together high-pressure hose and safety trigger gun.



5. Lance on to safety trigger gun.

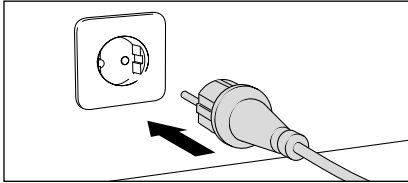


6. Screw together lance and safety trigger gun pressure tightly.



Accessories may only be connected to a Kränzle-approved trigger gun with safety catch.

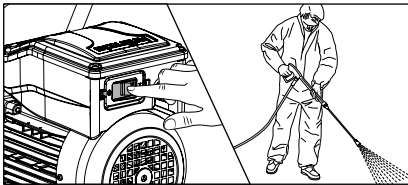
Putting into operation



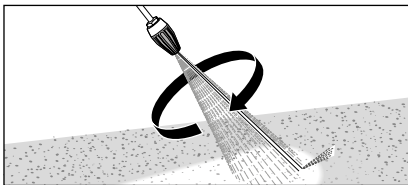
- 10.** Connect to circuit (see technical data).



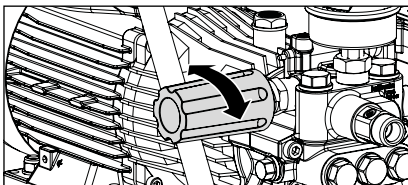
Do not touch the mains plug or any live parts with wet or moist hands.



- 11.** Switch on high-pressure cleaner with opened safety trigger gun. Bleeding of the high-pressure cleaner: Pull and release trigger of safety trigger gun several times. Start cleaning task.



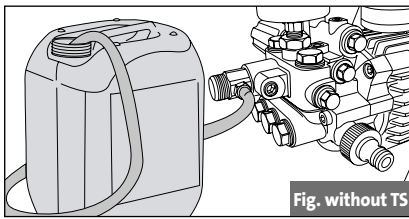
- 12.** When using the dirt killer lance make sure that lance points downward when starting.



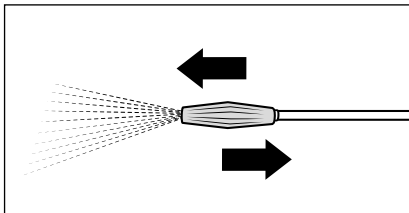
- 13.** Adjust operating pressure infinitely using the rotary handle. The maximum pressure is factory-set.

Suction of additives

Suction of additives is only possible with mounted lance and control nozzle and/or Vario-Jet lance requiring adjustment to low pressure.

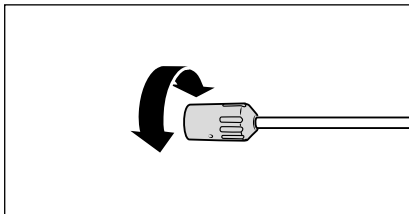


1. Place chemicals filter into container with additives. Switch on high-pressure cleaner with opened safety trigger gun.



2. **HD 9/80, HD 9/80 TS:**

To achieve low pressure, push vario nozzle forward and start sucking additive. Pushing vario nozzle backward causes the high-pressure cleaner to switch to high-pressure. Allow additive to react prior to washing it down with high pressure.



3. **HD 12/130, HD 12/130 TS:**

Adjust control nozzle to low pressure and suck in additive. Adjusting control nozzle to high-pressure will cause supply of chemicals to stop. Allow additives to react and wash down with high-pressure.



The additive must reveal a neutral pH value of 7-9. This machine has been designed for use of cleaning agents supplied or specifically recommended by the manufacturer. The use of other cleaning agents or chemicals may impair the safety of the machine. Observe and comply with relevant regulations, e.g. directives governing protective equipment, waste-water regulations, etc.



Attention solvents!

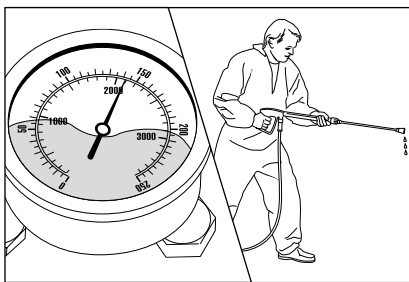
Never suck in liquids containing solvents like varnish solvents, petrol, oil or similar liquids! Seals inside the high-pressure cleaner are no resistant against solvents! The spray mist of solvents is highly inflammable, explosive and poisonous.

Problem

No water from nozzle although the high-pressure cleaner is running.
The stainless steel pressure gauge shows full pressure.

Cause

Most likely the nozzle is blocked.



The stainless steel pressure gauge shows full pressure, but from the nozzle comes only little water or no water at all.

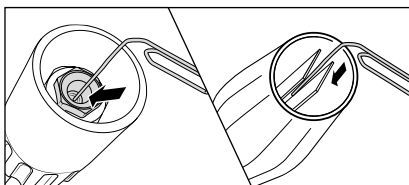
(Inside the stainless steel pressure gauge is no water but a filling with glycerin to damp the vibration of the pointer.)

Proceeding:

Switch off the high-pressure cleaner. Pull plug from the socket. Operate safety trigger gun catch several times to decrease the pressure.

Unscrew safety trigger gun and lance first, then rinse high-pressure hose to remove possible soiling.

Check water inlet filter for soiling.



If the problem still exists, take wire (paper clip) and push through nozzle opening. If this procedure is not successful, the nozzle has to be replaced.



Pull plug from socket prior to starting any repair work!

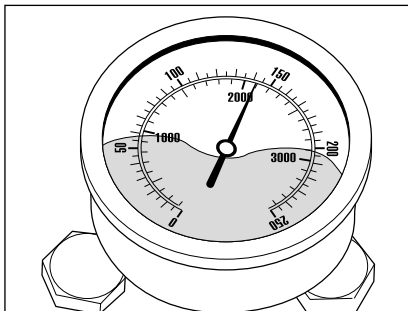
HD 9/80, HD 12/130

Problem

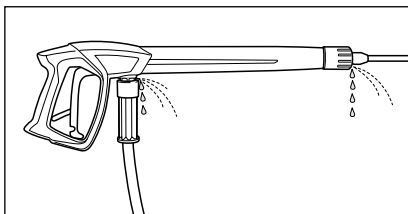
After closing the safety trigger gun, the pressure control valve-safety valve keeps switching. The stainless steel pressure gauge continuously displays full pressure.

Possible cause No. 1

Leakage.

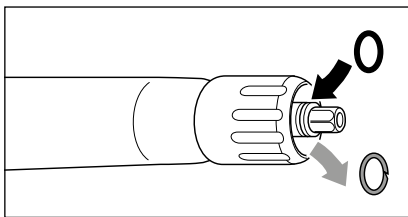


Having closed the safety trigger gun, the pressure control valve - safety valve must switch and the stainless steel pressure gauge must show „0“ bar. Failing to switch and with the stainless steel pressure gauge continuously showing full pressure, this could be due to leakage at the high-pressure pump, at the pressure switch, at the high-pressure hose or at the safety trigger gun.



Proceeding:

Check connections from the high-pressure cleaner to the high-pressure hose and from the high-pressure hose to the safety trigger gun and also the connection between lance and safety trigger gun for tightness.



Switch off the high-pressure cleaner. Shortly press the trigger of the safety trigger gun to decrease the high-pressure cleaner. Unscrew high-pressure hose, safety trigger gun and lance and check the O-rings. If the O-rings are damaged they have to be replaced.



In case of a leakage there is no guarantee for possible consequential damages.

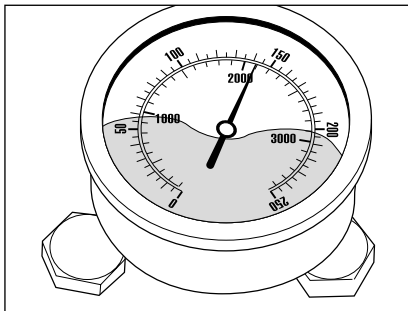
HD 9/80 TS, HD 12/130 TS

Problem

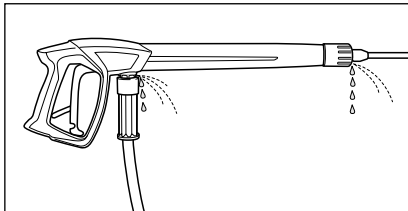
After closing the safety trigger gun the high-pressure cleaner keeps switching on and off. The stainless steel pressure gauge continuously displays full pressure.

Possible cause No. 1

Leakage.

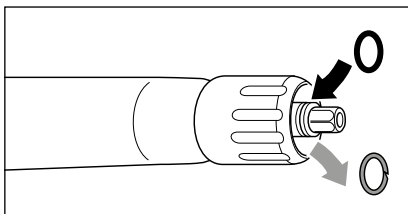


Having closed the trigger gun with safety catch, the high-pressure cleaner must shut down and the stainless steel pressure gauge must show „0“ bar. If not shut down and the stainless steel pressure gauge continuously shows full pressure, this could be due to leakage at the high-pressure pump, at the pressure switch, at the high-pressure hose or at the trigger gun with safety catch.



Proceeding:

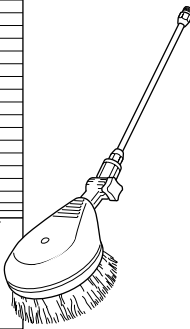
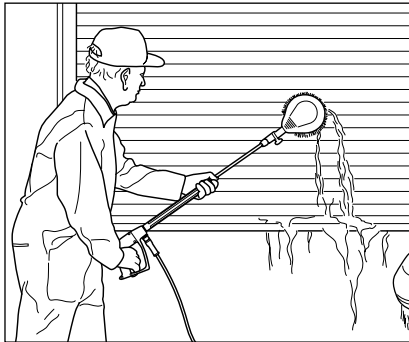
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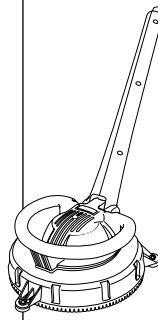
In case of a leakage there is no guarantee for possible consequential damages.



Rotating washing brush

- 400 mm
- Stainless steel extension
- Brush head \varnothing 180 mm
- Nozzle size 3.2 mm

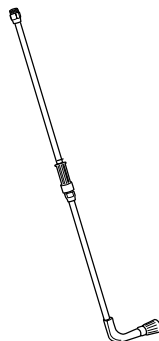
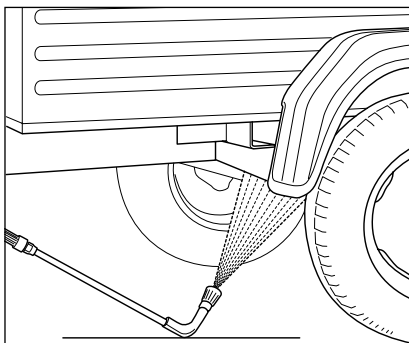
Item no.: 410501



**Floor washer
Round Cleaner UFO**

- \varnothing 300 mm
- Nozzle system 045

Item no.: 41850



Underbody lance

- Stainless steel pipe
- 1000 mm extension
- Nozzle system 4007

Item no.: 41075



**The high-pressure cleaner accessories are safety components!
Any warranty will be void if parts not authorised by Kränzle are used.**

EU Declaration of Conformity

We hereby declare that the design of the high-pressure cleaners: **HD 9/80**
HD 9/80 TS
HD 12/130
HD 12/130 TS

Nominal flow: **HD 9/80, HD 9/80 TS: 540 l/h**
HD 12/130, HD 12/130 TS: 680 l/h

technical specifications available from: **Fa. Josef Kränzle GmbH & Co. KG**
Manfred Bauer
Rudolf-Diesel-Str. 20, 89257 Illertissen

comply with the following guidelines and their amendments for high-pressure cleaners: **Machinery Directive 2006/42/EC**
EMC Directive 2014/30/EU
ROHS Directive 2011/65/EU
Outdoor Directive 2000/14/EC

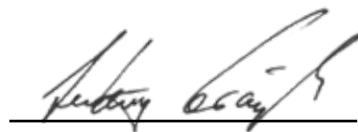
Noise pressure level, typical: **89 dB (A)**
Noise pressure level, guaranteed: **91 dB (A)**

Applied conformity assessment procedure: **Annex V, Outdoor Directive 2000/14/EC**

Applied specifications and standards: **EN 60335-1:2012/A13:2017**
EN 60335-2-79:2012
EN 62233: 2008
EN 55014-1: 2006+A1: 2009+A2: 2011
EN 55014-2: 2015
EN 61000-3-2: 2014
EN 61000-3-3: 2013

Josef Kränzle GmbH & Co. KG
Rudolf-Diesel-Straße 20
89257 Illertissen (Germany)

Illertissen, 2019-04-05



Ludwig Kränzle
(Managing director)

Inspection reports

High-pressure cleaners for industrial use have to be checked by an expert every 12 months! Inspection report on annually carried out Labour Safety Inspection (UVV) according to the Guidelines for Liquid Spray Equipment. (This inspection sheet serves as proof for the completion of the retest and must be kept carefully!)

Kränzle-test seals: Item no.: UVV200106

Owner: Type:
 Address: Serial no.:
 Repair order no.:

Scope of inspection	o.k.	yes	no	repaired
Type plate (on hand)				
Operating manual (on hand)				
Protective covering, Protective device				
Pressure line (tightness)				
Stainless steel pressure gauge (function)				
Float valve (tightness)				
Spraying device (marking)				
High-pressure hose / connector (damage, marking)				
Safety valve opens at 10 % / 20 % exceeding				
power supply cable (damage)				
Protective conductor (connected)				
On / Off switch				
Used chemicals				
Allowed chemicals				

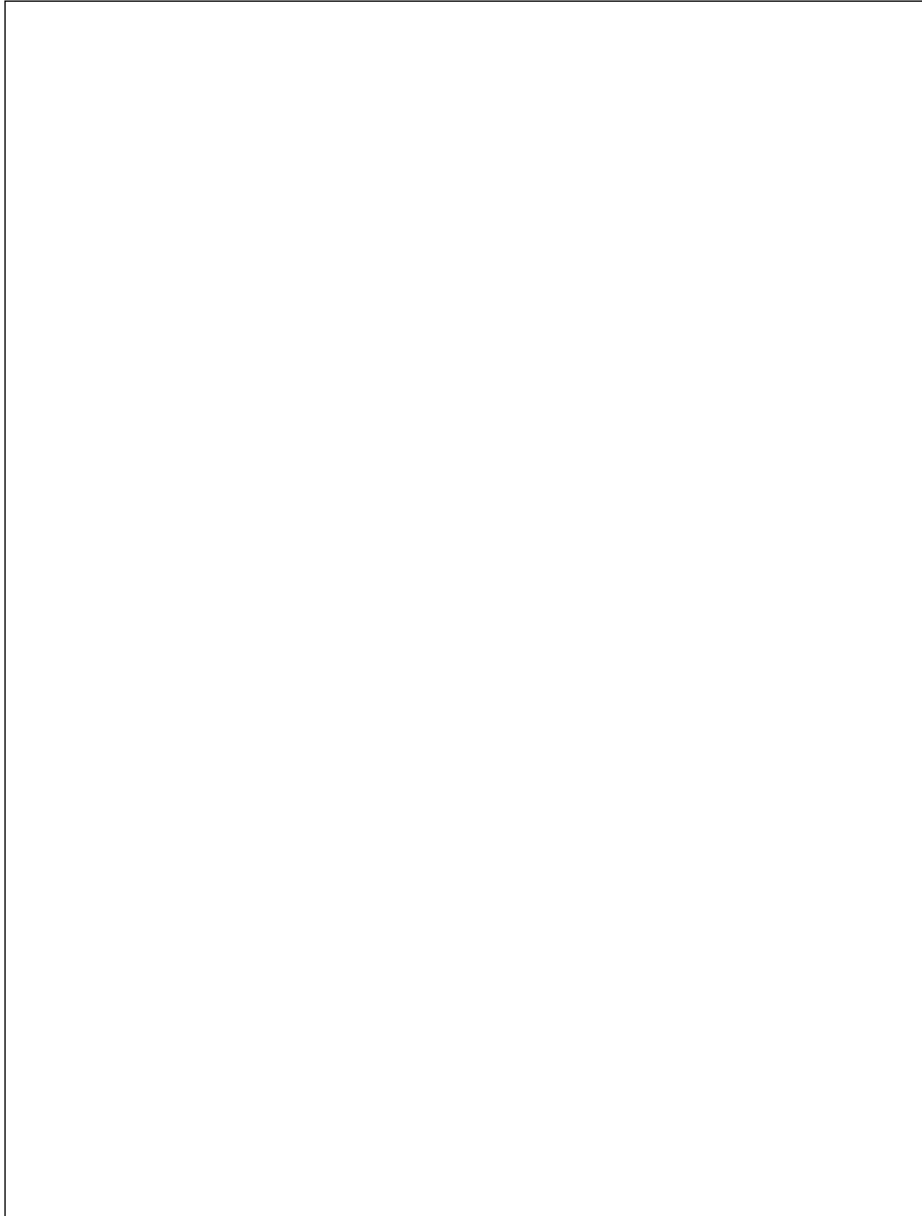
Inspection data	determined value	set value
High-pressure nozzle		
Operating pressurebar		
Switch off pressurebar		
protective conductor resistance not exceeded / value		
Insulation		
Leakage current		
Safety trigger gun locked		

Inspection result (check)

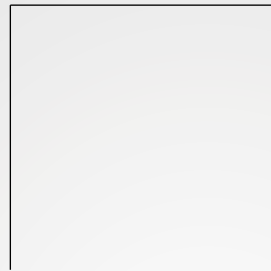
- The high-pressure cleaner was checked by an expert according to the Guidelines for Liquid Spray Equipment, the defects found have been rectified so that the Labour Safety can be confirmed.
- The high-pressure cleaner was checked by an expert according to the Guidelines for Liquid Spray Equipment. The Labour Safety cannot be confirmed unless the defects found are rectified by repair or replacement of the faulty parts.

The next retest according to the Guidelines for Liquid Spray Equipment has to be carried out by: Month Year

Place, Date Signature



kranzle®



Josef Kränzle GmbH & Co. KG
Rudolf-Diesel-Straße 20
89257 Illertissen (Germany)
sales@kraenzle.com

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■ Made
■ in
■ Germany

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