

# kränzle® GB

## High Pressure Cleaners



**W 11/135**  
**W 13/230**  
**W 15/200**  
**W 19/160**



**made  
in  
Germany**



**Operating manual**  
**Read before use and**  
**conform to**  
**safety instructions**



# Description

## Dear Customer

We would like to congratulate you on your new high pressure cleaner and to thank you for the purchase.

To ease your introduction to the use of the cleaner, we have provided the following pages of explanations, tips and hints.

The equipment will assist you professionally in all cleaning tasks, e.g.:

- Vehicles of all types
- Machines etc.
- Removing old paint
- Barrels and containers

| Technical specifications  | <b>Kränzle<br/>W 11 / 135</b> | <b>Kränzle<br/>W 19 / 160</b>    | <b>Kränzle<br/>W 15 / 200</b> | <b>Kränzle<br/>W 13 / 230</b> |
|---|-------------------------------|----------------------------------|-------------------------------|-------------------------------|
| Operating pressure steplessly adjustable                        | 10 - 135 bar                  | 10 - 160 bar                     | 10 - 200 bar                  | 10 - 230 bar                  |
| Permiss. overpressure   | 150 bar                       | 180 bar                          | 220 bar                       | 250 bar                       |
| Water output *  | at 1400 rpm<br>11 l/min       | at 1400 rpm<br>19 l/min          | at 1400 rpm<br>15 l/min       | at 1400 rpm<br>13 l/min       |
| Hot water input   | max. 60 °C                    | max. 60 °C                       | max. 60 °C                    | max. 60 °C                    |
| High pressure hose  | 10 m                          | 10 m                             | 10 m                          | 10 m                          |
| Electrical ratings  | 230 V ; 50 Hz ;<br>14,0 A     | 400 V ; 50 Hz ;<br>12,5 A        | 400 V ; 50 Hz ;<br>12,5 A     | 400 V ; 50 Hz ;<br>12,5 A     |
| Connected load Input<br>Output                                  | P1: 3,3 kW<br>P2: 2,4 kW      | P1: 7,5 kW<br>P2: 5,5 kW         | P1: 7,5 kW<br>P2: 5,5 kW      | P1: 7,5 kW<br>P2: 5,5 kW      |
| Weight  | 76 kg                         | 90 kg                            | 90 kg                         | 90 kg                         |
| Dimensions  | 710 x 740 x 370               | 710 x 740 x 370                  | 710 x 740 x 370               | 710 x 740 x 370               |
| Sound lever accord.<br>to DIN 45 635 (rel. to<br>working place) | 89 dB                         | 89 dB                            | 89 dB                         | 89 dB                         |
| with dirtkiller   | 84 dB                         | 93 dB                            | 93 dB                         | 93 dB                         |
| Recoil at lance   | approx. 25 Nm                 | approx. 22 Nm                    | approx. 25 Nm                 | approx. 27 Nm                 |
| Torque  | 26 Nm                         | 24,3 Nm                          | 28,8 Nm                       | 28,8 Nm                       |
|   |                               | (Assumed length of lance: 0.9 m) |                               |                               |
| Vibrations at lance   | 2,4 m/s <sup>2</sup>          | 3,2 m/s <sup>2</sup>             | 3,2 m/s <sup>2</sup>          | 3,2 m/s <sup>2</sup>          |
| Order n°:   | 41 312                        | 41 310                           | 41 309                        | 41 308                        |

Permissible tolerance for figures ±5% in accordance with VDMA, uniform sheet 24411

\* Min. water quantity to be supplied to the high pressure cleaner!

# Preparation for use

## Stationary cold water high pressure cleaner

The stationary wall-mounted systems are supplied with a stainless steel housing and equipped with an AQ pump (W11/135 with APG pump) and 10m steel fabric heavy duty hose.

Pressure fully adjustable, automatic total-stop feature.

After the gun is closed, the device continues to run for a time and then cuts out. It restarts when the gun is opened. Incorrect operation by unauthorised persons is therefore not possible. The factory setting is 30 seconds. The device is connected to a water supply with advance pressure. Temperatures of up to 60 °C are possible.

## Features

Stainless steel housing,  
10 m heavy duty hose with gun,  
lance 800 mm  
control nozzle and HP nozzle.

## Function

- 1 **Water inlet connection**
- 2 **High-pressure outlet**
- 3 **Press. gauge with glycerin filling**
- 4 **On-/ Off switch**



## Preparation for use

Connect to suitable water supply, open the water tap.

Switch on high-pressure cleaner. The pump is running and the pressure is built up. If the gun remains closed, the cleaner continues to run for another 30 seconds and then switches automatically into standby.

As soon as you presser the trigger of the gun the high-pressure pump starts.

After closing the gun, it continues to run for approx. 30 seconds, and then switches back to standby mode.

The device continues to run once the trigger is pressed during the 30 seconds.



If you use the HP cleaner for the first time or if you have not worked with your cleaner for a longer period of time, the machine has to be deaerated by opening and closing the gun various times.

# Description

## Water supply system

The water is fed under pressure (2 - 8 bar) to the HP pump. Then the water is fed under pressure from the HP pump to the safety spray 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 !

## Lance with spray gun

The machine can only be operated when the safety trigger is squeezed.

When the lever is squeezed, the spray gun opens. The liquid is then pumped to the nozzle.

When the trigger is released, the spray gun closes and any further spraying of liquid from the lance is stopped and the manometer must show 0 bar.

The increase in pressure when the spray gun is closed causes the unloader valve-safety valve to open. The pump remains switched on and continues to pump liquid through the pump at reduced pressure. When the spray gun is opened, the unloader valve - safety valve closes and the pump resumes pressure spraying from the lance.



The spray gun is a safety device. Repairs should only be performed by qualified persons. Should replacement parts be required, use only components authorized by the manufacturer.

## Unloader valve - safety valve

The unloader valve - safety valve protects the machine from a build up of excess pressure, and is designed not to permit an excess pressure to be selected for operation. The limit nut on the handle is sealed with a spray coating.

The operating pressure and spray rate can be steplessly adjusted by turning the handle.



Replacements, repairs, new adjustments and sealing should only be performed by qualified persons.

## High pressure hose and spraying device

The high pressure hose and spraying device supplied with the machine are made of high grade material. They are also optimized for the machine and marked as required by the appropriate regulations.



*If replacement parts are required, only such parts that are authorized by the manufacturer and which bear the markings required by the appropriate regulations may be used. The high pressure hose and spraying device must be connected in a pressure-tight manner. The high pressure hose may not be driven over, pulled excessively or twisted. Make sure that the hose is not damaged on sharp edges. Hose lines are wear parts. Guarantee is accepted only for manufacturing errors, not for external damages.*

*High pressure hose lines and spraying equipment must not be repaired, but replaced by a new hose or spraying equipment.*

## Unloader valve - safety valve

The unloader valve - safety valve protects the machine from a build up of excess pressure, and is designed not to permit an excess pressure to be selected for operation. The limit nut on the handle is sealed with a spray coating.



The operating pressure and spray rate can be steplessly adjusted by turning the handle.

Replacements, repairs, new adjustments and sealing should only be performed by qualified persons.



Take care that all screw connections are pressure-tight. A leakage of gun, high-pressure hose or hose drum has to be repaired at once. Leakages lead to an increased wear and to a possible malfunction of the delayed motor cut-out.

Operator's task:



Prior to each usage of this liquid spraying device, the operator is obliged to check if all safety relevant parts are in perfect working condition. (e.g. safety valves, high-pressure hose, cables and connections, spraying devices, etc. )

# Description



## With delayed motor cut-out

Frequent, work-necessitated switching on and off of motors on machines of this size puts a heavy load on the power network and causes increased wear on internal electrical parts. That's why the motor on the new KRÄNZLE appliances switches itself off 30 seconds after the trigger is released, and switches itself back on again when the trigger is pressed.



Replacements and inspection work should only be performed by qualified persons when the machine is disconnected from the power supply, i.e. the plug is pulled out from the electrical socket.

## Setting up

### Location



Neither set up and operate the machine in rooms where there is a risk of fire or explosion nor put it into puddles. Do not use the machine under water.

## CAUTION !



Never use liquid containing solvents such as paint thinners, petrol, oil or similar liquid matter. Pay attention to the instructions of the manufacturers of the cleaning agents. The seals in the machine are not resistant to solvents. The spray of solvents is inflammable, explosive and poisonous.

## CAUTION !



When running your high pressure cleaner with hot water of 60° C raised temperatures occur. Do not touch the machine without safety gloves!

# Description

W 11-135  
230V/50Hz  
W 13-230;  
W 15-200;  
W 19-160  
400V/50Hz



## Electrical connection

The machine is supplied with an electrical power cord with plug.



The mains plug must be fitted to a standard grounded socket with a **30mA** residual current operated device. The socket must be protected with a **16A** delay action fuse on the mains side.

KRÄNZLE W 11-135 = 230 Volt / 50 Hz  
KRÄNZLE W 13-230 = 400 Volt / 50 Hz (phase-sequence not significant)  
KRÄNZLE W 15-200 = 400 Volt / 50 Hz (phase-sequence not significant)  
KRÄNZLE W 19-160 = 400 Volt / 50 Hz (phase-sequence not significant)

When using an extension cable, this must have an earthed lead which is properly connected to the socket. The conductors in the extension cable must have a minimum cross section of 1.5 mm<sup>2</sup>. Plug connections must be of a spray-proof design, and may not be located on a wet floor.

(with extension cables of more than 10 m - 2.5 mm<sup>2</sup>)

## CAUTION !

The use of extension cables which are too long may lead to malfunctions and start up difficulty.

# Description



Brief operating instructions:

1. **Connect the high pressure hose with spray gun and machine.**
2. **Connect to suitable water supply.**
3. **Flush the air from the pump (open and close the spray gun several times).**
4. **Make the electrical connection - (400 Volt three-phase current).**
5. **Switch on the machine and commence cleaning.**
6. **After having completed the work switch off the tap and completely empty the pump.**  
**(Switch on the motor for approx. 20 sec. without the water hose and gun).**  
**Afterwards you can roll up the high pressure hose.**  
**- Only use clean water ! - Protect from frost !**

## **CAUTION !**

Please pay attention to the regulations of your waterworks company.

In accordance with EN 61 770, the machine 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 tube ventilator with check valve (Kränzle Order-No. 41.016 4) is built into the water supply.

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.



# Preparation for use

## 1. Check oil level.

There are two

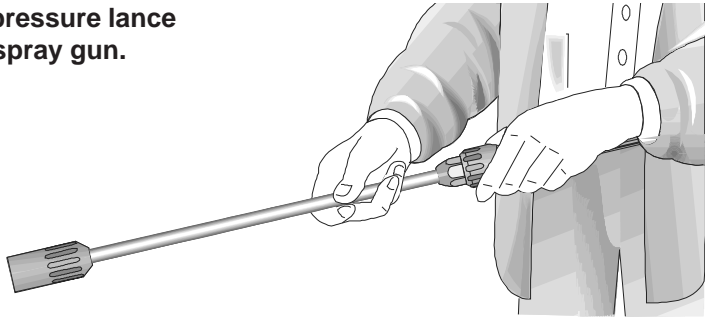
possibilities for checking the oil level of the pump:

- a) Oil must be visible in the viewing window
- b) The oil level must be between the two markings on the oil dipstick.

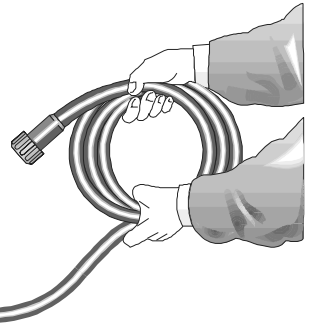
To check the oil level, loosen the oil cover screw and take out the oil dip stick. The oil level must be between the two markings.

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## 2. Connect the high pressure lance or dirtkiller to the spray gun.



## 3. Unroll hose without kinks and connect with handgun and pump. Max. extension 20m-HP hose or 2 x 10m with hose connections.



## 4. The machine must be connected to the water line with cold water or up to 60° C warm water (see page 2).

The hose cross section must be at least  $\frac{3}{4}$ " = 16 mm (free passage).

It is recommended to install a water filter prior to the cleaner.

(Kränzle order no.: 13.300 3)

# ***To shut down the pump:***

*To shut down the pump:*

- 1. Switch off the machine. Switch to „0“ position.**
- 2. Cut off the water supply.**
- 3. Open the spray gun briefly until the pressure is released.**
- 4. Apply the safety catch on the spray gun.**
- 5. Remove the water hose and spray gun.**
- 6. Pull the plug from the socket.**
- 7. Winter: store the pump in rooms above 0°C.**
- 8. Clean the water filter.**

## **Frost protection**

Normally after operation, there is still some water in the device. Thus, you must take special measures to protect the device from frost.

### **- Completely drain the device**

For this purpose, separate the device from the water supply. Then, turn on the main switch and open the gun. Now, the pump presses the remaining water out of the water tank and the pump. However, do not allow the device to operate without water for longer than one minute.

### **- Fill the device with antifreeze agent**

If the device is not operated for longer periods, especially over the winter, you should pump an antifreeze agent through the device. For this purpose, fill the antifreeze agent into the water box and turn on the device. Wait with opened gun, until the agent spurts out of the nozzle.

**However, the best way to protect the device from frost is  
to store it at a frost-free location.**

# Care and Maintenance

## Care and Maintenance

Care and maintenance is required to keep the machine in good working order, and to allow you to enjoy the machine for as long as possible.



### **IMPORTANT!!!**

**Always remove the plug before working on the machine!**

**Only use original Kränzle spare parts**

### **What to do!**

**- Weekly, or after approx. 40 hours of operation**

- Check the oil level of the high pressure pump.

Loosen the red oil stopper on the high pressure pump and pull out the oil dipstick.

If the oil level is too low, add oil until the oil level is between the two markings on the oil dipstick.

Change the oil if it has a grey or whitish appearance. The oil should be disposed of responsibly.

## Changing the oil

To do this, take the oil drainage hose (1) connected to the oil drain screw, from the inside of the machine and open the red oil filler cap on the top side of the black oil reservoir. Open the cap at the end of the hose. Drain off the oil into an oil pan and dispose of it responsibly. Close the end of the hose.

Refill with oil, as described above.



### **Oil leakage**

If oil leaks out, contact the nearest customer service (dealer) immediately. (Environmental damages, transmission damages, loss of guarantee.)

### **Type of oil:**

W19/160      **Formula RS of Castrol** - Quantity: 1.0 l

W15/200

W13/230

W11/135      **Motor oil: 15/W40** - Quantity: 0.3 l

# Care and Maintenance

## Rules, directives, inspections

### ● Inspections performed by Kränzle

- measurement of earth line resistance
- measurement of voltage and current
- inspection of tension consistency with +/- 1530 V
- visual and functional check as per the inspection sheet provided

### ● Guidelines for liquid sprayers

The machine conforms with the "Guidelines for liquid sprayers". These guidelines are issued by the organisation of trade associations and may be obtained from Carl Heymann-Verlag KG, Luxemburger Str. 49, 50939 Köln. These guidelines specify that this machine is to be inspected by qualified personnel whenever necessary, but no less than once every 12 months. These inspections must be recorded in the inspection log at the end of this manual.

### ● Duties of owner

The owner is to ensure that all safety-relevant components are in a serviceable condition before the sprayer is used. (e.g., safety valves\*, hoses and electric cables, spray equipment etc).

\* The pressure gauge must show 0 bar once the gun is closed.

# Safety Information

## Safety Information

*Important !!!*



*The machine must be disconnected from the power supply when servicing work is being carried out. The master switch should be in position "0" and the plug out of the socket.*

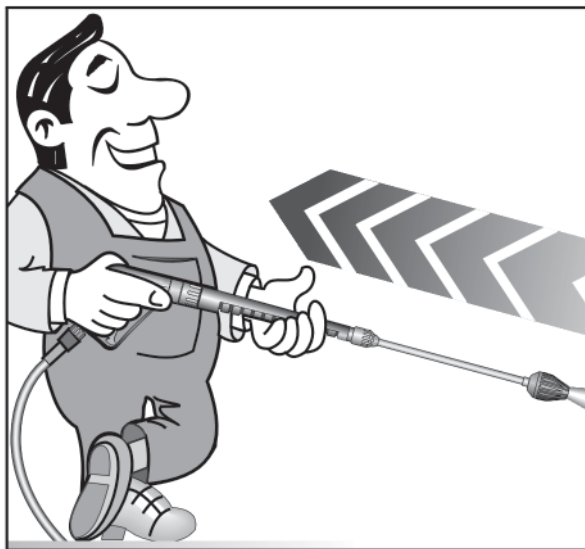
*Do not use the cleaner if electrical connections or other safety-relevant parts (e.g. overpressure valve, high pressure hose, spraying equipment etc.) are damaged.*

*The machine may only be used by persons who have received the necessary training.*

- Never operate the machine without supervision.
- The water spray can be dangerous. It should never be directed at people, animals, electrical apparatus or the machine itself.
- Never direct the spray at power sockets.
- Parts of the machine interior and parts of the gun and lance become hot when hot water is used. Leave the cover of the machine closed when using the machine and do not touch the metallic parts of the gun and lance.
- Children must not use high pressure cleaning equipment.
- Do not damage the cable or repair it incorrectly.
- Do not pull the high pressure hose if there are kinks or loops in it. Make sure that the hose is not damaged on sharp edges.
- Persons operating the machine should wear the necessary protective clothing, i.e., waterproof clothing, rubber boots, safety goggles, headwear etc. It is prohibited to use the machine in close vicinity to people lacking suitable protective clothing.
- The high pressure spray can generate a high level of noise. If noise exceeds the maximum allowed levels, users and others in the vicinity must wear suitable ear protection.
- The high pressure spray causes recoil and additional twisting movement if the gun is angled. The gun must therefore be held firmly with both hands. (see page 2)
- Do not clamp down the trigger of the gun. Apply the safety catch after use, in order to prevent accidental spraying.
- Do not spray against matter containing asbestos or other hazardous substances.
- Never spray liquids containing solvents, such as paint thinner, petrol, oil, or anything similar. **Note the specifications of the additive makers!** The seals in the machine are not resistant to solvents. The spray vapour of solvents is highly inflammable, explosive and poisonous.

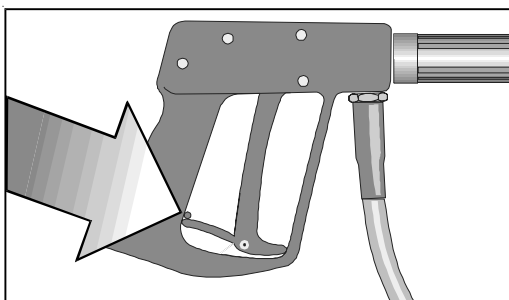
# Safety Information

- The machine may not be set up and used in rooms where there is a danger of fire or explosion. The machine may not be used under water.
- Never direct the high-pressure jet at yourself or other persons just to clean clothing or shoes.



As to the recoil -  
see notice on page 2!

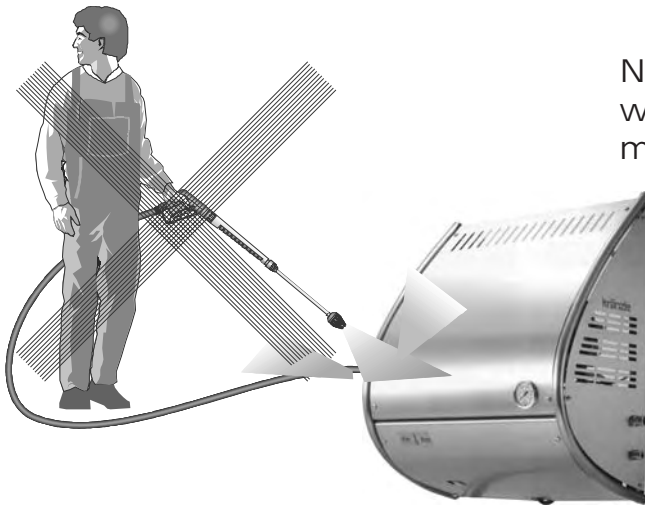
Apply the safety catch on  
the spray gun after each use,  
in order to prevent unintentional  
spraying!



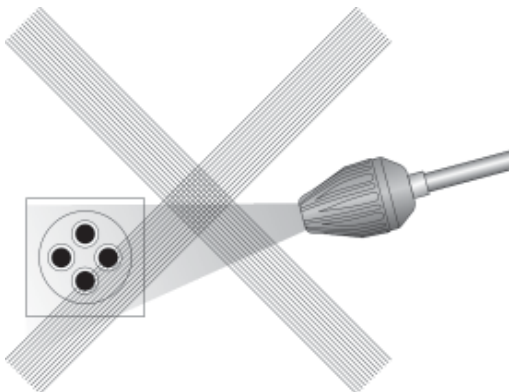
*This is prohibited!*



Never allow children to use the high pressure cleaner!

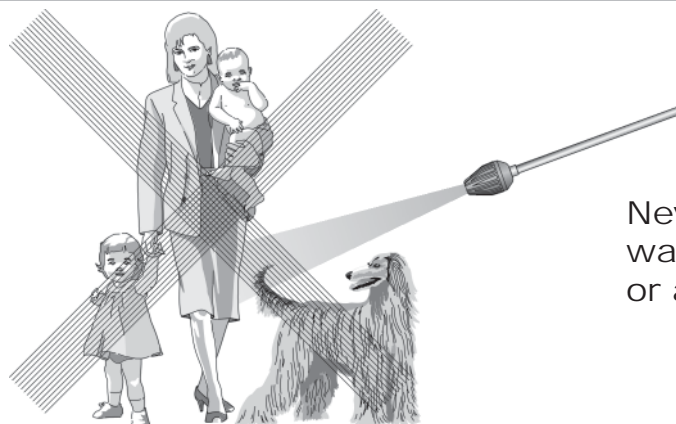


Never direct the water jet at the machine itself!

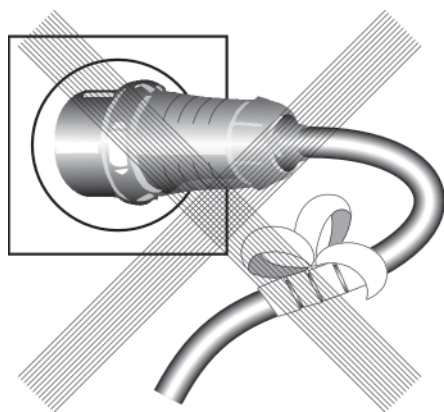


Never direct the water jet at a power socket!

*This is prohibited!*



Never direct the water jet at people or animals!



Do not damage the power cable or repair it incorrectly!



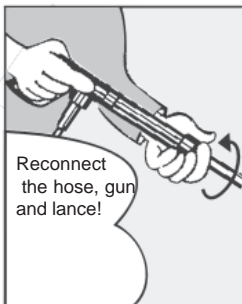
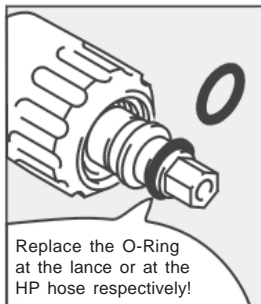
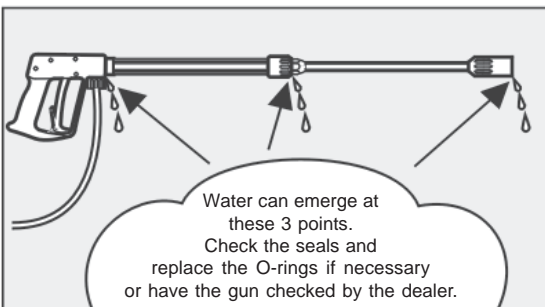
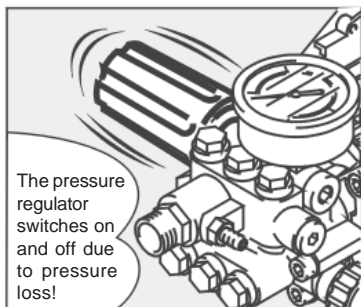
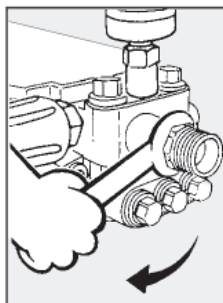
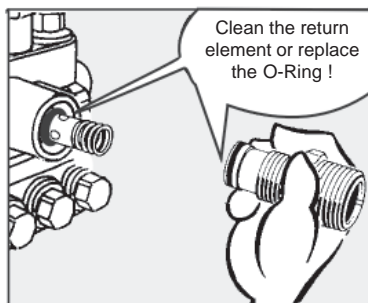
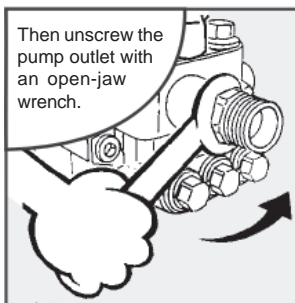
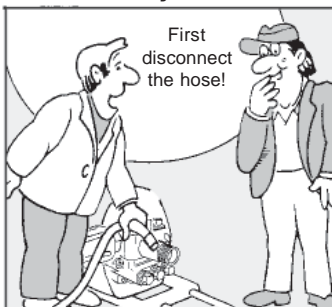
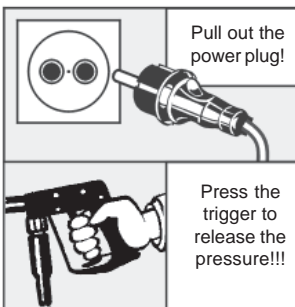
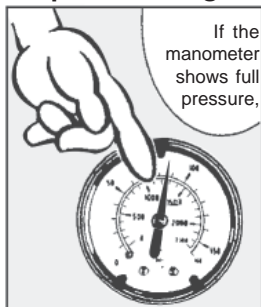
Never pull the high pressure hose if it has formed kinks or "nooses"!  
Never pull the hose over sharp edges!



# Small repairs - Do it yourself!

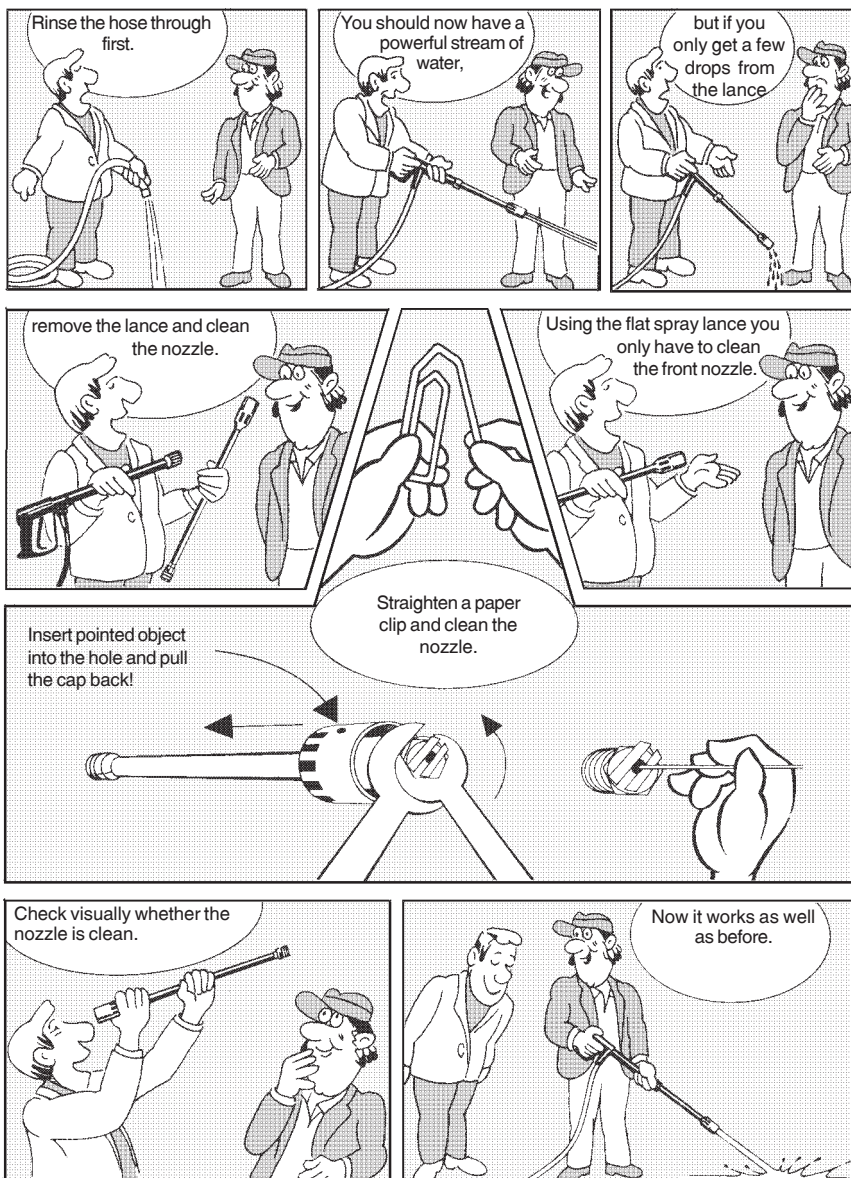
## Stopping leaks from hose or gun

- After closing the gun the manometer shows full pressure!
- The pressure regulator switches on and off continuously!



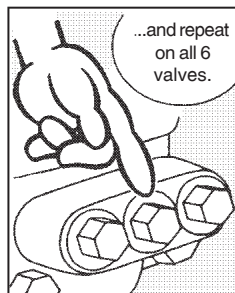
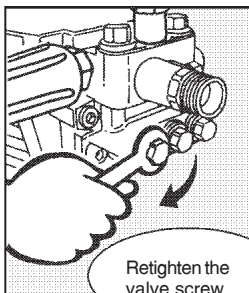
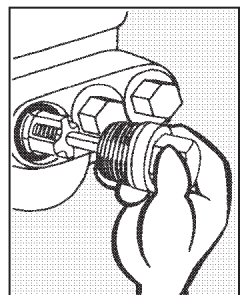
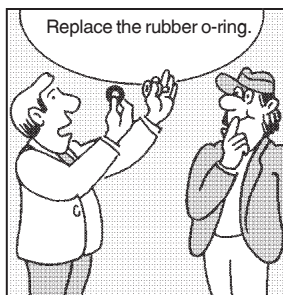
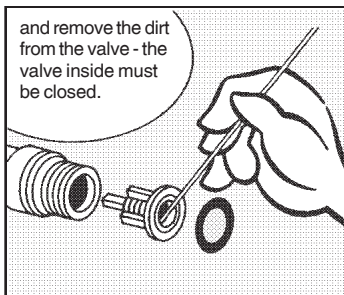
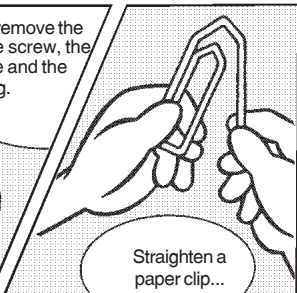
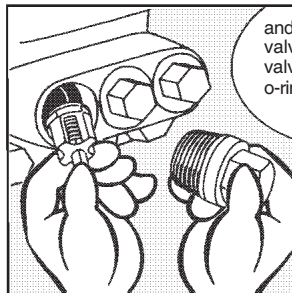
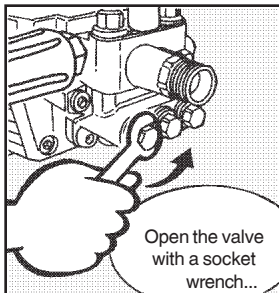
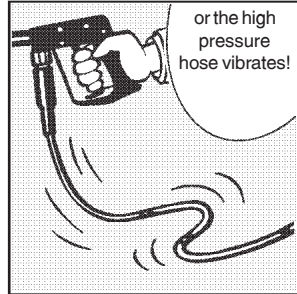
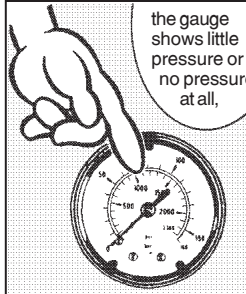
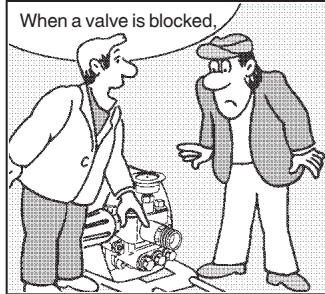
# The nozzle is blocked!

- No water but the gauge shows full pressure !

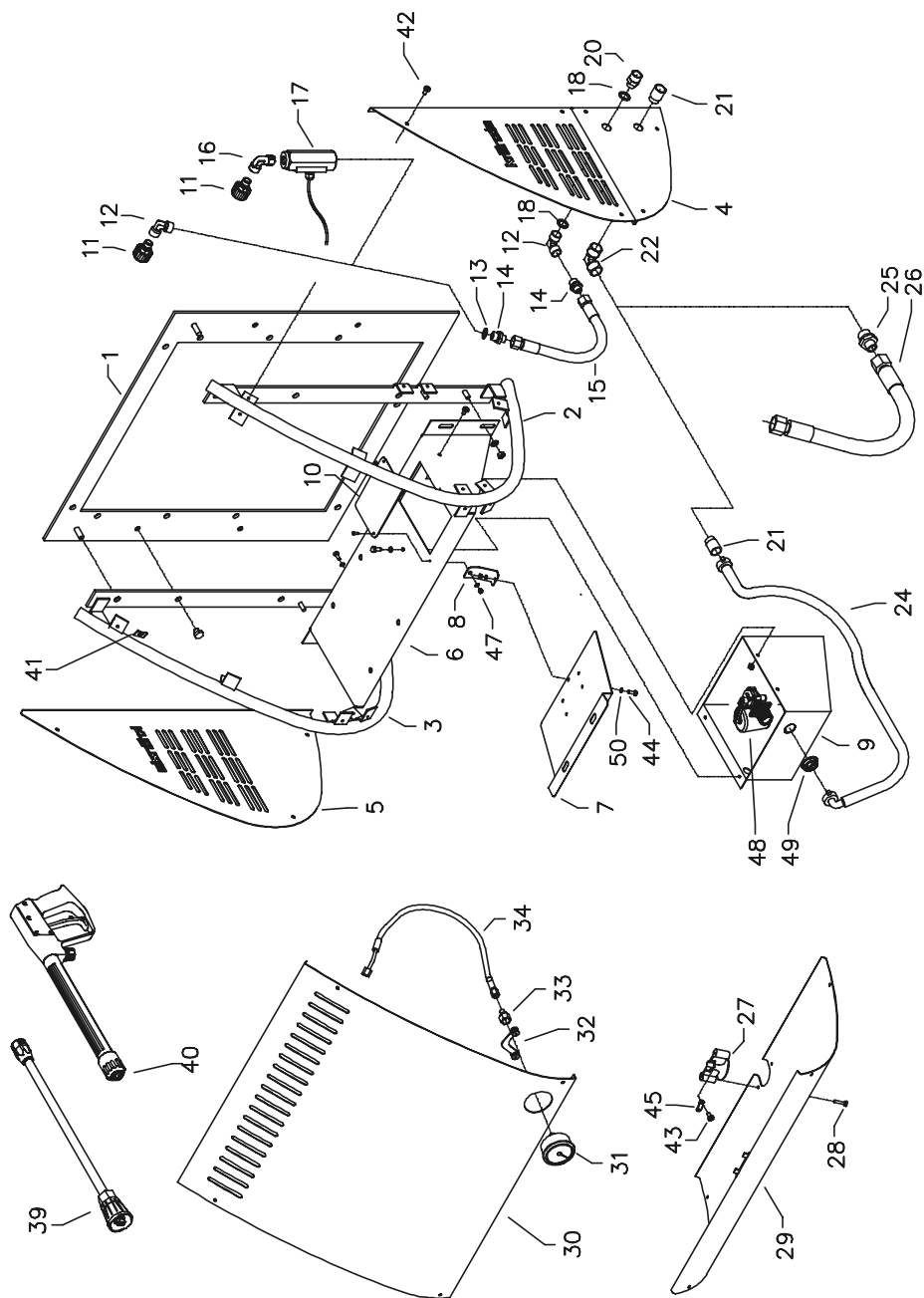


## Nozzle dirty or sticky!

- Pressure gauge does not show full pressure.
- Water comes out in spurts.
- If you do not use the high-pressure cleaner for some time the valves can stick.
- The high-pressure hose vibrates.



# Complete Assembly

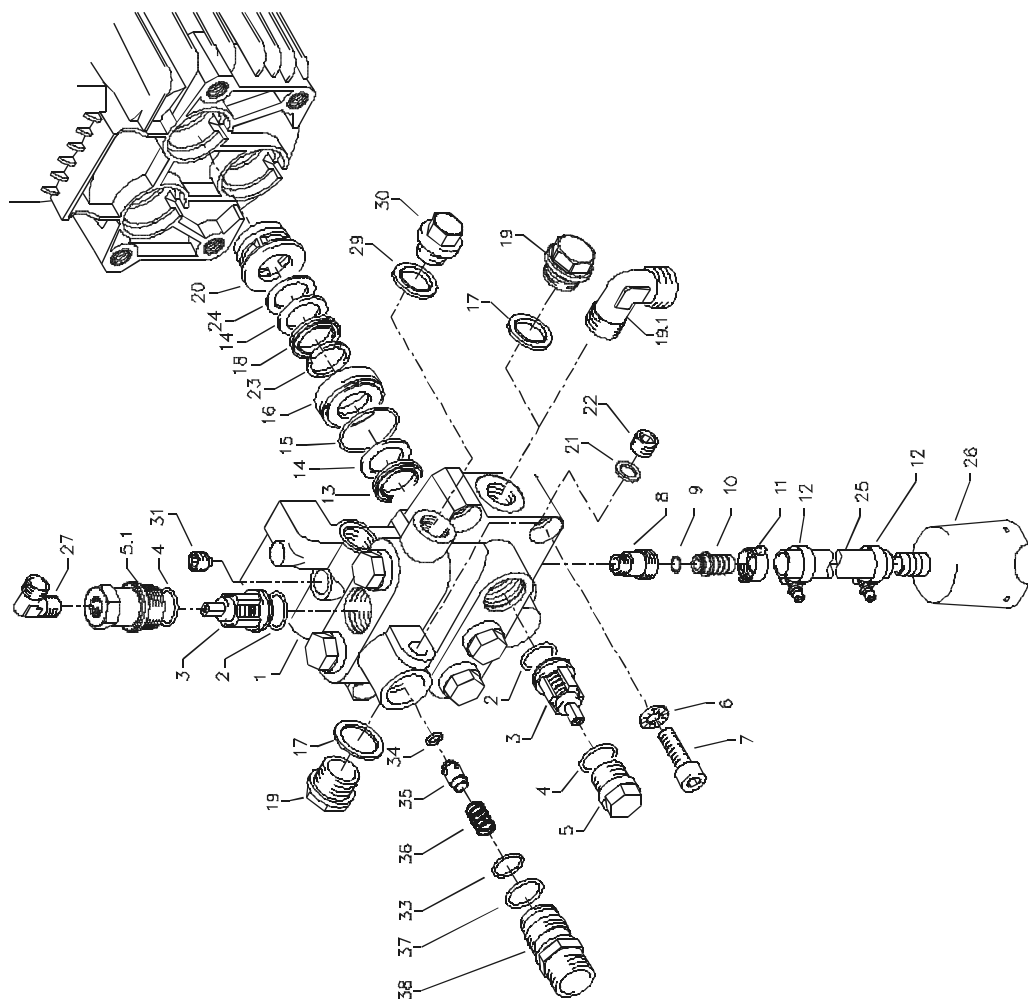


# Spare parts list

## Spare parts list KRÄNZLE W 11-135; W 13-230; W 15-200; W 19-160 Complete Assembly

| No | Description                      | Qty. | Ord.-No  | No | Description                        | Qty. | Ord.-No          |
|----|----------------------------------|------|----------|----|------------------------------------|------|------------------|
| 1  | Tragrahmen Wandaggregat          | 1    | 42.750   | 24 | Wassereingangsschlauch R3/4"       | 1    | 42.760           |
| 2  | Seitenbügel rechts               | 1    | 42.751   | 25 | Nippel R 1/2" x 15L                | 1    | 42.763           |
| 3  | Seitenbügel links                | 1    | 42.752   | 26 | Wassereingangsschlauch 15L         | 1    | 42.760 1         |
| 4  | Seitenblech rechts               | 1    | 42.753   | 27 | Kabeldurchführung                  | 1    | 42.513           |
| 5  | Seitenblech links                | 1    | 42.754   | 28 | Kunststoffschraube 5,0 x 25        | 2    | 41.414           |
| 6  | Motorträger                      | 1    | 42.755   | 29 | Frontblech unten                   | 1    | 42.761           |
| 7  | Halteblech Schaltkasten          | 1    | 42.756   | 30 | Frontblech oben                    | 1    | 42.762           |
| 8  | Verbindungsblech Schaltkasten    | 1    | 42.757   | 31 | Manometer                          | 1    | 15.039 1         |
| 9  | Wasserkasten                     | 1    | 42.758   | 32 | Klemmbügel für Manometer           | 1    | 44.049           |
| 10 | Abdeckblech                      | 1    | 42.759   | 33 | Anschlussmuffe Manometer           | 1    | 44.136           |
| 11 | Verschraubung R3/8" AG x M22x1,5 | 1    | 13.371   | 34 | Druckmessleitung                   | 1    | 44.102 1         |
| 12 | Winkel 2x R3/8" IG               | 2    | 44.138   | 39 | Lanze mit HD-Düse                  | 1    | 12.392 5-HD25045 |
| 13 | Kupferdichtring                  | 1    | 40.019   | 40 | Starlett -Pistole mit Verlängerung | 1    | 12.320 2         |
| 14 | Ermetonippel R3/8" x 12          | 2    | 44.139   | 41 | Blechmutter                        | 17   | 42.506           |
| 15 | HD-Schlauch                      | 1    | 44.093   | 42 | Schraube                           | 17   | 41.414 1         |
| 16 | Winkel R3/8"AG x R3/8"IG         | 1    | 44.127   | 43 | Schraube                           | 2    | 40.290           |
| 17 | Durchflusswächter                | 1    | 12.634   | 44 | Schraube M4 x 30                   | 4    | 40.436           |
| 18 | Usit-Ring                        | 2    | 12.129   | 45 | Zugentlastung                      | 1    | 43.431           |
| 20 | Ausgangsteil R3/8" x M22x1,5     | 1    | 13.365 2 | 47 | Schraube M4 x 20                   | 1    | 40.313           |
| 21 | Sauganschluss R3/4" x R1/2"      | 1    | 41.016 1 | 48 | Schwimmerventil                    | 1    | 46.250           |
| 22 | Winkel 2x R1/2" IG               | 1    | 42.764   | 49 | Überwurfmutter                     | 1    | 46.258           |

# Valve housing

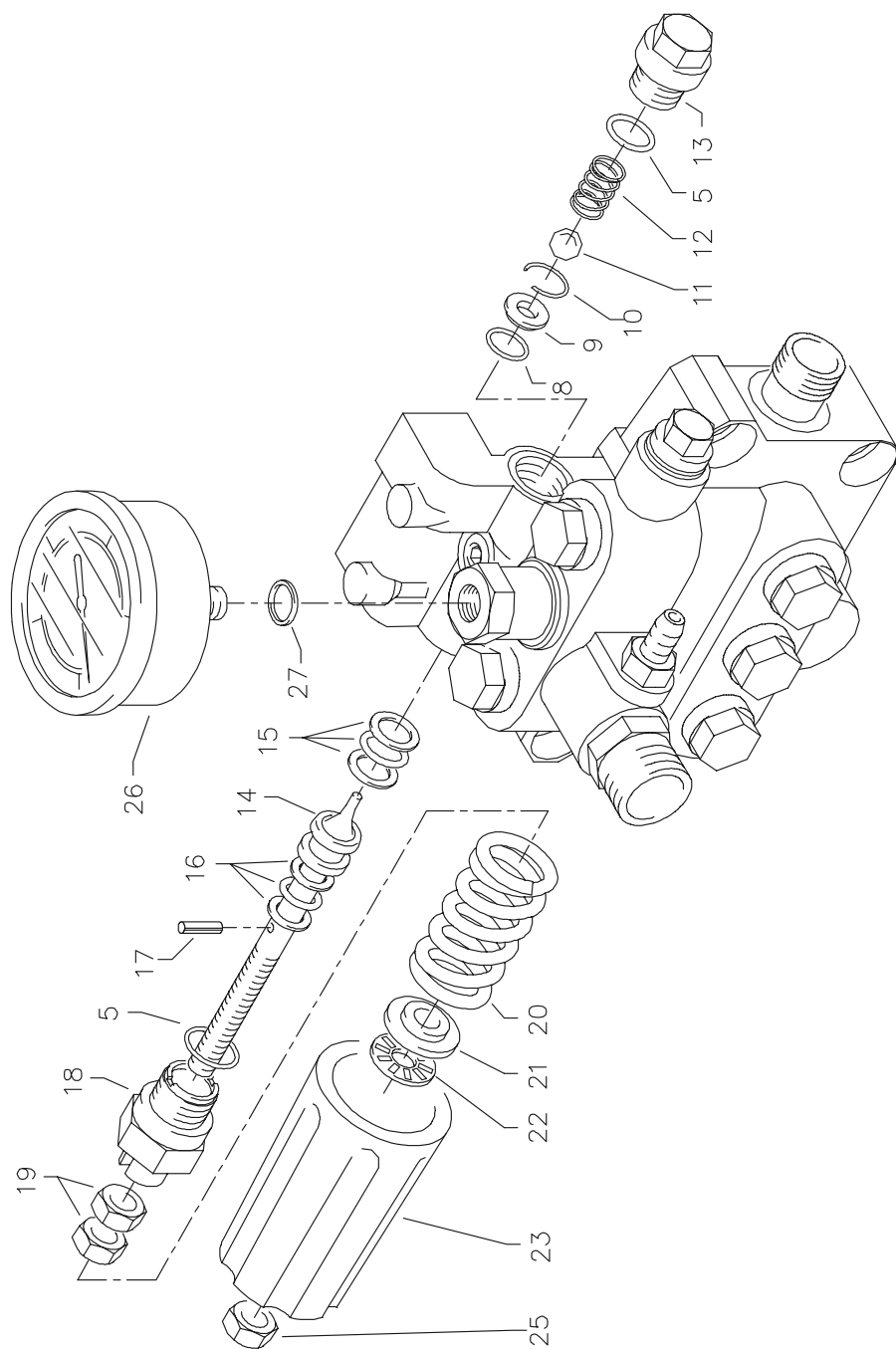


# Spare parts list

## Spare parts list W13/230; W15/200; W19/160 Valve housing AQ-pump

| No   | Description                          | Qty. | Ord.-No  | No | Description                            | Qty. | Ord.-No         |
|------|--------------------------------------|------|----------|----|--|------|-----------------|
| 1    | Ventilgehäuse AQ mit integr. UL      | 1    | 40.521   | 31 | Dichtstopfen M 10 x 1                  | 1    | 43.043          |
| 2    | ohne integr. Druckschalter           |      |          | 34 | O-Ring 6 x 3                           | 1    | 14.121          |
| 3    | O-Ring 18 x 2                        | 6    | 40.016   | 35 | Rückschlagkörper                       | 1    | 14.122          |
| 4    | Einlass- / Auslass- Ventil           | 6    | 42.024   | 36 | Rückschlagfeder                        | 1    | 14.120          |
| 5    | O-Ring 21 x 2                        | 6    | 42.025   | 37 | O-Ring 18 x 2                          | 1    | 43.446          |
| 5.1  | Ventilstopfen                        | 5    | 42.026   | 38 | Ausgangsstück Injektor ST30 M22x1,5    | 1    | 43.447          |
| 6    | Ventilstopfen mit R 1/4" IG          | 1    | 42.026.2 |    | <b>Repair kits:</b>                    |      |                 |
| 7    | Sicherungsring                       | 4    | 40.032   |    | <b>Repair kit for sleeves</b>          |      | <b>40.065 1</b> |
| 8    | Innensechskantschraube M 12 x 45     | 4    | 40.504   |    | consisting of: 3x Pos. 13; 6x Pos. 14; |      |                 |
| 9    | Sauganschluss 3/8" AG x 3/4" AG      | 1    | 41.016   |    | 3x Pos. 15; 3x Pos. 16; 3x Pos. 18;    |      |                 |
| 10   | O-Ring 13 x 2,6                      | 1    | 13.272   |    | 3x Pos. 20; 3x Pos. 23                 |      |                 |
| 11   | Schlauchtülle 11,3                   | 1    | 44.126.2 |    | Repair kit for sleeves without         |      |                 |
| 12   | Schlauchverschraubung 3/4" x 19      | 1    | 44.122   |    | brass parts                            |      | 40.517          |
| 13   | Schlauchschelle 20 - 32              | 2    | 44.054.1 |    | consisting of:                         |      |                 |
| 14   | Gewebemanschette                     | 3    | 40.023   |    | 3x Pos. 13; 6x Pos. 14; 3x Pos. 15;    |      |                 |
| 15   | Backring 20 mm                       | 6    | 40.025   |    | 3x Pos. 18; 3x Pos. 23                 |      |                 |
| 16   | O-Ring 31,42 x 2,62                  | 3    | 40.50    |    | Repair kit valves                      |      | 40.062 1        |
| 17   | Leckagering 20 x 36 x 13,3           | 3    | 40.509   |    | consisting of:                         |      |                 |
| 18   | Cu-Dichtring 21 x 28 x 1,5           | 1    | 42.039   |    | 6x Pos. 2; 6x Pos. 3; 6x Pos. 4        |      |                 |
| 19   | Gummimanschette                      | 3    | 40.512   |    |  |      |                 |
| 19.1 | Verschlusssschraube R 1/2"           | 1    | 42.032   |    |  |      |                 |
| 20   | Winkel Einschraub-Verschraubung 1/2" | 1    | 42.765   |    |  |      |                 |
| 21   | Distanzring mit Abstützung           | 3    | 40.507   |    |  |      |                 |
| 22   | Aluminium-Dichtring                  | 2    | 13.275   |    |  |      |                 |
| 23   | Verschlussstopfen                    | 1    | 13.181   |    |  |      |                 |
| 24   | Druckring 20 mm                      | 3    | 40.021   |    |  |      |                 |
| 25   | Zwischenring 20 mm                   | 3    | 40.516   |    |  |      |                 |
| 26   | Ansaugschlauch                       | 1    | 40.096   |    |  |      |                 |
| 27   | Saugglocke mit Sieb                  | 1    | 15.038.5 |    |  |      |                 |
| 29   | Winkel Einschraub-Verschraubung 1/4" | 1    | 44.062   |    |  |      |                 |
| 30   | Dichtring 17 x 22 x 1,5 (Kupfer)     | 1    | 40.019   |    |  |      |                 |
|      | Verschlusssschraube 3/8" AG          | 1    | 40.018   |    |  |      |                 |

# Unloader valve



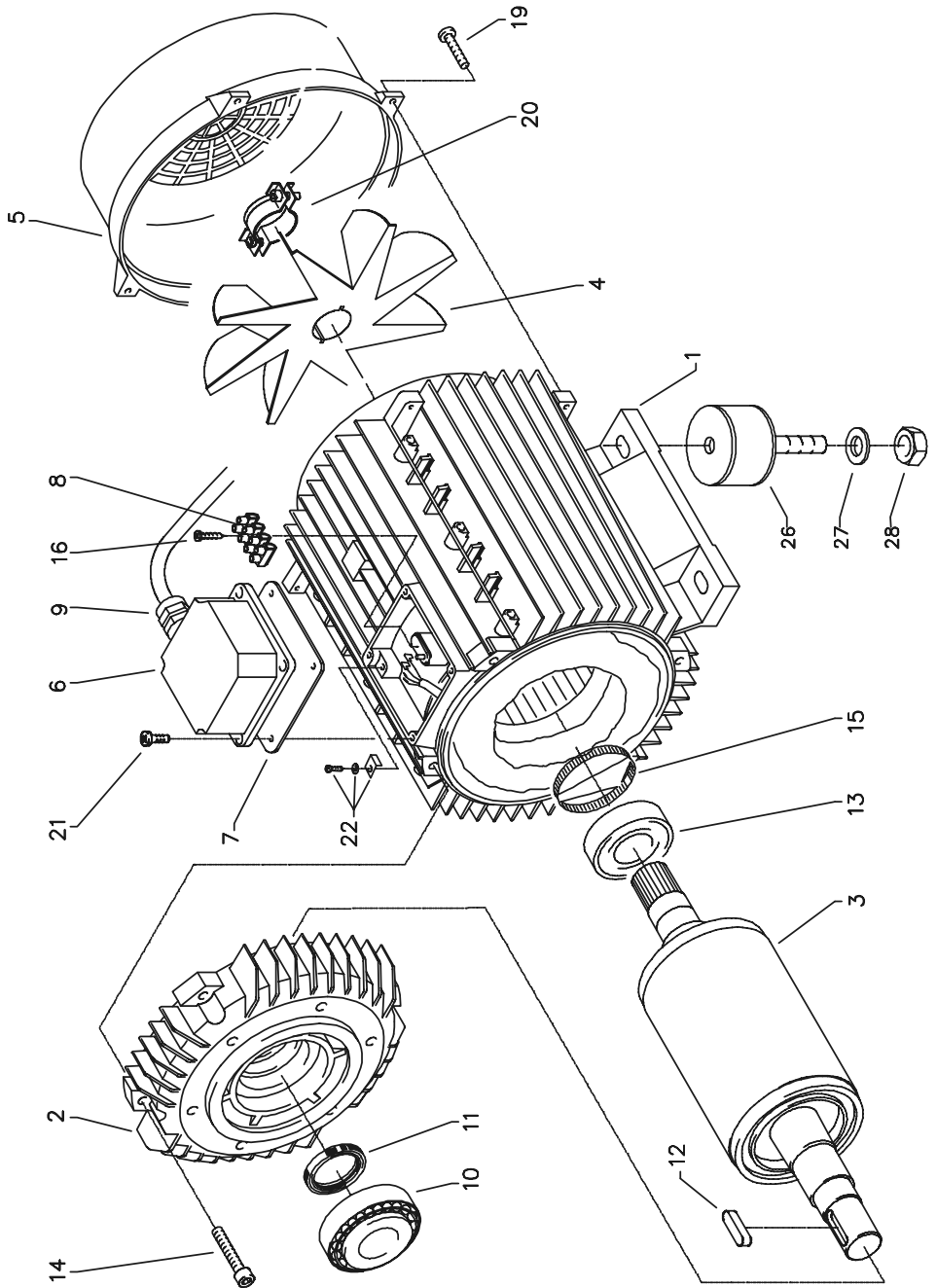


# Spare parts list

## Spare parts list W13/230; W15/200; W19/160 Unloader valve AQ-pump

| No | Description                 | Qty. | Ord.-No  |
|----|-----------------------------|------|----------|
| 5  | O-Ring 16 x 2               | 2    | 13.150   |
| 8  | O-Ring 11 x 1,44            | 1    | 12.256   |
| 9  | Edelstahlsitz               | 1    | 14.118   |
| 10 | Sicherungsring              | 1    | 13.147   |
| 11 | Edelstahlkugel              | 1    | 13.148   |
| 12 | Edelstahlfeder              | 1    | 14.119   |
| 13 | Verschlußschraube           | 1    | 14.113   |
| 14 | Steuerkolben                | 1    | 14.134   |
| 15 | Parbaks 16 mm               | 1    | 13.159   |
| 16 | Parbaks 8 mm                | 1    | 14.123   |
| 17 | Spanstift                   | 1    | 14.148   |
| 18 | Kolbenführung spezial       | 1    | 42.105   |
| 19 | Kontermutter M 8 x 1        | 2    | 14.144   |
| 20 | Ventilfeder schwarz         | 1    | 14.125   |
| 21 | Federdruckscheibe           | 1    | 14.126   |
| 22 | Nadellager                  | 1    | 14.146   |
| 23 | Handrad                     | 1    | 14.147 2 |
| 25 | Elastic-Stop-Mutter M 8 x 1 | 1    | 14.152   |

# Motor

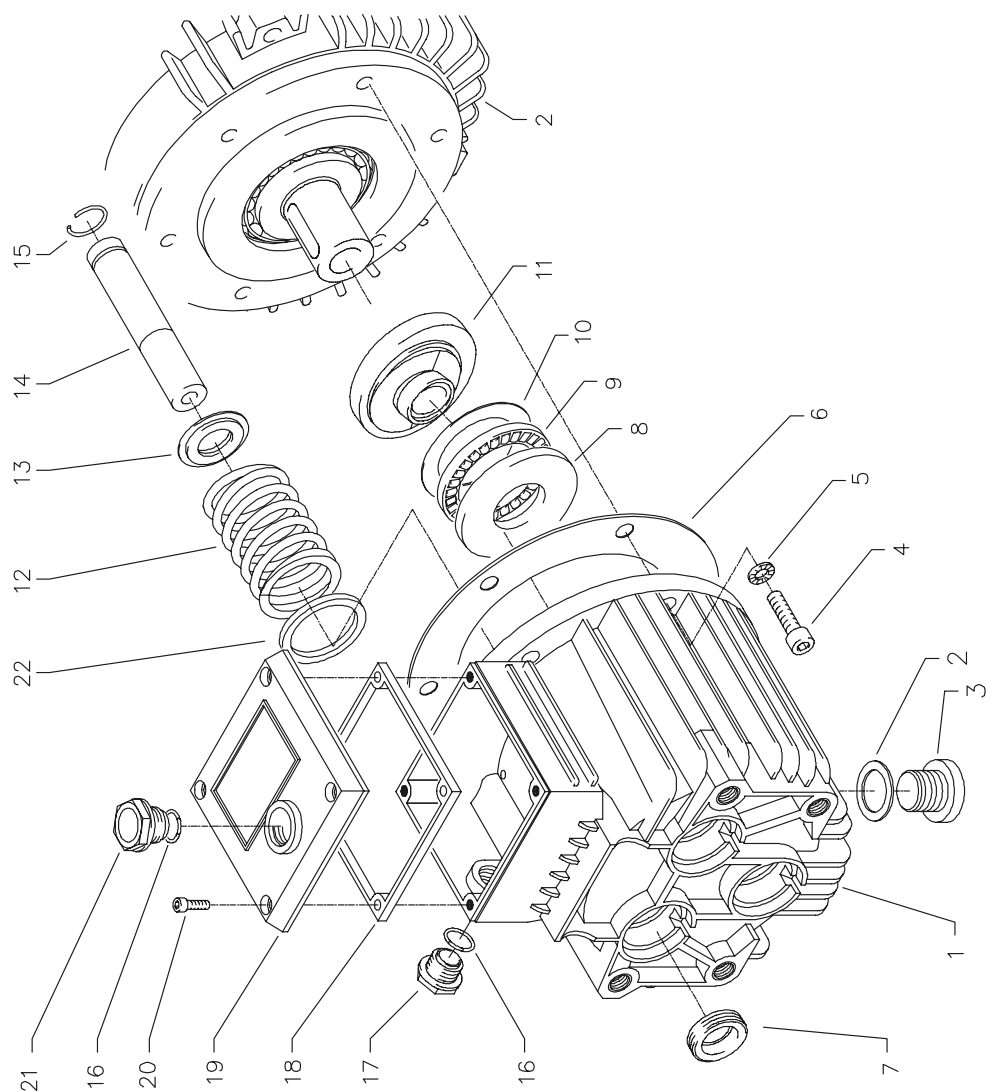


# Spare parts list

## Spare parts list Motor W 13/230; W 15/200; W 19/160

| No  | Description                              | Qty. | Ord.-No         |
|---|--|------|-----------------|
| 1   | Stator 112 5.5 kW 400V / 50Hz            | 1    | 40.540          |
| 2   | A-Lager Flansch                          | 1    | 40.530          |
| 3   | Rotor 112 400V / 50Hz                    | 1    | 40.531          |
| 4   | Lüfterrad BG112                          | 1    | 40.532          |
| 5   | Lüfterhaube BG 112                       | 1    | 40.533          |
| 6   | Klemmkasten                              | 1    | 40.534          |
| 7   | Flachdichtung                            | 1    | 43.030          |
| 8   | Lüsterklemme 2,5 mm <sup>2</sup> 4-polig | 1    | 43.031 1        |
| 9   | PG-Verschraubung PG 13,5                 | 1    | 40.539          |
| 10  | Kegelrollenlager 31306                   | 1    | 40.103          |
| 11  | Öldichtung 35 x 47 x 7                   | 1    | 40.080          |
| 12  | Paßfeder 8 x 7 x 32                      | 1    | 40.104          |
| 13  | Kugellager 6206 - 2Z                     | 1    | 40.538          |
| 14  | Innensechskantschraube M 6 x 30          | 4    | 43.037          |
| 15  | Toleranzhülse                            | 1    | 40.544 1        |
| 16  | Blechschaube 2,9 x 16                    | 1    | 43.036          |
| 19  | Schraube M 4 x 12                        | 4    | 41.489          |
| 20  | Schelle für Lüfterrad BG112              | 2    | 40.535          |
| 21  | Schraube M 4 x 12                        | 4    | 41.489          |
| 22  | Erdungsschraube kpl.                     | 1    | 43.038          |
| 26  | Gummidämpfer                             | 4    | 40.220          |
| 27  | Unterlegscheibe 8,4 DIN 125              | 4    | 41.515          |
| 28  | Elastic-Stop-Mutter M 8                  | 4    | 41.410          |
| <b>Motor with terminal box 400 V / 50 Hz</b>    |  |      | <b>24.060</b>   |
| <b>Motor with terminal box 3x 220 V / 50 Hz</b> |  |      | <b>24.060 2</b> |

# Drive unit AQ

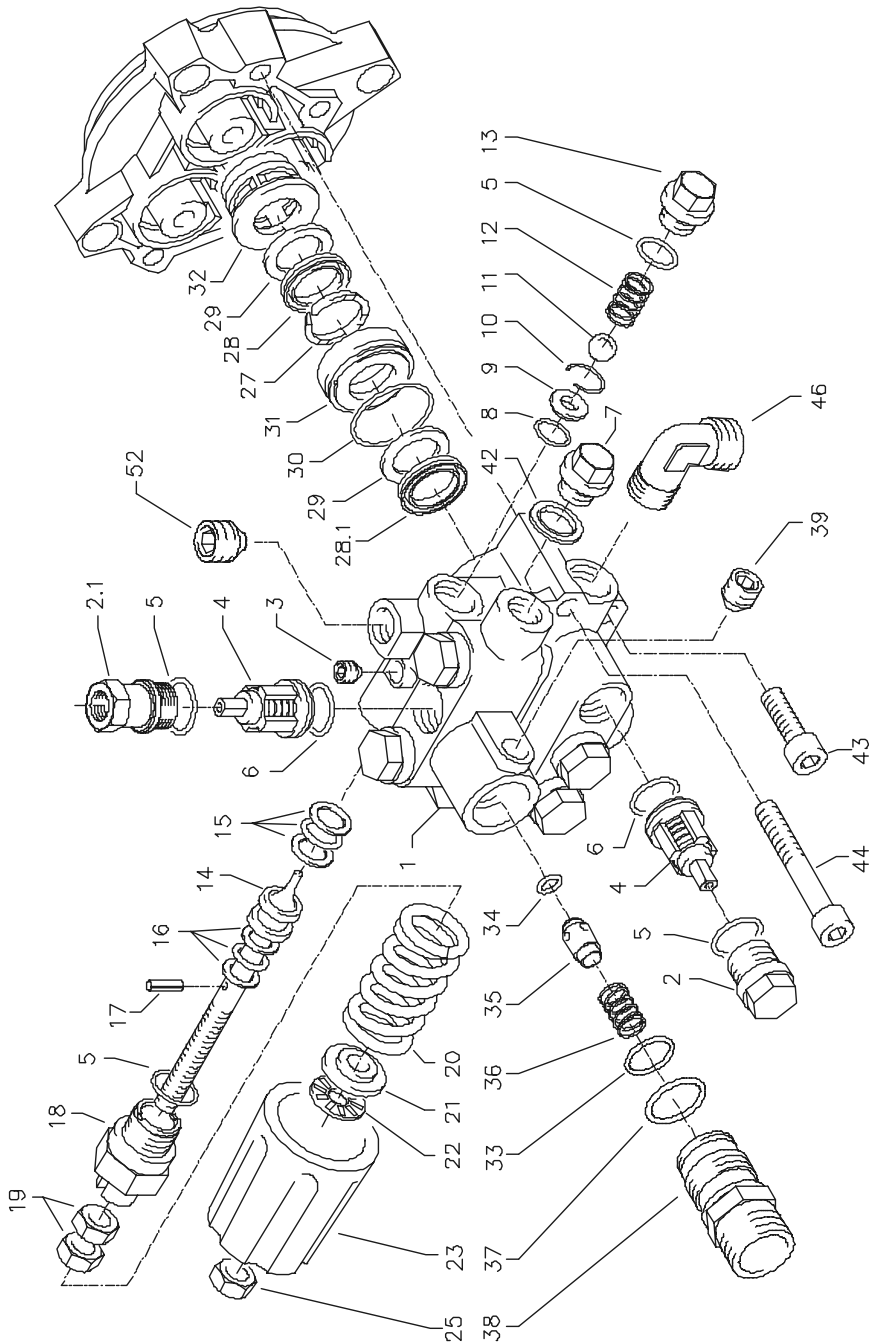


# Spare parts list

## Spare parts list Drive unit AQ

| No   | Description   | Qty. | Ord.-No        |
|--|---|------|----------------|
| 1  | Ölgehäuse   | 1    | 40.501         |
| 2  | CU_Dichtung   | 1    | 40.052         |
| 3  | Ölablaßschraube   | 1    | 40.051         |
| 4  | Innensechskantschraube M 8 x 25                                       | 6    | 40.053         |
| 5  | Sicherungsscheibe   | 6    | 40.054         |
| 6  | Flachdichtung   | 1    | 40.511         |
| 7  | Öldichtung 20 x 30 x 7  | 3    | 40.044 1       |
| 8  | Wellenscheibe   | 1    | 40.043         |
| 9  | Axial-Rollenkäfig   | 1    | 40.040         |
| 10   | AS-Scheibe  | 1    | 40.041         |
| 11.1   | Taumselscheibe AQ 12,75° bei 19 l/min                                 | 1    | 40.042 1-12,75 |
| 11.2   | Taumselscheibe AQ 10,8° bei 15 l/min                                  | 1    | 40.042 1-10,8  |
| 11.3   | Taumselscheibe AQ 9,5° bei 13 l/min<br>bitte Taumelwinkel mit angeben | 1    | 40.042 1-9,5   |
| 12   | Plungerfeder  | 3    | 40.506         |
| 13   | Federdruckscheibe   | 3    | 40.510         |
| 14   | Plunger 20 mm (lang)  | 3    | 40.505         |
| 15   | Sprengring  | 3    | 40.048         |
| 16   | O-Ring 14 x 2   | 2    | 43.445         |
| 17   | Ölschauglas M 18 x 1,5  | 1    | 42.018 1       |
| 18   | Flachdichtung   | 1    | 41.019 3       |
| 19   | Deckel  | 1    | 41.023 1       |
| 20   | Innensechskantschraube M 5 x 12                                       | 4    | 41.019 4       |
| 21   | Ölschraube M 18 x 1,5   | 1    | 41.022 1       |
| 22   | Stützscheibe für Plungerfeder   | 3    | 40.513         |
| Drive unit complete with plunger without swash plate |   |      | 40.514         |

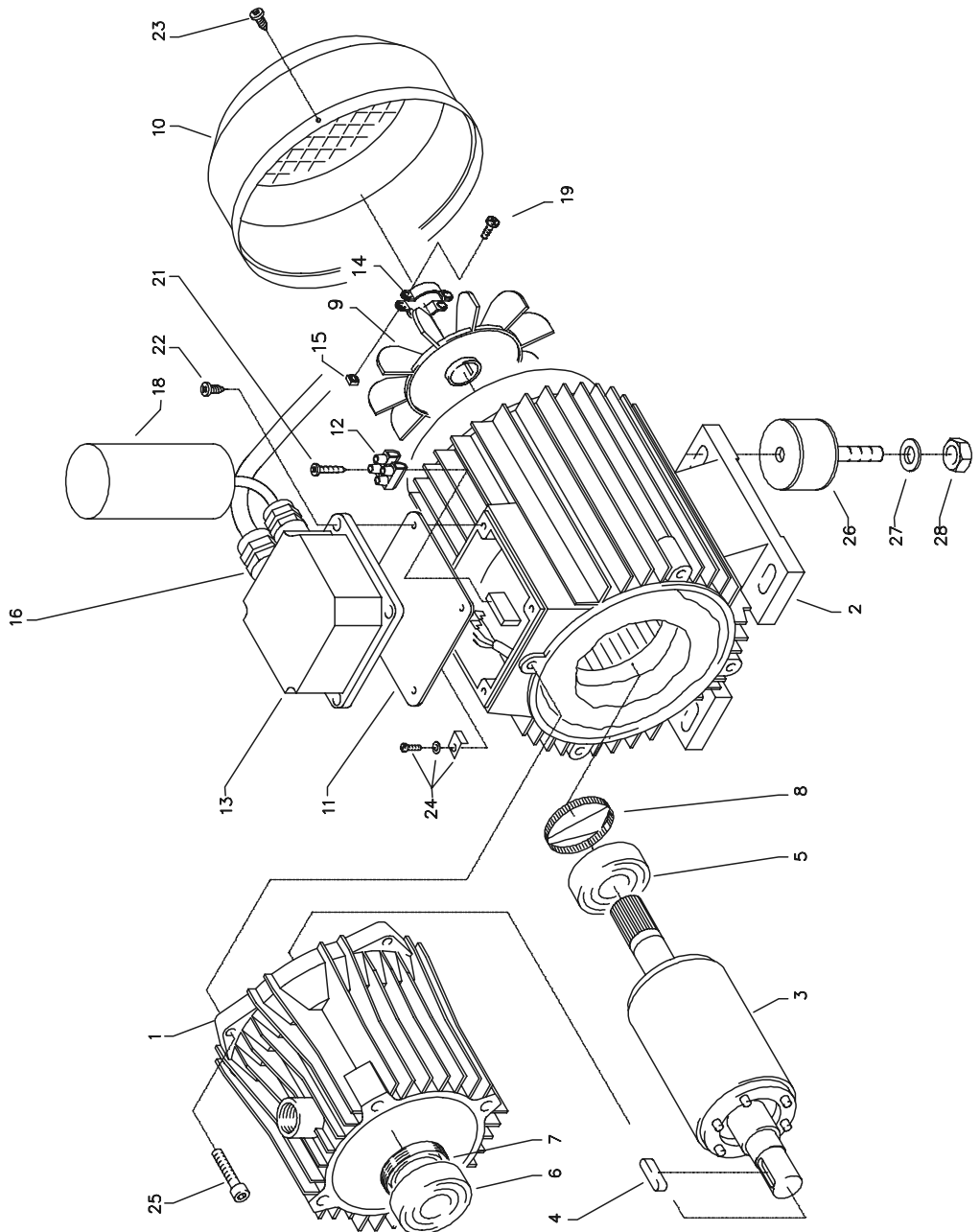
# Valve housing



## Spare parts list Kränzle W 11 / 135 Valve housing APG for plunger diameter 18 mm

| No   | Description                    | Qty. | Ord.-No  | No | Description                                    | Qty. | Ord.-No         |
|------|--------------------------------|------|----------|----|--|------|-----------------|
| 1    | Ventilgehäuse                  | 1    | 43.435   | 31 | Leckagering 18 mm                              | 3    | 41.066          |
| 2    | Ventilstopfen                  | 5    | 41.714   | 32 | Zwischenring 18 mm                             | 3    | 41.015 2        |
| 2    | Ventilstopfen mit 1/4" IG      | 1    | 42.026 1 | 33 | O-Ring 15 x 1,5                                | 1    | 42.104          |
| 3    | Dichtstopfen M 10 x 1          | 1    | 43.043   | 34 | O-Ring 6 x 3                                   | 1    | 14.121          |
| 4    | Ventile (grün) für APG-Pumpe   | 6    | 41.715 1 | 35 | Rückschlagkörper                               | 1    | 14.122          |
| 5    | O-Ring 16 x 2                  | 8    | 13.150   | 36 | Rückschlagfeder                                | 1    | 14.120          |
| 6    | O-Ring 15 x 2                  | 6    | 41.716   | 37 | O-Ring 18 x 2                                  | 1    | 43.446          |
| 7    | Dichtstopfen R1/4" mit Bund    | 1    | 42.103   | 38 | Ausgangsstück M22x1,5 AG                       | 1    | 43.447 1        |
| 8    | O-Ring 11 x 1,44               | 1    | 12.256   | 39 | Dichtstopfen                                   | 1    | 13.385          |
| 9    | Edelstahlsitz                  | 1    | 14.118   | 40 | Einschraubwinkel R3/8" AG x R3/8" IG           | 1    | 44.127          |
| 10   | Sicherungsring                 | 1    | 13.147   | 41 | ST30-Nippel R3/8" AG x M22 x 1,5               | 1    | 13.365 2        |
| 11   | Edelstahlkugel 8,5 mm          | 1    | 13.148   | 42 | Kupferring                                     | 1    | 42.104          |
| 12   | Edelstahlfeder                 | 1    | 14.119   | 43 | Innensechskantschraube M 8 x 30                | 2    | 41.036 1        |
| 13   | Verschlußschraube              | 1    | 14.113   | 44 | Innensechskantschraube M 8 x 55                | 2    | 41.017 1        |
| 14   | Steuerkolben                   | 1    | 14.134   | 45 | Sicherungsring                                 | 4    | 40.054          |
| 15   | Parbaks 16 mm                  | 1    | 13.159   | 46 | Winkel Einschraub-Verschraubung R3/8"          | 1    | 42.766          |
| 16   | Parbaks 8 mm                   | 1    | 14.123   | 52 | Dichtstopfen                                   | 1    | 13.385          |
| 17   | Spannstift                     | 1    | 14.148   |    |  |      |                 |
| 18   | Kolbenführung spezial          | 1    | 42.105   |    |  |      |                 |
| 19   | Mutter M 8 x 1                 | 2    | 14.144   |    | <b>Rep.-kit valves for APG-pump</b>            |      | <b>41.748 1</b> |
| 20   | Ventilfeder schwarz            | 1    | 14.125   |    | consisting of: 6x Pos. 4; 6x Pos. 5; 6x Pos. 6 |      |                 |
| 21   | Federdruckschleibe             | 1    | 14.126   |    |  |      |                 |
| 22   | Nadellager                     | 1    | 14.146   |    | <b>Rep.-kit sleeves 18 mm</b>                  |      | <b>41.049 1</b> |
| 23   | Handrad                        | 1    | 14.147 2 |    | consisting of: 3x Pos. 27; 3x Pos. 28;         |      |                 |
| 25   | Elastic-Stop-Mutter            | 1    | 14.152   |    | 3x Pos. 28.1; 6x Pos. 29; 3x Pos. 30           |      |                 |
| 27   | Druckring                      | 3    | 41.018   |    | <b>Guide piston compl. with handwheel</b>      |      | <b>43.444</b>   |
| 28   | Manschette 18 x 26 x 4/2       | 3    | 41.013   |    |  |      |                 |
| 28.1 | Gewebemanschette 18 x 26 x 4/2 | 3    | 41.013 1 |    |  |      |                 |
| 29   | Backring 18 x 26               | 6    | 41.014   |    |  |      |                 |
| 30   | O-Ring 28,3 x 1,78             | 3    | 40.026   |    |  |      |                 |

# Motor



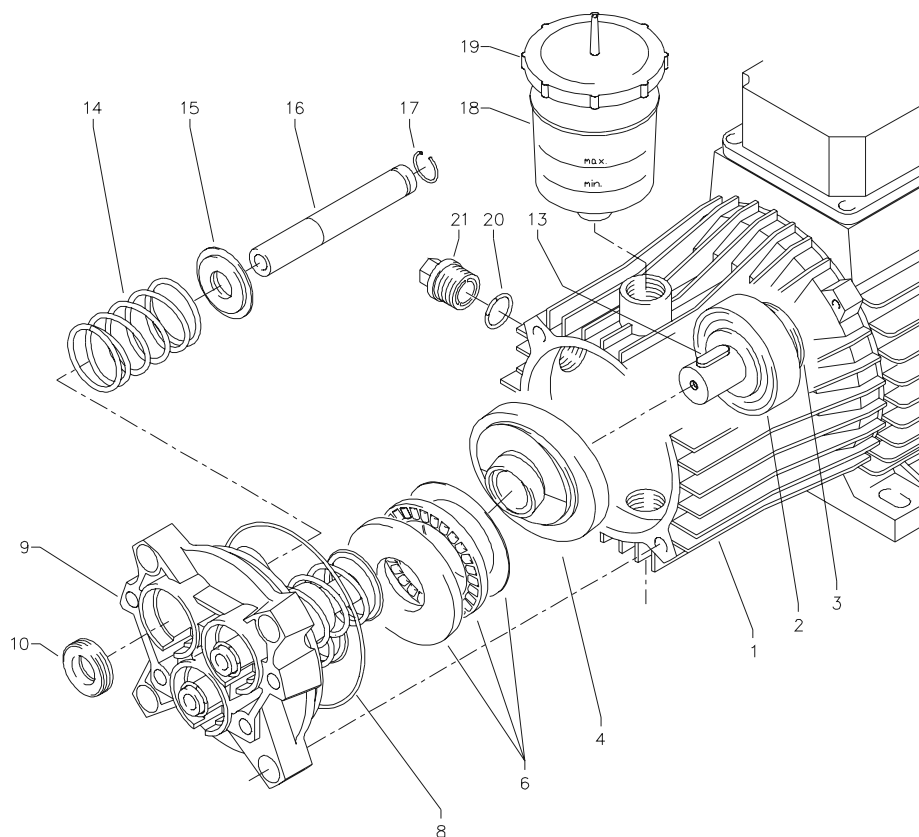


# Spare parts list

## Spare parts list Motor W 11/135

| No | Description                              | Qty. | Ord.-No  |
|----|--|------|----------|
| 1  | Ölgehäuse                                | 1    | 41.417   |
| 2  | Stator BG90 230V / 50Hz                  | 1    | 23.003   |
| 3  | Rotor für 2,2 kW - Motor                 | 1    | 43.316   |
| 4  | Paßfeder 6 x 6 x 20                      | 1    | 41.483 1 |
| 5  | Kugellager                               | 1    | 43.317   |
| 6  | Schulterlager                            | 1    | 41.027   |
| 7  | Öldichtung 25 x 35 x 7                   | 1    | 41.024   |
| 8  | Toleranzhülse                            | 1    | 43.330 1 |
| 9  | Lüfterrad BG 90                          | 1    | 41.118 1 |
| 10 | Lüfterhaube BG 90                        | 1    | 41.120 1 |
| 11 | Flachdichtung                            | 1    | 41.086   |
| 12 | Lüsterklemme 2,5 mm <sup>2</sup> 2-polig | 1    | 43.031   |
| 13 | Klemmkasten                              | 1    | 41.090 2 |
| 14 | Klemmschelle für Lüfterrad               | 1    | 43.456   |
| 15 | Vierkantmutter                           | 2    | 43.323   |
| 16 | PG-Einschub mit 1 PG-Verschraubung       | 1    | 41.090 4 |
| 18 | Kondensator 55 µF                        | 1    | 41.114 8 |
| 19 | Schraube M 4 x 12                        | 2    | 41.489   |
| 21 | Blechschaube 2,9 x 16                    | 1    | 43.036   |
| 22 | Blechschaube 5 x 12                      | 4    | 41.089   |
| 23 | Blechschaube 4 x 9                       | 4    | 41.079   |
| 24 | Erdungsklemme kpl.                       | 1    | 43.038   |
| 25 | Innensechskantschraube M 6 x 30          | 4    | 43.037   |
| 26 | Gummidämpfer                             | 4    | 40.220   |
| 27 | Unterlegscheibe 8,4 DIN 125              | 4    | 41.515   |
| 28 | Elastic-Stop-Mutter M 8                  | 4    | 41.410   |

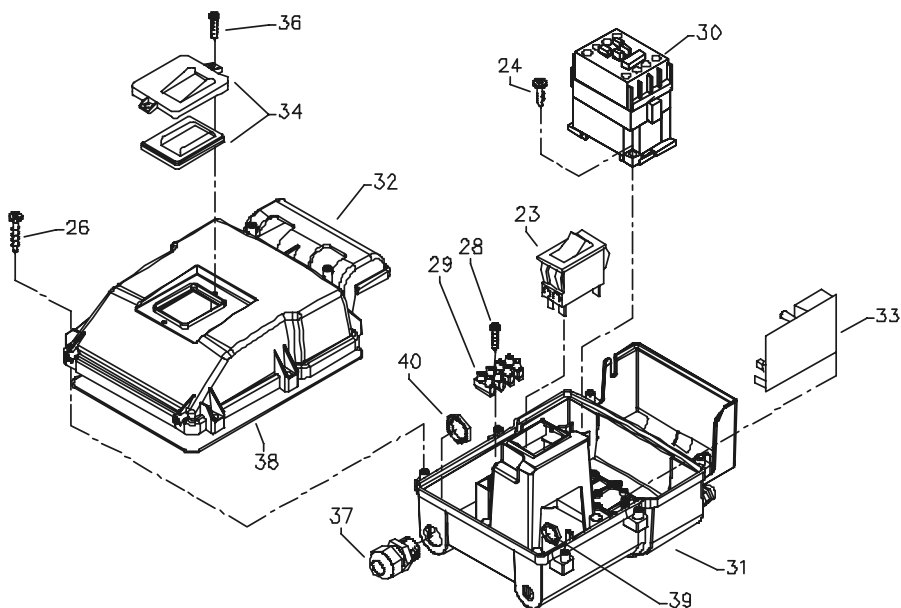
# Transmission unit 18 mm



# *Spare parts list*

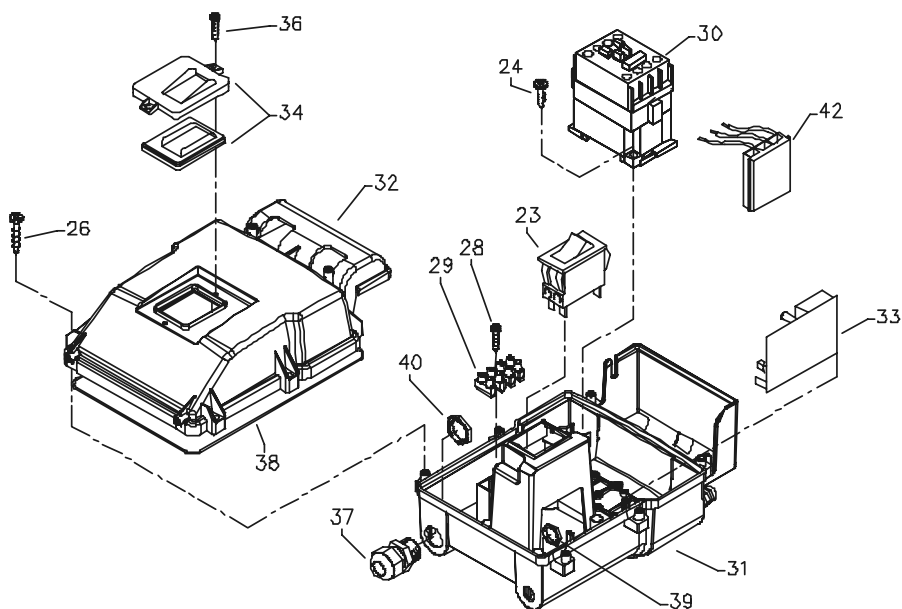
| No | Description                  | Qty. | Ord.-No     |
|----|------------------------------|------|-------------|
| 1  | Motor 2,2 kW 230 V           | 1    | 24.012      |
| 2  | Schulterlager                | 1    | 41.027      |
| 3  | Öldichtung 25 x 35 x 7       | 1    | 41.024      |
| 4  | Taumelscheibe 12,5°          | 1    | 46.542-12,5 |
| 6  | Axial-Rollenlager 3-teilig   | 1    | 46.543      |
| 8  | O-Ring 88 x 2                | 1    | 41.021 1    |
| 9  | Gehäuseplatte 18 mm          | 1    | 41.020 2    |
| 10 | Öldichtung 18 x 28 x 7       | 3    | 41.031      |
| 13 | Passfeder 6 x 6 x 20         | 1    | 41.483 1    |
| 14 | Plungerfeder                 | 3    | 41.033      |
| 15 | Federdruckscheibe            | 3    | 41.034      |
| 16 | Plunger 18 mm                | 3    | 41.032 1    |
| 17 | Sprengring                   | 3    | 41.035      |
| 18 | Ölbecher                     | 1    | 41.622      |
| 19 | Deckel für Ölbecher          | 1    | 41.023      |
| 20 | O-Ring 12 x 2                | 1    | 15.005 1    |
| 21 | Verschlusschraube M 18 x 1,5 | 1    | 41.011      |

# Control unit 230 V



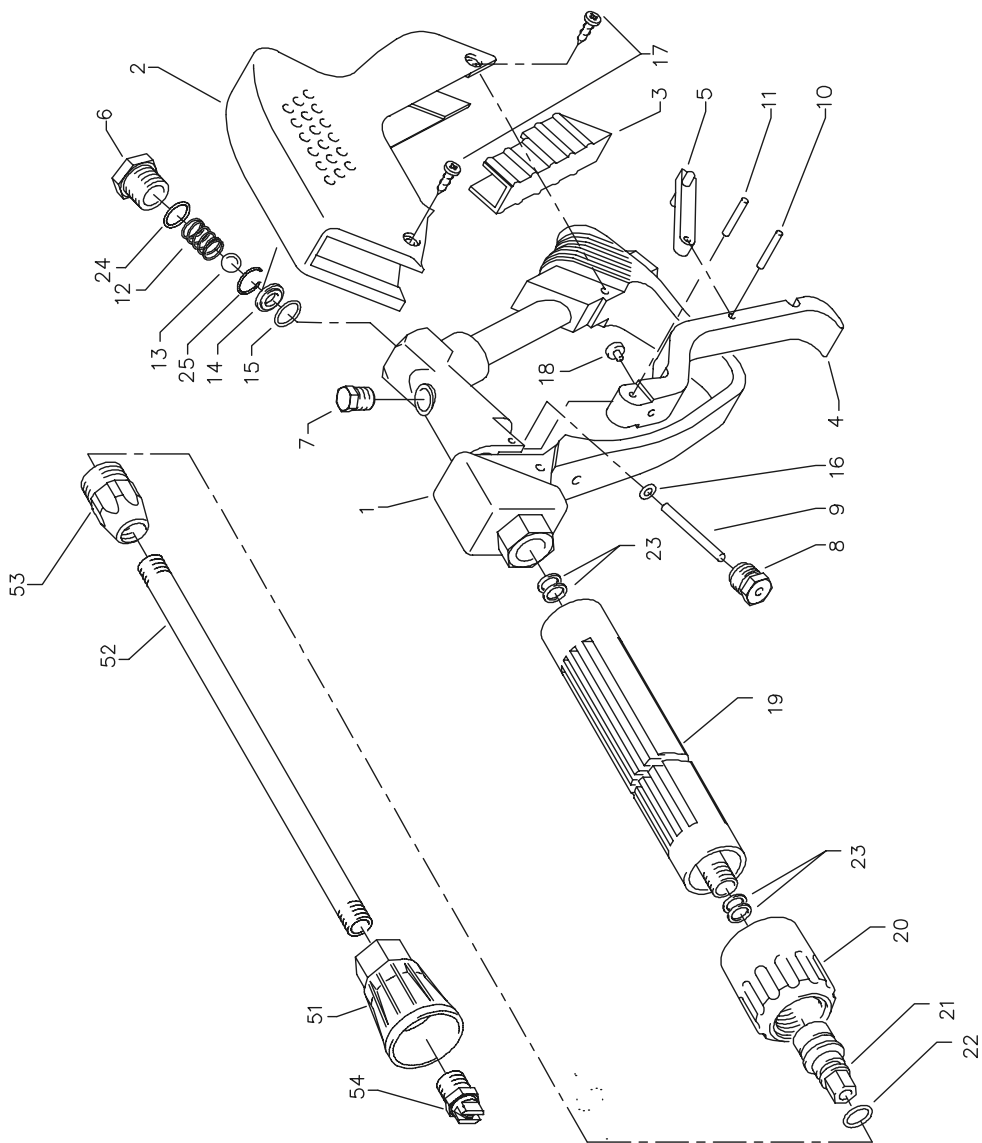
| No | Description                        | Qty. | Ord.-No  |
|----|------------------------------------|------|----------|
| 23 | Schalter 14,5 A Amazonas           | 1    | 41.111 6 |
| 24 | Kunststoffschraube 4,0 x 16        | 4    | 43.417   |
| 26 | Kunststoffschraube 5,0 x 25        | 6    | 41.414   |
| 28 | Kunststoffschraube 3,5 x 20        | 2    | 43.415   |
| 29 | Lüsterklemme 5-pol.                | 1    | 43.326 1 |
| 30 | Schütz 230V 50/60 Hz               | 1    | 46.005   |
| 31 | Schaltkasten Unterteil             | 1    | 46.012   |
| 32 | Schaltkasten Deckel                | 1    | 46.013   |
| 33 | Steuerplatine Abschaltverz.        | 1    | 42.564   |
| 34 | Klemmrahmen mit Schalterabdichtung | 1    | 43.453   |
| 36 | Blechschrabe 3,5 x 16              | 2    | 44.161   |
| 37 | PG 16-Verschraubung                | 1    | 41.419 1 |
| 38 | Dichtung für Schaltkastendeckel    | 1    | 42.525   |
| 39 | Gegenmutter für PG9-Verschraubung  | 1    | 41.087 1 |
| 40 | Gegenmutter für PG16-Verschraubung | 3    | 44.119   |
| 41 | PG 9 - Verschraubung               | 1    | 43.034   |

# Control unit 400 V



| No | Description                        | Qty. | Ord.-No  |
|----|------------------------------------|------|----------|
| 23 | Schalter 14,5 A Amazonas           | 1    | 41.111 6 |
| 24 | Kunststoffschraube 4,0 x 16        | 4    | 43.417   |
| 26 | Kunststoffschraube 5,0 x 25        | 6    | 41.414   |
| 28 | Kunststoffschraube 3,5 x 20        | 2    | 43.415   |
| 29 | Lüsterklemme 5-pol.                | 1    | 43.326 1 |
| 30 | Schütz 100-C12KN10 3x400V 50/60 Hz | 1    | 46.005 1 |
| 31 | Schaltkasten Unterteil             | 1    | 46.012   |
| 32 | Schaltkasten Deckel                | 1    | 46.013   |
| 33 | Steuerplatine Abschaltverz.        | 1    | 42.564   |
| 34 | Klemmrahmen mit Schalterabdichtung | 1    | 43.453   |
| 36 | Blechschrabe 3,5 x 16              | 2    | 44.161   |
| 37 | PG 16-Verschraubung                | 1    | 41.419 1 |
| 38 | Dichtung für Schaltkastendeckel    | 1    | 42.525   |
| 39 | Gegenmutter für PG9-Verschraubung  | 1    | 41.087 1 |
| 40 | Gegenmutter für PG16-Verschraubung | 3    | 44.119   |
| 41 | PG 9 - Verschraubung               | 1    | 43.034   |
| 42 | Überstromauslöser 3-polig 12 A     | 1    | 46.040 1 |

# Gun and HP lance



# Spare parts list

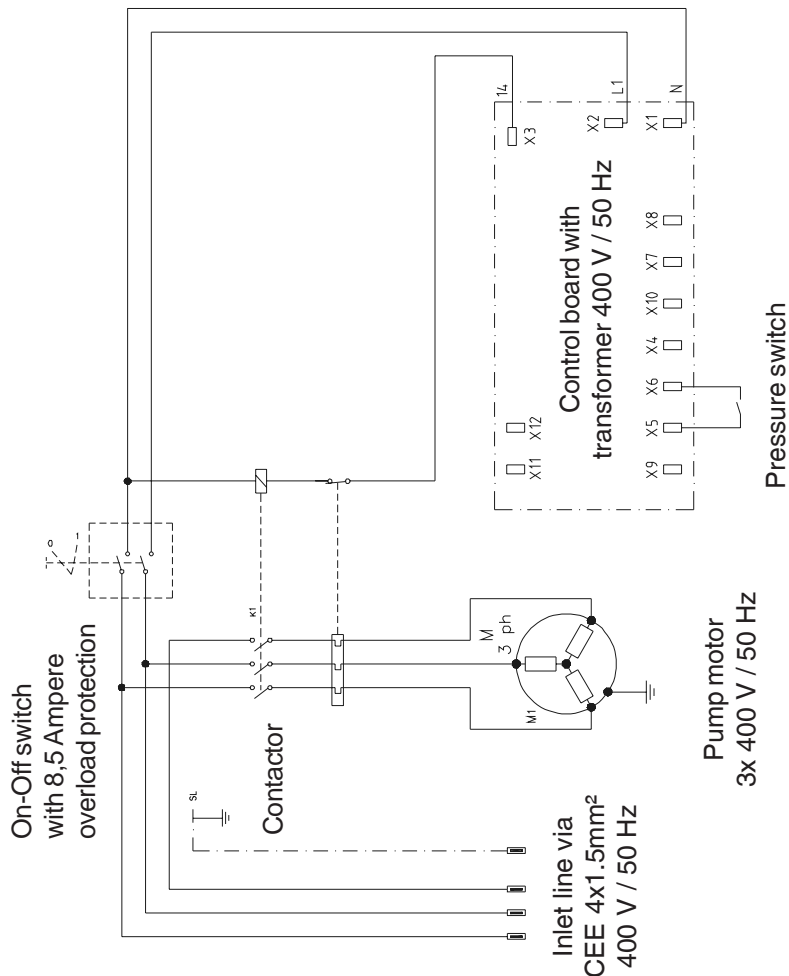
## Spare parts list Gun and HP lance W 13 / 230; W 15 / 200; W 19 / 160

| No | Description                             | Qty. | Ord.-No  | No   | Description                                  | Qty. | Ord.-No  |
|----|---|------|----------|------|--|------|----------|
| 1  | Ventilkörper mit Handgriff              | 1    | 12.294   | 51   | Düzenschulz                                  | 1    | 26.002   |
| 2  | Schutzhülse                             | 1    | 12.295   | 52   | Rohr 500 mm; bds. R1/4"                      | 1    | 12.385 1 |
| 3  | Abdeckschulz                            | 1    | 12.296   | 53   | ST 30 Nippel M 22 x 1,5 / R1/4" m. ISK       | 1    | 13.370   |
| 4  | Betätigungshebel                        | 1    | 12.298   | 54   | Flat jet nozzle 25045 (for therm 890)        | 1    | D25045   |
| 5  | Sicherungshebel                         | 1    | 12.149   | 54.1 | Flat jet nozzle 2507 (for therm 1160)        | 1    | D2507    |
| 6  | Abschlußschraube M 16 x 1               | 1    | 12.247   |      |  |      |          |
| 7  | Stopfen                                 | 1    | 12.287   |      | Starlet-Gun compl. with prolongation         |      | 12.320 2 |
| 8  | Gewindeführungshülse R 1/4" AG          | 1    | 12.250   |      | Pos. 1-24                                    |      |          |
| 9  | Aufsteuerbolzen                         | 1    | 12.284   |      | Rep.-Kit "Starlet II"                        |      | 12.299   |
| 10 | Stift                                   | 1    | 12.148   |      | consisting of 1x Position: 13, 9, 10, 15, 14 |      |          |
| 11 | Lagernadel                              | 1    | 12.253   |      |  |      |          |
| 12 | Edelstahlfeder                          | 1    | 12.246   |      |  |      |          |
| 13 | Edelstahlkugel                          | 1    | 12.245   |      |  |      |          |
| 14 | Edelstahlsitz                           | 1    | 13.146   |      |  |      |          |
| 15 | O-Ring 11 x 1,44                        | 1    | 12.256   |      |  |      |          |
| 16 | O-Ring 3,3 x 2,4                        | 1    | 12.136   |      |  |      |          |
| 17 | Blechschrabe 3,9 x 8                    | 4    | 12.297   |      |  |      |          |
| 18 | Druckstück                              | 1    | 12.252   |      |  |      |          |
| 19 | Rohr kunststoffumspritzt bds. R 1/4" AG | 1    | 15.004 5 |      |  |      |          |
| 20 | Überwurfmutter ST 30 M22 x 1,5 IG       | 1    | 13.276 1 |      |  |      |          |
| 21 | Außen-Sechskant-Nippel R 1/4" IG        | 1    | 13.277 1 |      |  |      |          |
| 22 | O-Ring 9,3 x 2,4                        | 1    | 13.273   |      |  |      |          |
| 23 | Aluminium-Dichtring                     | 4    | 13.275   |      |  |      |          |
| 24 | O-Ring 15 x 1,5                         | 1    | 12.129 1 |      |  |      |          |
| 25 | Sicherungsring                          | 1    | 12.258   |      |  |      |          |





# Wiring diagram 400V 50Hz



Wiring diagram for KRÄNZLE W13-230 - W 19-160  
400 Volt / 50 Hz

# Warranty

## Warranty

This warranty covers material and/or workmanship related defects only and does not extend to ordinary wear.

The machine must be operated according to enclosed operating instructions which are part of present warranty conditions.

All products sold directly to private customers are warrantied for a period of 24 months, whereas the warranty period for industrial purchases is limited to 12 months.

In case of any warranty claims, please have your HP cleaner together with accessories and your purchase document ready and contact your nearest dealer or authorized service point which can also be looked up in the internet at [www.kraenzle.com](http://www.kraenzle.com).

Warranty is void in case of attempts to modify any of the safety devices or in the event of exceeding temperature or rpm limits - this also applies to undervoltage, low water and/or polluted water. Gauge, nozzle, valves, sealing gaskets, high pressure hose and spray equipment are considered wear parts and do not fall under this warranty.

# kränzle®

**High-pressure-cleaners**  
Hochdruckreiniger  
Nettoyeurs à Haute Pression



I. Kränzle GmbH  
Elpke 97 · 33605 Bielefeld



## EC declaration of conformity

We hereby declare,  
that the high-pressure models:

**W 11/135; W 13/230**  
**W 15/200; W 19/160**

techn. documentation available from:

**Manfred Bauer, Fa. Josef Kränzle**  
**Rudolf-Diesel-Str. 20, 89257 Illertissen**

comply with the following guidelines and  
specifications and their amendments for  
high-pressure cleaners:

**Machine guideline 89/392/EEC**  
**Low voltage guideline 73/23 EEC**  
**Specification for electromagnetic**  
**compatibility 89/336 EEC**  
**Outdoor noise directive 2000/14/EC,**  
Art. 13, High-pressure water jet machines  
Appendix 3, part B, chapter 27

Applied specifications and  
standards:

**EN 60 335-2-79:2004**  
**EN 55 014-1 / A2:2002**  
**EN 55 014-2 / A1:2001**  
**EN 61 000-3-2 / A14:2000**  
**EN 61 000-3-3 / A1:2001**

Bielefeld, 08.09.05

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Drottsch  
(Managing Director)

# Inspection report for HP cleaners

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!)

Owner: \_\_\_\_\_ Type: \_\_\_\_\_ Built: \_\_\_\_\_

Address: \_\_\_\_\_ Serial no.: \_\_\_\_\_

Rep.-order-no.: \_\_\_\_\_

| Scope of inspection:  | ok  |    | repair-<br>ed |
|---|-----|----|---------------|
|   | yes | no |               |
| Type plate (on hand)  |     |    |               |
| Operating manual (on hand)                                      |     |    |               |
| Protective covering, -device                                    |     |    |               |
| Pressure line (tightness)                                       |     |    |               |
| Pressure gauge (function)                                       |     |    |               |
| Float valve (tightness)   |     |    |               |
| Spraying device (marking)                                       |     |    |               |
| HP-hose/ connector (damage, marking)                            |     |    |               |
| Safety valve opens at 10% / 20% exceeding of operating pressure |     |    |               |
| Pressure reservoir  |     |    |               |
| Heating oil line (tightness)                                    |     |    |               |
| Solenoid valve (function)                                       |     |    |               |
| Thermostat (function)   |     |    |               |
| Flow controller (function)                                      |     |    |               |
| Power cable (damage)  |     |    |               |
| Power plug (damage)   |     |    |               |
| Protective conductor (connected)                                |     |    |               |
| Emergency Off Switch (function)                                 |     |    |               |
| On/Off-switch   |     |    |               |
| Water quantity safety device (function)                         |     |    |               |
| Used chemicals  |     |    |               |
| Allowed chemicals   |     |    |               |

| Inspection data:                              | determ.<br>value | set<br>value |
|---|------------------|--------------|
| High-pressure nozzle                          |                  |              |
| Operating pressure .....bar                   |                  |              |
| Cutting-off pressure.....bar                  |                  |              |
| Smoke spot number.....acc. to Bacharach scale |                  |              |
| CO <sup>2</sup> -value.....% CO <sup>2</sup>  |                  |              |
| Efficiency rating.....%                       |                  |              |
| Conductor resist. not exceeded / value:       |                  |              |
| Insulation                                    |                  |              |
| Leakage current:                              |                  |              |
| Gun locked                                    |                  |              |

## Inspection result (tick):

- ☐ The appliance 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 appliance 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: \_\_\_\_\_

# Inspection report for HP cleaners

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!)

Owner: \_\_\_\_\_ Type: \_\_\_\_\_ Built: \_\_\_\_\_

Address: \_\_\_\_\_ Serial no.: \_\_\_\_\_

Rep.-order-no.: \_\_\_\_\_

| Scope of inspection:  | ok  |    | repair-<br>ed |
|---|-----|----|---------------|
|   | yes | no |               |
| Type plate (on hand)  |     |    |               |
| Operating manual (on hand)                                      |     |    |               |
| Protective covering, -device                                    |     |    |               |
| Pressure line (tightness)                                       |     |    |               |
| Pressure gauge (function)                                       |     |    |               |
| Float valve (tightness)   |     |    |               |
| Spraying device (marking)                                       |     |    |               |
| HP-hose/ connector (damage, marking)                            |     |    |               |
| Safety valve opens at 10% / 20% exceeding of operating pressure |     |    |               |
| Pressure reservoir  |     |    |               |
| Heating oil line (tightness)                                    |     |    |               |
| Solenoid valve (function)                                       |     |    |               |
| Thermostat (function)   |     |    |               |
| Flow controller (function)                                      |     |    |               |
| Power cable (damage)  |     |    |               |
| Power plug (damage)   |     |    |               |
| Protective conductor (connected)                                |     |    |               |
| Emergency Off Switch (function)                                 |     |    |               |
| On/Off-switch   |     |    |               |
| Water quantity safety device (function)                         |     |    |               |
| Used chemicals  |     |    |               |
| Allowed chemicals   |     |    |               |

| Inspection data:                                 | determ.<br>value | set<br>value |
|--|------------------|--------------|
| High-pressure nozzle                             |                  |              |
| Operating pressure .....bar                      |                  |              |
| Cutting-off pressure.....bar                     |                  |              |
| Smoke spot number.....acc.<br>to Bacharach scale |                  |              |
| CO <sup>2</sup> -value.....% CO <sup>2</sup>     |                  |              |
| Efficiency rating.....%                          |                  |              |
| Conductor resist. not exceeded /<br>value:       |                  |              |
| Insulation                                       |                  |              |
| Leakage current:                                 |                  |              |
| Gun locked                                       |                  |              |

## Inspection result (tick):

- ☐ The appliance 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 appliance 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: \_\_\_\_\_

# ***Notes***

# ***Notes***



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As date of 25. 04. 2006