GB

kränzle®

High Pressure Cleaners

D 26/250 TST
D 30/180 TST

made in Germany

Operating manual

Read and conform safety instructions before use

Technical data

Technical data	D 26 / 250 TST	D 30 / 180 TST
Operating pressure, steplessly adjust.	30 - 250 bar	30 - 180 bar
max. permissible overpressure	275 bar	210 bar
Water output (*1) at 0 bar	26 l/min	30 l/min
Nozzle size (flat jet)	2008	20125
Volume Water tank	16 l	16 l
max. inlet water temp. to water tank	max. 60 °C	max. 60 °C
max. temp. for direct suction (*2)	60 °C	60 °C
Direct suction height	2,5 m	2,5 m
Hose drum	yes	yes
High pressure hose	20 m	20 m
Electrical ratings	400 V 3~ / 50 Hz 2x 11,5 A = 23A	400 V 3~ / 50 Hz 2x 11,5 A = 23A
Motor speed adjust.	1400 rpm	1400 rpm
Connect.wattage Inp. Output	P1: 2x 7,5 kW = 15 kW P2: 2x 5,5 kW = 11 kW	P1: 2x 7,5 kW = 15 kW P2: 2x 5,5 kW = 11 kW
Weight (incl. access. with empty water tank)	160 kg	160 kg
Dimensions incl. handle L x W x H in mm	995 x 760 x 995	995 x 760 x 995
Sound level acc. to DIN 45 635	91 dB (A)	91 dB (A)
with Turbokiller	92 dB (A)	92 dB (A)
Sound intensity L_{WA}	93 dB (A)	93 dB (A)
Recoil at lance	approx. 20 N	approx. 20 N
Vibrations at lance	2,6 m/s²	2,6 m/s²
Order n°	41.306	41.305

Permissible tolerance for figures ± 5 % in acc. with VDMA uniform sheet 24411

(*1) Min. water quantity to be supplied to the high pressure cleaner! (1-8 bar admission pressure)

(*2) Direct suction is possible through by-passing of water tank! (see page 5)

Description

Dear customer

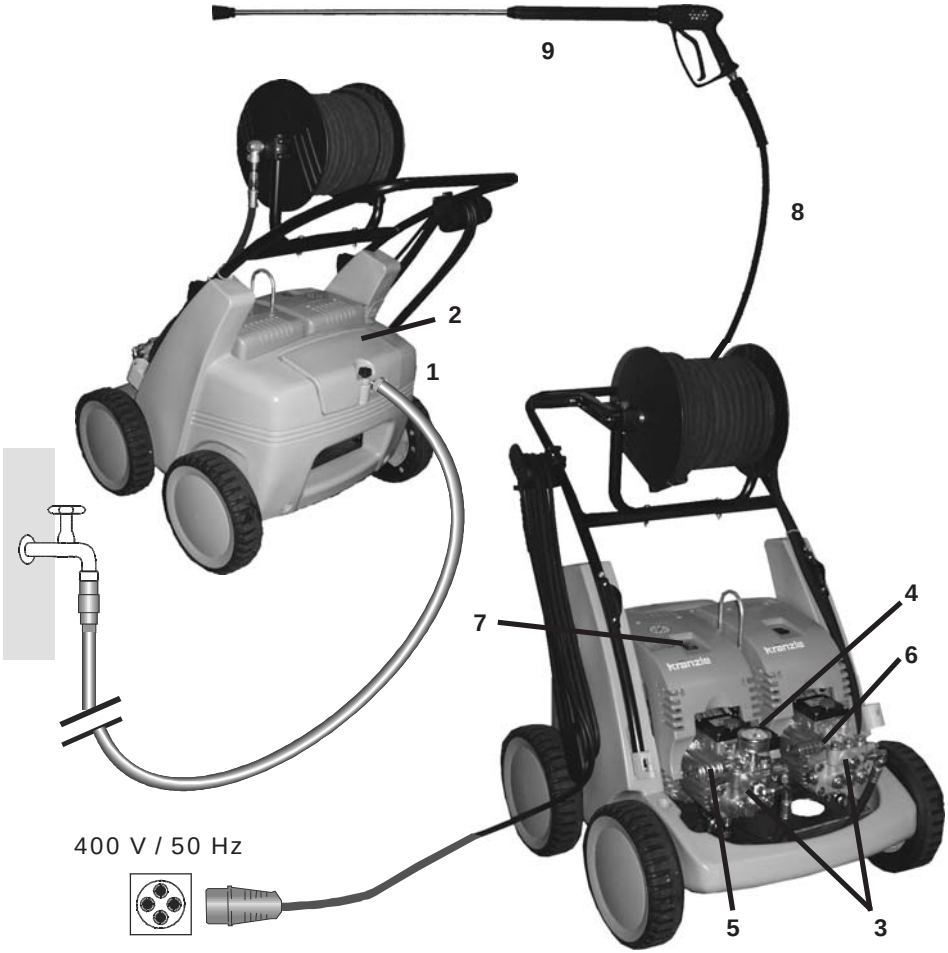
We would like to congratulate you on your new high pressure cleaner with integrated water tank and to thank you for the purchase.

To ease your introduction to the use of the cleaner, we have provided the following pages of explanations, tips and hints, which we ask you to read before using it for the first time.

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

- facades
- flagstones
- terraces
- vehicles of all types
- stables
- machines etc.
- barrels and containers
- channels

Contents



Connection principle

The KRÄNZLE D 26/250 and D 30/220 - high pressure cleaners are mobile machines for professional cleaning tasks.
The connection principle can be seen from the illustration.

Components

1 Water inlet connection with filter
2 Cover for water tank
3 High pressure pumps
4 Press. gauge with glycerin filling
5 Unloader valve
6 Safety valve
7 On-/ Off switch
8 High pressure hose
9 Spray gun with lance and flat jet nozzle with nozzle protection

Water system

The water must be lead to the high pressure cleaner under pressure (2 – 8 bar admission pressure). Two float valves regulate the water inlet. Then, the water is sucked by the high pressure pump from the water tank and supplied to the lance under the set pressure. The high pressure jet is formed by the nozzle at the end of the lance.

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. The spray pressure increases and quickly reaches the selected operating pressure. When the trigger is released, the trigger gun closes and any further spraying of liquid from the lance is stopped and the pressure gauge must show 0 bar.

The increase in pressure when the trigger gun is closed causes the unloader valve to open. The pumps remain switched on and continue to pump liquid through the depressurized circuit. When the spray gun is opened, the unloader valve closes and the pump ressumes spraying from the lance with the selected operating pressure.

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.

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. 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

The unloader valve protects the machine from a build up of excess pressure and is set to the maximum operating pressure. The limit nut on the handle is sealed with a spray coating.

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

Safety valve

In addition to the unloader valve the machine is equipped with a safety valve. This valve is set to a value approx. 15% higher than that of the unloader valve and it switches in case of unacceptable excess pressure, thus allowing the water to be pumped back into the float box .

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

Automatic starter

The high-pressure cleaner is equipped with an automatic starter controlling the start-up of both motors. Having switched on the machine the first motor starts and after two seconds the second motor. Thus current peaks in the electric circuit are avoided.

When working with the high-pressure gun be sure to stand firmly because there is an additional recoil at the lance as soon as the second pump is switched on.

Delayed motor cut-out

Frequent, work-necessitated switching on and off of motors on machines of this size puts a heavy load on the electric circuit and causes increased wear on internal electrical parts. Therefore the motor of the new KRANZLE devices only switches off 30 seconds after closing the gun and then goes to stand still. By opening the gun, the device is started again.

Safety cut-out

If the device is accidentally not turned off after use or the pistol is not used for 20 minutes, the device automatically goes into the safety mode. By operating the main switch, the device is activated again.

Replacements and inspection work should only be performed by qualified persons when the machine is disconnected from the power supply, i.e. the plug 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. The device must not stand in the spray area of the high pressure jet.

CAUTION !

Never suck in 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!

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 30 mA residual current operated device. The socket must be protected with a 32A delay action fuse on the mains side.

KRÄNZLE quadro = 400 Volt / 50 Hz (phase-sequence not significant)

When using an extension cable, this must have a grounded lead which is properly connected to the socket. The conductors in the extension cable must have a minimum cross section of 4.0 mm². Plug connections must be of a spray-proof design and may not be located on a wet floor.

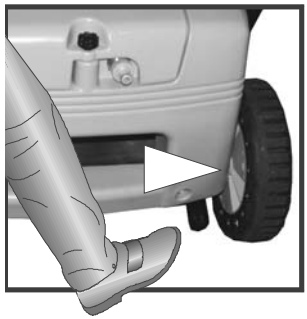
CAUTION !

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

When using a cable drum, always keep the cable wound as far as possible.

Brake

Brake applied



Brake not applied

Brief operating instructions:

1. **Connect high pressure hose with spray gun.**
2. **Connect to suitable water supply.**
3. **Connect current - (400 Volt three-phase current).**
4. **Switch on machine and start cleaning.**
5. **After having completed the cleaning process, put main switch in zero position and by opening the gun, reduce the pressure in the high pressure hose.**

   Then, the high pressure hose can be rolled up.

   - 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.

This is what you've purchased:

1. Lance with nozzle protection and flat jet high pressure nozzle

2. Spray gun Starlet with insulated handle and screw connection

3. KRÄNZLE - High pressure cleaners D 26/250 TST and D 30/180 TST with hose drum

4. Operating manual

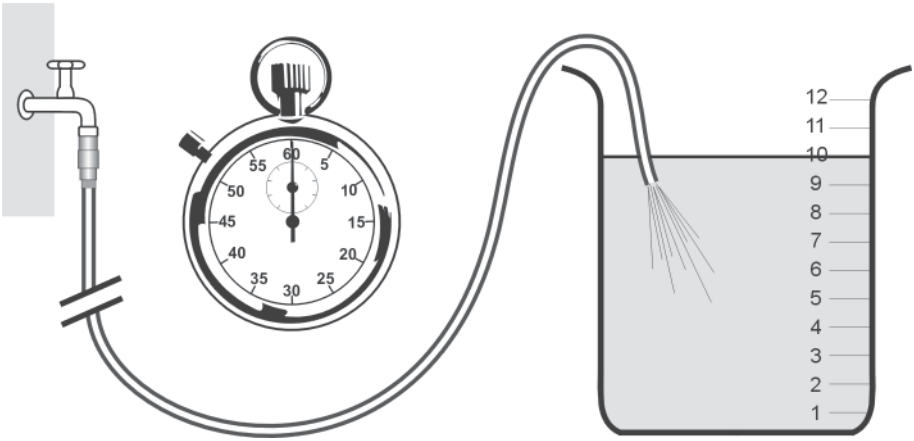
5. HP hose 20 m NW 8 with hose drum

6. Crank for hose drum

7. Water inlet parts

Water connection

Please check that the high pressure cleaner has the quantity of water (litres per minute) available as specified on page 2 (techn. specifications).



Test:

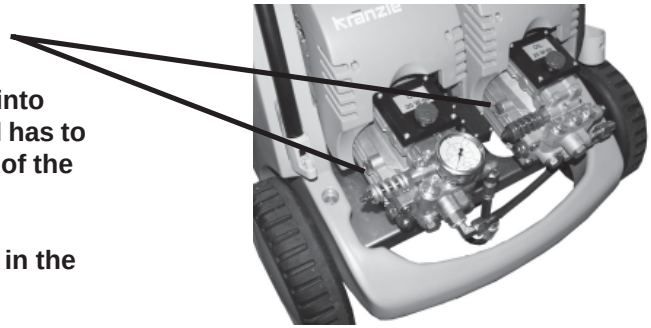
Allow the water supply hose to run for 1 minute into a bucket.

The received quantity of water must correspond at least to the quantity given on page 2 !!!

Lack of water causes fast wear on seals (no warranty)

Preparation for use

1. Check oil level



Prior to each setting into operation the oil level has to be checked on either of the pumps:

Oil must be visible in the viewing window

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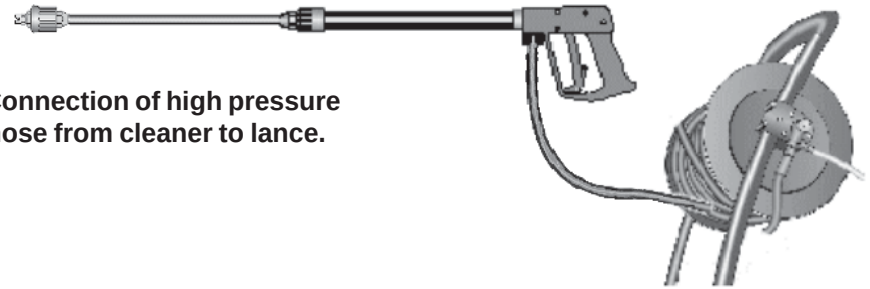
3. Unroll hose without kinks and connect with handgun and pump. Use max. 20 m HP hose.



4. Connection of high pressure hose from cleaner to lance.

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5. The machine must be connected to the water line with cold water or warm water with a temperature of up to 60° C (see page 2).

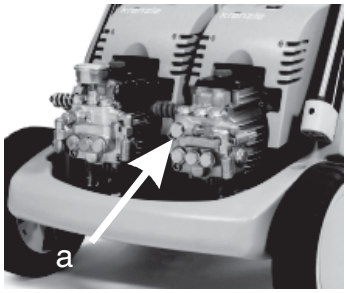
The hose cross section must be at least 3/4" = 16 mm (free passage).

Check whether enough water is supplied to the machine. (see page 11)

CAUTION !

When running your high pressure cleaner with hot water of 60° C raised temperatures occur.

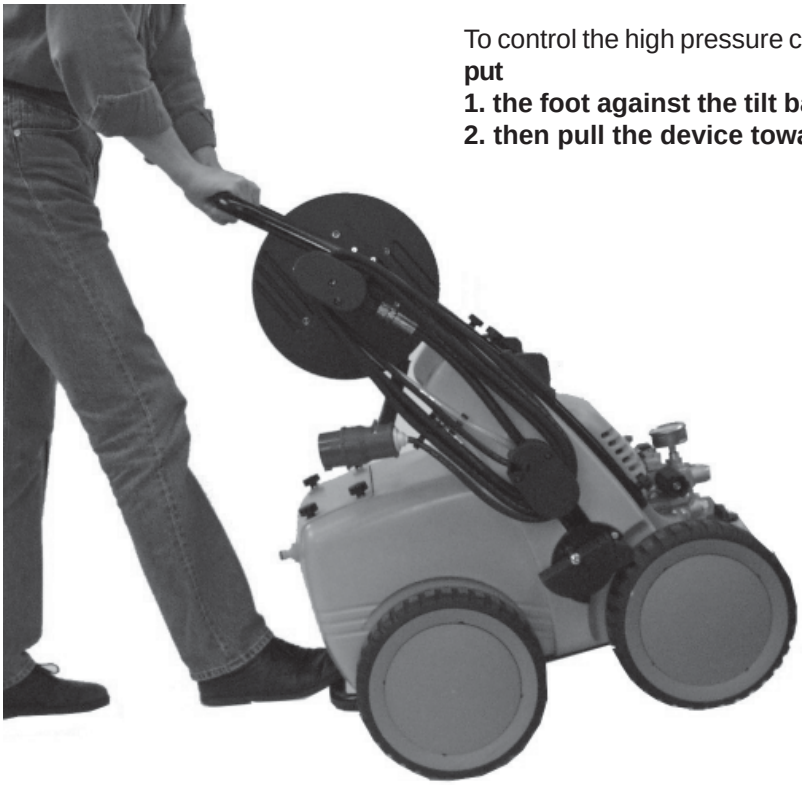
Do not touch the pump without safety gloves!



6. When operating the machine for the first time or after an extended stand still it may happen that an air pocket is formed in the second pump.

Release screw (a) and take out the screw. Place a container in front of the opening and briefly switch on the machine (approx. 5 seconds) thus allowing the pump to press out the air.

Now you can screw down the check valve again and your high-pressure cleaner works with the desired quantity of water.



To control the high pressure cleaner
put
1. the foot against the tilt bases and
2. then pull the device towards you.

When tilting the machine residual water inside the water box might float out of the water inlet at the back.

How to shut down the pump:

To shut down the pump:

1. Switch off the machine. Device 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 machine. Therefore you must take special measures to protect the HP cleaner from frost.

- **Completely drain the appliance**

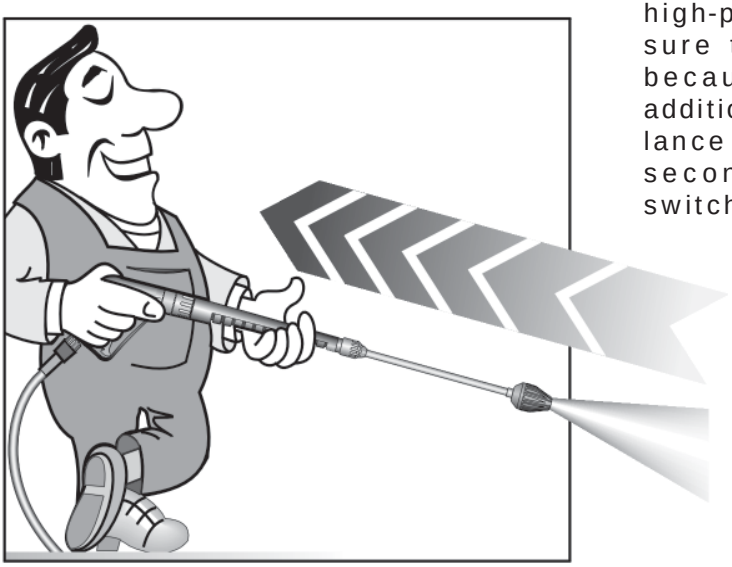
For this purpose, separate the appliance from the water supply. Then, turn on the main switch and open the gun. Now, the pump presses the remaining water from the water tank and the pump. However, do not allow the device to operate without water for longer than one minute.

- **Fill the appliance with antifreeze agent**

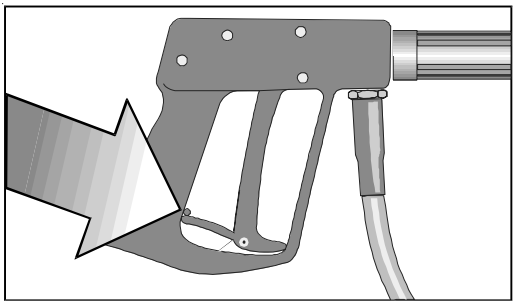
  If the appliance is not operated for longer periods, especially over the winter, you should pump an antifreeze agent through the device. For this purpose, fill the anti-freeze agent into the water box and turn on the device. Wait with opened gun, until the agent comes from the nozzle.

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

As to the recoil -
see notice on page 2!
When working with the high-pressure gun be sure to stand firmly because there is an additional recoil at the lance as soon as the second pump is switched on.

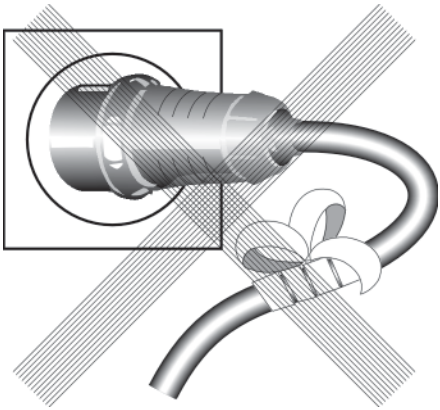


Apply the safety catch on the spray gun after each use, in order to prevent unintentional spraying!

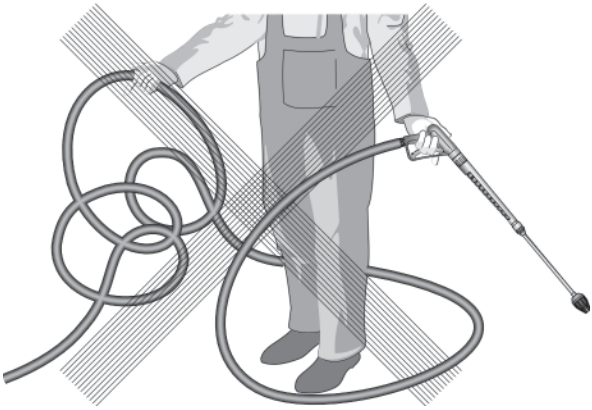


This is prohibited !

Never direct the water jet at people or animals !



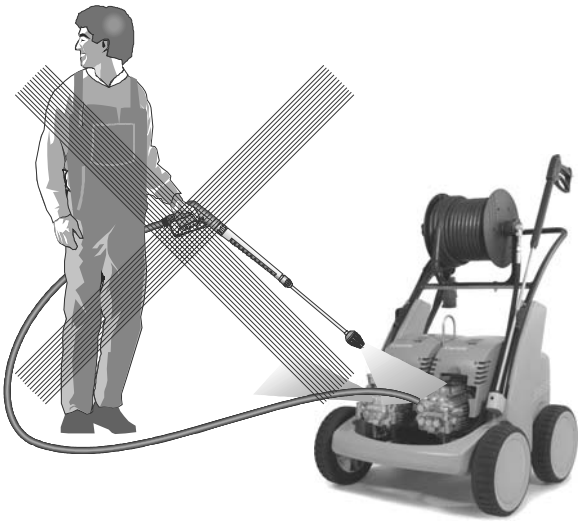
Do not damage the power cable or repair it incorrectly!



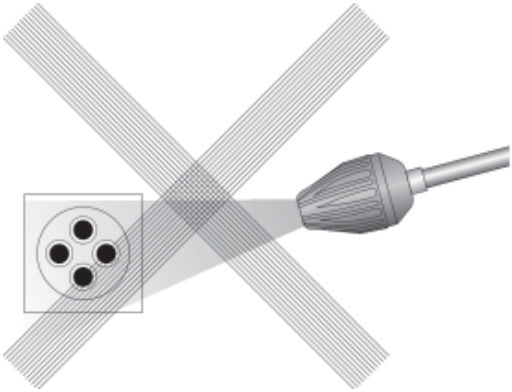
Never pull the high pressure hose if it has formed kinks or “nooses”!
Never pull the hose over sharp edges !

This is prohibited !

Never allow children to use the high pressure cleaner !



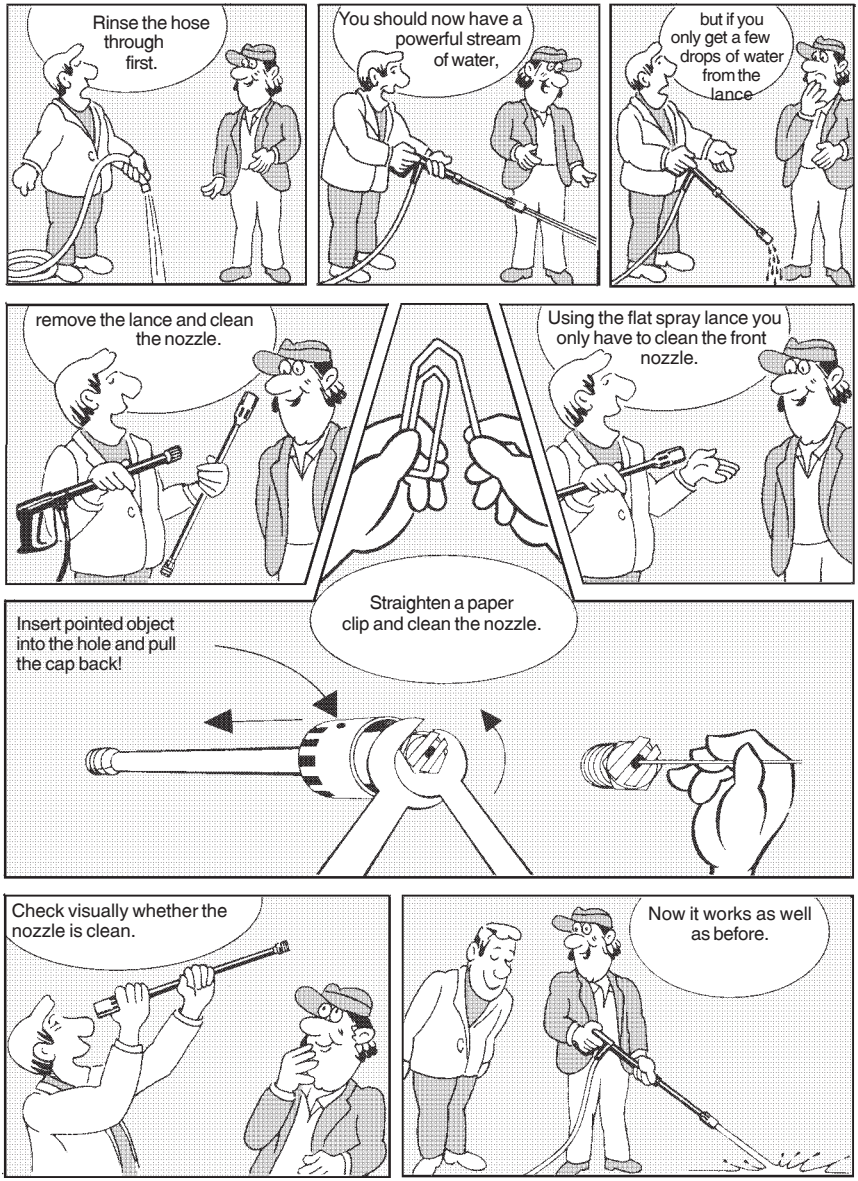
Never direct the water jet at the machine itself !



Never direct the water jet at a power socket !

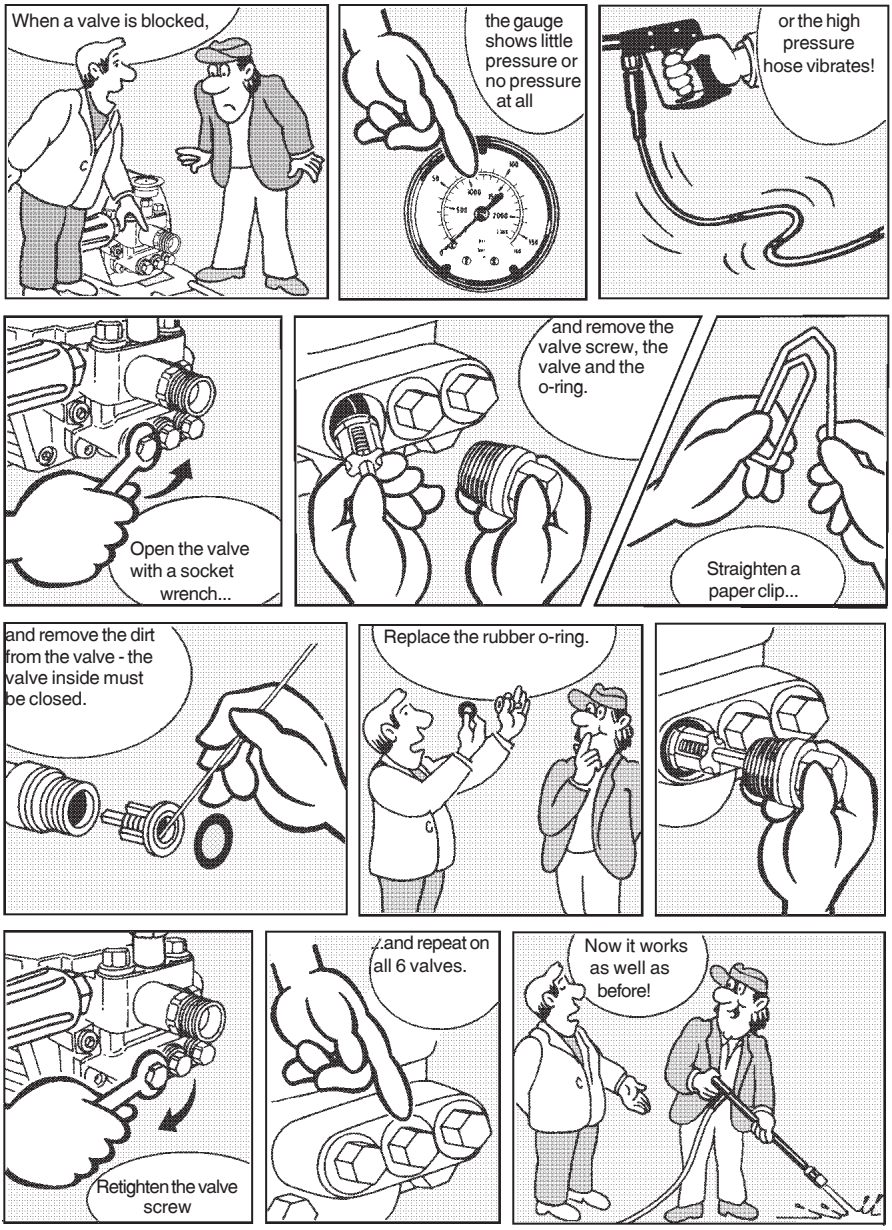
The nozzle is blocked!

● **No water but the gauge shows full pressure !**

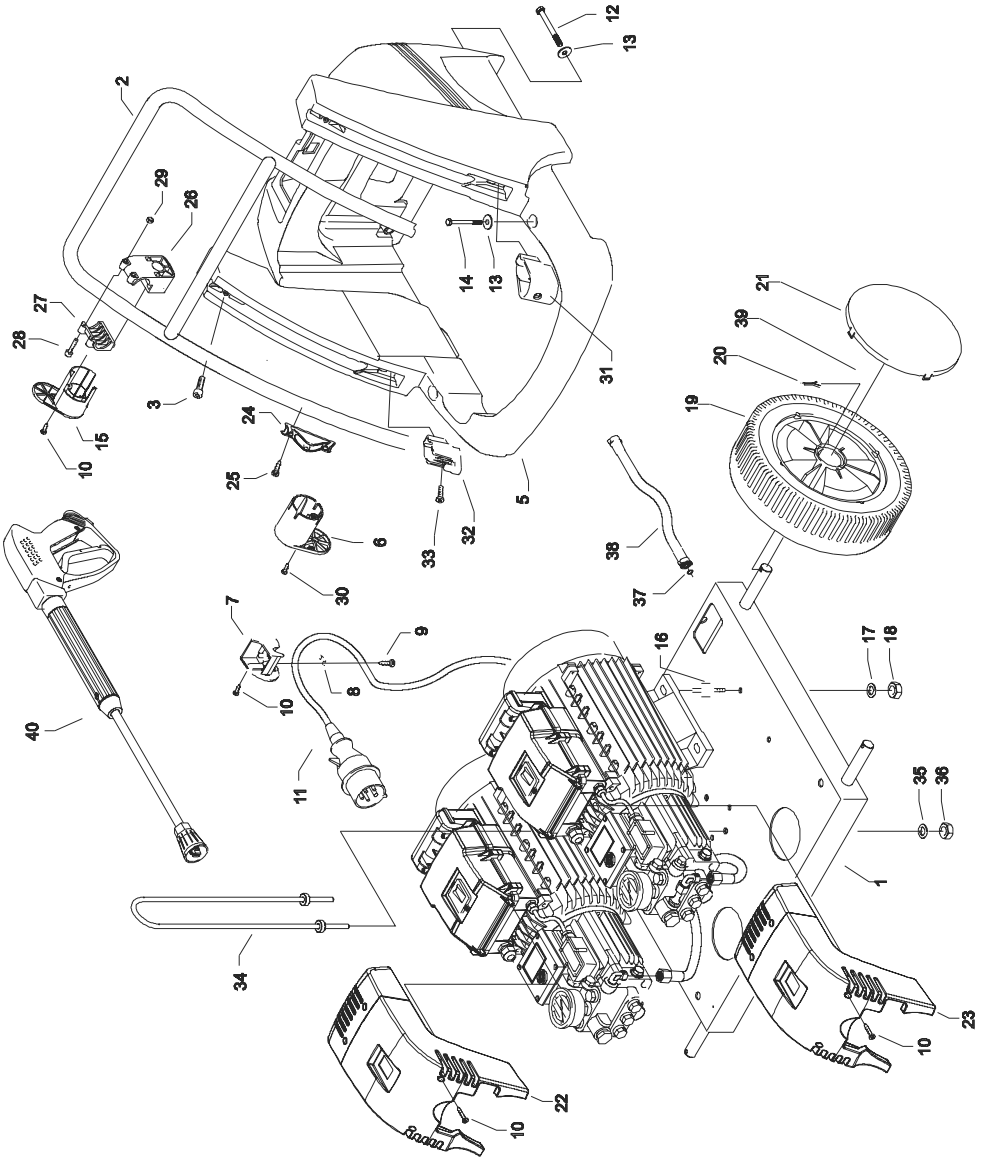


Nozzle dirty or sticky!

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



Complete Assembly

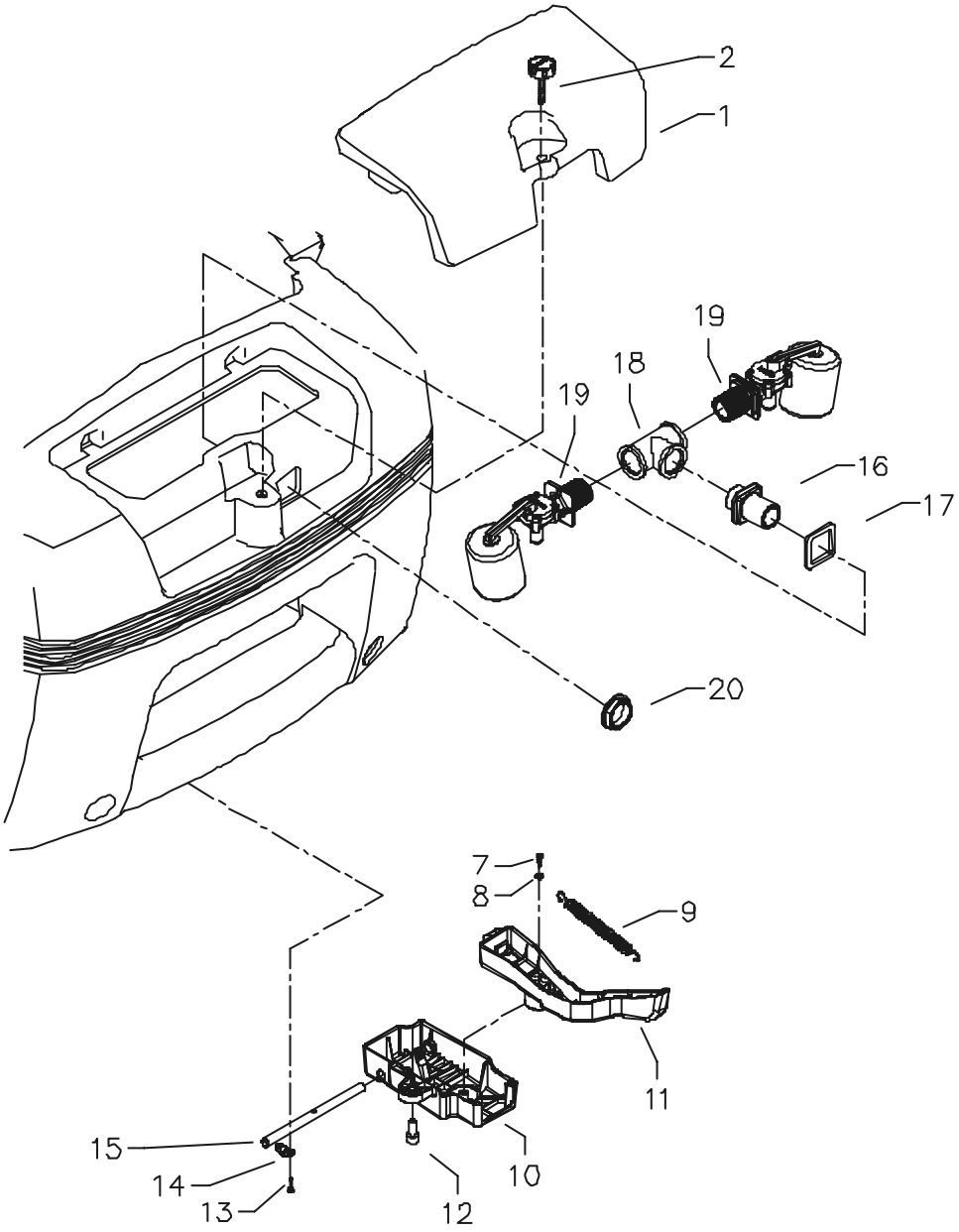


Spare parts list KRÄNZLE D 26/250 - D 30/180
Complete Assembly

No	Description	Qty.	Ord.-No
1	Fahrgestell	1	42.800
2	Schubbügel	1	42.802
3	Schraube M 6 x 40	4	46.025
5	Wasserkasten	1	42.801
6	Kabelaufwicklung unten	1	44.822
7	Kabeltrompete	1	46.506
8	Zugentlastung	1	43.431
9	Schraube 4,0 x 16	2	43.417
10	Kunststoffschraube 5,0 x 25	14	41.414
11	Netzanschlusskabel 8,0m, 4x 2,5 mm², H07RNF	1	42.812
12	Schraube M8x45 DIN931	2	42.815
13	Scheibe 8,4 DIN9021	4	41.409
14	Schraube M8x110 DIN931	2	44.826
15	Kabelaufwicklung oben	1	42.612
16	Schwingmetall 30 x 30	4	44.227
17	Scheibe 8,4 DIN125	8	50.186
18	Mutter M8 DIN985	8	41.410
19	Rad	3	44.017
19.1	Rad mit Bremsraster	1	44.017 2
20	Splint 5x28 DIN94	4	42.614
21	Radkappe	4	44.018
22.1	Frontplatte D26/250	1	42.806 1
22.1	Frontplatte D30/180	1	42.806 2
23	Frontplatte	1	42.806 3
24	Lanzenhalter	2	42.610
25	Blechschraube 3,5x16 DIN7981	4	44.161

No	Description	Qty.	Ord.-No
26	Lagerklotz links	1	40.305
27	Klemmstück	1	40.307
28	Innensechskantschraube M 4 x 25	2	40.313
29	Elastic-Stop-Mutter M 4	2	40.111
30	Schraube 6 x 40	2	42.817
31	Köchertopf	1	46.503
32	Lanzenständer	1	46.502
33	Schraube M6x12	2	43.421
34	Kranhaken	1	42.805
35	Scheibe DIN125 10,5	2	40.138
36	Elastic-Stop-Mutter M 10	2	40.139
37	O-Ring 13 x 2,6	4	13.272
38	Verbindungsschlauch	2	42.807
39	Scheibe 8mm für Rad	4	44.246
40.1	Pistole mit Lanze und Flachstrahldüse 2008 für D26/250 TST	1	12.320 3-M20080
40.2	Pistole mit Lanze und Flachstrahldüse 20125 für D30/180 TST	1	12.320 3-M20125

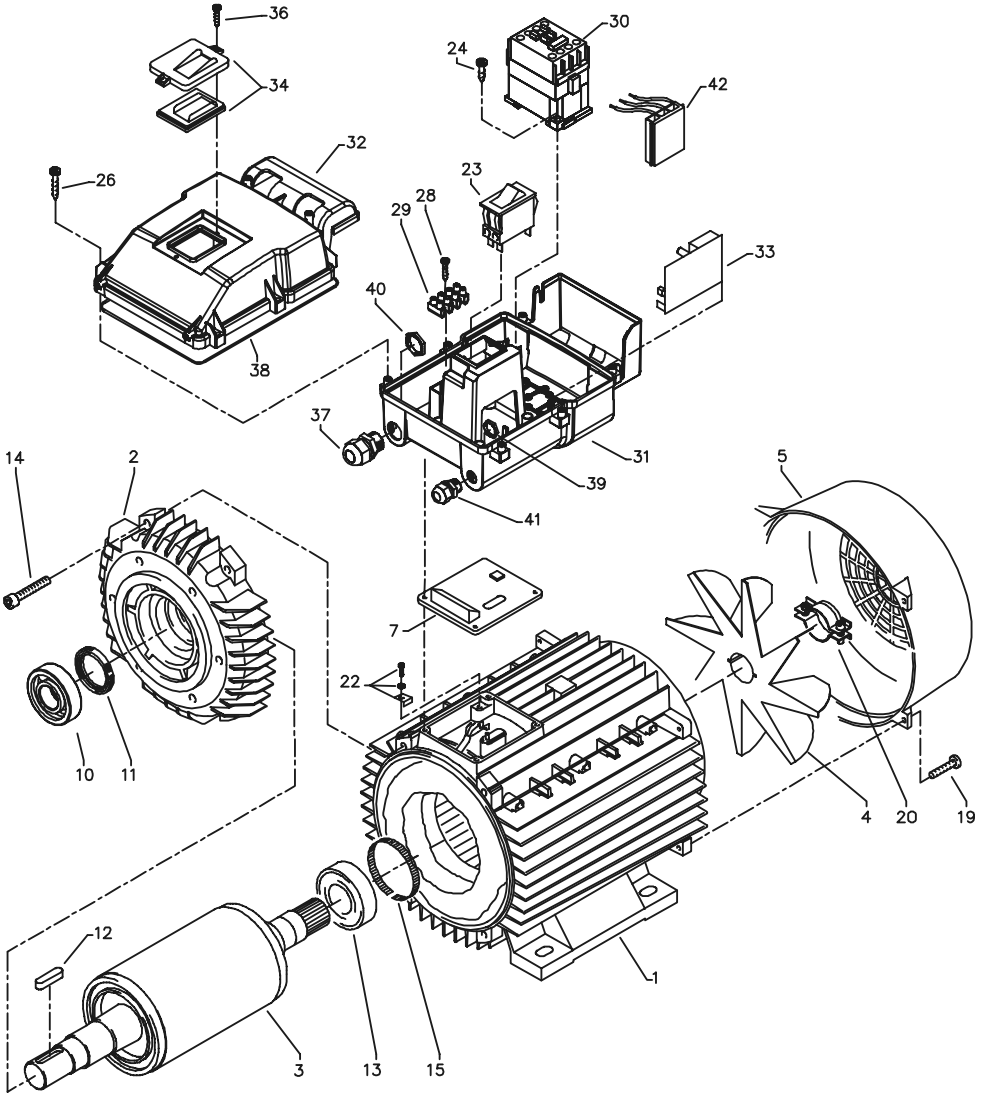
Water inlet and brake



Spare parts list KRÄNZLE D 26/250 TST - D 30/180 TST
Water inlet and brake

No	Description	Qty.	Ord.-No
1	Revisionsdeckel mit Dichtung	1	42.803
2	Sterngriffschraube M6	1	46.031
7	Kunststoffschraube 5x14	1	43.426
8	Scheibe 5,3 DIN9021	1	50.152
9	Zugfeder	1	46.020
10	Deckel Bremse	1	46.016
11	Hebel Bremse	1	44.804
12	Zylinderschraube M 8 x 20	1	41.480
13	Innensechskantschraube M4x10	4	46.002
14	Schelle	2	43.431
15	Bolzen für Bremse	1	46.018
16	Wassereingangsteil 2x R3/4“ AG	1	42.804
17	Moosgummidichtung	1	46.261
18	T-Stück 3x R3/4“ IG	1	42.813
19	Schwimmerventil	2	46.250 1
20	Bundmutter R3/4“	1	46.258

Pump motor 1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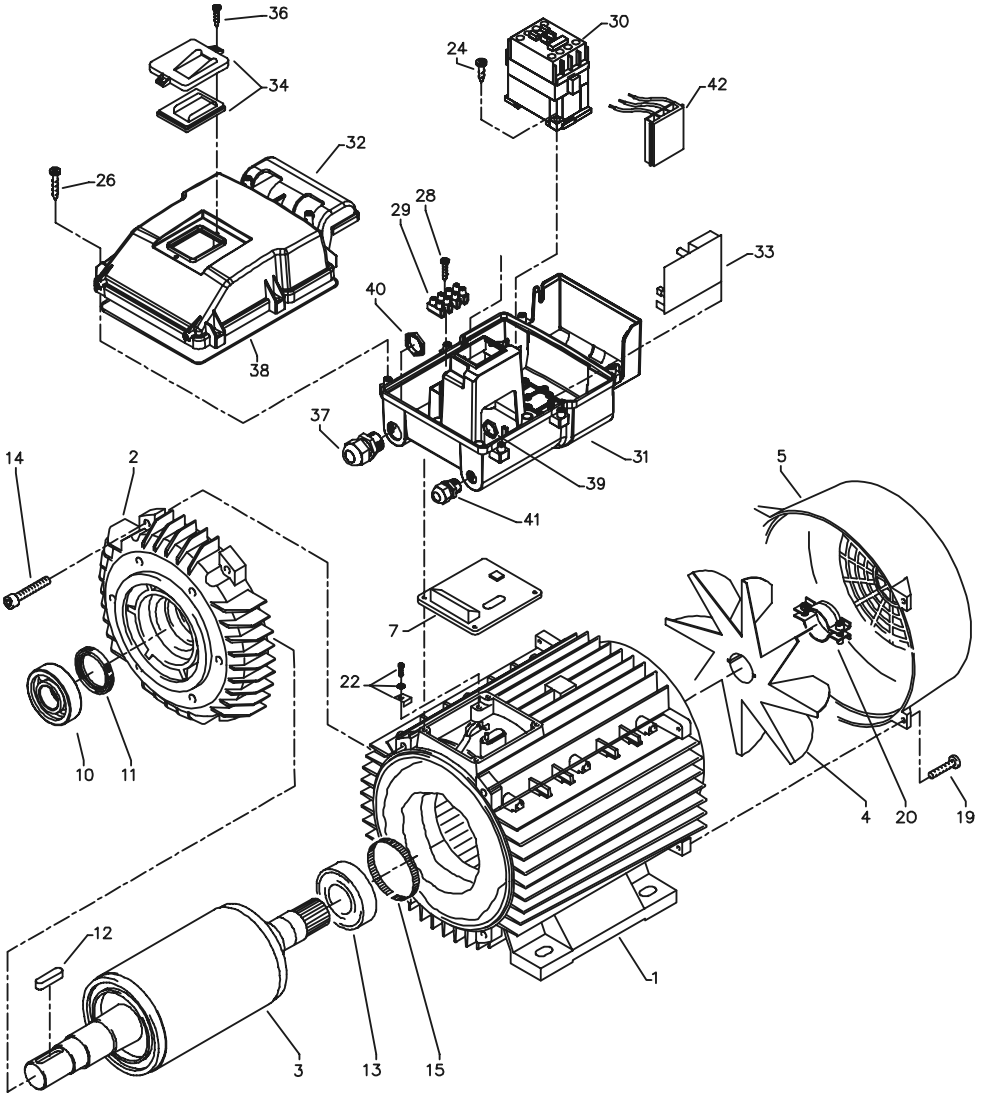
Spare parts list KRÄNZLE D 26/250 TST - D 30/180 TST
Pump motor 1

No	Description	Qty.	Ord.-No
1	Stator 112 5,5kW 400V / 50Hz	1	40.540
2	A-Lager Flansch	1	40.530
3	Rotor 112 (400V / 50Hz)	1	40.531
4	Lüfterrad für BG 112	1	40.532
5	Lüfterhaube BG 112	1	40.533
7	Flachdichtung	1	43.030
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
19	Schraube M 4 x 12	4	41.489
20	Schelle für Lüfterrad 112	2	40.535
21	Schraube M 4 x 12	4	41.489
22	Erdungsschraube kpl.	1	43.038
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	Kuststoffschraube 3,5 x 20	2	43.415
29	Lüsterklemme 6-pol.	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	42.563
34	Klemmrahmen mit Schalterabdichtung	1	43.453
36	Blechschraube 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	1	44.119
41	PG 9 - Verschraubung	1	43.034
42	Überstromauslöser 3-polig 12A	1	46.040 1

Switch box compl. items 23 - 42
Motor compl. without switch **24.060**

Pump motor 2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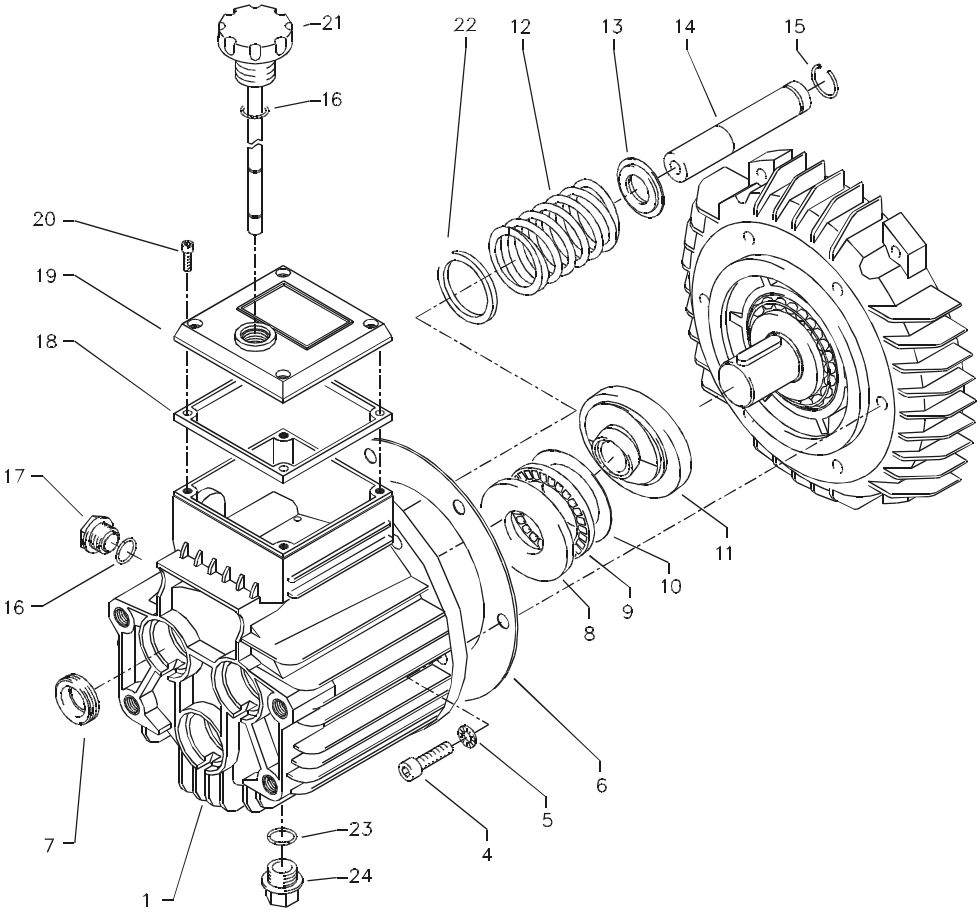
Spare parts list KRÄNZLE D 26/250 TST - D 30/180 TST
Pump motor 2

No	Description	Qty.	Ord.-No
1	Stator 112 5,5kW 400V / 50Hz	1	40.540
2	A-Lager Flansch	1	40.530
3	Rotor 112 (400V / 50Hz)	1	40.531
4	Lüfterrad für BG 112	1	40.532
5	Lüfterhaube BG 112	1	40.533
7	Flachdichtung	1	43.030
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
19	Schraube M 4 x 12	4	41.489
20	Schelle für Lüfterrad 112	2	40.535
21	Schraube M 4 x 12	4	41.489
22	Erdungsschraube kpl.	1	43.038
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 Anlaufver.	1	42.809
34	Klemmrahmen mit Schalterabdichtung	1	43.453
36	Blechschraube 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	1	44.119
41	PG 9 - Verschraubung	1	43.034
42	Überstromauslöser 3-polig 12A	1	46.040 1
	Switch box compl. items 23 - 42		
	Motor compl. without switch		**24.060**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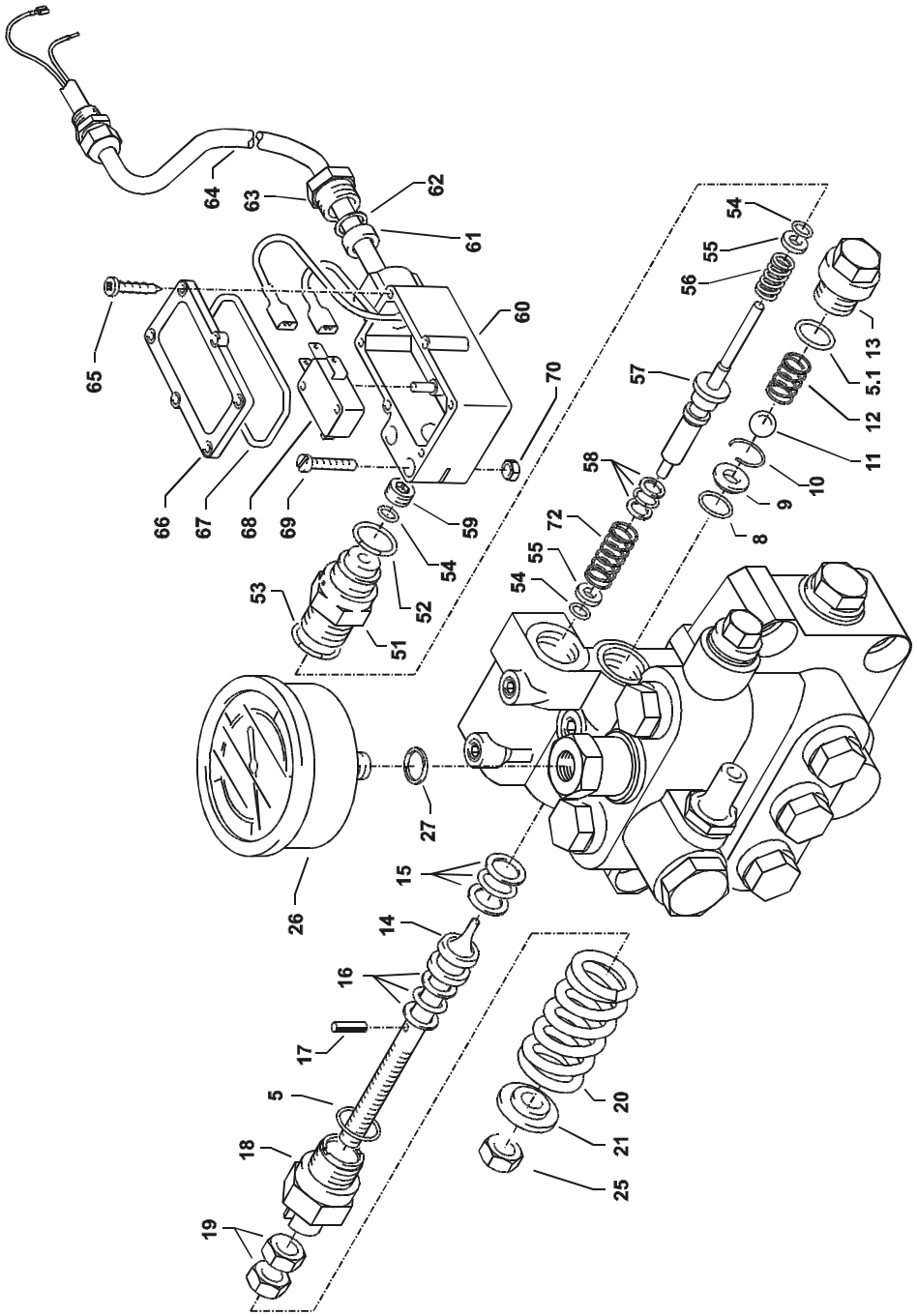
Spare parts list KRÄNZLE D 26/250 TST - D 30/180 TST
Pump transmission unit for AQ-pump

No	Description	Qty.	Ord.-No
1	Ölgehäuse	1	40.501
4	Innensechskantschraube M 8 x 30	6	41.036 1
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	Taumelscheibe AQ 9,5° bei D26/250	1	40.042 1-9,5
11.2	Taumelscheibe AQ 10,8° bei D30/180	1	40.042 1-10,8
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	1	42.018
18	Flachdichtung	1	41.019 3
19	Deckel flach für Ölgehäuse	1	41.023 1
20	Innensechskantschraube M 5 x 12	4	41.019 4
21	Stopfen M 18 x 1,5 mit Ölmessstab	1	42.623
22	Stützscheibe für Plungerfeder	3	40.513
23	O-Ring	1	43.445
24	Verschlussstopfen R 3/8“	1	40.051

Unloader valve and pressure switch



Spare parts list KRÄNZLE D 26/250 TST - D 30/180 TST
Unloader valve and pressure switch

No	Description	Qty.	Ord.-No
5	O-Ring 16 x 2	2	13.150
5.1	O-Ring 13,94 x 2,62	1	42.167
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 silber	1	42.816 1
20.1	Ventilfeder rot	1	42.816 2
21	Federdruckscheibe	1	14.126
25	Elastic-Stop-Mutter M 8 x 1	1	14.152
26	Manometer 0-400 Bar	1	15.039 4
27	Aluminium-Dichtring	2	13.275
51	Führungsteil Steuerstößel	1	15.009 1
52	O-Ring 12,3 x 2,4	1	15.017
53	O-Ring 14 x 2	1	43.445
54	O-Ring 3,3 x 2,4	3	12.136

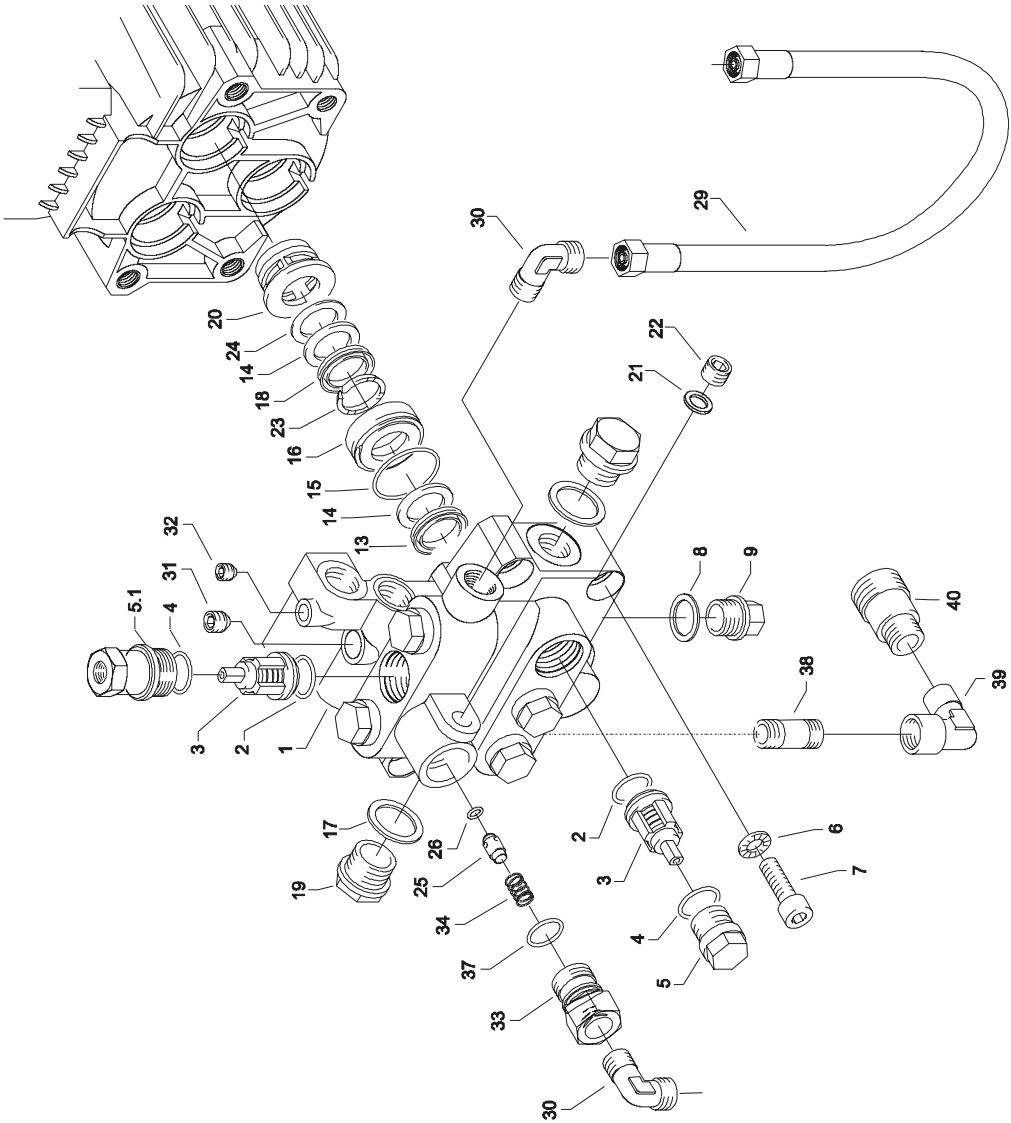
No	Description	Qty.	Ord.-No
55	Stützscheibe	2	15.015 1
56	Edelstahlfeder	1	15.016
57	Steuerstößel	1	15.010 2
58	Parbaks	1	15.013
59	Stopfen M 10 x 1 (durchgebohrt)	1	13.385 1
60	Gehäuse Elektroschalter	1	15.007
61	Gummimanschette PG 9	1	15.020
62	Scheibe PG 9	1	15.021
63	Verschraubung PG 9	1	15.022
64	PVC-Kabel 2x 1,0 mm²	1	42.505
65	Blechschruabe 2,8 x 16	6	15.024
66	Deckel Elektroschalter	1	15.008
67	O-Ring 44 x 2,5	1	15.023
68	Mikroschalter	1	44.262
69	Zylinderschraube M 4 x 20	2	15.025
70	Sechskant - Mutter M 4	2	15.026
72	Druckfeder 1 x 8,6 x 30	1	40.520

Repair kits:

Rep.-kit 15.009 3
Pressure switch mechanism
1x item 51, 1x item 52, 1x item 53,
3x item 54, 1x item 55, 1x item 56,
1x item 57, 1x item 58, 1x item 59

Pressure switch compl. items 54 - 70 41.300 5

Valve housing 1



Spare parts list KRÄNZLE D 26/250 TST - D 30/180 TST
Valve housing 1 for integrated AQ-pump

No	Description	Qty.	Ord.-No
1	Ventilgehäuse AQ mit integr. UL und Druckschalter	1	40.503 5
2	O-Ring 18 x 2	6	40.016
3	Einlass- / Auslass- Ventil	6	42.024
4	O-Ring 21 x 2	6	42.025
5	Ventilstopfen	5	42.026
5.1	Ventilstopfen mit R 1/4" IG	1	42.026 2
6	Sicherungsring	4	40.032
7	Innensechskantschraube M 12 x 45	4	40.504
8	Kupferdichtring	1	40.019
9	Stopfen R3/8"	1	40.018
13	Gewebemanschette	3	40.023
14	Backring 20 mm	6	40.025
15	O-Ring 31,42 x 2,62	3	40.508
16	Leckagering 20 x 36 x 13,3	3	40.509
17	Cu-Dichtring 21 x 28 x 1,5	2	42.039
18	Gummimanschette	3	40.512
19	Verschlussschraube R 1/2"	2	42.032
20	Distanzring mit Abstützung	3	40.507
21	Aluminium-Dichtring	2	13.275
22	Verschlussstopfen	1	13.181
23	Druckring 20 mm	3	40.021
24	Zwischenring 20 mm	3	40.516
25	Rückschlagkörper	1	14.122
26	O-Ring 6 x 3	1	14.121
28	Ausgangsteil Pumpe R1/4" x 12	1	44.215
29	Verbindungsschlauch P1 - P2	1	42.818
30	Winkel R3/8" x 12L	1	44.092
31	Dichtstopfen M 10 x 1	1	43.043
32	Dichtstopfen M 8 x 1	2	13.158

No	Description	Qty.	Ord.-No
33	Ausgangsteil R3/8“ IG	1	42.161 3
34	Rückschlagfeder	1	14.120
37	O-Ring 18 x 2	1	43.446
38	Messingrohr bds. R3/8“	1	41.628
39	Winkel 2x 3/8“ IG	1	44.138
40	Wassereingang R3/8“ AG	1	41.016

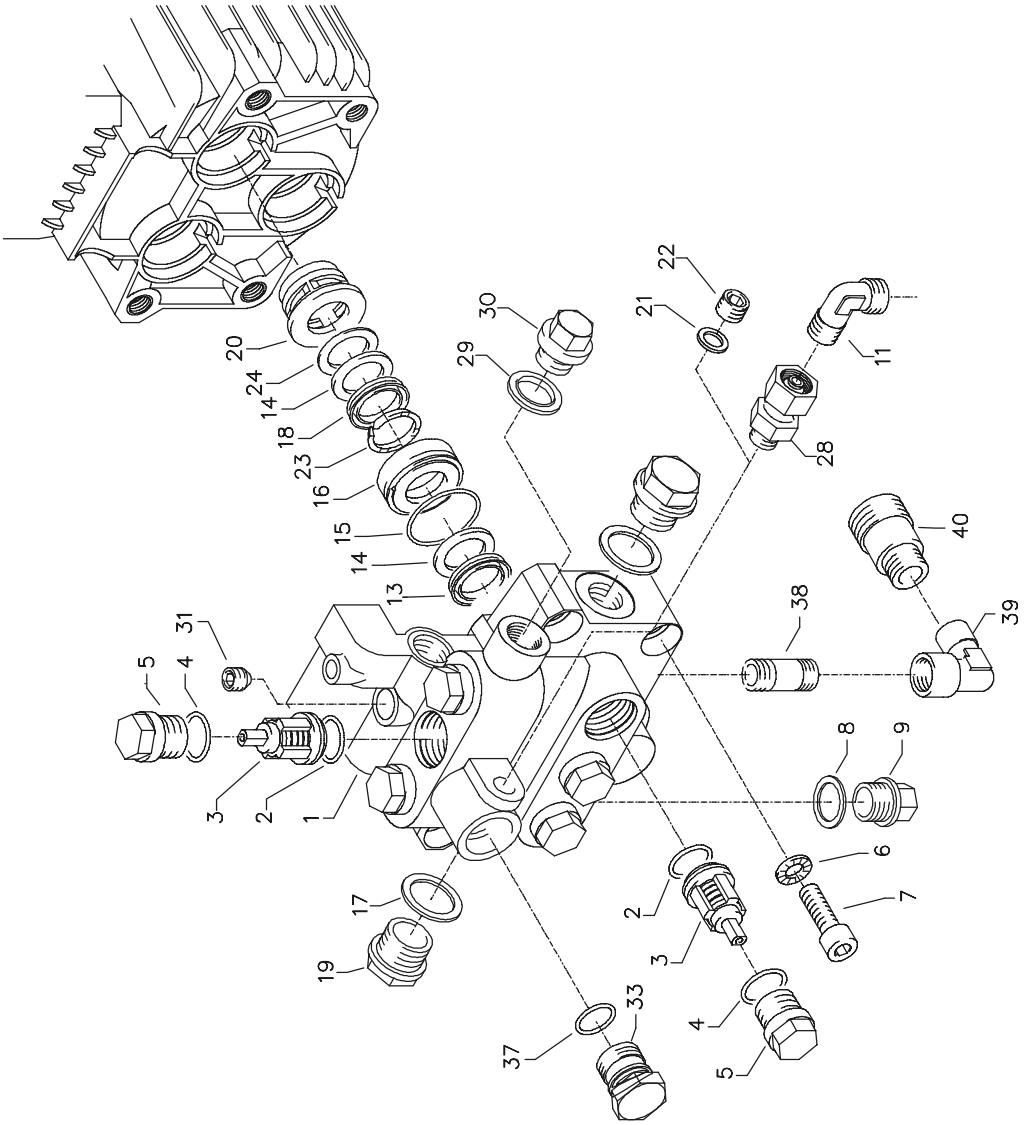
Repair kits:

Repair kit for sleeves 40.065 1
consisting of: 3x items 13; 6xitems 14;
3x items 15; 3x items 16; 3x items 18;
3x items 20; 3x items 23

epair kit for sleeves without 40.517
brass parts consisting of:
3x items 13; 6x items 14; 3x items 15;
3x items 18; 3x items 23

Repair kit valves 40.062 1
consisting of:
6x items 2; 6x items 3; 6x items 4

Valve housing 2



Spare parts list KRÄNZLE D 26/250 TST - D 30/180 TST
Valve housing 2 for integrated AQ-pump

No	Description	Qty.	Ord.-No
1	Ventilgehäuse AQ mit integr. UL und Druckschalter	1	
2	O-Ring 18 x 2	6	40.016
3	Einlass- / Auslass- Ventil	6	42.024
4	O-Ring 21 x 2	6	42.025
5	Ventilstopfen	5	42.026
6	Sicherungsring	4	40.032
7	Innensechskantschraube M 12 x 45	4	40.504
8	Kupferdichtring	1	40.019
9	Stopfen R3/8"	1	40.018
13	Gewebemanschette	3	40.023
14	Backring 20 mm	6	40.025
15	O-Ring 31,42 x 2,62	3	40.508
16	Leckagering 20 x 36 x 13,3	3	40.509
17	Cu-Dichtring 21 x 28 x 1,5	2	42.039
18	Gummimanschette	3	40.512
19	Verschlussschraube R 1/2"	2	42.032
20	Distanzring mit Abstützung	3	40.507
21	Aluminium-Dichtring	2	13.275
22	Verschlussstopfen	1	13.181
23	Druckring 20 mm	3	40.021
24	Zwischenring 20 mm	3	40.516
28	Ausgangsteil Pumpe R1/4" x 12	1	44.215
29	Verbindungsschlauch P1 - P2	1	42.818
30	Winkel R3/8" x 12L	1	44.092
31	Dichtstopfen M 10 x 1	1	43.043

No	Description	Qty.	Ord.-No
33	Ausgangsteil	1	
37	O-Ring 18 x 2	1	43.446
38	Messingrohr bds. R3/8“	1	41.628
39	Winkel 2x 3/8“ IG	1	44.138
40	Wassereingang R3/8“ AG	1	41.016

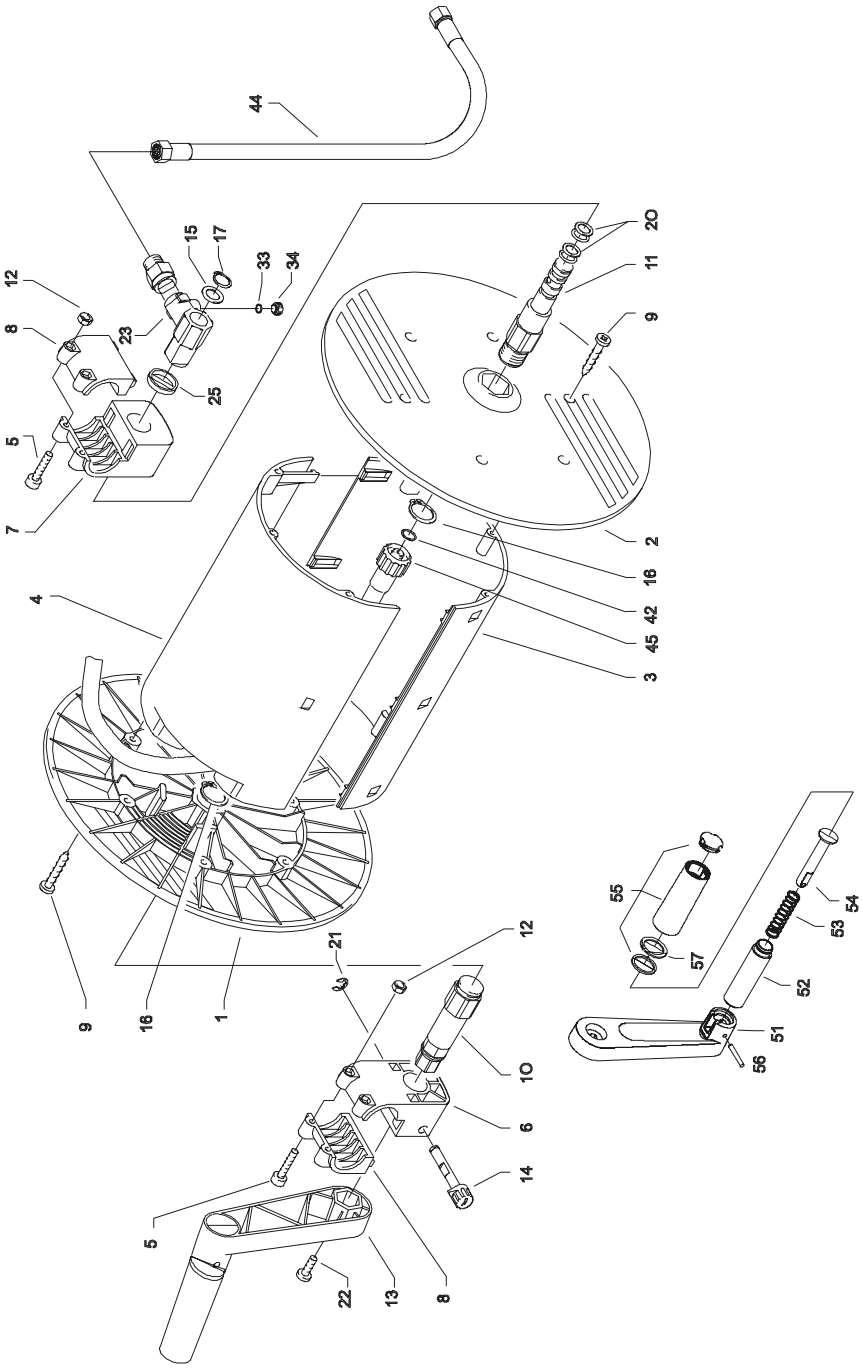
Repair kits:

Repair kit for sleeves **40.065 1**
consisting of: 3x items 13; 6xitems 14;
3x items 15; 3x items 16; 3x items 18;
3x items 20; 3x items 23

Repair kit for sleeves without brass parts consisting of: 40.517
3x items 13; 6x items 14; 3x items 15;
3x items 18; 3x items 23

Repair kit valves **40.062 1**
consisting of:
6x items 2; 6x items 3; 6x items 4

Hose drum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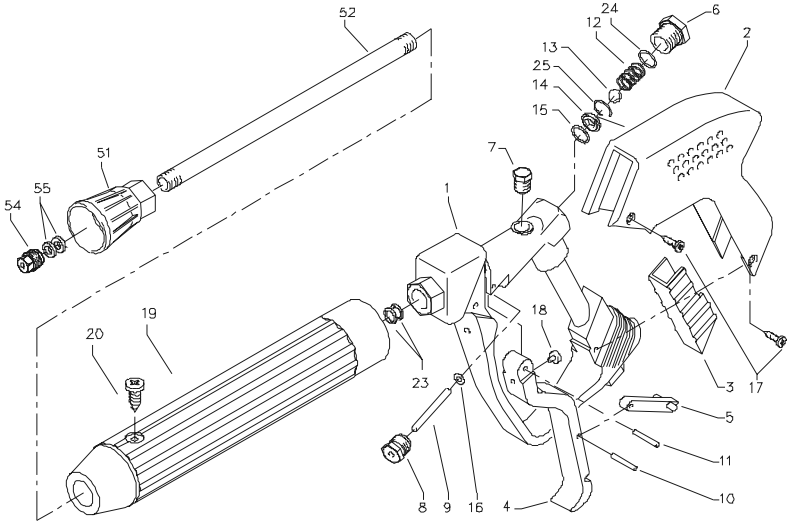
Spare parts list KRÄNZLE D 26/250 TST - D 30/180 TST
Hose drum

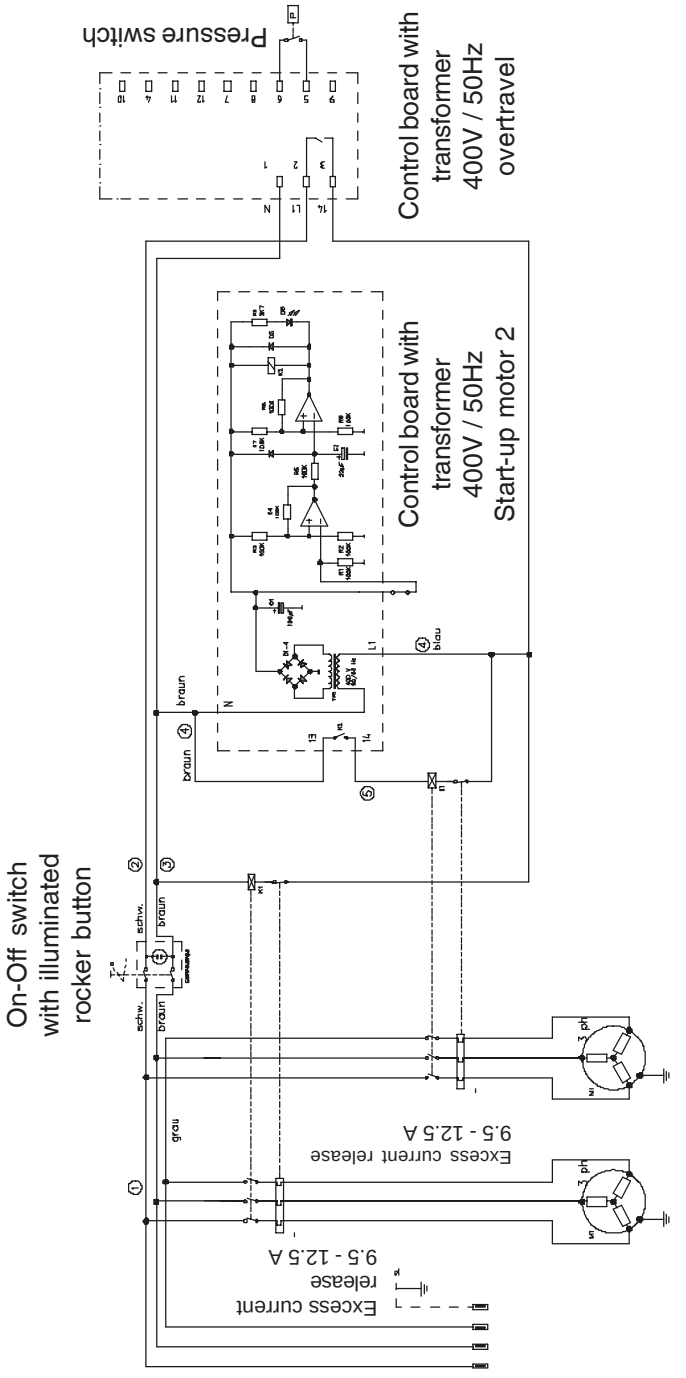
No	Description	Qty.	Ord.-No
1	Seitenschale Schlauchführung	1	40.302
2	Seitenschale Wasserführung	1	40.301
3	Trommel Unterteil	1	40.304
4	Trommel Oberteil	1	40.303
5	Innensechskantschraube M 4 x 25	4	40.313
6	Lagerklotz mit Bremse	1	40.306
7	Lagerklotz links	1	40.305
8	Klemmstück	2	40.307
9	Kunststoffschraube 5,0 x 20	12	43.018
10	Antriebswelle	1	40.310
11	Welle Wasserführung	1	40.311
12	Elastic-Stop-Mutter M 4	4	40.111
13	Handkurbel klappbar	1	40.320 0
14	Verriegelungsbolzen	1	40.312
15	Scheibe MS 16 x 24 x 2	1	40.181
16	Wellensicherungsring 22 mm	2	40.117
17	Wellensicherungsring 16 mm	1	40.182
20	Parbaks 16 mm	2	13.159
21	Sicherungsscheibe 6 DIN6799	1	40.315
22	Schraube M 5 x 10	1	43.021

No	Description	Qty.	Ord.-No
23	Drehgelenk	1	40.167
25	Distanzring	1	40.316
33	O-Ring 6 x 1,5	1	13.386
34	Stopfen M 10 x 1	1	13.385
42	O-Ring 9,3 x 2,4	3	13.273
44	Verbindungsschlauch	1	42.819
45	Hochdruckschlauch NW 8 20 m	1	41.083
51	Kurbelarm	1	40.309 1
52	Hülse	1	40.309 2
53	Druckfeder	1	40.309 3
54	Bolzen	1	40.309 4
55	Griff mit Kappe und Gleitscheibe	1	40.309 5
56	Spannstift 4 x 28	1	40.309 6
57	Flachsprengring SW18	1	40.309 8
	Crank compl. consisting of items 51 - 57		40.309 9



No	Description	Qty.	Ord.-No
1	Ventilkörper mit Handgriff	1	12.294
2	Schutzhülse	1	12.295
3	Abdeckschutz	1	12.296
4	Betätigungshebel	1	12.298
5	Sicherungshebel	1	12.149
6	Abschlußschraube M 16 x1	1	12.247
7	Stopfen	1	12.287
8	Gewindeführungshülse R 1/4" AG	1	12.250
9	Aufsteuerbolzen	1	12.284
10	Stift	1	12.148
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	Blechschraube 3,9 x 8	4	12.297
18	Druckstück	1	12.252
19	Isoliergriff	1	
20	Schraube 3,5 x 9,5	1	41 088
23	Aluminium-Dichtring	2	13.275
24	O-Ring 15 x 1,5	1	12.129 1
25	Sicherungsring	1	12.258
51	Düsenschutz	1	26.002
52	Rohr 500 mm; bds. R1/4"	1	
54	Flat jet nozzle 2008 (for D 26 / 250)	1	M2008
54.1	Flat jet nozzle 20125 (for D 30 / 180)	1	M20125
55	Aluminium sealing ring 8.3x11.3x2	2	13.275 1
	Starlet-II repair kit 1x Position: 1x items 13, 9, 10, 15, 14		12.299

Wiring diagram



Inlet line via CEE 4x 32 A 400 V / 50 Hz

2x pump motor 3x 400 V / 50 Hz

Inspections

The machine 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 guarateed.
The results of the inspection are to be recorded in writing.
This may be done in any form.

Accident prevention

The machine is designed for accidents to be impossible if used correctly.
The operator is to be notified of the risk of injury from hot machine parts and the high pressure water jet. The “Guidelines for Liquid Spray Devices” must be complied with. (see pages 14 and 15).

Check the oil level at the oil dip stick prior to each use (see also page 11). (Ensure horizontal position!)

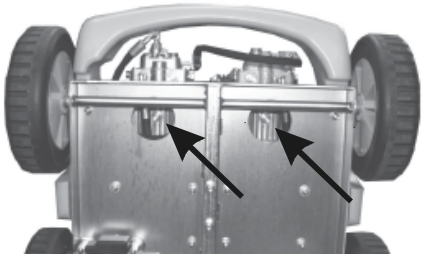
Oil change:

The first oil change should be carried out after approximately 50 operating hours, then every year or after 1000 operating hours. If the oil turns grey or white, you must change the oil of your high pressure pump in any case.

Open the oil discharge screw at the bottom of the device over a collection resevoir.

Ensure a horizontal position to drain the oil completely. The oil is to be caught in the reservoir and disposed of in an approved manner.

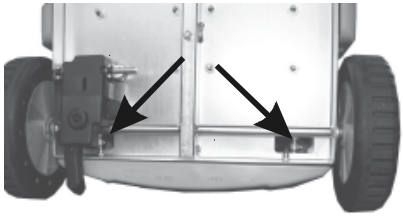
New oil: 1,0 l -
Motor oil: 10/W60 SAE halfsynthetic oil.



Bottom side of cleaner

Filter cleaning:

At the outlet of the water tank, in front of the hose connected to the pump, there is a water filter.
This filter prevents that dirt which has been flushed into the tank is sucked in by the pump leading to damages.
Check the filter each time you change the oil.
To do this, loosen the connecting hose at the rear bottom side of the tank and pull the filter together with the hose connector out of the tank. Clean filter and rinse the tank. Then you can screw the connection hose back to the tank.



Inspection report

for KRÄNZLE - High Pressure Cleaners

The high pressure cleaner must be inspected by an expert every 12 months.

Appliance No.:

Type of appliance:

The following must be checked:

1. Safety features

a) Manometer
b) Safety valve (pressure control)
c) Operating pressure
d) Cut out pressure (max. 10% above operating pressure)
e) Low pressure with closed gun

2. General condition

a) High pressure hose
b) Cable, plug, switch (VDE)
c) Spray gun, spray accessories.
d) Motor
e) Oil level

The information in the operating instructions are a part of the inspection

Result of inspection:	Date of inspection:	Faults rectified, Stamp and signature

Excerpt from the Guidelines for Liquid Spray Equipment (ZH 1/46) by the Central Office of the Professional Trade Association.
Inspection:
Liquid spray equipment should be inspected for safe operation by a qualified person whenever necessary, but no less than every 12 months. The maker's or supplier's instructions must be followed. The inspection intervals may be extended if the equipment is not in active use.
The results of inspections must be recorded in writing and presented to the respective authorities on demand. There is no set form for these records.

Warranty

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

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

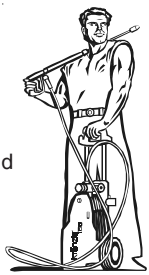
All products sold directly to private customers are warrantied for a period of 24 months, whereas the warranty period for industrial purchases is limited to 12 months.

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.

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.

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:	**Kränzle D 26 / 250** **Kränzle D 30 / 220**
(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 2006/95/EG** **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
Sound power level measured: guaranteed:	**89 dB (A)** **91 dB (A)**
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

Droitsch
(Managing Director)

Order-N°.: 30 270 1