High pressure cleaners D 16/220





perating manual Read and conform safety instructions before use

Description

Dear Customer

We would like to congratulate you on your new portable/mobile 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.:

- facades
- vehicles of oll
- barrels and containers

- terraces

- flagstones

- sheds

types

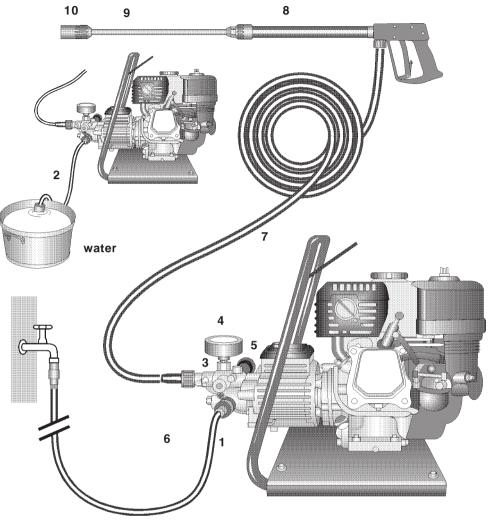
- channels

- machines
 streets

| technical specifications | D 16/220 |
|--|-------------------------|
| operating pressure, steplessly adjustable | 10 - 220 bar |
| permissible overpressure | 240 bar |
| water output | at 1800 rpm 16 l/min |
| hot water input up to | 70 °C |
| suction height | 2,5 m |
| high pressure hose with hose drum | 10 m 15 m |
| engine | Yanmar L100AE-S |
| weight | 26 kg |
| Guaranteed sound level L _{wa} | 103 dB(A) |
| Vibrations at lance | 2,2 m/s² |
| recoil at lance | approx. 38 Nm |

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

Description



Construction

The KRÄNZLE D 16/220 - high pressure cleaners are mobile machines. The design can be seen from the diagram.

ltem

- 1 Water inlet connection with filter
- 2 Suction hose with filter (special accessory) order No. 15.038 3
- 3 High pressure pump
- 4 Pressure gauge with glycerin filling
- 5 Unloader valve safety valve

- 6 Injector for cleaning agents
- 7 High pressure hose
- 8 Spray gun assembly
- 9 Interchangeable lance
- 10 Regulator nozzle

Water - and Cleang - Care System

Water can be connected at mains pressure to the high pressure pump or it can be sucked directly from a storage tank.

The water is then forced under pressure by the high pressure pump to the lance.

The high pressure jet is formed by the nozzle at the end of the lance.

Cleaning and caring agents can be mixed with the water by a low pressure injector.



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

Lance with trigger gun

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

When the lever ist 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 ist released, the trigger gun closes and any further spraying of liquid from the lance ist stopped.

The increase in pressure when the trigger gun is closed causes the unloader valvesafety valve to open. The pump remaines switched on and continues to pump liquid through the pump at reducated pressure.

When the trigger gun ist opened, the unloader valve - safety valve closes and the pump ressumes pressure spraying from the lance.



The trigger 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 operating. The limit nut on the handle is sealed with a spray coating.

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



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

For the motor follow the Yanmar operating manual only.



Motor-safety: (see Yanmar operating manual)

Yanmar motors are safe and reliable if they are operated correctly. Read the operating manual carefully before using the motor and try to understand the contents of the manual completely.

Not following this advice could lead to injuries or damage of the equipment.



To avoid a possible fire hazard and to ensure the necessary ventilation the motor has to be operated at a distance of at least 1 m from buildings and objects. Inflammable objects have to be kept away from the surrounding area of the motor.

Children and pets have to be kept away from the motor, as there is a danger of suffering burns from hot motor parts and to be injured by equipment driven by the motor.

Get to know the motor and especially learn how to switch it off quickly. Do not allow persons to operate the motor who are not familiar with it.

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 $70^\circ\,\text{C}$ raised temperatures occur.

Do not touch the machine without safety gloves.

Brief operating instructions

- 1. Connect the high pressure hose with spray gun and machine.
- 2. Connect the suitable water supply.
- 3. Flush the air from the pump (open and close the spray gun several times).
- 4. Switch on the motor while the spray gun is open and commence cleaning.
- 5. After completing the work, completely empty the pump (switch the motor on for approximately 20 seconds without the suction and pressure hose).

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 ist 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.

High pressure hose and spray device

The high pressure hose and spray 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.



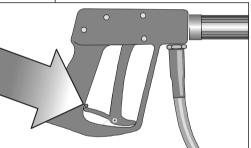
If replacement parts are required, only such parts that are authorized by the manufacturer and which bear the markings required by the appropriate regulations may be used. The high pressure hose and spray device must be connected in a pressure-tight manner. The high pressure hose may not be driven over, pulled excessively, or twisted. The hose may under no circumstances be pulled over sharp edges, since otherwise the guarantee is automatically void.

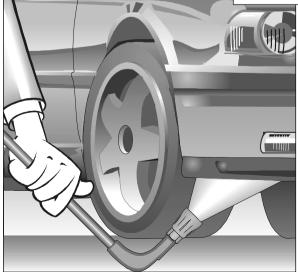




As to the recoil see notice on page 2.

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

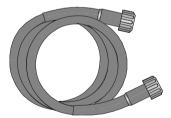




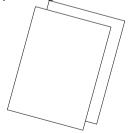
Always aim the underbody lance. Note when using an angle underbody lance, like for example lance No. 41.075, that there is a certain amount of torque (twisting motion) in the recoil. (See also notice on page 2).



- 3. KRÄNZLE High pressure cleaner D 16/220
- 4. High pressure hose 10 m 15 m HP-hose for cleaners with hose drum



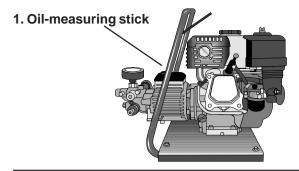
5. Operating instructions pump Operating instructions motor



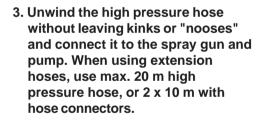


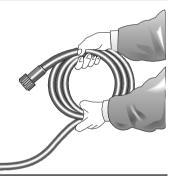
6. Water inlet components

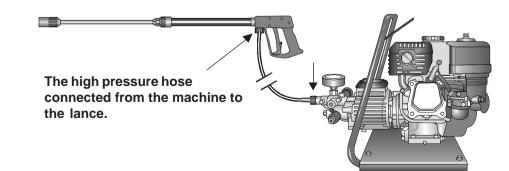
Prepare for use



2. Connect the high pressure lance to the spray gun.







Preparation for use

4. The machine can be connected to a pressurised water line with cold or 60 °C respectively 70 °C hot water (see page 2).

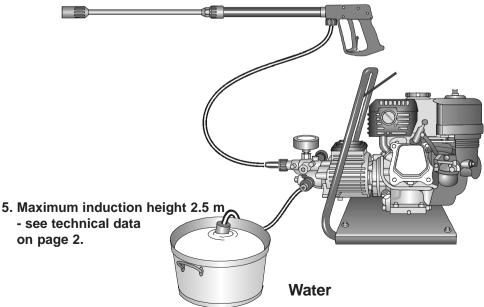
Ensure that the water supply ist clean when sucking from external sources.

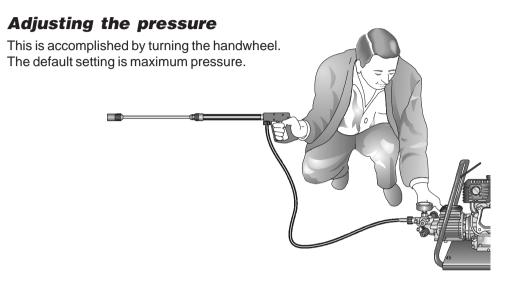
The hose cross section must be at least 1/2" = 12.7 mm (free passage). Filter 1 must always be clean.

Please make sure that the filter is clean before using your high pressure cleaner.

CAUTION !

When running your high pressure cleaner with hot water of 70° C raised temperatures occur. Do not touch the machine without safety gloves.





To shut down the pump:

- 1. Switch off the machine
- 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 high pressure hose
- 6. Drain the pump: switch on the motor for approx. 20 seconds
- 7. Winter: store the pump in rooms above 0° C
- 8. Clean the water filter

This is prohibited



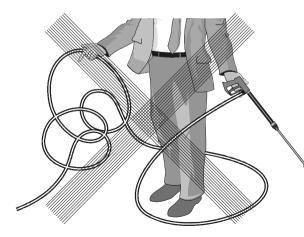


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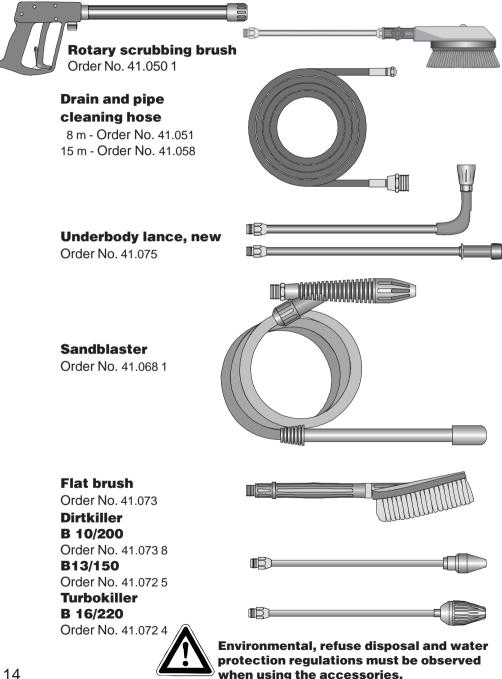


Never direct the water jet at people or animals !

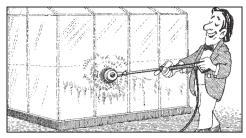


Never pull the high pressure hose if it has formed kinks or "nooses"! Never pull the hose over sharp edges !

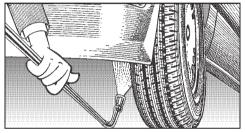
Additional KRÄNZLE accessories



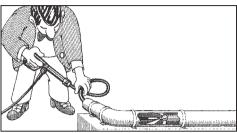
for further combination possibilities



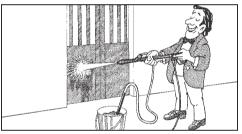
Car cleaning, glass, caravan, boat etc.: rotary washing brush with 40 cm extension and ST 30 nipple M 22



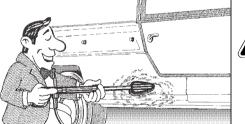
Underbody cleaning of cars, trailers and equipment: lance 90 cm with high pressure nozzle and ST 30 nipple. The lance must be aimed when spraying.



Cleaning pipes, channels and drains: Pipe cleaning hose with KN nozzle and ST 30 nipple M 22.



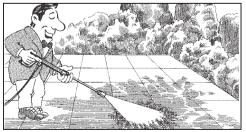
Blasting old paint, rust and facades: sandblasting injector with suction lance and 3 m PVC hose and ST 30 nipple M 22.



Cleaning cars and all smooth surfaces: brush with ST 30 nipple M 22.



When sandblasting you must wear protection clothes! Pay attention to the instructions of the manufacturer of the abrasive.



Rotary point sprayer for extreme soiling: dirt killer with 40 cm extension and ST 30 nipple M 22.

You only get a weak flow of water or no water at all !

• The pressure gauge shows a 10% higher pressure than the working pressure.



The nozzle is blocked !

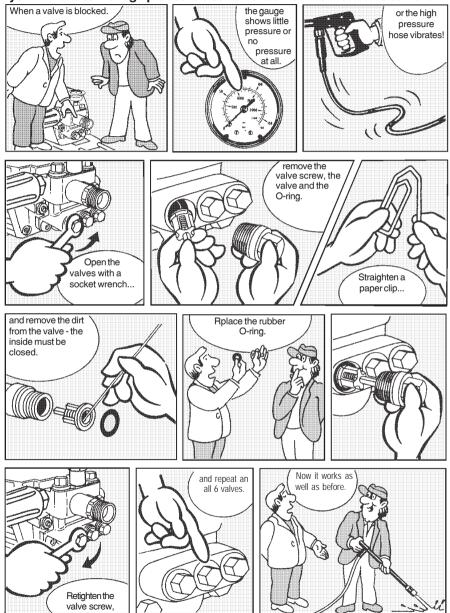
• No water but the gauge shows full pressure.



• The high-pressure hose

Valve dirty or sticky !

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



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 guaranteed. 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 page 12 and 13)

Check the oil level with the oil-measuring stick prior to each use. (Ensure horizontal position!)

Oil change D16/220:

The oil of your high pressure pump should be changed after approx. 40 hours of operation, or no later than when it takes an a grey or whitish colour. Open the oilplug over a container and drain off all the oil. The oil must be caught in a contianer and disposed of in a responsible, legal manner. New oil: $1,0 \mid$ - Castrol Formula RS

Guarantee

The guarantee is only valid for material and manufacturing errors. Wearing does not fall within this gurantee.

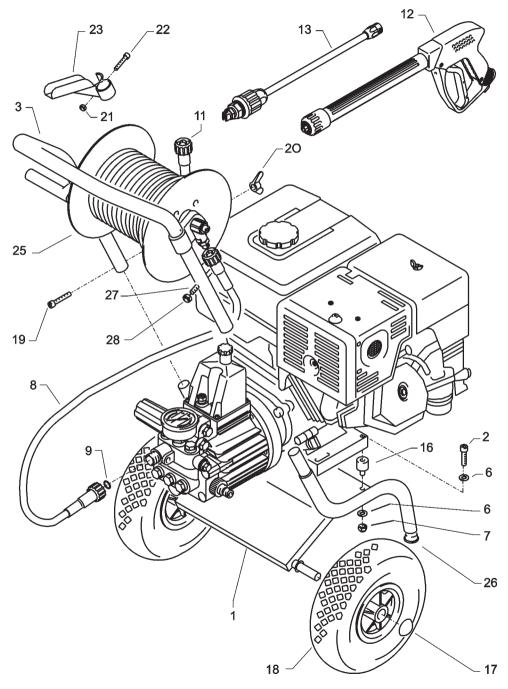
The instructions in our operating manual must be complied with. The operating instructions form part of the guarantee. The Guarantee is void if other parts are used than genuine Kränzle accessory parts or genuine Kränzle spare parts.

For high-pressure cleaners sold to the user the guarantee period is 24 month.

For high-pressure cleaners sold for industrial use the guarantee period is 12 month. In the case of a guarantee please contact your dealer or authorized seller delivering accessories and your purchase receipt. You can find them in the internet under <u>www.kraenzle.com</u>.

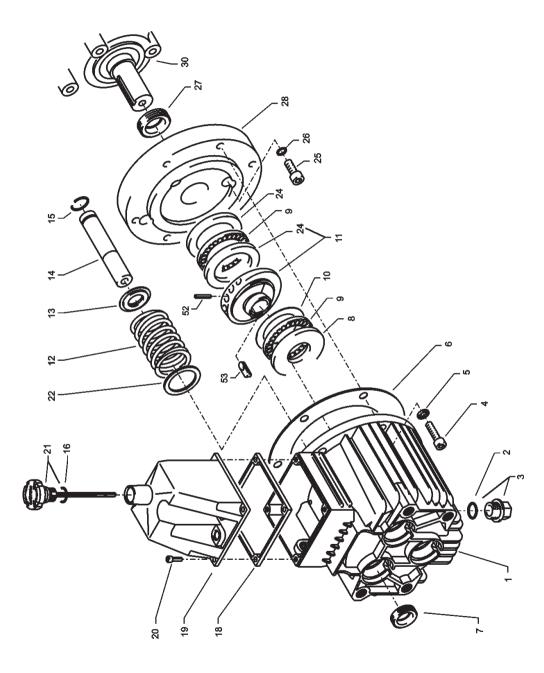
The guarantee is also void if the machine is used with exceeding the temperature and speed limits, a voltage below the required rating, with less than the required amount of water or with dirty water. Pressure gauge, nozzle, valves, sleeves, high pressure hose and spray equipment are wear parts and are not covered by the warranty.

Complete Assembly



Spare parts list Profi-Jet D 16/220 with undercarriage **Complete Assembly**

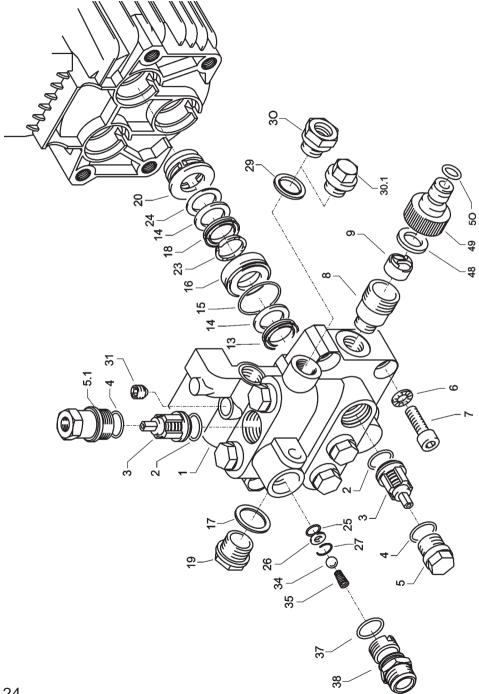
| No. | Description | Qty. | OrdNo. |
|-----|---|------|----------|
| 1 | Wagen | 1 | 41.101 7 |
| 1a | Wagen kompl. (Pos. 1 + 3) | 1 | 41.101 5 |
| 2 | Sechskantschraube M 8 x 30 | 4 | 40.221 |
| 3 | Schubbügel | 1 | 41.101 3 |
| 6 | Unterlegscheibe 8,4 | 8 | 41.515 6 |
| 7 | Elastic-Stop-Mutter M 8 | 4 | 41.410 |
| 8 | Hochdruckschlauch 1m / DN 8 - 210 ba | | 41.265 |
| 9 | O-Ring 9,3 x 2,4 | 3 | 13.273 |
| 10 | Chemiesieb mit 1,2 m PVC-Schlauch | 1 | 15.038 |
| 11a | at unit with hose drum | | |
| 11b | high pressure hose 15 m / DN 8 - 210 b at unit without hose drum | oar1 | 41.083 |
| 110 | high pressure hose 10 m / DN 8 -210 ba | ar 1 | 41.082 |
| 12 | Starlett II mit ISO-Handgriff | 1 | 12.320 2 |
| 13 | Lance with reg. nozzle 25055 | 1 | 41.053 2 |
| | prease specify size of nozzle | - | |
| 14 | Saugschlauch 3 m mit Saugfilter | 1 | 15.038 3 |
| 15 | Turbokiller 055 | 1 | 41.072 4 |
| 16 | Gummidämpfer | 4 | 40.220 |
| 17 | Starlock-Kappe | 2 | 40.142 |
| 18 | Rad luftbereift | 2 | 40.141 |
| 19 | Innensechskantschraube M 6 x 40 | 2 | 40.133 |
| 20 | Flügelmutter M 6 | 2 | 40.132 |
| 21 | Mutter M 6 | 1 | 14.127 1 |
| 22 | Innensechskantschraube M 6 x 40 | 1 | 40.133 |
| 23 | Pistolenablage | 1 | 40.130 |
| 24 | Schraube 2,9 x 19 | 2 | 15.024 |
| 25 | Schlauchtrommel kpl. ohne Schlauch | 1 | 41.259 |
| 26 | Gummistopfen | 2 | 40.208 1 |
| 27 | Bügel | 1 | 41.101 6 |
| 28 | Elastic-Stop-Mutter M 8 | 2 | 41.514 |
| | Speedcontrol with 1m Bowden cable | 1 | 40.255 1 |
| | Motor Yanmar L100 AE-S | | 24.200 |
| | Upgrade kit hose drum with 1 m HP-Connection hose with 20 m HP-hose | | 41.259 1 |



Spare parts list Profi-Jet D 16/220 Transmission unit AQ-Pump

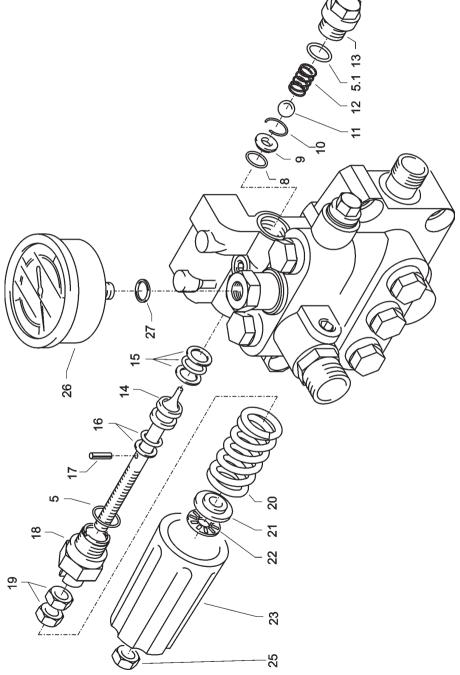
| No. | Description | Qty. | OrdNo. |
|-----|---------------------------------|--------|---------------|
| 1 | Ölgehäuse | 1 | 40.501 |
| 2 | O-Ring 13,94 x 2,62 | 1 | 42.167 |
| 3 | Ölablassstopfen R 3/8" | 1 | 42.019 |
| 4 | Innensechskantschraube M 8 x 25 | 6 | 40.053 |
| 5 | Sicherungsscheibe | 6 | 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 | Swash plate 8° 30mm | 1 | 40.042 7-8,0° |
| 12 | Plungerfeder | 3 | 40.506 |
| 13 | Federdruckscheibe | 3 | 40.510 |
| 14 | Plunger 20mm (lang) | 3 3 | 40.505 |
| 15 | Sprengring | 3 | 40.048 |
| 16 | O-Ring 14 x 2 | 1 | 43.445 |
| 18 | Flachdichtung | 1 | 41.019 3 |
| 19 | DeckelÖlgehäuse | 1 | 40.518 |
| 20 | Innensechskantschraube M 5 x 12 | 4 | 41.019 4 |
| 21 | Ölmessstab | 1 | 42.520 2 |
| 22 | Stützscheibe | 3 | 40.513 |
| 24 | Gehäusescheibe | 2 | 40.039 |
| 25 | Innensechskantschraube M 8 x 30 | 4 | 41.036 1 |
| 26 | Kupfer-Dichtring | 4 | 41.500 |
| 27 | Dichtring 30 x 42 x 7 | 1 | 40.224 |
| 28 | Flansch für D 16/220 | 1 | 40.225 |
| 30 | Motor Yanmar L100 AE-S | 1 | 24.200 |
| 52 | Spannstift | 1 | 14.148 |
| 53 | Stufenkeil | 1 | 40.222 |

Valve housing



Spare parts list Profi-Jet D 16/220 Valve housing AQ-Pump

| No. | Description | Qty. | OrdNo. | No. | Description | Qty. | OrdNo. |
|------|--|------|----------|------|--------------------------------------|------|----------|
| 1 | Ventilgehäuse AQ mit integr. UL | 1 | 40.521 | 31 | Dichtstopfen M10x1 | 1 | 43.043 |
| | ohne integr. Druckschalter | | | 34 | Edelstahlkugel Ø10 | 1 | 12.122 |
| 2 | O-Ring 18 x 2 | 6 | 40.016 | 35 | Rückschlagfeder "K" | 1 | 14.120 1 |
| 3 | Einlass- / Auslass- Ventil | 6 | 42.024 | 37 | O-Ring 18 x 2 | 1 | 43.446 |
| 4 | O-Ring 21 x 2 | 6 | 42.025 | 38 | Ausgangsstück Injektor ST30 M22x1,5 | | 43.447 |
| 5 | Ventilstopfen | 5 | 42.026 | 48 | Gummidichtung für Steckkupplung | 1 | 41.047 1 |
| 5.1 | Ventilstopfen mit R 1/4" IG | 1 | 42.026 2 | 49 | Steckkupplung für Wassereingang | 1 | 41.047 2 |
| 6 | Sicherungsring | 4 | 40.032 | 49.1 | Steckkupplungkpl. | | 41.047 4 |
| 7 | Innensechskantschraube M 12 x 45 | 4 | 40.504 | | Pos. 48 - 50 | | |
| 8 | Sauganschluss R 1/2" AG | 1 | 41.016 1 | 50 | O-Ring | 1 | 41.047 3 |
| 9 | Wassereingangsfilter | 1 | 41.046 2 | | | | |
| 13 | Gewebemanschette | 3 | 40.023 | | Repair kit sleeves | | 40.065 1 |
| 14 | Backring 20 mm | 6 | 40.025 | | consisting of: 3x No. 13; 6x No. 14; | | |
| 15 | O-Ring 31,42 x 2,62 | 3 | 40.508 | | 3x No. 15; 3x No. 16; 3x No. 18; | | |
| 16 | Leckagering 20 x 36 x 13,3 | 3 | 40.509 | | 3x No. 20; 3x No. 23 | | |
| 17 | Cu-Dichtring 21 x 28 x 1,5 | 1 | 42.039 | | 0.1.101 20, 0.1.101 20 | | |
| 18 | Gummimanschette | 3 | 40.512 | | Repair kit sleeves without | | 40.517 |
| 19 | Verschlussschraube R 1/2" | 1 | 42.032 | | brassparts consisting of: | | 40.517 |
| 20 | Distanzring mit Abstützung | 3 | 40.507 | | 3x No. 13; 6x No. 14; 3x No. 15; | | |
| 23 | Druckring 20 mm | 3 | 40.021 | | 3x No. 18; 3x No. 23 | | |
| 24 | Zwischenring 20 mm | 3 | 40.516 | | 3X INU. 18, 3X INU. 23 | | |
| 25 | O-Ring 11 x 1,5 | 1 | 12.256 | | Devision late Malance | | 40.000.4 |
| 26 | Edelstahlsitz Ø 7 | 1 | 14.118 | | Repair kit Valves | | 40.062 1 |
| 27 | Sprengring | 1 | 13.147 | | consisting of: | | |
| 29 | Dichtring 17 x 22 x 1,5 (Kupfer) | 1 | 40.019 | | 6x No. 2; 6x No. 3; 6x No. 4 | | |
| 30 | Anschlussmuffe 3/8" AG x 3/8" IG bei Ausführung mit Drehzahlregulierung | 1 | 13.136 | | | | |
| 30.1 | Verschlussschraube 3/8" AG bei Ausführung ohne Drehzahlregulierung | 1 | 40.018 | | | | |

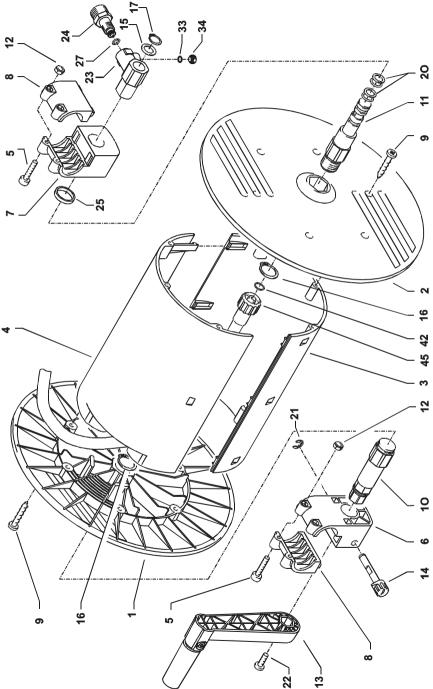


Spare parts list Profi-Jet D 16/220 Unloadervalve AQ-Pump

| No. | Description | Qty. | OrdNo. |
|-----|-----------------------------|--------------|----------|
| 5 | O-Ring 16 x 2 | 7 | 13.150 |
| 8 | O-Ring 11 x 1,44 | - | 12.256 |
| 6 | Edelstahlsitz | - | 14.118 |
| 10 | Sicherungsring | - | 13.147 |
| 11 | Edelstahlkugel | - | 13.148 |
| 12 | Edelstahlfeder | - | 14.119 |
| 13 | Verschlußschraube | - | 14.113 |
| 14 | Steuerkolben | - | 14.134 |
| 15 | Parbaks 16 mm | - | 13.159 |
| 16 | Parbaks 8 mm | - | 14.123 |
| 17 | Spanstift | - | 14.148 |
| 18 | Kolbenführung spezial | - | 42.105 |
| 19 | Kontermutter M 8 x 1 | 2 | 14.144 |
| 20 | Ventilfeder schwarz | - | 14.125 |
| 21 | Federdruckscheibe | . | 14.126 |
| 22 | Nadellager | - | 14.146 |
| 23 | Handrad | - | 14.147 |
| 25 | Elastic-Stop-Mutter M 8 x 1 | - | 14.152 |
| 26 | Manometer 0-400 Bar | - | 15.039 4 |
| 27 | Aluminium-Dichtring | 2 | 13.275 |

KRÄNZLE D 16/220

Hose drum

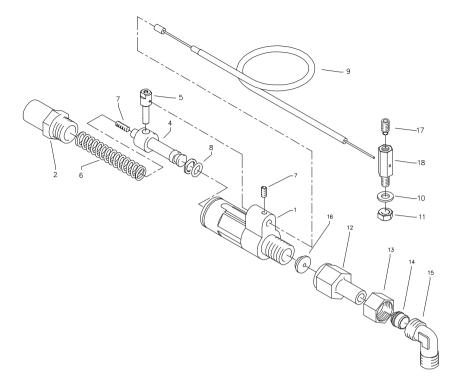


Spare parts list Profi-Jet D 16/220 Hose Drum

| No. | Description | Qty. | OrdNo. | No. | Desci |
|-----|---------------------------------|------|----------|-----|----------|
| 1 | Seitenschale Schlauchführung | 1 | 40.302 | 51 | Kurbela |
| 2 | Seitenschale Wasserführung | 1 | 40.301 | 52 | Hülse |
| 3 | Trommel Unterteil | 1 | 40.304 | 53 | Druckfe |
| 4 | Trommel Oberteil | 1 | 40.303 | 54 | Bolzen |
| 5 | Innensechskantschraube M 4 x 25 | 4 | 40.313 | 55 | Griff mi |
| 6 | Lagerklotz mit Bremse | 1 | 40.306 | 56 | Spanns |
| 7 | Lagerklotz links | 1 | 40.305 | 57 | Flachsp |
| 8 | Klemmstück | 2 | 40.307 | | |
| 9 | Kunststoffschraube 5,0 x 20 | 12 | 43.018 | | Hose |
| 10 | Antriebswelle | 1 | 40.310 | | without |
| 11 | Welle Wasserführung | 1 | 40.311 | | |
| 12 | Elastic-Stop-Mutter M 4 | 4 | 40.111 | | Hose |
| 13 | Handkurbel | 1 | 40.309 9 | | with So |
| 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 | | |
| 23 | Drehgelenk | 1 | 40.167 | | |
| 24 | Anschlußteil | 1 | 40.308 1 | | |
| 25 | Distanzring | 1 | 40.316 | | |
| 27 | O-Ring 6,68 x 1,78 | 1 | 40.585 | | |
| 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 | 4 | 13.273 | | |
| 45 | Hochdruckschlauch 20 m NW 8 | 1 | 41.083 | | |
| | | | | | |

|). | Description | Qty. | OrdNo. |
|----|---|------|----------|
| | Kurbelarm | 1 | 40.309 1 |
| | Hülse | 1 | 40.309 2 |
| | Druckfeder | 1 | 40.309 3 |
| | Bolzen | 1 | 40.309 4 |
| | Griff mit Kappe und Gleitscheibe | 1 | 40.309 5 |
| | Spannstift 4 x 28 | 1 | 40.309 6 |
| | Flachsprengring SW18 | 1 | 40.309 8 |
| | <i>Hose Drum kpl.</i> without Schlauch | | 41.259 0 |
| | <i>Hose Drum kpl.</i> with Schlauch | | 41.259 1 |

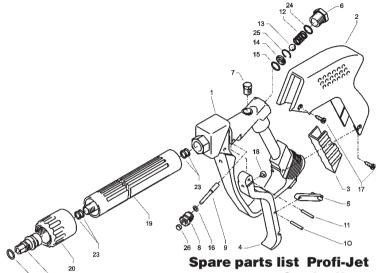
Speed control



Spare parts list Profi-Jet B 16/220 Speed control

| No. | Description | Qty. | OrdNo. |
|-----|------------------------------------|------|----------|
| 1 | Grundteil | 1 | 42.581 |
| 2 | Druckhülse | 1 | 42.584 |
| 4 | Steuerkolben | 1 | 42.582 |
| 5 | Querbolzen | 1 | 42.583 |
| 6 | Druckfeder 2,0 x 9,5 x 70 | 1 | 42.587 |
| 7 | Gewindestift M4 x 6 DIN 913-A2 | 1 | 42.592 |
| 8 | Parbaks 7 mm | 1 | 15.013 |
| 9 | Bowdenzug | 1 | 42.586 |
| 10 | Unterlegscheibe 6,4 DIN 125 | 1 | 50.189 |
| 11 | Sechskantmutter M6 | 1 | 14.152 1 |
| 12 | Anschlussmuffe Drehzahlregulierung | 1 | 42.585 |
| 13 | Überwurfmutter | 1 | 40.075 |
| 14 | Klemmhülse | 1 | 40.074 |
| 15 | Winkelverschraubung 3/8"x 12l | 1 | 44.092 |
| 16 | Drosselscheibe | 1 | 42.589 |
| 17 | Gewindestift M 6 x 12 DIN915 | 1 | 42.590 |
| 18 | Klemmbolzen | 1 | 42.591 |

Starlet II - Pistole



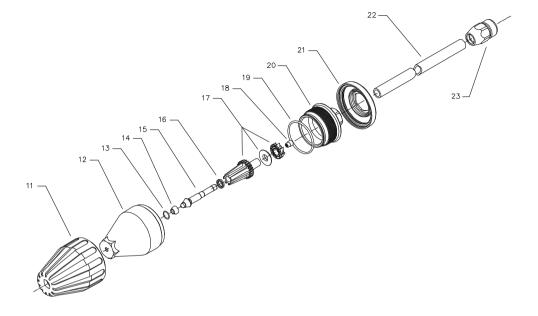
20

21 22

Spare parts list Profi-Jet D 16/220 Starlet II

| No. | Description | Qty. | OrdNo. |
|-----|---|------|--------------------|
| 1 | Ventilkörper mit Handgriff | 1 | 12.294 |
| 2 | Sc hutz hülse | 1 | 12.295 |
| 3 | Abdeckschutz | 1 | 12.296 |
| 4 | Abzugshebel grau | 1 | 12.298 3 |
| 5 | Sicherungshebel | 1 | 12.149 |
| 6 | Abschlussschraube M 16 x 1 | 1 | 12.247 |
| 7 | Stopfen | 1 | 12.287 |
| 8 | Gewindeführungshülse 3mm R1/4" AG | 1 | 12.250 1 |
| 9 | Aufsteuerbolzen abgesetzt 3mm | 1 | 12.284 1 |
| 10 | Stift | 1 | 12.148 |
| 11 | Lagernadel | 1 | 12.253 |
| 12 | Edelstahlfeder | 1 | 12.246 |
| 13 | Edelstahlkugel | 1 | 12.245 |
| 14 | Edelstahlsitz | 1 | 14.118 |
| 15 | O-Ring 11 x 1,44 | 1 | 12.256 |
| 16 | O-Ring 2,84 x 2,62 | 1 | 12.136 1 |
| 17 | Blechschraube 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 ST30 M 22 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 |
| 26 | Gleitbüchse 3mm | 1 | 12.289 1 |
| | Starlet - Gun with extention Repair kit "Starlet II" consisting of No. 8, 9, 13-16, 24-26 | | 12.320 2 12.299 |

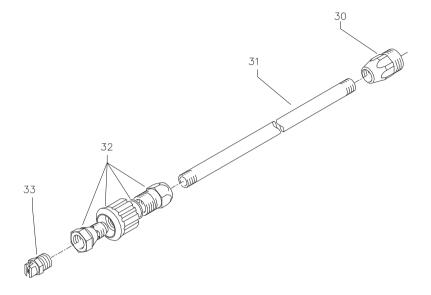
Turbokiller



Spare parts list Profi-Jet D 16/220 Turbokiller 055

| No. | Description | Qty. | OrdNo. |
|-----|-----------------------------------|------|----------|
| 11 | Sprühkörperschutz | 1 | 41.528 |
| 12 | Sprühkörper | 1 | 41.529 |
| 13 | O-Ring 6,88 x 1,68 | 1 | 41.521 |
| 14 | Düsensitz | 1 | 41.522 |
| 15 | Düse 055 | 1 | 41.532 |
| 16 | Ring | 1 | 41.533 |
| 17 | Rotor | 1 | 41.534 |
| 18 | Stabilisator | 1 | 41.524 |
| 19 | O-Ring 41 x 1,78 | 1 | 41.538 |
| 20 | Deckel | 1 | 41.539 |
| 21 | Deckelschutz | 1 | 41.540 |
| 22 | Rohr 500 mm lang; bds. R1/4" | 1 | 12.385 1 |
| 23 | Nippel M22x1,5 x R1/4" IG | 1 | 13.370 |
| | Turbokiller 055 compl. with Lance | | 41.072 4 |
| | Rep. kit Turbokiller 055 | | 41.097 1 |

Standard regulation nozzle



Spare parts list Profi-Jet D 16/220 Standard reg. nozzle

| No. | Description | Qty. | OrdNo. |
|-----|-----------------------------------|------|----------|
| 30 | Nippel ST30 M22x1,5 AG / M 12 x 1 | 1 | 13.363 |
| 31 | Rohr 400 mm, bds. M 12 x 1 | 1 | 15.002 |
| 32 | Regeldüse mit Regulierring | 1 | 13.201 2 |
| 33 | Flat spray nozzle 2505 | 1 | 26.001 |

Please specify size of nozzle

Inspirection report

for KRÄNZLE - High Pressure Cleaners

Regular inspection every 12 months if used professionally!

Appliance No:

Type:

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 trigger released

2. General condition

- a) High pressure hose
- b) Spray gun
- c) Motor
- d) Oil level

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



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.

In Germany, inspections compliant with the (German) Emission Controls Act may be required for oil and gas-fired equipment, and the owner must arrange for these to be carried out independently of the main inspection.

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.



High-pressure-cleaners Nettoyeurs à haute pression Hochdruckreiniger

I. Kränzle GmbH

Elpke 97, 33605 Bielefeld



We hereby declare, that the high-pressure models:

(techn. documentation available from):

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

Kränzle D16/220

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

Machine guideline 2006/42/ **EECSpecification for electromagnetic** compatibility 2004/108/EEC Outdoor noise directive 2005/88/EC. Art. 13, High-pressure water jet machines Appendix 3, part B, chapter 27

Sound power level

measured: guaranteed: 100 dB (A) 103 dB (A)

Applied conformity evaluation procedures

Applied specifications and standards:

annex V, noise directive 2005/88/EC

EN 60 335-2-79 :2009 EN 55 014-1 :2006 EN 61 000-3-2 :2006 EN 61 000-3-3 :2008

Droitsch (Managing Director)

Bielefeld, den 21.12.09

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