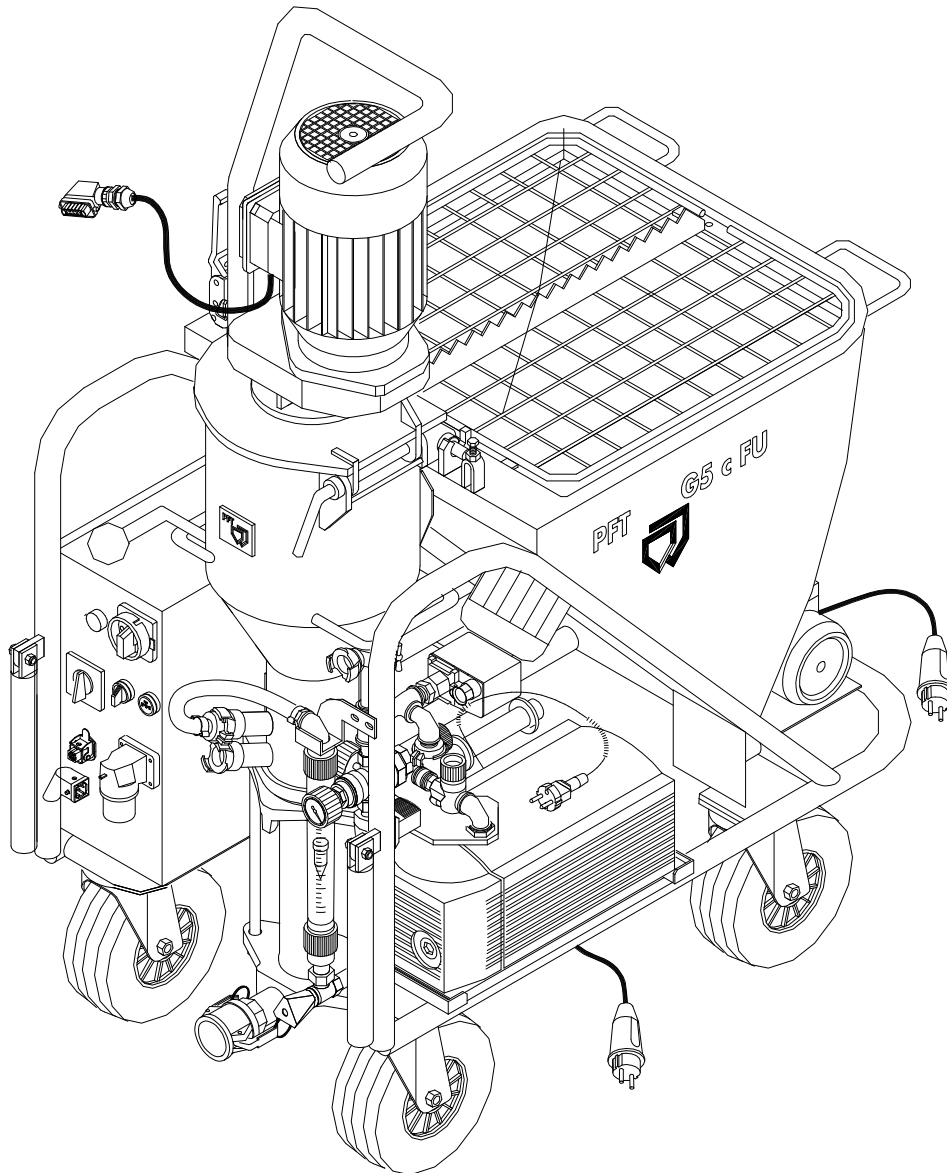


OPERATING INSTRUCTIONS
BAL.NO.00 07 45 22

MIXING PUMP

PFT G 5 c FU 230V



WE KEEP THINGS MOVING



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Dear PFT Customer,

Congratulations on your purchase. You have made a wise choice, because you appreciate the quality of a brand from a company with a name that has exemplified quality.

The **PFT G 5 c FU 230** mixing pump uses state-of-the-art technology. It was designed in a task-optimized way so that it can be a trustworthy aid for rough construction site conditions.

These operating instructions should always be stored and kept at hand at the machine's application site. They give you information on the various functions of the system. Study the operating instructions thoroughly before starting the machine, as we claim no responsibility for accidents or damage to the machine caused by incorrect operation.

The **PFT G 5 c FU 230** mixing pump will be a trustworthy aid, if it is operated correctly and handled with care.

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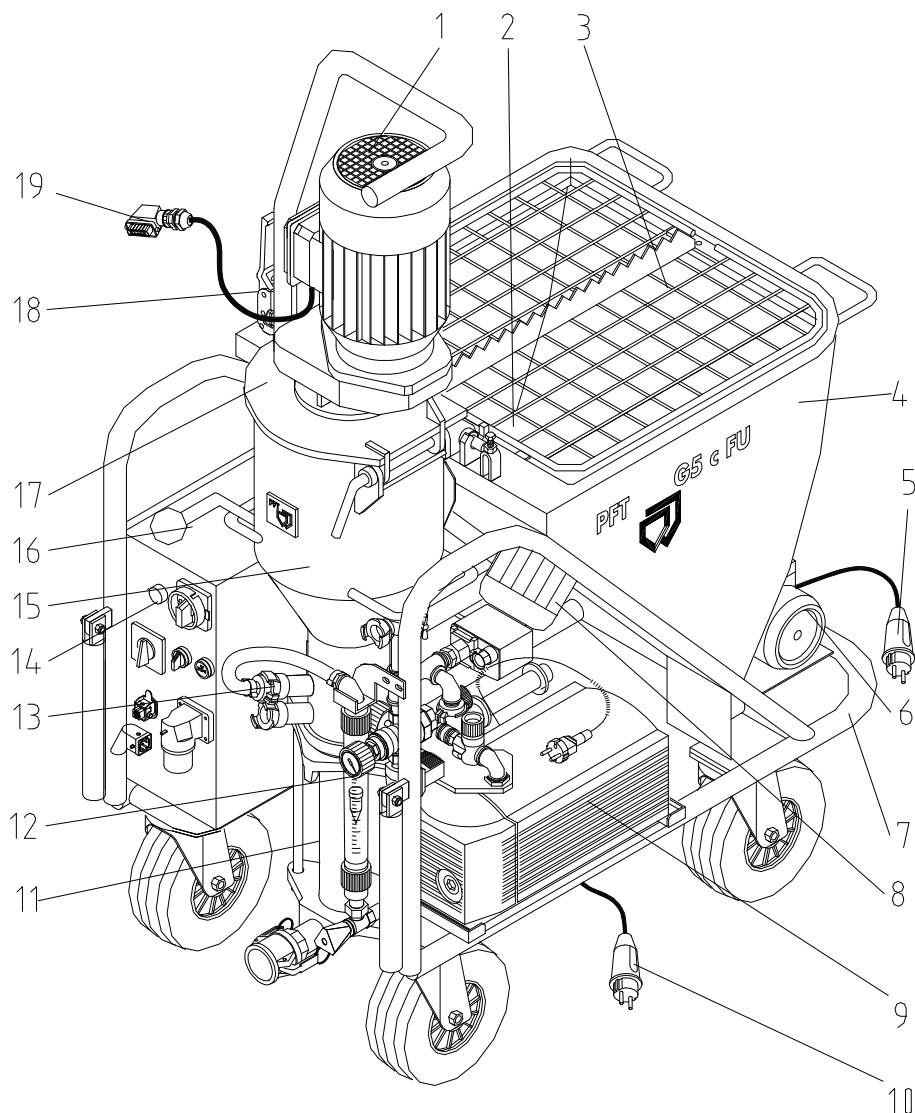
Initial inspection after delivery

An indispensable task of all technicians delivering the **PFT G 5 c FU 230** mixing pump is the inspection of the machine settings at the end of the first spraying phase. The factory settings can be changed during the first operation. If these changes are not corrected in time, immediately after initial start-up, then operating trouble can be expected.

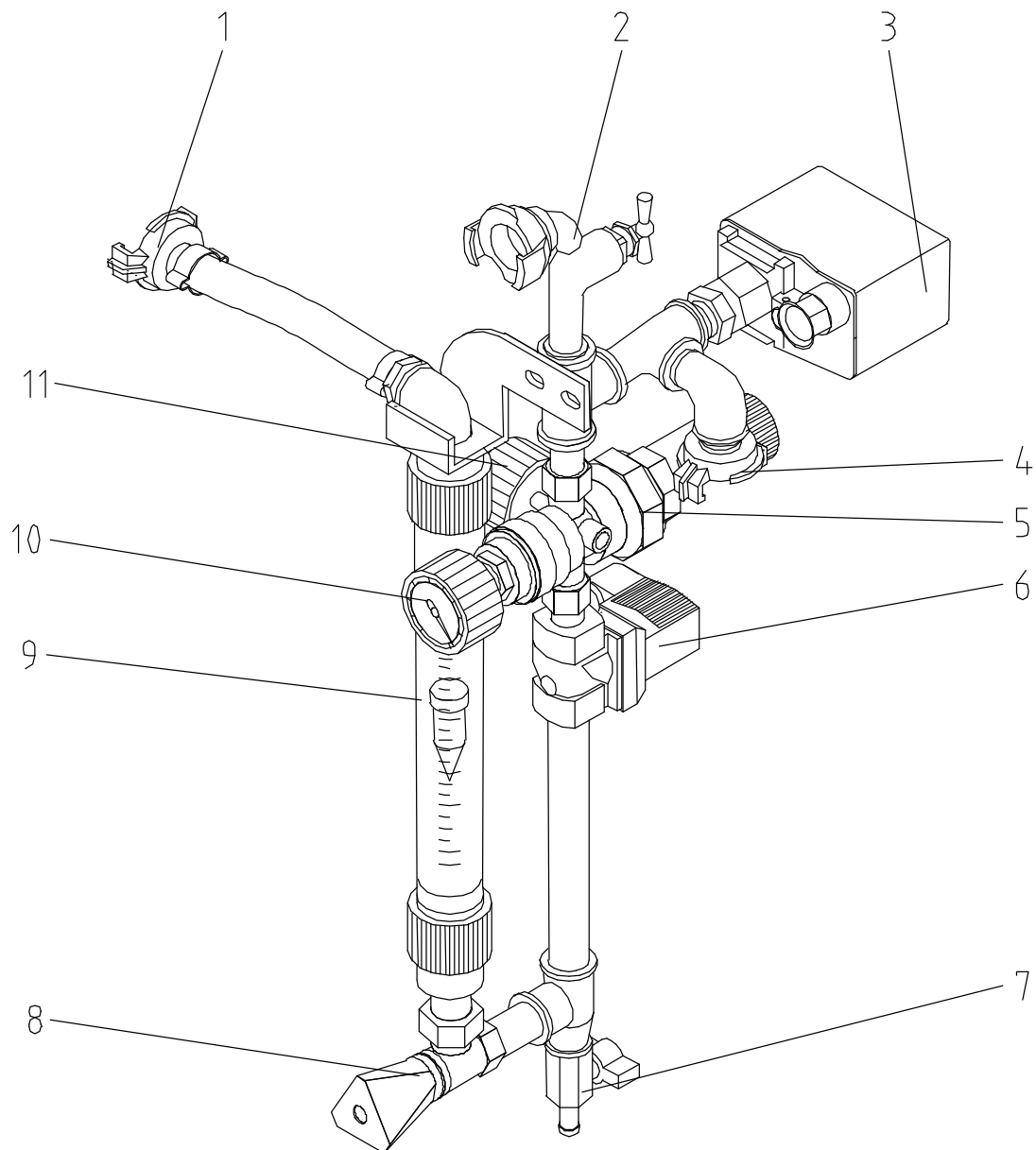
After putting the **PFT G 5 c FU 230** mixing pump into service and giving appropriate instructions, after about two hours, the technician must always carry out the following checks / make the following settings:

1. Water safety switch
2. Pump pressure, backpressure
3. Pressure relief valve on compressor
4. Air nozzle tube clearance (spray pattern)
5. Air safety switch
6. Compressor safety switch
7. Remote control switch
8. Pressure reducer
9. Motor protection switch

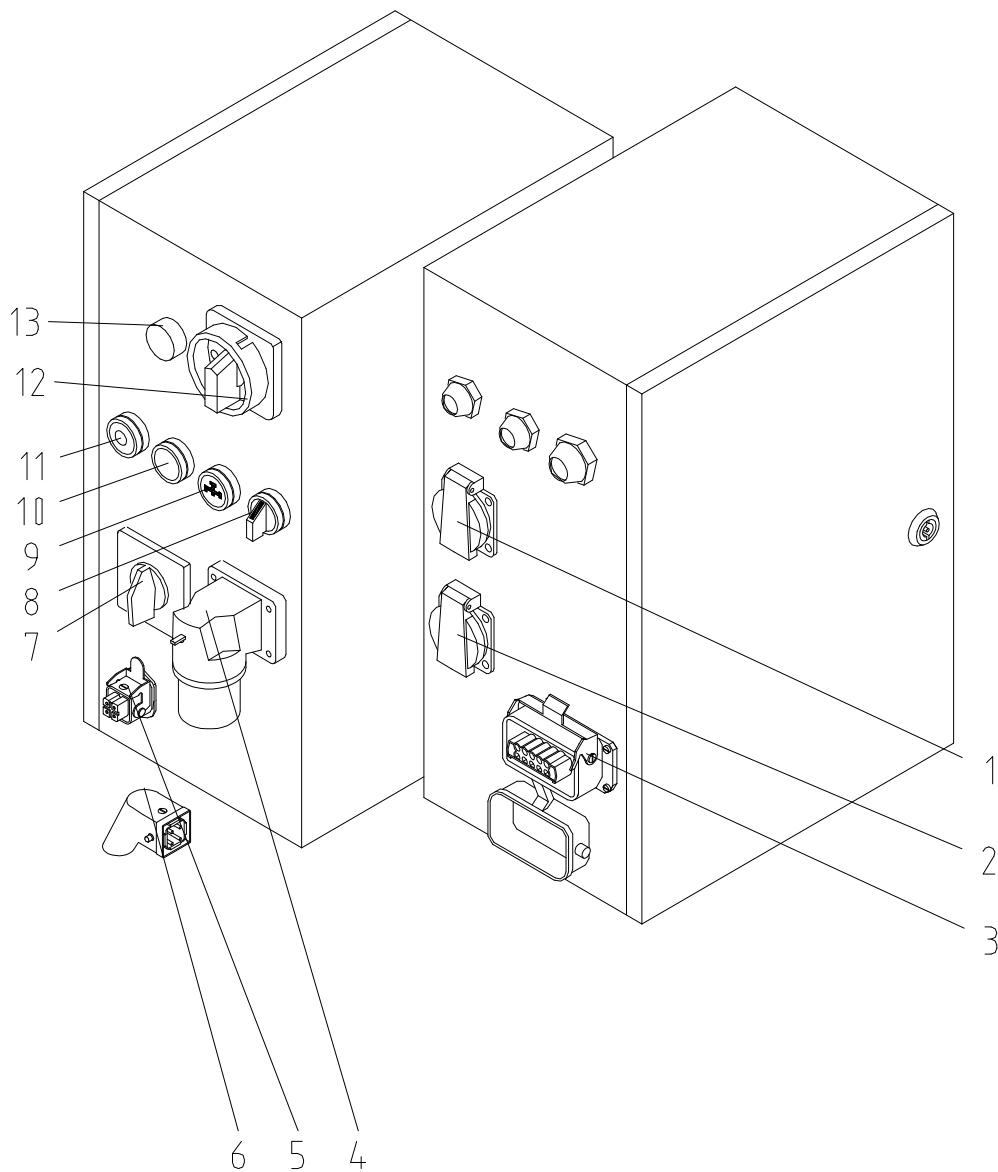
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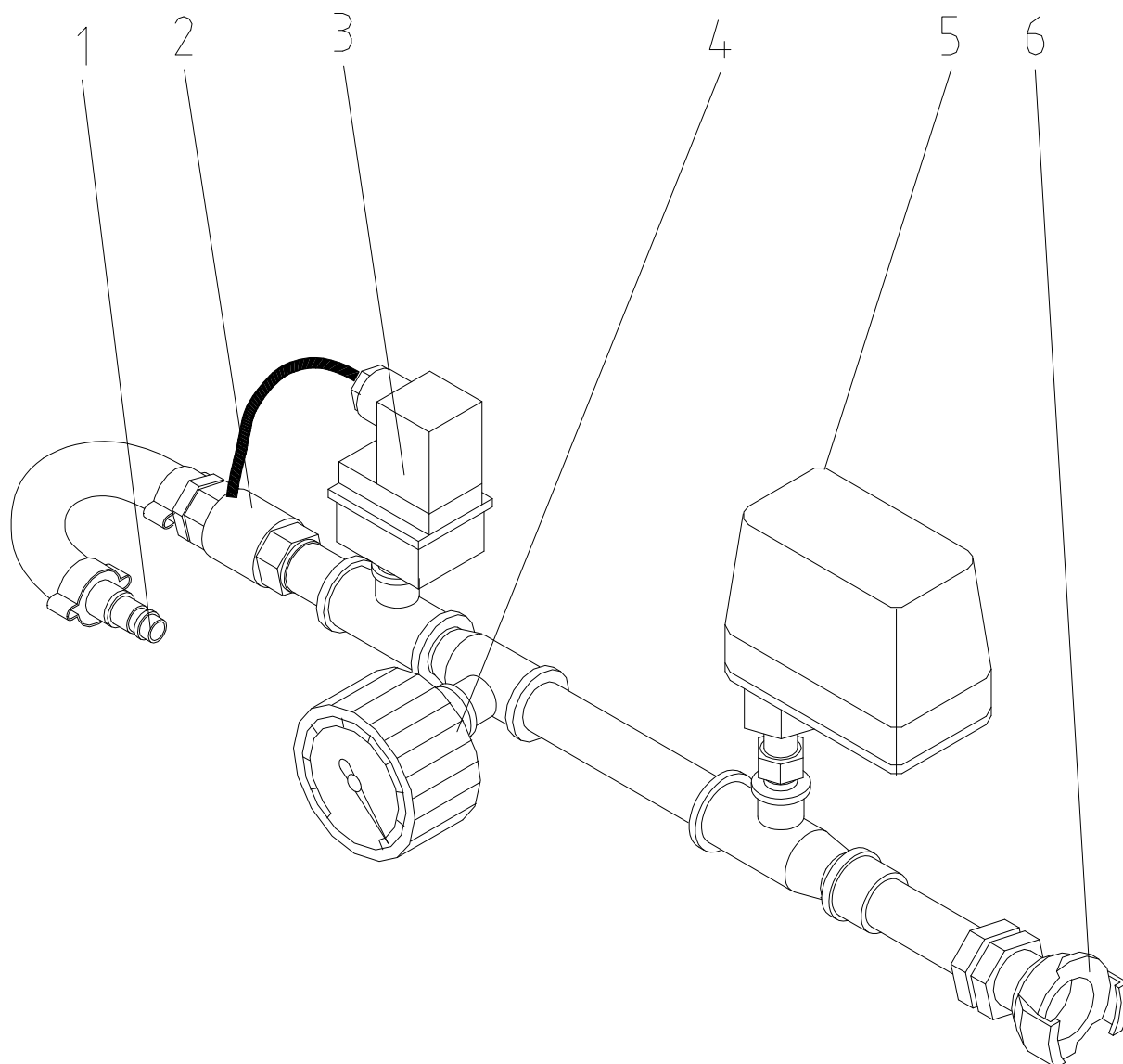
- | | |
|--|--|
| 1. Mixing pump motor | 11. Pump system D6-2L |
| 2. Star wheel | 12. Water manifold |
| 3. Protection grille with bag opener | 13. Water inlet |
| 4. Material hopper | 14. Control box |
| 5. Connecting cable high pressure pump | 15. Mixing tube with exchangeable flange |
| 6. High pressure pump | 16. Locking lever |
| 7. Frame | 17. Motor flange |
| 8. Star wheel gearbox | 18. Snap lock |
| 9. Compressor | 19. Motor connection cable |
| 10. Connection cable compressor | |



- | | |
|--------------------------------------|------------------------------------|
| 1. Water to mixing tube | 7. Outlet tap |
| 2. Water intake valve | 8. Needle valve |
| 3. Water safety switch | 9. Water flow meter |
| 4. Water intake (high pressure pump) | 10. Gauge primary water pressure |
| 5. Pressure reducer | 11. Gauge water operating pressure |
| 6. Solenoid valve | |



- | | |
|--|--------------------------------------|
| 1. Socket compressor 230 V, 16 A | 8. Motor mixer direction of rotation |
| 2. Socket high pressure pump 230 V, 16 A | 9. Water flow button |
| 3. Housing 10-pin, mixer motor | 10. Operation ON |
| 4. Main power supply CEE 3X16 A | 11. Operation OFF |
| 5. Remote control socket 42 V | 12. Main switch |
| 6. Blind plug for remote control socket | 13. Fault control lamp |
| 7. Selector switch star wheel | |



- 1. Air from compressor
- 2. Counter flow valve
- 3. Air pressure safety switch

- 4. Air pressure gauge
- 5. Air pressure safety switch
- 6. Air to the spraying gun

The **PFT G 5 c FU 230** mixing pump is a continuously operating mixing pump for pre-mixed ready-to-use dry mortar. It can be filled either with bagged material or using the delivery or injection hood.



Please observe the processing guidelines of the material manufacturer.

The machine consists of carryable single components of small, handy dimensions and light weight that allow fast, convenient transport.

When operating the machine, the following aspects must be observed:

1. Connection worksite power - control box
2. Connection control box – pump motor
3. Connection control box – compressor
4. Connection compressor – air manifold
5. Connection water supply – water manifold / high pressure pump
6. Connection air manifold – air hose
7. Connection air hose – spraying gun
8. Connection mixing tube – mortar pressure gauge
9. Connection mortar pressure gauge – mortar hose
10. Connection mortar hose – spraying gun

The following terms and symbols are used in this manual for particularly important information:

NOTE:



Special information for running the machine efficiently.

WARNING!



Special information, regulations and restrictions concerning the prevention of damage.

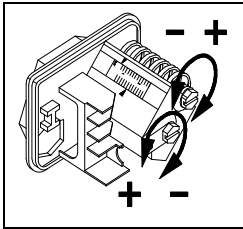
WARNING!

The machine should only be used if it is in technically perfect condition and in compliance with the regulations. Pay attention to safety and the operating instructions. It is especially important to immediately rectify all faults which could impair safety. Proper machine operation includes following the instructions in the operating manual and complying with the inspection and maintenance conditions.

In order to make operating our machines as easy as possible for you, we would like to briefly inform you of the most important safety regulations. If you comply with these regulations, you will be able to use our machine in a safe and quality-assuring manner for a long time to come.

1. Follow all safety instructions and danger warnings on the machine. Ensure that all instructions are kept legible!
2. Inspect the machine for visible damage and defects at least once every shift! If you notice any safety-threatening alterations to the machine or its operating behavior, stop the machine immediately and notify your supervisor!
3. Do not attempt to modify the machine in any way which may impair its safety without first consulting your machine dealer! This also applies to the installation of unchecked "safety devices"!
4. All spare parts must comply with the technical requirements of the manufacturer. This is guaranteed for all original PFT parts!
5. Only trained or authorized personnel should operate the machine. Clearly define all lines of responsibility for operation, equipping, service and maintenance!
6. Personnel undergoing training should only be allowed to operate the machine under the supervision of experienced personnel!
7. All electrical work should be carried out by a qualified electrician or by trained personnel under the supervision of a qualified electrician and should comply with electro-technical regulations.
8. Observe all instructions for turning the machine on and off. Watch control lamps for signals.
9. If the machine is completely switched off for maintenance and repair work, it must be ensured that it cannot be switched back on accidentally (for example, lock the main switch and remove the key, or attach a warning sign to the main switch).
10. Before cleaning the machine with a water jet, seal all openings through which water could enter, thereby impairing the safety and proper functioning of the machine (electric motors and control boxes). After cleaning, remove all covers.
11. Only use original fuses with prescribed amps!
12. Control box must be closed during operation!
13. Disconnect the machine from any external energy source before you relocate it, even if you are only moving it a short distance. Prior to putting the machine back into service, it should be connected to the mains correctly.
14. Set up the machine on stable and horizontal ground and secure it against unintentional movements.
15. Lay out the conveying lines safely. Do not rest them on sharp edges!
16. Depressurize all conveying systems before opening conveying lines!
17. When unblocking hoses, stand away from the machine to avoid injury through high-pressure discharges of mortar. Always wear safety goggles. No other persons should be near the machine.
18. If the permanent noise level exceeds 85 dB(A), appropriate noise protection devices must be provided.
19. If required, wear the following protective clothing while spraying: Safety goggles, safety shoes, safety clothing, gloves, protective skin cream and respirator mask.
20. Have the machine inspected by a qualified person. This should however happen at least once a year.



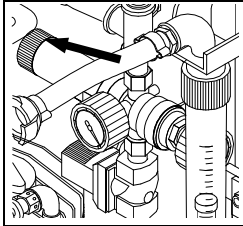


Safety switch

	Switching on the machine	Switching off the machine
Water	2.2 bar	1.9 bar
Air	0.9 bar	1.2 bar
Compressor	2 bar	3 bar

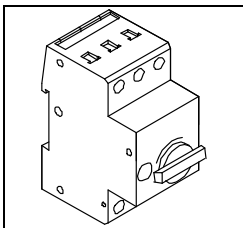
Compressor safety valve

1.5 bar against closed air pipe (factory setting, secured)



Pressure reducing valve

1.9 bar for maximum flow at water manifold (1000 l/min)

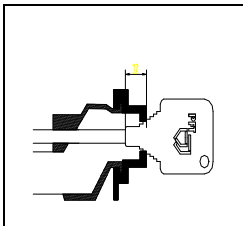


Motor protection switch

	Output	Setting value	Designation
Star wheel	0.37 kW	1.6 A	Q2

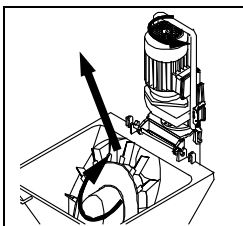
Air nozzle tube gap

The gap between air nozzle tube and spray cap should always be equivalent to the diameter of the spray cap;
e.g.: 14 mm spray cap = 14 mm gap.



Direction of rotation of the star wheel motor

The star wheel usually operates independent of the direction of rotation. If a SILOMAT conveying system is being used, we recommend a clockwise direction of rotation (factory setting). This ensures that the pump motor also runs in the correct direction.

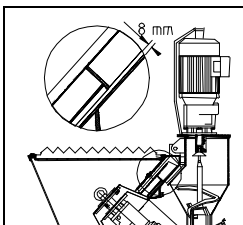


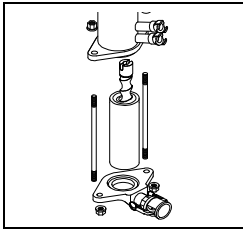
Star wheel

Gap star wheel to hopper floor: Factory setting approx. 8 mm

Rule of thumb:

1.5 x diameter of largest dry mortar particle. If required, star wheel distance disk (item no. 20 10 19 00) can be installed for coarse plaster.





The **PFT G 5 c** mixing pump is standard-equipped with a D6-2L pump system.

Rotor and stator are subject to wear and must be inspected on a regular basis.

WARNING!

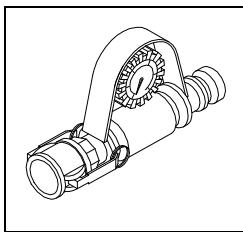
The use of a mortar pressure gauge is absolutely imperative according to the safety regulations of the Builder's Guild.



PFT mortar pressure gauges monitor the mortar consistency efficiently and easily.

Some advantages of the mortar pressure gauge:

- Exact regulation of correct mortar consistency
- Constant monitoring of correct conveying pressure
- Early detection of clogging or overloading of pump motor
- Early detection of clogging or overloading of pump motor
- Establishes zero pressure
- Contributes significantly to the safety of operating personnel
- Durability of pump components



PFT pump components

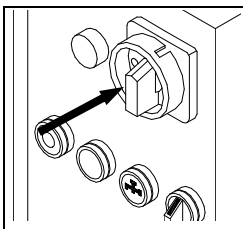
New pump components with a conveying hose of 10 m should attain a conveying pressure of approx. 15 bar / 30 bar and maintain a backpressure of approx. 8 bar / 12 bar before and after the first spraying. We recommend using the PFT pressure tester with coupling and outlet tap to monitor the backpressure (item no. 20 21 68 10).

During installation/removal of the mortar pump, the following must be observed:

- the main switch must be switched off during assembly.

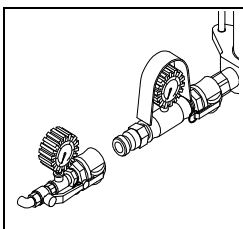
Furthermore observe that:

- a new rotor and stator must be run in; real pressure values can only be determined after the first spraying.
- pump components which neither attain the required conveying pressure nor maintain the required backpressure are worn out and must be replaced.



Checking the conveying pressure and backpressure

- Connect 10 m conveying hose
- Connect the pressure tester to outlet tap at end of the hose
- Open valve
- Switch on machine and let water run until water emerges from the outlet tap (let hose bleed)



- Close valve
- Let pump run against pressure until there is no more increase in pressure
- Switch off the machine
- If the required pressure is no longer attained, the maintenance-free pump must be replaced
- Check the backpressure
- A backpressure of approx. 14 bar should be maintained in the hose by the screw pump (for TWISTER D5-2,5)

NOTE:

The test pressure with water should be 5 to 10 bar above the expected mortar conveying pressure!

An adverse position of the screw pump in the liner will result in water flowing back to the hopper accompanied by a distinct gurgling noise. Switch the machine on and off repeatedly until you find the position in which the rotor seals with the stator.

NOTE!

1. Stator TWISTER D5-2,5 can be used up to 30 bar operating pressure.
2. The minimum conveying distance depends mainly on how the mortar flows. Heavy, coarse-grained mortar does not flow easily. Fluid mortars, filling compounds and floor screed flow easily.
3. Use thicker mortar hoses if you exceed an operating pressure of 30 bar.
4. To avoid machine breakdowns and excessive wear on pump motor, pump shaft and pump, always use original spare parts

PFT rotors

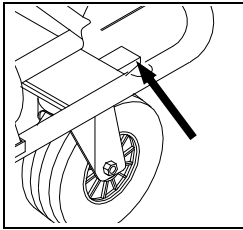
PFT stators

PFT pump shafts

PFT mortar pressure hoses

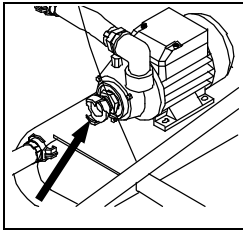
PFT clamps.

These components are compatible with one another and form a single constructive unit together with the machine. If you do not follow these recommendations, you will not only lose your warranty rights, but the quality of the mortar you are producing will also suffer.



- Transport assemblies as near as possible to the object to work with (assembly see transport).

- Lock the castor before putting the machine into service.



- Connect water intake to 3/4" hose. Open water intake to vent and clean the hose line. Close water intake.

- Connect water hose to inlet of water manifold / water pump.

Close drainage valves on water manifold

- at a water pressure below 2.5 bar, the installed water pump can be used to increase pressure.

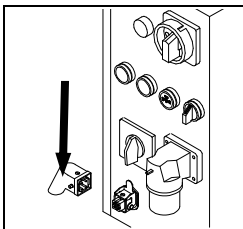


WARNING!

When working using the water barrel, the suction inlet with filter screen (item no. 20 47 50 00) must be mounted (bleed water pump).

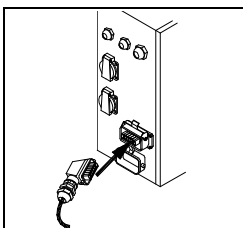
The machine may only be connected to a 16 A worksite switchgear assembly with approved 30 mA FI safety switch. The connection cable must be equivalent to the H07 RN-F 3x2.5 mm² version.

We always recommend using the PFT power cable 3x2.5 mm², 25 m with earthing plug and CEE coupling (item no. 20 42 34 20).

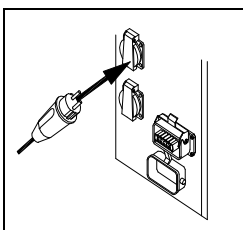


Before the cabinet box is powered, the following must be observed:

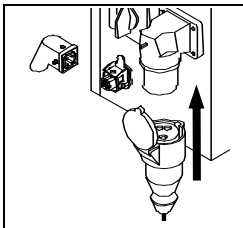
- Turn off main reversing switch (position "0", lockable)
- Turn star wheel switch to "0" position
- Pull out blind plug



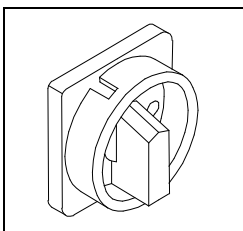
Connect pump motor (10-pin plug)



Switch off compressor (pull out plug)



Connect control box to power supply



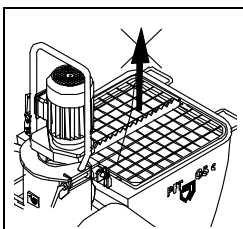
Now the following steps must be carried out:

Turn on the main switch

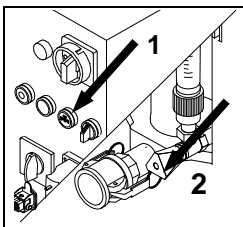


Warning!

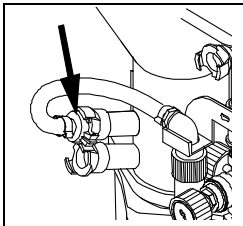
The protective grille must not be removed during operation or while preparing the machine.



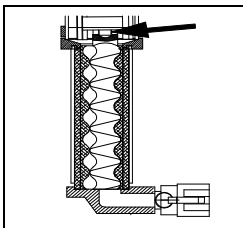
Press water flow button (1) (water pump runs), adjust estimated water quantity at the needle valve (2).



Connect water hose of water flow meter to upper water inlet of the mixing tube.



Press water flow button briefly. On starting, there must be a sufficient quantity of water in the mixing area so that the rotor head is covered (check for leaks, screw pump might be defective).

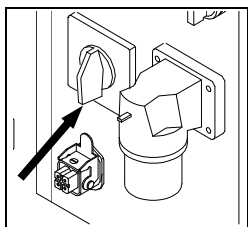


Check water level (can be done with tilted pump motor).



WARNING!

If the 7-pin connection plug of the mixing pump motor is removed, the control circuit is interrupted (starting lock). To put the machine back into service, the green OFF switch must be used again.



Turn **star wheel switch** briefly to "Hand". The star wheel can be switched to the positions:

HAND

0

AUTOMATIC.

HAND

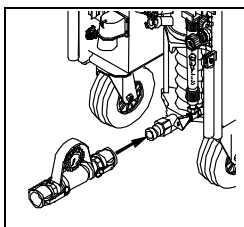
The star wheel always runs if the machine is connected and switched on. In this position, mortar can be added to the mixing area, if the pump is not running. We call this "Swamping"! For heavy or dispersion mortars we recommend "swamping" and the brief opening of the mixing area's lower water connection so that excess water can be drained. (The control circuit must be interrupted by removing the blind plug).

IMPORTANT!

The **TWISTER D 6-3** pump **always requires swamping!**

ZERO

Star wheel is switched off thus interrupting the supply of mortar to the mixing area. E.g. when cleaning the mixing area with a mixing cleaner or when adjusting the pump.

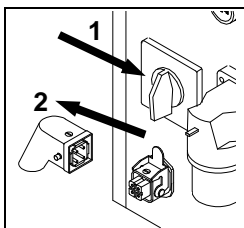


AUTOMATIC

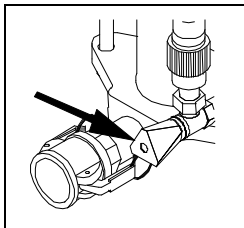
Star wheel runs in synchronization with the mixing pump and is switched on and off using the air control or remote control.

Connect the mortar pressure gauge to the pressure flange.

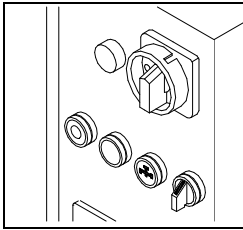
Fill the storage container with dry mortar.



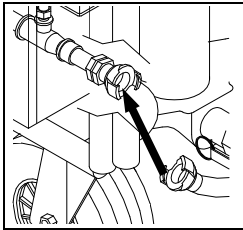
Turn star wheel switch (1) to automatic. Pull out blind plug (2). The machine is now running. The mortar consistency can now be checked at the mortar outlet flange (do not yet connect mortar hose). While the motor is running, adjust the water quantity to approx. 10 % above the reference value. The reference value is the water value for the correct mortar consistency;
e.g.: Knauf MP 75 – reference value approx. 650 to 750 l/h



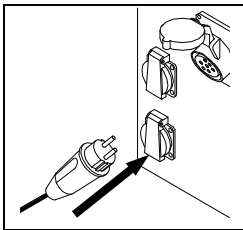
If mortar emerges, correct the water supply for optimum consistency by adjusting the water quantity using the needle valve – visible at the cone of the water flow meter. Turn the hand wheel in clockwise direction to reduce water flow. Turn it in the opposite direction to increase water flow.



Operate red "OFF" pressure switch (machine stops)



Connect air hose to air manifold and spraying gun



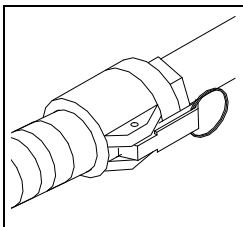
Switch on compressor (insert plug)

Connect all required mortar hoses to each other and flush with water to avoid hose blocks (do not leave water in hoses). To do so, use cleaner coupling (in tool bag). If mortar quality is unknown, pour approx. 3 liters lime or plaster slurry into the first hose after the machine.



WARNING!

Make sure that the coupling is clean and correctly joined.

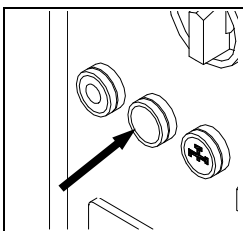


Connect hoses to the mortar pressure gauge and again observe the mortar hose seal.

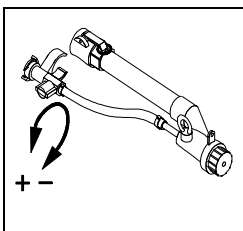
Connect spraying gun (finishing coat gun or crimp valve gun) to mortar hose.

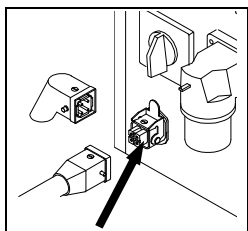
Press selector switch "ON" and open air tap on spraying gun. The machine starts; cleaning can now be started.

At first, mortar of thin consistency emerges at the spraying gun, then mortar of the correct consistency. If required, use the needle valve for making further adjustments.



Open and close the air tap on the spraying gun to switch the machine on and off.



**NOTE:**

If work is done without air (e.g. when pumping flow screed), the machine is switched on and off via 42 V remote control. For this purpose, the blind plug must be removed from the coupling and the remote control plug connected.

Mortar consistency

The mortar consistency is correct when the material on the surface being sprayed flows into itself forming a consistent coat (we recommend that you apply material on wall surfaces from top to bottom). If the material is too dry, even mixing and spraying cannot take place. There may be clogging in the hose. Pumping components are thus subject to greater wear and tear.

Spraying guns and nozzles

Use spraying nozzles of 10, 12, 14, 16 or 18 mm, depending on the mortar consistency. Larger nozzles reduce the projection speed and thus the rebound effect. Smaller nozzles create better atomization. Note that the gap between the air nozzle tube and the nozzle outlet should correspond to the diameter of the nozzle (see also page 12).

Interruption of work

Follow all instructions from the mortar manufacturer when interrupting spraying work.

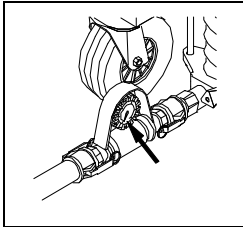
It is recommended to clean the pump prior to longer interruptions. To do so, see the corresponding step on page 20 - Measures at the end of work and when cleaning.

Every interruption of the spraying procedure results in minor irregularities of the mortar consistency. This normalizes however, as soon as the machine has been working for a short while. So do not change the water supply each time you detect irregularities, but instead wait until the consistency of the mortar emerging at the spraying gun has self-adjusted.

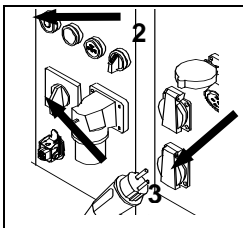


WARNING!

Prior to dismantling the screw pump and opening the motor tilt flange, make sure under all circumstances that pump and hoses are pressurized.



Observe the mortar pressure gauge display.

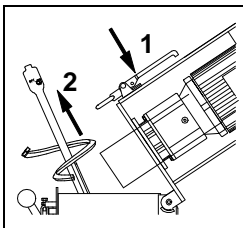


At the end of work, switch off the mortar supply (star wheel) (turn star wheel switch to "0" position!) (1)

Empty mixing tube

Press red "OFF" pressure switch

Switch off compressor (3) (pull plug) and open tap on spraying gun.



Disconnect mortar hose (only when depressurized)

Release snap lock (1) on motor tilt flange and tilt motor

Remove and clean mixing shaft (2)

Clean mixing area with spatula.

Insert cleaning shaft and mixing tube cleaning agent with the scrapers at the bottom.

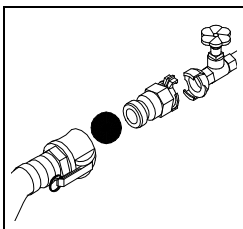
Connect motor tilt flange and lock with snap lock, connect 7-pin coupling to control box.

Press green "ON" pressure switch approx. 5 - 10 seconds and let machine run until mixing tube is clean.

Press red "OFF" pressure switch, remove mixer cleaner.

Install cleaned mixing shaft.

Fold motor tilt flange to close and lock with snap lock.



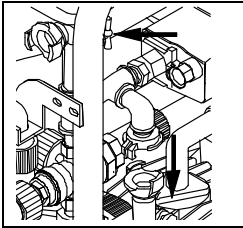
To be cleaned, the hoses and mortar pressure gauge are connected to the water intake valve using the transition adapter (in the tool bag). This prevents the pump from damage. First a water-soaked sponge ball must be pressed into the hose inlet.

Then open the water valve until the sponge ball emerges at the end of the hose.

The corresponding sponge balls must be used separately for different hose diameters.

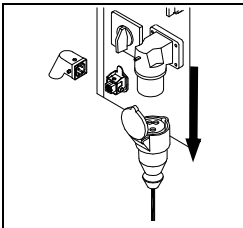
Repeat this procedure if required.

Clean the spraying gun separately using running water.

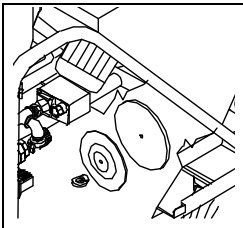


Close water intake valve

Depressurize the water hose by opening and then carefully disconnecting the water valve at the side



Disconnect power supply

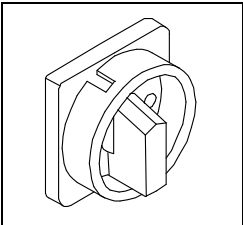


If the machine is not going to be used for several days, empty the material hopper. To do so, open the hopper cleaning flap and remove the star wheel, if required.



WARNING!

Prior to dismantling the hopper cleaning flap, the main switch must be turned off / the power supply must be disconnected.



How can problems with the PFT G 5 c FU 230 mixing pump be avoided or rectified?

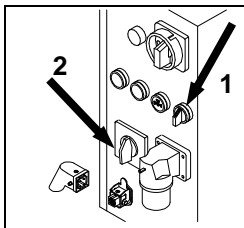
Fault	Cause	Remedy
Machine does not start!	<i>Water</i> Water pressure too low - Gauge indicates pressure below 2.2 bar	- Check water intake - Clean water inlet filter - Switch on high pressure pump
Machine does not start!	<i>Electricity</i> - Power supply okay? - FI safety switch triggered? - Main switch turned on? - Fault indicator lamp lights up? - Motor safety switch triggered? - Self-holding button not pressed? - Automatic plump level defective? - Fuses defective? - Water safety switch misadjusted: - Pump jammed?	
Machine does not start!	<i>Air</i> - Insufficient pressure gradient in remote control due to blocked air pipe or blocked air nozzle tube	Clean blocked air pipe or air nozzle tube!
Machine does not start!	- Air safety switch misadjusted: - Compressor connected and switched on?	
Machine does not start! (No display by flow meter)	<i>Material</i> - To much dry material in hopper or mixing area - Material in pump component too dry	Half-empty hopper and restart. WARNING! Turn off main switch and pull plug first
Water isn't running! (No display at flow meter)	- Solenoid valve (bore in diaphragm blocked) - Solenoid defective - Pressure reducing valve closed - Water intake blocked at pump tube - Needle valve closed - Cable to solenoid valve defective	
Pump motor does not start!	- Pump motor defective - Connecting cable defective - Plug or panel-mounted socket defective - Motor safety switch defective or triggered	
Machine stops after a short while!	- Water inlet filter contaminated - Pressure reducing filter contaminated - Hose connection or water supply too small - Water intake line too weak or too long	Clean or replace filter and enlarge water connection possibly install additional high pressure pump

Machine does not stop	<ul style="list-style-type: none">- Air pressure safety switch mis-adjusted or defective- Air hose or gaskets defective- Air tap on spraying gun defective- Compressor output insufficient- Air pipe not connected to compressor	<ul style="list-style-type: none">- Adjust air pressure safety switch- Replace air hose or check compressor
No mortar flow (Air bubbles)	<ul style="list-style-type: none">- Bad mixture in mixing tube- Motor clutch defective- Mixing shaft defective- Inlet at mixing tube is wet- Mortar clogs, narrowing the mixing tube inlet	<ul style="list-style-type: none">Add more waterReplace motor clutchIf this doesn't help, clean or replace mixing tube, dry and restart
Mortar flow "thin-thick"	<ul style="list-style-type: none">- not enough water- Water pressure safety switch misadjusted or defective- Mixing shaft defective; no original PFT mixing shaft- Pressure reducer misadjusted or defective- Rotor worn out, defective- Stator worn out or too loose at clamp- Clamp defective (oval)- Inner wall of mortar hose defective- Rotor too deep in pressure flange- No original PFT spare parts	<ul style="list-style-type: none">If there is not enough water, increase by 10 % for approx. ½ minute and then turn back to normal setting or tighten or replace pump componentsReplace mortar hoseCheck mixing shaft and motor clutch
Water level rises in mixing tube during operation	<ul style="list-style-type: none">- Backpressure in mortar hose higher than pump pressure- Rotor or stator worn out- Hose block due to mortar being too thick (high pressure due to low water factor)	<ul style="list-style-type: none">Tighten or replace stator; if required, also replace rotorRemove hose blocks
Fault indicator lamp lights up	<ul style="list-style-type: none">Overload- Motor safety switch triggered (pump motor)- due to pump stopping with dry material- due to insufficient water quantity- Motor safety switch (2.5 A) triggered (star wheel motor)- Clogging material in hopper	<ul style="list-style-type: none">Clean mixing tube and increase water intake on startingClean hopper and star wheel

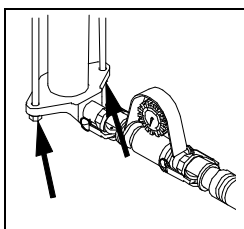


WARNING!

In accordance with the safety regulations of the Builder's Guild, all personnel clearing hose blocks should wear safety goggles and should position themselves in such a way as to avoid injury through discharged mortar.



- Switch off star wheel motor (2)
- Run pump motor briefly in reverse, to do so:
- cover outlet opening of pump tube with foil
- "Reverse run" (3) (water intake is automatically interrupted) until pressure at mortar pressure gauge has fallen to 0 bar
- Loosen nut on pressure flange lightly so that entire residual pressure is released
- Release hose coupling and clean hose



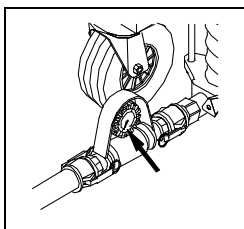
To remove residual mortar from the mortar hose, see page 20 Cleaning the hose.



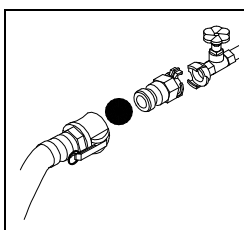
Measures to take in the case of power failure/no water supply

WARNING!

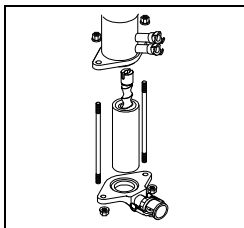
Check that all hoses are depressurized before opening the couplings (observe mortar pressure gauge display)!



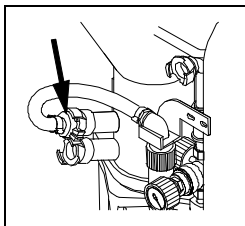
Measures to take in the case of power failure



The mortar hoses must be cleaned immediately. Cleaning can be done at the water intake valve. To do so, connect the cleaner coupling (in the tool bag) to the mortar hose first and then to the water intake valve. Force the mortar out by opening the water valve and then clean using water-soaked sponge balls.

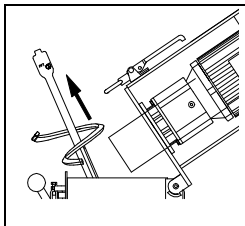


Loosen tie rod screws, remove pump, press rotor out of the stator and clean carefully. Clean pressure flange or agitator (ROTOMIX or ROTOQUIRL). Clean the mixing area and mixing shaft with water and spatula. Then assemble the pump and prepare for service.



Measures to take in the case of a breakdown of the water supply

Use suction inlet (item no. 00 00 69 06) to supply machine with clean water from a container.

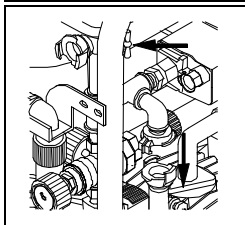


Measures to take if there is a risk of frost

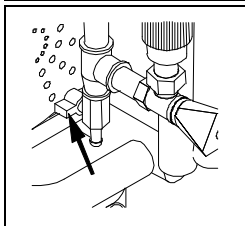
After cleaning the machine:

disconnect water supply

Remove mixing shaft

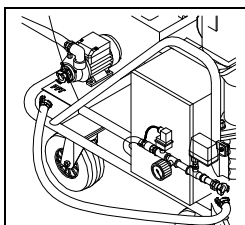


Open water intake valve, relieve water pressure in hose

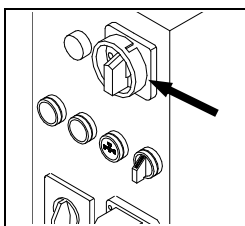


Close water supply, pinch off water hose and empty hose

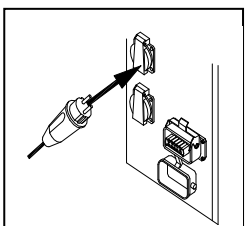
Open outlet tap at the water manifold



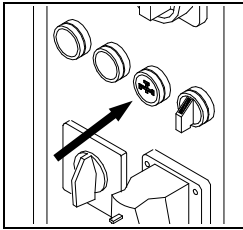
Remove water hose from the spraying gun and attach it to the water inlet



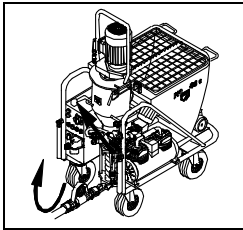
Turn on the main switch



Switch on compressor (insert plug)



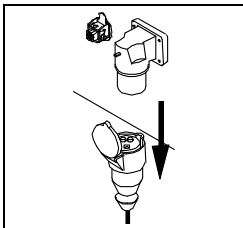
Press motor flow button. The water is now blown out of the manifold by compressed air! (at 1.5 bar for approx. 1 minute).



Empty mixing pump by folding up the entire pump component.

Disconnect and clean mortar hoses.

The machine is now completely empty with the exception of a small rest in the screw pump. The machine must however still be started carefully the next day.



Transport

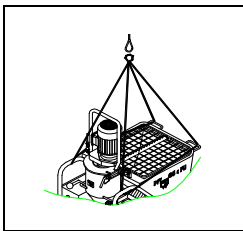
Prior to transporting the mixing pump using a crane, all loose parts (compressor) must be removed first.

Observe the ultimate load for the ropes. (min. 350 kg).

First disconnect the power supply, then all other cable connections.

Remove water supply lines.

If required, dismount mixing tube.

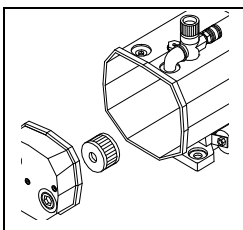


The **PFT G 5 c FU 230** mixing pump consists of several units (mixing tube, motor with tilt flange, material hopper) that can be transported separately.



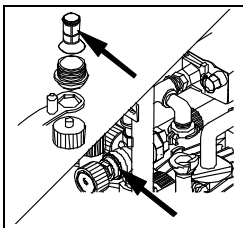
WARNING!

Check that all hoses are depressurized before opening the couplings (observe mortar pressure gauge display)



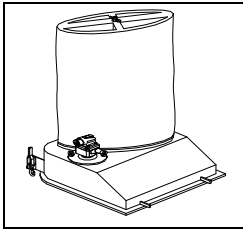
Maintenance

Clean the compressor's filter on a weekly basis, depending on operation. Repeat this procedure if required.



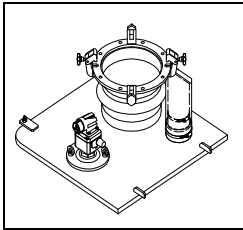
Water inlet filters in the pressure reducer should be removed and cleaned every two weeks, replace if required.

Check brass screen in water inlet on a daily basis.



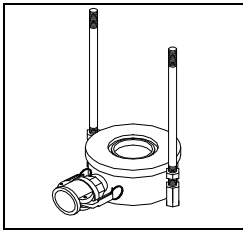
PFT injection hood for G 5 (item no. 00 04 43 34)

The PFT injection hood is for feeding the dry material into the **PFT G 5 c FU 230** mixing pump with the help of the SILOMAT system.



PFT delivery hood for G 5 (item no. 00 00 85 45)

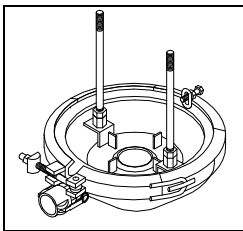
The PFT delivery hood is for feeding dry material into the **PFT G 5 c FU 230** mixing pump directly from the silo / container. If the material hopper of the **PFT G 5 c FU 230** mixing pump is reported to be empty.



ROTOMIX D pumps with size 35 coupling (item no. 20 11 80 00)

Agitator for improved solubilization and mixing of the material.
Direct drive via rotor tangs. Volume approx. 1.2 l

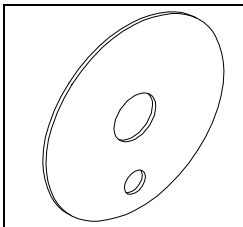
Follow all guidelines from the mortar manufacturer!



ROTOQUIRL II with size 35 coupling (item no. 20 11 84 00)

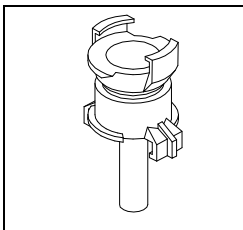
Agitator for improved solubilization and mixing of the material.
Direct drive via rotor tangs. Volume approx. 4.2 l

Follow all guidelines from the mortar manufacturer!



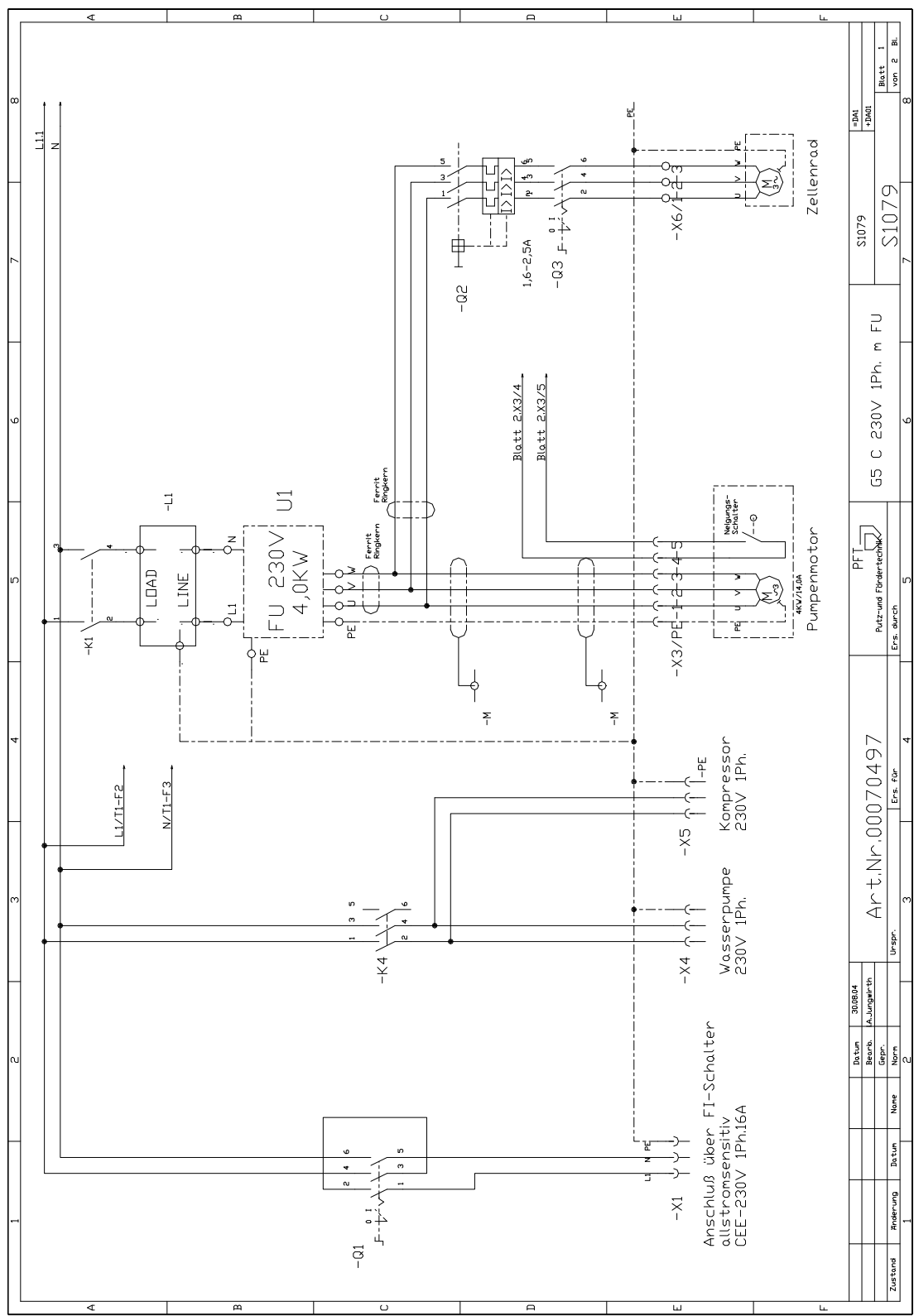
Star wheel distance disk for coarse plaster (item no. 20 10 19 00)

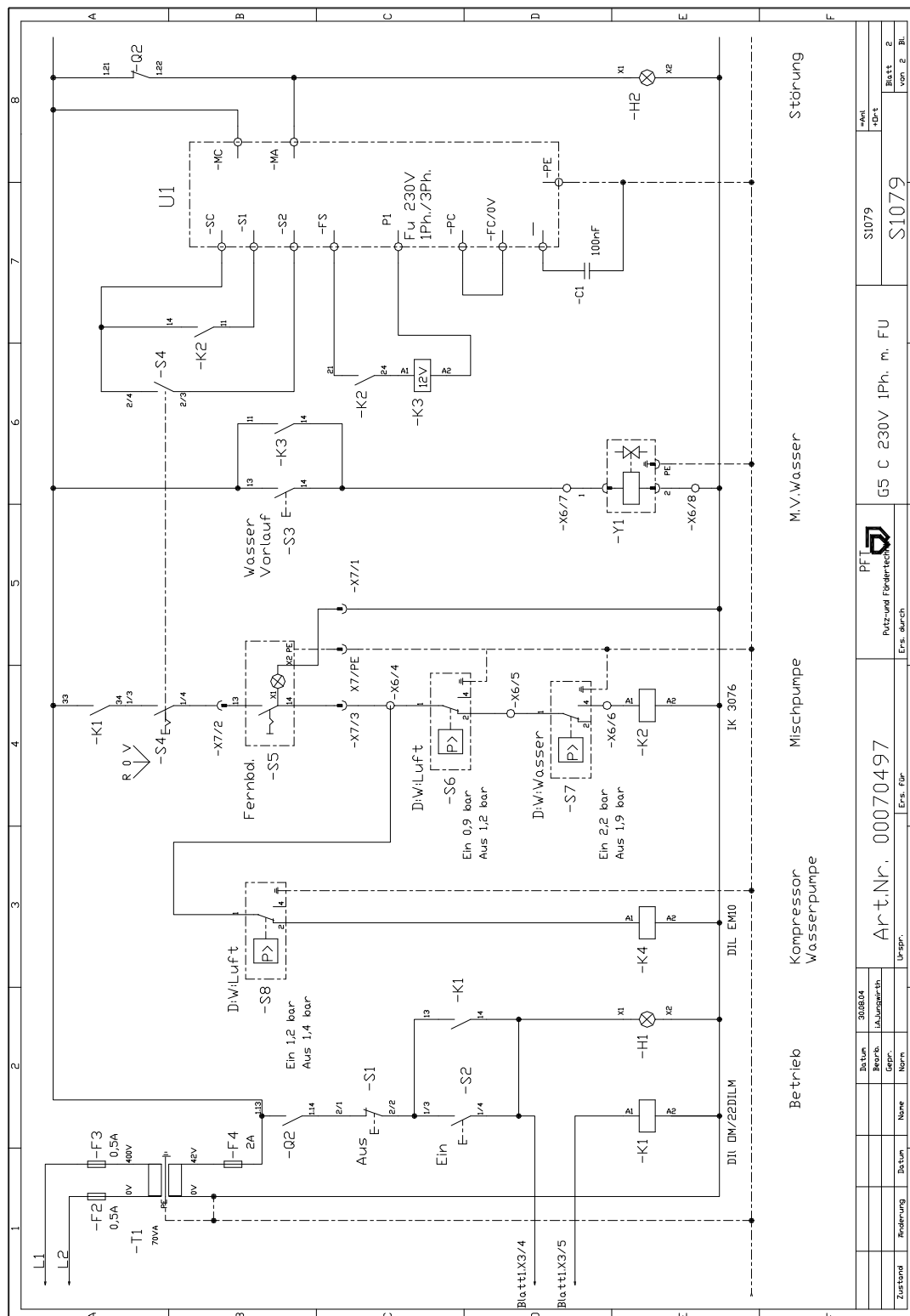
Increases the gap between the star wheel and the floor of the material hopper by 3 mm.

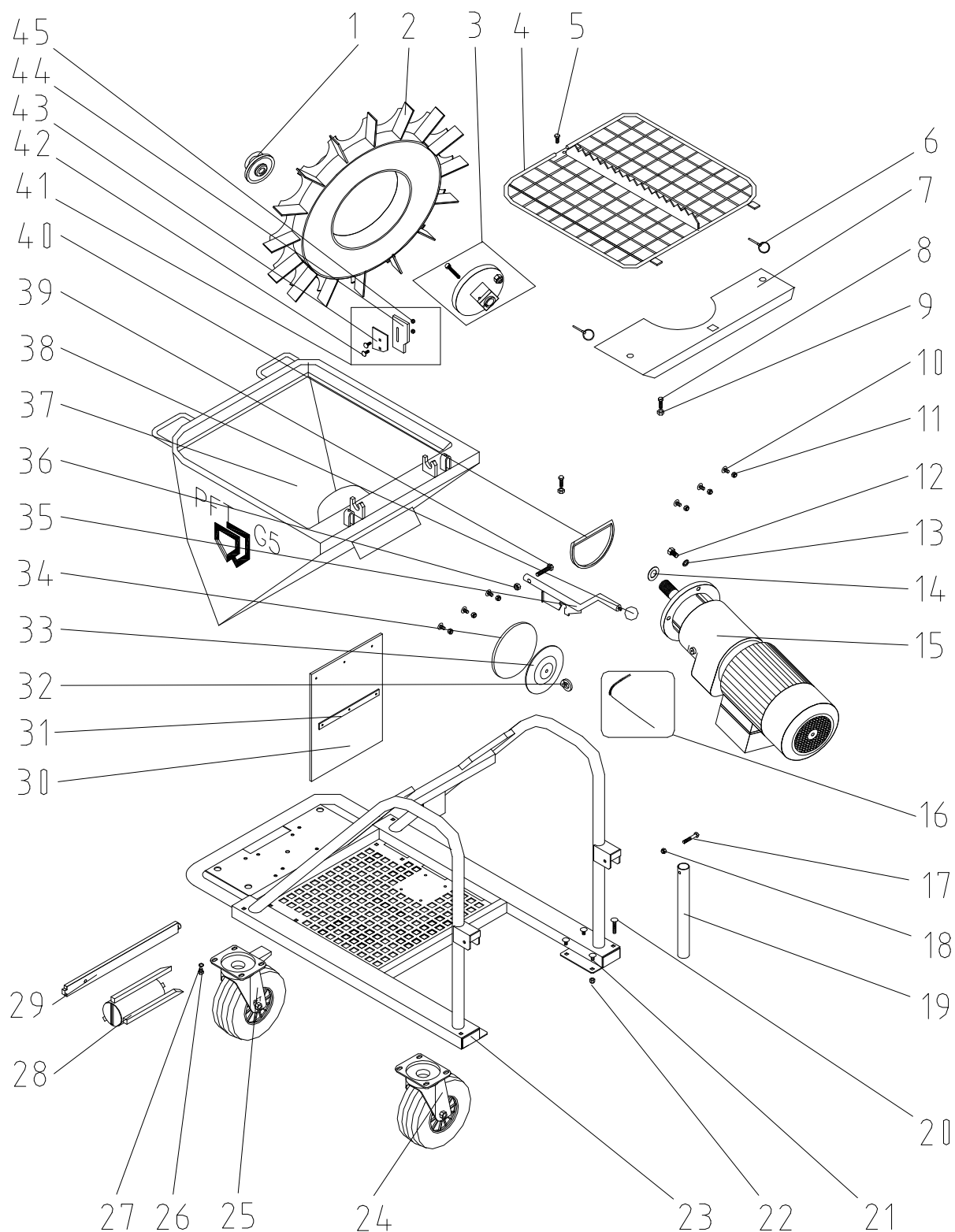


Cap for water intake with Geka coupling (item no. 20 21 58 00)

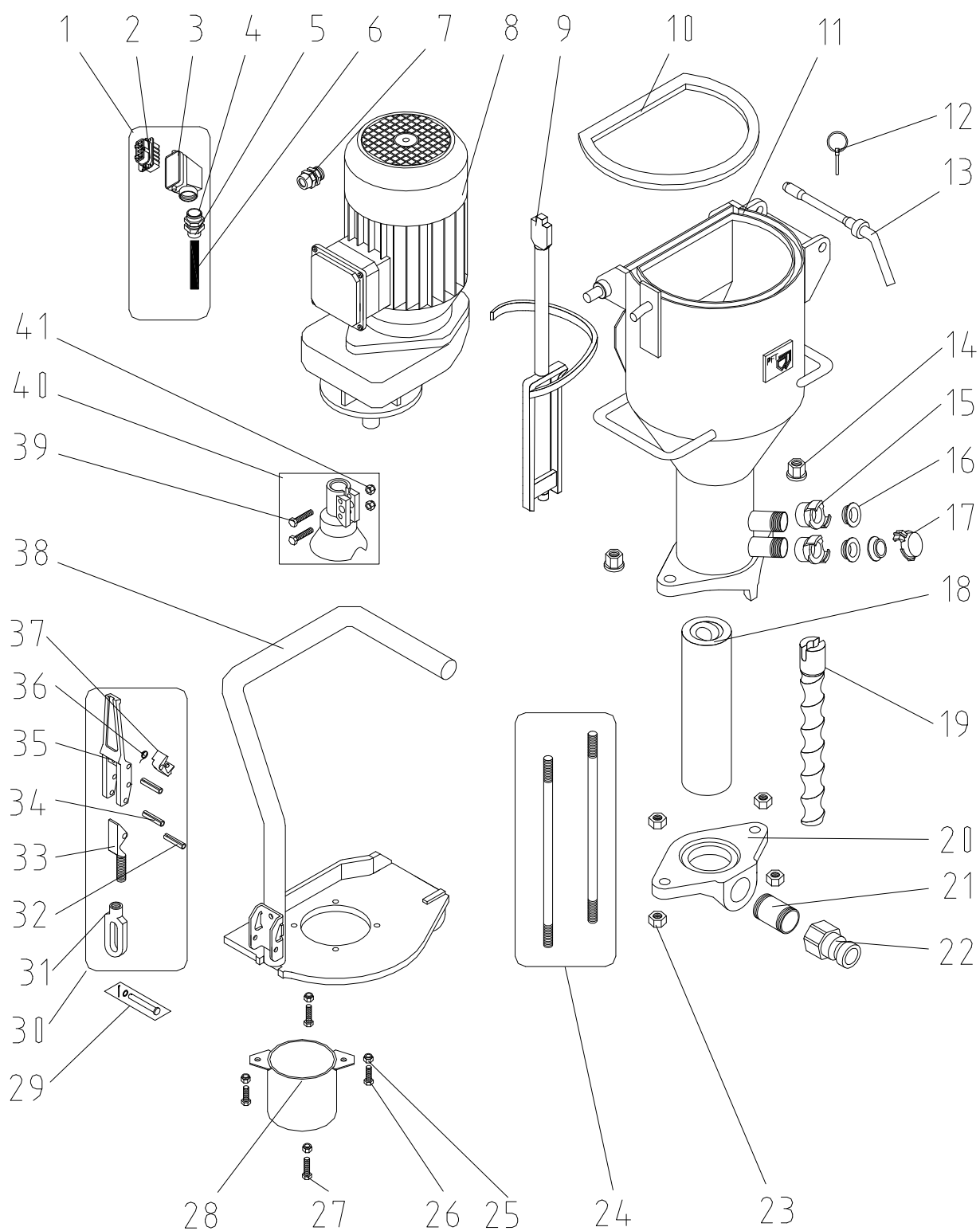
For improved injection of water into the mixing area with low water factor.



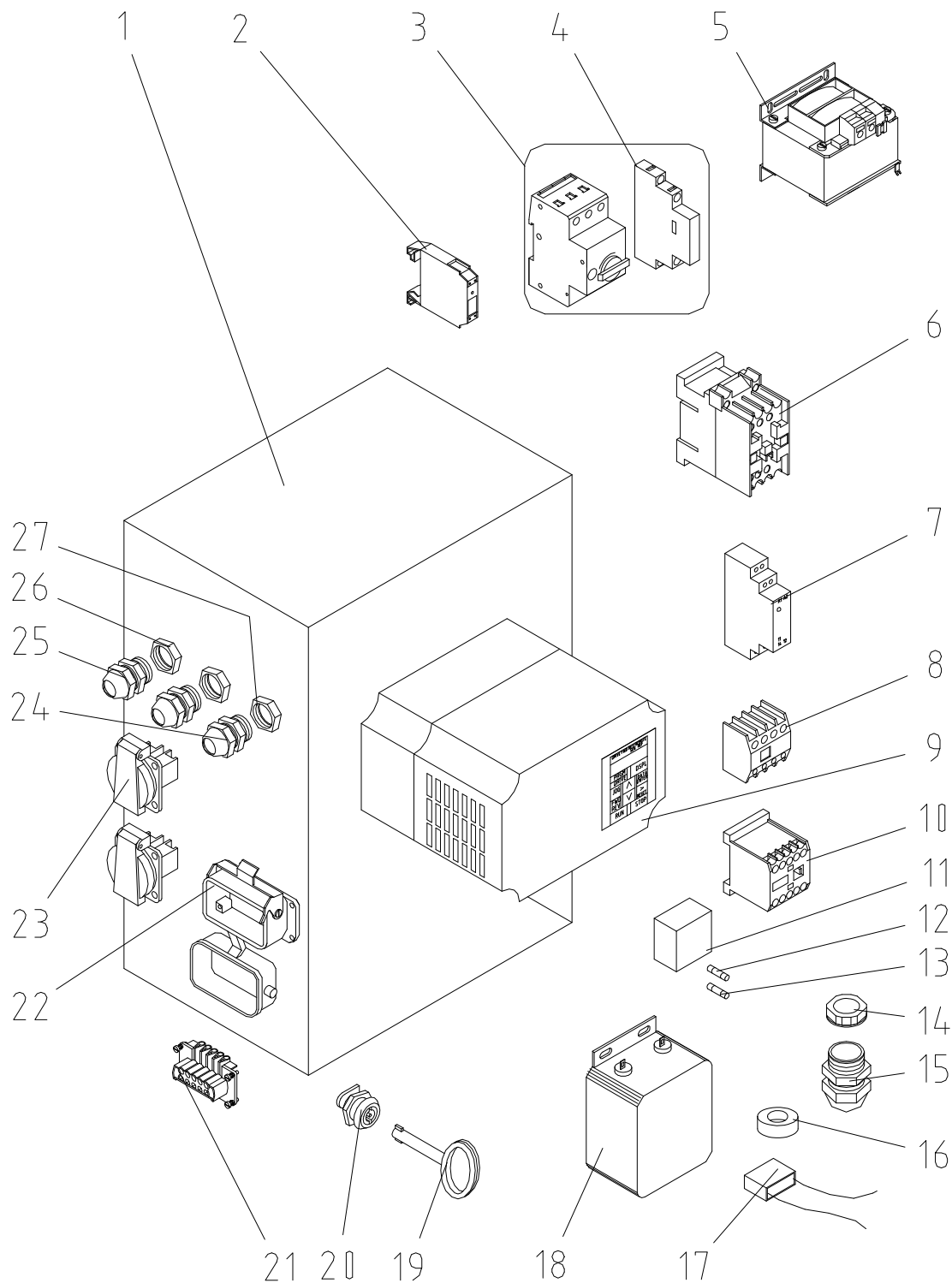




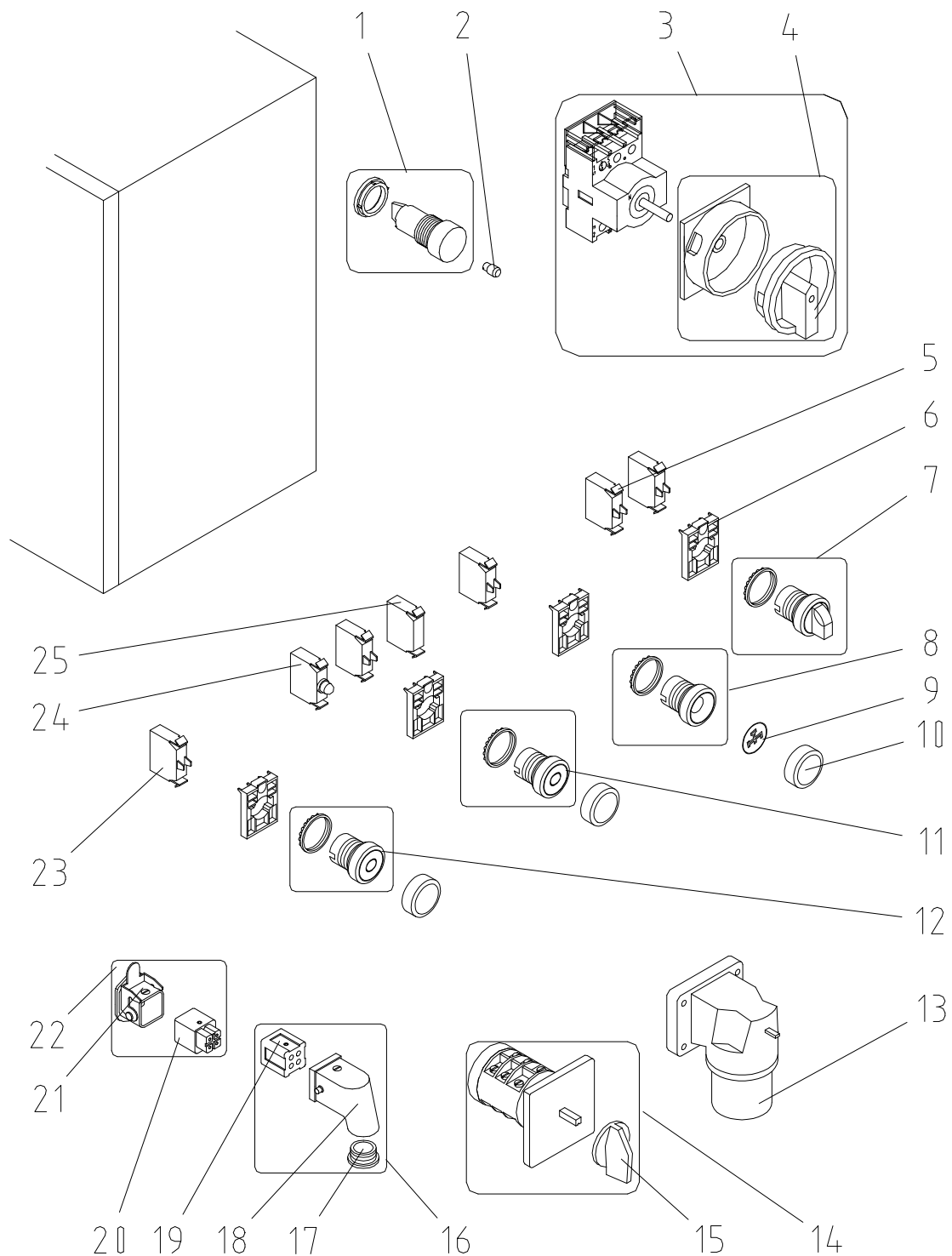
Item	Qty	Item no.	Article description
1	1	20 10 17 10	Star wheel ring nut M24
2	1	00 04 64 73	Star wheel G 5 deep-drawn RAL9002
3	1	20 10 18 10	Star wheel fixing plate
4	1	00 00 73 61	Protective grille G 5 RAL9002
5	1	20 20 61 00	Skt. screw M8 x 20 DIN 933 zinc-pl.
6	1	20 10 10 10	Splint D 4.5 with ring
7	1	00 04 56 47	Dust guard G 5 c (deep-drawn) RAL9002
8	2	20 20 78 10	Skt. screw M8 x 25 DIN 933 zinc-pl.
9	2	20 20 64 00	Skt. nut M8 DIN 934 zinc-pl.
10	6	20 20 63 14	Flat screw M8 x 16 DIN 603 zinc-pl.
11	6	20 20 72 00	Nut M8 DIN 985 zinc-pl.
12	4	20 20 99 61	Skt. screw M12 x 20 DIN 933 zinc-pl.
13	4	20 20 91 10	Spring washer B 12 DIN 127 zinc-pl.
14	1	20 10 15 02	Distance disk star wheel 1.5 mm
15	1	00 04 89 83	Gearbox 0.3 kW 12U/m RAL2004 NORD
16	1	20 42 41 46	Motor connecting cable 1.0 m 4 wire end sleeves and ring eyelet 4 mm
17	2	20 20 78 02	Skt. screw M8 x 50 DIN 933 zinc-pl.
18	2	20 20 72 00	Nut M8 DIN 985 zinc-pl.
19	2	00 04 89 96	Carrying handle G 54 E RAL2004
20	4	00 05 09 40	Flat screw M8 x 55 DIN 603 zinc-pl.
21	12	20 20 63 14	Flat screw M8 x 16 DIN 603 zinc-pl.
22	16	20 20 72 00	Nut M8 DIN 985 zinc-pl.
23	1	00 04 91 83	Frame G 5 C canted RAL2004
24	3	00 00 11 15	Castor G 5 c/ G 54
25	1	00 00 11 16	Double stop castor G 4.66
26	16	20 20 87 02	Skt. screw M8 x 10 DIN 933 zinc-pl.
27	16	20 20 91 00	Spring washer B 8 DIN 127 zinc-pl.
28	1	20 10 23 20	Mixing tube cleaner D and R pumps
29	1	20 10 23 00	Cleaning shaft
30	1	00 01 99 63	Rubber apron 380 x 290 mat. hopper G 5
31	1	00 01 99 64	Terminal strip rubber apron G 5 RAL9002
32	1	20 20 79 50	Ring nut M8 DIN 582 zinc-pl.
33	1	00 00 82 35	Cleaning hole cover G 5 RAL9002
34	1	00 00 23 58	Sealing disk cleaning hole D=173 mm
35	1	00 00 25 84	Locking device lever G 4 1 catch
36	1	20 20 72 10	Nut M10 DIN 985 zinc-pl.
37	1	00 04 58 48	Material hopper G 5 deep-drawn RAL9002 with logo
38	1	20 70 61 10	Knob shape C, M12, plastic DIN 319
39	1	20 20 96 01	Skt. screw M10 x 45 DIN 931 zinc-pl.
40	1	20 10 11 02	Gasket outlet hole
41	1	00 03 91 79	Retrofit set scraper star wheel G 5
42	2	00 02 26 01	Flat screw M6 x 20 DIN 603 zinc-pl.
43	1	00 02 26 04	Clamping plate for scraper rubber
44	1	00 02 26 02	Scraper for star wheel G 5
45	2	20 20 62 00	Nut M6 DIN 985 zinc-pl.



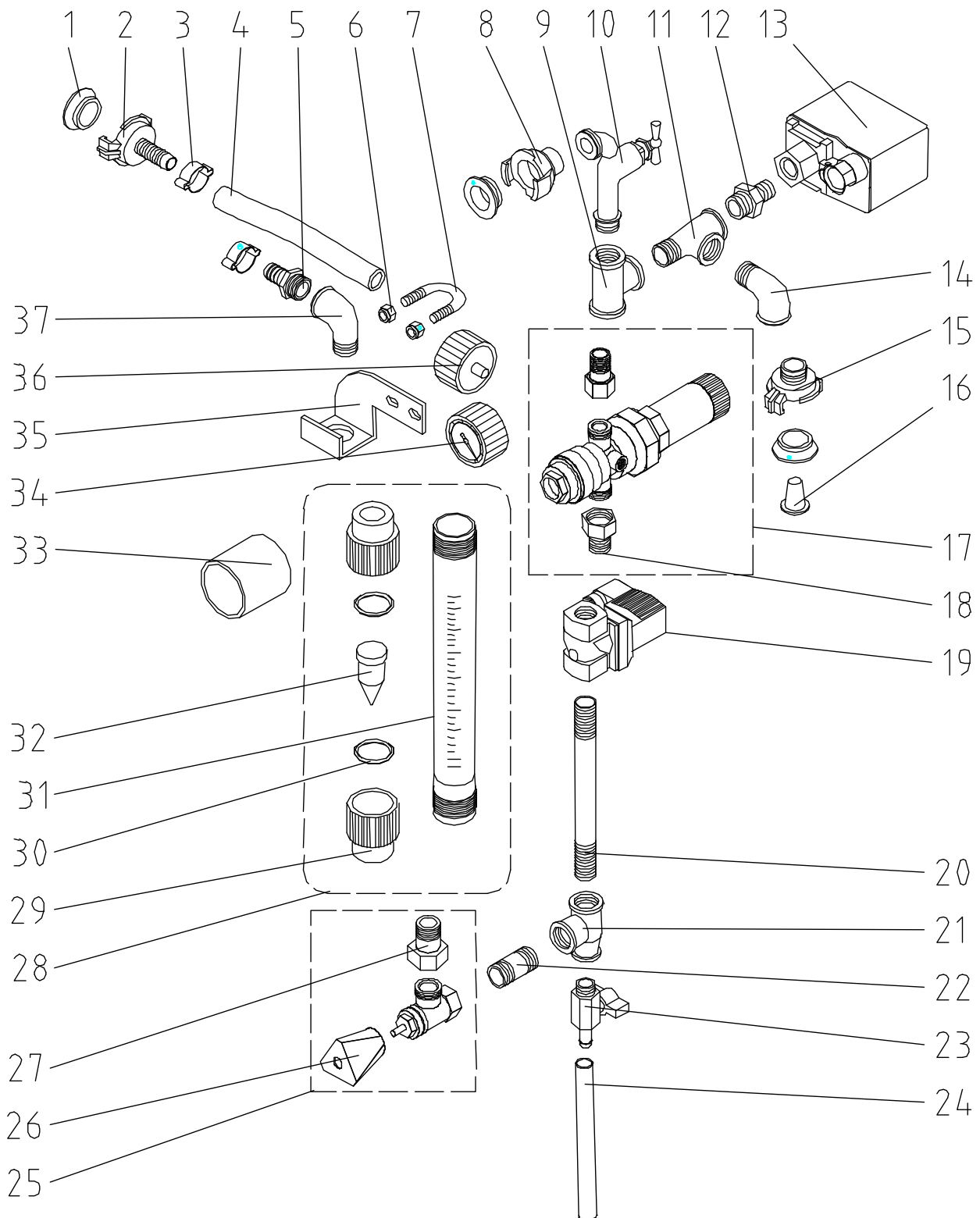
Item	Qty	Item no.	Article description
1	1	00 07 15 45	Motor connection cable 1.9 m 7 x 1.5 mm ² 16 A with 10-pin industry plug
2	1	20 43 23 00	Male insert 10-pin HAN 10 E
3	1	00 04 06 71	Socket box 10-pin HAN 10 E 16A
4	1	00 06 69 81	EMC cable screw joint M25 x 1.5
5	1	00 06 91 62	Extension (metal) PG16 / M25x1.5
6	1	00 06 91 30	Oil flex cable 7x1.5 mm ² 540P CP with shield (P)
7	1	00 06 69 81	EMC cable screw joint M25 x 1.5
8	1	00 05 35 27	Gearbox EFQ68 4 kW 400U Nei RAL2004
9	1	00 04 86 29	Mixing shaft G 4/G 5 forged RAL2004
10	1	20 10 09 00	Gasket tilt flange G 4 sponge rubber 20 x 15 x 750
11	1	20 10 06 56	Mixing tube G 4 D pump RAL 2004
12	1	20 10 10 10	Splint D 4.5 with ring
13	1	20 10 12 02	Pin motor flange zinc-pl.
14	2	20 20 99 21	Nut M16 DIN 6331 zinc-pl.
15	2	20 20 11 00	Geka coupling 1" IG
16	3	20 20 17 00	Gasket Geka coupling
17	1	20 20 16 50	Geka coupling blind plug
18	1	20 11 55 10	Stator D6-2L 200mm long, maintenance-free blue RAL5017
19	1	20 11 30 13	Rotor D6-2L blue head
20	1	00 04 16 64	Pressure flange D pump G 4 zinc-pl. 1 1/4" IG
21	1	20 20 32 60	Double nipple 1 1/4" x 40 no. 23 zinc-pl.
22	1	20 19 93 01	Coupling 25 V component 1 1/4" IG
23	4	20 20 99 20	Skt. nut M16 DIN 934 zinc-pl.
24	1	20 11 87 09	Tie rods M16 x 290 mm (1 set = 2 parts)
25	4	20 20 72 00	Nut M8 DIN 985 zinc-pl.
26	2	20 20 78 00	Skt. screw M8 x 30 DIN 933 zinc-pl.
27	2	20 20 78 01	Skt. screw M8 x 35 DIN 933 zinc-pl.
28	1	20 10 29 01	Protection tube for hauling bracket G 4/G 5/HM 200/MONOJET RAL2004
29	1	20 20 85 22	Cotter bolt 8 H11 x 58 x 54 with disk and splint zinc-pl.
30	1	20 10 08 01	Snap lock with catch
31	1	20 20 99 71	Nut for snap lock M 14 x 1.5
32	1	20 54 76 02	Dowel pin 5 x 36 DIN 1481
33	1	20 20 99 74	Screw for snap lock
34	2	20 20 85 19	Dowel pin 8 x 40 DIN 1481
35	1	20 10 08 03	Lever snap lock
36	1	20 10 08 04	Return spring
37	1	20 10 08 02	Locking device snap lock
38	1	00 04 76 21	Tilt flange G 54 with tube bail RAL2004
39	2	00 02 32 71	Skt. screw M8 x 40 DIN 931 zinc-pl.
40	1	00 06 18 58	Hauling bracket casting for mixing pumps with round escape hopper
41	2	20 20 72 00	Nut M8 DIN 985 zinc-pl.



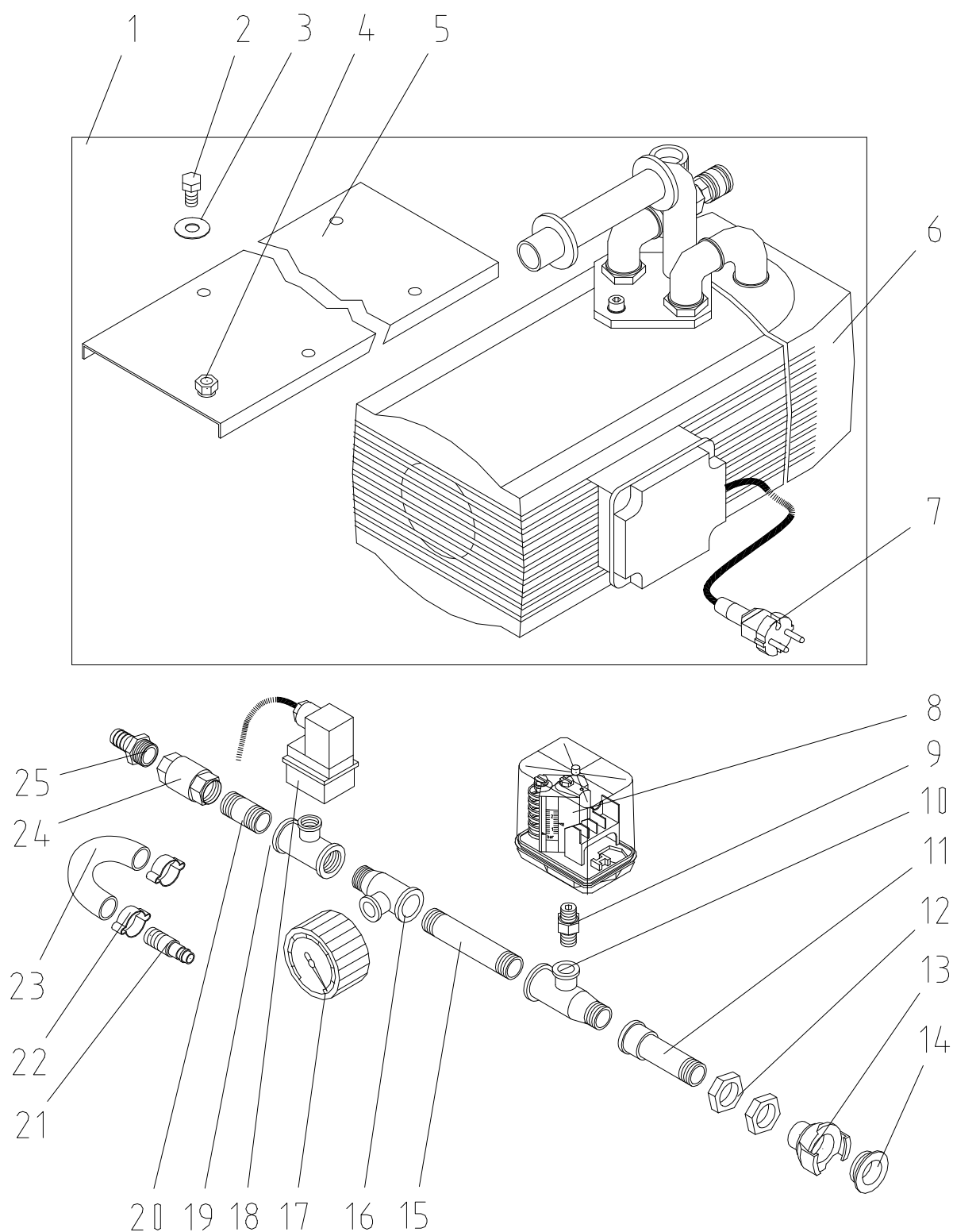
Item	Qty	Item no.	Article description
1	1	00 07 04 97	Control box G 5 c with frequency converter 230 V EMC
2	1	20 46 20 10	Switching relay STR 2 W DC 12V
3	1	00 00 93 70	Motor protection switch 1.6-2.5 A PKZM 0-2.5
4	1	00 02 14 01	Auxiliary contact NHI-11-PKZO Klöckner/Möller
5	1	00 28 07 98	Transformer unit 230 V/42V 80VA
6	1	20 44 71 00	Automatic plumb level DIL 0M 42 V
7	1	20 44 81 20	Switching relay 42 V 2 changer
8	1	20 45 04 10	Auxiliary contact 31 DIL M assembly
9	1	00 03 75 92	Frequency converter 230 V 4 KW 17.6 A programmed
10	1	20 44 66 10	Automatic plump level DIL EM 10 42 V 50 Hz/48 V 60 Hz
11	1	00 02 22 25	Foamed rubber fuse block
12	2	20 41 90 30	Fine fuse 5 x 20, 0.5 A, slow-blow
13	1	20 41 90 21	Fine fuse 5 x 20, 2.0 A, slow-blow
14	1	00 06 69 84	EMC nut M25 x 1.5
15	1	00 06 69 81	EMC cable screwed joint M25 x 1.5
16	1	00 06 69 94	Ferrite toroidal core d1-35.5 mm d2-19.2 mm
17	1	00 07 02 74	Anti-interference condenser Y2 100nF
18	1	00 07 02 43	EMC filter for frequency converter 4.0 KW 230 V 16A type: FN 207 1N-16-06
19	1	20 44 45 00	Key for control box 3 mm
20	1	00 03 62 49	Lock control box (two-way key bit)
21	1	20 43 33 00	Female insert 10-pin HAN 10E
22	1	20 43 20 01	Housing 10-pin, HAN 10 E
23	2	20 42 72 10	Earthling panel mounted socket 16 A gray no. 10199
24	1	00 04 11 27	Connector Skintop M 20 x 1.5
25	2	00 04 11 41	Connector Skintop M 16 x 1.5
26	2	00 04 11 43	Nut Skintop M 16 x 1.5
27	1	00 04 11 45	Nut Skintop M 20 x 1.5



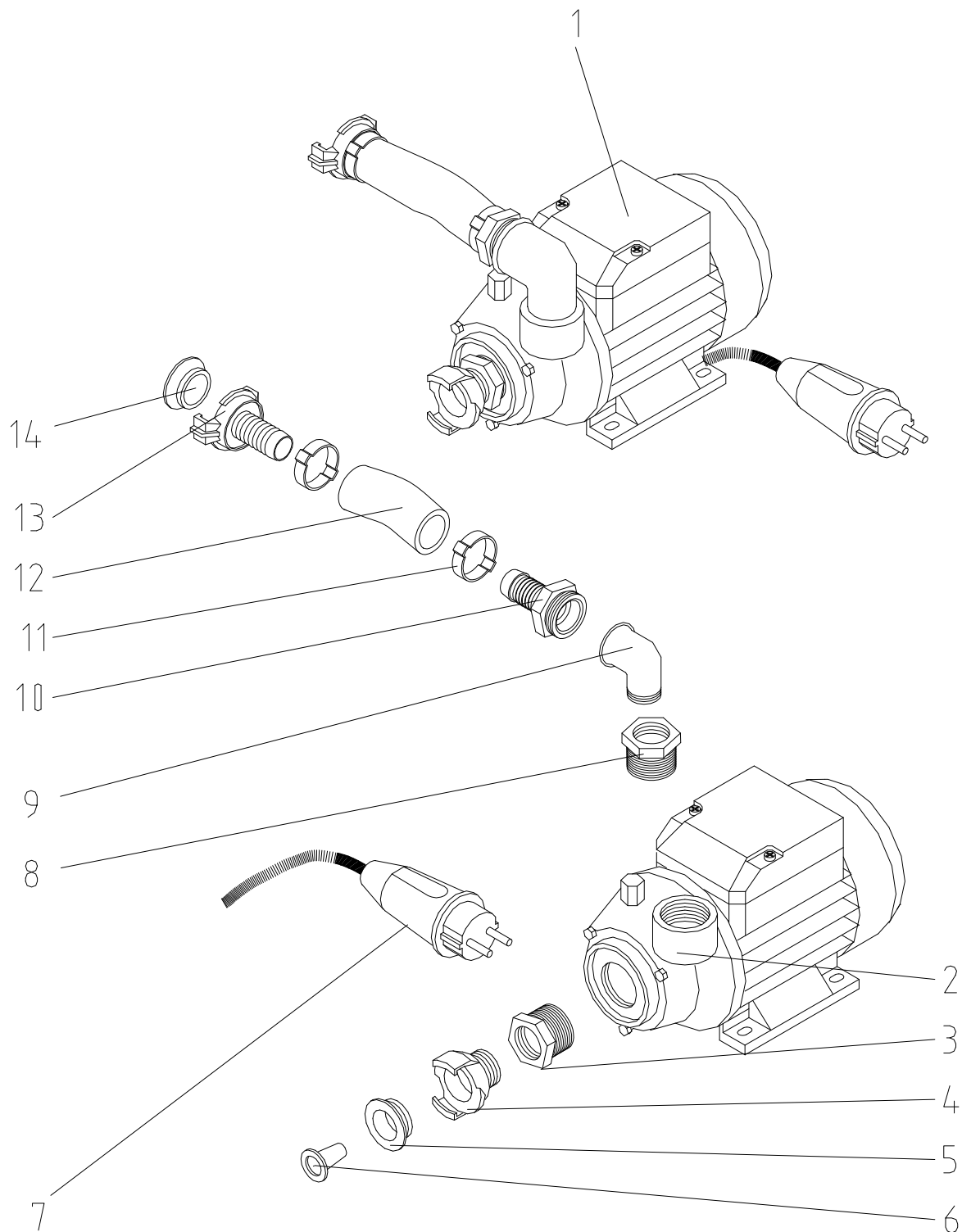
Item	Qty	Item no.:	Article description
1	1	00 00 22 51	Control lamp plug-type socket red without electric bulb
2	1	20 45 91 01	Light bulb 42 V 2 W plug-type socket BA 9S
3	1	20 45 40 00	Main switch 25 A 3-pin
4	1	20 45 40 50	Toggle with locking collar for main switch
5	4	00 05 38 35	Contact element 1 closer M22
6	4	00 05 38 34	Fixation adapter for switch elements
7	1	00 05 38 78	Selector switch toggle /sensing 0 latching M22
8	1	00 05 38 39	Pressure switch without sensor plate M22
9	1	00 05 38 42	Sensor plate for pressure switch black liquid M22
10	1	00 05 38 30	Membranes round for pressure switch IP 67 M22-T-D
11	1	00 05 38 33	Illuminated button green M22
12	1	00 05 38 37	Pressure switch red Off M22
13	1	00 01 25 77	CEE device plug 3 x 16 A 6h blue no.611306
14	1	00 02 21 62	On/off switch 3-pin CA10 A202-600E
15	1	20 45 45 10	Toggle with screw for pole changing switch
16	1	20 42 85 01	Blind plug 4-pin, HAN 3A
17	1	20 43 12 00	Stopper PG 11
18	1	20 42 86 05	Socket box 4- + 5-pin angled
19	1	20 42 86 06	Male insert 4-pin HAN 3A
20	1	20 42 86 07	Female insert 4-pin, HAN 3A
21	1	20 42 86 04	Housing 4/5-pin, HAN 3 A/HA 4
22	1	20 42 98 00	Coupling 4-pin HAN 3 A with female insert
23	1	00 05 38 36	Contact element 1 opener M22
24	1	00 05 38 80	Illuminated element green 12-30 V
25	1	00 05 38 86	LED – resistor – series element for 42 V



Item	Qty	Item no.:	Article description
1	3	20 20 17 00	Gasket Geka coupling
2	1	20 20 15 00	Geka coupling 1/2" socket
3	2	20 20 25 00	Hose clip 20-23
4	1	20 21 36 02	Water/air hose 1/2" x 400 mm
5	1	20 19 04 10	Hose screw joint 1/2" AG socket 1/2"
6	2	20 20 72 00	Nut M8 DIN 985 zinc-pl.
7	1	20 20 99 85	Bail M8 x 3/4" x 43 zinc-pl.
8	1	20 20 13 00	Geka coupling 1/2" IG
9	1	20 20 45 20	T-piece 1/2" IG no. 130 zinc-pl.
10	1	20 21 50 00	Hose tap 1/2"
11	1	20 20 40 00	T-piece 1/2" IG 1/2" IG 1/2" IG no.134
12	1	20 20 32 02	Double nipple reduced 1/2" -1/4" AG no. 245 zinc-pl.
13	1	20 44 76 00	Air safety switch type FF4-4 0.22-4 bar
14	1	20 20 36 10	Curved section 1/2" IG-AG no. 92 zinc-pl.
15	1	20 20 09 00	Geka coupling 1/2" AG
16	1	20 15 20 00	Water inlet filter Geka coupling
17	1	20 15 52 00	Pressure reducer D06FN 1/2" bore
18	2	20 20 31 07	Nipple 1/2" AG flat with reducer nut 3/4" IG
19	1	20 15 26 13	Solenoid valve 1/2" 42 V type 6213 A
20	1	20 20 34 14	Double nipple 1/2" x 180 no. 23 zinc-pl.
21	1	20 20 45 21	T-piece 1/2" 1/2" 3/8" IG no. 130 zinc-pl.
22	1	20 20 34 00	Double nipple 1/2" x 40 no. 23 zinc-pl.
23	1	20 19 03 20	Tap 3/8" AG with socket 10 mm
24	1	20 19 05 30	Hose section 9 mm x 220 mm
25	1	20 15 77 00	Needle valve 1/2" type 6701
26	1	20 15 78 00	Handle needle valve 1/2"
27	1	20 20 31 05	Nipple 1/2" AG conical with reducer nut 3/4" IG item no. 20 15 77 00
28	1	20 18 30 00	Water flow meter 100-1000 l/h
29	2	20 18 33 10	Reduction nipple 1/2" plastic
30	2	20 18 32 00	O-ring 28.17 x 3.53 DIN 3771-NBR 70
31	1	20 18 31 00	Plastic tube 100-1000 l/h
32	1	20 18 34 00	Cone (WDFM type 1500)
33	1	00 02 09 67	Hose section inner width 48 mm x 55 mm lg
34	1	00 01 99 13	Gauge 0-16 bar 1/4" rear, D = 50 mm
35	1	00 03 73 56	Holder flow meter G 5 C
36	1	00 00 93 67	Gauge 0-4 bar 1/4" rear, D = 50 mm
37	1	20 20 36 10	Curved section 1/2" IG-AG no. 92 zinc-pl.



Item	Qty	Item no.	Article description
1	1	00 04 77 24	Compressor DT4.16 230 V 50/60 Hz cable 0.6 m, earthling plug and holder
2	4	20 20 78 00	Skt. screw M8 x 30 DIN 933 zinc-pl.
3	8	20 20 93 20	Washer 8.4 x 25 x 1.5 zinc-pl.
4	4	20 20 72 00	Nut M8 DIN 985 zinc-pl.
5	1	00 02 09 91	Adapter plate for compressor 220 V
6	1	00 04 77 30	Compressor DT4.16 230 V 50/60 Hz cable 0.6m and earthling plug
7	1	20 42 46 00	Earthling plug 16 A black no. 10754
8	1	20 44 76 00	Safety switch type FF4-4 0.22-4 bar
9	1	20 20 37 12	Screwed joint 1/4" AG brass for automatic switch-off device
10	1	20 20 43 00	T-piece 1/2" IG 1/4" IG 1/2" AG no.24 zinc-pl.
11	1	20 20 34 22	Extension 1/2" x 80 no. 526 zinc-pl.
12	2	00 00 28 11	Tube nut G 1/2"
13	1	20 20 13 00	Geka coupling 1/2" IG
14	1	20 20 17 00	Gasket Geka coupling (VPE=50 parts)
15	1	20 20 34 00	Double nipple 1/2" x 40 no. 23 zinc-pl.
16	1	20 20 43 00	T-piece 1/2" IG 1/4" IG 1/2" AG no.24 zinc-pl.
17	1	20 21 64 31	Gauge 0-16 bar 1/8" rear, D = 50 mm
18	1	20 44 76 60	Safety switch PS3/AF1 HMRS, 1/4" 0.9-1.2 bar opener
19	1	20 20 43 01	T-piece 1/2" IG 1/4" IG 1/2" IG no.130 zinc-pl.
20	1	20 20 34 00	Double nipple 1/2" x 40 no. 23 zinc-pl.
21	1	20 20 21 00	EWO coupling V component 1/2" socket
22	2	20 20 25 00	Hose clip 20-23
23	1	00 02 06 13	Water/air hose 3/4" x 1750 mm
24	1	20 21 90 50	Counter flow valve 1/2" IG
25	1	20 19 04 10	Hose screw joint 1/2" AG socket 1/2"



Item	Qty	Item no.	Article description
1	1	00 05 08 69	High pressure pump G 54 E 230 V PQm 60 lateral
2	1	00 00 14 99	High pressure pump AV 3 PQm 60 230 V 1phase
3	1	20 20 50 00	Reduction nipple 1" AG 3/4" IG no.241
4	1	20 20 09 10	Geka coupling 3/4" AG
5	1	20 20 17 00	Gasket Geka coupling
6	1	20 15 20 00	Water inlet filter Geka coupling
7	1	20 42 41 43	Motor connection cable 0.8 m earthling plug wire end sleeves
8	1	20 20 54 00	Reduction nipple 1" AG 1/2" IG no.241
9	1	20 20 36 10	Curved section 1/2" IG-AG no. 92 zinc-pl.
10	1	20 19 04 10	Hose screw joint 1/2" AG socket 1/2"
11	2	20 20 29 00	Hose clip 28-31 VPE=10 parts
12	1	20 21 36 12	Water/air hose 1/2" x 500 mm
13	1	20 20 16 00	Geka coupling 3/4" socket
14	1	20 20 17 00	Gasket Geka coupling

Drive	Pump motor	4.0 kW 50 Hz
	Star wheel motor	0.25 kW 50 Hz
Motor speed	Pump motor	approx. 375 rpm
	Star wheel motor	approx. 16 rpm
Power consumption	Pump motor at maximum load	13.9 A at 230 V
	Star wheel motor at maximum load	1.8 A at 230 V
Electrical connection		230 V 1ph. 16 A
Fuse protection		min. 16 A C slow-blow
Power unit		min. 10 kVA
Water connection		¾ inch min. 2.5 bar
Pump output	TWISTER D5-2,5	approx. 20 l/min
Pumping distance	max. for 25 mm Ø	15 m
	max. for 35 mm Ø	25 m
Working pressure		max. 20 bar
Compressor output		0.25 Nm³/min
Dimensions and weights	Filling height	930 mm
	Hopper capacity	150 liters
	Hopper volume with extension	240 liters
	Overall length	1250 mm
	Overall width	650 mm
	Overall height	1520 mm
	Pump motor	53 kg
	Mixing pump module	81 kg
	Hopper module	141 kg
	Compressor	23 kg
	Overall weight	298 kg
Permanent noise pressure level		77±1 dB(A)

Warning!

If the 16 A slow-blow fuse protection is not sufficient for operation with water pump and compressor, an external 230 V connection is recommended for both drives.

WE KEEP THINGS MOVING



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