PENTAIR JUNG PUMPEN

PUMP TECHNICAL SERVICES LIMITED

THE SUBMERSIBLE PUMP SPECIALISTS

JUNG PUMPEN

COMPLI

1535/2 B2	1555/2 B2	1575/2 B5	15100/2 B5	15200/2 B6
1525/4 C1	1535/4 C1	1555/4 C5	1575/4 C5	1575/4 B6

COMPLI

2535/2 B2	2555/2 B2	2575/2 B5	25100/2 B5	25200/2 B6
2525/4 C1	2535/4 C1	2555/4 C5	2575/4 C5	2575/4 B6

EN Instruction Manual

TÜVRheinland CERTIFIED

Type Tested and Monitored

www.tuv.com ID 1111219534

You have purchased a product made by Pentair Jung Pumpen and with it, therefore, also excellent quality and service. Secure this service by carrying out the installation works in accordance with the instructions, so that our product can perform its task to your complete satisfaction. Please remember that damage caused by incorrect installation or handling will adversely affect the guarantee.

This appliance can be used by children aged 8 years or over and by persons with limited physical, sensory or intellectual capabilities, or with limited experience and knowledge, provided that they are supervised or have been instructed in the safe use of the appliance and are aware of the dangers involved. Children must not be allowed to play with the appliance. Cleaning and user maintenance must not be carried out by children unless they are supervised.

Damage prevention in case of failure

Like any other electrical device, this product may fail due to a lack of mains voltage or a technical defect.

If damage (including consequential damage) can occur as a result of product failure, the following precautions can be taken at your discretion:

- Installation of a water level dependent (under circumstances, mains-independent) alarm system, so that the alarm can be heard before damage occurs.
- Inspection of the collecting tank/chamber for tightness up to the top edge before – or at the latest, during – installation or operation of the product.
- Installation of backflow protection for drainage units that can be damaged by wastewater leakage upon product failure.
- Installation of a further product that can compensate in case of failure of the other product (e.g. duplex unit).
- Installation of an emergency power generator.

As these precautions serve to prevent or minimise consequential damage upon product failure, they are to be strictly observed as the manufacturer's guideline – in line with the standard DIN EN specifications as state of the art – when using the product (Higher Regional Court Frankfurt/Main, Ref.: 2 U 205/11, 06/15/2012).

SAFETY INSTRUCTIONS

This instruction manual contains essential information that must be observed during installation, operation and servicing. It is therefore important that the installer and the responsible technician/operator read this instruction manual before the equipment is installed and put into operation. The manual must always be available at the location where the pump or the plant is installed.

Failure to observe the safety instructions can lead to the loss of all indemnity.

In this instruction manual, safety information is distinctly labelled with particular symbols. Disregarding this information can be dangerous.

 General danger to people

 Warning of electrical voltage

NOTICE! Danger to equipment and operation

Qualification and training of personnel

All personnel involved with the operation, servicing, inspection and installation of the equipment must be suitably qualified for this work and must have studied the instruction manual in depth to ensure that they are sufficiently conversant with its contents. The supervision, competence and areas of responsibility of the personnel must be precisely regulated by the operator. If the personnel do not have the necessary skills, they must be instructed and trained accordingly.

Safety-conscious working

The safety instructions in this instruction manual, the existing national regulations regarding accident prevention, and any internal working, operating and safety regulations must be adhered to.

Safety instructions for the operator/user

All legal regulations, local directives and safety regulations must be adhered to.

The possibility of danger due to electrical energy must be prevented.

Leakages of dangerous (e.g. explosive, toxic, hot) substances must be discharged such that no danger to people or the environment occurs. Legal regulations must be observed.

Safety instructions for installation, inspection and maintenance works

As a basic principle, works may only be carried out to the equipment when it is shut down. Pumps or plant that convey harmful substances must be decontaminated.

All safety and protection components must be re-fitted and/or made operational immediately after the works have been completed. Their effectiveness must be checked before restarting, taking into account the current regulations and stipulations.

Unauthorised modifications, manufacture of spare parts

The equipment may only be modified or altered in agreement with the manufacturer. The use of original spare parts and accessories approved by the manufacturer is important for safety reasons. The use of other parts can result in liability for consequential damage being rescinded.

Unauthorised operating methods

The operational safety of the supplied equipment is only guaranteed if the equipment is used for its intended purpose. The limiting values given in the "Technical Data" section may not be exceeded under any circumstances.

Instructions regarding accident prevention

Before commencing servicing or maintenance works, cordon off the working area and check that the lifting gear is in perfect condition.

Never work alone. Always wear a hard hat, safety glasses and safety shoes and, if necessary, a suitable safety belt.

Before carrying out welding works or using electrical devices, check to ensure there is no danger of explosion.

People working in wastewater systems must be vaccinated against the pathogens that may be found there. For the sake of your health, be sure to pay meticulous attention to cleanliness wherever you are working.

Make sure that there are no toxic gases in the working area.

Observe the health and safety at work regulations and make sure that a first-aid kit is to hand.

In some cases, the pump and the pumping medium may be hot and could cause burns.

For installations in areas subject to explosion hazards, special regulations apply!

APPLICATION

compli sewage lifting stations are LGA certified and are suitable for lifting sewage from toilets and urinals, and domestic wastewater containing the usual impurities.

The tanks can withstand submersion to a depth of not more than 2 m of water and a submersion period of up to 7 days.

The control unit cannot withstand submersion, but is splash-proof in accordance with IP 44.

If installed in compliance with the regulations and used properly, then this control unit meets the protective requirements of the EMC Directive 2014/30/EU and is suitable for domestic use and connection to a power supply from the grid. When connected to an industrial mains within an industrial operation with power supply provided by a company-own high-voltage transformer, insufficient immunity to interference has to be expected.

When using the pumps, the relevant national laws, regulations and stipulations must be adhered to, for example:

- Sewage lifting stations for building and ground drainage systems (e.g. EN 12050 and EN 12056 in Europe)
- Installation of low voltage systems (e.g. VDE 0100 in Germany)
- Safety and working materials (e.g., BetrSichV and BGR 500 in Germany)
- Safety in wastewater systems (e.g., GUV-V C5, GUV-R 104 and GUV-R 126 in Germany)
- Electrical systems and operating resources (e.g., GUV-V A3 in Germany)
- Explosion protection EN 60079-0, EN 60079-1, EN 60079-14, EN 60079-17 and EN 1127-1

Supply package

- One or two tanks with a DN 150 inlet clamping flange
- Two submersible drainage pumps
- Duckfoot bend for the pumps
- Flexible connector(s) with clamps for the DN 70 vent pipe
- Flexible connectors with clamps for the duckfoot bend
- Flexible connector with clamps for the pressure pipe
- Fastening materials for tank and duckfoot bend
- Control unit

Operating mode: Intermittent operation S3; see "Technical data"

INSTALLATION

The pump must be installed so that it is buoyancy-proof and free-standing. At least 60 cm free working space must be provided around and above the parts that require access for operation or maintenance.

Ventilation: The vent pipe must be vented above roof level.

Inlet: A wastewater stop valve must be fitted in the tank inlet.

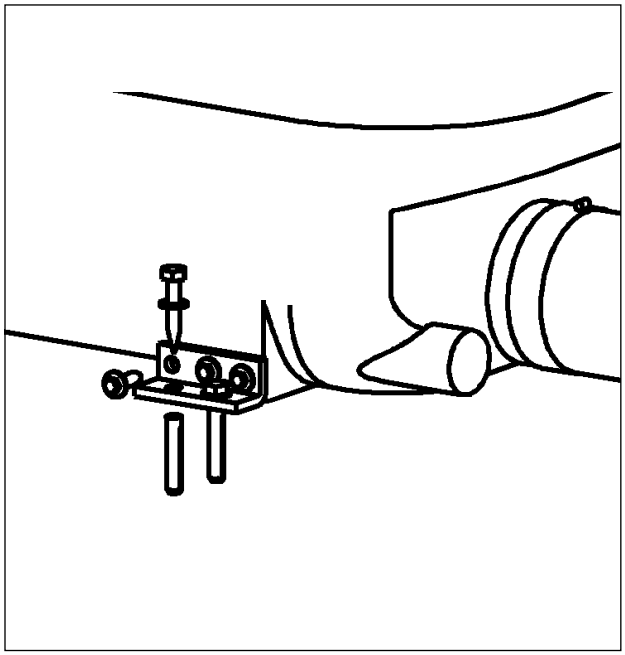
In order to continue using the pump in the event of a fault or maintenance work, a maintenance valve must be fitted between each pump and the tank.

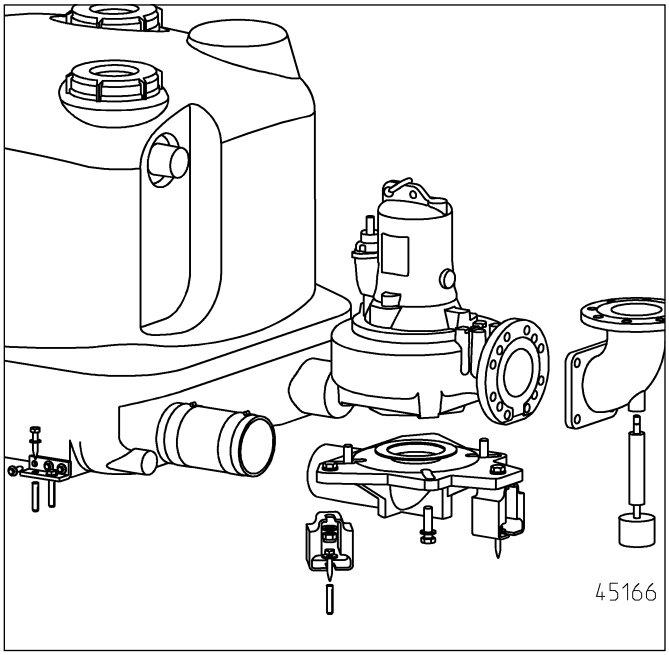
Pressure pipe: A further wastewater sluice valve must be installed behind the EN-certified swing-type check valve in the pressure pipe. The pressure pipe must be laid in a loop above the local backup level.

A pump sump must be provided to facilitate the disposal of water from the pump installation area.

compli 1500 and compli 2500 sewage lifting stations are supplied as assembly groups and are assembled on site by a plumbing company.

NOTICE! All screws and bolts that are used for fixing individual components to the tank should be tightened with a torque of no more than 6 Nm.





Installing the tank

Close the sluice valve in the inlet (accessory) to prevent any leakage of water during the installation work.

Screw the four angle brackets to the sides of the tank. **NOTICE!** Ensure that the tank does not become deformed due to overtightening the screws, otherwise this could result in leakage.

Slide the lifting station, together with the clamping flange, as far as possible onto the inlet pipe and then align them.

If a DN 150 side inlet is used, it must first of all be opened up at the location marked using a Ø 152 hole saw and then deburred. The standard inlet must in this case be closed off with the sealing plug supplied.

Tighten the hexagon screws on the clamping flange.

In the case of compli 2500, connect the two tanks together with a DN 150 pipe and clamping flanges.

Mark the position of the drill-holes for anchoring the tank to the ground, drill the holes, insert rawlplugs and screw the tank in place using wood screws and washers.

Installing the pump

Screw three duckfeet to the underside of each bend.

Connect the bends to the tank using a flexible connector and hose clamps.

Next, bolt the bends to the floor.

Place the seals on the bends, set the pumps down on top of them and affix them from below using hexagon screws.

Installing the ventilation

Connect the DN 70 vent pipe to the top of the tank with the flexible connector and vent it above roof level. In the case of compli 2500, both tanks must be connected with a flexible connector but they can be brought together with a tee branch.

Installing the pressure pipe

Attach the supports to the flanged connections (accessory) and screw them to the pumps. The remaining parts of the pressure pipe can now be assembled:

1. Swing-type check valves (accessory),
2. Stop valves (accessory)
3. "Y" piece (accessory).
4. Connect up the pressure pipe with the flexible connector and a flanged spigot (accessory) and take it in a loop over the local backup level.

Emergency pump connection (DN 50 at front)

This connection is used for the HMP hand diaphragm pump (accessory).

Using a (Ø 38) hole saw, open up either the right-hand or left-hand pipe socket at the location marked and deburr the edges.

Fix the hand diaphragm pump to the wall at an easily accessible place and connect it to the pipe sockets on the tank with PVC piping and flexible connectors. The pressure pipe must be laid in a loop above the local backup level.

ELECTRICAL CONNECTION

NOTICE! Only qualified electricians may carry out electrical works to the pump or the control units.

⚠ WARNING!

Before carrying out any work, unplug the lifting station from the mains socket and ensure that the power supply to the lifting station cannot be switched on again by anyone else.

NOTICE! Never put the mains plug and free lead ends in water! If water gets into the plug, this can cause malfunctions and damage.

The relevant standards (such as EN standards), national regulations (such as VDE in Germany), and the regulations of the local power supply companies must be observed.

Observe the operating voltage (see type plate)!

The lifting stations have a level controller that switches the pumps on and off depending on the level of the water. An integrated alarm system beeps if there is a malfunction, even if this is only temporary.

If the pumps overheat, the motor cuts out due to the winding thermostat. Before remedying the fault, the lifting station must be disconnected from the power supply. Unplug the mains plug from the electrical socket or turn the main switch off, as otherwise the pumps will be switched on again automatically after they have cooled down. A direct malfunction message is not generated.

For the mains electrical connection of compli 1525, 1535, 2525 and 2535 type units, a correctly installed five pole CEE power socket is required (3/N/PEx400 V, 50 Hz). This must be located in a dry room above the backup level.

For compli 1555, 1575, 15100, 2555 and 2575 type units, the mains power supply is connected directly to the terminals of the main switch for the control unit. The cross section of the connection cable must be configured to take into account the current input of the pumps and the length of the connection cable.

NOTICE! Only time delay fuses or automatic fuses with C characteristics are to be used as pre-fuses for the pump. If the pre-fuses have been triggered, the cause of the malfunction must be eliminated before switching the pump on again.

Mounting the control unit

Only operate the control unit in dry rooms above the backup level, and keep the housing closed at all times. The control unit must be easily accessible to enable it to be checked at any time. High humidity and condensation can destroy the controls!

Connecting the pumps

The pumps are connected to the control unit on site in accordance with the circuit diagram (appendix). The three-phase pumps are protected with an overcurrent release or motor protection switch, set to the rated current + 10%.

Coil thermostats

NOTICE! In addition to the overcurrent release or motor protection switch, the thermostats in the motor winding must be connected to the control unit (terminal 30/32).

The thermostat contacts are suitable for a maximum of 250 V / 1.2 A (cos phi = 0.6) and are labelled 30 and 32 for connection purposes. The motor is switched off via the 230V control circuit when the response temperature is reached. The pump is switched on again automatically after the winding has cooled down.

Connecting the level contact sensor

The level contact sensor is connected to the control unit on site in accordance with the circuit diagram (appendix).

The switch-off point is set in the factory. The switch-on point must be set for each individual lifting station. The other switching points for the alarm (+2 cm) and peak load (+4 cm) are then automatically set accordingly by the control unit.

Setting the switch-on level

Set the Hand-Off-Automatic selector to "0". Adjust the switch-on point in the "analogue evaluator" module on the right-hand side of the control unit. Temporarily remove the transparent cover of the module. Fill the collecting tank with water up to the desired switch-on level (but not higher than the lower edge of the inlet pipe).

There are three LEDs on the analogue evaluator labelled P1 - P2 - P3. Only P2 must light up. If P3 lights up too, a readjustment must be carried out.

Turn the small setscrew below P1 one or two revolutions in a clockwise direction. Now immerse the level controller float in the tank until it is below the switch-off point and then allow it to float up again. If P3 is still lit up, turn the setscrew a further revolution in a clockwise direction and immerse the float again.

Repeat this procedure until P3 no longer lights up, then turn the setscrew back carefully in an anti-clockwise direction until P3 only just lights up. The switch-on point is now set.

Alarm system

Malfunction messages are given both visually as well as acoustically. The standard mains-dependent alarm system indicates motor faults in the pump (red LED). At the same time a built-in acoustic alarm sounds. This acoustic signal can only be turned off by remedying the fault or by totally deactivating it.

If an acoustic signal would be inappropriate at the installation site in question, an alarm signal can be relayed via the potential-free contact (terminals 40 and 41) on the circuit board. The connection cable must have maximum length of 250m for a cross-section of 0.75 mm^2. The potential-free NO contact of the centralised alarm can be loaded with a maximum of 5A / 250 VAC. The contact opens after the fault has been remedied.

Battery pack for alarm system (accessory)

The alarm device is mains-dependent in its standard version, i.e. it is not possible to trigger a high-water alarm in the event of a power failure. To enable the alarm device to work even if there is a power failure, a rechargeable battery must be used. Open the transparent cover. Connect the battery to the connection clip, and use the existing cable tie to attach it to the intended position on the PCB. The battery can supply the alarm system with power for a continuous alarm of about 1 hour.

After the return of the mains voltage, the battery is charged again automatically. An empty battery is ready for operation within approx. 24 hours. It is fully charged after about 100 hours.

Check the function of the battery at regular intervals! To do so, disconnect the lifting station from the mains power supply and trigger a high-water alarm. The volume of the acoustic signal must not become significantly quieter over a period of several minutes. The service life is about 5 years. Note the insertion date on the battery, and after five years the battery should be replaced as a precautionary measure.

⚠ CAUTION!

Only use the 9V-NiMh battery supplied by the manufacturer! If dry-cell batteries or Lithium batteries are used there is a danger of explosion!

Time meter (accessory)

An optional time meter can be fitted in the control unit. To fit this, shorten the connections of the time meter to approx. 8 mm and insert them in the four sockets at location A2 on the printed circuit board. If the time meter indicator does not go on after switching the lifting station on again, rotate the time meter through 180°.

Shutting down the internal alarm buzzer

Remove the sealed jumper (BRX). To prevent the jumper from getting lost, re-attach it to a pin on the two-pole pin connector.

External alarm buzzer

Open the transparent cover on the control unit.

An additional separate acoustic 12 VDC signal transmitter with an input current of not more than 30 mA can be connected to terminals "S+" and "S-". The internal alarm buzzer can either be switched on or off.

Test run and functional check

NOTICE! First of all tighten all clamps and flanged connections.

1. Open the maintenance cover on the tank.
2. Open the sluice valves in the inlet pipe and pressure pipe.
3. Connect the lifting station to the power supply and observe the indicator for the rotating field direction.
4. Fill the tank up to the switch-on level.
5. The pump will now switch on and empty the tank. Observe the pumping process through the maintenance opening.
6. Lift the float of the level controller slowly by hand until it is above the switch-on point and hold it there until the alarm is triggered
7. Then close the maintenance opening with the cover and seal.
8. Check to ensure that the tank, fittings and pipes are watertight, by carrying out several switching runs.

OPERATION

Automatic operation is the normal operating mode of the lifting station. The rocker switch must be set to "Automatic". The integrated level controller switches the pump on and off depending on the water level in the tank. A green LED lights up when the pump is operating.

NOTICE! If unusually large quantities of wastewater flow into the lifting station (e.g. when a pool is drained), partially close the sluice valve at the inlet until the lifting station can operate normally again, switching on and off, (not pumping continuously, since this could overheat the pump motor).

Emergency operation with one pump

If maintenance valves are fitted between the pump and the tank, the lifting station can be temporarily operated with only one pump.

Set the rocker switch for the faulty pump to "0" on the control unit and close the maintenance valve.

Manual operation
Set the rocker switch to "Hand". The pump will now operate in continuous mode independently of the wastewater level. The pumping out operation should therefore be observed through the maintenance opening.

Shutting down
Set the rocker switch to "0". This shuts down the pump. The alarm system is still ready for use.

⚠ DANGER!
Do not use position "0" of the selector switch for repair and maintenance work on the control unit and pump, but rather always unplug them from the mains or turn them off at the main switch.

Inspection
To maintain operational reliability, carry out a visual inspection of the lifting station, including the pipe connections, once a month.

MAINTENANCE

Maintenance and inspection of this product must be carried out in accordance with EN 12056-4.

To ensure continued reliability of service, we recommend that you take out a service contract.

NOTICE! Servicing and maintenance of the sewage lifting station as well as repair work must be carried out by a qualified technician at intervals of 3 months in industrial plants or 6 months in blocks of flats.

⚠ WARNING!
Before carrying out any work, unplug the lifting station from the mains power supply or turn it off at the main switch and ensure that the power supply to the lifting station cannot be switched on again by anyone else.

⚠ WARNING!
Check the plug and the mains cable for signs of mechanical and chemical damage. Damaged or kinked cables must be replaced by the manufacturer.

We recommend that the following work is included in the service:

1. Check the connection points for watertightness by inspecting the areas surrounding the lifting station and the fittings.
2. Operate the sluice valves and check that they move easily. Adjust and grease them if necessary.
3. Open and clean the swing-type check valve; check the seat and ball (valve).
4. Clean the pump and the pipes where they connect to the lifting station; check the impeller and the bearings.
5. Oil check. If necessary top up or carry out an oil change.
6. Clean the inside of the tank (as necessary, or if especially required); remove any grease, for example.
7. Check the condition of the collecting tank.
8. Flush the system through with water once every 2 years.
9. Inspect the electrical section of the lifting station. The control unit itself is maintenance-free, but if a rechargeable battery is fitted, then it should be checked regularly to ensure that it is in good working order. To do so, unplug the lifting station from the mains and lift the float of the level controller slowly by hand and hold it there until a high-water alarm is triggered. In addition, clean the float if necessary.

When all the maintenance tasks have been performed, carry out a test run and then put the lifting station back into operation. The service must be documented, giving details of the important data and of all the tasks carried out.

Oil check
First of all loosen the hexagon screws or Allen screws around the pump and lift the pump off the duckfoot bend. The filling and draining port of the oil reservoir is sealed off with a screw-on drain plug labelled "Oil". In order to check the mechanical seal, the oil, including any residue, must be drained from the oil reservoir and collected in a clean measuring container.

• If the oil is contaminated with water (milky), an oil change must be carried out. Check again after a further 300 operating hours, but at the very latest after 6 months!

• However, if the oil is contaminated with both water and pollutants, then not only the oil must be replaced, but the mechanical seal as well. For monitoring the oil reservoir, it is also possible to retrofit the electrode of our "DKG" seal leak control device in place of the "DKG" screw plug.

Oil change
To ensure operational reliability, the first oil change should be carried out after 300 operating hours, with further oil changes carried out after every 1000 operating hours. If the number of operating hours is very low, an oil change should still be carried out at least once a year.

If wastewater with strongly abrasive constituents is being pumped, oil changes should be carried out at correspondingly shorter intervals.

Use HLP hydraulic mineral oil, viscosity class 22 to 46, e.g. Nuto from ESSO or DTE 22, DTE 24, or DTE 25 from Mobil, to replace the oil in the oil reservoir.

The quantity of oil required is 1000 cm^3 for ...C1 pumps and 1700 cm^3 for ...B5, ...B6 and ...C5 pumps.

NOTICE! The oil reservoir must be filled with the specified quantity of oil only. Overfilling will result in the pump being rendered inoperable.

QUICK TIPS FOR REMEDYING FAULTS

The lifting station does not work
- Check the mains voltage, the fuse and the FI circuit breaker. Replace defective fuses only with fuses with the same nominal value. If the fuse triggers again, call a qualified electrician or our service engineers.
- The internal 2 A glass tube time delay fuse for the 230/12V control transformer, the motor contactor and the 230V AC power supply are faulty. Replace defective fuses only with fuses of the same type and nominal value!
- If the mains cable is damaged, it must be replaced by the manufacturer only.
- If the float switch is obstructed, close the inlet sluice valve, open the maintenance cover and clear the blockage.

Lifting station does not work and alarm is triggered

- The thermostat in the motor windings has switched off the system because the pump is obstructed. In this case, close the inlet sluice valve, drain the tank, unplug the mains power supply cable or switch off at the main switch, remove the pump module, and clear the blockage

Decreased pumping performance

- Check that the sluice valve in the pressure pipe is fully open.
- If the pressure pipe is obstructed, flush water through the pressure pipe to clear it.
- If the swing-type check valve is obstructed, close the sluice valve and clean the swing-type check valve.
- If the ventilation system is blocked, clean the ventilation hose between the pump and the tank and check the drilled holes.

"Drehfeld falsch" (Wrong rotating field) indicator is lit

- Mains phase sequence is wrong or phase is absent - thus lower or absent pump delivery. The mains connection must be corrected by a qualified electrician only.

"P2, P3 Pump failure" indicator is lit.

- The pump is protected by an integrated overload safety switch which turns the pump off if it overloads or if there is an electrical motor fault. After this has been triggered, it must be reset by hand in order to use the pump again. The control unit must be opened by a qualified electrician in order to press the safety switch reset button.

"P5 High water" indicator is lit

- Water level in the tank too high because of low pump flow rate or excessive inflow. Remove any obstructions in the pump or pressure pipe and/or eliminate the excessive inflow.

LED P1 on the analogue evaluator is continuously lit

- There is a fault in the level detection. Call our Customer service.
- There is no residual water in the tank. Fill the tank with a small amount of water.
- Note: If the LED lights up after the pumping operation, this is not a sign of a malfunction. The LED goes off once the tank is filled again with a small amount of wastewater.

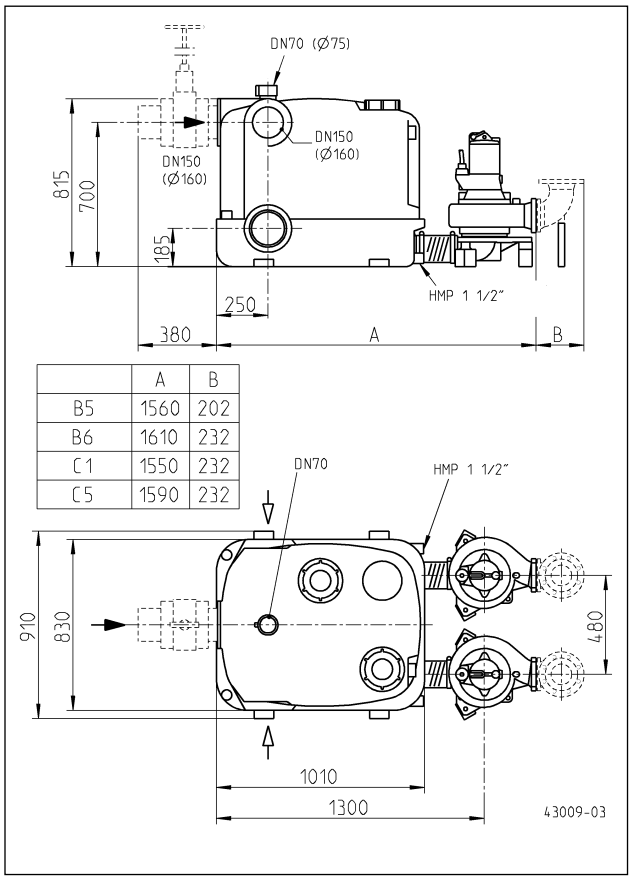
Pump "snores" and does not switch itself off

- The switch-off point of the lifting station is too low.

Unscrew the three fastening screws of the level detection at the front of the collecting tank. By carefully rotating it in an anti-clockwise direction the switch-off point can be set to a higher level. Retighten the screws. When the switch-off level is reached during pumping, this is shown by the middle LED P2 on the analogue evaluator going off (on the right-hand side of the control unit).

NOTICE! It may also be necessary to re-adjust the switch-on level (please refer to the section “Redefining the switch-on level”).

compli 1500



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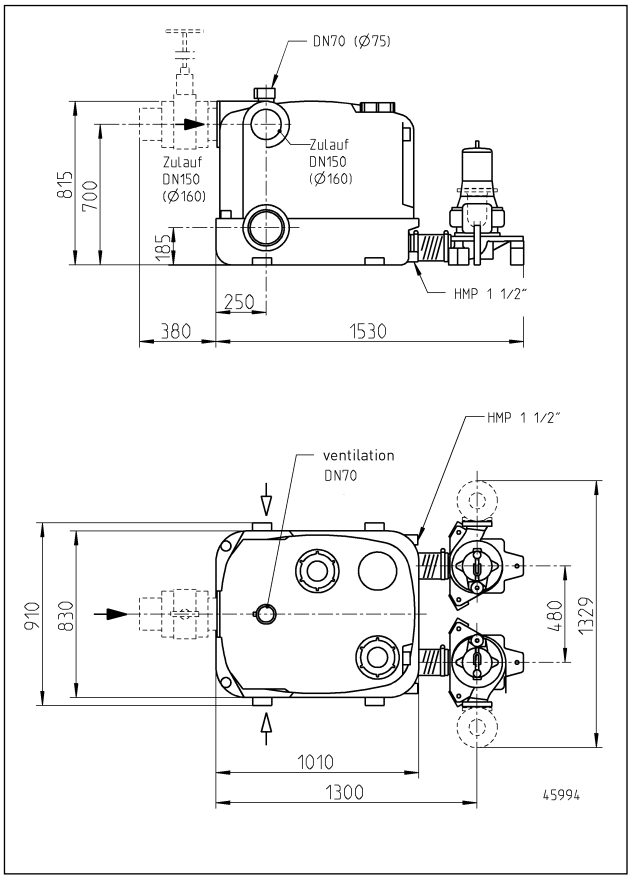
B6	1610	232
C1	1550	232
C5	1590	232



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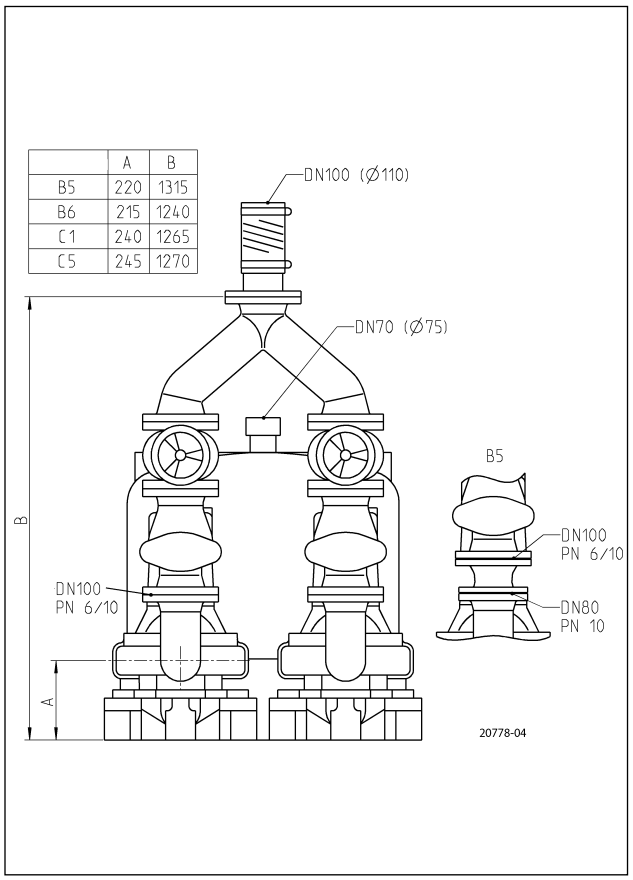
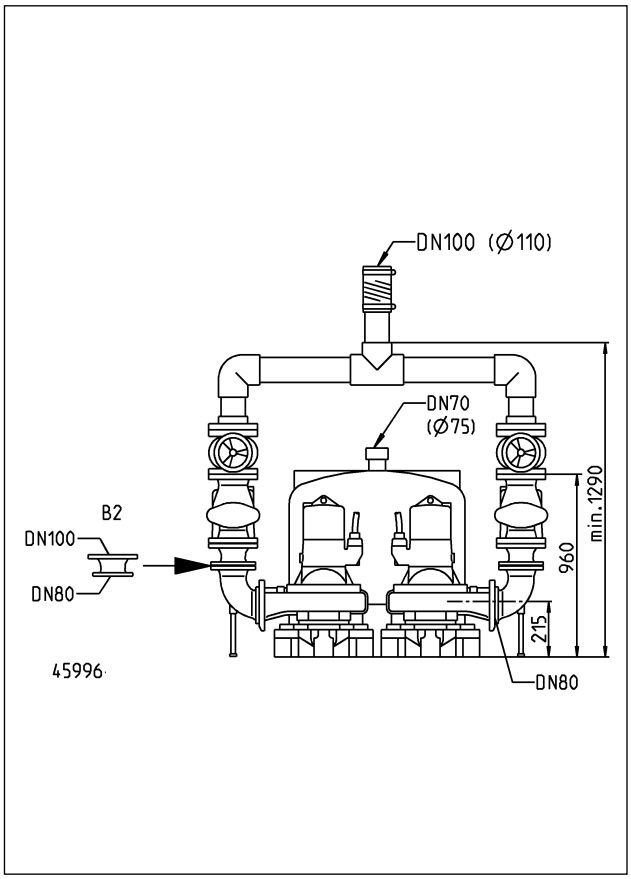
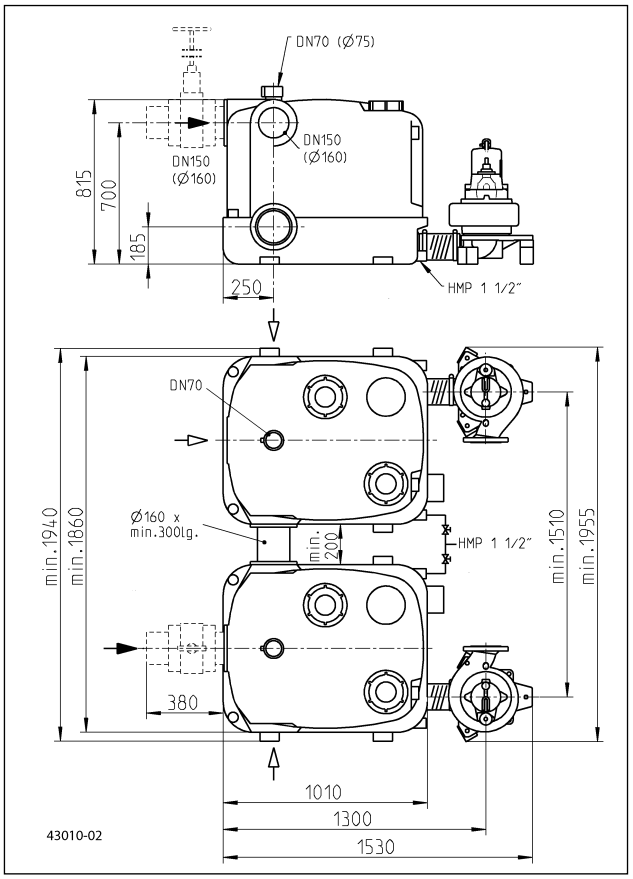
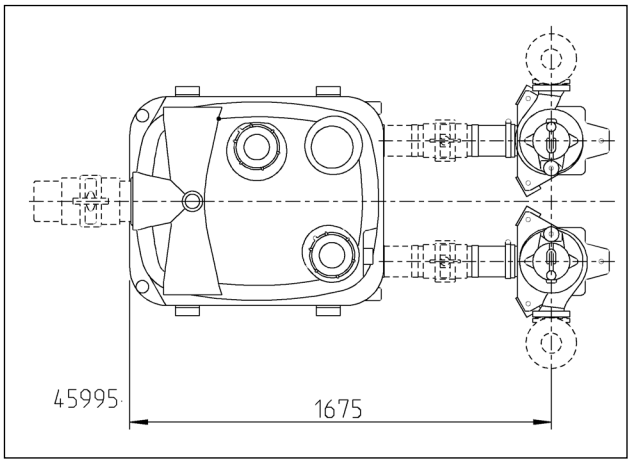
B6	215	1240
C1	240	1265
C5	245	1270

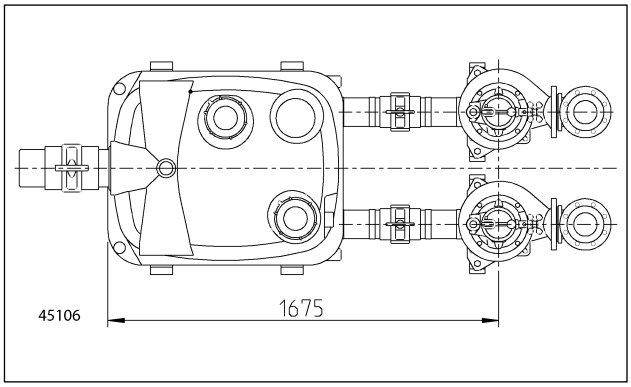




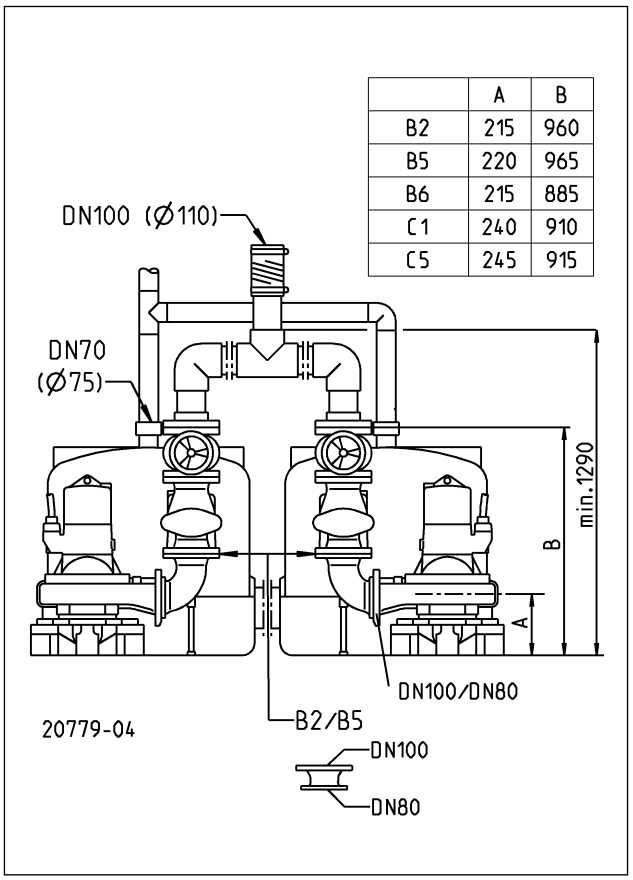
compli 2500

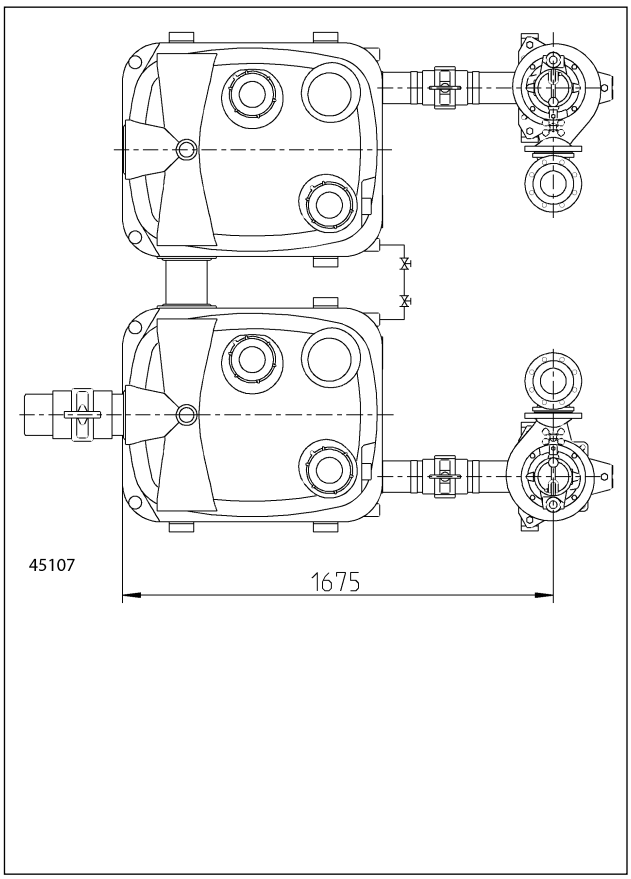


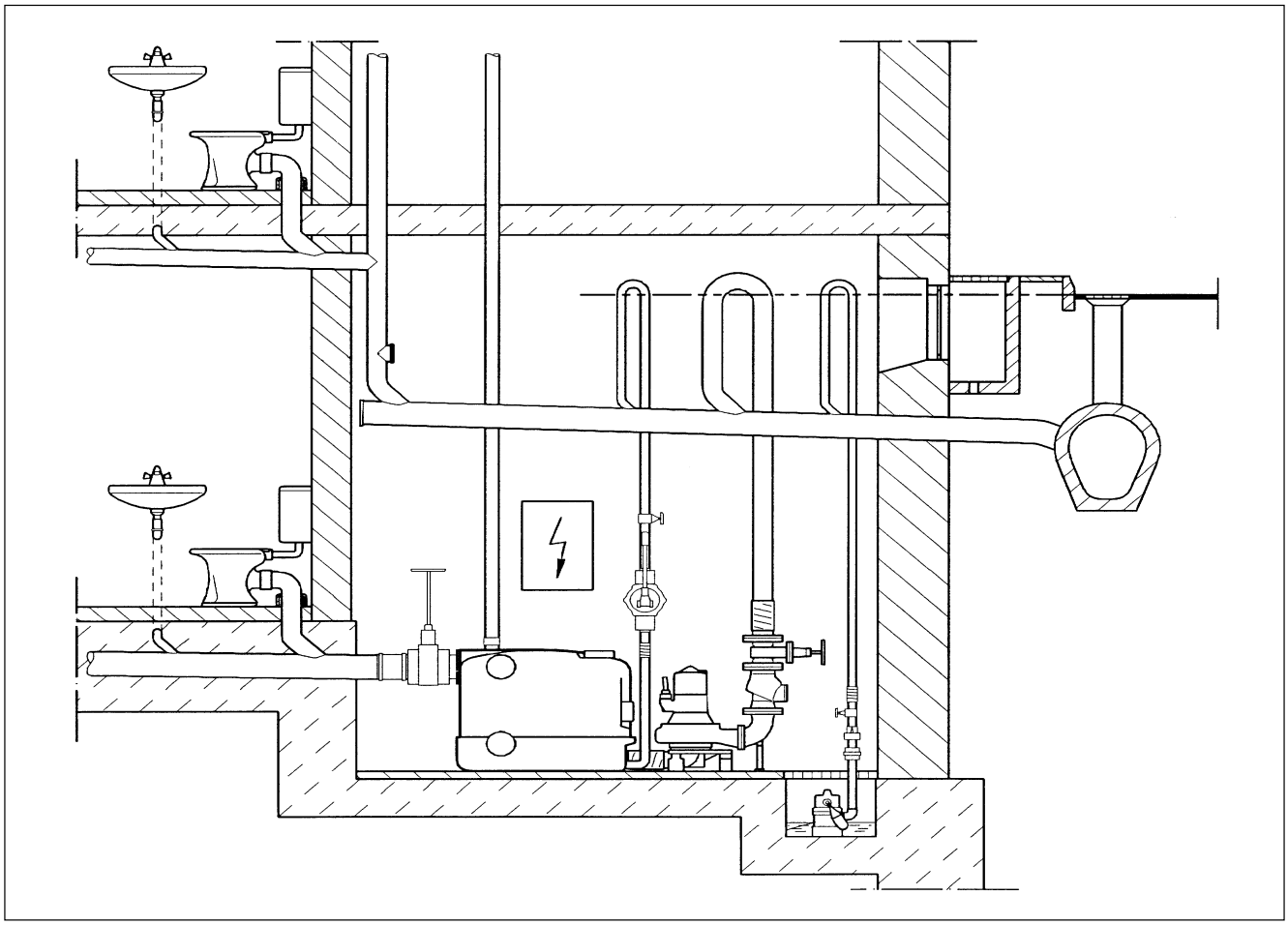




	A	B
B2	215	960
B5	220	965
B6	215	885
C1	240	910
C5	245	915







TECHNICAL DATA

Umgebungstemperatur / Ambient temperature / Température ambiante / Omgevingstemperatuur / Temperatura ambiente / Temperatura otoczenia / **环境温度**: -20° C bis 50° C

Luftfeuchtigkeit 0-90% rH, nicht kondensierend / Humidity Up to 90rH with no condensation / Umidità dell'aria 0-90% rH, non condensante Humidité de l'air : 0-90% rH, non-condensant / Luchtvochtigheid: 0-90% RV niet-condenserend / Umidità dell'aria 0-90% rH, non condensante / Wilgotność powietrza: 0-90% wzgl., bez kondensacji pary / **湿度：不超过90rH，无冷凝**

		... 1535/2 B2 **... 2535/2 B2**	**... 1555/2 B2** **... 2555/2 B2**	**... 1575/2 B5** **... 2575/2 B5**	**... 15100/2 B5** **... 25100/2 B5**	**... 15200/2 B6** **... 25200/2 B6**
	[kg]	236 / 283	302 / 349	322 / 369	368 /415	550 / 597
	PN 10 [mm]	DN 80 70	DN 80 70	DN 80 70	DN 80 70	DN 100 70
	S3*	40 %	40 %	30 %	30 %	45 %
P1	[kW]	3,7	5,2	7,7	10,5	17,3
P2	[kW]	3,04	4,45	6,6	9,2	15,4
U	[V]	3/N/PE ~400	3/N/PE ~400	3/N/PE ~400	3/N/PE ~400	3/N/PE ~400
f	[Hz]	50	50	50	50	50
I	[A]	6,6	8,7	13,2	17,6	28,8
n	[min^{-1}]	2895	2910	2925	2920	2940
		BD 610 P	BD 1016 PD	BS 1016 PD	BS 1620 PD	BS 2532 PD

		... 1525/4 C1 **... 2525/4 C1**	**... 1535/4 C1** **... 2535/4 C1**	**... 1555/4 C5** **... 2555/4 C5**	**... 1575/4 C5** **... 2575/4 C5**	**... 1575/4 B6** **... 2575/4 B6**
	[kg]	254 / 301	262 / 309	364 / 411	374 / 421	358 / 405
	PN 10 [mm]	DN 100 100	DN 100 100	DN 100 100	DN 100 100	DN 100 70
	S3*	30 %	25 %	20 %	25 %	25 %
P1	[kW]	2,4	3,5	5,8	7,2	7,2
P2	[kW]	1,9	2,65	4,65	5,9	5,9
U	[V]	3/N/PE ~400	3/N/PE ~400	3/N/PE ~400	3/N/PE ~400	3/N/PE ~400
f	[Hz]	50	50	50	50	50
I	[A]	4,2	6,9	10,2	12,8	12,8
n	[min^{-1}]	1395	1424	1430	1432	1432
		BD 46 P	BD 610 P	BS 1016 PD	BS 1016 PD	BS 1016 PD

* Beispiel: 40%: 4 min Betrieb + 6 min Pause (Spieldauer 10 min)

* Example for 40%: 4 min. operation and 6 min. rest (Cycle duration 10 min.)

* Exemple: 40% = 4 min de service et 6 min de pause (Durée du jeu 10 min)

* Eksempel: 40 %: 4 min drift + 6 min pause (spilletid 10 min)

* Esempio: 40%: 4 min. di funzionamento + 6 min. di pausa (durata del ciclo 10 min.)

* Przykładowo 40%: 4 min pracy i 6 min przerwy (Czas cyklu 10 min)

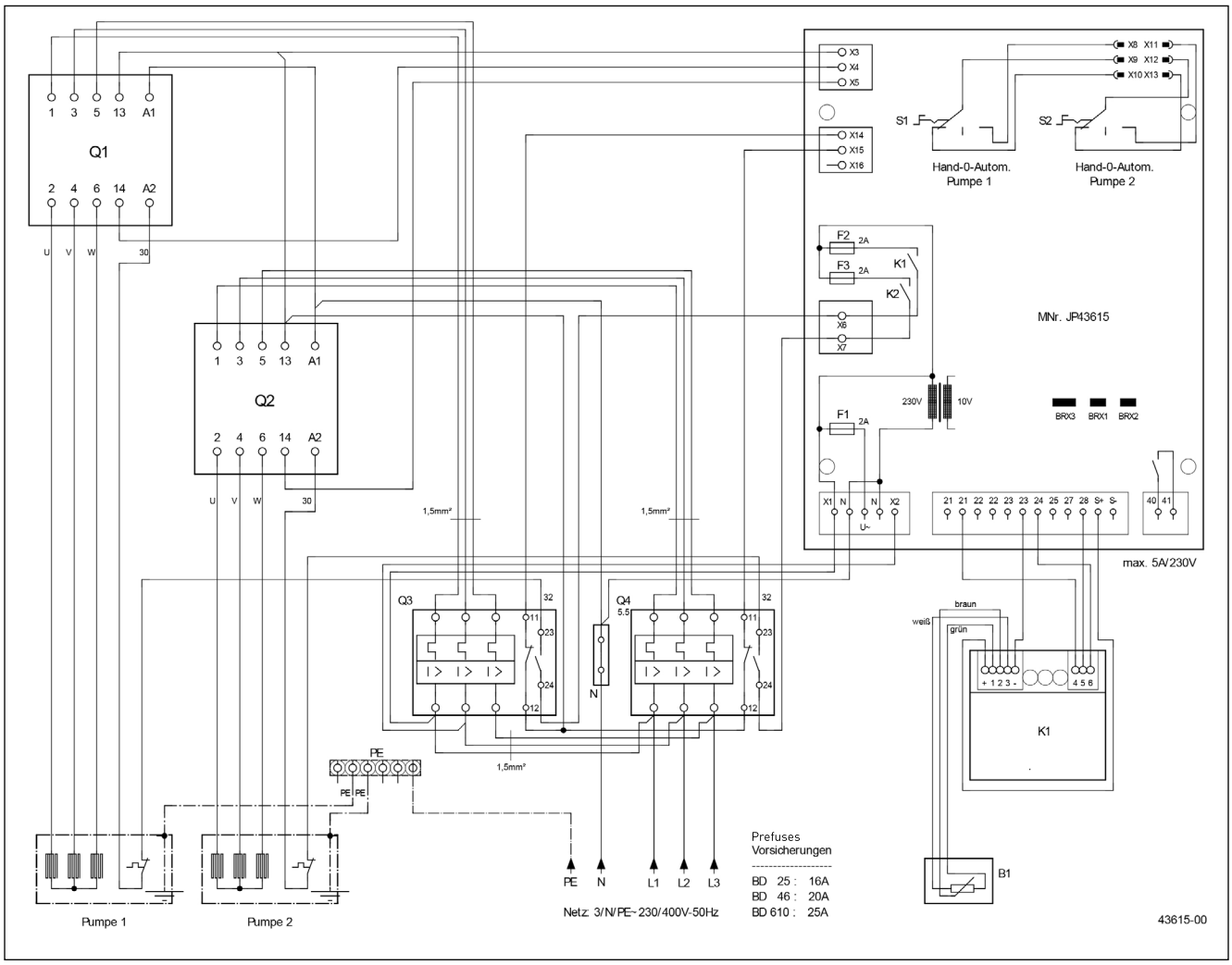
* 示例：40%：=运行4分钟、休息6分钟（一个周期持续时间为10分钟

PERFORMANCE

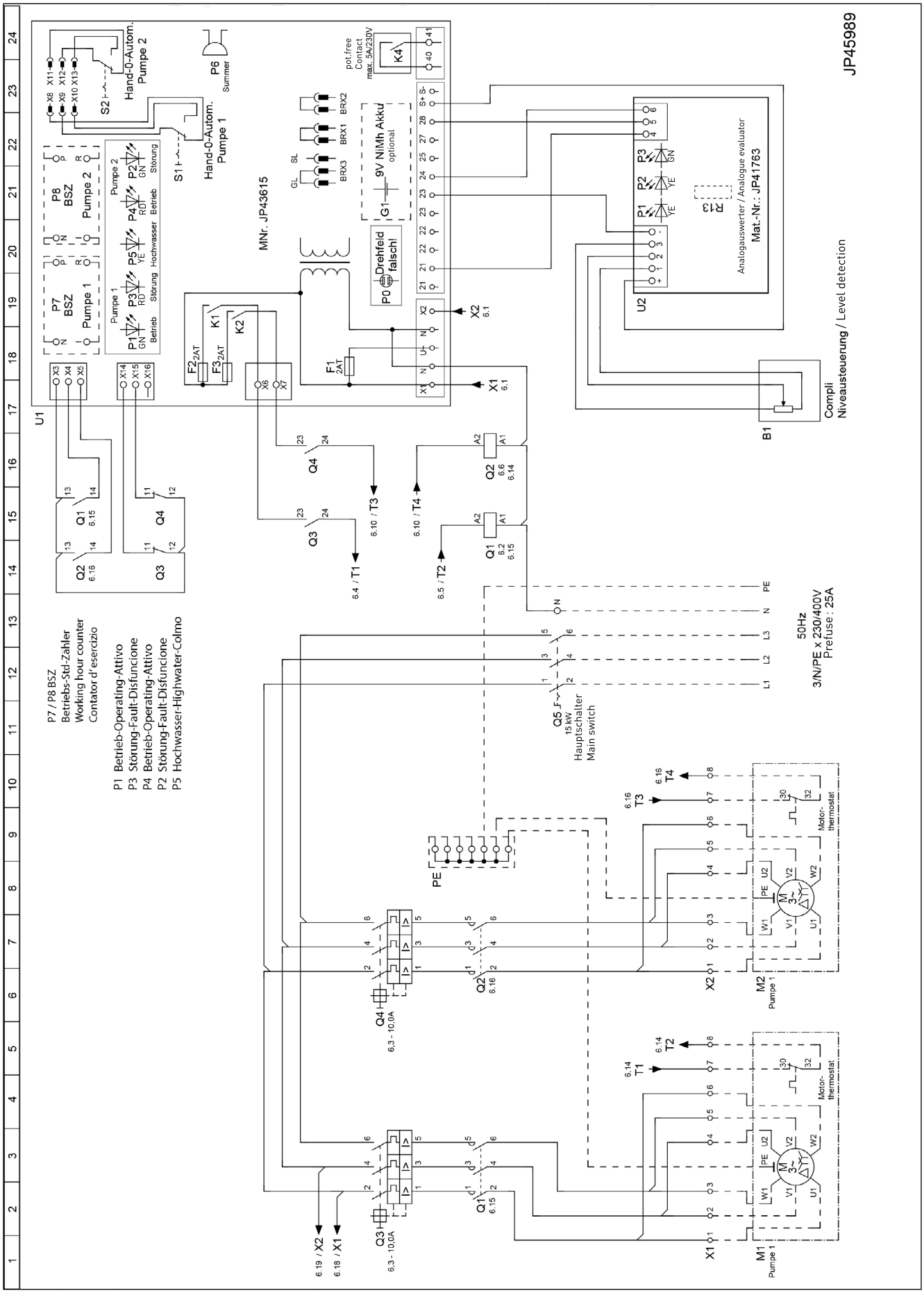
H [m]	4	5	6	7	8	9	10	12	14	16	18	20	
compli ... 25/4 C1	104	87	71	51	32	16							Q [m³/h]
compli ... 35/4 C1			103	89	72	54	36						
compli ... 55/4 C5							100	74	45	22			
compli ... 75/4 C5								100	75	44	22		
compli ... 75/4 B6									82	62	41	24	

H [m]	5	7	10	13	16	19	22	25	28	31	34	37	40	43
compli ...35/2 B2	102	88	65	38	17									
compli ...55/2 B2		96	76	58	35	17								Q [m³/h]
compli ... 75/2 B5			104	87	70	54	37	23	9					
compli ...100/2 B5							91	76	55	41	23	15	4	
compli ...200/2 B6									95	85	73	55	39	

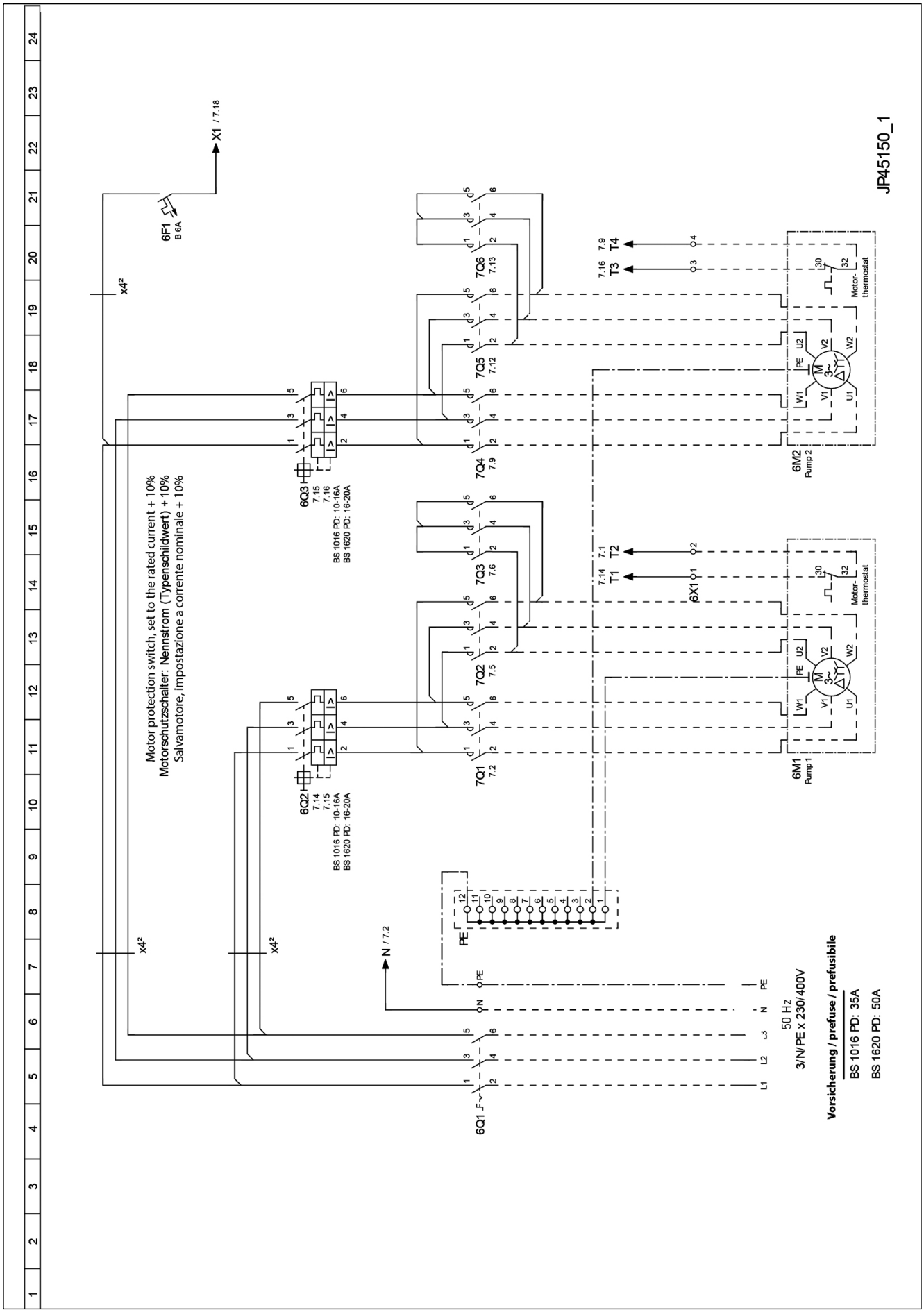
BD ... P

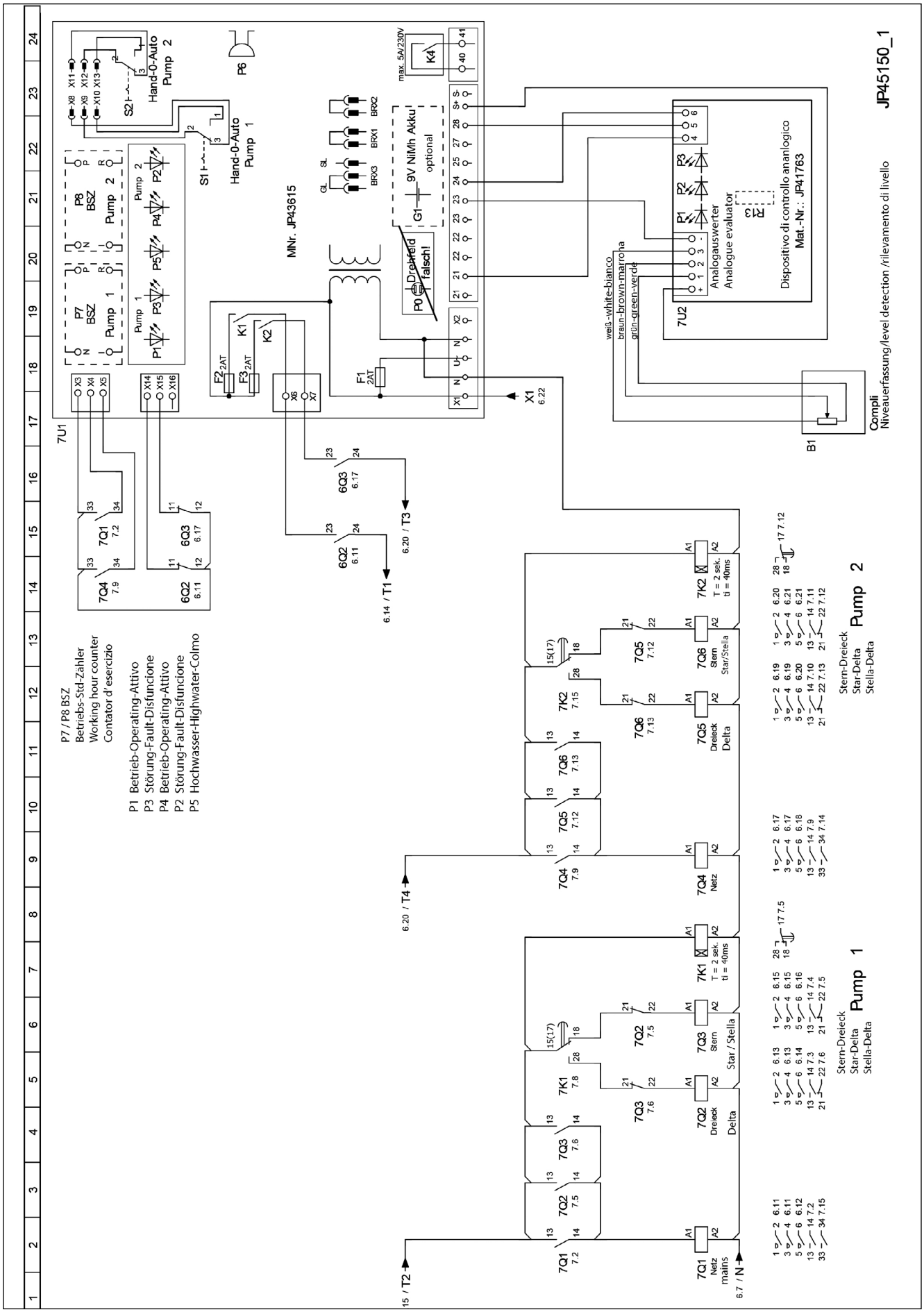


BD 610 PD

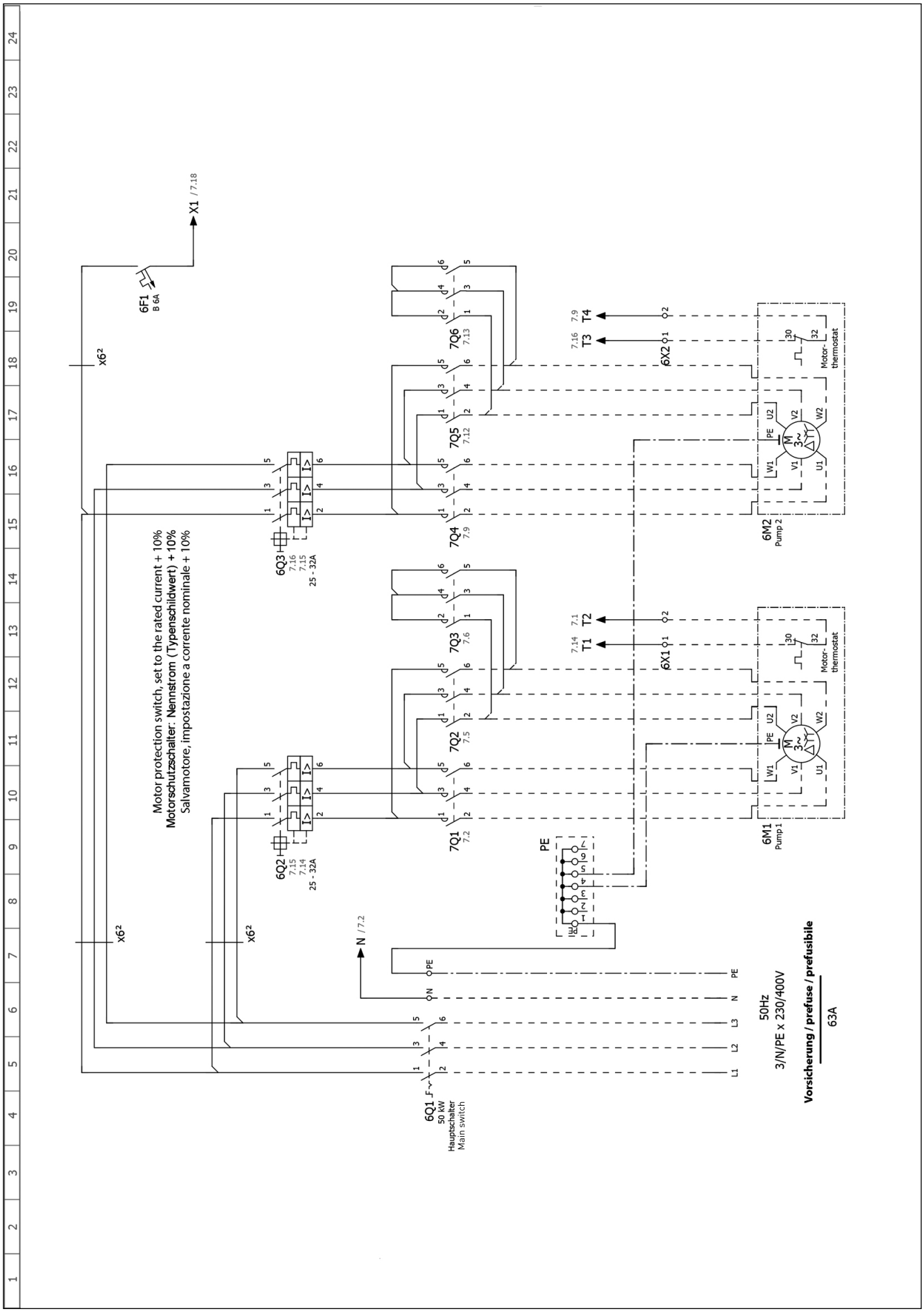

JP45989
MNr. JP43615
Compli
Niveausteuerung / Level detection
Analogauswerter / Analogue evaluator
Mat.-Nr.: JP41763
9V NiMh Akku
optional
Drehfeld falsch!
pot.free Contact max. 5A/230V
Hand-0-Autom. Pumpe 2
Hand-0-Autom. Pumpe 1
Summer
Pumpe 1
Pumpe 2
Betrieb
Störung
Hochwasser
P7 / P8 BSZ
Betriebs-Std-Zähler
Working hour counter
Contator d'esercizio
P1 Betrieb-Operating-Attivo
P3 Störung-Fault-Disfuncione
P4 Betrieb-Operating-Attivo
P2 Störung-Fault-Disfuncione
P5 Hochwasser-Highwater-Colmo
Hauptschalter
Main switch
15 kW
50Hz
3/N/PE x 230/400V
Prefuse : 25A
Motor-thermostat

BS 1016 PD / BS 1620 PD

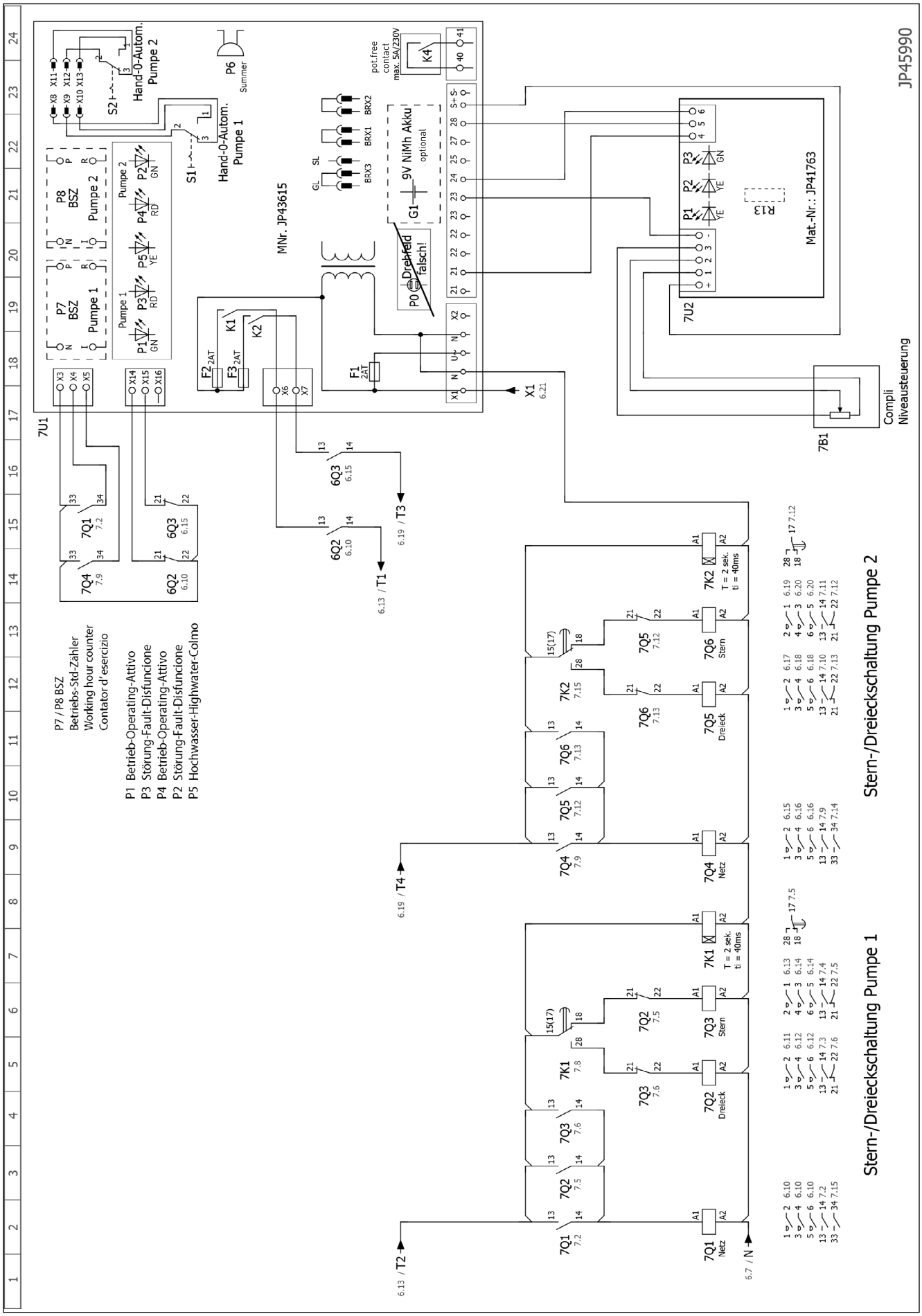



JP45150_1
MNr. JP43615
Pump 1
Pump 2
Hand-0-Auto
9V NiMh Akku
optional
Drehfeld
falsch!
Dispositivo di controllo ananlogico
Mat.-Nr.: JP41763
Analogauswerter
Analogue evaluator
weiß-white-bianco
braun-brown-marrone
grün-green-verde
Compli
Niveauerfassung/level detection /rilevamento di livello
P7 / P8 BSZ
Betriebs-Std-Zähler
Working hour counter
Contator d'esercizio
P1 Betrieb-Operating-Attivo
P3 Störung-Fault-Disfunzione
P4 Betrieb-Operating-Attivo
P2 Störung-Fault-Disfuncione
P5 Hochwasser-Highwater-Colmo
Stern-Dreieck
Star-Delta
Stella-Delta
Pump 1
Pump 2
Netz
mains
Stern
Star/Stella
Dreieck
Delta
T = 2 sek.
ti = 40ms

BS 2532 PD


Motor protection switch, set to the rated current + 10%
Motorschutzschalter: Nennstrom (Typenschildwert) + 10%
Salvamotore, impostazione a corrente nominale + 10%
6F1 B 6A
X1 / 7.18
6Q1 50 kW Hauptschalter Main switch
6Q2 7.15 7.14 25 - 32A
6Q3 7.16 7.15 25 - 32A
7Q1 7.2
7Q2 7.5
7Q3 7.6
7Q4 7.9
7Q5 7.12
7Q6 7.13
6M1 Pump 1
6M2 Pump 2
Motor-thermostat
6X1
6X2
T1 T2 T3 T4
PE
N / 7.2
50Hz
3/N/PE x 230/400V
Vorsicherung / prefuse / prefusibile
63A

BS 2532 PD


JP45990
Stern-/Dreieckschaltung Pumpe 1
Stern-/Dreieckschaltung Pumpe 2
Compli
Niveausteuerung
Mat.-Nr.: JP41763
MNr. JP43615
Hand-0-Autom.
Pumpe 1
Pumpe 2
Summer
9V NiMh Akku
optional
pot.free
contact
max. 5A/230V
Drehfeld
falsch!
P1 Betrieb-Operating-Attivo
P3 Störung-Fault-Disfunzione
P4 Betrieb-Operating-Attivo
P2 Störung-Fault-Disfunzione
P5 Hochwasser-Highwater-Colmo
P7 / P8 BSZ
Betriebs-Std-Zähler
Working hour counter
Contator d'esercizio

PENTAIR JUNG PUMPEN

EU-Konformitätserklärung
EU-Prohlášeni o shodě
EU-Overensstemmelseserklæring
EU-Declaration of Conformity
EU-Vaatimustenmukaisuusvakuutus

EU-Déclaration de Conformité
EU-Megfelelöségi nyilatkozat
EU-Dichiarazione di conformità
EU-Conformiteitsverklaring
EU-Deklaracja zgodności

EU-Declarație de conformitate
EU-Vyhlásenie o zhode
EU-Försäkran om överensstämmelse

DE - Richtlinien - Harmonisierte Normen
CS - Směrnice - Harmonizované normy
DA - Direktiv - Harmoniseret standard
EN - Directives - Harmonised standards
FI - Direktiivi - Yhdenmukaistettu standardi
FR - Directives - Normes harmonisées
HU - Irányelve - Harmonizá szabványok
IT - Direttive - Norme armonizzate
NL - Richtlijnen - Geharmoniseerde normen
PL - Dyrektywy - Normy zharmonizowane
RO - Directivă - Norme coroborate
SK - Smernice - Harmonizované normy
SV - Direktiv - Harmoniserade normer

• 2006/42/EG	**(MD)**	**EN 809:1998/AC:2010, EN ISO 12100:2010, EN 60335-1:2012/A11:2014**
• 2011/65/EU	**(RoHS)**	
• 2014/30/EU	**(EMC)**	**EN 55014-1:2006/A2:2011, EN 55014-2:1997/A2:2008, EN 61000-3-2:2014, EN 61000-3-3:2013**
• 2014/34/EU	**(ATEX)**	**EN 1127-1:2011**

JUNG PUMPEN GmbH - Industriestr. 4-6 - 33803 Steinhagen - Germany - www.jung-pumpen.de

DE - Wir erklären in alleiniger Verantwortung, dass das Produkt den aufgeführten Richtlinien entspricht.
CS - Prohlašujeme na svou výlučnou odpovědnost, že výrobek odpovídá jmenovaným směrnicím.
DA - Vi erklærer under ansvar at produktet i overensstemmelse med de retningslinjer
EN - We hereby declare, under our sole responsibility, that the product is in accordance with the specified Directives.
FI - Me vakuutamme omalla vastuullamme, että tuote täyttää ohjeita.
FR - Nous déclarons sous notre propre responsabilité que le produit répond aux directives.
HU - Kizárólagos felelősségünk tudatában kijelentjük, hogy ez a termék megfelel az Európai Unió fentnevezett irányelveinek.
IT - Noi dichiariamo sotto la nostra esclusiva responsabilità che il prodotto è conforme alle direttive citate
NL - Wij verklaren geheel onder eigen verantwoordelijkheid dat het product voldoet aan de gestelde richtlijnen.
PL - Z pełną odpowiedzialnością oświadczamy, że produkt odpowiada postanowieniom wymienionych dyrektyw.
RO - Declarăm pe proprie răspundere că produsul corespunde normelor prevăzute de directivele mai sus menţionate.
SK - Na výlučnú zodpovednosť vyhlasujeme, že výrobok spĺňa požiadavky uvedených smerníc.
SV - Vi försäkrar att produkten på vårt ansvar är utförd enligt gällande riktlinjer.

compli 1010/4 BWE (JP09273/2)
compli 1010/4 BW (JP09829/5)
compli 1015/4 BW (JP09830/5)
compli 1025/4 BW (JP09831/5)
compli 1025/2 BW (JP09461/1)
compli 1035/2 BW (JP09462/1)
compli 1008/2 ME (JP43131)
compli 1008/2 M (JP43132)
compli 1020/2 M (JP43133)
compli 1210/4 BW (JP09168/2)
compli 1215/4 BW (JP09169/2)
compli 1225/4 BW (JP09170/2)
compli 1225/2 BW (JP09171/2)
compli 1235/2 BW (JP09172/2)
compli 1525/4 C1 (JP09181/1)
compli 1535/4 C1 (JP09182/1)
compli 1555/4 C5 (JP09183/1)
compli 1575/4 C5 (JP09184/1)
compli 1575/4 B6 (JP09185/1)
compli 1535/2 B2 (JP45933)
compli 1555/2 B2 (JP45934)
compli 1575/2 B5 (JP45141/1)
compli 15100/2 B5 (JP45142/1)
compli 15200/2 B6 (JP45935)
compli 2525/4 C1 (JP09186/1)
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compli 2555/4 C5 (JP09188/1)
compli 2575/4 C5 (JP09189/1)
compli 2575/4 B6 (JP09190/1)
compli 2535/2 B2 (JP45936)
compli 2555/2 B2 (JP45937)
compli 2575/2 B5 (JP45938)
compli 25100/2 B5 (JP45939)
compli 25200/2 B6 (JP45940)

DE - Weitere normative Dokumente CS - Jinými normativními dokumenty DA - Andre normative dokumenter EN - Other normative documents FI - Muiden normien FR - Autres documents normatifs HU - Egyéb szabályozó dokumentumokban leírtaknak IT - Altri documenti normativi NL - Verdere normatieve documenten PL - Innymi dokumentami normatywnymi RO - Alte acte normative SK - Iným záväzným dokumentom SV - Vidare normerande dokument:

EN 50274:2002/AC:2009,
EN 60335-2-41:2003/A2:2010,
TRBS 2153, CLC/TR 50404

DE - Bevollmächtigter für technische Dokumentation CS - Oprávněná osoba pro technickou dokumentaci DA - Autoriseret person for teknisk dokumentation EN - Authorized person for technical documentation FI - Valtuutettu henkilö tekninen dokumentaatio FR - Personne autorisée à la documentation technique HU - Hivatalos személy műszaki dokumentáció IT - Persona abilitata per la documentazione tecnica NL - Bevoegd persoon voor technische documentatie PL - Pełnomocnik ds. dokumentacji technicznej RO - Persoană autorizată pentru documentatiei tehnice SK - Oprávnená osoba pre technickú dokumentáciu SV - Auktoriserad person för teknisk dokumentation:

JUNG PUMPEN - Stefan Sirges - Industriestr. 4-6 - 33803 Steinhagen

Steinhagen, 20-09-2018

_____
Stefan Sirges, General Manager

i.V. _____
Rüdiger Rokohl, Sales Manager

CE 353-15-1809

CE 0197

JUNG PUMPEN GmbH - Industriestr. 4-6 33803 Steinhagen, Germany
13
453.12.1509

EN 12050-1:2001
Fäkalienhebeanlage

compli 1525/4 C1 (JP09181/1)
compli 1535/4 C1 (JP09182/1)
compli 1555/4 C5 (JP09183/1)
compli 1575/4 C5 (JP09184/1)
compli 1575/4 B6 (JP09185/1)
compli 1535/2 B2 (JP45933)
compli 1555/2 B2 (JP45934)
compli 1575/2 B5 (JP45141/1)
compli 15100/2 B5 (JP45142/1)
compli 15200/2 B6 (JP45935)

compli 2525/4 C1 (JP09186/1)
compli 2535/4 C1 (JP09187/1)
compli 2555/4 C5 (JP09188/1)
compli 2575/4 C5 (JP09189/1)
compli 2575/4 B6 (JP09190/1)
compli 2535/2 B2 (JP45936)
compli 2555/2 B2 (JP45937)
compli 2575/2 B5 (JP45938)
compli 25100/2 B5 (JP45939)
compli 25200/2 B6 (JP45940)

Sammeln und automatisches Heben von fäkalienfreiem und fäkalienhaltigem Abwasser über die Rückstauebene

BRANDVERHALTEN	NPD
WASSERDICHTHEIT, LUFTDICHTHEIT	
- Wasserdichtheit	Bestanden
- Geruchsdichtheit	Bestanden
WIRKSAMKEIT (HEBEWIRKUNG)	
- Förderung von Feststoffen	Bestanden
- Rohranschlüsse	Bestanden
- Mindestmaße von Lüftungsleitungen	Bestanden
- Mindestfließgeschwindigkeit	Bestanden
- Freier Mindestdurchgang der Anlage	Bestanden
- Mindestnutzvolumen	Bestanden
MECHANISCHE FESTIGKEIT	
- Tragfähigkeit und strukturelle Stabilität des Sammelbehälters für die Verwendung außerhalb von Gebäuden	NPD
- Strukturelle Stabilität des Sammelbehälters für die Verwendung innerhalb von Gebäuden	Bestanden
GERÄUSCHPEGEL	≤ 70 dB(A)
DAUERHAFTIGKEIT	
- der Wasserdichtheit und Luftdichtheit	Bestanden
- der Hebewirkung	Bestanden
- der mechanischen Festigkeit	Bestanden
GEFÄHRLICHE SUBSTANZEN	NPD

CE 0197

JUNG PUMPEN GmbH - Industriestr. 4-6 33803 Steinhagen, Germany
13
453.12.1509

EN 12050-1:2001
Lifting plant for wastewater containing faecal matter

compli 1525/4 C1 (JP09181/1)
compli 1535/4 C1 (JP09182/1)
compli 1555/4 C5 (JP09183/1)
compli 1575/4 C5 (JP09184/1)
compli 1575/4 B6 (JP09185/1)
compli 1535/2 B2 (JP45933)
compli 1555/2 B2 (JP45934)
compli 1575/2 B5 (JP45141/1)
compli 15100/2 B5 (JP45142/1)
compli 15200/2 B6 (JP45935)

compli 2525/4 C1 (JP09186/1)
compli 2535/4 C1 (JP09187/1)
compli 2555/4 C5 (JP09188/1)
compli 2575/4 C5 (JP09189/1)
compli 2575/4 B6 (JP09190/1)
compli 2535/2 B2 (JP45936)
compli 2555/2 B2 (JP45937)
compli 2575/2 B5 (JP45938)
compli 25100/2 B5 (JP45939)
compli 25200/2 B6 (JP45940)

Collection and automatic lifting of wastewater without sewage and wastewater containing faecal matters above the backflow level

REACTION TO FIRE	NPD
WATERTIGHTNESS, AIRTIGHTNESS	
- Water tightness	Pass
- Odour tightness	Pass
EFFECTIVENESS (LIFTING EFFECTIVENESS)	
- Pumping of solids	Pass
- Pipe connections	Pass
- Minimum dimensions of ventilating pipes system	Pass
- Minimum flow velocity	Pass
- Minimum free passage of the plant	Pass
-Minimum useful volume	Pass
MECHANICAL RESISTANCE	
- Load bearing capacity and structural stability of collection tank for use outside buildings	NPD
- Structural stability of collection tank for use inside buildings	Pass
NOISE LEVEL	≤ 70 dB(A)
DURABILITY	
- of structural stability	Pass
- of lifting effectiveness	Pass
- of mechanical resistance	Pass
DANGEROUS SUBSTANCES	NPD

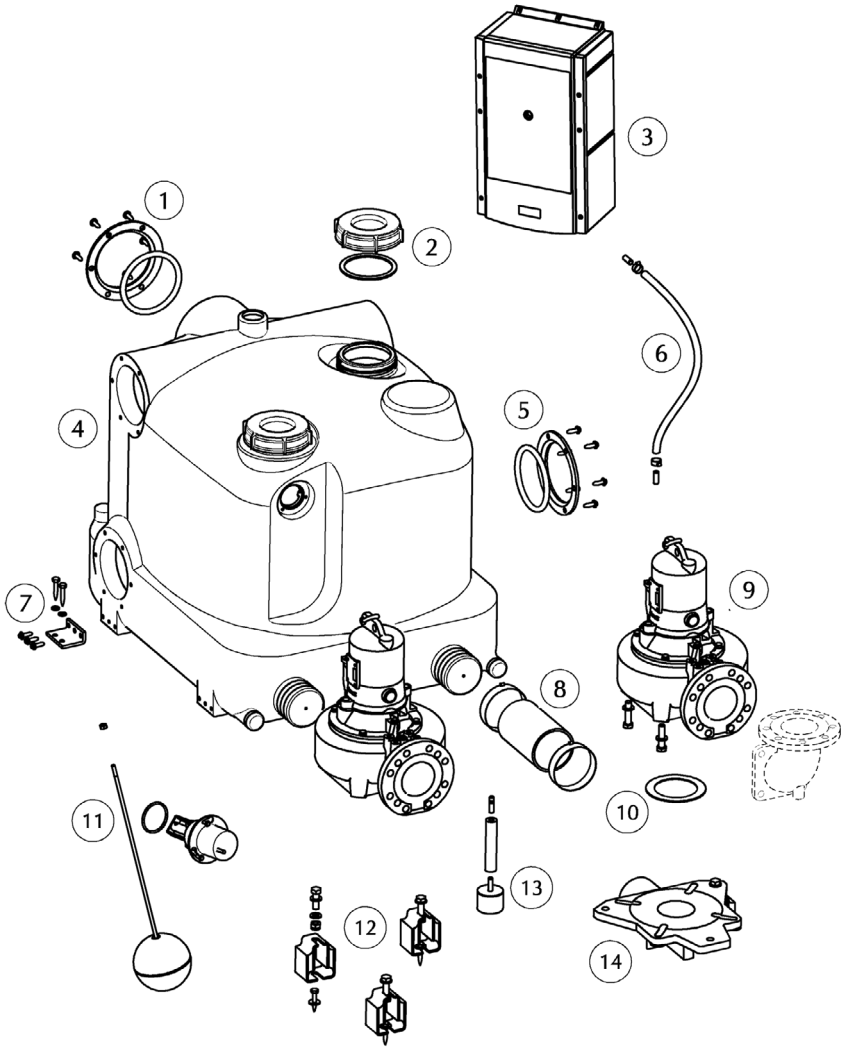
PENTAIR JUNG PUMPEN

PUMP TECHNICAL SERVICES LIMITED

JUNG PUMPEN

COMPLI 1500 - COMPLI 2500

Ersatzteile - Spare parts - Pièces de rechange - Reserveonderdelen - Parti di ricambio - Reservedele - Reservdelar Varaosat - Części zamienne - Náhradní díly - Alkatrészek - Piese de schimb - Запасные части - 备件



①	Klemmflansch	Clamping flange	**JP43713**
②	Wartungsdeckel	Service lid	**JP42798**
③	Steuerung	Control unit	
	...25		**JP45786**
	...35		**JP45787**
	...55		**JP45989**
	...75		**JP47662**
	...100		**JP47663**
	...200		**JP47664**
④	Behälter	Tank	**JP45945**
⑤	Klemmflansch	Clamping flange	**JP43713**
⑥	Pumpenlüftung	Pump ventilation	**JP43732**
⑦	Auftriebssicherung	Anti float set	**JP43716**
⑧	Elast. Verbindung	Elastic connector	**JP46009**
⑨	Pumpe	Pump	
	25/4 C1		**JP47651**
	35/4 C1		**JP47652**
	55/4 C5		**JP47653**
	75/4 C5		**JP47654**
	75/4 B6		**JP47655**
	35/2 B2		**JP47656**
	55/2 B2		**JP47657**
	75/2 B5		**JP47658**
	100/2 B5		**JP47659**
	200/2 B6		**JP47660**
⑩	Dichtungssatz	Seal set	**JP46074**
⑪	Niveauschaltung	Level control	**JP47306**
⑫	Pumpenfüße	Pump pedestal	**JP46075**
⑬	Stütze	Support	
	B2		**JP47669**
	B5		**JP47665**
	B6		**JP47666**
	C1		**JP47667**
	C5		**JP47668**
⑭	Fußkrümmer	Bend receiver base	**JP47661**

PENTAIR

PUMP TECHNICAL SERVICES LIMITED

THE SUBMERSIBLE PUMP SPECIALISTS

JUNG PUMPEN

Pump Technical Services Limited, Pump House, Unit 12 Bilton Road Industrial Estate, Erith, Kent, DA8 2AN. Tel: 01322 357 080 Email: sales@pts-jung.co.uk