

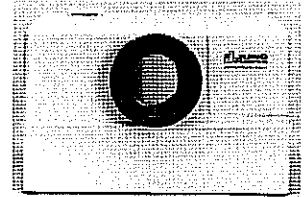
General Safety Instructions

Application

Electrical Connection

Installation

Maintenance



Sewage disposal unit

You have bought a Jung Pumpen product and therefore purchased quality and performance. Guarantee this achievement by an installation according to the operating instructions so that our product can meet your demands to your full satisfaction. Please note that damages as a result of poor installation will affect the guarantee.

For this reason please follow the advice of the operating instructions.

Like any other electrical appliance the operation of this product can fail by electrical failure or technical faults. It is wise to always consider standby pumps, emergency generator and a control unit fitted with mains independent alarm.

Operating Instructions

General Safety Instruction

This operation manual gives basic instructions that should be followed carefully during installation, operation and maintenance. It is essential that this manual is carefully read by the responsible personnel/operator before assembly and commissioning. It is always to be kept available at the installation site.

Identification of safety instructions in the operating manual

Safety instructions given in this manual non-available with which would affect safety are identified by the following symbol:



General danger for personnel



Dangerous voltage

WARNING

Danger for machine and function

It is imperative that signs affixed to the machine, e.g.

- rotation arrow
- fluid connection symbols
- data / approval plate

be observed and kept legible.

Qualification of personnel

An authorized (certified) electrician and mechanic shall carry out all work. Scope of responsibility and supervision of the personnel must be exactly defined by the plant operator. If the staff does not have the necessary knowledge, they must be trained and instructed, which may be performed by the machine manufacturer or supplier on behalf of the plant operator, moreover, the plant operator is to make sure that the contents of the operating manual are fully understood by the personnel.

Hazards in the event of non-compliance with the safety instructions

Non-compliance with the safety instructions may produce a risk to the personnel as well as to the environment and the machine and results in a loss of any right to claim damages or compensation. For example, non-compliance may involve the following hazards:

- Failure of important functions of the machine/plant
- Failure of specified procedures of maintenance and repair
- Exposure of people to electrical, mechanical and chemical hazards
- Endangering the environment owing to hazardous substances being released.

Safety regulations for owner / operator

All safety instructions contained in this manual, all relevant national and local health and safety codes and any other service and safety instructions issued by the plant operator shall be complied with.

Safety instructions relevant for operation

If hot or cold machine components involve hazards, they must be guarded against accidental contact.

Guards for moving parts (e.g. coupling) must not be removed from the machine while in operation.

Any leakage of hazardous (e.g. explosive, toxic, hot) fluids (e.g. from the shaft seal) must be drained away so as to prevent any risk to persons or the environment. Statutory regulations are to be complied with. The pumping station must be kept tidy and in good condition.

Hazards resulting from electricity are to be prevented (see for example, the national-specifications or the regulations of your local electricity supply company.)

Safety instructions relevant for maintenance, inspections and assembly work

It shall be the plant operator's responsibility to ensure that all maintenance, inspection and assembly work is performed by authorized and qualified personnel who have adequately familiarized themselves with the subject matter by studying this manual in detail.

Any work on the machine shall only be performed when it is at a stand-still, it being imperative that the procedure for shutting down the machine described in this manual be followed.

Pumps and pump units which convey hazardous media must be decontaminated. All waste emissions such as used oil must be appropriately disposed of, oil spills must be cleaned up and emissions to the environment must be reported. On completion of work all safety and protective facilities must be reinstalled and made operative again.

Prior to restarting the machine, the instructions listed under "Electrical Connection" and "Installation" are to be observed.

Unauthorized alterations and production of spare parts

Any modification may be made to the machine only after consultation with the manufacturer. Using spare parts and accessories authorised by the manufacturer is in the interest of safety. Use of other parts may exempt the manufacturer from any warranty or compensation claims.

Unauthorized modes of operation

The reliability of the machine delivered will be only guaranteed if it is used in the manner intended, in accordance with clause 1; of this manual: The limit values specified in the data sheet must under no circumstances be exceeded.

Warranty claim

Jung Pumpen pumps are long living, high quality products with expected reliable operation. However, should the need arise for a warranty claim, please contact your Jung Pumpen distributor.

Operating Instructions

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Operating Instructions

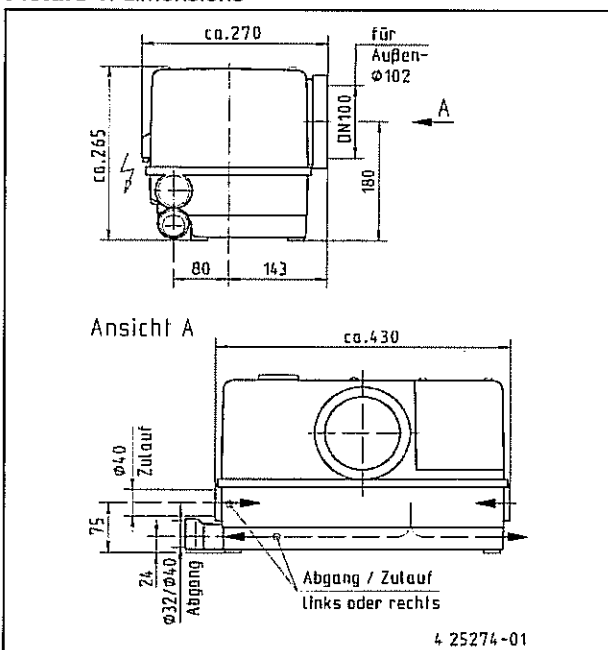
Technical Data

	WC fix 260 / 260 A
Supply voltage [V]	1 N/PE x 230 V
Power input P1 [kW]	0,40
Nominal current [A]	1,75
r.p.m. [1/min]	2610
Weight [kg]	6,0
Mode of operation: intermittent service S3	50 % (5 min operation - 5 min stand by)
max. water temperature	35° C
Protective system	IP 44

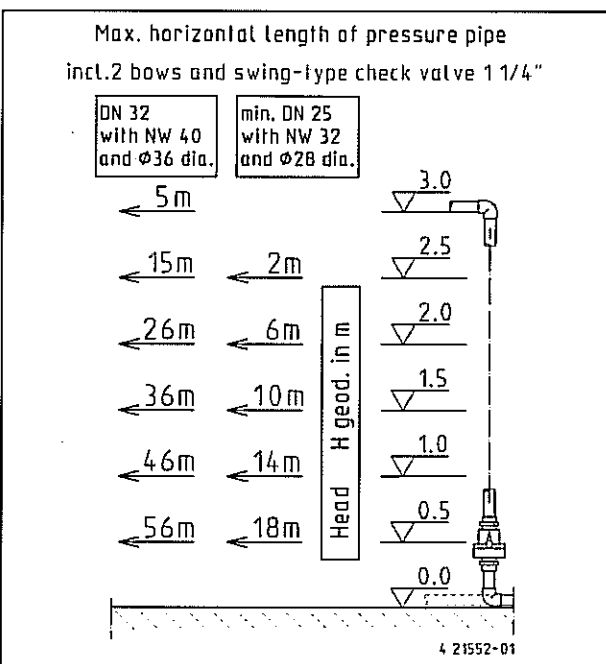
Description

This manual applies to a Jung Pumpen sewage disposal unit WCfix 260 V.

Picture 1: dimensions



Picture 2: operation limits



Application

The WC-fix is a sewage disposal unit for a toilet above and below the backpressure level. (in accordance with DIN 1986) They are suitable for the direct connection of a flush toilet with horizontal discharge and 9 lt. cistern. (DIN 1387 1388) In addition a shower, a washbasin, and a bidet can be connected in the same room. The unit is suitable for waste water without wearing additions, in accordance to DIN 1986, part 3. The WC-fix can be used wherever the installation of an additional toilet is required as part of renovation or conversion work.

The use is only advisedly if there are a few users and an additional toilet above the backpressure level.

The flow rate in the pressure line must have a min. of 0,7 m/s. The application limit is 0,35 bar. (3,5 m WS) The waste water can be pumped up to 2,5 m high or over a distance of 18,0 m through a tube with an inner diameter of 28 mm (pic. 2).

WARNING

Do not put in any hygienic articles, fibre substances, food waste, solvents, chemicals, etc.

Do not connect a washing machine or a dishwasher! (DIN EN 12050 T3)

Operation limits

The flow rate in the pressure line must have a min. of 0,7 m/s. The application limit is 0,40 bar. (4,0 m WS) The waste water can be pumped up to 2,5 m high or over a distance of 18,0 m through a tube with an inner diameter of 28 mm (pic. 2).

Transportation and storage

The pump can be transported and stored in vertical or horizontal position.



Always use the handle to carry the pump, never lift it at the cable. Make sure the pump cannot roll or fall over and injure people or damage property.

If kept dry the pump can be stored down to a minimum temperature of -20°C. The flooded pump must not freeze.

For longer periods of storage, the pump must be protected against moisture and heat. The impeller should be rotated occasionally to prevent the seals from sticking together.

After a long period of storage, the pump should be inspected before it is taken into operation. Pay special attention to the seals and the cable gland.

Follow the instructions of „Operation“.

Operating Instructions



Please pay attention to the following regulations at installing the pump(s) or ask your qualified electrician / distributor.

- regulations for electrical installations (in Germany: VDE 0100, VDE 0165)
- regulations for prevention of accidents in sewage technical installations (in Germany: GUV 7.4, GUV 17.6)
- guidelines for explosion protection (in Germany: GUV 19.8)
- electrical installations in explosion hazardous areas (in Germany: Elex V)

Safety precautions

In order to minimize the risk of accidents in connection with the service and installation work, the following rules should be followed:

- Never work alone. Use a lifting harness, safety line and a respirator as required. Do not ignore the risk of drowning.
- Make sure there are no poisonous gases within the work area.
- Check the explosion risk before welding or using electric hand tools.
- Do not ignore health hazards. Observe strict cleanliness.
- Bear in mind the risk of electrical accidents.
- Make sure that the lifting equipment is in good condition.
- Provide a suitable barrier around the work area, e.g. guard rail
- Make sure you have a clear path of retreat.
- Use safety helmet, safety goggles and protective shoes.
- All personnel who work with sewage systems must be vaccinated against diseases to which may be exposed.
- A first-aid kit must be close at hand.
- Note that special rules apply to installation in explosive atmosphere.

Follow all other health and safety rules and local codes and ordinances

Electrical connection



Following works should only be done by qualified and authorized electricians.



Jung Pumpen disclaims all responsibility for work done by untrained or/and unauthorized personnel.

- Heed operating voltage ! (see name plate and additional labels)
- Take out the main fuses to isolate the mains supply from the control unit before repairs or any other works and make sure it cannot be energized again.
- If the pump is equipped with automatic level control, there is a risk of sudden restart.
- Before starting check the efficiency of the protective arrangements of the pump and the monitoring equipment. Failure to heed this warning may cause a lethal accident.
- Do not put the plug or the lead ends into water! Irruption of water may cause malfunctions.

- If persons are likely to come into physical contact with pump or pumped media, the earthed (grounded) socket must have an additional connection to a earth- (ground) fault protection device (GFI).
- When pumping near a lake, a jetty, a pond etc. a safety distance of at least 20 m between the person and the pump is applicable. Do not place the pump directly in a pool. Observe the special safety regulations if used in connection with swimming pools.
- Use the pump only in accordance to the data stated on the pump's plate resp. in the technical data on page 4.



WARNING

Special rules apply to installation in explosive atmosphere.

Intrinsically safe circuits (Exi) are normally required for the automatic level control system by level regulators.

- A Jung Pumpen control unit gives you the certainty of design under safety regulations and an acceptance of work without any problems.
- Level sensors must be used at low voltage. For further details please see data sheet / o.m. Local rules may specify otherwise.
- To prevent the pump from blocking after long rest periods an additional daily trial run unit can be installed.
- Connection only to a mains supply installed in accordance to the local regulations. For fusing of d.o.l. starting pumps use only 10 A slow fuses or automatic circuit-breaker with C or D characteristic. (former G and K)
Because the motor's nominal voltage is measured at the terminal board of the pump, please consider the voltage drop of long supply cables.
- The motors of the three-phase a.c. pumps must be protected by a suitable overcurrent release. Adjustment as following:
direct start: + 10% of the nominal current
star-delta start: (nominal current x 0,58) + 10 %
If the protective arrangement has triggered, eliminate the trouble
- Replace the cable if the cable jacket is damaged. Do not pinch the cable or pull it around sharp bends.
- Always install the control unit in a dry and well ventilated room above the backpressure level. Never install the control unit in the sump !

Operating Instructions

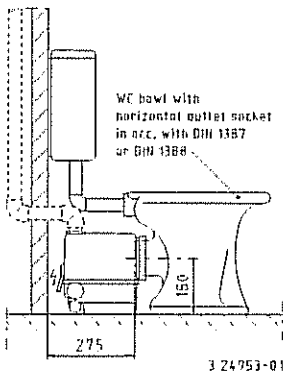
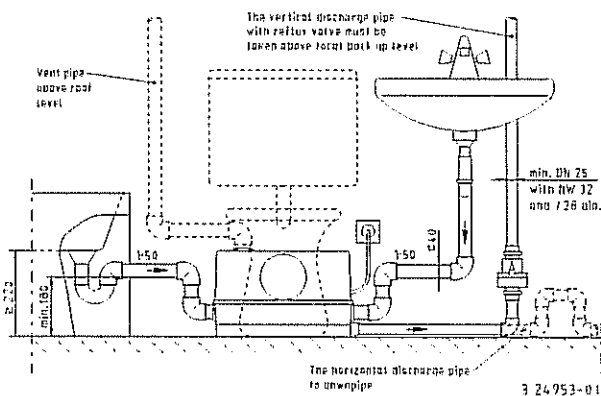
Mode of operation

The WC-fix may only be connected to fused sockets (min. 10 A, slow fuse) according to the electric regulations. The motor is protected by an integrated winding thermostat, that triggers in case of high temperatures or too long operation times. (see wiring diagram)

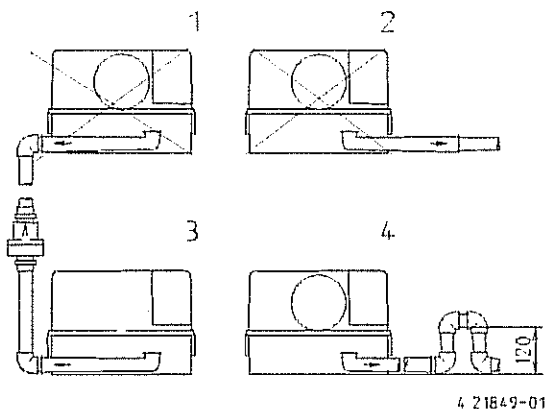


WARNING At triggered motor thermostat pull the main plug, because the pump restarts automatically when cooled down.

Picture 3: installation



Picture 4: mounting instructions



General explication

The WC-fix 260/260 A operates automatically depending on the water level in the tank. It has a static air level control unit to switch the motor on or off. The signal of the integrated alarm unit (only WC-fix 260 A) signals a malfunction even if it is temporary.



Do not put the plug into water! Irruption of water may cause malfunctions.

Mounting instructions

Before working on the WC-fix, the plug must be pulled. The WC-fix can be fixed directly at commercial toilets (DIN 1387 or 1388) with a horizontal discharge pipe. The height of the installation level up to the middle of the connection piece must be 180 mm.



WARNING A connection tube between the WC-fix and the toilet can cause malfunctions.

This sort of installation is not in accordance with the rules of the German institute for construction engineering. The required space behind the toilet is the same as the one of a commercial flushing box with a content of 9l. The distance between the end of the connecting branch of the toilet and the wall must have a minimum of 275 mm (pic. 8), to allow a removing of the unit without demounting the basin. The enclosed flap-trap must be installed into the pressure tube (preferred installation: vertical, connection 1 ¼ inch) (pic. 3 and 4)

Connection

For additional connections there are 2 separate inlets, above the bottom, at the rear side of the tank for tubes with an outside diameter of 40 mm.

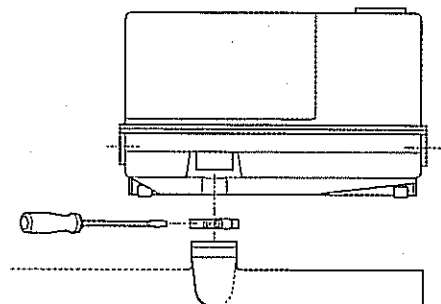
In order to decrease bad smells there is an activated carbon filter which can be installed if required. Before installation the foil must be removed. An alternative solution is the connection of a ventilation (Ø: 40 mm) to the roof, that prevents effectively an annoyance caused by bad smell.



WARNING Do not connect more additional objects than a washbasin, a bidet and a shower.

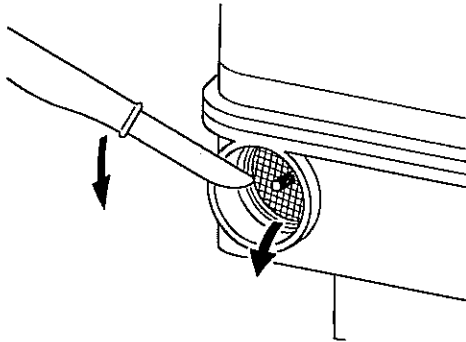
The place of installation must be safe from flooding and should be well ventilated. Accessories to fix the unit on the floor against torsion and floating are enclosed.

Picture 5: Installation of the pressure elbow

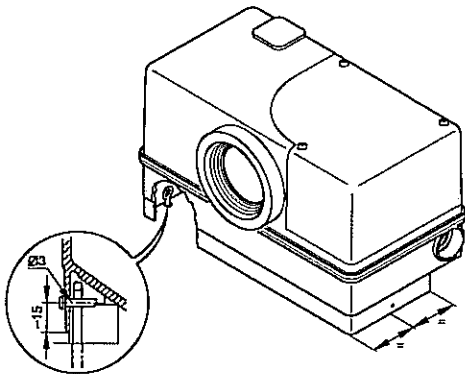


Operating Instructions

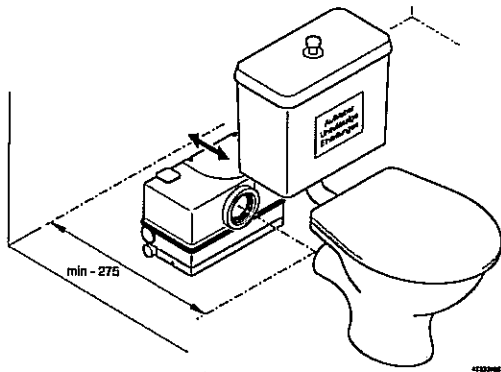
Picture 6: Preparation of additional connection



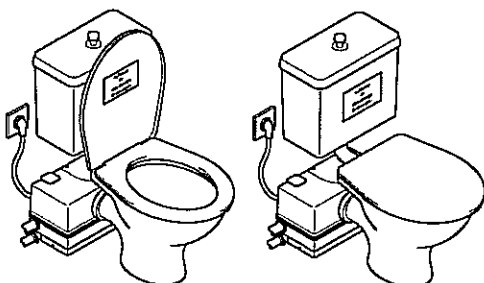
Picture 7: Protection against buoyancy



Picture 8: Installation



Picture 9: Advice for the user



Installation procedure

Before installation make sure that all tubes have the required outer diameter, especially the pressure tube.

Picture 5:

Push the pressure elbow (Pos. 34) onto the outlet of the unit, choose the direction and fix it with the strap (Pos.33). See to it that the pressure elbow is completely pushed onto the outlet, to secure a save installation of the strap.

Picture 6:

To connect a wash-basin, a shower and / or a bidet, remove the plug (Pos. 30) from the inlet. Pay attention to the installation notes (Pic. 4) concerning heights, falls and arrangement.

After removing the plug, open the inlet sleeve at the marked point with a knife or a screwdriver (Pic. 6)

WARNING

The cut out seal must not be left in the container.

Picture 7:

The WC-fix 260/260 A can be secured against torsion and floating by using eyelet bolts (Pos. 31), dowels (Pos. 32) and sheet metal screws (Pos. 10) which are enclosed.

Work flow (Picture 7)

At first mark the dowel holes on the floor with the enclosed drill template. Therefore straighten the template at the wall behind the toilet, check the outlet of the toilet and then draw on the bore holes on the floor. After that straighten the WC-fix 260/260 A on the template, fold up the side walls and draw on the bore holes ($\varnothing: 3$) on the lower edge of the casing. After drilling the holes into the floor and the container, mount the eyelet bolts.

Picture 8:

Put the pre-assembled WC-fix 260/260 A behind the toilet. Push the unit with the rubber collar DN 100 (Pos. 25) up to the stop (in the inlet of the tank) onto the outlet of the toilet. If necessary, moisten the rubber collar with soap water and level out the heights with the rubber bases (Pos. 24) of the unit with washers. (not enclosed). Screw the sheet metal screws (Pos. 10) into the middle of the eyelet plugs.

WARNING

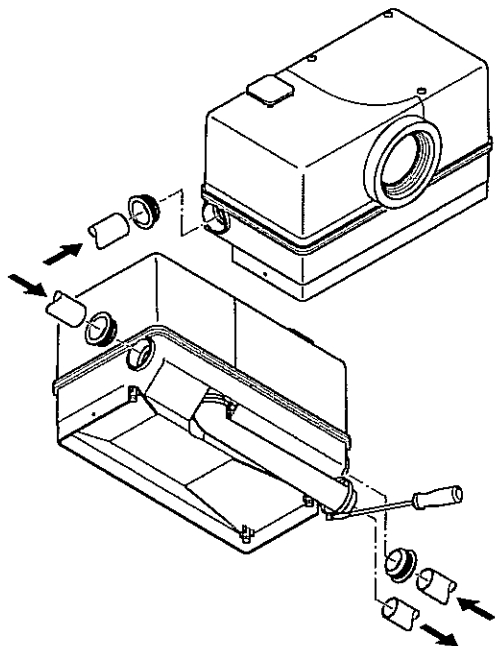
The fit of the rubber collar must be perfect.

Picture 9

Fix the enclosed sticker with „Operating Instructions“ in a visible place. The disposal of things like hygienic articles, fibre substances, food waste, solvents, chemicals, etc. can lead to malfunctions and will affect the guarantee.

Operating Instructions

Picture 10: Installation of the tubes



Picture 10

Put the plug-in seal(s) (Pos. 34) flush into the inlet sleeve(s). Then put the tube(s) up to the stop into the plug-in seal of the inlet sleeve. Push the pressure elbow (Pos. 34) with a strap (Pos. 33) over the pressure line and fix it.

Picture 11

An uptake to the roof must be installed risingly. The connection of the line is the same as the one of the additional connections. The connection sleeve is made for a tube \varnothing 40 mm.

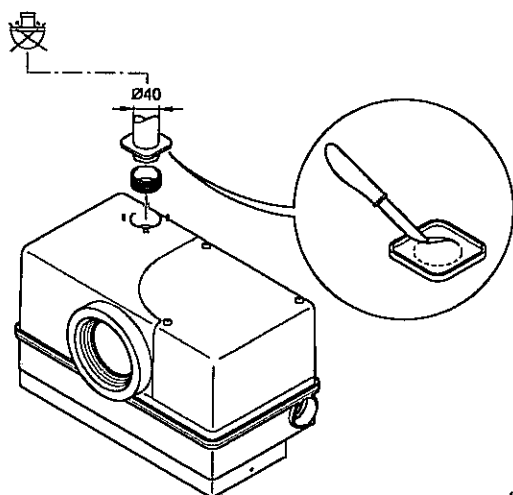
Remove the cap (Pos. 13) of the casing. If an activated carbon filter is already installed, it must be removed.

Put the plug-in seal (Pos. 29), into the connection sleeve until the collar of the seal is on the surface of the casing. If both enclosed plug-in seals are already used, please order an extra seal with the part-No. 08318.

The cap (Pos. 13) has a prepared cut out at the inner side, to cover the hole if a ventilation tube will be installed. Remove the cut out with a knife or a screwdriver and burr the separating line.

Push the cap over the ventilation pipe, put the pipe into the seal and press on the cap.

Picture 11: Connection of the ventilation to the roof



Practical hints

After using commercial cleaning material, flush several times to ensure that no reminders rest in the unit.

Holding devices of permanent cleaning materials must be fixed especially save to prevent them from being flushed into the unit.

Trouble shooting

The water in the toilet-basin drains off very slowly:

cause: blockage of the tank inlet, the pump intake or the tank ventilation caused by too much paper and not enough water.

remedy: check flushing volume, if necessary adjust to 9l. If the water does not bank up into the toilet, flush 1 x . If the unit operates repeat several times if necessary.

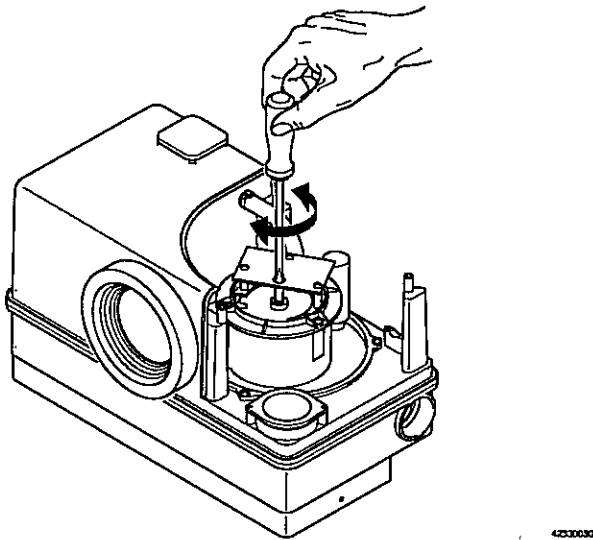
Several starts after a single operation:

cause: If the water flows back into the unit after operation, the flap trap can leak or is defective, otherwise there can be a blockage in the tank or in the pump because of too much paper.

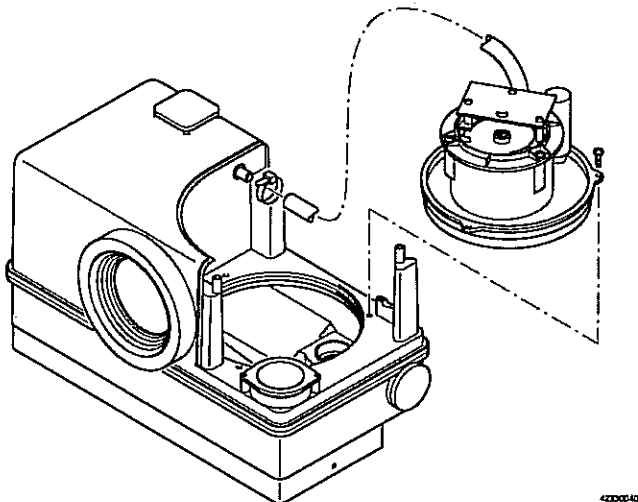
remedy: Use the flushing several times, if there is no change, please call our service.

Operating Instructions

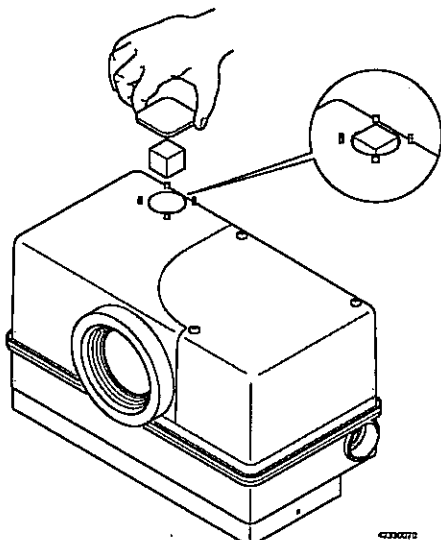
Picture 12: Remove of blockages



Picture 13: Remove of the motor and pump



Picture 14: Change of air filter



Maintenance



Take out the main fuses to isolate the mains supply of both, control unit and pump, before any works and make sure it cannot be energized again. Check the cable on mechanical or chemical damages.



Only authorised workshops or the manufacturer are permitted to carry out repairs and maintenance.

In case of repairs the gap peripheries have to be inspected for damages, defective parts must be replaced by genuine spare parts.

Jung Pumpen disclaims all responsibility for work done by untrained, unauthorized personnel.

General safety

- clean the pump thoroughly
- beware of the risk of infection
- follow local safety regulations

The pump is designed to deliver liquids which can be dangerous to health. When working on the pump, prevent injuries to the eyes and skin, by:

- wearing goggles and rubber gloves
- cleaning the pump before any works
- cleaning the parts after dismantling
- hold a cloth over the drain plug to prevent splatter when opening the oil chamber

In case of contact with dangerous liquids:

- eye contact: rinse your eyes immediately in running water for 15 min. Hold your eyelids apart with your fingers. Contact an eye specialist
- skin contact: remove contaminated clothes, wash your skin with soap and water, seek medical attention, if necessary

To keep the reliability of operation the unit should be inspected half yearly but not later than once a year.

If the pump delivers water with abrasive additions servicing should be carried out at adequate shorter intervals. At decreasing flow rates or ascending noises the impeller has to be checked on wear, and if necessary, it has to be changed.



Following works should only be done by qualified electricians. Pull main plug before any work or repairs on the unit !

1. Disassemble the cover (Pos. 26). Unscrew three cap screws (Pos.27).
2. In case or any blockages of the unit: Insert a screwdriver through the hole in the Printed Circuit Board (Pos. 21) into the slotted pump shaft and turn it until the shaft is moving freely. Re-fit the cover and check the pump by a short test run.



After that, control the pump by plugging in the mains plug momentarily.

3. If the unit will not run satisfactorily after the procedure of point 2., the pump with motor must be disassembled.

Operating Instructions

- Before disassembling the complete pump and motor unit, remove the water from the toilet bowl, detach the pressure elbow connection (Pos. 34) from the pipework and drain the water off into a flat storage basin, or pump out the water with a drilling machine. ($n > 2000$ min, right handed rotation) and a screwdriver bit.
- If necessary, remove the water and any blockages from the tank and the pump etc. and clean all parts.
- Check and clean also the vent pipe and carbon filter plate which must be replaced, if necessary.
- Before re-assembling, the O-rings and seal sleeves must be cleaned and greased.

Picture 14:

Installation / change of the activated carbon filter

To prevent an annoyance caused by bad smell we recommend the installation of the activated carbon filter (enclosure). Therefore the cap of the tank ventilation must be removed. Push the **unwrapped** activated carbon filter into the cylindric opening.

The filter has a little interfering for a save seat. The edges of the filter will sheare off slightly. After that, re-fit the cover. The filter should be changed after malfunctions with overflowing of water through the ventilation valve, in case of bad smells, it should be changed once a year.

Trouble shooting

The unit does not work, and the water does not drain off

cause: power failure or blockage of the pump.

remedy: check supply voltage, change fuse if necessary, check supply cable.

If the unit operates very noisy

cause: foreign objects in the pump

remedy: see advices on page 7

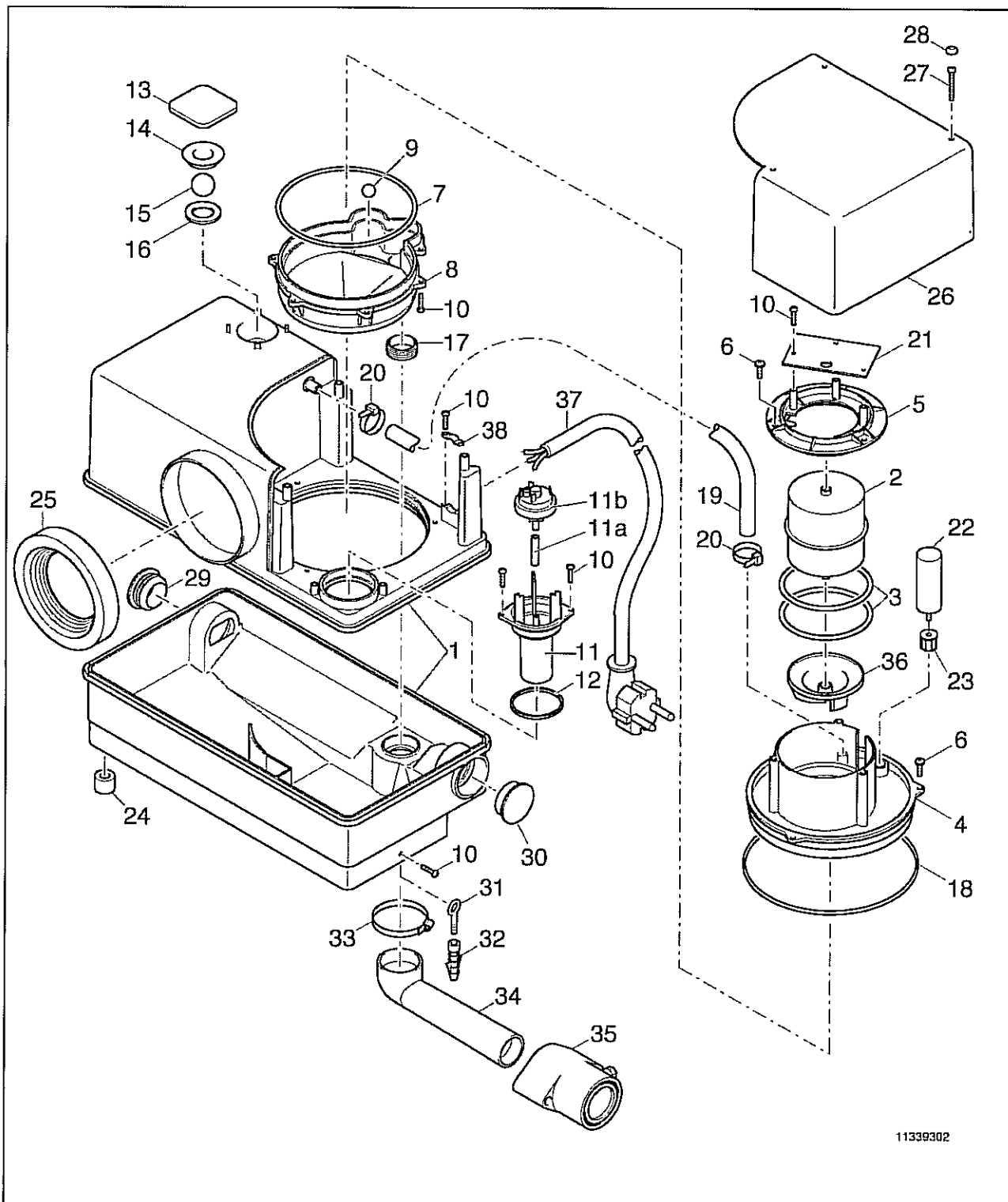
For other faults see trouble shooting on page 7


Jung Pumpen GmbH & Co Industriestraße 4-6 - 33803 Steinhagen
XX ¹
EN 12050 - 3
Fäkalienhebeanlage zur begrenzten Verwendung DN 40
Hebewirkung – siehe technische Daten
Geräuschemissionswert < 70dB (A)

¹ Die beiden ersten Ziffern der Pumpen-Nr. bezeichnen das Produktionsjahr.

Operating Instructions

Picture : Sectional drawing



11339302

Operating Instructions

Spare parts list WC-fix 260 and 260 A

<u>Pos.No.</u>	<u>ID.No.</u>	<u>Description</u>	<u>Dimensions</u>	<u>Quantity</u>
1	24866	tank / top and base		
2	24897	motor unit, complete		
3	16325	O-ring	86 x 6	1
4	24861	motor adaptor flange		1
5	24868	thrust piece		1
6	20538	screw	5 x 20	6
7	24896	O-ring	148 x 3	1
8	24860	pump casing		1
9	17308	ball	Ø14	1
10	3991	screw	3,5 x 16	14
11	27892	switch unit receiver		1
11 a	27971	tube	5 x 1,5 x 34	1
11 b	12252	pressure switch	911.10	1
12	24898	O-ring	54 x 3	1
13	24865	ventilation cap		1
14	24878	ventilation seal		1
15	24876	ball	Ø25	1
16	24875	washer		1
17	19957	leathering	d 30	1
18	3807	O-seal	175 x 3	1
19	22019	pipe	10/14 x 170 lg.	1
20	05580	wire strap	2,6 x 100	2
21	27932 / 27933	printed control board	(only WC-fix 260 A)	1
22	16318	capacitor	6 uF	1
23	24899	mounting cap for capacitor	GPN 800 IM8	1
24	03189	rubber bases		4
25	12616	collar	DN100	1
26	24863	tank cover		1
27	17311	screw	4,2 x 38	3
28	17406	cap	No. 7	3
29	08318	leathering	40 x 47	2
30	07417	vent plug	55 x 46	2
31	20060	eyelet bolts	30 x 12 x 4	2
32	12599	dowel	S 6	2
33	3573	hose clamp	35 – 48	2
34	24877	outlet elbow	d 32/41	1
35	9739	flap trap	R 1 ¼	1
36	24864	impeller		1
37	25149	mains supply		1
38	00072	strap for strain relief		1
not shown	20140	activated carbon filter	35 x 20, wrapped	1

Replacement kits

24907 motor / pump unit, consisting of Pos. 2 - 10

By ordering spare parts indicate type of the pump and the part number.

