

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.

compli 1525/4 C1	ID-No. 09181 / 00
compli 1535/4 C1	ID-No. 09182 / 00
compli 1555/4 C5	ID-No. 09183 / 00
compli 1575/4 C5	ID-No. 09184 / 00
compli 1575/4 B6	ID-No. 09185 / 00

compli 2525/4 C1	ID-No. 09186 / 00
compli 2535/4 C1	ID-No. 09187 / 00
compli 2555/4 C5	ID-No. 09188 / 00
compli 2575/4 C5	ID-No. 09189 / 00
compli 2575/4 B6	ID-No. 09190 / 00

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



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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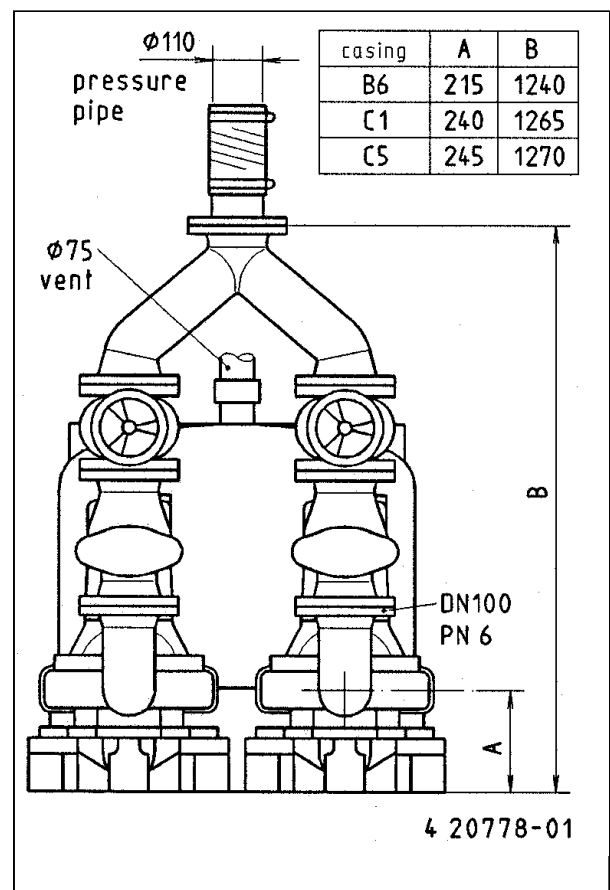
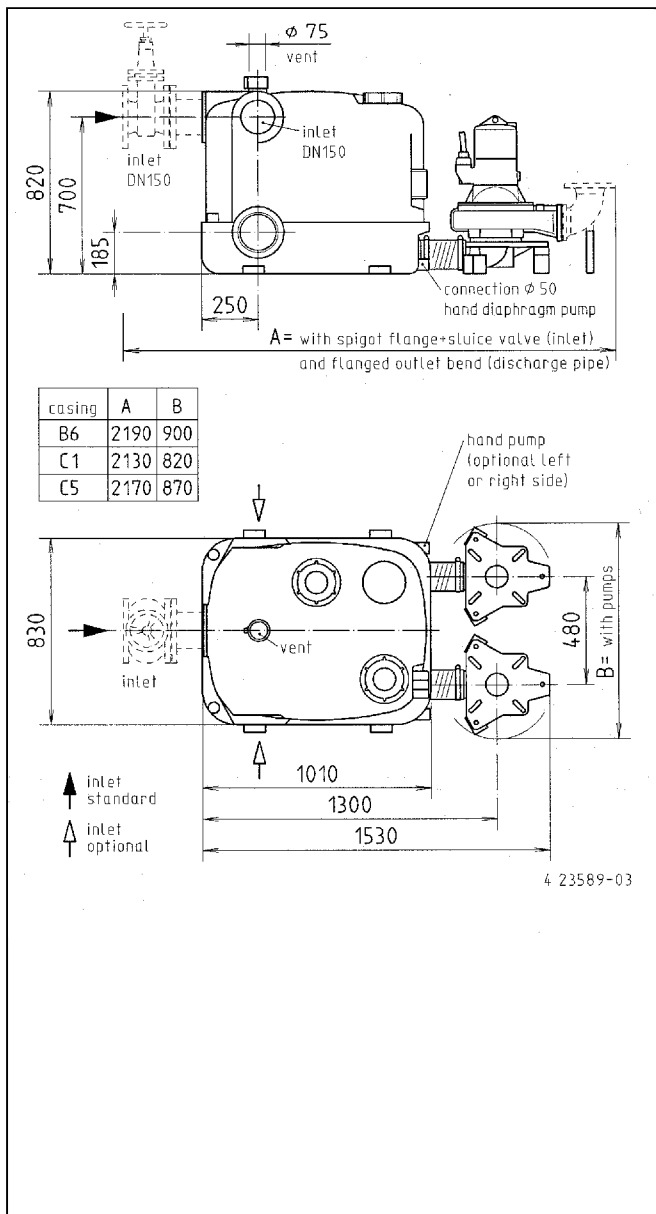
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Operating Instructions

Technical Data

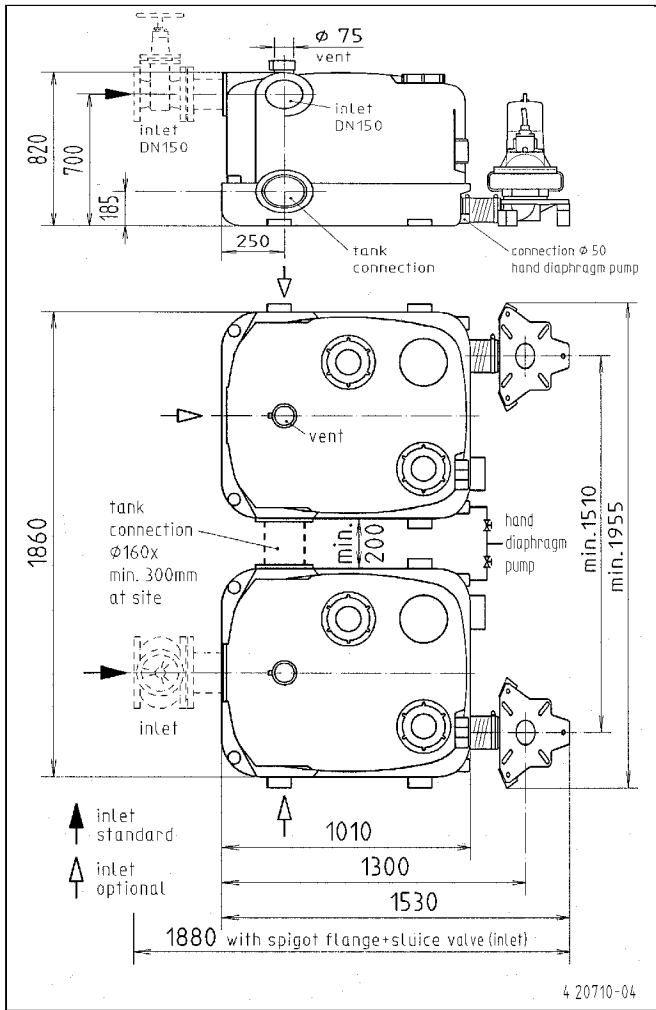
	compli				
	1525/4 C1 2525/4 C1	1535/4 C1 2535/4 C1	1555/4 C5 2555/4 C5	1575/4 C5 2575/4 C5	1575/4 B6 2575/4 B6
Supply voltage [V]	3N ~ 400 V				
Power input P1 [kW]	2,40	3,50	5,80	7,20	7,20
Nominal current [A]	7,1 / 4,1	11,7 / 6,8	10,2 / 5,9	12,5 / 7,3	12,5 / 7,3
cos phi	0,85	0,75	0,83	0,83	0,83
r.p.m. [1/min]	1345	1410	1420	1425	1425
weight [kg]	62	66	15	122	114
Mode of operation: intermittent service S3	20 %	15 %	10 %	15 %	15 %
max. switch. frequency	40 / h				
max. water temperature	1 – 40° C				
protective system	IP 68				

Picture 1: dimensions compli 1500

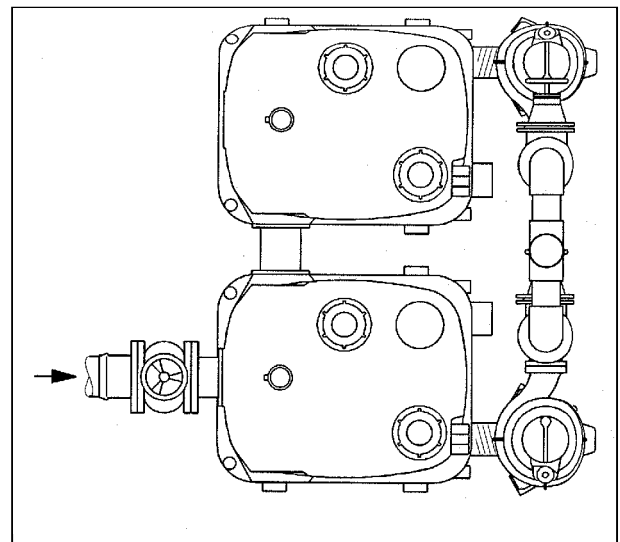


Operating Instructions

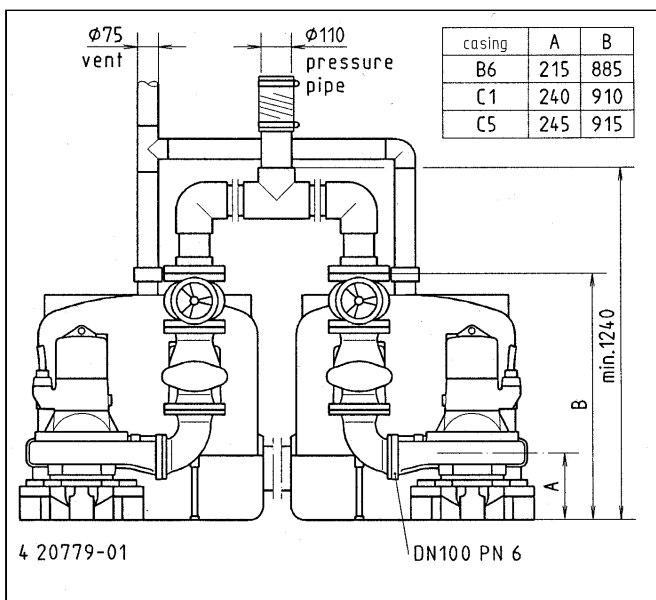
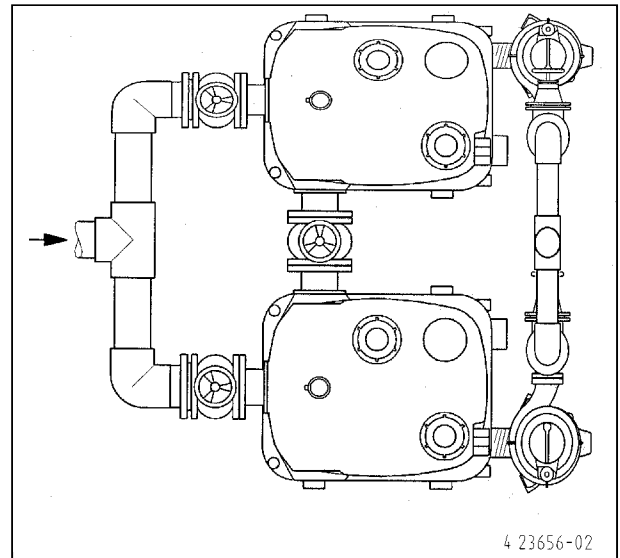
Picture 2: dimensions compli 2500



Installation with 1 stop valve



Installation with 3 stop valves



Operating Instructions

Description

This manual applies to a Jung Pumpen sewage disposal unit of the compli series 1500 / 2500. Observe the special handling instructions of the Ex-approved UFK type (option)

Application

- The compli units are designed for sewage in the domestic, industrial and municipal sectors (DIN EN 12050-1, DIN 1986, part 3). They are ideally suited to deliver sewage and waste water with the usual admixtures to the next gravity sewer in remote situations. In some countries sumps with a connection to the public sewer are an explosion hazardous location. For this application the **explosion proof UFK type** is necessary, for further information ask your distributor.
- Only Ex-approved pumps may be used at different operating conditions in explosion hazardous locations. Please ask the industrial and trade supervision, the building inspection or the employer's liability insurance association for such an application.
- The unit is flood-proof, but the control unit, protective system IP 44, has to be installed in a well-ventilated and dry area, safe from flooding. A high degree of humidity could damage the unit.
- Height of overflow: max. 2 m (3,2 feet), duration: max. 7 days
- Allowed temperature of pumped medium:
Continuous operation : 40 °C (S1-operation)
Intermittent operation : S3 operation, 30 %
(3,0 min. operation, 7,0 min. stand by)
- If kept dry the pump can be stored down to a minimum temperature of -20°C. The flooded pump must not freeze.
- noise emission: >70 dB (A)

Transportation and storage

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



Always use the shackle 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 they 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 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 an 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.

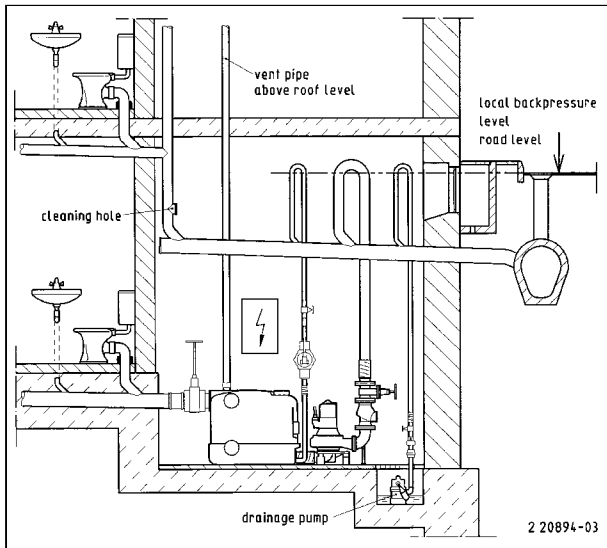
- A Jung Pumpen control unit gives you the certainty of design under safety regulations and an acceptance of work without any problems.
- Level sensors must be used at low voltage. For further details please see data sheet / o.m. Local rules may specify otherwise.
- To prevent the pump from blocking after long rest periods an additional daily trial run unit can be installed.
- The mains supply must be installed in accordance to the local regulations. For fusing use only slow fuses or automatic circuit-breaker with C or D characteristic. (former G and K)
pump series 25/4 and 35/4 = fuse size 10 A
pump series 55/4 and 75/4 = fuse size 20 A
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 !

Earthing

For safety reasons, the earth conductor should be appr. 50 mm (2 inch) longer than the phase conductors. If the motor cable is jerked loose by mistake, the earth conductor should be at last conductor to come loose from its terminal. This applies to both ends of cable. Ensure the correct earthing of the pump and the control unit.

Operating Instructions

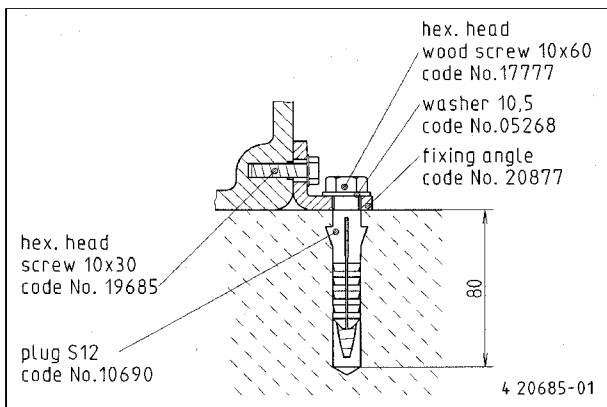
Picture 3: installation example



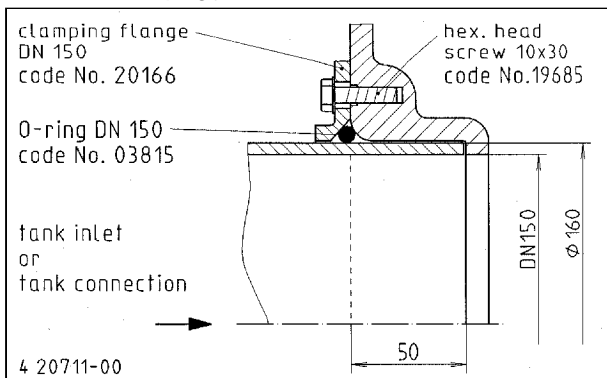
Installation

In accordance to the regulations for prevention of accidents and the DIN 12056-2 sewage disposal units must be installed buoyancy proof and with a necessary clearance zone to ensure easy maintenance and repairs at all parts be in consideration. The min. clearance zone must be 60 cm (2 feet) in breadth and height. The unit should be installed correspondingly to picture 2. The pressure tube must be taken in a loop over the local backpressure level and secured with a DIN EN 12050-4 approved reflux valve. A sluice valve must be installed in the inlet pipe and behind the reflux valve of the pressure tube. To dewater the operational premise a pump sump with a drainage pump should be planned.

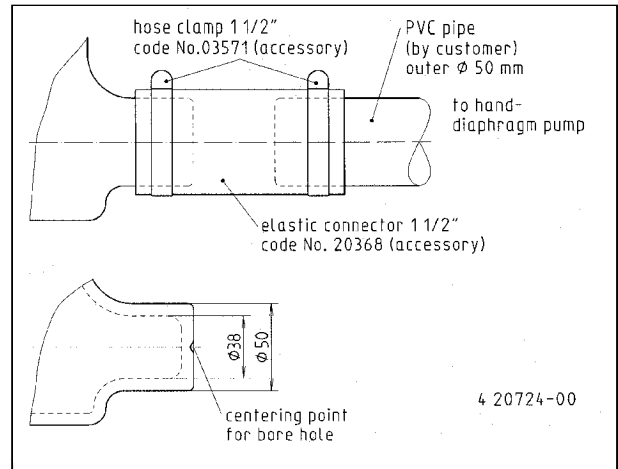
Picture 4: tank ground fixing



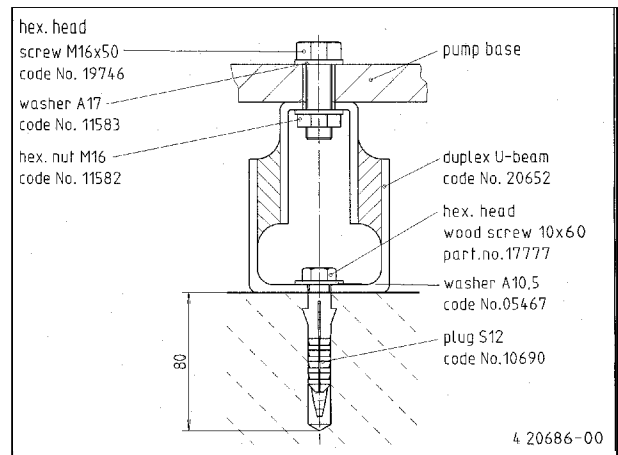
Picture 5: clamping joint



Picture 6: hand diaphragm pump connection



Picture 7: ground fixing of the bend receiver base



WARNING

All screws that fasten parts on the tank, must not be screwed down with a tightening moment higher than 6 Nm. Secure the storage tank from unintended water intake during the installation, e.g. by closing the stop valve.

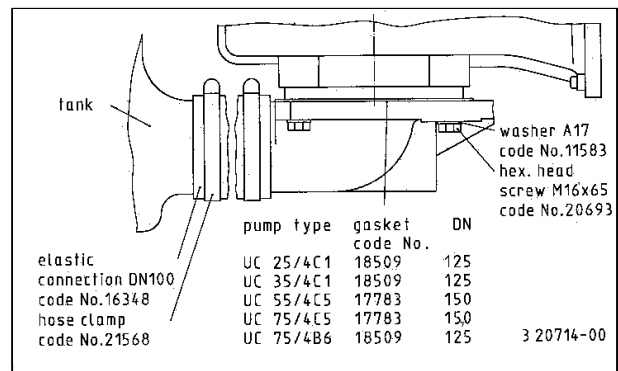
Operating Instructions

Mounting

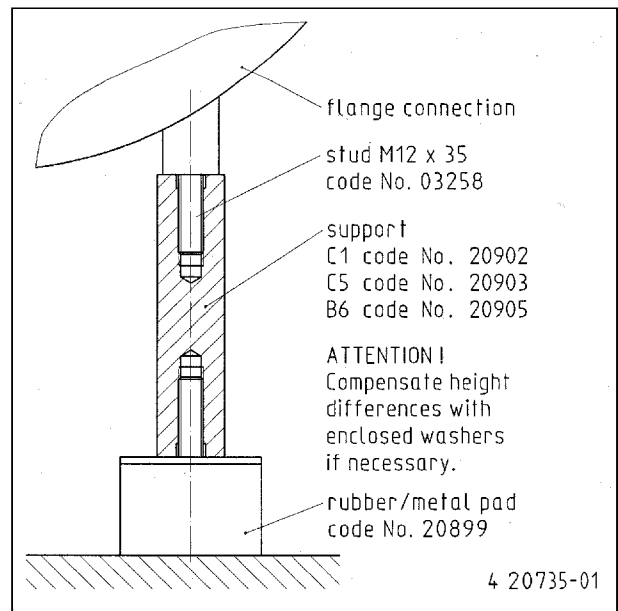
1. Install at the inlet :
 - a. flange/socket pipe
 - b. stop valve
 - c. spigot flange

The inlet of the 2500 series tank should be branched into 2 arms with 2 stop valves. If the tank connection has a stop valve too, the unit can still be operated with one defective pump. Alternatively the unit can be installed with only one stop valve. (see pict. 1, 2 and 3)
2. Screw down each fixing angle (code-No. 20877) at the tank with 3 „Amtec“ hexagon head screws 10 x 30 (code-No. 19685), but do not fix the tank on the ground yet (see pict. 4)
3. Untighten the hexagon head screws (width across 13 mm) of the of the inlet clamping joint and the tank connection (pict. 5)
4. Install the duplex U-beams on the receiver base (code-No. 20649) as shown in pict. 7, do not fix them on the ground yet.
5. The tanks of the compli 2500 series have to be connected with a PVC pipe DN 150.
6. Install the DN 100 elastic connectors (code-No. 16348) with hose clamps (code-No. 21568) at the tank outlet. Put the second hose clamp on the elastic connector and push the bend receiver base into it. (see pict. 8)
7. Adjust the complete unit.
8. Connect the unit with the delivery pipe, mark and drill the holes for the floor fixing of the tank and fix the tank on the ground. (see pict. 4)
9. Put the necessary gaskets on the bend receiver bases, put the pumps into position and fasten them with the washers A 17 (code-No. 11583) and the hexagon head screws M 16 x 65 (code-No. 20693) from underneath. (see pict. 8)
10. Adjust the pumps, mark and drill the holes for the floor fixing of the bend receiver bases and install the pumps on the ground. Do not forget to tighten the hose clamps. (see pict. 7 and 8)
11. Connect a DN 70 ventilation pipe at the branch on each tank top with the elastic connector (code-No. 02574).
12. Tighten the hexagon head screws of the clamping flange connections.
13. Screw the support shaft into the flanged outlet bend of the pump as shown in pic. 8. Install the bend on the pump discharge and connect it to the pressure pipework.

Picture 8: ground fixing of the receiver base with bend



Picture 9: support of the pump receiver base with bend



Mounting of hand diaphragm pump

1. To install a hand diaphragm pump, drill a $\varnothing 38$ mm hole at the centring into one of the $\varnothing 50$ mm connecting branches. (pict. 5)
2. Connect the PVC pipe, outside $\varnothing 50$ mm, with the elastic connection (code-No. 20368) and fix it with the hose clamps (code-No. 03571). (pict. 5)
3. Install the hand diaphragm pump on the wall in an easily accessible location and connect it to the PVC pipe.
4. Connect the discharge pipe to the pump in accordance to pict. 13.

Operating Instructions

Control panel



Install the control panel in a well-ventilated and dry area, safe from flooding. A high degree of humidity could damage the unit. The panel should be mounted at a place higher than the backpressure level and should be easily accessible to facilitate checking in case of trouble.



Any electrical works should only be done by qualified electricians. Jung Pumpen disclaims all responsibility for work done by untrained, unauthorized personnel. Take out the main fuses or pull the main plug to isolate the mains supply from the control unit before repairs or any other works. Before starting, check the efficiency of the protective arrangements and pay attention to the following points !

Alarm device

If the control unit is installed in a place where the alarm buzzer is hard to hear, an external flash light or buzzer can be installed. The max. cable length can be 250 m (273 yard) with a minimum core size of 0,75 mm². (see operating instructions of control unit)

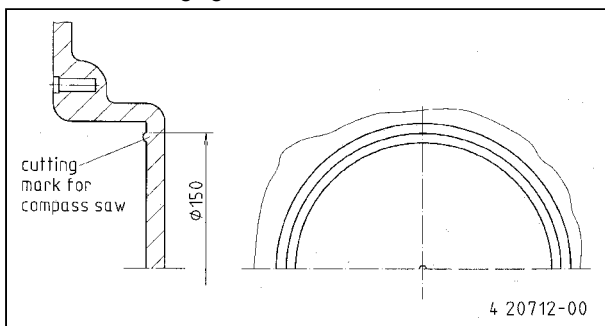
Test run

1. Screw off the cleansing hole cover from the tank.
2. Open the inlet and outlet stop valves.
3. Connect the mains supply. Check the sense of rotation (see operating instructions of control unit)
4. Fill the tank up to the switch on position of the integrated level control until the starting point is reached.
5. Deaerate the pump casing by taking out the screw marked „Luft“ (Width across 13 mm), close it properly when the water penetrates.
6. The pump starts working and drains the tank. Check the pump process through the inspection hole. Close the inspection hole afterwards. Do not forget the seal. Check the tightness of the whole installation by several test runs.

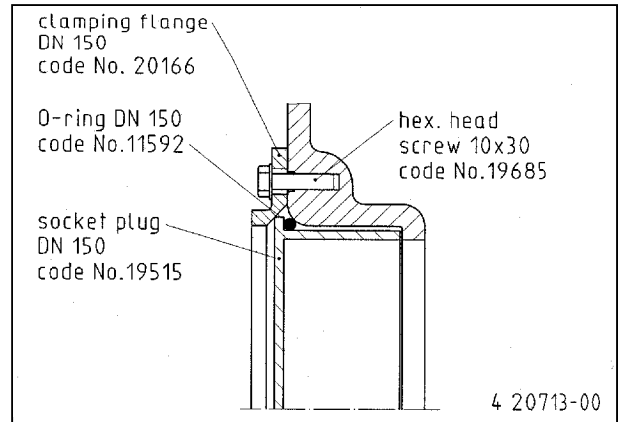
Checking the alarm system

1. Lift the float of the level control through the open cleansing hole slowly by hand beyond the starting point, until the alarm system switches on. (alarm delay time appr. 12 sec.)
2. If the trial run and the alarm check was satisfactory let the float go and close the inspection hole. Do not forget the seal.

Picture 10: changing the inlet



Picture 11: socket plug



Changing the inlet

The standard inlet can be changed if necessary. Open one of the lateral inlets at the marked position e.g. with a compass saw, remove the burr and install the clamping flange DN 150 with O-ring and screws. (accessory enclosed with code-No. 20704) The standard inlet can be closed with the socket plug DN 150 (code-No. 19515).

Operation

The sewage disposal unit operates automatically, depending on the water level in the tank. A test run can be started by actuating the test run push button. The operation is signalled by a green LED.

Stopping operation

Isolate the main supply or take out the main fuses. If the inflow cannot be stopped it is wise to consider an emergency generator for power failures. The tank can also be drained by an additional hand diaphragm pump in case of power failures or other malfunctions.

Emergency operation with only one tank

Close the stop valve of the respective tank, as well as the stop valve of the tank connection and the respective pressure pipe.

Turn the hand-0-automatic selector switch at the control unit into position „0“ to stop the pump operation of the respective pump. In case of an alarm (high water level) the operative tank must be drained manually (selector switch in position „hand“).

WARNING

Stop the pump operation before air is sucked into the pump casing ! After finishing all maintenance or repair works and re-operation of the unit do not forget to turn both selector switches in position „automatic“ again.

Operating Instructions

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.



In accordance to the DIN EN 12056-4 servicing should be carried out in intervals of 6 months by competent personnel. Jung Pumpen disclaims all responsibility for work done by untrained, unauthorized personnel.



At using a chain to lift the pump, please pay attention to the rules for prevention of accidents. Chains have to be inspected regularly by qualified personal.



The motor of the UFK series has the protection type: flameproof enclosure. Only authorised workshops or the manufacturer are permitted to carry out repairs effecting the flameproofness. In case of repairs the gap peripheries have to be inspected for damages, defective parts must be replaced by genuine spare parts.

The servicing should contain:

1. Checking the tightness of the whole installation including flexible connections, valves
2. Checking of valves including adjusting and greasing if necessary.
3. Opening and cleaning of the reflux valve, checking of valve face and ball or flap.
4. Cleaning of the pump and the pressure outlet, checking of impeller and bearing clearance.
5. Checking the oil chamber and oil-level (if oil chamber exists)
6. Cleaning of the tank, if necessary in accordance to special requirements.
7. Checking of the electrical system, voltage, sense of rotation (3-phase units only), current consumption of each motor, motor protection and adjusting value, test button, level control and indicators.
8. Checking of tank condition.
9. Rinsing the hole installation thoroughly at least every second year.
10. Re-initiation of the unit with test run.
11. Providing a test-report with declaration of all works that have been carried out and all measured values.

Malfunctions

Pump does not run

cause: missing mains supply

remedy: check supply voltage

cause: faulty fuse (maybe too low)

remedy: check fuse and change if necessary

cause: damaged supply cable

remedy: changing of the cable gland only by qualified personnel

Pump does not run, no power failure, no alarm

cause: jammed float

remedy: close inlet sluice valve, switch off the mains supply, open the cleansing hole and move the float up and down until it moves freely

Pump does not run, no power failure, alarm is signalled and float works properly

cause: released winding thermostat because of electrical or mechanical overload of the pump. (tightened or blocked impeller, electrical motor fault)

remedy: close inlet sluice valve, switch off mains supply, empty the tank, unscrew the 6 hexagon head screw M 10 x 30 (part-No. 19685) on the pump base, take off the pump, check the impeller and the cutting system and remove blocking parts if necessary. If there is no mechanical problem the electrical fault finding should only be done by qualified electricians.

Pump runs but without / low capacity and alarm is signalled

cause: wrong phase sequence of the mains supply or one phase is missing

(result: lower or missing pump flow rate)
remedy: change two of the three leads with the phase inverter (see operating instructions ADZ ...)

cause: closed sluice valve in the discharge pipe
remedy: check sluice valve and open it

cause: clogged reflux valve
remedy: switch off mains supply, close sluice valve, open the reflux valve, check and clean it

cause: clogged pressure pipe
remedy: rinse the pressure pipe thoroughly

cause: trapped air in the spiral housing
remedy: take off the deaeration hose (part-No. 01588) and clean it
clean the deaeration hole in the pump and in the fitting of the tank

Unit operates too noisy at the end of operation

cause: follow up time is too long

remedy: adjust follow up time
(see operating instructions ADZ ...)

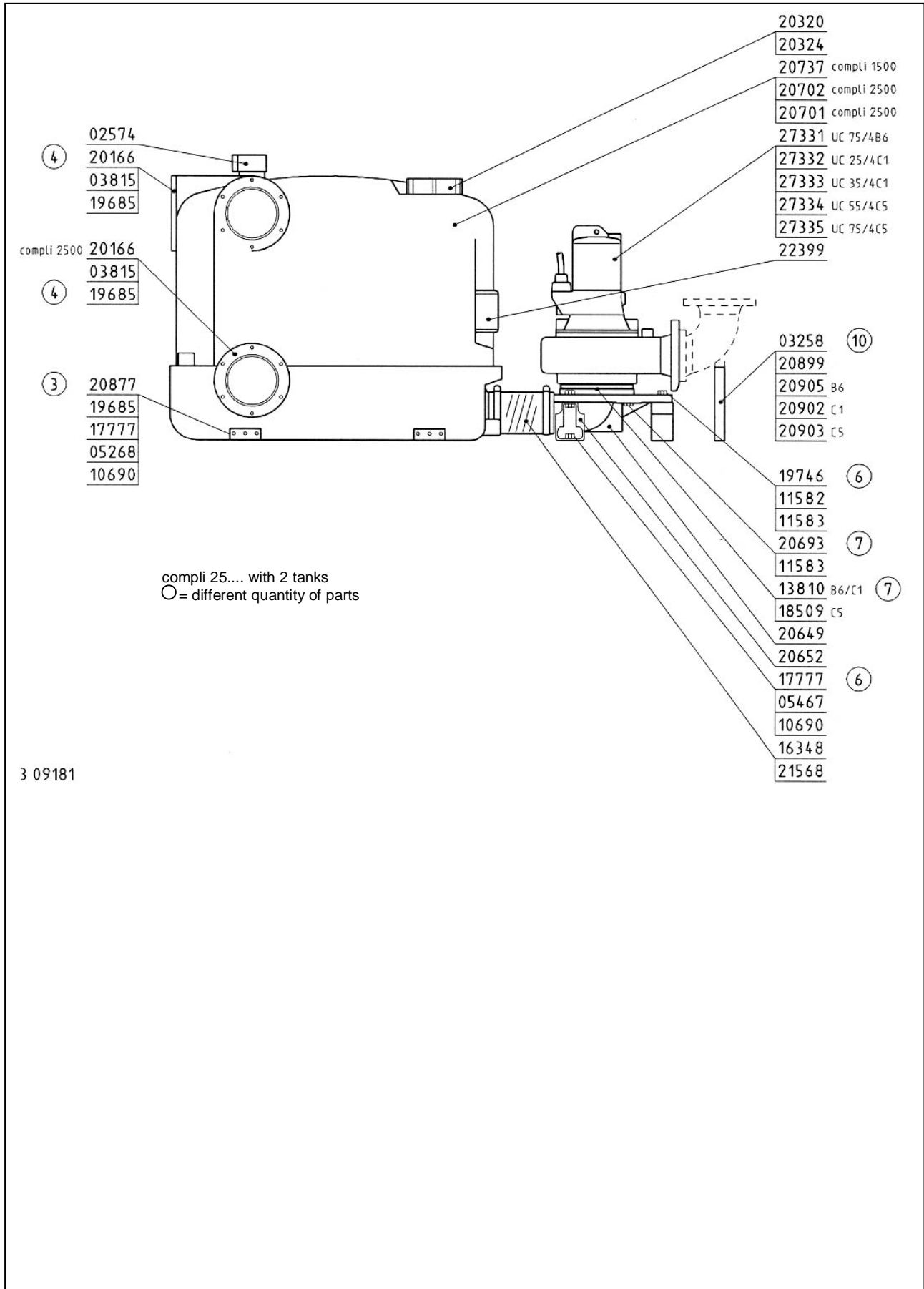
Jung Pumpen GmbH & Co
Industriestraße 4-6 - 33803 Steinhagen

XX¹

EN 12050-1
Fäkalienhebeanlage DN 100
Hebewirkung – siehe technische Daten
Geräuschemissionswert < 70dB (A)
Korrosionsschutz – Kunstharzlack

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

Picture 12: compli 1500 / 2500



No.	Code-No.	Description	Qty. compli 1500	Qty. compli 2500
1	02574	elastic connector with clamps	1	2
2	03258	stud M 12 x35	2	2
3	03815	O-ring 155 x 15 (DN 150)	1	3
4	05268	washer A 10,5	8	16
5	05467	washer 10,5	6	6
6	10690	plug S 12	8	16
7	11582	hexagon nut M 16 (self locking)	6	6
8	11583	washer A 17	20	20
9	11592	O-ring 159 x 9 (DN 150)	1	1
10	13810	gasket DN 100 PN 10	2	2
11	16348	elastic pipe connector 4" x 200 (DN 100)	2	2
12	17777	hexagon head wood screw 10 x 60	14	22
13	18509	gasket DN 125 PN 10	2	2
14	19515	socket plug DN 150	1	1
15	19685	hexagon head screw „Amtec“ 10 x 30	24	36
16	19746	hexagon head screw M 16 x 50	6	6
17	20166	clamping flange DN 150	1	1
18	20320	screw cap	1	1
19	20324	O-ring for screw cap	2	4
20	20649	bend receiver base	2	2
21	20652	duplex U-beam	6	6
22	20693	hexagon head screw M 16 x 65	8	8
23	20701	tank I compli 2500	-	1
24	20702	tank II compli 2500c	-	1
25	20737	tank compli 1500	1	-
26	20877	fixing angle	4	8
27	20899	rubber / metal pad D 70 x 55	2	2
28	20902	support C1, 85 x 150	2	2
29	20903	support C5, 85 x 155	2	2
30	20905	support B6, 85 x 125	2	2
31	21568	hose clamp 4" (DN 100)	4	4

Replacement kits

14358	control unit BD 46
25298	control unit BD 610
20763	control unit BS 610
16603	cable with plug
27332	sewage disposal pump UC 25/4 C1/ 5
27333	sewage disposal pump UC 35/4 C1/ 5
27334	sewage disposal pump UC 55/4 C5/ 2
27335	sewage disposal pump UC 75/4 C5/ 2
27331	sewage disposal pump UC 75/4 B6/ 4
20848	rotary level control
22399	operating instructions for rotary level control unit

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

EG-Konformitätserklärung Declaration of EC-Conformity Attestation de Conformité CE

Hiermit erklären wir, dass alle Exemplare unserer Geräte:
Herewith we declare that all our devices:
Nous attestons par la présente, que tous nos produits :

compli 500
compli 600
compli 1000
compli 1200

compli 1500
compli 2500

den wesentlichen Schutzanforderungen folgender EG-Richtlinien entsprechen:
comply with the following provisions applying to:
correspondent aux principales directives CE suivantes:

EG-EMV Richtlinie		in der Fassung	89/336/EWG
EG-Niederspannungsrichtlinie	73/23/EWG	in der Fassung	93/68/EWG
EG-Bauproduktenrichtlinie		in der Fassung	89/106/EWG
EG-Richtlinie ATEX 100a		in der Fassung	94/9/EG

Angewendete harmonisierte Normen, insbesondere:
Applied harmonized standards in particular:
Principales normes harmonisées:

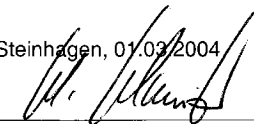
73/23/EWG	89/336/EWG	89/106/EWG	94/9/EG
EN 60 204-1	EN 55 014-1	EN 12050-1	EN 1127-1
EN 60 335-1	EN 55014-2		
EN 60 730-1	EN 6100-3-2/3		

Angewendete, nicht unter obige EG-Richtlinien fallende technische Normen und Spezifikationen:
Applied national technical standards and specifications in particular:
Normes et spécifications n'entrant pas dans directives ci-dessus:

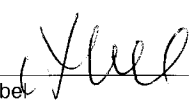
VDE 0106 Teil 100	BGR 132 (bisher ZH1/200)
EN 292 Teil 1+2	CLC/TR 50404
EN 809	

Bei einer nicht mit uns abgestimmten Änderung des Gerätes verliert diese Erklärung ihre Gültigkeit.
By altering the device without approval the declaration would invalidate.
Toute modification de la machine, effectuée sans notre accord, annule la validité de la présente déclaration.

Steinhagen, 01.09.2004



Helmut Schweitzer
(Geschäftsführer)



Horst Abel
(Techn. Geschäftsleitung)