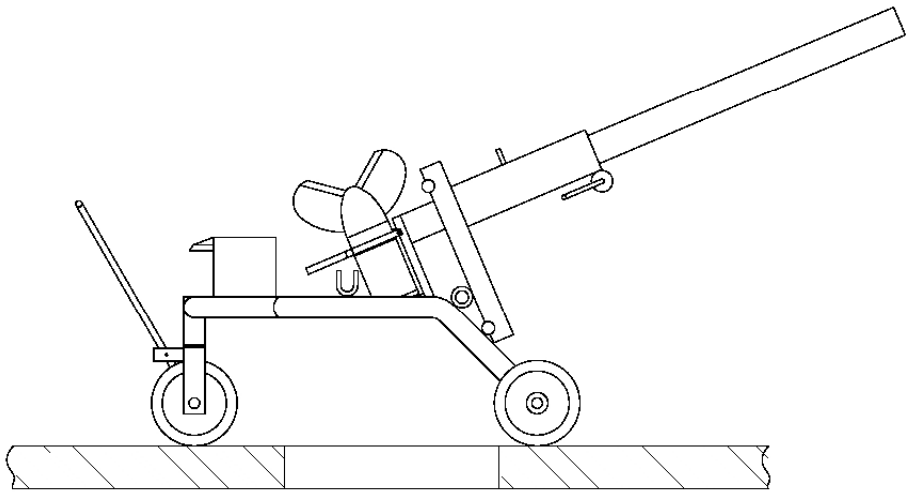
Stallkamp

OPERATING MANUAL

Trioport chassis for sub-mersible motor agitator

BG 132 4.0 / 5.5/ 7.5 kW



Zg. Nr.: 1 102387/0/1

Document no.: 8160668 Version: March 2008

Space for notes:

General notices

- **The technical specifications, dimensions and weights are to be considered approximate and non-binding.**
- **Pictures are for illustration purposes and may deviate from the actual product.**

Date saved: 05.05.2021 09:12:00
Date printed 05/05/2021
BA_Fahrgestell Trioport für TMR_englischV1_8160668_EN(UK)

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1. TABLE OF CONTENTS

2. MANUFACTURER'S DECLARATION

Manufacturer: Erich Stallkamp ESTA GmbH

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Product name: Trioport chassis for submersible motor agitator

We hereby declare that the above-designated chassis was produced by Erich Stallkamp ESTA GmbH.

Erich Stallkamp ESTA GmbH

Dinklage, dated 28 March 2008

This declaration is not an assurance of characteristics pursuant to the German Product Liability Act.

The safety notices provided in the product documentation must be observed.

3. GENERAL INFORMATION

Our state-of-the-art devices are developed and manufactured with great care and subject to continuous quality control. This operating manual should help you to become familiar with the device and to make use of its intended applications.

The operating manual contains important notices in order to operate the chassis safely, appropriately and cost-effectively. It is necessary to observe the operating manual to ensure the reliability and long lifespan of the chassis and to avoid hazards.

The operating manual does not take local, on-site requirements into consideration; the owner is solely responsible for ensuring that these are observed – also by any appointed external installers.

Identification of notices in the operating manual

In the Operating Manual, safety instructions about causes of endangerment to persons are designated with the general hazard symbol DIN 4844-W9,

warnings about electrical voltage, with the safety sign according to DIN 4844-W8.

All other notices whose disregard might restrict the functional reliability of the device or represent a danger for the machine are marked with the word

ATTENTION!

This machine unit may not be operated beyond the values defined in the technical documentation with respect to pumped liquid, delivery flow rate, rotational speed, density, pressure, temperature as well as motor power or other instructions contained in the operating manual or contract documentation. If you have any queries, please consult the manufacturer.

The type plate designates the most important operating data and the machine serial number. We request that this always be specified in the event of enquiries, subsequent orders and when ordering spare parts.

Provided that additional information or notes are required or in case of damage, please contact our local field sales employee or contact us directly.

Unauthorised conversion and spare part manufacture

Conversions and modifications to the devices and their machine units are only permissible with the explicit approval of the manufacturer. The use of non-"genuine spare parts" voids any liability.

4. SAFETY

This operating manual contains fundamental notices which must be observed during installation and operation as well as when performing maintenance work on the device.

It is therefore imperative that the installer as well as the responsible specialist personnel and owner read this manual before installation and commissioning, and that it is continually available at the location where the machine is operated.

Not only the safety instructions in this operating manual must be observed, but also the warning signs and provisions of the respective professional association.

4.1. Qualification of the personnel

The personnel performing the operation, maintenance, inspection and installation must be appropriately qualified for this work.

The area of responsibility, competence and monitoring of personnel must be closely regulated by the owner. If the personnel do not possess the necessary knowledge, they should be trained and instructed accordingly.

Furthermore, the owner must ensure that personnel fully understand the contents of the operating manual.

4.2. Dangers if the safety notices are not observed

Failure to observe the safety notices can endanger persons as well as the environment and the machine. Failure to observe the safety notices results in the forfeiture of all claims for damages.

Specifically, failure to observe instructions can, for example, result in the following dangers:

- Failure of important functions of the device or system.
- Endangerment of persons due to electrical, mechanical, chemical and other exposure.
- Endangerment of the environment due to leakage of hazardous materials.

WARNING SIGNS

All notice and warning signs must be observed. Dangerous gases can escape when stirring the manure.

RISK OF POISONING!

If the manure is stored below slatted floors, the presence of persons in buildings during agitation is only permissible with sufficient ventilation. Therefore, windows and doors must be open and the ventilator set to full power.

4.3. Safety-conscious work

Observe the safety notices presented in this operating manual, the existing national regulations for accident prevention as well as any internal work, operation and safety regulations of the company at all times.

Safety notices for the owner and operator:

- ✓ If hot or cold machine parts are potentially hazardous, these parts must be protected on site to prevent contact.
- ✓ Contact protection for moving parts must not be removed while the machine is in operation.
- ✓ Leakages of dangerous transported material must be discharged so that there is no endangerment to persons and environment. Statutory provisions must be observed.

4.4. Safety notices for maintenance, inspection and installation work

The operator has to ensure that all maintenance, inspection and installation work is carried out by authorised and qualified personnel.

Fundamentally, all work on the machine can only be carried out when the machine is at a standstill.

Directly after completion of the work, all safety and protection equipment must be reattached or made functional.

5. WARRANTY

This section contains the general specifications for the warranty. Contractual agreements are always treated with priority and are not nullified by this. The warranty period is a component of Stallkamp's general terms and conditions. Agreements deviating from this must be specified in writing in the order confirmation.

5.1. General information

Stallkamp is obligated to repair every defect to products sold by Stallkamp under the condition:

- ✓ that it is a quality defect of the material, manufacture or design;
- ✓ that the defect is reported in writing to Stallkamp or the Stallkamp representative within the period of the warranty;
- ✓ that the product is used exclusively in line with the operating conditions specified in the operating manual and used for the intended purpose;
- ✓ that the monitoring device integrated in the product is correctly connected (temperature protection);
- ✓ that genuine Stallkamp parts are used.

5.2. Exclusion of liability

No guarantee or liability is assumed for damage to the device if one or several of the following points are applicable:

- A faulty configuration of the device on our part because of inadequate or incorrect information from the ordering party or owner.

- Failure to observe the safety notices, regulations or the necessary requirements in this operating manual which apply according to German law.
- Installation, disassembly or repair of the device not in keeping with the regulations.
- Inadequate maintenance.
- Possible chemical, electrical or electrochemical influences.
- Wear.

Since maintenance has an influence on the safety and functional capability of the device, it is an integral component of the warranty. The operator of the device is obligated to carry out maintenance work according to the regulations of the manufacturer, including the repair and replacement of wearing parts.

The liability of Stallkamp thereby excludes any liability for personal injury, property damage or financial losses.

The manufacturer reserves the right to modify the performance, specification or configuration data without prior notice.

6. PRODUCT DESCRIPTION

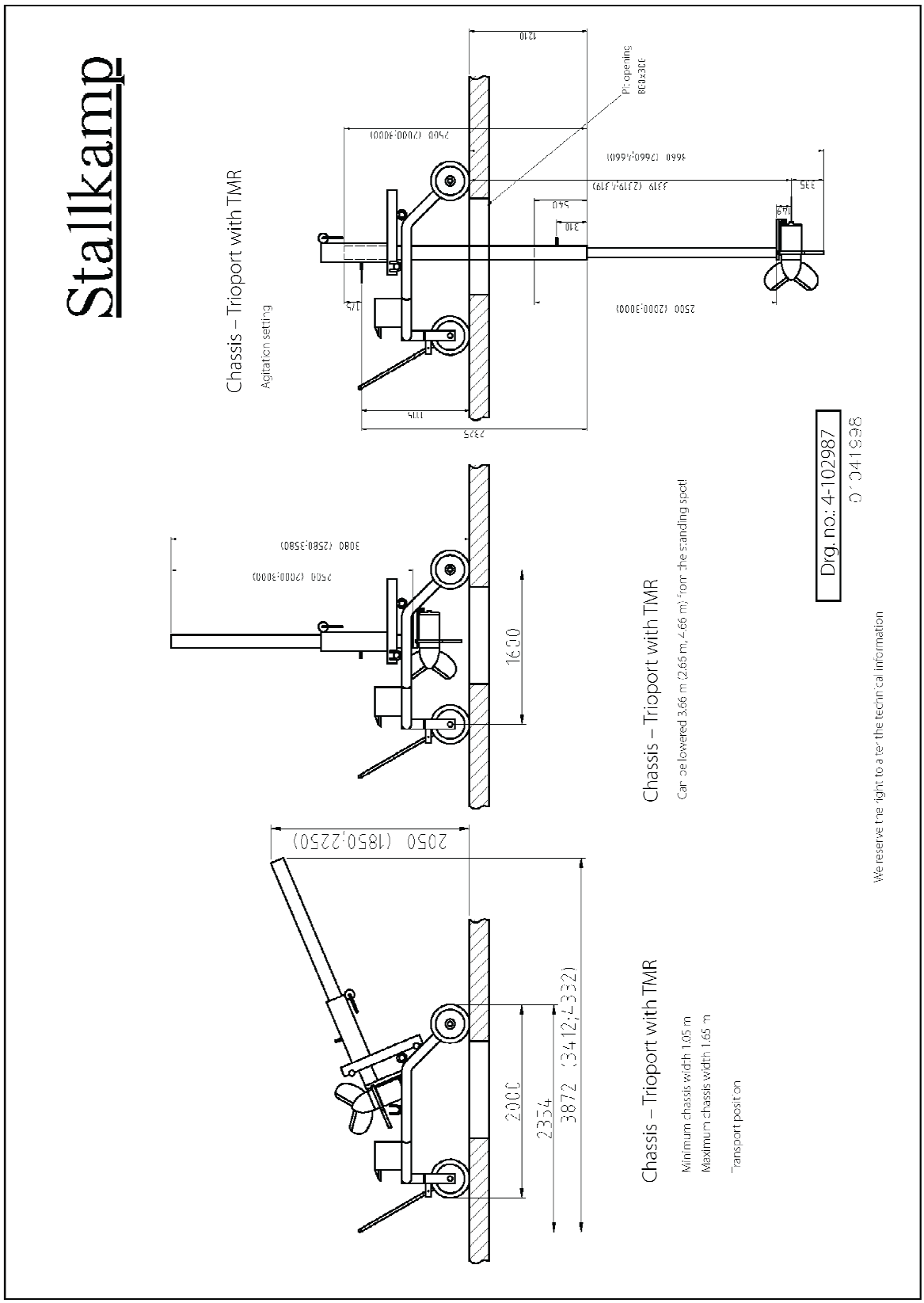
The galvanized Trioport chassis for the submersible motor agitator is equipped as follows:

- Three-wheel chassis with hard rubber wheels,
- Wheel lock on the drawbar,
- Adjustable track width on the rear axle,
- Swivelling telescopic rail for lowering the pump,
- Slewing ring for changing the direction of flow,
- Safety cable winch with load brake for lifting and lowering the agitator.

6.1. Applications

The Trioport chassis is designed to accommodate a Stallkamp submersible motor agitator (see operating manual of submersible motor agitator). This chassis allows a submersible motor agitator to be driven manually to the vehicle-accessible liquid manure pit and lowered over the pit opening (at least 800 mm x 300 mm). Overrun rails are required for larger pit openings.

7. DIMENSIONS OF THE TRIOPORT CHASSIS FOR THE TMR



8. COMMISSIONING

8.1. Prior to commissioning: Safety notices

The following rules should strictly be followed to prevent accidents during servicing and installation work:

(1) Never work alone. The danger of drowning and suffocation must not be underestimated.

(2) Check whether sufficient oxygen is available and that no poisonous gases exist.

(3) Before welding work or using electrical tools, check whether there is a danger of explosion.

(4) Pay attention to the danger of electrical accidents.

(5) Examine the lifting gear to ensure its fully satisfactory condition.

(6) Ensure an adequate shutoff at the place of work, e.g., cordoning trellis.

(7) Wear a hardhat, safety glasses and safety footwear.

(8) Keep a first-aid kit ready.

Otherwise, observe the health and safety regulations as well as the prevailing governmental regulations.

8.2. Commissioning the Trioport chassis with a submersible motor agitator

Open the pit cover and measure the pit width. The minimum pit opening must be 800x300 mm. It is possible to widen the track width of the rear axle for larger pit openings. If this is not enough, the chassis must be moved over the pit opening on additional overrun rails.

Fig. 1

Chassis in transport position

Trioport chassis equipped with a submersible motor agitator and manual star-delta motor protection switch in transport position.

Fig. 2

Changing the track width at the rear axle.

Remove the jack from the chassis and place it under a wheel axle. Loosen the lifting eyebolt and pull the wheel with the axle all the way out. Retighten the lifting eyebolt. Then swing the wheel support down for better stability. Repeat the same procedure on the other side of the chassis.

Fig. 3

Wheel lock on the drawbar

Move the chassis backwards over the pit opening until the front wheel is in front of the pit edge. The front wheel is braked by pivoting the drawbar upwards until the claw engages. To release the brake, step on the front end of the claw with one foot and pivot the drawbar downwards.

Fig. 4

Chassis in transport position

The rear wheel supports have already been swung down for better stability. The front wheel is braked by means of the drawbar.

Fig. 5

Setting up the chassis in agitation position

Raise the guide rail to the agitation position by hand until the telescopic rail is vertical.

Fig. 6

Locking the swivel frame

Lock the swing frame with two locking bolts.

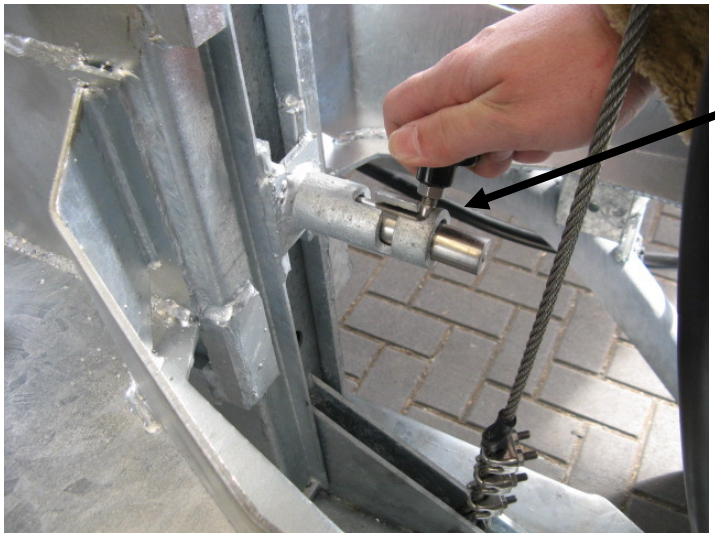


Fig. 7

Locking bolt in the middle section

Unlock the locking bolt on the middle section of the telescopic rail. If it is hard to move, lift the agitator slightly with the cable winch. Then lower the agitator with the cable winch until it reaches the last locking position between the middle and inner section. Lock the locking bolt again in the middle section.

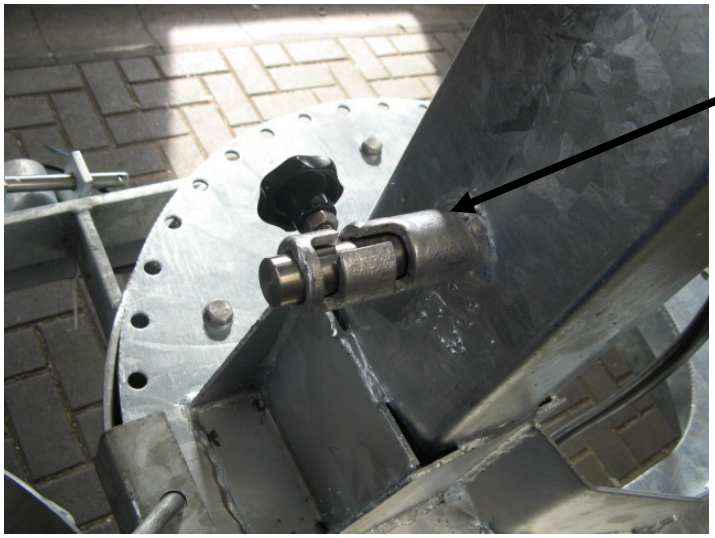


Fig. 8

Locking bolt on external section

Unlock the locking bolt. If it is hard to move, lift the agitator slightly with the cable winch. Then lower the agitator with the cable winch until the last locking position between the outer and middle section is reached or the agitator touches the pit bottom with the system to prove the capacitive level. Lift the agitator slightly and lock the locking bolt again on the outer section. Attention, the agitator must not touch the pit bottom with the system to prove the capacitive level during operation.

Fig. 9

Chassis fixing

Hook the chassis fixing with two chains and two turnbuckles into the holes of the swing frame so that the chassis is braced with the clamping tube under the pit opening.

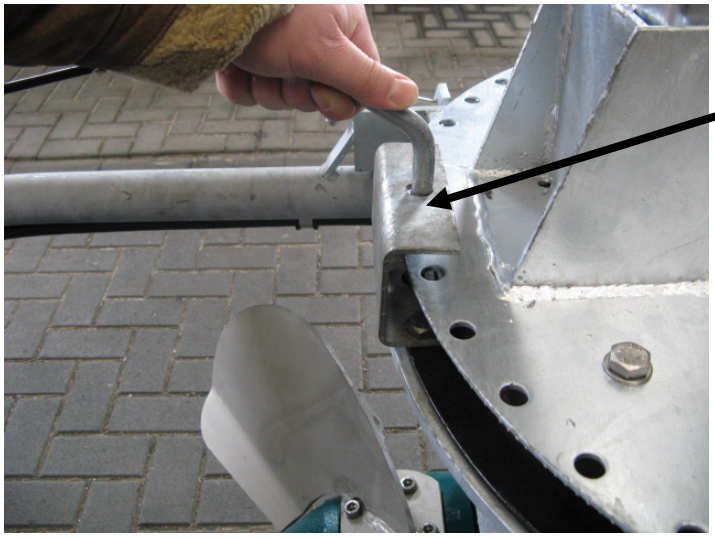


Fig. 10

Adjusting the direction of flow

Pull the locking bolt upwards and turn the agitator with the rotary base in the desired direction. Then lock it again. Attention, the agitator blades must not touch the pit walls.

Ensure that nothing can fall in the pit opening by protecting it with suitable cover plates or safety fences. Connect the mains plug to the switch box on the chassis and start the agitator from the star-delta switch. (see operating manual of submersible motor agitator: direction test, etc.)

After completing the agitation process, stop the agitator, crank it up and return the chassis into transport position. Now proceed in reverse order.

9. MAINTENANCE

Lubricate all joints and rotating parts on the chassis at regular intervals (approx. every 3 months). After use, clean the chassis and especially the telescopic rail.

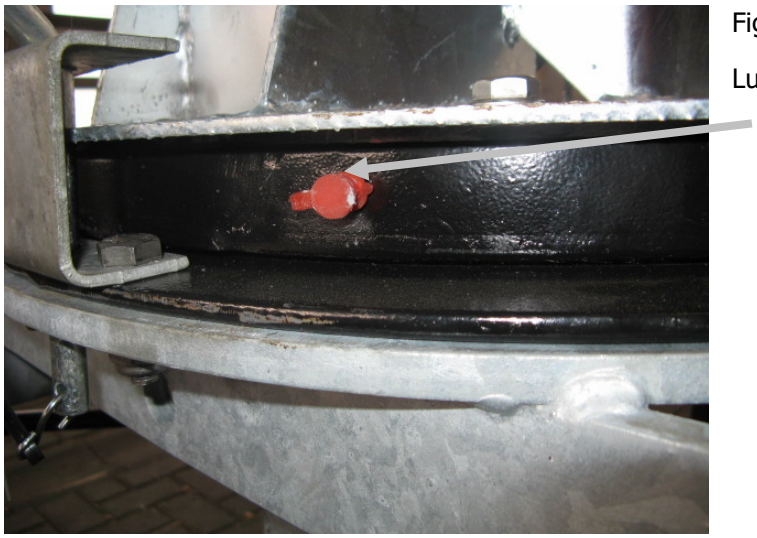


Fig. 11

Lubricating the slewing ring on the chassis

The maintenance work that should be performed on the submersible motor agitator can be found in the "Submersible motor agitator" operating manual.

The maintenance work that should be performed on the hand-crank cable winch can be found in the "Hand-crank cable winch" operating manual.

10. NOTICES

10.1. Regulation of the professional association

The accident prevention regulations of the German Agricultural Professional Association stipulate the following in Paragraph 2.8 under "Special provisions for pits and canals":

Paragraph 2.8

§ 1 Protection against falling in

(1) Pits, ditches, canals, wells and other similar pits in the house and courtyard area must be protected with fences or coverings to prevent persons from falling in. If these are not deeper than 100 cm, other safety precautions will suffice.

§ 2 Openings

(1) If removal and entry openings and suchlike are opened, it must be ensured that persons and objects cannot fall in.

(2) Pits and canals that are customarily entered must have facilities which permit risk-free entry. The openings of these pits and canals must be dimensioned in such a way to allow the rescue of any accident victims.

§ 3 Entry

(1) Before entering and while present in pits and canals, ensure that sufficient respiratory air is present and that operational equipment is reliably protected against being switched on. The handling of naked flames is not permitted.

(2) Entry for the recovery of an accident victim is only permissible if two other persons secure the entering person with a rope which is firmly anchored outside the tank.

§ 4 Tanks and canals for animal faeces

(1) For tanks and canals in the open air, it must be ensured by suitable measures that fermentation gases cannot flow into the building.

(2) Sealed tanks in the open air must have vent openings on opposite sides.

(3) If tanks and canals are located in buildings – also under slatted floors – it must be ensured that fermentation gases are discharged out of the buildings.

(4) If tanks and canals in buildings are fitted with agitators, pumping and rinsing plants, facilities for the discharge of fermentation gases must be present which automatically switch on when the agitators, pumping and rinsing equipment are commissioned. They may only be switched off after conclusion of the work process. The discharged gases must not endanger persons.

(5) Canals must be designed in such way as to avoid any unnecessary whirling up of the faeces.

(6) Operating stations for agitators, pumping and rinsing equipment etc. must be positioned over the floor, however.

(7) Closed rooms in which there are operating stations must not have openings to the tanks and canals.

(8) Operating instructions must be permanently attached to the operating stations.

§ 5 Removal of animal faeces from tanks and canals

(1) No smoking and no naked flames are allowed in the immediate proximity of removal openings during the agitating and removal of faeces.

(2) In the buildings in which there are open tanks and canals, the presence of persons and animals during agitation and removal is only permissible with sufficient ventilation.

§ 6 Warning signs

(1) Easily visible warning signs must be attached to openings of tanks and canals which indicate the danger of the gases.

(2) Refer to the "Information Sheet with Notice, Warning, Prohibition and Rescue Signs" of the Federal Association of Agricultural Professional Associations.

You can find us here

Stallkamp

...Lead by innovative technology

Dinklage is in the heart of Germany's Oldenburg Münsterland.

From the A1 exit no. 65, Lohne Dinklage, towards Dinklage, in Dinklage towards Vechta, then Industriegebiet West.

- Pump technology
- Agitating technology
- Stainless steel tanks

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