

# Instructions for use

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**Responsible manufacturer: ACO Funki**

**Machine: Residual tank VF7**



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## 1. Introduction

### Original instructions for use

This instructions for use is the ACO Funki's original instructions for use for "Residual tank VF7" (hereinafter referred to as the machine).

**The Danish version is the original sample, all other language versions refer to the original sample.**

### Purpose

The purpose of this instructions for use is to ensure correct use and maintenance of the machine. The instructions for use are general instructions for use, with an emphasis on the safety aspects that relate to the interaction of the assembled machines. For detailed information regarding the individual machines and their function, please refer to the respective instructions for use.

### Availability

The instructions for use must be kept in a place known to the staff, where it is easily accessible to operators and maintenance staff.

### Knowledge

It is the employer's (machine owner's) responsibility to ensure that everyone who must to service, clean, operate, maintain or repair the machine has read the user manual; at least the parts of it that are relevant to their work. In addition, everyone who must to operate, service, maintain or repair the machine has a duty to search for information in the user manual themselves.

## 2. General

### 2.1. Manufacturer

The machine is manufactured from:

ACO Funki  
Kirkevænget 5  
7400 Herning

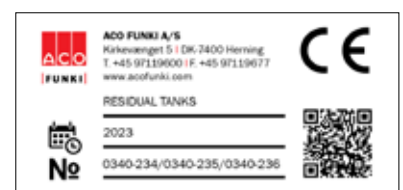
### 2.2. The designation of the machine

The full name of the machine is:

RESIDUAL TANK VF7 2300/4200/6000 L

### 2.3. Machine plate

The CE-label is placed on the inner part of the front leg of the tank.



### 3. Overview and application

#### 3.1. General description

The machine consists of:

- Tank in fiberglass and galvanized steel
- Stirrer made of stainless steel
- Gear motor with worm gear
- Load cell
- Sump with bottom cover
- Magnetic insert

If changes are made to the machine, the instructions for use and the risk assessment must be reviewed again and corrected if necessary.

#### 3.2. Functional description



*Read the Function/Control manual 0930-116\_FunkiNet\_Autofeed for a deeper description of the operation of the machine.*

#### 3.3. Purpose and intended use of the machine

With traditional liquid feeding, there are residues of feed in the pipes between feedings, which partly leads to the breakdown and neutralization of specially synthetic amino acids (proteins), which are important for the pig's growth and health. This is avoided with residual feeding, because after each feeding the system has water lying on the pipe string, and not feed. That is the pigs always get freshly mixed feed, and not a mix of new and old feed. In addition, you save approx. 40% energy because there is no need to recirculate pipe strings before feeding, where new and old feed are mixed.

At the beginning of feeding, the feeding tube is full of water. The system begins pumping feed through the piping system to the cribs and pushes the water back to the residual tank.

The mixing tank is emptied. The tank for residual is filled. When there is no more feed in the mixing tank, pump there from the clean water tank. In this way, the clean water tank is used to feed what is now on the pipe strings of feed, and when the last valve is fed, there will be water on the pipe string.

The residual tank must not be used for anything other than the purpose described above.

#### 3.4. Warning of foreseeable abuse

The machine may only be used when:

- The entire machine complies with the EN ISO 13857 standard.
- There is a full overview of the machine's movements.
- There are no people in the processing area.
- Lids and safeguard are securely closed.
- The operating parameters are correctly set.
- Electric cables and pressurized hoses are undamaged.

- The necessary energy supply is present.
- Venting works correctly.
- The machine is correctly mounted.
- All safety components are active and functional.

It is NOT permitted to:

- Stay within the machine safeguard during operation!
- Reach through or over the machine's safeguard during operation.
- Climb on the machine during operation.

- as these conditions will provide access to potential dangerous moving parts of the machine.

Surfaces on the machine must not be used as work surfaces or workplaces.

### 3.5. Product's service life

The machine is expected to operate for 8 years. After 20 years, the machine must be reviewed and a new risk assessment carried out, and the safety relevant components replaced.

The part of the machine have reduced service life or limits of use:

- Gearmotor/ bushing / bearing

Regular maintenance and replacement of the machine's parts and the safety related components must take place. For more detailed information, see the mounting instructions 3035\_Liquid\_feeding\_tank\_residual\_tank.

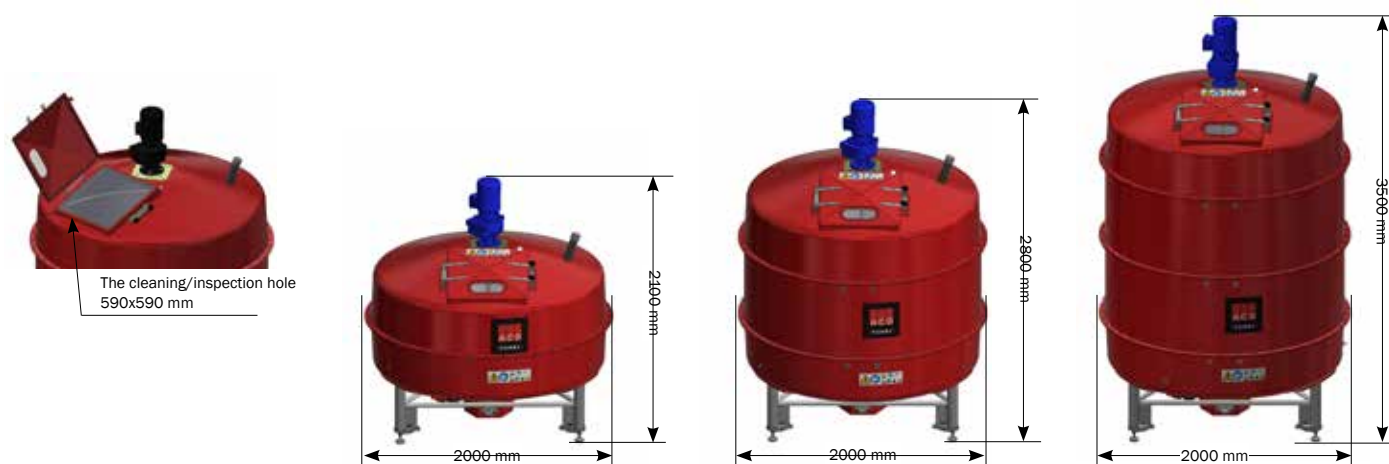
This must be done in accordance with the instructions for use of the individual components.

The machine may only be used indoors in a dry environment.

### 3.6. Technical data

For detailed data regarding electricit, refer to the respective installation instructions.

#### 3.6.1. Dimensions



### 3.6.1. Electricity

The user manual must contain a description of the machine's electrical power supply:

Supply voltage: 3 x 400 V + N + PE

Frequency: 50 Hz

Absorbed full load current: 4,3 A

For technical data for electrical equipment, see the rating plate/user manual on the individual machines.

### 3.6.2. Noise

Airborne noise emitted by the machine:

The machine's noise level must be measured after installation, and the measured values must be reported at values higher than 70 dB.

### 3.7. Operator workstations, location and layout

The operator's place is at the control panel on the front of the machine.

*During repair and maintenance:*

- Is the workplace around the machine.

See section on maintenance for more information.

*Requirements for layout:*

Space requirements for people working at the machines on the machine:

There must be sufficient space for the operator to use appropriate working positions and movements.

The free width must be at least 1000 mm.

The following applies to electricity and control panels: All lids must be able to be opened at least 95°.

Recommended aisle width between barriers (walls, building parts etc.) and operating handle: at least 800 mm.

Operating limits, Environment:

|   |                        |
|---|------------------------|
| Permissible temperature range                     | +2 °C to 40 °C         |
| Permissible relative humidity<br>(Non condensing) | min. 20 %<br>max. 80 % |

Lighting:

|                             |   |
|-----------------------------|---|
| Around the machine          | Min. 200 lux  |
| Repair and maintenance work | Min. 200 lux<br>In connection with repair and maintenance, sufficient light is brought as necessary to solve the task safely. |

## 4. Security and residual risks

### 4.1. Built-in safety measures

For the sake of personal safety, during operation, the machine is equipped with a hatch and a fixed safety switches.

The new operator must be familiar with the construction of the machine for personal safety reasons.

Motors are protected with motor protectors.

Under no circumstances must the safety switches be removed if the machine is not in a safe state or the supply separator/the repair switch is open and locked.

#### 4.1.1. Safety switch, repair switch.

Safety switches and repair switch:

- a) Safety switch, hatch
- b) Repair switch, agitator

#### 4.1.2. Safety features

| Safety feature  | Explanation  |
|-----------------|--|
| Emergency stop. | The machine is equipped with an emergency stop via the control panel.<br>Run-on time of 3 seconds.<br>PLr - c*                     |
| Safety switches | The machine is brought to a stop when the hatch is opened when the supply is interrupted.<br>Run-on time of 3 seconds.<br>PLr - d* |

\*According to the following standard: EN 13849-1.

*Supply separators:*

The machine's parts are equipped with lockable supply separators via FunkiNet control.

*Testing intervals:*

If the test limits mentioned below are exceeded, the safety functions can no longer be considered to protect operators at the machine from the machine's sources of danger.

The safety functions must be functionally tested every 12 months. Activate the safety function by checking whether it stops the machine when the machine is started. In the event of a failure or fault, the machine must be taken out of service until the fault has been rectified, after which the function is tested again.



## 4.2. Safety measures to be taken by ACO Funki certified personnel.

### 4.2.1. Clothing and personal protective equipment

#### Use:

The prescribed personal protective equipment must always be used in accordance with ACO Funki's guidelines and safety data sheets (references to safety data sheets 29100028) as well as applicable national regulations.

Loose clothing, jewellery, scarves etc. must not be used while operating the machine. It is recommended to wear overalls when working with the machine.

#### Maintenance and repair:

In connection with maintenance, safety shoes, gloves, long clothing and the like must be used in accordance with internal and applicable national rules for the individual task being carried out.

Suitable personal protective equipment must be used during repair and maintenance work.

The area near the machine must be kept clean of spills and other items.

When replacing components, the manufacturer's instructions for the corresponding component must be followed.

- Personal protective equipment in the form of work gloves, safety shoes and head protection when parts are transported.
- Approved lifting equipment in the form of a crane and hoist for handling parts over 15 kg.











#### Lubricants:

Personal protective equipment must be used in accordance with the individual product data sheets / safety data sheets in connection with:

- Handling/use of lubricants.
- Installation of liquid components.

Disposal of products and other waste must be done according to the guidelines for the materials in corresponding, see the product's data sheet.

## 4.2.2. Warnings

|   |  |
|---|--|
|    | <b>READ THE MOUNTING INSTRUCTION!</b><br>Read this manual thoroughly before mounting, use and service.   |
|    | <b>CORROSIVE SUBSTANCES!</b><br>The tank can contain acidic substances that can cause corrosive damage to skin and material.                     |
|    | <b>SLIPPERY!</b><br>Risk of wet and slippery areas in and around the tank.   |
|    | <b>MOVING PARTS!</b><br>Risk of crushing due to moving machinery in the tank.  |
|    | <b>LACK OF OXYGEN!</b><br>There is no oxygen in the tank. Before entering the tank, be sure to vent the tank thoroughly.                         |
|   | <b>UV-LIGHT!</b><br>The tank can contain UV light that can cause eye damage.   |
|  | <b>SUPERVISION REQUIRED!</b><br>A supervising person is required outside of the tank, when someone is working in the tank.                       |
|  | <b>WASH YOUR HANDS!</b><br>Clean yourself and used tools thoroughly after working around the tank. Disposable tools (e.g. gloves) are discarded. |

Two warning signs are affixed. Blank labels (45x45 mm) are included to cover the icons that are not relevant; it can be acid, UV light and moving machine parts. For example, UV light is covered if a UV purifier is not installed in the tank.



### 4.2.3. Residual risks

There are the following residual risks in connection with maintenance and repair:

- Risk of electric shock.
- Risk of electric shock (residual dangerous voltage).

Before starting repair, maintenance and service work, it must be ensured that:

- Accumulated energy is relieved.
- The machine's supply separators are opened, disconnected and locked.



- Pay attention to residual dangerous voltage at frequency converters for some time after the interruption. The machine is de-energized in 3 seconds after disconnecting all energy sources.
- Correct personal protective equipment is used.

### 4.2.4. Work procedures

Before starting the work, it must be ensured that:

- The area is clean and free from objects the operator could trip over.
- There is sufficient lighting to operate the machine safely.
- There are no people around dangerous parts of machine.

Start up and operation takes place under the following conditions:

- Emergency stop panel has been installed and tested.
- Operation is initiated and supervised by trained personnel.
- Operation can be stopped on the emergency stop panel.
- Lids are securely closed.

## 5. Operation



For operation, see mounting instruction *M-3035\_Liquid\_feeding\_tank\_residual\_tank*, which contains information on parameters for operating the machine.  
*Funkinet control 930-116\_FunkiNet\_Autofeed.*  
*B-1000\_Instruction for use\_Gearmotor\_74038094.*

### 5.1. Start/stop

Before starting, the operator must make sure that there is full visibility around the part of the machine he plans to operate (no people behind shielding). This also means that there must be sufficient lighting in the area where the machine is located.

It must be ensured that the operating devices are clearly and unambiguously marked, so that incorrect operation is prevented. The operating devices are positioned so that they can be operated safely.

Position switches are fitted with a clearly marked switch MAN – AUT, where parts of the machine can be put into automatic or manual operation.

The machine must not be left with parts set to manual operation.

### 5.2. Emergency stop, safety switch

During a period of operation, dangerous situations may happen where it will be necessary to stop the machine or parts of it immediately. If such a situation happens, the machine is stopped by activating the emergency stop.

*The following situations may require an emergency stop:*

- Potential dangerous situation.
- Sudden unknown conditions arise, e.g. abnormal sounds (rumbling, knocking) or movements from parts of the machine.
- Faults in safety equipment that cannot be replaced/repared during normal operation.
- In case of breaks and leaks that cannot be immediately eliminated as well as faults or leaks.

The emergency stop and safety switch stops the entire system.

#### 5.2.1. Restart after safety stop

Before resetting the emergency stop, an inspection of the machine part must be carried out to find and eliminate the cause of the activation.

Before the machine can be restarted, the emergency stop must be reset (turning the button or pulled out) and the control panel must be reset, after which it can be started again.

Before starting up again, it must be ensured that there are no people, subjects, tools etc. at/on or around dangerous parts of the machine.

See applicable operating instructions and workplace instructions.

### **5.3. Feeding/Removing items**

Feeding takes place via snails and a pump.

Removal is pumped / sucked out.

### **5.4. Return to operation after blocking**

*In case of emergency stop:*

Before resetting, an inspection of the machine part must be carried out to find and remove the cause of the activation.

Before the machine can be restarted, the safety function must be released and the control panel must be reset.

Before starting up again, it must be ensured that there are no people, subjects, tools etc. at/on or around dangerous parts of the machine.

*In case of overload:*

In case of overload, the overload protection of the loaded motor or the frequency converter will switch the motor off.

Before the machine can be restarted, an inspection must be carried out, in order to find and remedy the cause of the activation, and then the motor's motor protection or the frequency converter must be reset and possibly on the control panel.

Before starting up again, it must be ensured that there are no people, subjects, tools etc. at/on or around dangerous parts of the machine.

Before resetting, the operator must inspect the entire machine part for faults and defects.

## 6. Training

### 6.1. Operators

Operators must be qualified either by professional training or by training that equates them with this and the person in question must have knowledge of the machine's function and safety conditions.

Operators must have read and understood user manuals, guides, workplace instructions, etc. and must have knowledge of the machine's function and safety conditions by reviewing the user manual, operator's manuals and workplace instructions and by training assistants and be able to make general adjustments, etc., and be trained/instructed in the machine's use, handling, etc.

Operators must have knowledge of the location of safe access routes and emergency stops.

Before starting up or servicing the machine, the operating staff must be informed about all installed safety functions.

| Operator's work                  | 1<br>Instructed operators | 2<br>Specially instructed operators | 3<br>Instructed operators with special training (mechanical/ electric) |
|----------------------------------|---------------------------|-------------------------------------|--|
| Troubleshooting and repair       | -                         | X                                   | X  |
| Use (daily operation/ operation) | X                         | X                                   | X  |
| Maintenance                      | -                         | X                                   | X  |
| Disposal/Recycling               | -                         | X                                   | X  |

#### 6.1.1. Operator qualifications

##### 1 - Instructed operators

- Instructed operator means a daily user who is not normally skilled in the area.
- It is expected that instructed operators are instructed in safety and operation of the equipment and can solve tasks within their work area.
- Or during normal operation, for example starting, stopping, loading, checking and removing items.
- It must be ensured that those involved are properly instructed in the user manual and trained so that the work can be carried out safely.
- No or minimal English skills.
- From time to time needs support.

## 2 - Specially instructed operators

- Specially trained operators mean that one is skilled in the field.
- It is expected that specially instructed operators are instructed in safety and operation of the equipment and can solve tasks that require independent actions, e.g. set-up and setting, can restart the equipment after errors and stops or during conversion and maintenance tasks, and masters complex tasks within the competence, also regarding maintenance, transport and tool change etc.
- It must be ensured that the person concerned is properly instructed in the user manual and trained so that the work can be carried out safely.
- From time to time needs support.

## 3 - Instructed operators with special training (mechanical/electric)

- Instructed operators with special training means technicians, engineers or specialists in the field.
- It is expected that the instructed operator with special training is a designer, programmer or supervisor and has the highest level of competence.
- It must be ensured that those involved are properly instructed in the user manual or during commissioning and trained in such a way that the work can be carried out in a safe manner.

### 6.2. Maintenance staff

#### **ALL MAINTENANCE MUST ONLY BE CARRIED OUT BY ACO FUNKI CERTIFIED PERSONNEL.**

Personal protective equipment must be used during repair and maintenance tasks. See pkt 4.2.1 for further information.

The maintenance staff must have knowledge of the machine's function and safety conditions as well as knowledge of the location of safe access routes and emergency stops.

The maintenance staff must have read and understood instructions for use, guides, workplace instructions, etc.

Before starting work, repairers and maintenance personnel must be instructed in safety conditions around the machine.

New maintenance staff must be trained by an experienced colleague.

Incorrect operation or maintenance can be dangerous and in the worst case cause death!!

## 7. Maintenance, troubleshooting and repair

### 7.1. Service and maintenance

Checklist table can be found under pkt 9.6

| SERVICE- AND MAINTENANCE INTERVALS |   |
|------------------------------------|---|
| Interval                           | Task  |
| Weekly                             | <ul style="list-style-type: none"><li>Manual washing of the tank</li></ul>          |
| Yearly                             | <ul style="list-style-type: none"><li>Thorough manual washing of the tank</li></ul> |
| Min. every 3 months                | <ul style="list-style-type: none"><li>Visual control</li></ul>                      |

#### **Manual washing:**

- Weekly - cleaning can be done from the outside when the lid is open, then clean with a highpressurecleaner where you stand outside the tank and radiate in all directions via the manhole.
- Yearly - takes place inside the tank. Requires another person present outside the tank.

#### **Visual control:**

- Check the tank for leaks.
- For leaks, such as dripping water from the tank. Tightly bolt around the tank.

| SERVICE- AND MAINTENANCE INTERVALS                          |  |
|---|--|
| Interval  | Task   |
| Min. every 6 months   | <ul style="list-style-type: none"><li>Visual control</li><li>Control of noise</li><li>Oil level control</li><li>Visual control of tube</li><li>Lubrication with grease (grease house between gear and tank)</li><li>Replacement of the automatic lubrication system / excess grease is removed</li><li>(At operational times &lt; 8 hrs. / day: the interval for changing the lubrication system is up to 1 year.) Every second time the lubrication system is changed, the lubrication collecting container is emptied or changed</li></ul> |
| After every 10,000 operating hours, at least every 6 months | <ul style="list-style-type: none"><li>Change the oil (When using synthetic products, the interval doubles)</li><li>Clean the ventilation valve. Replace, if needed</li><li>Replace the sealing rings for the shaft, if they are worn</li></ul>   |

#### **Visual control:**

- Check the gear unit for leaks, external damage and cracks in hose lines, hose connections and rubber buffers
- For leaks, such as dripping gear oil or e.g. refrigerant, damage or cracks, the gear must be repaired

#### **Control of noise:**

- Noise or vibrations in the gear are signs of damage to the gear unit. Disengage the gear unit and carry out a general inspection



### Oil level control:

- Only check the oil level when the gear is disengaged, stationary and cooled off. The drive must not be energized and must be secured against accidental connection

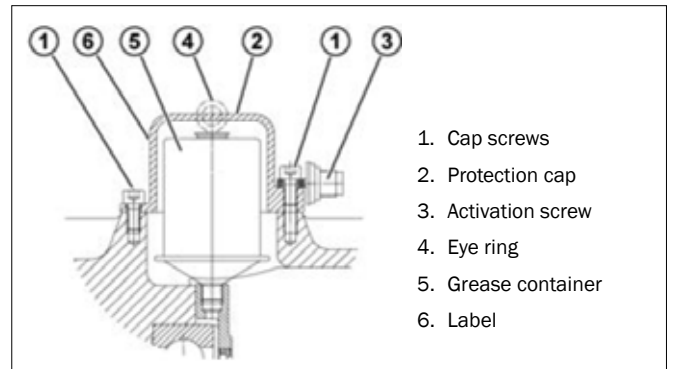
### Lubrication with grease:

- The grease house is replenished with grease (see illustration in this mounting instruction under “Mounting of the gearmotor”). When using acid vapor cleaners in the tank, the grease house is replenished every 3 months.

### Replacing the automatic lubrication system:

- Unscrew the protection cap
- Unscrew the lubrication system, and replace it with a new system
- Remove excess grease from the adaptor
- Activate the automatic lubrication system

Every second time the lubrication system is changed, the lubrication collecting container is emptied or changed. Empty the container by unscrewing it. The plunger in the container is pushed in and the pressed out grease is removed. The container is cleaned and screwed in again. If the container is damaged, replace it with a new one.

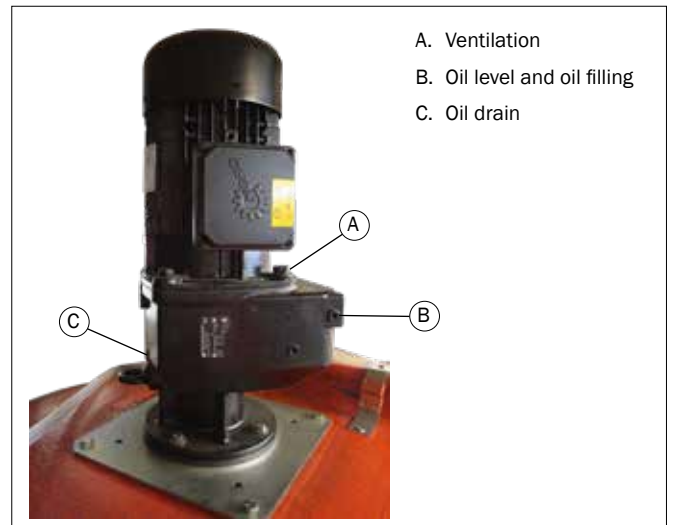


### Changing the oil:

- Cool the gear. Wear protective gloves due to possibly hot oil
- Place a drip tray under the outlet
- Unscrew the oil level plug completely
- Let all the oil run out of the gear
- Screw the oil drain plug in, and tighten it
- Fill with new oil until the oil starts to run out of the oil level hole. If using an oil level container, the oil is filled via the containers top opening.

### Cleaning (or replacing) the ventilation valve:

- Unscrew the ventilation valve and clean it (e.g. using an air compressor). Screw it back in.
- Replace the valve (incl. sealing ring), if needed



### Replacing the sealing ring for the shaft:

- When a distinct leakage of dripping oil is formed around the sealing lips, the shaft seal ring must be replaced
- During assembly, the space between the sealing- and the protective lip is filled approx. 50% with grease
- Note: the new sealing ring must not continue in the track of the old ring

### Lubrication types

BEARING GREASE: Novatex Heavy EP 2, item no. 99900099

OIL: Mineral oil ISO VG 220

Before repair, maintenance, etc. is started, energy sources must be disconnected (unlocked) and possibly vented or depressurised.

- Electrical supply separators must be opened (voltage disconnected) and locked.

### **Interruption of energy supply**

*Before repair, maintenance, etc. is started, energy sources must be disconnected (unlocked).*



1. Bring the machine to a standstill.
2. Identify all shut-off devices and switches relevant to the work.
  - a. Relevant shut-off devices are the shut-off valves and electric ones circuit breakers that cut off the supplies to the machine, as well as adjacent machines if these can create a risk of danger.
3. Disconnect the electrical supply to all electrical equipment via the supply disconnecter.
4. Protect the machine from accidental restart using a locking device.

### **Withholding of the energy supply**



*If it is not possible to maintain an overview of the entire machine and its plug during, for example, maintenance, the machine must be protected against accidental restart by means of a locking device.*



There is a legal and authorized lockable switch on the control board that handles the mixing tank. (Must be placed at least 0.6 m and at most 1.9 m - 1.7 m is preferred above the service level)

*This prevents accidental starting and contact with live parts.*

- Suitable personal protective equipment must always be used during repair and maintenance work.
- In cases where additional light is needed, the maintenance staff must bring this.
- Approved lifting equipment must be used when lifting and handling heavy parts/components.
- In operating situations where repairers are inside the machine, have dismantled parts of the machine or handle spare parts or tools, these people must be instructed to exercise special caution.
- After repair, maintenance, etc. before start-up, the operator must inspect the entire machine for faults and defects.

- When carrying out repairs inside the machine, another person **MUST** be present outside the machine.

*Electronic work:*

- Before starting work on electrical control board, a de-energized condition must be checked with a reliable instrument. It must be checked with 2 different measuring methods.
- For inspections where it is necessary to work under voltage, the staff must have a valid electrical safety course (formerly L-AUS) certificate/course certificate.
- Work on live parts and work near live parts must always be carried out by qualified persons.
- When working under voltage, there must always be another person so close to the workplace that the corresponding person can intervene quickly if an accident happens.
- This person, who does not need to be an expert or instructed in the electrical safety course regulations, must know before starting the work how best possible to intervene to stop the accident.
- Pay attention to residual dangerous voltage at frequency converters for some time after the interruption. (see operating instructions for the frequency converter).
- After repair, maintenance, etc. the compensating connection must be refitted correctly.
- Potential equalization must be checked at least once a year in connection with inspection.



*For maintenance, see mounting instruction 0901-357\_Mixing\_tank\_VF4, which contains a spare parts list, error and alarm list as well as information and guidance on maintenance tasks, performance, points and intervals for:*

- |   |             |   |             |
|---|-------------|---|-------------|
| - | Cleaning    | - | Inspection  |
| - | Lubrication | - | Testing     |
| - | Check       | - | Replacement |

## **7.2. Corrective maintenance**

If there are any noises, unusual vibrations or the like from the machine, the fault must be located and rectified. If this is not possible, an authorized fitter must be called.

In general, it must be advised that maintenance and repairs are only carried out by trained and instructed personnel with the necessary professional background.

When replacing parts and components, only parts that are identical to those fitted by the manufacturer may be used.

All written information and warnings must be formulated in danish.

If information and warnings are illegible or indistinct, these must be replaced immediately with new ones.

### 7.3. Troubleshooting

If you have heard mechanical knocking sounds, noises or unusual vibrations from inside the tank - a service must be carried out. If service is to take place inside the tank, see point 7.4.

Error codes are found in the FunkiNet control.

### 7.4. Repair

**ALL MAINTENANCE AND SERVICE INSIDE THE TANK MUST ONLY BE CARRIED OUT BY ACO FUNKI TRAINED/ CERTIFIED PERSONNEL.**

When carrying out repairs inside the machine, another person **MUST** be present outside the machine.

If service is to take place inside the tank, you must use extra equipment. (ACO Funki is not responsible for delivering extra equipment).

- Aluminum rope ladder to climb down into the tank. Rope ladder must be attached to the wall or to the ceiling close to the lid of the thought.
- Headlamp 250 LUX - to carry out work in the tank.
- Fan - for the pressure is equalised.
- Lifeline System - in case of rescue.

When working inside the tank, the safety regulations must be strictly followed:

- The power to the tank is cut off and locked. While washing the tank, it must not be possible to start the gear motor.
- Open the hatch.
- Before starting to wash the tank/work into the tank, the pressure must be equalized in the tank.
  - Option 1: Water. Fill the tank with water, open the bottom cover, drain the water.
  - Option 2: Fan (1). Fan must blow into the tank. Bottom cover must be open.
- Close the hatch after the wash/task is finished.

### 7.5. Cleaning and order

**ALL MAINTENANCE AND SERVICE INSIDE THE TANK MUST ONLY BE CARRIED OUT BY ACO FUNKI TRAINED/ CERTIFIED PERSONNEL.**

Weekly cleaning of the tank can take place outside the tank by standing on an approved platform ladder. Cleaning carried out with a high-pressure cleaner.

Annual cleaning, a thorough cleaning of the tank takes place inside the tank.

- The power to the tank is cut off and locked. While washing the tank, it must not be possible to start the gear motor.
- Open the hatch.
- Before starting to wash the tank/work into the tank, the pressure must be equalized in the tank.
  - Option 1: Water. Fill the tank with water, open the bottom cover, drain the water.
  - Option 2: Fan (1). Fan must blow into the tank. Bottom cover must be open.
- Close the hatch after the wash/task is finished.

## SAFETY SWITCH FUNCTIONS

When you start to turn the lid, the safety switch is activated, the automation in the tank including filling and mixing equipment stops, this happens in the first 3 seconds of turning the lid, and it takes another 10 seconds to turn and remove the lid, all the equipment inside the tank is stopped with no remaining rotation.

When the safety switch is activated, the safety reset button starts to light up, this means that the protection system is inactive. To restore safety - press the safety reset button on the EL board.



The protection system is deactivated.



The protection system is activated.

## 7.6 Procedure for rescue

- Before entering the tank and working, the possibility of evacuating the employee working inside the tank must be established.
- If you go down into the tank from the cleaning/inspection hole at the top, rescue equipment must be established, such as a Lifeline, where the employee is connected via fall protection before he climbs into the tank.
- Always ensure that there is an employee outside the tank who can keep an eye on employees inside the tank and react if an accident occurs.

### PPE/equipment:

Breathing apparatus

## 7.7. Service addresses

Contact distributor for support and service. Contact information can be found on the electrical panel. When contacting your distributor, please provide tanks type number, which are shown on the CE-label on the inner part of the front leg of the tank.



## 8. Termination of use

### 8.1. Disassembly

Before disassembly the machine, a plan for the disassembling must be drawn up, the plan must contain a risk assessment for the work and for the disposal of machines and machine parts.

The plan and risk assessment must be prepared according to the regulations in force at the time of dismantling.

### 8.2. Dispose

The machine is dismantled and sorted into categories, as required by applicable environmental requirements.

The product is subject to directive 2012/19/EU on waste electrical and electronic equipment (WEEE).

The product must not be disposed of together with unsorted household waste. Use the local WEEE recycling points for the disposal of this product and ensure that all relevant regulations are observed.



## 9. Appendix

### 9.1. EC-declaration of conformity

# EC-declaration of conformity

2006/42/EC annexe II A

Hereby declares that machine type:

- Liquid feeding tank, Funki Liq Mix                      3035\_GB\_LIQUID\_FEEDING\_RESIDUAL\_TANKS  
Mounting and service instruction

Is manufactured in accordance with the following EC directives:

- 2006/42/EU    The Machinery Directive
- EN ISO 12100     Safety of machinery - General principles for  
design - Risk assessment and risk reduction.

Person responsible for compiling the relevant  
technical documents:

Lene Bryde  
Kirkevænget 5  
7400 Herning  
Denmark  
Tlf.: +45 97 11 96 00

This declaration certifies compliance with the guidelines indicated. Changes to the design that might have effects on the technical data or proper use are indicated in the manual, The declaration of conformity is invalidated if changes are made that seriously change the equipment.

17.10.2023

Lene Bryde  
Managing Director



## 9.2. El-diagrams.

References to Control board F-13-19833-A01R4

## 9.3. Drawings, mechanical construction.

References to Mounting instruction 3035\_GB\_Liquid\_feeding\_residual\_tanks

## 9.4. Other instructions for use.

### **Description:**

### **Filnavn:**

Control/Function manual

Funkinet 0930-116

EL panel

Control board F-13-19833-A01R4

Operating manual

Mounting instruction 3035\_GB\_Liquid\_feeding\_residual\_tanks

Maintenance manual

Mounting instruction 3035\_GB\_Liquid\_feeding\_residual\_tanks

## 9.5. Other Compliance or Incorporation Statements.

Gearmotor 74038094



# GETRIEBEBAU NORD

Member of the NORD DRIVESYSTEMS Group



## Getriebebau NORD GmbH & Co. KG

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C412000\_3021

## EF/EU-overensstemmelseserklæring

Iht. EU-direktiverne 2014/34/EU, bilag VIII, 2014/30/EU, bilag II, 2009/125/EF, bilag IV, 2011/65/EU Bilag VI

Hermed erklærer Getriebebau NORD GmbH & Co. KG som producent,  
at de trefasede asynkronmotorer i produktserien

Side 1 af 1

### • SK 63<sup>\*1)</sup>/P<sup>\*2)</sup> 3G <sup>\*3)</sup> til SK 200<sup>\*1)</sup>/P<sup>\*2)</sup> 3G <sup>\*3)</sup>

<sup>1)</sup> Effektmærke: S, SA, SX, M, MA, MB, MX, L, LA, LB, LX, R, X, Y, A, W - valgfrit suppleret med: H, P

<sup>2)</sup> Poltallkode: 2, 4, 6

<sup>3)</sup> Optioner

med ATEX-mærkning  II 3G Ex ec IIC T3 Gc

opfylder følgende bestemmelser:

|                                   |                                    |                                     |
|-----------------------------------|------------------------------------|-------------------------------------|
| ATEX-direktivet for produkter     | 2014/34/EU                         | ABI. L 096 af 29.3.2014, s. 309–356 |
| Direktivet om miljøvenligt design | 2009/125/EF (FO nr. 2019/1781)     | ABI. L 285 af 31.10.2009, s. 10–35  |
| EMC-direktiv                      | 2014/30/EU (fra d. 20. april 2016) | ABI. L 96 af 29.3.2014, s. 79–106   |
| RoHS-direktivet                   | 2011/65/EU                         | ABI. L 174 af 1.7.2011, s. 88–110   |
| Delegeret direktiv                | 2015/863                           | ABI. L 137 af 4.6.2015; s. 10-12    |

### Anvendte harmoniserede standarder:

|                           |                             |   |
|---------------------------|-----------------------------|---|
| EN 60079-0:2018           | EN IEC 60079-7:2015/A1:2018 | EN 60529:1991+A1:2000+A2:2013+AC2016-12 |
| EN 60034-1:2010+AC:2010   | EN 60034-2-1:2014           | EN 60034-5:2001+A1:2007                 |
| EN 60034-6:1993           | EN 60034-7:1993+A1:2001     | EN 60034-8:2007+A1:2014                 |
| EN 60034-9:2005+A1:2007   | EN 60034-11:2004            | EN 60034-14:2018                        |
| EN 60034-30-1:2014        | EN 55011:2016+A1:2017       | EN 61000-6-3:2007+A1:2011+AC:2012       |
| EN 61000-6-4:2007+A1:2011 | EN 60204-1:2018             | EN IEC 63000:2018                       |

Den første identifikation blev udført i 2014.

Bargteheide, 01-07-2021

U. Küchenmeister  
Direktion

Dr. O. Sadi  
Teknisk direktør

## Manufacturer's statement

(according to the guideline 2011/65/EU of 08.06.2011)



### Getriebbau NORD

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Tel.: +49 (0) 4532 / 289 - 0  
Fax: +49 (0) 4532 / 289 - 2253  
<http://www.nord.com>  
[info@nord-de.com](mailto:info@nord-de.com)

The EU Directive 2011/65/EU dated 08.06.2011 is the new version of the EU Directive 2002/95/EU dated 27.01.2003.

The Directive was implemented under national law by the present version of the Electrical and Electronic Appliances Law [Elektro- und Elektronikgerätegesetz] (ElektroG). Devices governed by this directive may not contain more than 0.1 weight percent of lead, mercury, chrome 6, polybrominated biphenyl (PBB) or polybrominated diphenyl ether (PBDE) or 0.01 weight percent cadmium per homogenous material.

Mechanical drive components delivered by Getriebbau Nord are principally not governed by the scope of application of the EU Directive 2011/65/EU. If the drive components are intended to be used in products governed by the scope of application of the EU Directive 2011/65/EU, the manufacturer must ensure that the end product meets the requirements of the EU Directive.

For this case, Getriebbau NORD declares that the following drive components conform with the essential requirements of the electric and electronic act and the guideline 2011/65/EG of 08.06.2011 and the guideline 2015/863/EG of 31.03.2015:

#### Gear units:

##### Helical gear units:

SK11E, SK21E, ..., SK51E, SK02, SK12, ...SK102, SK03, SK13, ..., SK103

In the versions / options:

F, XZ, XF, VL, IEC, NEMA, AI, AN, RLS, SEK, SEP, W, VI, OA, SO1

##### Helical gear units NORDBLOC:

SK172, SK272, ..., SK972, SK273, SK373, ..., SK973,  
SK071.1, SK171.1, SK371.1, SK571.1, SK771.1, SK871.1, SK971.1, SK1071.1  
SK072.1, SK172.1, SK372.1, ..., SK673.1, SK772.1, ..., SK973.1

In the versions / options:

F, XZ, XF, VL, AL, IEC, NEMA, AI, AN, SEK, SEP, W, VI, OA, SO1

##### Standard helical gear units:

SK0, SK01, SK20, ..., SK33, SK010, SK200, ..., SK330

In the versions / options:

Z, XZ, XF, F, 5, V, AL, IEC, NEMA, W, VI, SO1

##### Flat gear units:

SK0182NB, SK0282NB, SK0182.1, SK0282.1, SK1282.1, SK1282, ..., SK11282,  
SK1382NB, SK1382.1, SK2382, ..., SK11382.1, SK12382

In the versions / options:

A, V, Z, F, X, S, VS, EA, B, G, VG, H, H66, VL, VL2, VL3, IEC, NEMA, AI, AN, RLS, SEK, SEP, W, VI, OA, OT, SO1, SCP

**Industrial gear units:**

MAXXDRIVE helical gear units SK5207, SK5307...SK15207, SK15307  
MAXXDRIVE bevel helical gear units SK5407, SK5507...SK15407, SK15507  
MAXXDRIVE XT bevel helical gear units SK5217...SK11217  
MAXXDRIVE XD helical gear units SK15319  
MAXXDRIVE XJ bevel helical gear units SK5418  
MAXXDRIVE XS bevel helical gear units SK49320, SK59320

In the versions / options:

A, AS, B, D, DRY, EA, ED, EV, EW, F, FAN, FK, F1, H/H66, IEC, L, LC, LCX, MC, MD, MF, MFB, MS, MSB, MFK, MFT, MSK, MSKB, MST, MFTB, MSTB, MT, NEMA, OT, R, V, VL, VL2, VL3, VL4, VL5, VL6, W1, W2, W3, WG, WX, SAFOMI  
Tac, FV, EF, DB, DR, OSG, OST, PS

**Bevel gear units:**

SK920072.1, SK92072, SK92172, ..., SK92772, SK92072.1, SK92172.1, ..., SK92772.1,  
SK930072.1, SK93072.1, SK93172.1, ..., SK93772.1,  
SK9012.1, SK9016.1, SK9022.1, ..., SK9096.1,  
SK9013.1, SK9017.1, SK9023.1, ..., SK9053.1

In the versions / options:

A, V, L, Z, F, X, D, K, S, VS, EA, R, G, VG, B, H, H66, VL, VL2, VL3, IEC, NEMA, AI, AN, RLS, SEK, SEP, W, VI, OA, SO1, SCP

**Helical worm gear units:**

SK02040, SK02040.1, SK02050, ..., SK42125, SK13050, SK13080, ..., SK43125

In the versions / options:

A, V, L, X, Z, F, D, S, B, H, H66, VL, IEC, NEMA, RLS, SEK, SEP, W, VI, OA

**Worm gear unit Minibloc:**

SK1SM31, SK1SM40, ..., SK1SM63, SK2SM40, ..., SK2SM63

In the versions / options:

A, V, L, Z, F, D, X, B, IEC, NEMA, W, VI

**UNIVERSAL worm gear units:**

SK1SI31, SK1SI40, ..., SK1SI75, SK1SID31, ..., SK1SID75, SK2SID40, ..., SK2SID63, SK1SIS31, ..., SK1SIS63, SK2SIS40, ..., SK2SIS63, SK1SMI31, ..., SK1SMI75, SK1SMID31, ..., SK1SMID75, SK2SMID40, ..., SK2SMID63

In the versions / options:

V, A, L, X, Z, F, D, H, H10, /31, /40, IEC, NEMA, W, VI

**Motor console:**

MK I, MK II, MK III, MK IV, MK V

**Adjusting gear units:**

R080, R100, R196, R210, R250, R280, R300, R350, R375, R400, R500

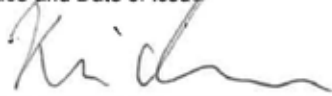
In the designs: U, Z

**Getriebebau NORD**

GmbH&Co.KG

Bargteheide, 21.01.2022

Place and Date of Issue



U. Küchenmeister, managing director



Dr. O. Sadi, technical managing director









