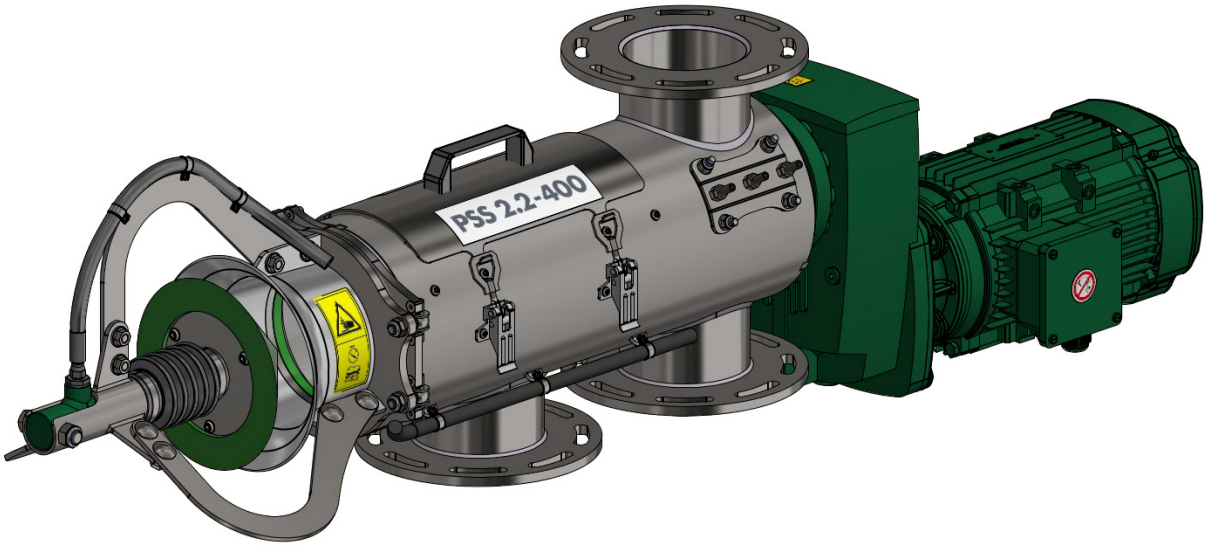
Stallkamp

OPERATING MANUAL

Press Screw Separator

PSS 2.2-400-M1508



Version 3

Document no.: 8090077 Version: February 2022

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: 09/03/2022 10:03:00
Date printed 11/03/2022
BA_Separator PSS 2.2-400 M1508_englischV3_8090077oE_EN(UK)

1 TABLE OF CONTENTS

2 DECLARATION OF CONFORMITY PURSUANT TO MACHINERY DIRECTIVE 2006/42/EC (TRANSLATION OF THE ORIGINAL GERMAN VERSION)

Manufacturer: Erich Stallkamp ESTA GmbH

In der Bahler Heide 4
49413 Dinklage
Germany

Tel.: (0049) 04443 / 9666-0
Fax.: +49 (0) 4443 / 96 66-60

Authorised representative for the composition of the technical documentation:

Dipl.-Ing. (FH) Heiko Ansorge

In der Bahler Heide 4
49413 Dinklage
Germany

Product name: Press screw separator PSS 2.2-400 M1508

Type: PSS 2.2-400-M1508; 2,2kW;

We hereby declare that the products listed above conform to the pertinent regulations of the EC Directive:

Machinery Directive 2006/42/EC

Including all amendments and compliant with the pertinent regulations of the directive on electromagnetic compatibility:

EMC Directive 2004/108/EC

The following harmonised standards have been applied:

EN ISO 12100: 2010, Safety of machinery – General principles for design

EN 60204-1:2007-06, Safety of machinery – Electrical equipment of machines – Part 1: General requirements

EN 61000-6-1:2007, Electromagnetic compatibility (EMC) Part 6-1: Generic standards – Immunity for commercial environments

EN 61000-6-2:2005, Electromagnetic compatibility (EMC) Part 6-2: Generic standards – Immunity for industrial environments

Dinklage, dated 11. March 2022

Stallkamp
Erich Stallkamp ESTA GmbH
D-49413 Dinklage-Germany
In der Bahler Heide 4, Industriegeb. West

Erich Stallkamp ESTA GmbH, Dipl.-Ing. (FH) H. Ansorge (AL-TPR, authorised management board representative)

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. If any conversions or modifications are made to the product, this declaration shall lose its validity with immediate effect.

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 device safely, appropriately and cost-effectively. It is necessary to observe the operating manual to ensure the reliability and long lifespan of the device and to avoid hazards.

The operating manual does not take local regulations into consideration; the operator is solely responsible for complying with those regulations and ensuring that any installation personnel employed do so too.

3.1 Identification of notices in the operating manual

In the operating manual, safety notices indicating dangers to persons are identified with the general hazard symbol as per DIN 4844-W9.

In the operating manual, warnings about electrical voltage are identified with the safety signs as per DIN 4844-W8.

All other notices whose disregard might restrict the functional reliability of the device or represent a danger for the machine are highlighted 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 and motor power, or outside the scope of any other instructions contained in the operating manual or contract documentation. If you have any queries, please consult the manufacturer.

The rating plate displays 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.

If additional information or notices are required or in case of damage, please contact your local field sales employee or contact us directly.

3.2 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.

In addition to the safety notices in this operating manual, all warning signs and regulations of the respective professional association in the latest version must be observed.

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, non-observance may, 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 liquid manure is stored below slatted floors, the presence of persons in buildings during agitation or pumping 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 in a manner that ensures 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 owner must ensure that all maintenance, inspection and installation work is carried out by authorised and qualified specialist personnel.

Work on the machine must strictly 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 put back into operation.

5 WARRANTY

This section contains the general specifications for the warranty. Contractual agreements shall always take precedence 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 undertakes to rectify 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 warranty is honoured 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 undertakes to have the manufacturer itself or a service provider approved by the manufacturer perform maintenance work according to the regulations of the manufacturer, including the necessary changing of oil and the repair and replacement of wearing parts. The operator is thus obligated to maintain a maintenance and revision list, which facilitates monitoring of the mandatory inspection and maintenance work (**see Point 12 Maintenance and revision** list).

We expressly emphasise that this device is a fluid-flow machine in which the protective coating is exposed to constant wear from the abrasive contents of the pumping medium and should consequently be classed as a wearing part. Wear, damage and consequential damage due to external influences on the protective coating are expressly excluded from the warranty. The use of the device and/or the field of application and resistance to the application must be verified by the operator and does not form part of the warranty.

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 OF THE PSS 2.2-400-M1508

6.1 General description

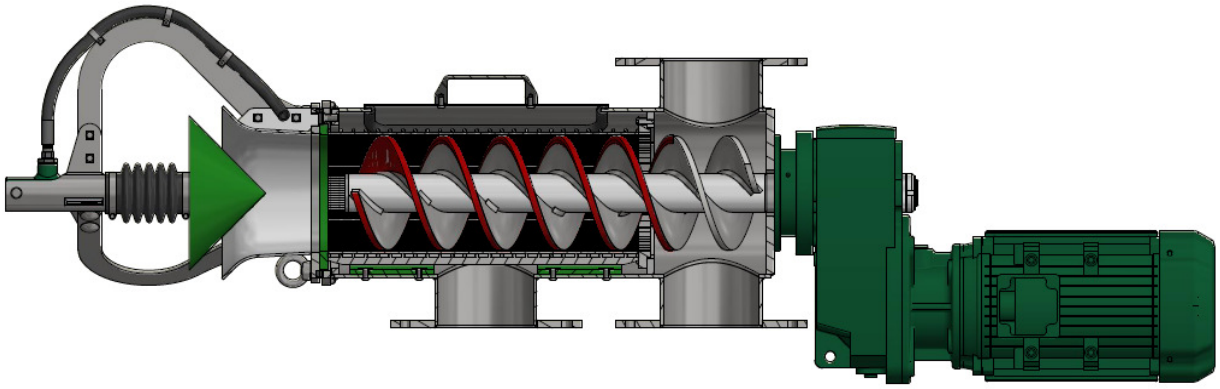
This operating manual applies to the standard model of the Stallkamp press screw separator PSS 2.2-400-M1508. The separator must not be operated in potentially explosive atmospheres.

Press screw separator PSS 2.2-400-M1508 comprising:

- Stainless steel separator housing
- Right-threaded and double-threaded press screw made of V2A 1.4301 stainless steel. Hardened surface in the external and press area
- Screen basket made of V2A stainless steel. 1.4301 stainless steel with defined clearance
- Drive motor 400/690V, 50 Hz, 2.2 kW, 49 rpm
- Temperature of medium being separated up to max. 50°C -> separation without restrictions as long as the motor is not running in the overload range.

6.2 Functional principle

The Stallkamp press screw separator separates solid and liquid fractions from thick and thin raw liquid.



The raw liquid enters the separator via the inlet fitting. Meanwhile, the horizontally aligned screw conveys the raw liquid to the screen basket. Gravity then forces the liquid fraction of the raw liquid to pass through the screen basket, where it is collected in the housing and returned through the outlet port.

The solid fraction of the raw liquid in contrast remains in the screen basket. This fraction on the screen basket is removed by the rotating screw and conveyed to the outlet. Thorough cleaning of the screen basket is possible thanks to a small clearance between the screen basket and the screw. The solids conveyed to the outlet are squeezed by the adjustable counterpressure of the pressing cone, which extracts any remaining liquid from the solids.

The separation efficiency and the throughput depend on the following factors:

- The nature of the raw liquid
- The selection of the screen basket mesh width
- The setting of the pressing cone pressure
- The nature of the screen and the screw

6.3 Intended use of the PSS 2.2-400-M1508

The separator is designed for a wide range of applications in which the solid and liquid fractions of various mixtures of substances that are able to be pumped need to be separated; for example, in the processing of cattle and pig manure or bio-mass where the solid and liquid fractions of a solid-liquid mixture need to be separated with the objective of:

- reducing the volume of natural fertiliser;
- reducing unpleasant odours when spreading fertiliser;
- recovery of the solid fraction for bedding material or fertiliser;
- composting the solids;
- recovery of the liquid for biogas plants with dry fermentation;
- reducing the nutrients for sprinkling of the liquid.

The separation depends on the solid fraction and the viscosity of the liquid.

6.4 Technical data

Press screw separator PSS 2.2-400-M1508 comprising:

- Separator type: Separator PSS 2.2-400 M1508
- Three phase motor: 400/690 V, 50 Hz, 3 ph., 1440 rpm
- Protection category: IP55
- Insulating category: F = 155°C
- Motor power: 2.2 kW, 4-pole
- Nominal current: 4.65 A
- Gear seal: Radial shaft seal ring
- Press screw: Ø150 mm, 1.4301, hardened surface in the external and press area
- Screen basket: V2A stainless steel, 1.4301, clearance 0.35 – 1.00 mm, other widths up on request
- Max. permissible operating pressure: 0.5 bar, optimum between 0.1 – 0.3 bar
- Dimensions: 1500 x 400 x 465 (LxWxH, [mm] without hand pump)
- Weight: 120kg

6.5 Type plate PSS 2.2-400-M1508

The type plate displays the most important power and specification data:

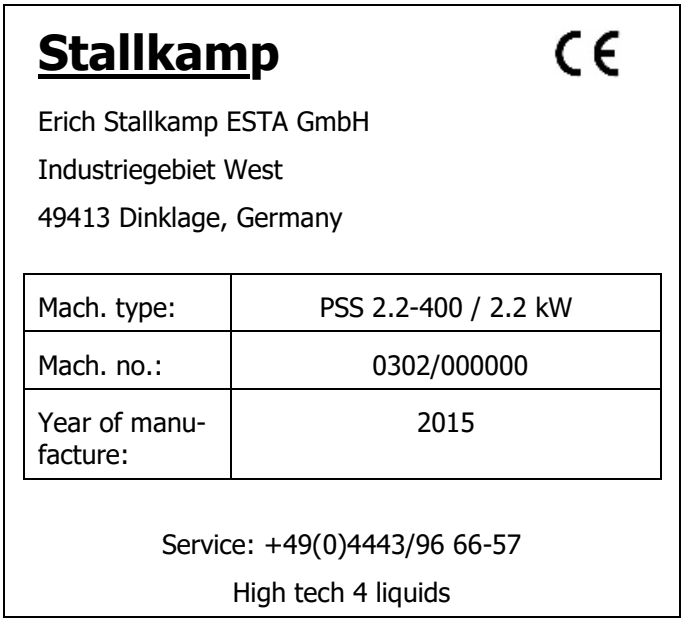


Figure 1

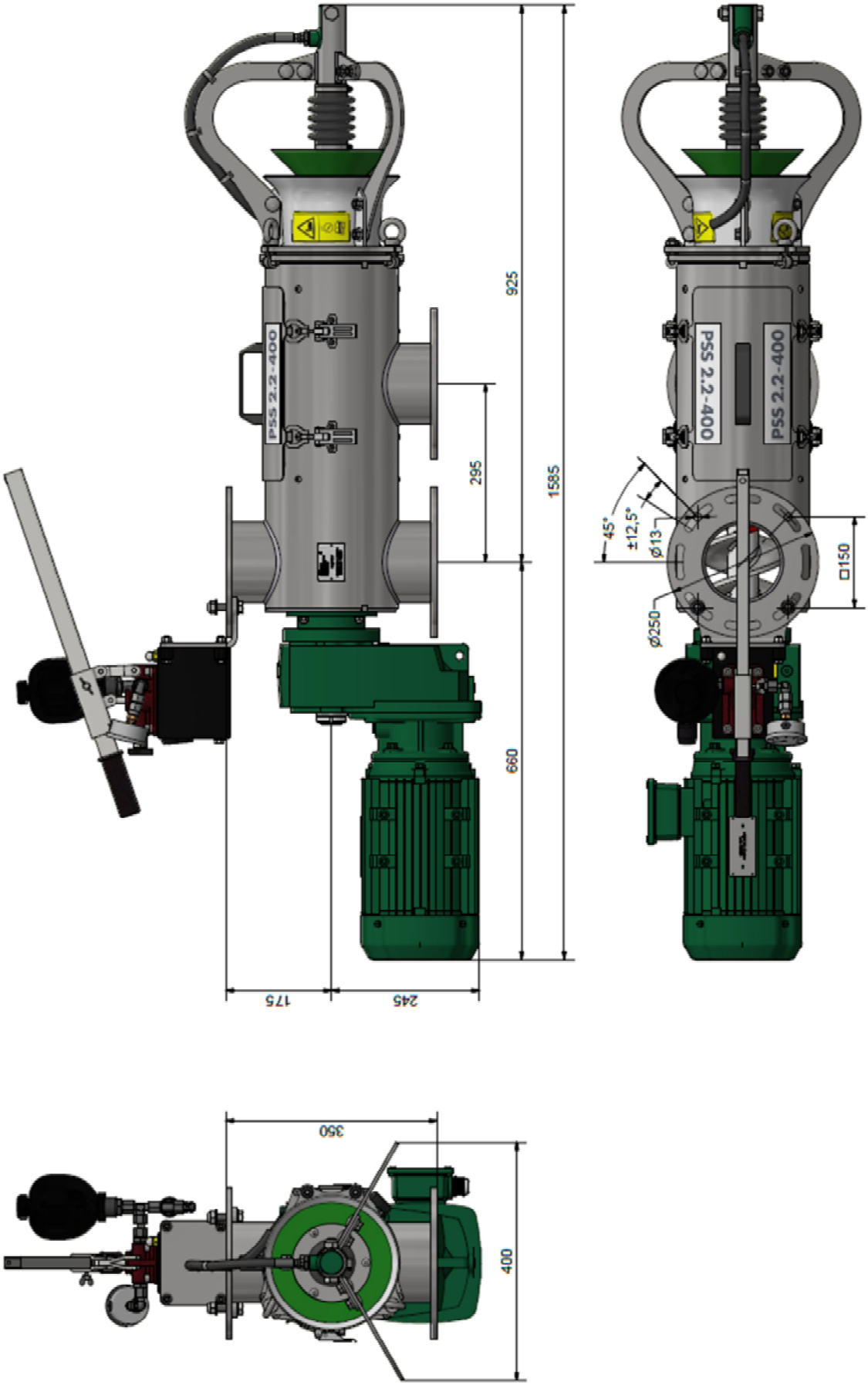
Classification: (e.g. PSS 2.2-400)

Motor/serial number: (e.g. 0302/000003)

Year of manufacture: (e.g. 2015)

In case of technical queries about the device, the above type plate data must be specified.

6.6 Dimensions of the PSS 2.2-400-M1508



7 INSTALLING THE PSS 2.2-400-M1508

7.1 Delivery scope

The Stallkamp separator is delivered completely assembled, except for the hydraulic hand pump which needs to be connected. The hydraulic hand pump and optional accessories are installed by the customer. The following components can be delivered as an option:

- Pressure measuring unit
- Control system
- Hopper
- Pump

7.2 Set-up and installation

7.2.1 Transport

Transport the separator in a horizontal position, secured to a transport pallet. Make sure that the vent plug on the gear is secured.

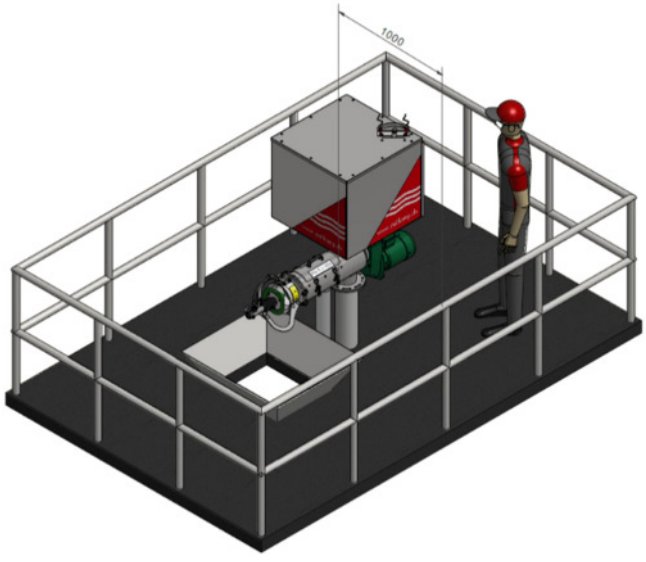
The separator can be lifted from the 6" standard flange plate or using two straps around the frame and the drive motor. Make sure that the machine does not tilt to the side or swing in the belts.

The directions under Point 4 Safety must be observed.

7.2.2 Installation site

The installation site for the separator must comply with the following criteria:

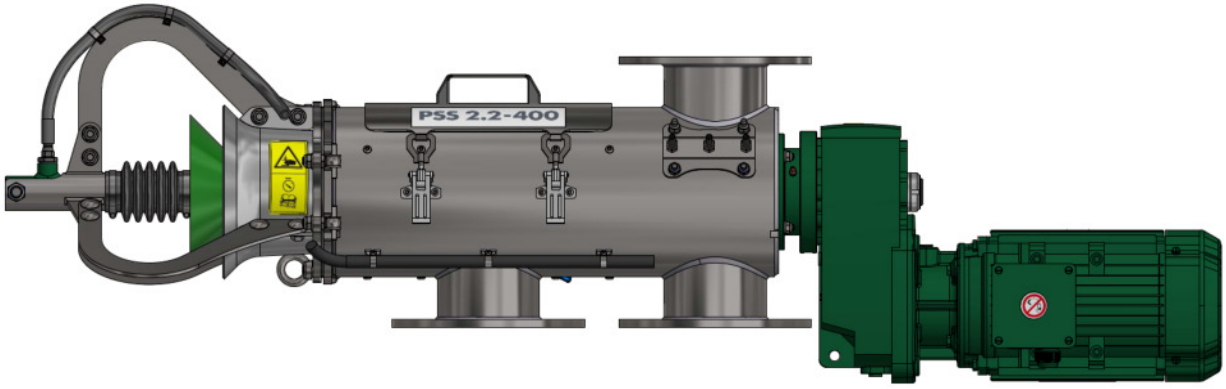
- The separator must be firmly anchored in order to avoid unintentional movement or tilting.
- If the separator is installed on a frame, the statics must be sufficient for the separator and if applicable the storage tank when completely full.
- Adequate accessibility must be provided for adjustments and maintenance work. It is recommended to have at least 1 m free access to the separator.
- Solids must be able to be ejected and discharged freely.
- All discharged liquids must be able to drain without pressure.



Exemplary installation on a platform with a distance of 1 m between the separator and the fence.

7.3 Fixing the separator with hopper/overflow

At least one of the two standard 6" flanges is used for holding the press screw separator.

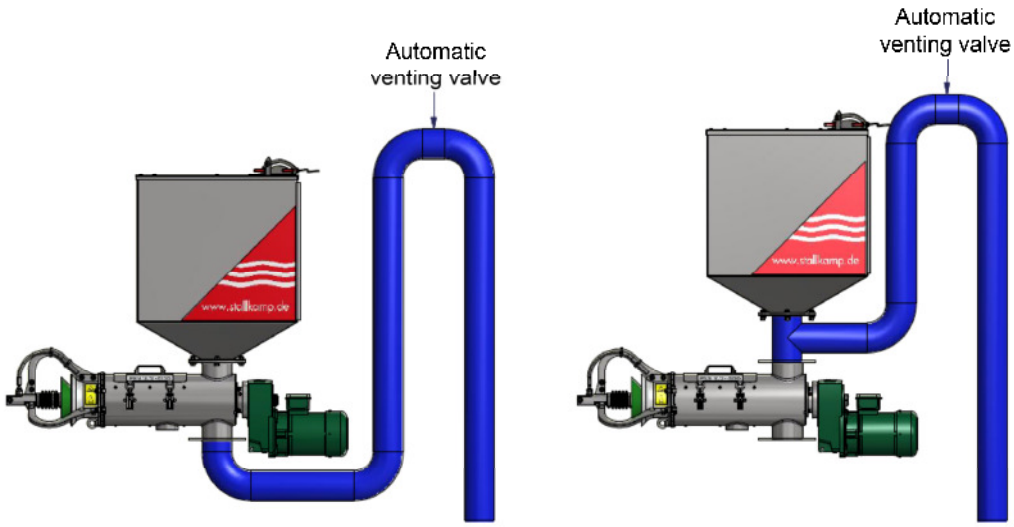


Connecting and fixing the separator

It is recommended to supply the separator/hopper with liquid via the bottom connection. This has an additional rinsing effect during pumping.

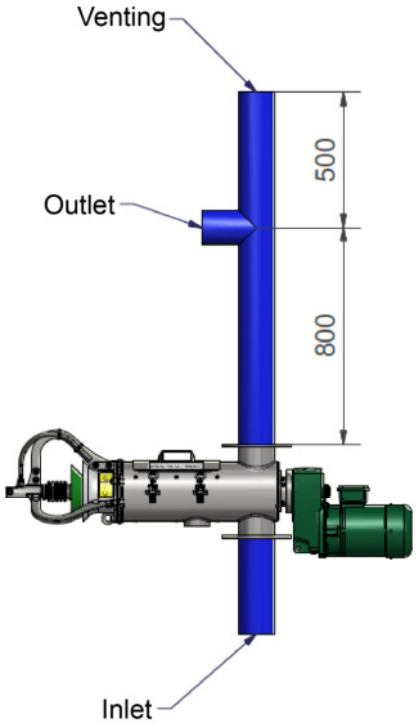
Alternatively, the bottom connection can also be blinded and a T-piece can be placed at the top connection between the separator and the hopper.

With both versions, it must be ensured that the liquid cannot flow back out of the hopper after switching off the supply pump. This can be done by using a rotary lobe pump, a pneumatic shut-off valve or by laying the supply line above the liquid column (attention, ventilation valve is required).



Installation examples: Left: feed from below. Right: Feed via T piece

If an overflow is used, it is recommended to feed the liquid from below and to drain it via a T-piece at a height of approx. 800 mm. Venting is absolutely necessary.

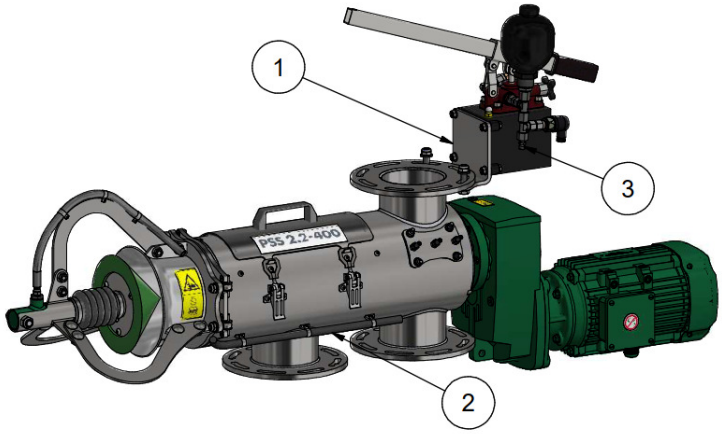


Installation example of an overflow

7.4 Connecting the hydraulic hand pump

Install the hydraulic hand pump with the bracket on the standard flange. This can be fixed as shown, twisted or on our flange. Alternatively, the hydraulic hand pump can also be installed on-site on a fixing. When doing this, make sure that the hand pump can be operated by the user and that the manometer can be read.

Connect the hydraulic hose to the connection of the hydraulic hand pump. Once the connection is firmly tightened, you can fill in with the supplied oil. After filling, perform a seal inspection by operating the hand pump and applying pressure of approx. 20 bar to the system. Make sure that the pressure remains constant and that the connections do not leak. Tighten the connections more if necessary.



1 Hydraulic hand pump bracket **2** Hydraulic hose **3** Hydraulic hand pump connection

7.5 Mains connection

Electrical connection may only be established by a certified electrician. The VDE regulations (German Association for Electrical, Electronic & Information Technologies) must be observed. Compare the existing voltage with the specifications on the motor's manufacturer's plate and select the appropriate circuit.

The separator motor is splash-proof according to IP55.

The technical connection conditions of the local energy supply company must be observed during connection.

The use of a motor protection device is a prerequisite.

The separator must be properly connected to the mains supply (pay attention to serviceable protective conductors) and check whether the feed line is properly protected. The respective power consumption of the motor in amperes is shown on the motor's type plate.

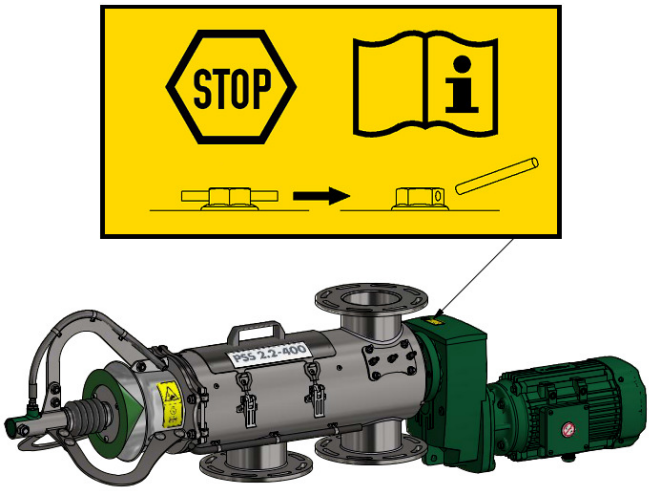
ATTENTION!

The switch box must be protected from moisture at all times!

Pay attention to which way the motor turns. If it turns the wrong way, two of the three feed lines (L1; L2; L3) must be switched.

7.6 Drive motor

Remove the plug from the vent once the separator has reached its final working position. If the separator is moved, this ventilation must be blocked again.



8 OPERATING AND COMMISSIONING THE PSS 2.2-400-PSS-M1508

8.1 Prior to commissioning: Safety notices

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

(1) Check that the separator is stable.

(2) Check the oil level of the drive motor and fill up if necessary, lubricate the bearing/seal.

(3) Check that the supply and discharge lines are connected correctly and have no leaks. Pressure-free drainage is essential.

(4) Check the direction of rotation.

(5) Check that the motor protection is set correctly.

8.2 Setting the hydraulic hand pump

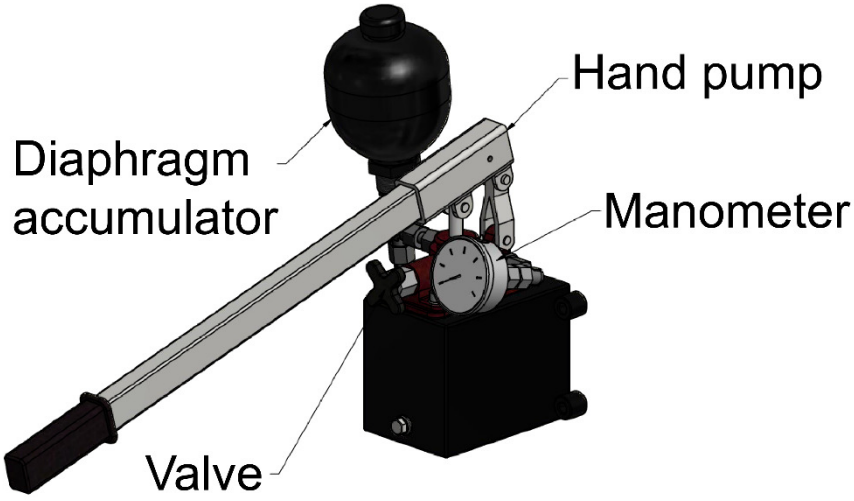
The hydraulic hand pump is used for adjusting the pressure of the conical head and thus the DM content of the solid matter. The following points must be observed:

- The higher the pressure, the higher the DM content.
- High DM content causes high power consumption. The maximum permissible power consumption must be observed! The motor may get overloaded.
- High DM content leads to increased press screw and screen basket wear.
- Increased DM content causes less throughput.
- Overly low pressure might result in breakage at the conical head.

Close the valve to adjust the pressure. Pressure can now be built up by pumping the lever. This can be read on the manometer. To lower the pressure again, you have to open the valve briefly.

Keep an eye on the pressure when starting the separator. The pressure may need to be corrected, depending on the application.

The diaphragm accumulator allows the conical head to "bounce" without much change in system pressure. In order for the diaphragm accumulator to function properly, a pressure of at least 7 bar must prevail in the system.



Assembling the hydraulic hand pump

8.3 Commissioning the separator

To commission the separator, proceed as follows:

(1) Close the ball head by building up a pressure of approx. 10 bar with the hand pump.
(2) Switch on the supply pump to supply the separator with liquid.
(3) Switch on the separator.
(4) Observe the build-up process of the plug at the outlet. If necessary, readjust the pressure of the hydraulic pump.
(5) Pay attention to the maximum permissible power consumption of the motor during operation

8.4 Terminating the separation

To terminate separation, it is recommended to switch off the supply pumps and to continue operating the separator until the feed lines or hopper are empty. If the separator is not used for more than 1 week, the tension must be relieved from the ball head. Allow the separator to run for approx. 30 seconds after relieving the tension from the ball head to convey any remaining solid matter out of the machine. Only relieve the tension from the ball head when no more liquids are left in the feed line or hopper.

Avoid long dry running times for all processes. This leads to increased wear.

8.5 Resuming separation operation

Before commissioning the separator, check if the ball head is under tension. If the separator is as it was in the last separation process, you can first switch on the supply pumps and then the separator.

If the tension has been relieved from the ball head and the machine has been cleaned, proceed as described in Point **8.3 Commissioning the** separator.

If the separator is not working after resuming operation, check if the screw is jammed. This can happen after downtimes due to deposition of solids. To clean the separator, please dismantle the screen and clean everything. The instructions for removing the screen can be found in **9.3 Replacing the press screw** and screen basket

8.6 Winter operation and extended periods of inactivity

At temperatures under 0°C or during extended periods of inactivity (> 2 week), the separator should be completely cleared of liquids and solid phases following operation. In addition, all the pumps and lines must be drained of liquids. Depending on the control system, the lines and pumps may be emptied by changing the conveying direction.

9 PSS 2.2-400-M1508 MAINTENANCE

The specified maintenance and inspection work must be performed regularly. This work may only be carried out by trained, qualified and authorised personnel. The operator of the device undertakes to have the manufacturer itself or a service provider approved by the manufacturer perform maintenance work according to the regulations of the manufacturer, including the necessary changing of oil and the repair and replacement of wearing parts. The operator is thus obligated to maintain a maintenance and revision list, which facilitates monitoring of the mandatory inspection and maintenance work (see Point 12 Maintenance and revision list on page 32).

9.1 Maintenance intervals

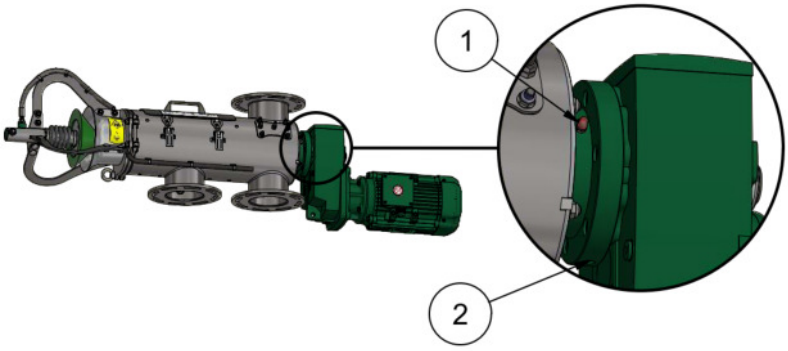
The separator must be inspected for damage every time before it is commissioned. In addition, the secure fitting of all screws and other fixing devices must be checked.

Thorough and regular maintenance and inspection of the wearing parts extends the service life considerably. Worn parts must be replaced as quickly as possible to avoid consequential damage.

9.1.1 Recommendation: every 14 days

9.1.1.1 Lubricate the sealing elements

The separator has a lubricating point (lubrication nipple (1)) with an outlet which controls the seal. The seal must be lubricated with a waterproof, high-performance lubricant.



Important:

The lubrication process must always be performed when the machine is running, including in particular:

1.) after medium to long operational pauses (14 days to 4 weeks) when commissioning

2.) after every use

The fill level should not exceed 2-4 strokes with respect to the hand lever press.

There is a leakage hole (2) on the underside. If grease or liquid leaks out, it indicates that the seal is damaged. Please contact your assigned sales representative. A defective seal can lead to subsequent damage to the gear unit!

9.1.1.2 Cleaning the screen basket

Carry out a visual inspection to make sure the screen works properly. During proper operation, you should be able to see the press screw moving.

If necessary, remove the screen basket and clean it (see *9.3* Replacing the press screw and screen basket*).*

Depending on the medium used, the nature of the press screw and the screen basket, it may be necessary to clean the screen basket more frequently!

9.1.2 Recommendation: every 3 months

9.1.2.1 Checking the power consumption on the amperemeter

Power consumption is constant during normal operation. Occasional current fluctuations are caused by the consistency of the pumping medium. If a constantly increased power consumption is measured, please contact our sales representative.

9.1.3 Hydraulic system visual inspection

The hydraulic system must be inspected for damages or leaks. Any existing damages or leaks must be rectified.

9.1.4 Readjusting the scraper

The scraper must be adjusted every three months or at the latest after problems caused by long fibres getting stuck to the press screw. To do this, loosen the three lock nuts (1) and adjust the three adjusting screws (2) evenly during operation until the scraper touches the press screw. Turn back each adjusting screw (2) by approx. 1/8 turn and secure it again using the lock nut (1).

9.1.5 Recommendation: every 6 months in continuous operation

9.1.5.1 Checking the shaft seal

The shaft seal is a wearing part and must be replaced at the latest every 4,500 operating hours when the separator is in continuous operation. Please contact us or our responsible sales representative.

9.1.6 Recommendation: every 12 months

9.1.6.1 Checking the gear oil

The oil filling in the gear unit must be checked once annually. If oil is missing or contaminated with water or other media, the separator must be taken out of operation immediately. In this case, the oil must be changed immediately and the shaft seals must be exchanged.

9.1.6.2 Checking the tightening torque of all screw connections

Every 9,000 operating hours or at least once annually, we recommend checking the secure positioning of the screw connections in the scope of maintenance work. The tightening torques for stainless steel screws in Nm for different thread sizes are shown below:

(M8 = 18 Nm, M10 = 33 Nm, M12 = 57 Nm, M16 = 135 Nm, M20 = 150 Nm)

9.1.6.3 Visual inspection and cleaning of the separator

Every 9,000 operating hours or at least once annually, we recommend checking the separator for damage and soiling in the scope of maintenance work. Deposits, blockages and fibrous materials adhering to the opened separator must be removed. The separator can be rinsed with a hose pipe but not with a pressure cleaner. Damaged components must be exchanged immediately. Please contact our sales representative.

9.1.7 Recommendation: Every 6 years

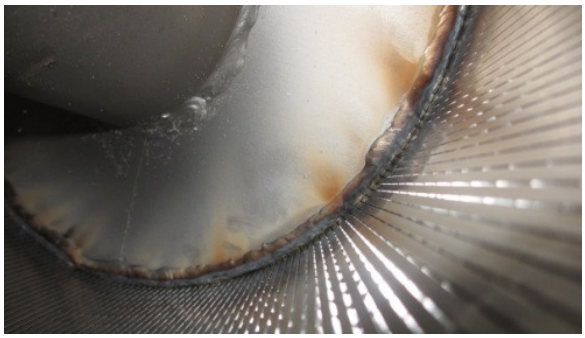
9.1.7.1 Replacing the hydraulic hose

The hydraulic hose must be replaced with a new one after a maximum of 6 years. Replacement is required if damages are noted before this period elapses.

9.2 Control of the clearance width between the screw and the screen

The clearance width between the press screw and the screen basket can be checked by performing a visual inspection from the outlet towards the screen basket. This should be as small as possible. A reduction in performance might occur if this clearance is larger than 1 mm.

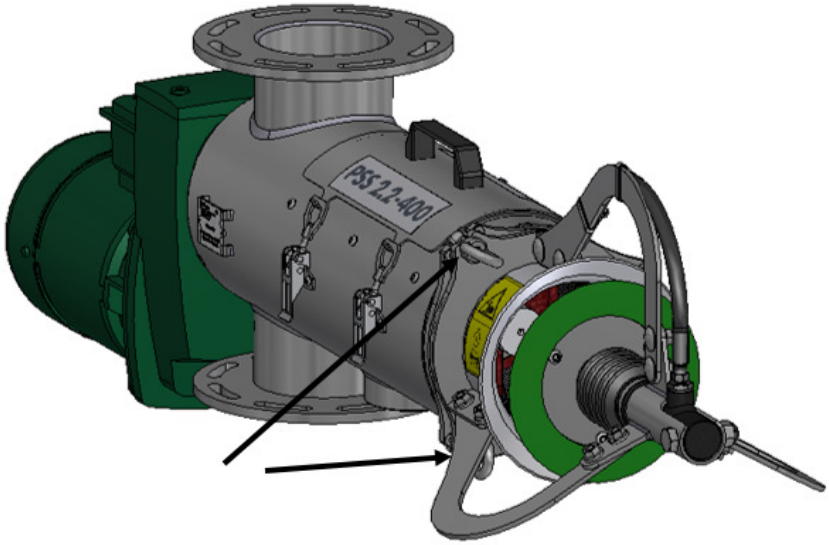
The left image shows a suitable clearance between screen and screw and the right image shows light signs of wear.



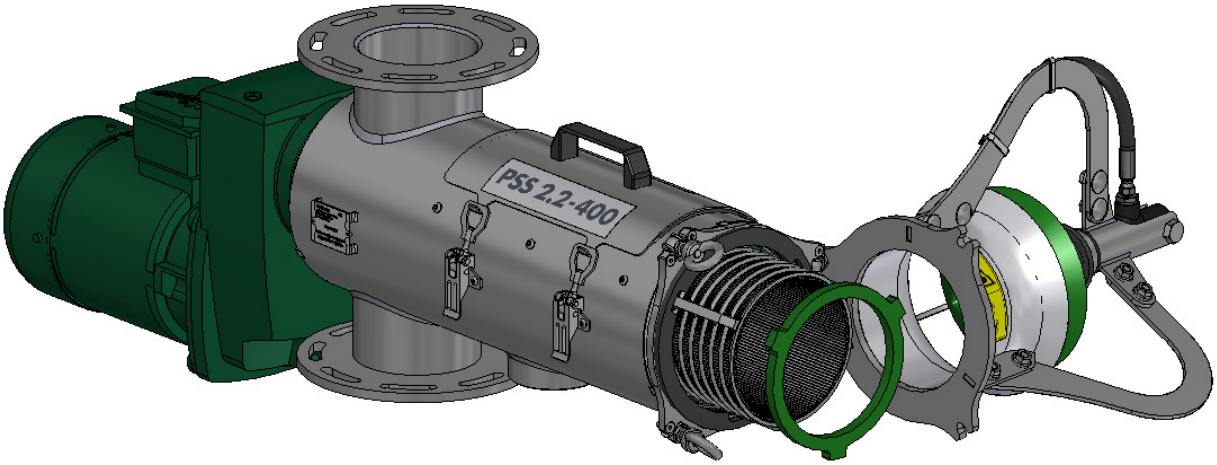
9.3 Replacing the press screw and screen basket

To replace the press screw and/or the screen basket, proceed as follows:
(*** These steps can be skipped when replacing the screen basket)

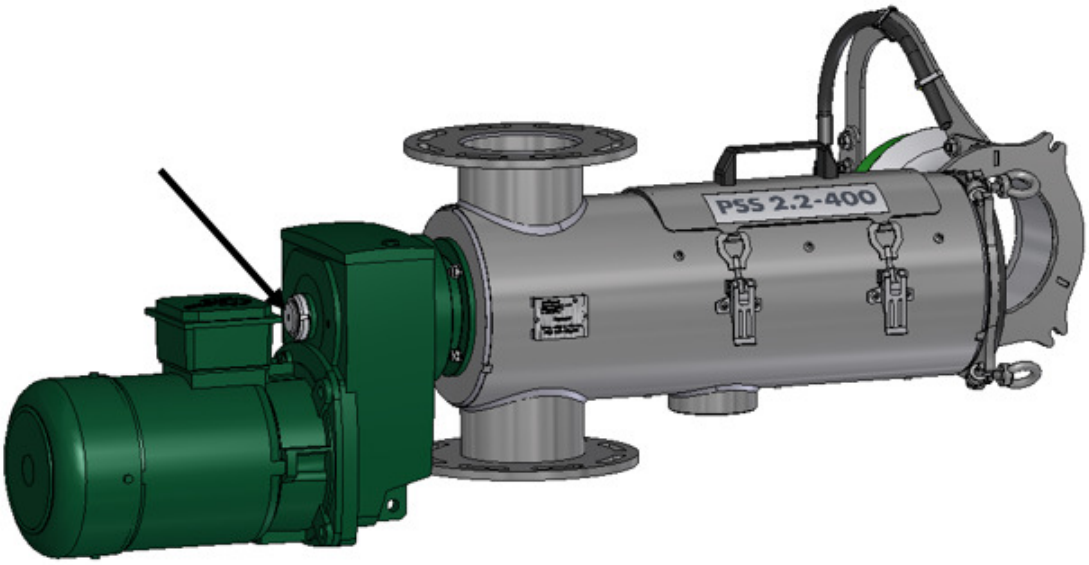
1. Switch off the supply pump and continue separating until all the liquid has been processed.
2. Relieve the pressure from the hydraulic hand pump and allow the separator to run for approx. 30 seconds.
3. De-energise the machine.
4. Open the outlet by loosening the two ring nuts.



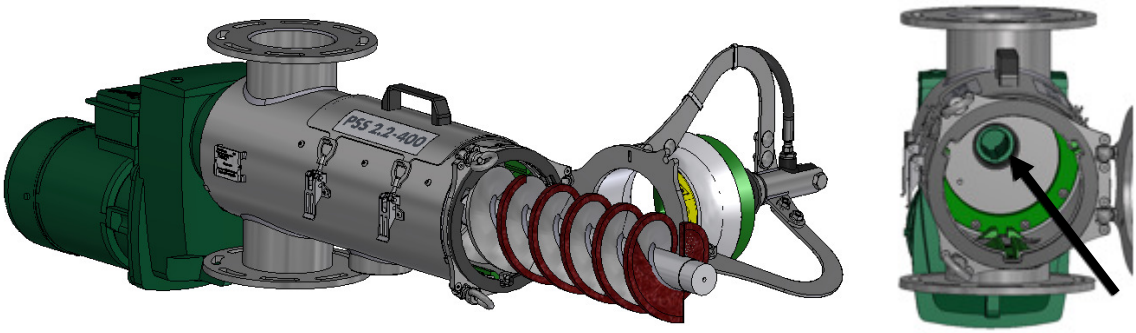
5. Remove the distance ring. You can now pull out the screen. (If reusing, take note of how the screen was installed.)



6. *** Loosen the grooved nut on the gear unit.

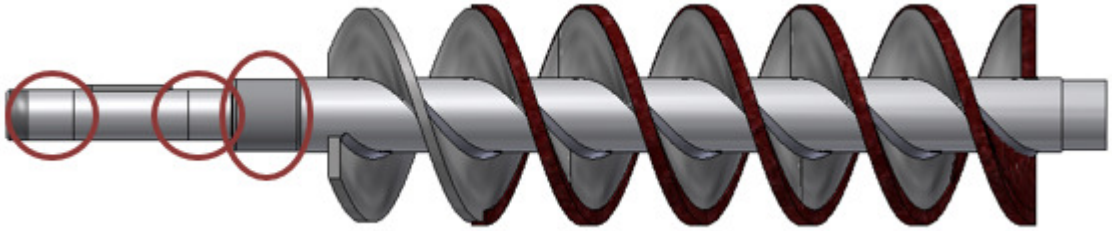


7. *** You can now carefully pull out the press screw. Take care with the shaft seal rings to avoid damage.

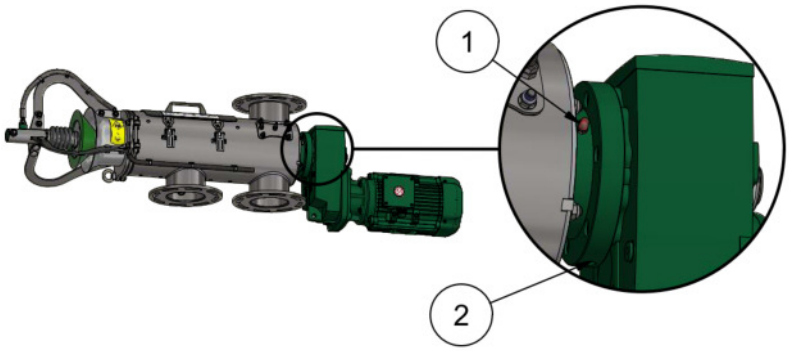


8. Clean the separator from the inside to remove any residues.
9. *** Loosen the three lock nuts (1) on the scraper and turn the adjusting screws (2) slightly back.

10. *** Take the new press screw. Lubricate the bearing surfaces with fitting lubricant. Grease the sealing surface lightly.

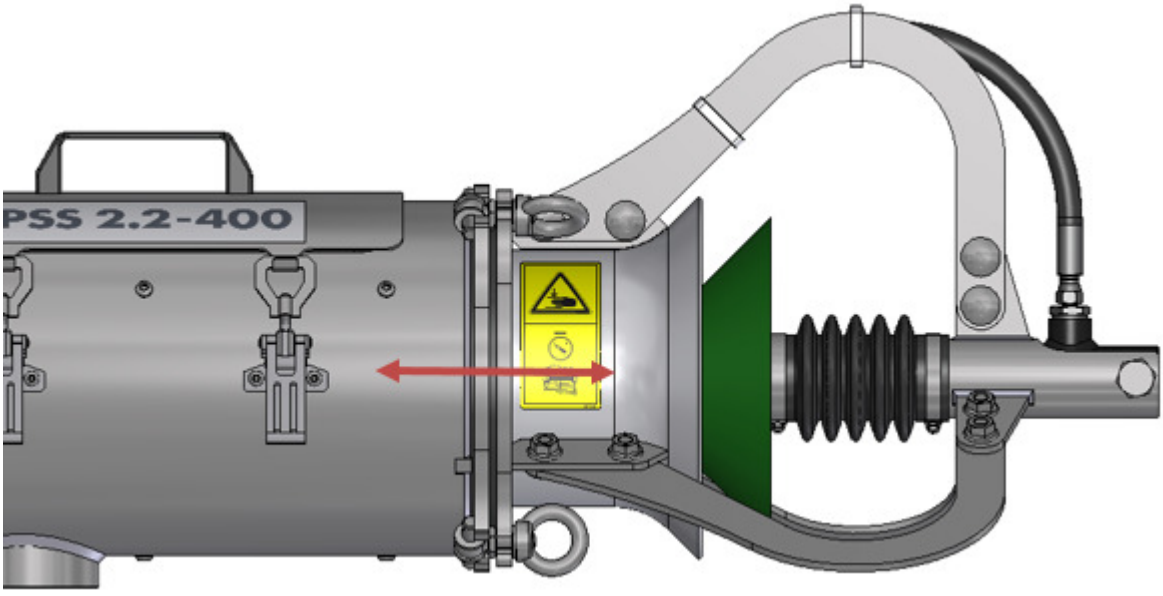


11. *** Slide in the new press screw carefully. Make sure that the shaft seal rings are not damaged in the process. Secure the press screw again by means of the grooved nut and lubricate the seal (1).



12. Slide in the new screen. Pay attention to the installation position of the screen. The marking must match the direction of rotation of the press screw. If the separator has a low throughput, you can turn the screen for better performance. When using the old screen, install it the same way as it was before.

13. Insert the distance ring back on and close the flap. Make sure that the screen doesn't get deformed in the process.



14. Switch the separator back on and adjust the scrapers. To do this, adjust the three adjusting screws (2) evenly during operation until the scraper touches the press screw. Turn back each adjusting screw (2) by approx. 1/8 turn and secure it again by means of the lock nut (1).

The separator can be put into operation again.

9.4 Recommendation at end of the lifespan

At the end of its lifespan, the device can be disposed of normally as scrap metal. The oils should be drained carefully in advance and disposed of as waste oil. The device is composed of various metals, such as steel, aluminium, copper and stainless steel. Dismantling it and sorting the components considerably increases returns.

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 the like 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.

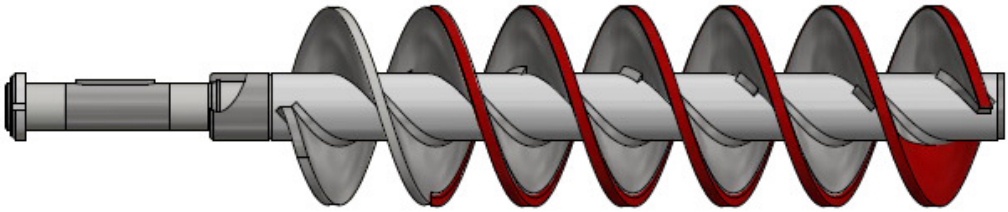
(2) Refer to the "Information Sheet with Notice, Warning, Prohibition and Rescue Signs" of the Federal Association of Agricultural Professional Associations.

11 SPARE PARTS LIST FOR THE PSS 2.2-400-M1508

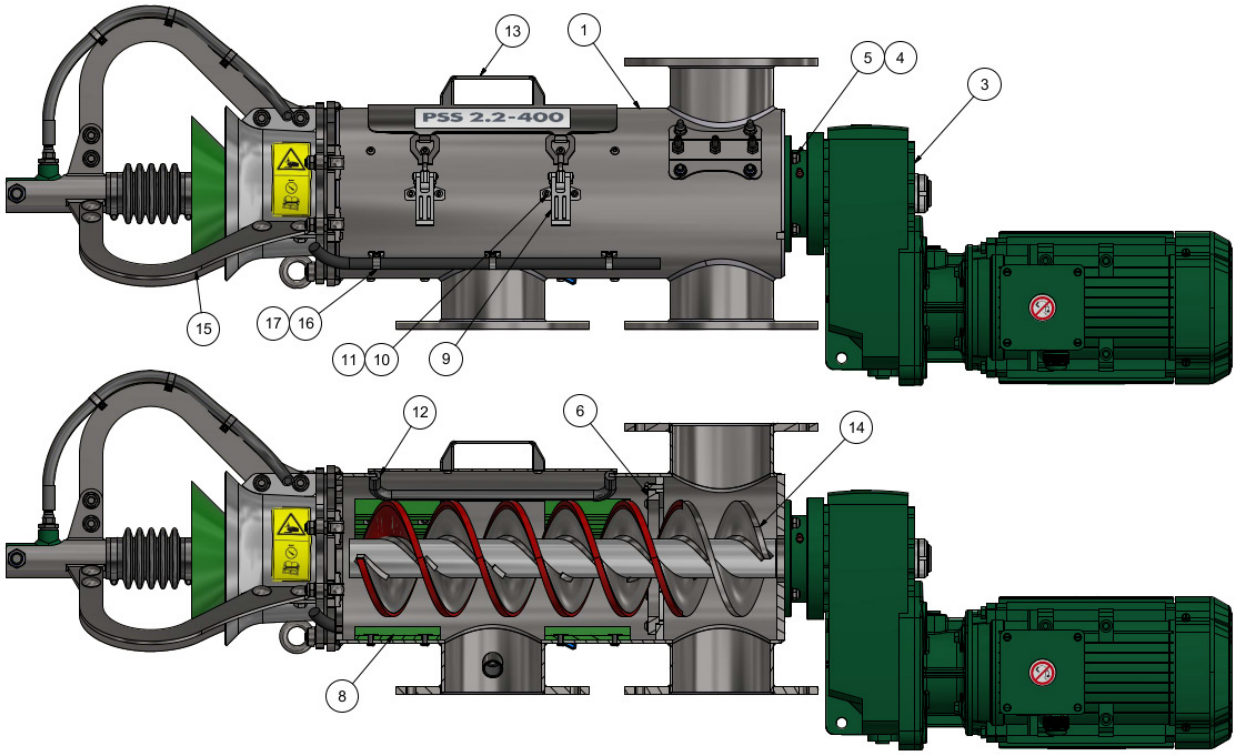
Screen baskets

Clearance size [mm]	Part no.
0.35	5501081
0.50	5501082
0.75	5501083
1.00	5501084

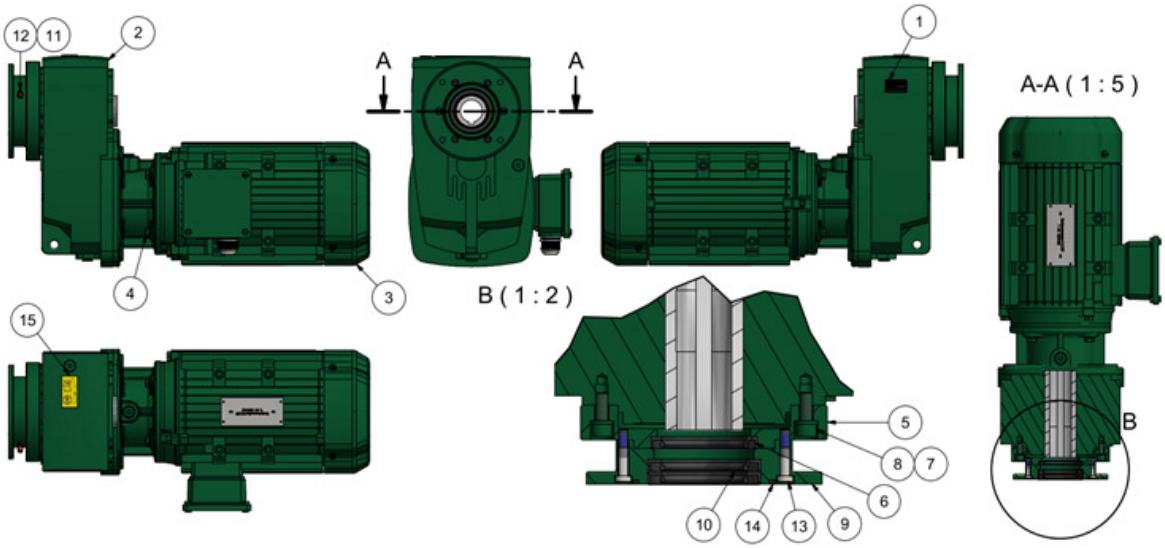
Press screw 6090719



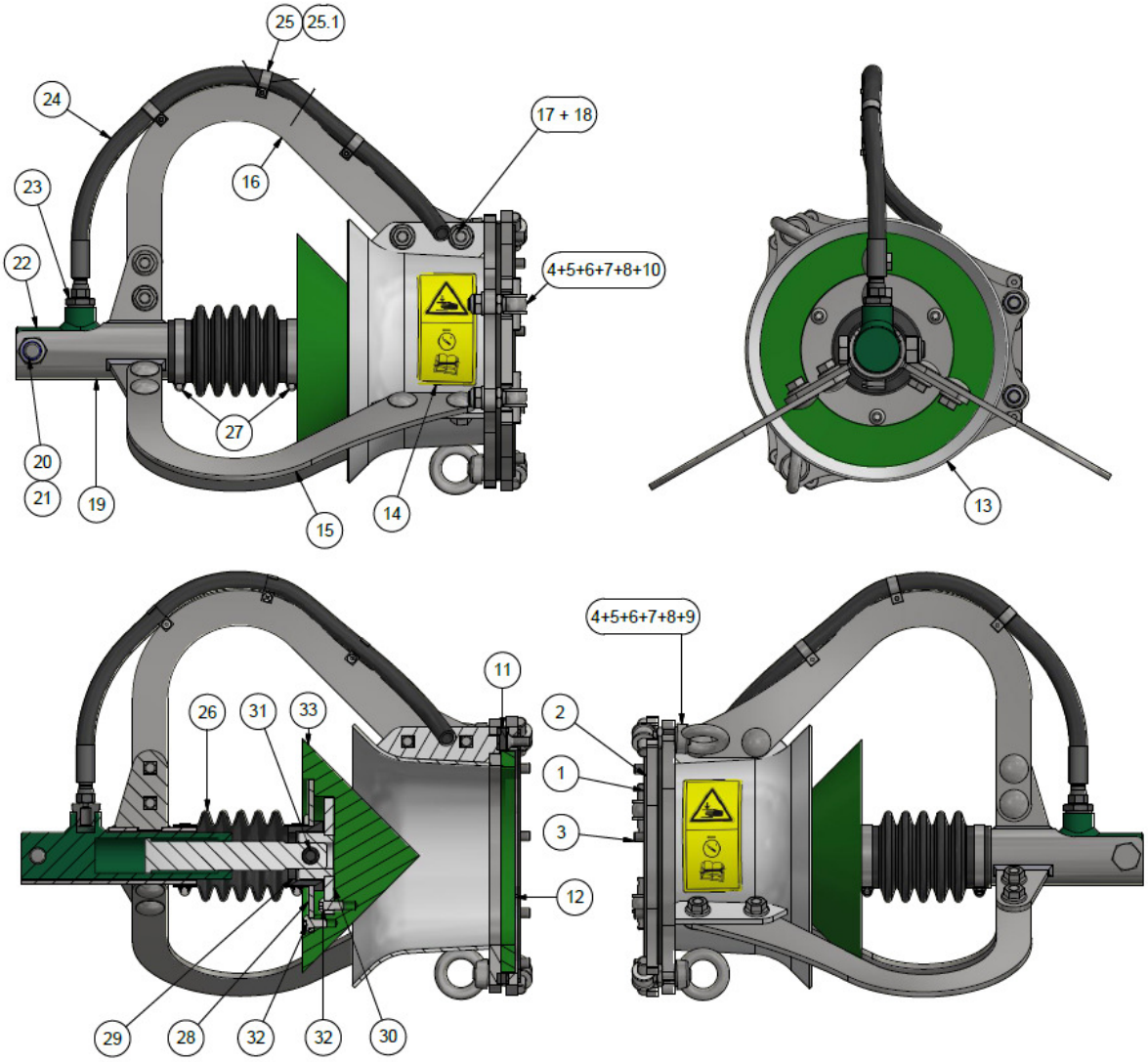
11.1 Separator, Drg. 34-0656-600



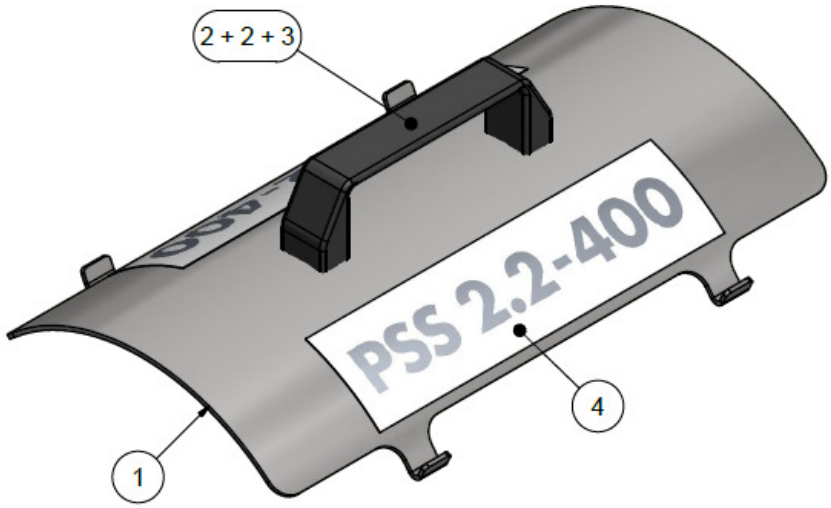
11.2 Drive unit, Drg. 6090534



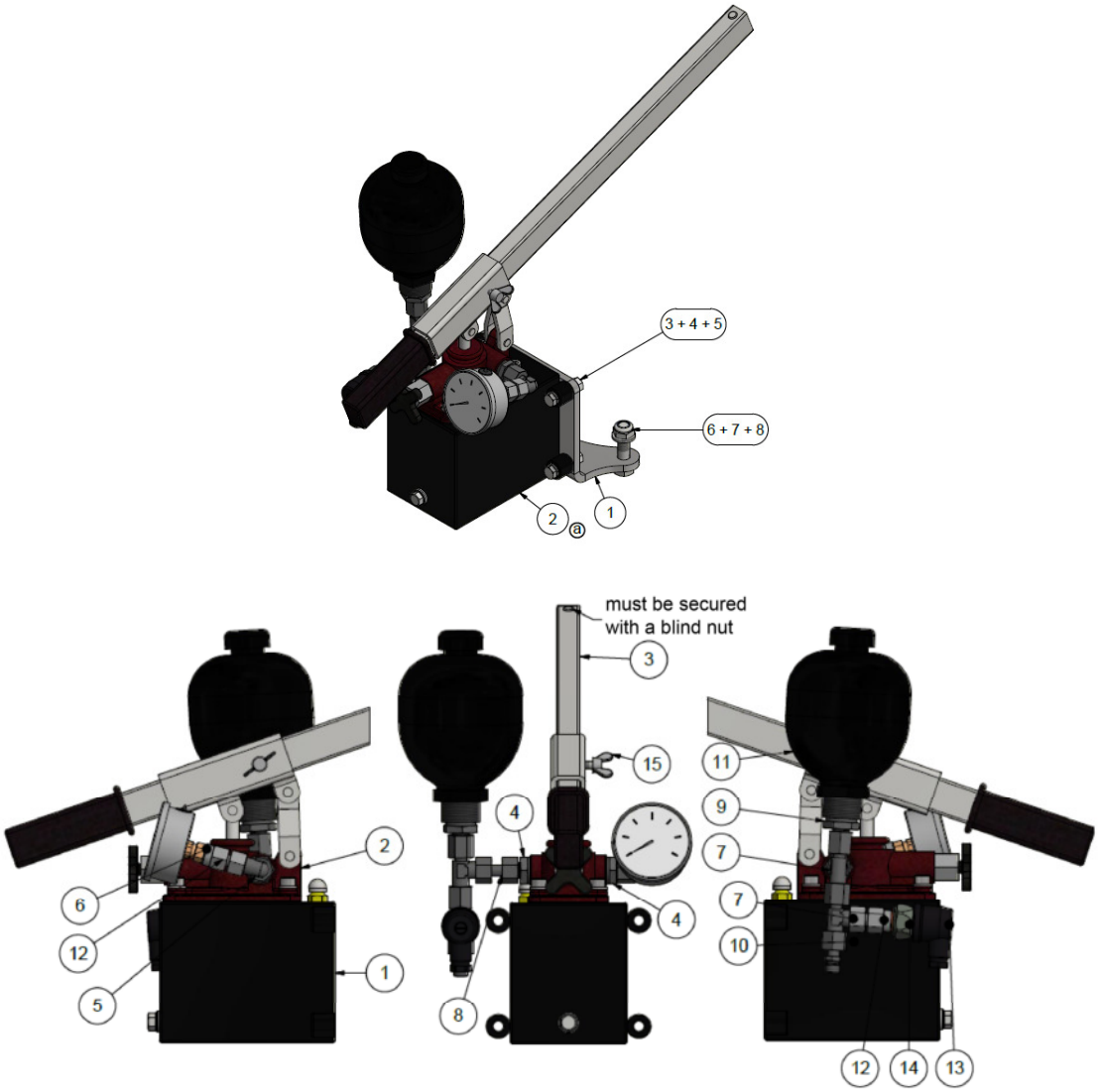
11.3 Outlet, Drg. 34-0656-550



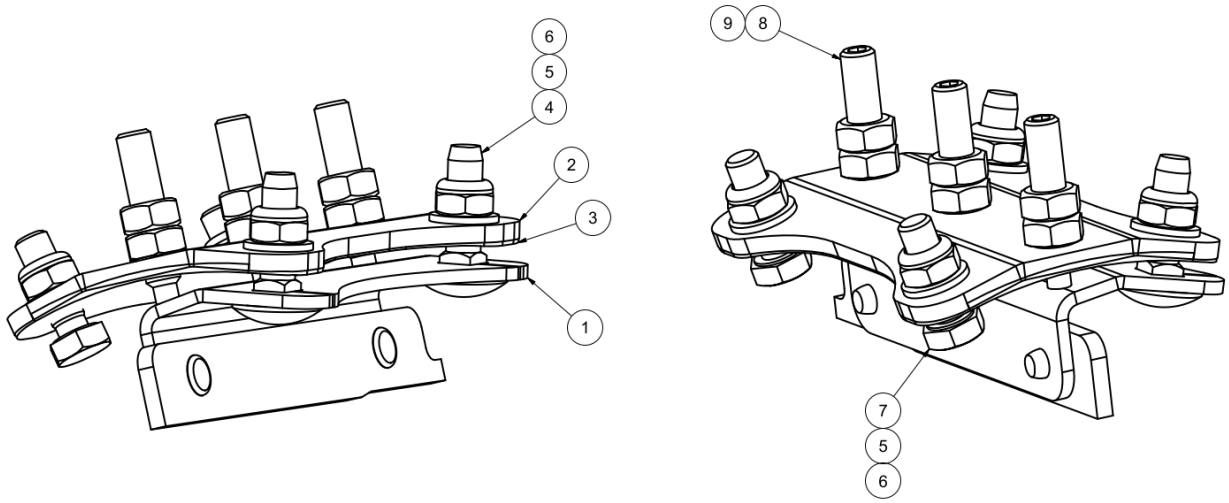
11.4 Cover, Drg. 34-0656-019



11.5 Hydraulic pump, Drg. 34-0656-017 / 6090519



11.6 Scraper, Drg. 34-0925-017



12 MAINTENANCE AND REVISION LIST OF THE PSS 2.2-400-M1508

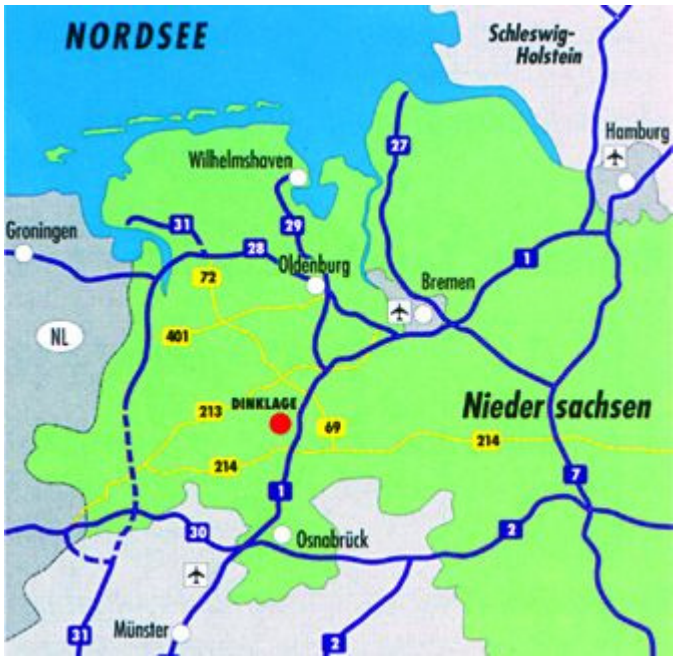
Each person must properly enter all maintenance and revision work in the list and confirm it with his or her own signature and that of their supervisor.

This list must be submitted to the supervisory bodies of the professional association, the TÜV and the manufacturer on request.

Maintenance/revision on the device with the machine no.	Notes	Date	Signature of installer	Signature of supervisor

Maintenance/revision on the device with the machine no.	Notes	Date	Signature of installer	Signature of supervisor

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
- Corrugated stainless steel tanks

Erich Stallkamp ESTA GmbH
In der Bahler Heide 4 – Industriegebiet West – 49413 Dinklage, Germany
Tel. +49 (0) 4443 / 96 66-0 – Fax +49 (0) 4443 / 96 66-60
info@stallkamp.de – http://www.stallkamp.de

Stallkamp – the competent solution for every application