ZEMMLER®
Siebanlagen

ZEMMLER® MULTI SCREEN® MS 3200

Operating Instructions

Table of contents

1 General Information

Notice!

To ensure optimum utilisation of the machine, please read these Operating Instructions carefully before commissioning. This way you are well informed about the working and functioning of the machine.

Please read these instructions and keep them.

Please observe and follow the safety instructions.

Notice!

All technical data and instructions given refer to the standard version of the double drum screening system ZEMMLER® MULTI SCREEN® MS 3200 with version of:

May 2022

1.1 Field of Application

The ZEMMLER® MULTI SCREEN® MS 3200 double drum screening system is a mobile double drum screening system. This system classifies your piece goods into two (optionally three) fractions in one operation with a high volume throughput.

The ZEMMLER® MULTI SCREEN® MS 3200 has been designed to screen a wide variety of materials such as compost, soil, sand, slag, gravel, construction waste, wood chips, recycling material and crushed stone with a grain size of up to 2 mm.

The maximum grain size that can be processed is ≤ 170 mm.

1.2 Details of the System

Designation	ZEMMLER® MULTI SCREEN® MS 3200
Machine number	MS3200 075
Year of Manufacturer	07/2022
Manufacturer / Supplier / Customer Service	ZEMMLER® Siebanlagen GmbH Nobelstraße 11 D-03238 Massen-Niederlausitz +49 3531 7906 0 +49 3531 7906 11 info@zemmler.de www.zemmler.de

1.3 Scope of Delivery

The ZEMMLER® MULTI SCREEN®MS 3200 is supplied with the following accessories as standard:

- Operating and maintenance instructions with EC declaration of conformity (1x)
- Pulling device (pulling eye 40mm)
- Sieve change key MS2 (2x)
- Padlock (4x)
- Chocks (2x)

The following accessories can be supplied as an option:

- Remote control
- Aggregate
- Screen lining (inside/outside)
- Drum without tensioning station
- Slip-on ring (with perforation Ø40, Ø50, Ø60, Ø70, Ø80 or closed)
- Deflector plate
- Hopper attachment
- 3. Fraction belt

2 Documentation

The documentation for the double drum screening unit consists of the following parts:

Operating Instructions

1. The operating instructions (hereinafter also abbreviated to "OI") provide information on the function, installation, commissioning, transport, operation, maintenance, servicing and decommissioning of the system. The operating instructions are not a textbook, but a reference book.
2. The operating instructions for the accessory parts and machines are attached to the manual.
3. The spare parts list consists of assemblies, flow diagrams and the electrical documentation. This contains the circuit diagrams. These documents provide assistance to the operator's specialist personnel when ordering wear and spare parts.

Notice!

When corresponding with ZEMMLER® Siebanlagen® staff, please use the machine details from *Section 1.2 - Details of the* System.

2.1 Operating Instructions

These operating instructions are an essential part of the system and are absolutely necessary for the successful and safe operation of the system.

The operating instructions contain important information on how to operate the double drum screening unit safely, properly and economically. Observing them helps to avoid hazards, reduce repair costs and downtimes and increase the reliability and service life of the system.

The operating instructions must be available to the operator of the system and must be read and applied by every person involved in work with/on the system, e.g.:

The following tasks are the responsibility of the operator: operation, troubleshooting in the work process, disposal of operating and auxiliary materials, maintenance (servicing, care, repair), quality assurance and/or transport.

2.2 Target Group

The operating instructions are a reference book for the information of the operating personnel, the operator and, if necessary, of specialist personnel who work on the double drum screening unit for maintenance, troubleshooting and quality assurance. These operating instructions are intended to make it easier for the system operator to work safely and professionally on the system.

2.3 Use of the Operating Instructions

Notice!

If the operating instructions contain basic or more detailed information on a topic covered, cross-references point to the relevant sections.

Example: "For implementation, see *Section 6.3 - Title*".

Explanation: The description can be found in chapter 6 in Section 6.3.

A prerequisite for working on/with the double drum screening unit is an understanding of the functions of the double drum screening unit.

When operating the double drum screening system as well as during testing and maintenance work, knowledge of the safety aspects to be observed is of particular importance. Therefore, the study of the operating instructions should begin with section *3 -*

3 Safety Instructions

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The other main points for informing the operator about the operation are sections *4 -*

General Description

If the maintenance of the double drum screening system is the responsibility of the operator, section *11 -Maintenance and servicing* gives guidance on how to carry out this work.

These operating instructions are also a tool for the operator of the double drum screening system to take organisational measures in his operation which are a prerequisite for the safe operation of the plant and form the basis of efficient and high-quality production.

The most important information for the operator can be found in Sections *3 -*

4 Safety Instructions

and *6 -Commissioning*. The requirements described there are to be taken into account in the design of the operating environment and the definition of work processes.

4.1.1 Symbols and Warnings in the Operating Instructions

It is essential that the accident prevention regulations and the general safety regulations are observed when operating the double drum screening unit. Important instructions, such as safety instructions, are marked by corresponding symbols.

The symbols and structural elements used in the operating instructions have the following appearance and meaning:

Caution - Danger to Persons!

This symbol indicates general work safety instructions which, if not followed, may result in danger to life and limb.

Carefully observe the instructions on work safety and act with particular caution in these cases.

Warning - Danger due to Electrical Voltage!

This symbol indicates safety instructions which, if not followed, may result in danger to life and limb of persons due to electrical voltage.

Carefully observe the instructions on work safety and act with particular caution in these cases.

Warning - Danger due to Injuries to the Hand!

This symbol indicates safety instructions which, if not followed, may result in hand injuries.

Carefully observe the instructions on work safety and act with particular caution in these cases.

Warning - Danger due to Bodies or Body Parts being pulled in!

This symbol indicates safety instructions which, if not followed, may result in danger to life and limb due to the risk of the drum screen or idlers being pulled in.

Carefully observe the instructions on work safety and act with particular caution in these cases.

Warning - Danger from crushing of bodies or body parts!

This symbol indicates safety instructions which, if not followed, may result in danger to life and limb of persons due to crushing hazard on the fraction belts and drawbar.

Carefully observe the instructions on work safety and act with particular caution in these cases.

Caution - Damage to the Double Drum Screening System!

This symbol identifies all safety instructions that refer to regulations, directives or work procedures that must be observed. Non-observance may result in damage to or destruction of the double drum screening system and/or other system components as well as faulty production.

The note symbol highlights application tips and other particularly useful information in these operating instructions.

Instruction Duty!

This symbol indicates all notes that refer to specific instructions that must be followed. Non-observance may result in damage to or destruction of the double drum screening system and/or other system components as well as faulty production.

4.2 Liability and Warranty

The system documentation including all its parts is protected by copyright.
Any use outside the narrow limits of copyright law without the consent of ZEMMLER® Siebanlagen is inadmissible and liable to prosecution. This applies in particular to reproductions and adaptations.

The transfer of these operating instructions to third parties is prohibited and will result in liability for damages.

All information and instructions for the operation and maintenance of the system are given to the best of our knowledge, taking into account our experience and knowledge to date. We reserve the right to make technical changes in the course of further development of the system described in this operating manual. Only spare parts approved by us and specified in the spare parts book may be used.

We shall be liable for any errors or omissions, to the exclusion of any further claims, within the scope of the warranty obligations set out in the main contract. Claims for damages shall likewise exist to the extent of the compensation obligations agreed in the main contract.

Translations are carried out to the best of our knowledge. We cannot accept liability for translation errors.

The printed German version of the documentation supplied shall remain authoritative.

The textual and graphical representations do not necessarily correspond to the scope of delivery or a possible spare parts order. The drawings, graphics and photograph compositions do not correspond to the scale 1:1.

4.2.1 Warranty

Warranty:

In addition to the seller's statutory liability for material defects, we as manufacturer guarantee the perfect durability of properly used products of ZEMMLER® Siebanlagen under the following conditions.

The warranty covers the function of ZEMMLER® Siebanlagen products and includes all defects that can be proven to be due to manufacturing or material defects.

We accept no liability for consequential damage!

We accept no liability for damage to property or personal injury caused by improper handling or ignoring the safety instructions. In such cases, any warranty claim shall become void.

Warranty conditions:

Our warranty shall consist exclusively of the repair of the product free of charge for the first end user and/or a replacement delivery free of charge within the warranty period, at our discretion.

Costs, expenses, postage and the like incurred by the Policyholder shall not be reimbursed. The warranty claim exists only against presentation of the defective component. The replacement of a defective component is carried out exclusively by ZEMMLER® Siebanlagen or an authorised service company commissioned by us.

The warranty claim expires as soon as repairs are carried out by unauthorised service companies and/or non-original spare parts are used.

Warranty period:

The warranty period is 12 months or 1000 operating hours, whichever comes first, and begins on the day of delivery to the first end-user. In the event of complaints or warranty claims, please contact the seller or the manufacturer ZEMMLER® Siebanlagen directly.

Disclaimer of warranty:

All replaceable individual parts, e.g. screws, connecting pins, etc. are excluded from this warranty. Furthermore, no liability is accepted for damage caused by:

- Unsuitable and improper use
- Wear parts (belts, edge rubbers, wipers, screen linings, brush elements)
- Faulty and negligent handling

Non-observance of maintenance and operating instructions, modifications, inspections and self-repairs as well as chemical and physical effects on the material surface resulting from improper use, e.g. damage caused by sharp objects.

5 Safety Instructions

5.1 General Information on Safety

The chapter *Safety instructions* gives an overview of the safety aspects to be observed for the operation of the double drum screening unit.

The general safety instructions refer to the safety-related condition of the double drum screening unit, the requirements for operation and maintenance as well as the handling of operating and auxiliary materials.

In addition to these general instructions, the descriptions of procedures or instructions for action in the individual chapters of the operating instructions are, if necessary, provided with specific safety instructions.

Only the observance of all safety instructions (general and specific) enables the optimum protection of the personnel as well as the environment against hazards and the safe and trouble-free operation of the double drum screening system.

ZEMMLER® Siebanlagen recommends the operator to draw up a safety concept for the work processes in his company on the basis of the instructions given or to adapt an existing concept if necessary. Necessary orders or instructions for the implementation of this concept should be laid down for the individual work areas in the form of written operating instructions.

The double drum screening system is built according to the currently valid rules of technology and is safe to operate. We design and produce our machines in accordance with the Machinery Directive 2006/42/EC.

However, hazards may arise from the equipment if it is used by untrained personnel, improperly or for purposes other than those for which it is intended.

Therefore, every person who is assigned to operate or maintain the machine must have read and understood the complete operating instructions before carrying out the corresponding work. This also applies if the person concerned has already worked with such a machine or a similar machine or has been trained by ZEMMLER® Siebanlagen.

The operator is recommended to have the personnel confirm in writing that they have read and understood the contents of the operating instructions. Knowledge of the contents of the operating instructions is one of the prerequisites for protecting people from danger and avoiding errors.

The operating instructions must be accessible to the operating and maintenance personnel at all times!

The operator or the personnel authorised by him, who have to handle the system according to their task, are ultimately responsible for accident-free operation.

The information on occupational safety refers to the currently valid regulations of the European Community. In other countries, the relevant laws or national regulations must be observed and complied with. For the European Community as well as for other countries, the current status of all regulations must be determined by the operator.

In addition to the safety instructions in these operating instructions, the generally applicable safety and accident prevention regulations must be observed and complied with.

All information in the operating instructions must be followed without restriction!

5.2 Occupational Safety

By following the instructions for work safety, a hazard to persons, the environment and/or the double drum screening system can be prevented.

Ignoring these indications may, under certain circumstances, result in the following:

- Danger to persons due to mechanical, electrical or chemical effects;
- Hazard to the environment;
- Failure of the double drum screening system and/or other system components.

Ignoring the safety regulations can lead to the loss of any claims for compensation!

5.3 Intended Use

The operational safety of the double drum screening unit is only guaranteed if it is used as intended in accordance with the information in the operating instructions.

The double drum screening system is a system specifically built for classifying (screening) bulk materials into two (optionally three) fractions. Maximum and minimum grain sizes must be observed, as well as the maximum moisture content of the bulk material.

Any other use or use going beyond this is considered improper use! The operating company assumes sole liability for resultant damage and loss. This also applies to unauthorised modifications to the machine.

Intended use also includes compliance with the commissioning, operating and maintenance conditions prescribed by ZEMMLER® Siebanlagen as well as the use of bulk materials approved by ZEMMLER® Siebanlagen and the operating and auxiliary materials mentioned.

Furthermore, only original spare parts may be used. Incorrect or faulty spare parts can cause damage to the unit.

Intended use includes compliance with the operating, maintenance and cleaning instructions prescribed by the manufacturer. In case of unauthorised use and improper application, exclusion of liability applies.

Notice!

In order to guarantee you optimum utilisation of the machine, our specialists are available to answer any questions you may have about the appropriate bulk material and the corresponding screens.

5.4 Warning signs on the double drum screening system

Instructions and symbols directly attached to the system or ancillary equipment, such as warning signs, direction of rotation arrows, actuation signs, etc., must be observed without fail. They must not be removed and must be kept in a fully legible condition.

The symbols used on the warning signs have the following appearance and meaning:

Warning - Danger due to Electrical Voltage!

Warning - Danger due to Injuries to the Hand!

Warning - Danger due to Bodies or Body Parts being pulled in!

Warning - Danger from crushing of bodies or body parts!

Wear helmet and hearing protection

Wear glove

Secure with lock

5.5 General safety instructions on the technical condition of the system

The design and construction of the system complies with the currently valid rules of technology. In order to avoid hazards and to ensure optimum performance, no modifications or conversions may be made to the system that have not been expressly approved by ZEMMLER® Siebanlagen. This also applies to programme changes to programmable control systems.

Unauthorised conversions or modifications, especially those that affect the safety of the personnel, the environment or the system, are generally not permitted.

The setting values or value ranges specified in the operating instructions must not be exceeded.

Spare and wear parts to be used must comply with the technical requirements specified by ZEMMLER® Siebanlagen. This is guaranteed for original spare parts.

The operator is obliged to operate the system only in perfect, operationally safe condition. In particular, all safety devices and interlocks must be easily accessible and regularly checked for proper functioning.

5.6 General Safety Instructions for the Operator

The operating instructions are an integral part of the system. The operator shall ensure that the operating personnel take note of these guidelines.

The operating instructions must be supplemented by the operator with operating instructions based on existing national regulations on accident prevention and environmental protection, including information on supervisory and reporting obligations to take account of special operational features, e.g. with regard to work organisation, work processes and personnel deployed.

In addition to the binding regulations for accident prevention and occupational health and safety that apply in the country of use and at the place of use, the recognised technical rules for safe and professional work must also be observed.

The operator must oblige the operating personnel to wear personal protective equipment, insofar as the local regulations provide for this.

First aid equipment (first aid kit etc.) must be kept within easy reach! The location and operation of fire extinguishing equipment shall be made known.
Fire detection and fire fighting facilities shall be provided

Only deploy trained or instructed personnel. Responsibilities of the personnel for operating, setting up, maintaining and repairing must be clearly defined!

A machine operator is to be selected and given responsibility over the system and personnel. Personnel to be trained, instructed or undergoing general training may only work on the system under the constant supervision of an experienced specialist!

5.7 General Safety Instructions for the Operating Personnel

The system may only be operated and maintained by authorised, trained and instructed personnel. These personnel must have received special instruction on hazards that may occur.

An instructed person is a person who has been instructed about the tasks assigned to him and the possible hazards in the event of improper behaviour and, if necessary, has been trained and instructed about the necessary protective devices and protective measures.

Qualified personnel are those who, on the basis of their technical training, knowledge and experience as well as knowledge of the relevant regulations, are able to assess the work assigned to them and recognise possible hazards.

If staff do not have the necessary knowledge, they must be trained accordingly. This can be carried out by ZEMMLER® Siebanlagen on behalf of the operator.

The responsibilities for operation and maintenance must be clearly defined and adhered to so that no unclear competences arise from the point of view of safety.

The system may only be operated and maintained by persons who can be expected to carry out their work reliably. In doing so, any working method that impairs the safety of persons, the environment or the system must be refrained from. Persons who are under the influence of drugs, alcohol or medication that affect their ability to react must not carry out any work on the system.

When selecting staff, the youth employment protection regulations of the respective country and, if applicable, occupation-specific regulations based on them must be observed with regard to the minimum age.

The operator must help to ensure that no unauthorised persons work on the system.

Unauthorised persons, such as visitors etc., must not come into contact with the system. You must keep an appropriate safe distance.

To avoid personal injury, the work clothing of the operating and maintenance personnel must comply with the accident prevention regulations and recommendations of the employers' liability insurance associations (no wide sleeves, low tear resistance, etc.).

Personal protective equipment (eye protection, ear protection, protective clothing, etc.) must be worn according to the work to be carried out.

All safety devices (locks, interlocks, etc.) attached to the system must always be fitted and checked for proper function. If safety devices are not present, the system must not be operated or must be put out of operation until the defects have been properly remedied. The system operator is responsible for this.

5.8 Actions to take in Hazardous Situations and when Accidents occur

In the event of danger or accidents, the system must be stopped by immediately actuating an emergency stop switch (see **Fig. 3-1).**

The emergency stop function causes the system to stop immediately, regardless of the current position of the machine parts.

Only operate safety devices with emergency stop function in corresponding emergency situations. They must not be used for normal stopping of the system.

Always be prepared for accidents and fires

Keep first aid equipment (first aid kit, eye wash bottle etc.) and fire extinguishers within easy reach.

Staff must be familiar with the handling and location of safety, accident reporting, first aid and rescue equipment. This ensures the best possible assistance in the event of accidents and the prevention of hazards.

5.9 Safety Instructions for Maintenance Work

Only carry out maintenance work when the system is at a standstill.

For all maintenance work, observe the switch-off procedures and any necessary safety measures described in the operating instructions.

For all service interruptions, ensure that all necessary protective devices are functioning.

The maintenance cycle and periodic inspections of the engine and the technical equipment of the machine must be planned and carried out by the user or commissioned.

In the event of damage to the system, stop operation immediately, run the system empty, switch it off and repair or replace the relevant parts.

After all assembly or maintenance work, check that all safety devices are in place and functioning properly.

Safety devices must not be bypassed or rendered inoperative.

Only qualified personnel may be used to carry out certain maintenance work. This applies in particular to work on hydraulic and electrical equipment.

5.10 Location of the safety devices

The ZEMMLER® MULTI SCREEN® MS 3200 is equipped with five EMERGENCY STOP switches and five door safety sensors.

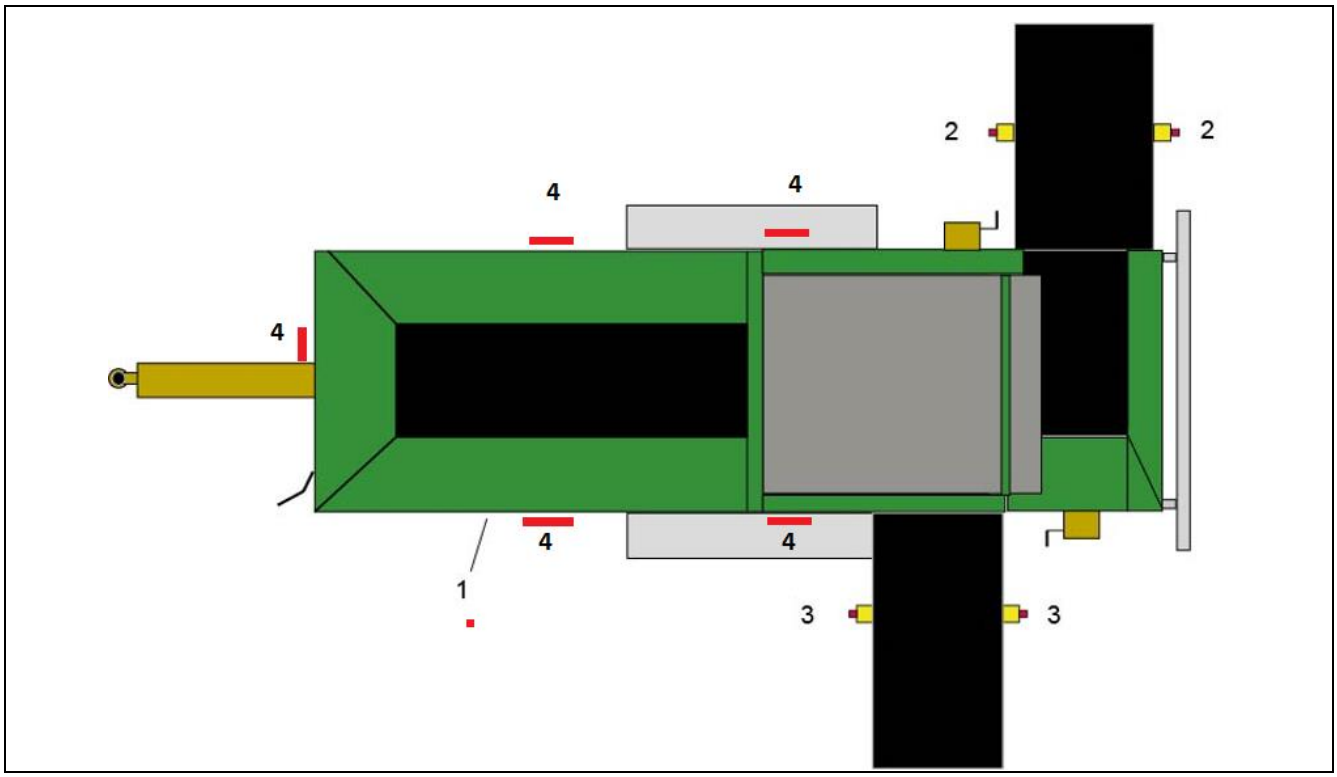

Fig. 3-1: Location of the safety devices

(1) Emergency stop switch on the control unit

(2) Emergency stop switch on 2. fraction belt (on the right and left of the supporting structure)

(3) Emergency stop switch on 1. fraction belt (on the right and left of the supporting structure)

(4) Door safety sensor

5.11 Safety Instructions - Door Safety Sensors

The safety sensors monitor the closed doors while the system is in operation. If a door is opened, the machine stops and the motors stops too.

In screen change mode, the drum door (rear right in the direction of travel) can be opened, all other doors must remain closed.

All firmly bolted panels may only be dismantled to carry out maintenance or servicing work. All claddings must be fitted for operation.

5.12 Safety instructions for workplaces on the double drum screening system

Only items that are required for the respective operating phase may be located at the workplaces.

The machine operator must always be in the immediate vicinity of the equipment and monitor its operation. The system must not run without supervision.

After completing the work, always run the system empty and switch it off.

Secure against unintentional restart.

Fig. 3-2 shows the arrangement of the working, operating and loading positions occupied by the operating personnel.

Drawing of the system from above with marking of the operating position

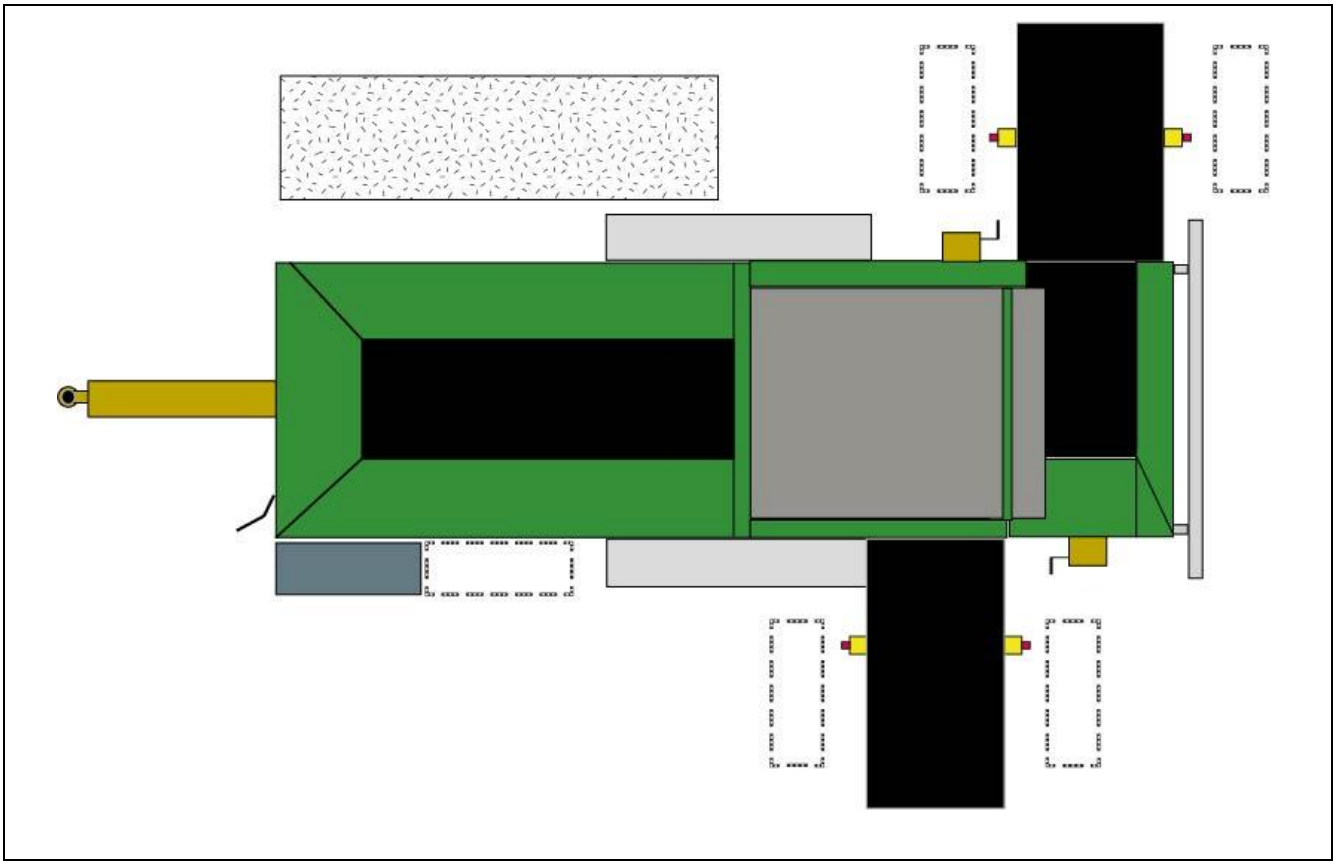

Fig. 3-2: Arrangement of the workplace

Workstation for operating the system.

Workstation for setting up, performing visual inspections and monitoring the control instruments during operation, for cleaning, maintenance and servicing work and for troubleshooting.

Feeding area of the system

5.13 Safety Instructions on Emissions

5.13.1 Generally

Caution!

The operation of the plant may cause emissions. Under certain operating conditions, these immissions can endanger the health of the personnel.

The operator must ensure that the permissible immission values are not exceeded.

5.13.2 Noise Emissions

Caution!

Noise emissions are associated with the operation of the plant. These emissions are above the prescribed limits.

These emissions can endanger the health of the staff. The operator must ensure that all employees wear appropriate hearing protection.

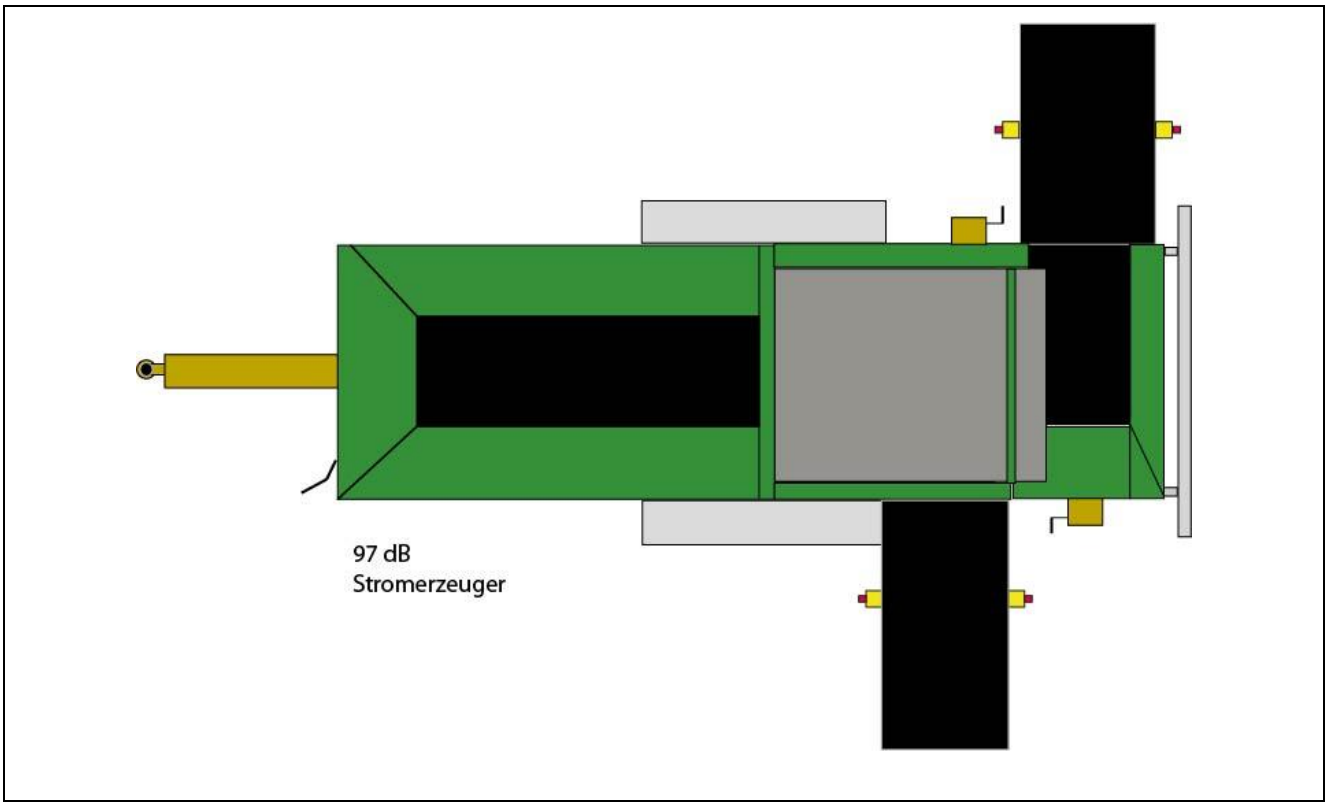

Fig. 3-3: Emission Values at the System

Note

Under certain operating conditions (e.g. screening of building rubble, ...) the above values may be exceeded.

6 General Description

6.1 General Description of the Mobile Double Drum Screening system

The ZEMMLER® MULTI SCREEN® MS 3200 double drum screening plant is a mobile screening system. This system classifies your piece goods into two (optionally three) fractions in one operation with a high volume throughput.

The screening system was designed to screen a wide variety of materials, such as building rubble, compost, soil, stones and sand up to a grain size of 2 mm.

The maximum particle size that can be processed without a bar screen is ≤ 170 mm.

6.2 Brief Description of the Process

The bulk material is poured into the feed hopper. A belt conveyor feeds the screenings into the double drum. Here, by means of rotation of the double drum and the corresponding screen sizes, the classification takes place while the material stream flows to the outlet. Due to the rotation of the drum, this unit achieves a higher retention time of the screenings in the unit. This allows larger volume flows to be classified with a more compact design. The two fractions produced in one operation are piled up on two different sides of the plant by belt conveyors to form a dump cone.

Optionally, the classification can be increased to three by means of an additional drum extension (slip-on ring). Here, the third fraction is diverted to the rear.

The double drum screening unit can optionally be operated via a remote control, which is operated by the system operator. This enables you as the operator to achieve a high level of efficiency with a minimum of personnel.

6.3 Module Overview

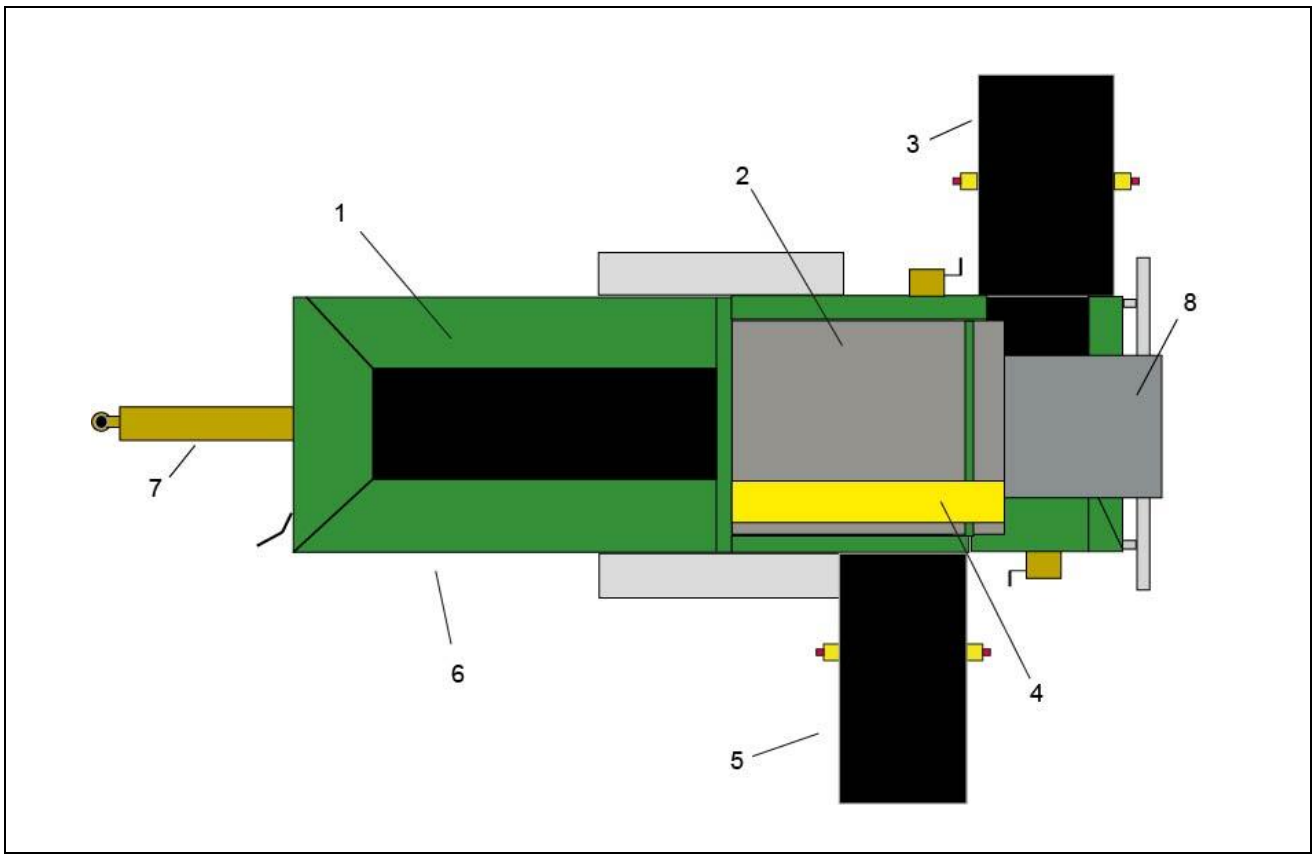

Fig. 4-1: Module overview (top view)

1	Feed hopper (optional hopper attachment)
2	Double drum
3	2. Fraction belt
4	Cleaning brush
5	1. Fraction belt
6	Control unit (and optional power unit)
7	Chassis
8	optional extension for 3. fraction (slip-on ring)

6.4 Assemblies

6.4.1 Feed hopper

The feed hopper consists of a hopper and a conveyor that moves the screenings into the screening drum. Optionally, the hopper can be raised with push-on walls.

Volume:	approx. 2.3 m³ (optionally 3.0 m³)
FCB Bandwidth:	800 mm

6.4.2 Double drum

The sorting drum consists of two drums that are firmly connected to each other, whereby the fixed screen size can be changed by a wide variety of wire screens.

Outer diameter:	1,300 mm
Inner diameter:	1,030 mm
Screen surface outside:	10.0m²
Screen surface inside:	8.1m²

Optionally, the double screening drum can be upgraded for further classification by means of a slip-on ring.

6.4.3 Drum take-off belt

The drum discharge belt conveys the smallest classification under the double drum to the fraction belt of the 1st drum. Fraction.

Belt width:	800 mm
Belt length:	2,000 mm
Belt type:	Smooth belt EP250

6.4.4 Fraction belt of the 1. Fraction

The fraction belt for the smallest classification throws the screenings onto the stockpile in the direction of travel on the left.

Belt width:	600 mm
Belt length:	3,300 mm
Belt type:	Steep material, Y - profile, EP400/3

6.4.5 Fraction belt of the 2. fraction

The fraction belt for the 2. classification throws the screening material onto the stockpile to the right in the direction of travel.

Belt width:	600 mm
Belt length:	4,500 mm
Belt type:	Steep conveyor belt, Y - profile, EP 250/2

6.4.6 fraction belt of the 3. fraction (option)

The fraction belt for the 3. classification throws the screening material to the back of the stockpile.

Belt width:	800 mm
Belt length:	5000 mm
Belt type:	Steep conveyor belt, Y - profile, EP 250/2

6.4.7 Power generator

The system can be equipped with a power generator (optional).

All belt conveyors and the double drum are electrically driven.

6.5 Control unit

Notice!

The ZEMMLER® MULTI SCREEN® MS 3200 has been equipped with a central operating unit.

If there are any questions regarding operation, please contact ZEMMLER® Siebanlagen.

Read the instructions for the control unit carefully to avoid mistakes during use.

If, contrary to expectations, there is any incomprehensibility, please contact ZEMMLER® Siebanlagen.

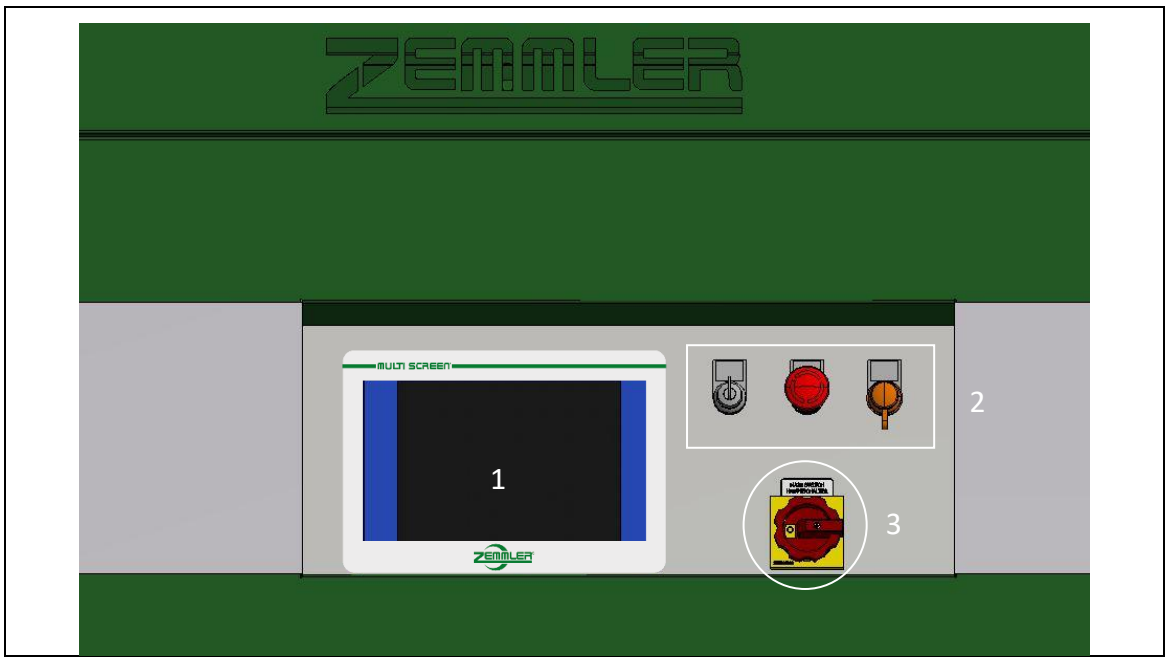

Fig. 4-2: Control unit

1 Display

2 Actuators

3 Main switch

6.5.1 Actuators

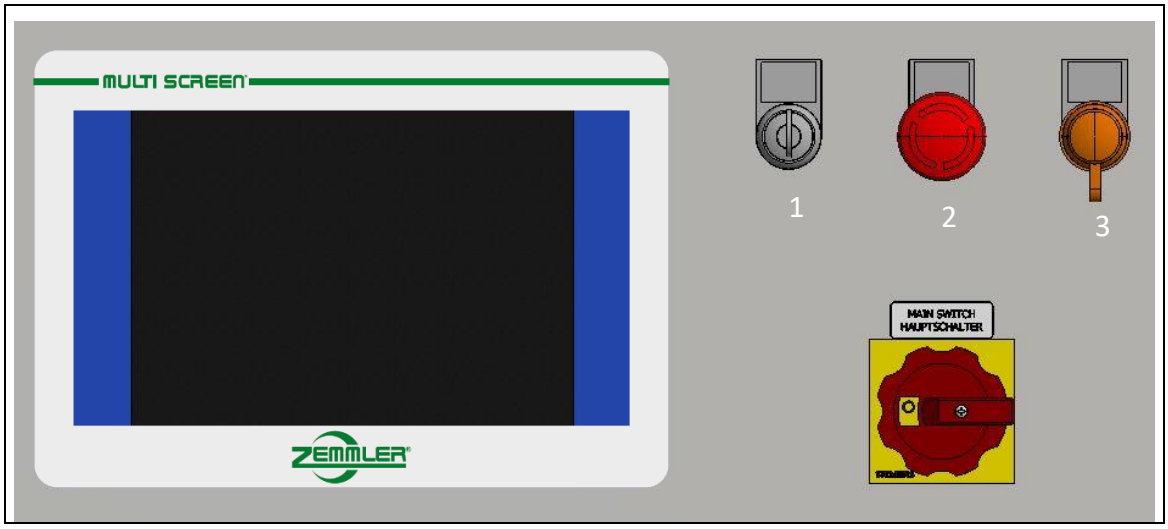

Fig. 4-3: Actuators

1 Screen change
2 Emergency stop
3 USB socket

Screen change	Key switch for activating the screen change function
Emergency-off	Dangerous machine processes are brought to a standstill as quickly as possible
USB socket	USB socket for data transfer (option)

Caution - damage to the USB socket!

The USB socket must be protected from moisture and dirt.

To do this, close it tightly with the cap. This serves to maintain the function of the USB socket.

6.5.2 Display

Notice!

For visualisation and functional description, please refer to the separate instructions in this manual!

6.6 Remote control (option)

Notice!

Retrofitting a remote control is possible at any time!

To activate the remote control, press key 4 on the remote control.

The emergency stop button is located at the top right.

Carry out the following steps within 5 seconds:

1. Pull the EMERGENCY OFF switch.
2. Briefly press button 4, the LED flashes red.
3. Press button 4 again until the status LED flashes green.
   Wait until the LED flashes green slowly. The remote control is connected to the machine.

Fig. 4-4: Remote control

To switch off the remote control, press the EMERGENCY OFF switch.

Note

When the status LED flashes red, an acoustic signal sounds and the transmitter vibrates, you need to change the battery. Otherwise, the transmitter switches off in a few minutes. Only recharge the battery with the corresponding charger.

7 Transport

Attention!

The transport of the double drum screening system may only be towed with approved tractors.

Please observe the applicable regulations (StVZO).

7.1 Preparations for transporting the machine

When preparing to transport the machine, the following points must be observed:

All material must be removed from the feed hopper, drum and conveyor belts.

Thoroughly clean the belts and drum so that no falling debris can affect the following traffic.

Check the machine for any damage that may affect the safety of transport.

Damage must be reported to the responsible personnel so that it can be repaired before the next commissioning.

When ordering transport, include the type of towing device present in order to counteract errors when ordering the tractor.

Before transporting the machine on public roads, check that it complies with the German Road Traffic Licensing Regulations (StVZO).

Connect all supply lines properly to the tractor and also check them for function.

Caution!

Check that the transport locks are in place on the fractions.

The system must be checked for proper condition and road safety before transport.

Before each transport, the operator must carry out a visual inspection of the entire system.

The trailer's hitch is type approved. The maximum drawbar load at the coupling point must not be exceeded. The actual drawbar load at the coupling point should be as high as possible. A minimum drawbar load of 4% of the actual total mass of the trailer is prescribed. However, more than 500kg drawbar load is not necessary. The maximum permissible drawbar load must not exceed 15% of the actual total mass, but not more than 2t.
Modifications to the machine, such as the removal of the power unit, affect the drawbar load.

Regularly check the tightness of the wheel nuts with a torque spanner and retighten if necessary (after taking over the machine, after the first 50 km, 50km after a wheel change, periodically every 2500km).

Before driving off, carry out a careful visual inspection and pay particular attention to the following:

- Check tyre condition and tyre pressure
- Check the seat of the drawbar eye
- Supports retracted
- Light control
- Control of traffic and operational safety

7.2 Moving the machine

When moving the machine without connecting the supply lines, the following points must be observed:

The release valve provided on the trailer brake valve must be actuated before transferring in order to release the brake system.

After repositioning, return the release valve to its original position to prevent the machine from rolling away unintentionally.

If the air pressure level in the brake system falls below the limit, the release valve can no longer be actuated and repositioning is not possible. This can be remedied by connecting the supply lines or by draining the compressed air system.

Caution!

Check that the transport locks are in place on the fractions.

The equipment must be checked for proper condition and road safety before moving.

Fig. 5-1: Trailer Brake Valve & Release Valve

1 Trailer brake valve

2 Release valve
- actuated (pressed) - brake released
- pulled - brake applied

8 Commissioning

8.1 Initial commissioning

After installation, initial commissioning and performance of a test run by the customer service of the ZEMMLER® Siebanlagen, the double drum screening system is handed over to the operator. Afterwards, the system can be operated in compliance with the information in the operating instructions and the applicable occupational health and safety and accident prevention regulations.

Caution!

The equipment must be checked for proper condition and operational safety before use. All safety devices (locks, interlocks, etc.) attached to the system must always be fitted and checked for proper function.

Before each commissioning, the operator must carry out a visual inspection of the entire system.

8.2 Commissioning after Maintenance or Malfunction

After all maintenance and servicing measures have been properly completed, the system can be put back into operation.

Attention!

The system must be checked for proper condition and operational safety prior to commissioning.

Before each commissioning, the operator must carry out a visual inspection of the entire system.

Check that all tools, aids and packaging have been removed.

Make sure that all safety measures and stand safety measures have been carried out in accordance with the instructions for commissioning.

8.3 Commissioning after a longer standstill

If the system is shut down for a longer full stop of time, the entire system must be cleaned.

If the system is put back into operation after a longer standstill, it must again be subjected to a thorough visual inspection. All safety devices (locks, interlocks, etc.) attached to the system must always be fitted and checked for proper function.

8.4 Commissioning after transport

After transport, manoeuvre the machine by means of the tractor to the intended working position.

The further procedure as described in *Section Operational readiness page 33*.

Fig. 6-1: Example of a screening system in working position (view from front left)

Fig. 6-2: Example of a screening system in working position (view from rear left)

9 Operational Readiness

Attention

The user is responsible to third parties in the work area.

The installation and initial commissioning of the unit should always be carried out by the customer service of ZEMMLER® Siebanlagen.

Unauthorised assembly or installation work is not permitted.

Caution - Danger of tipping of the double drum screening unit!

Setting up the double drum screening unit on an unstable or uneven surface can cause the unit to tip over during operation.

Ensure that the surface is sufficiently firm and level.

9.1 Setting up the machine

1. Place the double drum screening unit on a level and firm surface.
2. Apply the parking brake, which is located on the left front side of the machine next to the supply lines (see Figure 7-1).
3. Place the wheel chocks in front of or behind the wheels to prevent the machine from rolling away. The wheel chocks are located on the front part of the wheel cover (see figure 7-1).
4. Lowering the four lateral supports gives the unit a secure stand.
5. In the engine compartment there is a cross spirit level (see Figure 7-2) according to which the system must be aligned in order to ensure a safe stand. This is located behind the left-hand support in the interior in the direction of travel.

Fig. 7-1: Position parking brake and brake shoe holder

Fig. 7-2: Cross level gauge

Caution - Danger of tipping of the double drum screening unit!

If the subfloor is not stable enough, increase the support surface for the supports.

Warning - Crushing Hazard

Lowering the supports can cause a risk of crushing to the operator's feet.

Ensure an appropriate safety distance to slabs of the supports.

6. The machine can now be uncoupled from the tractor (truck) and prepared for operation.
7. When using the 3. fraction, it is necessary to remove the light bar.

Fig. 7-3: Disconnect the fuse unit and the power supply to the light bar

9.1.1 Transport lock of the 1. and 2. fraction

Fig. 7-4: Transport lock 1. and 2. fraction

Notice!

All fraction belts are equipped with a transport lock, which must be removed by hand.

9.1.2 Transport lock of the 3. fraction (option)

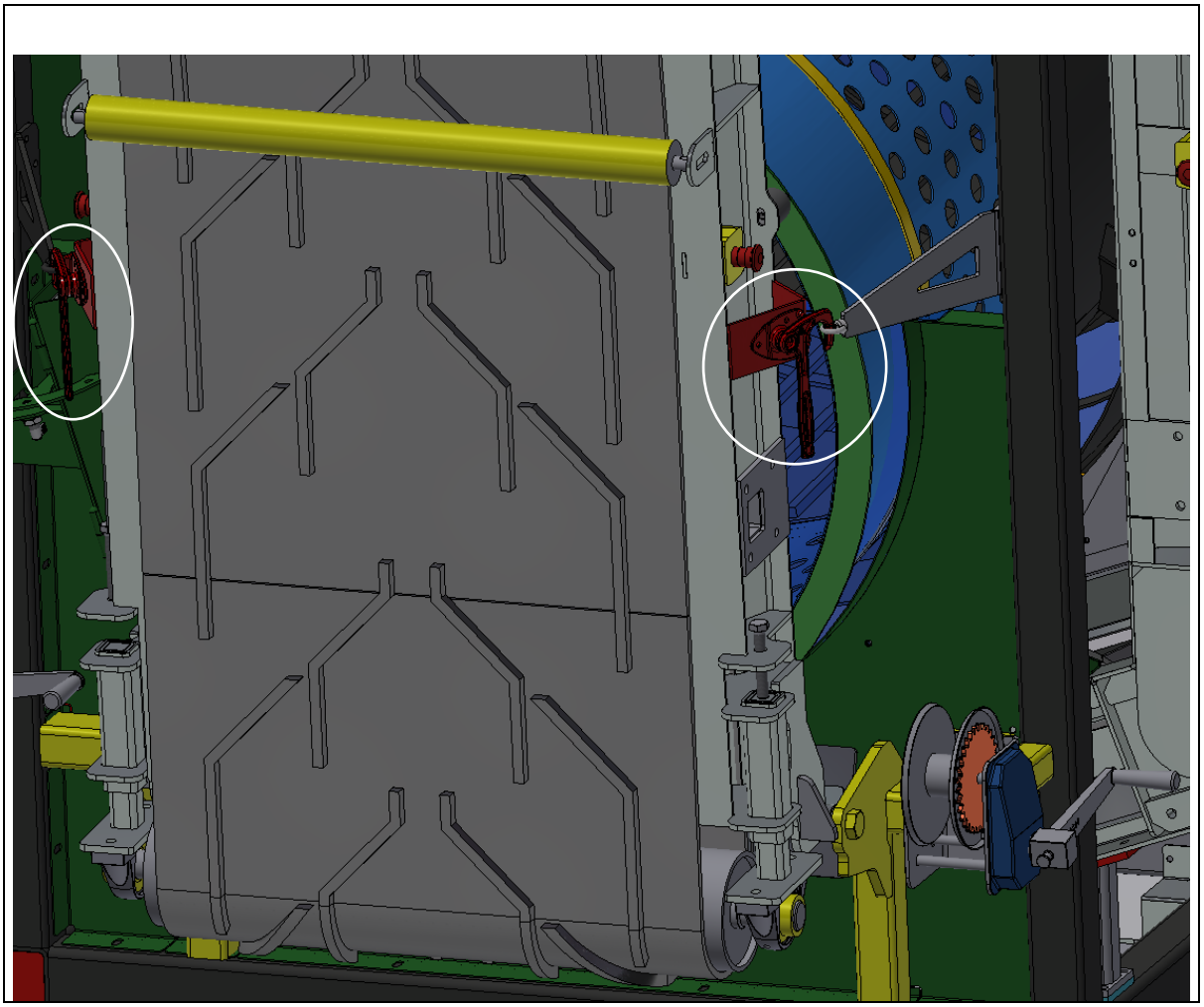

Fig. 7-5: Transport lock 3. fraction

Notice!

All fraction belts are equipped with a transport lock, which must be removed by hand.

10 Operation

Caution!

The equipment must be checked for proper condition and operational safety before use.

Before each commissioning, the operator must carry out a visual inspection of the entire system. Check the presence of all padlocks.

10.1 Fold out the 1. fraction belt

Caution!!

Please make sure that there are no people in the working area when the fraction belts are unfolded.

This can lead to injuries.

Caution Damage to the Double Drum Screening System!

Please make sure that there are no high objects under the conveyor belt.

This can cause damage to the machine.

Fold out the 1. fraction belt:

1. Put the crank handle on the winch (see figure 8-1).
2. Loosen the transport lock of the fraction belt.
3. By turning the crank to the left, the fraction belt is completely folded out.

Fig. 8-1: Winch of the 1. fraction belt

10.2 Fold out the 2. fraction belt

Caution!!

Please make sure that there are no people in the working area when the fraction belts are unfolded.

This can lead to injuries.

Caution Damage to the Double Drum Screening System!

Please make sure that there are no high objects under the conveyor belt.

This can cause damage to the machine.

Fold out the 2. fraction belt:

1. Put the crank on the winch (see figure 8-2).
2. Loosen the transport lock for the fraction belt.
3. By turning the crank to the left, the fraction belt is completely folded out.

Fig. 8-2: Winch of the 2. fraction belt

10.3 Fold out the 3. fraction belt (option)

Caution!!

Please make sure that there are no people in the working area when the fraction belts are unfolded.

This can lead to injuries.

Caution Damage to the Double Drum Screening System!

Please make sure that there are no high objects under the conveyor belt.

This can cause damage to the machine.

Fold out the 3. fraction belt:

1. Put the crank on the winch (see figure 8-3).
2. Loosen the transport lock for the fraction belt.
3. By turning the crank to the left, the fraction belt is completely folded out.

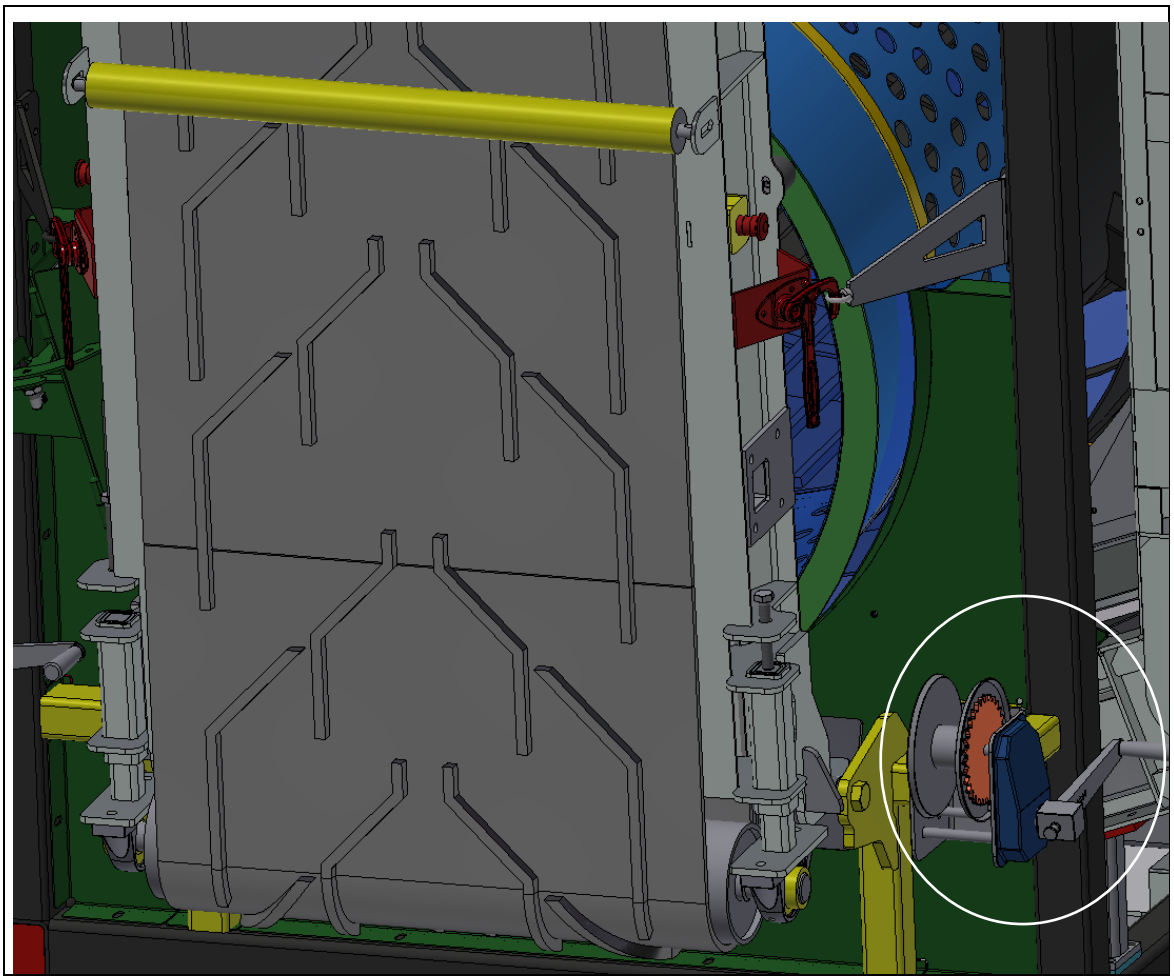

Fig. 8-3: Winch of the 3. fraction belt

10.4 Mounting deflector plate (option)

Secure the deflector plate to light bar provision with bolt and clamp.

Fig. 8-4: Position of the deflector plate

Caution Damage to the Double Drum Screening System!

Please make sure that there are no high objects under the conveyor belt.

This can cause damage to the machine.

Caution Danger for operating personnel!

Please be aware that under certain conditions (weather conditions and screen well) the surface can become slippery.

This can lead to injuries to the staff.

10.5 Aggregate operating mode (option)

1. Open the service door completely until the door catch engages, see figure 8-5.

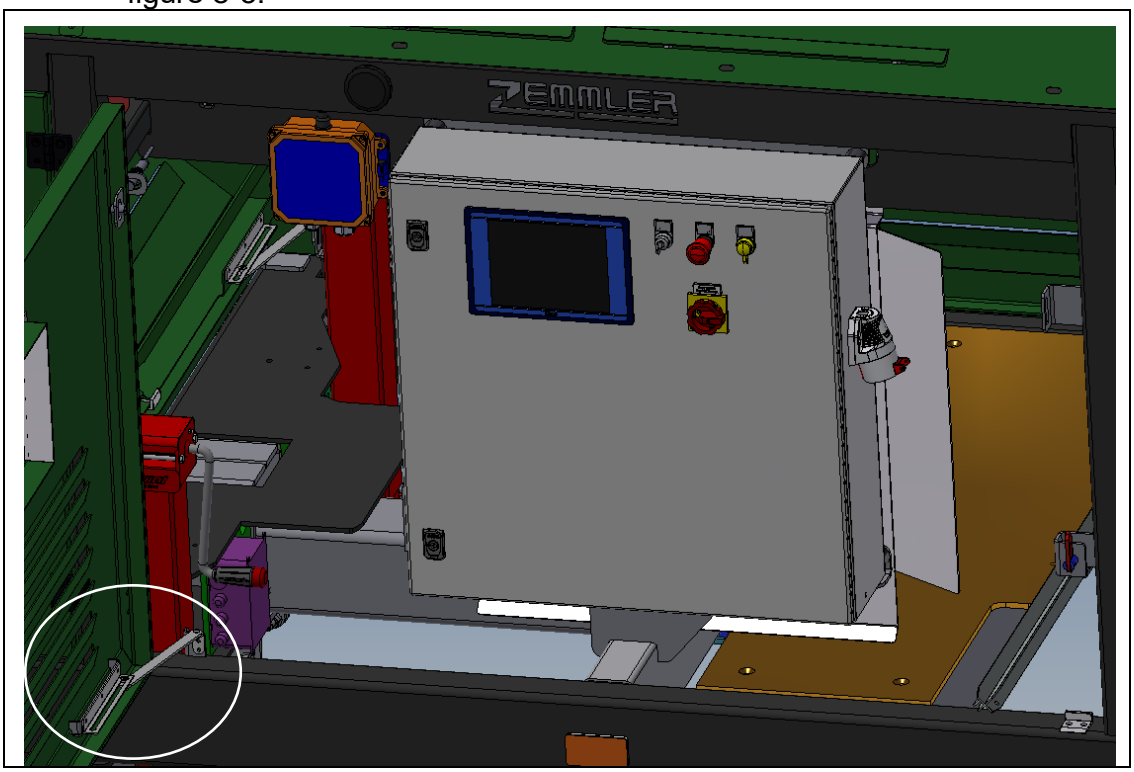

Fig. 8-5: Operating door open and secured with door holder

Warning - Danger from crushing of bodies or body parts!

Failure to secure the door by means of a bar will result in a crushing hazard between the door and the frame of the unit.

Always secure the doors with the existing safety bar.

2. Insert the earthing spike of the system into the ground at a sufficient distance from the system (approx. 10 - 20 m).

Warning - Danger due to electrical voltage

Check the power supply and its fuse protection according to the technical data of the installation.

3. The starting procedure is provided in the operating instructions of the generator.
4. Close all doors. To do this, lift off the guide rod on the door holder.

Notice!

It may occur that the RCD of the unit and mains operation do not harmonise with each other.

10.6 Operating mode Electrical

Warning - Danger due to electrical voltage

Check the power supply and its fuse protection according to the technical data of the installation.

Use the earthing spike

1. Open the service door completely until the door catch engages (see figure 8-5).
2. Insert the earthing spike of the system into the ground at a sufficient distance from the system (approx. 10 - 20 m).
3. Connect the suitable power supply cable to the CEE 32 ampere feed socket provided on the right-hand side of the control cabinet.
4. Close all doors. To do this, lift off the guide rod on the door holder.

10.7 Switching on the Machine

1. Turn the main switch (3) from 0 to 1
2. Control unit starts up, wait until the home screen on the display (1) is fully present (*see documentation Control unit*).
3. Touching the Automatic icon on the Home screen starts the automatic operation. First, the start-up warning sounds. All drives are started up one after the other (flashing green on the display). Finally, the FCB is started
   The machine is in automatic mode when all drives light up green.
4. The machine is now ready for use. The feed hopper can be loaded.

Fig. 8-6: Control unit

10.8 Readjustment of the speed of the feeder conveyor belt (FCB)

In order to achieve an optimal sieving result, the step, and thus the speed of the feeder conveyor belt may have to be readjusted (*see documentation control*).
On the home screen of the display, you can increase the level of the belt feeder with the FCB+ icon. The selected level is displayed in the FCB bar graph.
Lowering the level is done with the icon FCB-.
The FCB-Stop icon can be used to switch off the belt feeder.
When you then touch the FCB- icon, the tape feeder runs backwards by holding it down.

Notice!

The last speed setting is saved.

10.9 Emergency Stop Function

After pressing an emergency stop button or opening one of the doors, a message appears in the display.

After the check, unlock the operated emergency stop switch or close the doors.

By pressing the "Reset" icon in the message screen of the display, the safety relay is reset and the message disappears(see control unit documentation).

10.9.1 Emergency Stop Function

If the doors are opened during operation, the machine stops.

Close all doors.

By pressing the "Reset" icon in the message screen of the display, the safety relay is reset and the message disappears(see control unit documentation).

11 Decommissioning

When the system is shut down, it must run completely empty. This means that no further screening material can be fed into the system and the fraction belt conveyors must run empty.

11.1 Switching off the machine

1. Switch off the automatic mode in the home screen of the display (*see documentation Control*). The machine switches off, the individual drives in the machine view that were previously lit green are stopped with a delay in the following sequence and are thus no longer displayed in green:
   FCB, Drum, 2. Fraction, 1. Fraction.
2. After stopping all drives, turn off the main switch.
3. Switching off the power unit.
4. Close all doors.

Notice!

Carry out a visual inspection of the system.

11.2 Folding in the 1. fraction belt

Caution!!

Please make sure that there are no people in the working area when the fraction belts are folded in. This can lead to injuries.

All safety devices (locks, interlocks, etc.) attached to the system must always be fitted and checked for proper function.

Caution Damage to the Double Drum Screening System!

Please make sure that there are no objects on the conveyor belt.

This can cause damage to the machine.

Folding in the 1. fraction belt:

1. Put the crank handle on the winch. (see figure 8-1).
2. By turning the crank to the right, the 1. fraction belt is completely folded.
3. Attach the transport lock for the 1. fraction belt.

11.3 Folding in the 2. fraction belt

Caution!!

Please make sure that there are no people in the working area when the fraction belts are folded in. This can lead to injuries.

All safety devices (locks, interlocks, etc.) attached to the system must always be fitted and checked for proper function.

Caution Damage to the Double Drum Screening System!

Please make sure that there are no objects on the conveyor belt.

This can cause damage to the machine.

Folding in the 2. fraction belt:

1. Put the crank handle on the winch. (see figure 8-2).
2. By turning the crank to the right, the 2. fraction belt is completely folded.
3. Attach the transport lock for the 2. fraction belt.

11.4 Folding in the 3. fraction belt (option)

Caution!!

Please make sure that there are no people in the working area when the fraction belts are folded in. This can lead to injuries.

All safety devices (locks, interlocks, etc.) attached to the system must always be fitted and checked for proper function.

Caution Damage to the Double Drum Screening System!

Please make sure that there are no objects on the conveyor belt.

This can cause damage to the machine.

Folding in the 3. fraction belt:

1. Put the crank handle on the winch. (see figure 8-3).
2. By turning the crank to the right, the 3. fraction belt is completely folded.
3. Attach the transport lock for the 3. fraction belt.

12 Faults

Malfunction	Causes	Remedy
Power generator		Read the operating instructions of the power generator manufacturer. Contact ZEMMLER® Siebanlagen
Power generator motor goes out	Fuel	Check the fuel level in the tank and top up if necessary. Read the operating instructions of the power generator manufacturer. Contact ZEMMLER® Siebanlagen
Fraction bands cannot be folded out	Transport lock Cable winch	Removing the transport locks Check the rope guides for damage or objects that impair the function. Contact ZEMMLER® Siebanlagen
Conveyor belts do not start	 Electrics Control unit	Check emergency stop switch Contact ZEMMLER® Siebanlagen Contact ZEMMLER® Siebanlagen
Drum does not start	 overshot drum Chain Electrics	Check emergency stop switch Emptying the drum then restarting Contact ZEMMLER® Siebanlagen Contact ZEMMLER® Siebanlagen
Feed hopper overflow	Belt feeder runs too slowly	Readjustment of the belt feeder see section 8.6 page 43
Drum spillover	Belt feeder runs too fast Drum runs too slowly	Readjustment of the belt feeder see section 8.6 page 43 Readjustment of the sieve drum see section 8.6 page 43
Light bar	No function	Checking the plug connection Contact ZEMMLER® Siebanlagen

13 Maintenance and servicing

13.1 General information on Maintenance and Servicing

Consistent performance of maintenance work and adherence to the time intervals are important prerequisites for reliable functioning of the system.

This chapter specifies work to be carried out by the operating personnel of the system or by qualified specialist personnel.

Depending on the use of the screening unit, check all parts regularly for wear and damage. Replace defective parts in good time or have them replaced by qualified personnel to prevent damage to other parts. If separating guards are removed in the process, they must be refitted after the intervention.

A summary and overview of the work can be found in the maintenance plan.

Daily and weekly maintenance can be carried out by an authorised machine operator. The hourly maintenance must be carried out by an approved fitter/technician. All other maintenance work and fault rectification which is not covered in these instructions or which cannot be carried out by the user must be carried out by ZEMMLER® Siebanlagen Service.

Note

When ordering spare parts, please state the machine type and the information on the type plate.

Note

Please read the operating and maintenance instructions of the power generator manufacturer before use; they are part of these maintenance instructions and are not included here.

13.2 Safety measures during maintenance and repair work

During all work, the specified safety measures and any necessary shutdown procedures must be observed and complied with.

When carrying out work that involves opening protective devices (e.g. cladding doors), an emergency stop switch must be pressed beforehand.

Additional safety measures are required for work on certain equipment.

13.3 Emptying the system

To carry out maintenance work that may become necessary during operation, the system must run completely empty. This means that no further screenings are fed into the system and the belt conveyors of all two fractions must run empty.

Notice!

The system must always be run empty.

The control is carried out from the sighting of the two fraction belts and the double drum.

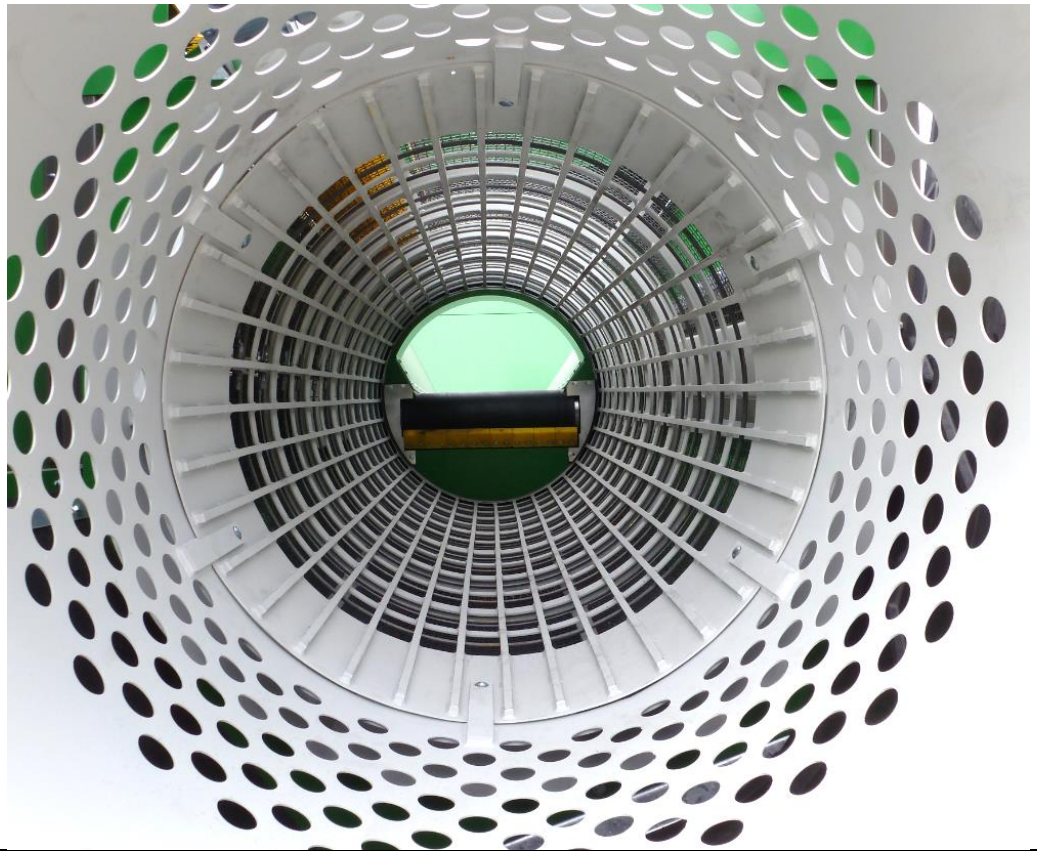

Fig. 11-1: Visual inspection of the double drum

13.4 Securing the system

1. After switching off the machine (*see 9.1 Switching Off the Machine*)
2. Main switch "Off" and secure with padlock against switching on.
3. Switch off the power unit.
4. Close all doors.

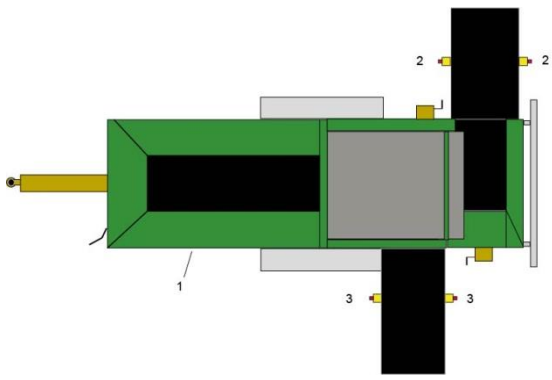

Fig. 11-2: Safety Devices

13.5 Maintenance after initial commissioning

The first maintenance after initial commissioning is carried out exclusively by the specialist personnel of ZEMMLER® Siebanlagen. For subsequent maintenance, please refer to the maintenance schedule.

13.6 Maintenance Schedule

Caution - damage to the system!

Before each start of production, all safety devices must be checked for proper functioning. The checks according to the maintenance schedule must be carried out by trained specialist personnel.

Notice!

Subsequent maintenance must be adhered to in order to maintain the function of the system and warranty claims:

Interval		Item No.	Components / Designation	Page
in sections	A daily (10h)	A1	Visual inspection of the entire system	52
		A2	Visual inspection of all fluid levels in the system	52
		A3	Noise control	52
		A4	Visual inspection of all wear parts - Belt scraper	52
		A5	Cleaning - removal of caking regularly according to material condition (at least daily).	52
	B weekly (50h)	B1	Check drum brushes	53
		B2	Visual inspection of all belt conveyors	53
		B3	Lubrication of the specified lubrication points	53
	C 100 h	C1	Maintenance by machine operator	54
	D 250 h	D1	Maintenance by machine operator	55
	E 500 h	E1	Maintenance by an approved fitter	56
	F 1000 h	F1	Maintenance by an approved fitter	57
	G 1500 h	G1	Maintenance by an approved fitter	58
	H 2000 h	H1	Maintenance by an approved fitter	59

Tab. 13-1: Maintenance plan Overview

13.6.1 Maintenance A - daily

A1 Carry out a daily visual inspection of the entire system.

Shut down the unit if leaks, suspicious noises, visible as well as hidden defects (such as cracks) occur and secure the unit against restarting.

Replace the defective system parts in compliance with all safety regulations using standardised tools and spare parts.

If necessary, inform the customer service of ZEMMLER® Siebanlagen.

A2 Carry out a daily visual inspection of all fluid levels in the system.

Special attention is paid to the system parts that are under pressure.

Should the petrol tank ever run empty, please follow the operating and maintenance instructions of the engine manufacturer.

Eliminate leaks in compliance with all safety regulations using standardised tools and original spare parts.

If necessary, inform the customer service of ZEMMLER® Siebanlagen.

A3 Carry out a daily noise check of the entire system.

Special attention is paid to the wear parts.

If any suspicious noises are heard during the inspection, shut down the unit and secure it. Replace the defective system parts in compliance with all safety regulations using standardised tools and spare parts.

If necessary, inform the customer service of ZEMMLER® Siebanlagen.

A4 Carry out a daily visual inspection of all wearing parts.

Shut down the unit if leaks, suspicious noises, visible as well as hidden defects (such as cracks) occur and secure the unit.

Replace the defective system parts in compliance with all safety regulations using standardised tools and spare parts.

If necessary, inform the customer service of ZEMMLER® Siebanlagen.

A5 If necessary, clean the machine thoroughly to avoid caking that causes wear.

13.6.2 Maintenance B - weekly

Caution - Risk of injury!

Always wear protective work clothing during all maintenance work.

B1 Carry out a weekly check of the drum brushes. The drum brushes must always engage in the drum to achieve the highest possible cleaning effect of the drum.

If defective brush elements are found during the inspection, secure the system and replace the defective brush elements in compliance with all safety regulations using standardised tools and spare parts.

B2 Carry out a weekly visual inspection of all belt conveyors.

If there are cracks or other damage, replace the defective system parts in compliance with all safety regulations using standard tools and spare parts.

If necessary, inform the customer service of ZEMMLER® Siebanlagen.

B3 Carry out weekly lubrication of all lubrication points (see section 8.10).

Lubrication must be carried out using the appropriate tool and operating material (see section 11.11). If there is any damage, replace the defective system parts in compliance with all safety regulations using standard tools and spare parts.

If necessary, inform the customer service of ZEMMLER® Siebanlagen.

13.6.3 Maintenance 100h

Maintenance by machine operator

		Control	Adjustment	Change
Check bearing for wear		☐		☐
Rollers		☐		☐
Belt conveyor				
Coarse fraction	Skew	☐	☐	
	Wear	☐		☐
Fine fraction	Skew	☐	☐	
	Wear	☐		☐
Belt feeder	Skew	☐	☐	
	Wear	☐		☐

Machine No.

Date: Fitter:

Operating hours: h

Comments:

Conducted by:

Signature

13.6.4 Maintenance 250h

Maintenance by machine operator

		Control	Adjustment	Change
Check bearing for wear		☐		☐
Rollers		☐		☐
Belt conveyor				
Coarse fraction	Skew	☐		
	Wear	☐		☐
Fine fraction	Skew	☐	☐	
	Wear	☐		☐
Belt feeder	Skew	☐	☐	
	Wear	☐		☐

Machine No.

Date: Fitter:

Operating hours: h

Comments:

Conducted by:

Signature

13.6.5 Maintenance 500h

Maintenance by Zemmler subject to a charge

		Control	Adjustment	Change
Check bearing for wear		☐		☐
Rollers		☐		☐
Belt conveyor				
Coarse fraction	Skew	☐	☐	
	Wear	☐		☐
Fine fraction	Skew	☐	☐	
	Wear	☐		☐
Belt feeder	Skew	☐	☐	
	Wear	☐		☐

Machine No.

Date: Fitter:

Operating hours: h

Comments:

Conducted by:

Signature

13.6.6 Maintenance 1000h

Maintenance by Zemmler subject to a charge

		Control	Adjustment	Change
Check bearing for wear		☐		☐
Rollers		☐		☐
Belt conveyor				
Coarse fraction	Skew	☐	☐	
	Wear	☐		☐
Fine fraction	Skew	☐	☐	
	Wear	☐		☐
Belt feeder	Skew	☐	☐	
	Wear	☐		☐

Machine No.

Date: Fitter:

Operating hours: h

Comments:

Conducted by:

Signature

13.6.7 Maintenance 1500h

Maintenance by Zemmler subject to a charge

		Control	Adjustment	Change
Check bearing for wear		☐		☐
Rollers		☐		☐
Belt conveyor				
Coarse fraction	Skew	☐	☐	
	Wear	☐		☐
Fine fraction	Skew	☐	☐	
	Wear	☐		☐
Belt feeder	Skew	☐	☐	
	Wear	☐		☐

Machine No.

Date: Fitter:

Operating hours: h

Comments:

Conducted by:

Signature

13.6.8 Maintenance 2000h

Maintenance by Zemmler subject to a charge

		Control	Adjustment	Change
Check bearing for wear		☐		☐
Rollers		☐		☐
Belt conveyor				
Coarse fraction	Skew	☐	☐	
	Wear	☐		☐
Fine fraction	Skew	☐	☐	
	Wear	☐		☐
Belt feeder	Skew	☐	☐	
	Wear	☐		☐

Machine No.

Date: Fitter:

Operating hours: h

Comments:

Conducted by:

Signature

13.7 Screen change

Warning against moving in bodies and body parts

When turning the screen drum, body parts may be drawn in.

Take special care when working on the screening drum.

Notice!

When fitting the screens, the system must be drained.

Caution!

The drum remote control is designed as a dead man's button, i.e. only by actively pressing the arrow key can the drum be operated in a slowed-down jog mode.

In case of danger, release the button.

Activate sieve change with key switch MS2 on the control unit. Set the key switch to "I" for this purpose. Screen change is active. All other machine functions are deactivated.

The display shows

Using the prescribed remote control with arrow button, the drum rotates in jogging mode.

Connect the plug of the cable to the socket beforehand. The socket is located on the inside of the chassis support.

(Storage location: funnel door on the right in the direction of travel)

13.7.1 Tension outer screen

Loosen the screen lining:

1. Open the right-hand side door of the drum in the direction of travel.
2. Bring the tensioning station of the drum to assembly height in jog mode and loosen the screws.
3. Release both ends of the screen lining from the clamping station using the assembly lever.
4. Carefully pull the screen out of the machine.

Put on the screen lining:

1. Position the tensioning station of the drum at assembly height in jogging mode.
2. Hook in the end of the screen lining without the screwing device.
3. Rotate the drum in jogging mode until the rubber is completely wrapped around the drum.
4. Tighten the screen lining end with the mounting lever in the clamping station using the screws. (see figure 11.3)

Fig. 11-3: Tensioning and fastening device for screen mesh covering (example)

13.7.1.1 Alternatively tension outer sieve for drums without tensioning station

Unlike before, the outer screen is not hooked into the drum, but the ends of the screen are screwed together.

Notice!

For clamping you need a clamping aid to minimise the danger for operators.

1. Push one end of the screen in the direction of rotation of the drum. Lock the sieve lining with a tool.
2. Rotate the drum by jogging until the rubber is completely wrapped around the drum.
3. Lock the clamping aid into the middle hole of both ends. Use the spanner to tighten the screw in the tensioning aid. The ends of the screen contract.
4. Fit the outer screws in the hole provided.

Fig 11.4. Clamping tool

5. Loosen the tensioning aid again and fit the screw in the middle.

Disassembly is done in reverse order.

13.7.2 Tension inner screen

Before mounting the inner screens, the outer screen must be removed.

The assembly is carried out as for the outer screen with a drum without tensioning station (see points 11.7.1.1.).

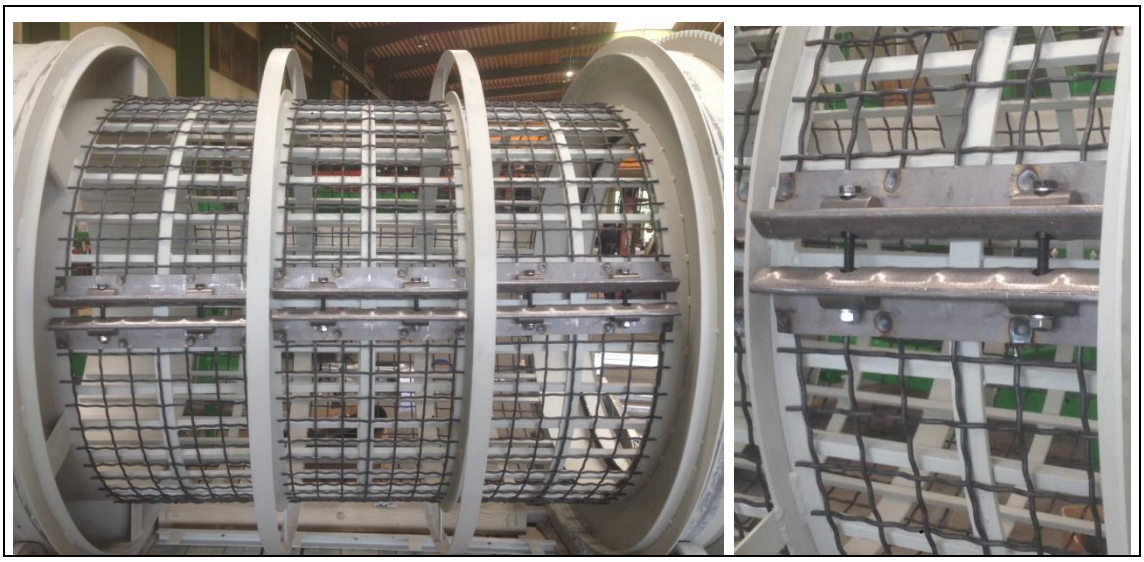

Fig. 11-5: Clamping device for inner screen

13.8 Changing the brush elements

Caution - Risk of injury!

Wear protective work clothing, protective work gloves and protective work goggles when carrying out this work.

Changing the brush elements

1. Dismantle the complete brush assembly using the fittings (1).
2. Lift this arrangement off the unit using a suitable aid.
3. The two bearings (2) for the brush shaft must be dismounted and removed
4. It is now possible to remove the spacer rings and the individual brush elements from the shaft.
5. The brush elements can be mounted in reverse order.

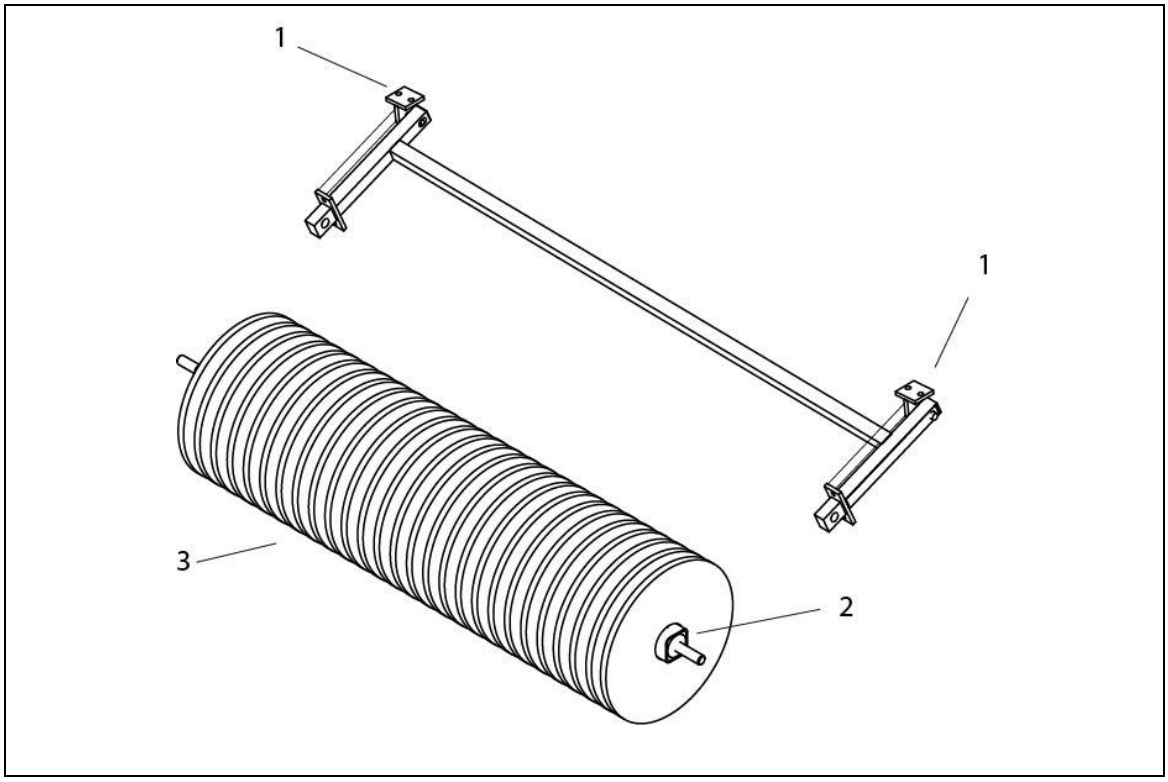

Fig. 11-6: Structure and attachment of the brush element

Notice!

If you need new brush elements, please contact ZEMMLER® Siebanlagen. Our staff will be happy to assist you.

13.9 Tensioning and adjusting the feeder conveyor belt (FCB)

Caution - Risk of injury!

Wear protective work clothing, protective work gloves and protective work goggles when carrying out this work.

The feeder conveyor belt (FCB) is equipped with 4 tensioning devices (2 outer and 2 inner) each to the right and left of the belt:

The inner and outer clamping devices work together. Both clamping devices are accessible through the side doors.

The correct tensioning:

1. With the outer tensioning device, the belt is tensioned and brought into the correct position.
2. The adjustment of the outer tensioner must be transferred and locked (tightened) by tightening the screws of the inner tensioner.
3. Slightly loosen the tension of the outer tensioner so that the spindle does not press on the drive motor.

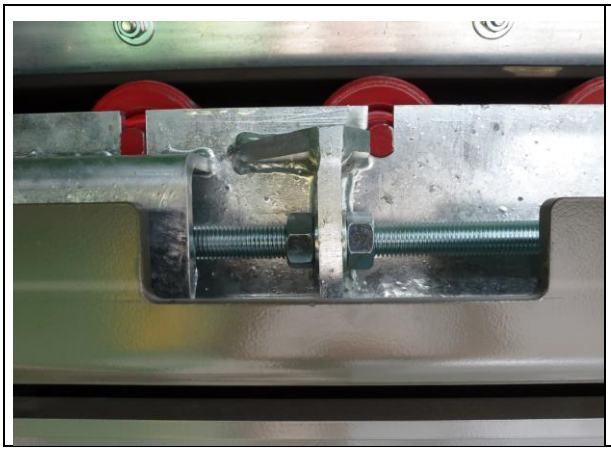

Fig. 11-7: Inner clamping device

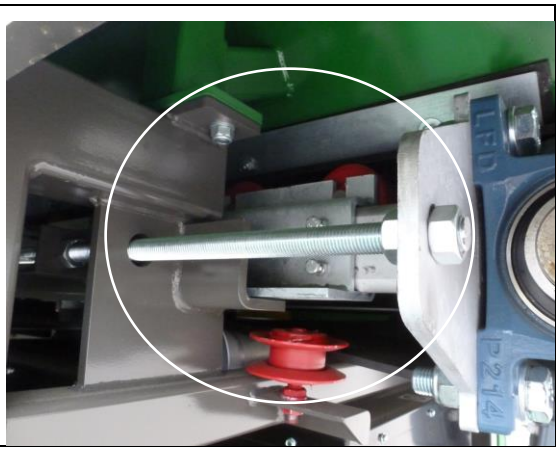

Fig. 11-8: Outer clamping device

Notice!

If the belt runs in one direction, the tensioning devices on the side where it runs must be adjusted.

If the belt does not have enough tension and the motor is spinning, all tensioning devices must be adjusted.

13.10 Resources

Caution - damage to the system!

The equipment listed here is approved for the operation of the ZEMMLER® MULTI SCREEN® MS 3200.

Always use the means listed in the operating instructions of the engine manufacturer to avoid damage to the system or your assemblies.

Resources	Quantity	Type	DIN
Grease			ISO 6743
Gear oil		SAE 80W-90 GL-4/5	

Notice!

If you have any questions about alternative lubricants and the like, please contact the customer service of ZEMMLER® Siebanlagen.

13.11 Position of the lubrication points on the system

The system is to be lubricated **weekly** with 5 strokes each.

Fig. 11-9: Position of the central lubrication points

Fig. 11-10: Position of the lubrication points on the belt feeder

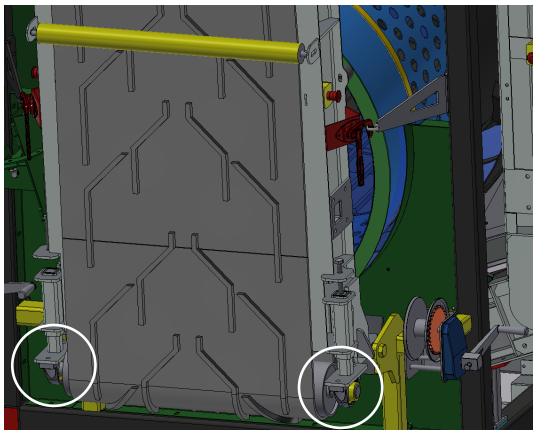

Fig. 11-11: Position of the lubrication points on the 3. fraction tape (OPTION)

13.12 Converting the screening drum to the three-fraction variant (option)

During all work, the specified safety measures and any necessary shutdown procedures must be observed and complied with.

If work is to be carried out by opening protective devices (e.g. enclosure doors), the system must be secured beforehand.

Additional safety measures are required for work on certain equipment.

To carry out maintenance work that may become necessary during operation, the system must run completely empty. This means that no further screenings are fed into the system and the belt conveyors of all fractions must run empty.

Assembly sequence of the slip-on ring (option)

1. Before you detach the light strip from the holder, disconnect the plug connection for the power supply. Remove the light bar.
2. Remove the upper part of the divided back wall in the area of the coarse fraction
3. Push the slip-on ring onto the screening drum using a suitable lifting device and screw the six connecting lugs to the screening drum.

Disassembly is carried out accordingly in reverse order.

Caution!

The installation must be checked for proper condition and road safety. All safety devices (locks, interlocks, etc.) attached to the system must always be fitted and checked for proper function.

Before each transport, the operator must carry out a visual inspection of the entire system.

13.13 Mounting the hopper attachment (option)

During all work, the specified safety measures and any necessary shutdown procedures must be observed and complied with.

The three top plates are to be inserted into the respective insertion openings on the feed hopper with the aid of a suitable lifting device and secured with the corresponding connecting screws.

Fig. 11-12: Mounted hopper attachment (example)

13.14 Securing the system after maintenance

Caution - damage to the system!

Visually check the entire system for operational readiness.

No tools lying around, spare parts, etc.

Caution - Risk of injury!

Close and secure all maintenance doors after the above visual inspection.

Secure all doors against unintentional opening with the padlocks provided.

13.15 Chassis test connection

Use for testing purposes only!

Fig. 11-13: Test connection

Notice!

Can only be checked by a specialist workshop!

14 Technical Specifications

14.1 Overall system Transport position

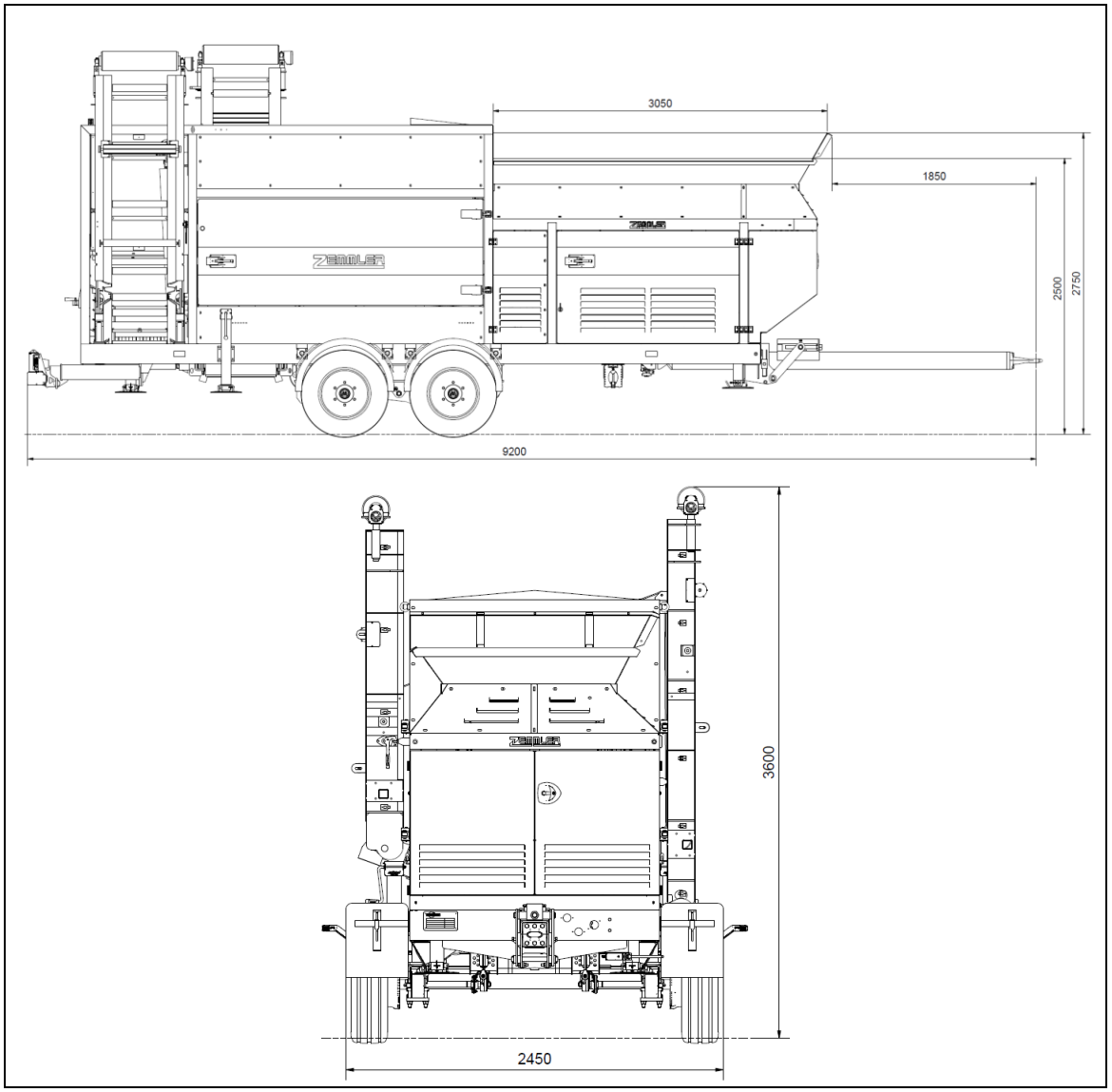

Fig. 12-1: Overall system Transport position

14.2 Overall system Working position

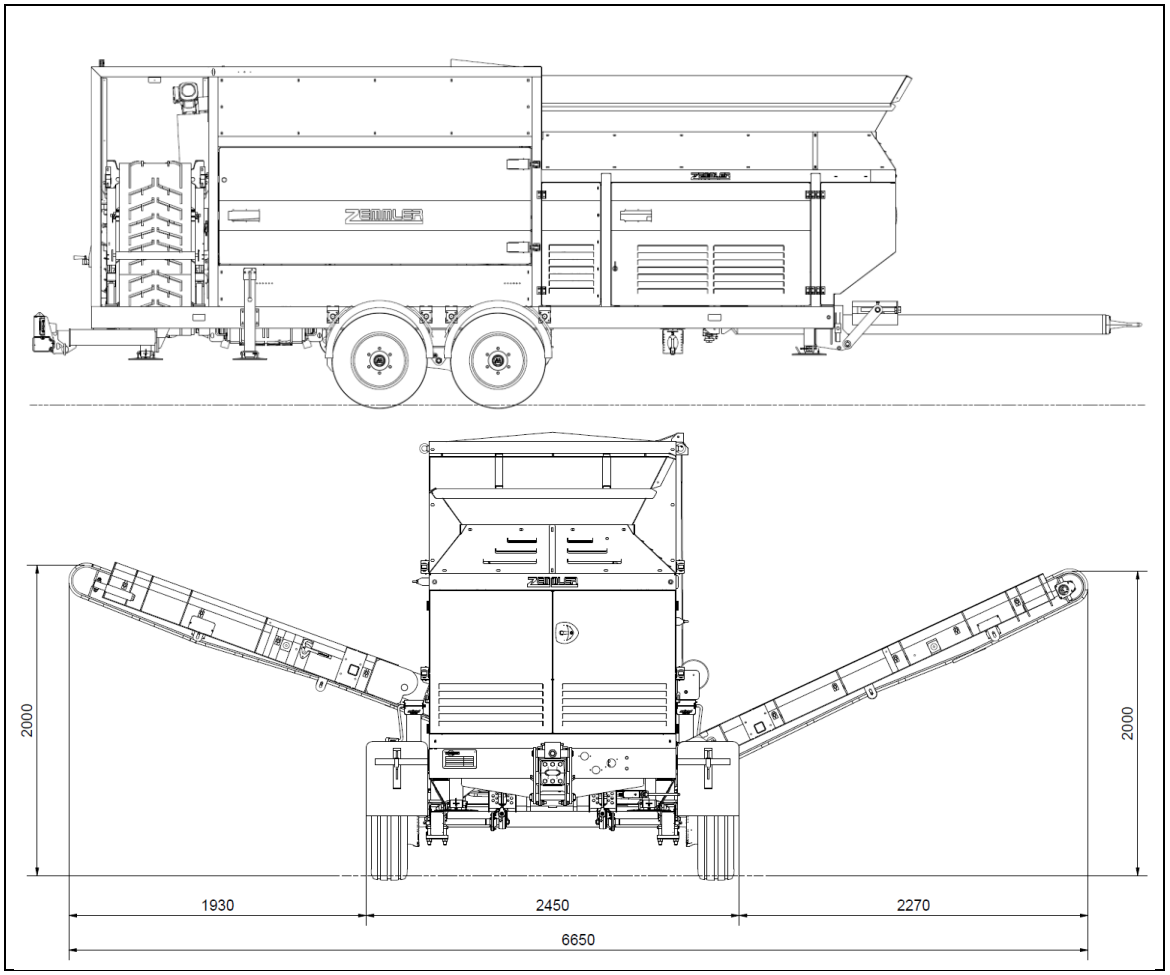

Fig. 12-2: Overall system Working position

14.3 Complete system with options Transport position

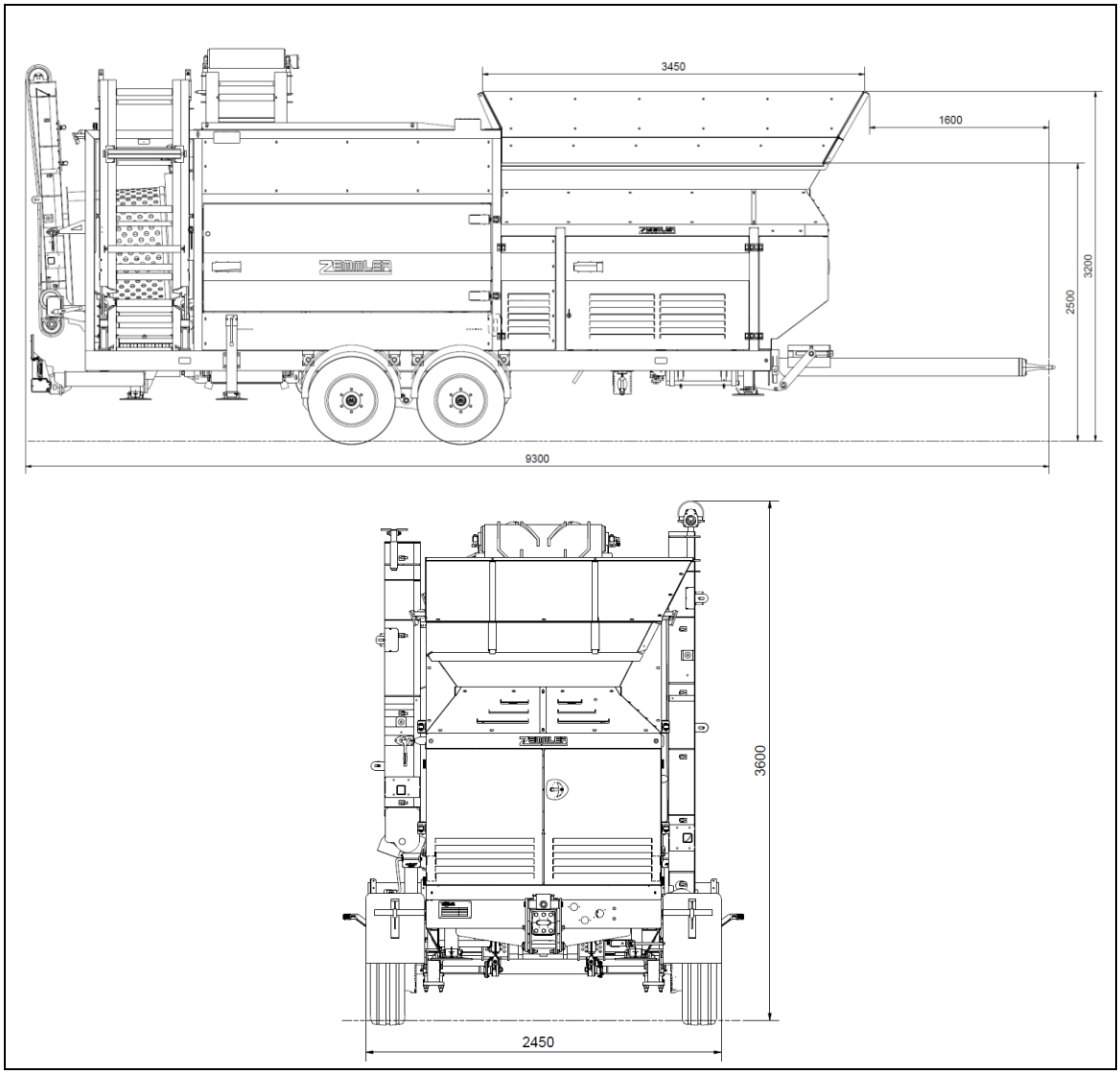

Fig. 12-3: Overall system Transport position

14.4 Overall system with options Working position

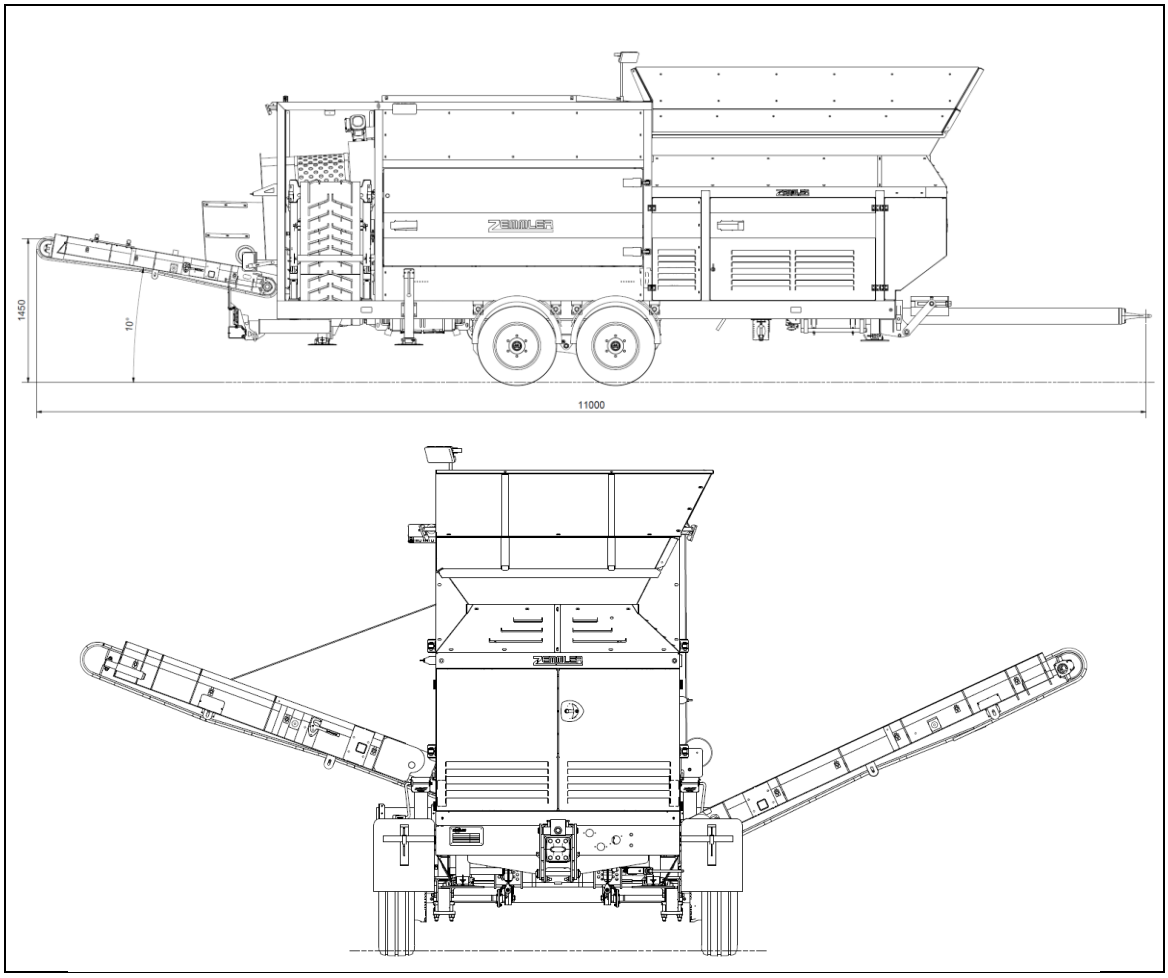

Fig. 12-4: Overall system Working position

14.5 Performance data

Screening materials:	
Compost, wood chips, soil, sand, slag, gravel, crushed stone, excavated building material, stones and recycled material up to max. 170 mm	
Control:	1 person
Throughput of the double drum screening system:	approx. 20-50m3 per hour (depending on material, feed, selected fractions and mesh size)

14.6 General data

Mobile double drum screening unit MS 3200 - Transport dimensions	
Length:	9,200 mm (with drawbar)
Width:	2,450 mm
Height:	3,600 mm
Weight	
System (unfilled):	approx. 7,500 kg (standard version)
Mobile double drum screening plant MS 3200 - Operating dimensions	
Length:	9,200 mm
Width:	6,650 mm
Height:	2,900 mm
Ambient condition Operation	
Ambient temperature	0°C – 40°C
Chassis	
Tyre pressure:	8.5 bar
Wheel nut tightening torque:	290 Nm

14.7 Power generator

A 14 kW power generator is sufficient for normal operation of the double drum screening plant.

When using additional consumers or the 230V additional socket, the power generator must be designed to be correspondingly more powerful.

14.8 Nameplate

The nameplate and manufacturer's plate is located on the base frame on the right-hand side in the direction of travel.

The data on the type plate, in particular the serial number, must be stated when ordering spare parts in order to avoid errors and to guarantee you a smooth spare parts delivery process.

Fig. 12-5: Nameplate (example)

15 Disposal

Machines that are permanently removed from the work process must be disposed of in accordance with the legal guidelines. The individual components must be separated according to material and substance groups and disposed of at the appropriate collection points.

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