



ZEMMLER® MULTI SCREEN® MS 3200 - ST - ET

Operating and Maintenance Manual

MS3200-044/045

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1 General information

Note!



In order to guarantee to you an optimal machine utilization, we ask you to read carefully this Operating Manual prior to the commissioning. In this way, you will be best informed about the operation and functioning of the machine.

Please read this introduction and conserve it.

Please pay attention to and follow the safety instructions.

Note!



All the specified technical data and instructions are related to the current model version of the double-drum screening machine ZEMMLER® MULTI SCREEN® MS 3200 - ST with a status as of:

April 2019

1.1 Area of application

The double drum screening machine ZEMMLER® MULTI SCREEN® MS 3200 is a stationary double drum screening machine. This machine classifies its bulk material in two fractions in one work cycle with high volume throughput.

The ZEMMLER® MULTI SCREEN® MS 3200 was designed for sieving various materials, such as compost, earth, sand, slags, gravel, construction waste, wood chips, recycling material and grit with grain size of up to 2 mm.

The largest grain size, which can be processed, is ≤ 170 mm.

1.2 Information about the machine

Name	ZEMMLER® MULTI SCREEN® MS 3200 – ST – ET
Machine number	MS3200 044 / MS3200 045
Year of manufacturing	2019 04
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 Delivery scope



The ZEMMLER® MULTI SCREEN® MS 3200 is delivered with the following accessories:

- Operating and maintenance manual of the machine (2x)
- CE – Declaration of conformity (2x)
- Operating instruction (2x)
- Spare parts catalogue (2x)

2 Documentation

The documentation of the double-drum screening machine consists of the following components:

Operating Manual

1. The Operating Manual (hereinafter abbreviated as "OM") provides information about function, assembly, commissioning, transport, operating, maintenance, servicing and decommissioning of the machine. The Operating Manual is not a textbook but a reference book.



Note!

In the correspondence with the employees of ZEMMLER® Siebanlagen®, please use the machine information from *Section 1.2 - Information about the machine*.

2.1 Operating Manual



This Operating Manual is a very important component of the machine and is absolutely essential for the successful and safe operation of the machine.

The Operating Manual contains important guidelines for the safe, proper and efficient operation of the double-drum screening machine. Your compliance with it helps to prevent any hazards, to reduce the repair costs and the downtimes, as well as to increase the reliability and lifespan of the machine.

The Operating Manual must be available to the operator of the machine and has to be read and applied by every person who is entrusted with any works with/on the machine, e.g.:

operating, troubleshooting during the working process, disposal of the operating and auxiliary materials, servicing (maintenance, care, repair), quality assurance and/or transportation.

2.2 Target group

The Operating Manual is a reference book with information for the operating personnel, the operator and, when necessary, for the specialist personnel that is working on the servicing, troubleshooting and quality assurance of the double-drum screening machine. This Operating Manual must make easier the safe and proper work on the machine by the machine operator.

2.3 Using the Operating Manual

**Note!**

When the Operating Manual contains basic or advanced information about a given subject, there is a cross-reference to the corresponding sections.

Example: "Implementation, see *Section 6.3 – Title*"

Explanation: The description is in Chapter 6 in *Section 6.3*.

A prerequisite for any works on/with the double-drum screening machine is the understanding of the of the double-drum screening machine.

In the operation of the double-drum screening machine as well as in the testing and maintenance works, the knowledge of the safety aspects that have to be observed is particularly important. That is why, the study of the Operating Manual must start with *Section 3 – Safety Instructions*.

The further main areas of information for the operating personnel about the operating of the machine are the sections *4* -

If the servicing of the double-drum screening machine is a responsibility of the operating personnel, *Section 11 – Service and maintenance* provides an introduction to the performing of these works.

This Operating Manual is also helpful for the operator of the double-drum screening machine in taking during the operation organisational measures, which are a prerequisite for the safe operation of the machine and form the basis for an efficient and qualitatively high-value production.

The most important information for the operator is to be taken from the sections *3 – Safety Instructions* and *6 - Maintenance*. The requirements described there must be taken into consideration in the design of the operating environment and at determining the work processes.

2.3.1 Symbols and warning signs in the Operating Manual

It is absolutely necessary to observe the accident prevention regulations and the general safety standards in the operation of the double-drum screening machine. The important notes, such as the safety-relevant instructions, are marked with corresponding symbols.

The symbols and structural elements used in the Operating Manual have the following appearance and the subsequent meaning:

**Caution – Danger for Persons!**

This symbol designates the general instructions relating to safe working practice, whose non-observance leads to danger to the life and limb of persons.

Observe carefully the work safety instructions and in such cases behave especially cautiously.

**Warning – Danger due to electric voltage!**

This symbol designates the safety instructions, whose non-observance leads to danger to the life and limb of persons due to electric voltage.

Observe carefully the work safety instructions and in such cases behave especially cautiously.

**Warning – Danger due to hand injuries!**

This symbol designates safety instructions, whose non-observance leads to danger due to hand injuries.

Observe carefully the work safety instructions and in such cases behave especially cautiously.

**Warning – Danger due to bodies or parts of the bodies being pulled in!**

This symbol designates the safety instructions, whose non-observance leads to danger to the life and limb of persons due to being pulled in the drum screen or carrier rollers.

Observe carefully the work safety instructions and in such cases behave especially cautiously.

**Attention – damaging the double-drum screening machine!**

This symbol designates all safety instructions pointing to requirements, guidelines or work processes which must be mandatorily observed. The non-observance can lead to damaging or destruction of the double-drum screening machine and/or other machine parts as well as to faulty production.



The Note symbol accentuates application tips and provides other particularly useful information from this Operating Manual.

**Instruction obligation!**

This symbol designates all the notes related to certain instructions which must be mandatorily observed. The non-observance can lead to damaging or destruction of the double-drum screening machine and/or other machine parts as well as to faulty production.

2.4 Documentation designation

The present Operating Manual pertains to the double-drum screening machine designated in the identification sheet (Section 1.2 - *Information about the machine*). For the clear allocation of each page of the Operating Manual, the footer lines are designated with the machine number + manufacturing date.

The complete designation contains the following data: MS3200.032.01.18

2.5 Liability guarantee and warranty liabilities

The machine documentation, including all its parts, is protected by copyright. Any use outside of the strict limits of the copyright law is not permitted without the approval of ZEMMLER® Siebanlagen is illegal and punishable. This is valid in particular for the reproductions and adaptations.

The making of this Operating Manual available to third parties is prohibited and obliges you to pay a compensation for damages.

All the information and instructions for the operating and maintenance of the machine are based on our past experience and knowledge to the best of our knowledge. We reserve the right to make any technical changes within the framework of the further development of the machine handled in this Operating Manual. Only spare parts, which are released by us and prescribed in the spare parts catalogue, may be used.

We are liable for any errors or omissions, under the exclusion of any further claims, within the framework of the warranty obligations determined in the main contract. Any claims for compensation for damages are also within the scope of the compensation for damages obligations agreed in the main contract.

The translations are made to the best of our knowledge. We can not accept liability for translation errors.

The delivered printed German version of the documentation shall prevail.

The textual and graphical presentations do not correspond obligatorily to the delivery scope or to an eventual spare part order. The drawings, graphics and composite photographs do not correspond to the 1:1 scale.

2.5.1 Warranty

Warranty

Under the legal liability for material defects of the seller, we guarantee as a manufacturer, under the following conditions, the flawless durability of the appropriately used products of ZEMMLER® Siebanlagen.

The warranty extends to the function of ZEMMLER® Siebanlagen products and includes all defects, which are proven to be due to a manufacturing or material error.

We do not assume any liability for consequential damages!

In the case of material damages or personal injuries, which result from improper handling or ignoring the safety instructions, we do not assume any liability. In such cases, any warranty claim expires.

Warranty conditions:

Our warranty consists exclusively in the assumption that during the warranty period we, at our choice, perform a free of charge repair of the product and/or free of charge replacement delivery for the first end user.

The arising costs, expenses, postal charges and similar for the warranty policyholder are not compensated. The warranty claim is valid only after submission of the defective component. The replacement of a defective component is made exclusively by ZEMMLER® Siebanlagen or by one of the service companies authorised by us.

The warranty claim expires if repairs have been made by unauthorised service company and/or with non-original components.

Warranty period:

The warranty period is 12 months or 1000 hours of operation, depending on which one comes first, and begins from the date of delivery to the first end user. In the case of complaints or warranty claims, please contact directly the seller or the manufacturer ZEMMLER® Siebanlagen.

Disclaimer of warranties:

All replaceable individual parts, e.g. bolts, connection pins, etc., are excluded from this warranty. Furthermore, no liability is assumed for damages which were caused by:

- inappropriate and incompetent use
- consumable parts (belts, border elastic bands, wipers, screen linings, brush elements)
- erroneous and negligent handling

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

3 Safety instructions

3.1 General information on safety

The Chapter *Safety instructions* provides an overview of the the safety aspect to be observed during the operation of the double-drum screening machine.

The general safety instructions are related to the safety-related condition of the double-drum screening machine, the preconditions for its operating and servicing as well as the handling of the operating and auxiliary materials.

Along with these general guidelines, the descriptions of the processes or the handling instructions in the individual chapters of the Operating Manual are provided, when necessary, with concrete safety instructions.

Only the compliance with all safety instructions (general and concrete) makes possible the optimal protection of the personnel and the environment from hazards as well as the safe and trouble-free operation of the double-drum screening machine.

ZEMMLER® Siebanlagen recommends to the operator to prepare on the basis of the provided guidelines a safety concept for the work processes in his operation or, as the case may be, to adapt an existing concept. The necessary directives or instructions for implementation of this concept must be determined for the individual work areas in the form of written operating instructions.

The double-drum screening machine is designed according to the currently valid rules of the sound engineering practice and is safe to operate. We design and manufacture our machines according to the Machinery Directive 2006/42/EU.

However, there may be hazards related to the machine when it is used by untrained personnel, inappropriately or not as intended.

That is why every person that is assigned to operate or maintain the machine must have read and understood the complete Operating Manual before performing the respective work task. This is valid also when the respective person has already worked with such or similar machine or has been trained by ZEMMLER® Siebanlagen.

It is recommended to the operator to obtain from the Personnel Department a written confirmation for the knowledge of the content of the Operating Manual. The knowledge of the content of the Operating Manual is one of the prerequisites for protecting persons from hazards as well as for preventing any errors.

The Operating Manual must be available at any time to the operating and maintenance personnel!

Ultimately responsible for the accident-free operation is the operator or the personnel authorised by him, who must operate the machine according to the assigned task.

The work safety information is related to the currently valid regulations of the European Union. In other countries, the corresponding laws and, respectively, local regulations must be observed and complied with. Both for the European Union as also for other countries, respectively, the current status of all the regulations must be determined by the operator.

Along with the safety instructions in this Operating Manual, the generally valid safety and accident-prevention regulations must be observed and complied with.

The entire information in the Operating Manual must be followed unconditionally!

3.2 Work safety

By following the work-safety instructions, any danger to persons, the environment and/or the double-drum screening machine can be prevented.

The ignoring of these instructions can cause under the circumstances the following:

- Danger to persons due to mechanical, electrical or chemical effects;
- Danger to the environment;
- Malfunction of the double-drum screening machine and/or other parts of the machine.

Ignoring the safety standards can lead to losing any claims for compensation for damages!

3.3 Intended use



The operating safety of the double-drum screening machine is guaranteed only at an intended use according to the information in the Operating Manual .

The double-drum screening machine is a system which has been designed specifically for classification (sieving) of bulk materials in two (and optionally three) fractions. Hereby the maximum and minimum grain size as well as the maximum humidity of the bulk material must be taken into consideration.

Any other use or use that is outside of it is considered not intended use! For damages resulting from it only the operator is liable. This is valid also for any unauthorized changes of the machine.

To the intended use belong also the compliance with the commissioning, operating and maintenance conditions prescribed by ZEMMLER® Siebanlagen as well as the use of the bulk materials and the operating and auxiliary substances approved by ZEMMLER® Siebanlagen.

Furthermore, only original spare parts may be used. Any incorrect or defective spare parts can lead to damages to the machine.

To the intended use belongs the observing of the operating, maintenance and cleaning requirements prescribed by the manufacturer. The unauthorised and improper use leads to exemption from liability.



Note!

In order to guarantee an optimal use of the machine, our specialists are available to you around the clock for questions about the corresponding bulk material and the adequate sieving.

3.4 Warning signs on the double-drum screening machine

The instructions and symbols such as warning signs, directional arrows, operating signs, etc., which are placed on the machine or the auxiliary equipment, must be mandatorily observed. They should not be removed and must be maintained in a fully legible condition.

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



Warning – Danger due to hand injuries!



Warning – Danger due to bodies or parts of the bodies being pulled in!



Wear hearing protection and helmet



Wear gloves

3.5 General safety instructions about the technical condition of the machine

The machine corresponds in its construction and design to the currently valid rules of the sound engineering practice. For preventing any hazards and for securing the optimal performance, no changes or modifications of the machine, which have not been explicitly approved by ZEMMLER® Siebanlagen, should be made. This is valid also for any software changes in the programmable control systems.

As a matter of principle, any unauthorized modifications or changes, in particular such that affect the safety of the personnel, the environment or the machine, are not permitted.

The settings, which are specified in the Operating Manual, or any value ranges should not be exceeded.

The spare parts and the parts subject to wear must correspond to the technical requirements determined by ZEMMLER® Siebanlagen. This is guaranteed in the original spare parts.

The operator is obliged to operate the machine only in a faultless, safe to operate condition. In particular, all safety devices and interlocks must be easily accessible and regularly tested for their flawless functioning.

3.6 General safety instructions for the operator

The Operating Manual is an essential component of the machine. The operator takes care that the operating personnel is well acquainted with these guidelines.

The Operating Manual is extended by the operator with existing operational requirements for accident prevention and environment protection, including with information regarding the supervisory responsibilities and reporting obligations for taking into consideration the operation specific features, a.g. as regards the work organisation, the work processes and the used personnel.

Along with the mandatory regulations for accident prevention and work protection, which are valid in the country of use as well as at the place of work, also the recognised technical rules for safe and skilled works must be observed.

The operator must oblige the operating personnel to wear personal protective equipment, insofar as the local regulations require it.

The first-aid equipment (first aid kit boxes, etc.) must be kept close at hand!

The location and the way of operating the fire-fighting equipment must be well known. A fire alarm system and fire-fighting possibilities are provided.

Use only trained or instructed personnel. The responsibilities of the personnels for the operation, equipping, maintenance and servicing must be clearly determined!

One machine supervisor must be selected, who has to be responsible for the machine and the personnel. The personnel that is in training, learning, under instruction or under general education may work on the machine only under the constant supervision by an experienced qualified person!

3.7 General safety instructions for the operating personnel

The machine may be operated and maintained only by authorised, trained and instructed personnel. This personnel must receive a special training for the potential hazards.

A person is considered trained when already instructed and when necessary taught about the tasks assigned to him and the possible hazards in the case of improper behaviour, as well as instructed about the necessary protection equipment and protection measures.

An employee is considered specialist personnel when, on the basis of a specialist education, knowledge and experience as well as knowledge of the relevant regulations, the employee can evaluate the works assigned and can recognise the possible dangers.

If the personnel does not have the necessary knowledge, a corresponding training is needed. It can be provided by ZEMMLER® Siebanlagen upon an order by the operator.

The responsibilities for the operating and servicing must be clearly determined and adhered to, so that there are no unclear competences under the safety aspect.

The machine may be operated and maintained only by persons, from which it can be expected to perform reliably their work. Hereby, any working method that adversely affects the safety of the persons, the environment or the machine must be discontinued. Persons, who are under the influence of drugs, alcohol or medications, which impair the reaction ability, should not perform any work on the machine.

In the selection of the personnel, it is necessary to take into account and observe the youth employment protection regulations of the respective country with respect to the minimum employment age and the profession-specific requirements.

The operator must take care that no unauthorised persons work with the machine.

Not-authorised persons, such as visitors. etc., may not enter in contact with the machine. They must stay at a reasonable safety distance.

For preventing damages to persons, the working clothes of the operating and maintenance personnel must correspond to the requirements of the accident-prevention regulations and the recommendations of the professional associations (no wide sleeves, low resistance to tearing, etc.).

Depending on the works to be performed, personal body-protection means (eye protection, ear protection, protective clothes, etc.) must be worn.

All the safety devices mounted on the machine (locks, latches, etc.) must be always attached and their function has to be tested. In the absence of safety devices, the machine may not be operated, or it must be put out of operation until the defects are adequately corrected. The machine operator is responsible for that.

3.8 Behaviour in the case of danger and at accidents



In the case of danger or at accidents, the machine must be turned off by the immediate activation of an emergency stop button (see Fehler! Verweisquelle konnte nicht gefunden werden. 1).

The emergency-stop function brings immediately the machine to stop regardless of the current position of the machine components.

Activate the safety devices with the emergency-stop function only in corresponding emergency situations. It should not be used for normal turning off of the machine.

Always be prepared for accidents or fire!

Keep the first-aid equipment (first aid kit boxes, eyewash bottle, etc.) and the fire extinguishers close at hand!

The personnel must be familiar with the handling and the location of the safety, accident-signalling, first-aid and rescue facilities. Through them a best-possible help is securely provided at accidents and for protection against dangers.

3.9 Safety instructions for maintenance works

Perform maintenance works only at standstill of the machine.

At all maintenance works observe the switching off procedures described in the Operating Manual and pay attention to the necessary safety measures.

At all interruptions of the operation make sure that all the necessary protection devices are functioning.

The maintenance cycles and the recurrent tests of the motor and the technical equipment of the machine must be planned and performed by the user or, as the case may be, respectively assigned.

In the case of damage to the machine, stop immediately the operation, leave the machine with empty load, turn it off and repair or replace the respective components.

After the end of all assembly or maintenance works, test whether all safety devices have been mounted and function faultlessly.

The safety devices should not be bypassed or put out of function.

Only specialised personnel should be used for performing certain maintenance works. This is valid in particular for works on the hydraulic and electric equipment.

3.10 Safety instructions for the workplaces of the double-drum screening machine



At the workplaces there should be only objects that are necessary for the respective operation phase.

The machine operator must be always in the immediate vicinity of the machine and monitor the operation. The machine should not run unattended.

After the end of the works, in any case, the machine should be run empty and then turned off.

Secure the machine against accidental restarting.

Figure 32 shows the configuration of the working, operating and feed-in workplaces which are taken by the operating personnel.

Drawing of the machine from above with designation of the operating station

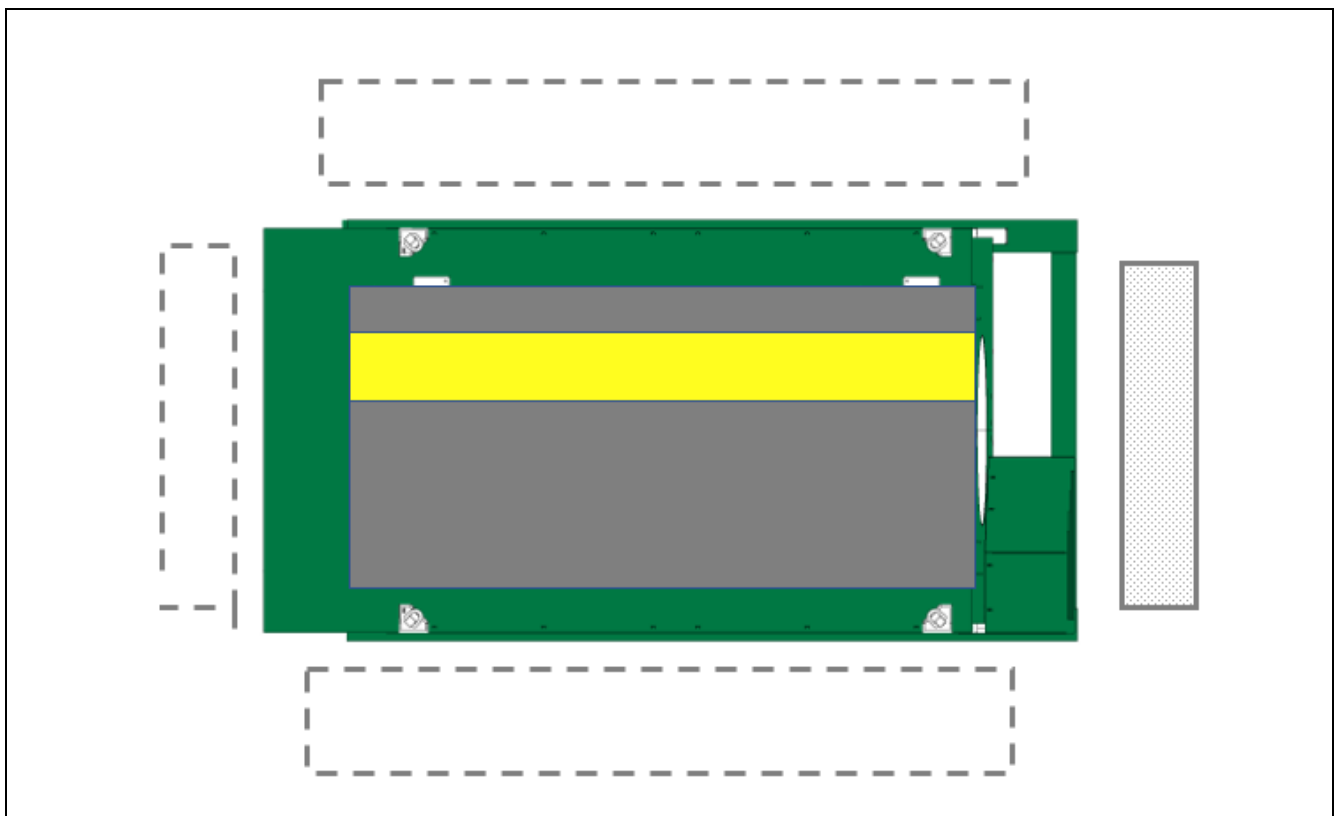
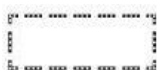


Figure 32: Configuration of the workplace



Workplace for equipping, for performing visual controls and monitoring the control instruments during the operation, for cleaning, maintaining and servicing works as well as for troubleshooting.



Intake area of the machine

4 Transport



Attention!

The transportation of the double-drum screening machine should be made only with approved towing vehicles.

Please observe the valid guidelines for that (national road traffic regulations - StVZO).

4.1 Preparing the machine for transportation

In the preparation of the machine for transportation, the following points must be paid attention to:

Any material must be removed from the charging hopper, the drum as well as the conveyor belts.

Clean thoroughly the belts and the drums, so that no falling residues of the material hamper the following traffic.

Check the machine for possible damages which can affect the safety of the transport.

Any damages must be made known to the competent personnel, so that they can be repaired before the next commissioning.

Check before the transportation on open roads whether the machine observes the StVZO guidelines.



Attention!

Check that in the fractions the transportation locks are mounted.

Prior to the transportation, the appropriate condition and the road safety of the machine must be checked.

Prior to any transportation, the operator must perform a visual inspection of the entire machine.

The machine is equipped with four lifting points and can be hoisted with a crane runway.



Figure 4.1: 4 Lifting points

5 Commissioning

5.1 Initial commissioning

After the installation, the initial commissioning and performing a test run by the ZEMMLER® Siebanlagen customer service, the transfer of the double-drum screening machine to the operator takes place. Then the machine can be operated in compliance with the information in the Operating Manual / operating instruction and in the respectively valid work protection and accident prevention regulations.



Attention!

Prior to the use, the appropriate condition and the operating safety of the machine must be checked. All the safety devices mounted on the machine (locks, latches, etc.) must be always attached and their function has to be tested.

Prior to any commissioning, the operator must perform a visual inspection of the entire machine.

5.2 Commissioning after maintenance or malfunction

After all maintenance and servicing measures have been appropriately completed, the machine can be put again in operation.



Attention!

Prior to commissioning, the appropriate condition and the operating safety of the machine must be checked.

Prior to any commissioning, the operator must perform a visual inspection of the entire machine.

Make sure that all tools, auxiliary means and packaging have been removed.

Make sure that all safety measures and stabilising procedures have been completed successfully according to the commissioning handling instructions.

5.3 Commissioning after a long standstill period

If the machine has been taken out of operation for a longer period of time, it is necessary to clean the entire machine.

When putting the machine in operation after a long standstill period, it is necessary to subject it again to a detailed visual inspection. All the safety devices mounted on the machine (locks, latches, etc.) must be always attached and their function has to be tested.

5.4 Commissioning after the transportation

After transportation, the machine must be lifted into the respective operating position by a suitable forklift truck.

The further course of action takes place as described under the *Section Operational readiness on Page 22*.



Figure 61: Example The sieving machine in working position

6 Operation readiness



Attention

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

The installation and initial commissioning of the machine must always be made by the customer service of the company ZEMMLER® Siebanlagen.

Unauthorized assembly or installation works are not permitted.



Caution – Tipping hazard of the double-drum screening machine!

If the double-drum screening machine is mounted on unstable or uneven foundation, there is a tipping hazard during the operation of the machine.

Take care for providing a sufficiently stable and even platform.

6.1 Installing the machine

1. Install the double-drum screening machine on an even, stable and flat surface.



Attention – Tipping hazard of the double-drum screening machine!

If the platform does not have sufficient load-bearing capacity, increase the bearing surface for the supports.



Warning – Crush hazard

By lowering the supports, the crush hazard for the operating personnel can exist in the feet area.

Please provide adequate safety distance to the plates of the supports.

7 Maintenance and servicing

7.1 General information about the maintenance and servicing

The consistent performing of the maintenance works and the observing of the time intervals are important prerequisites for the reliable function of the machine.

In this Chapter, the works, which must be performed by the operating personnel of the machine or by qualified specialist personnel, are determined.

Check regularly after each use of the sieving machine all the components for wear and tear and damages. Replace the defective components on time or leave the components to be replaced by specialised personnel in order to exclude any damage to other components. If thereby separating protection devices are removed, they must be mounted again after the replacement operation is completed.

A summary and overview of the works can be found in the maintenance schedule.



The daily and weekly maintenance can be performed by an authorised machine operator. The time-dependent maintenance works must be performed by an authorised installer/technician. All the other maintenance works and fault corrections, which are not handled in this introduction or can not be performed independently, must be performed by the ZEMMLER® Siebanlagen Service division.



Note

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



Note

Please read before use the operating and maintenance manual of the power generator manufacturer; it is part of this maintenance manual and is **not** included here.

7.2 Safety measures during maintenance and servicing works

In all works, the specified safety measures and the eventually necessary shut down procedures must be observed and complied with.

In works, which need protection devices (e.g. cladding doors) to be opened, first an emergency stop button must be pressed.

For works on certain devices, additional safety measures are necessary.

7.3 Emptying the machine

**Note!**

The machine must always run empty.

The control is done by inspecting the two fraction belts and the double drum.

For performing maintenance works, which in case of need would be necessary to be performed during the operation, the machine must run completely empty. This means that no sieved material should be fed into the machine and the conveyor belts of all two fractions must run empty.

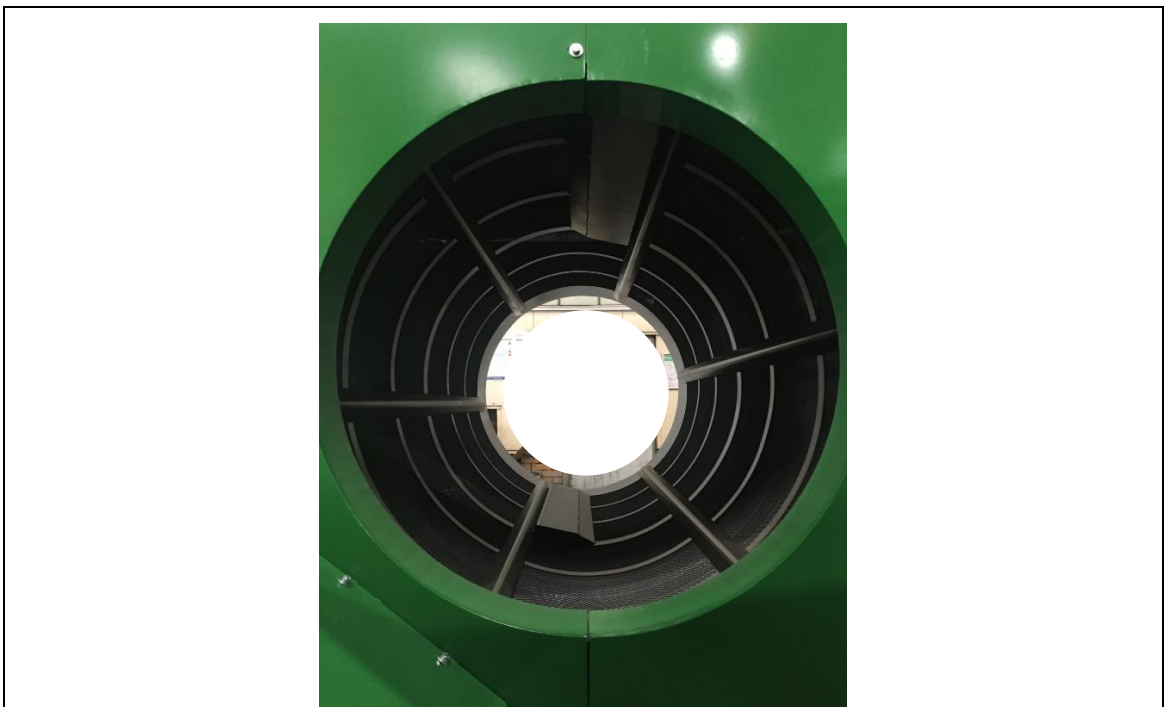


Figure 71: Visual control of the double drum

7.4 Securing the machine

1. Switch the machine off.
2. Press the emergency stop button and remove the key.
3. The main switch must be "Off" and has to be secured with a padlock against switching on.

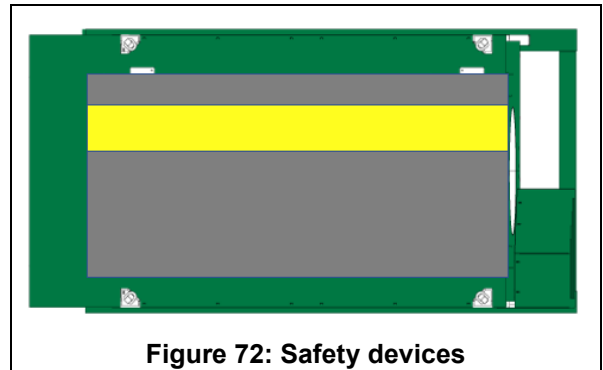


Figure 72: Safety devices

7.5 Maintenance after the initial commissioning

The first maintenance after the initial commissioning is performed exclusively by the specialised personnel of ZEMMLER® Siebanlagen. Please take the next maintenances from the maintenance schedule.

7.6 Maintenance schedule



Attention – damaging the machine!

Prior to each start of production, the flawless functioning of all the safety devices must be tested. The controls according to the maintenance schedule must be made by trained specialised personnel.



Note!

The following maintenance works for maintaining the function of the machine and for warranty claims must be complied with:

Interval	Item No.	Component / designation	Page
A daily (10h)	A1	Visual control of the entire machine	27
	A2	Visual control of all liquids of the machine	27
	A3	Noise control	27
	A4	Visual control of all wear and tear parts - belt scraper	27
	A5	Cleaning - removal of material deposited on the belts	27
B weekly (50h)	B1	Check the drum brushes	28
	B2	Lubrication of the brush / Lubrication of the conveyor rollers	28
	B3	Visual control of bearings / conveyor rollers	28

Table 71: Overview of the maintenance schedule

7.6.1 Maintenance A – daily

- A1** Perform daily a visual control of the entire machine.
When there are leaks, suspicious noise, visible or hidden objects (such as cracks), stop the machine and secure it against restarting.
Replace the defective machine parts by using standard tools and spare parts and by observing all safety regulations.
As the case may be, inform the customer service of ZEMMLER® Siebanlagen.
- A2** Perform daily a visual control of all liquids of the machine.
Pay special attention to machine parts under pressure.
If the gasoline tank has become empty, please refer to the user and maintenance manual of the motor manufacturer.
Eliminate the leaks by observing all the safety standards and by using standard-conforming tools and original spare parts.
As the case may be, inform the customer service of ZEMMLER® Siebanlagen.
- A3** Perform daily a noise control of the entire machine.
Special attention is to be paid to the wear and tear parts.
If suspicious noises are detected during the control, shut down the machine and secure it. Replace the defective machine parts by using standard tools and spare parts and by observing all safety regulations.
As the case may be, inform the customer service of ZEMMLER® Siebanlagen.
- A4** Perform daily a visual control of all wear and tear parts.
When there are leaks, suspicious noise, visible or hidden objects (such as cracks), stop the machine and secure it.
Replace the defective machine parts by using standard tools and spare parts and by observing all safety regulations.
As the case may be, inform the customer service of ZEMMLER® Siebanlagen.
- A5** When necessary, clean thoroughly the conveyors in order to prevent any unwanted deposits causing wear.

7.6.2 Maintenance B – weekly



Caution – Injury hazard!

Always wear protective clothing during all maintenance works.

- B1** Perform weekly a visual check of the drum brushes. The drum brushes must always take action in the drums in order to achieve as good as possible cleaning effect in the drums.
- If defective components of the brushes are found during the control, secure the machine and replace the defective brush components by observing all safety standards and using standard-conforming tools and spare parts.
- B2** Lubricate all lubrication points weekly.
- The lubrication must be carried out with the correspondingly suitable tool and operating equipment. If there are damages, replace the defective machine parts by using standard tools and spare parts and by observing all safety regulations.
- As the case may be, inform the customer service of ZEMMLER® Siebanlagen.
- B3** Carry out a visual control for wear to the bearing and conveyor rollers weekly and also every 100h.
- One-sided wear indicates malpositioning. As the case may be, inform the customer service of ZEMMLER® Siebanlagen.

7.7 Operating equipment



Attention – damaging the machine!

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

Always use the equipment that is introduced in the user manual of the engine manufacturer in order to prevent any damage to the machine or its assemblies.

Operating equipment	Quantity	Type	DIN
Lubricating grease			ISO 6743



Note!

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

7.8 Position of the lubrication points on the machine

The machine is equipped with three central lubrication points. The lubrication points on the machine are to be lubricated **weekly** or **monthly**, with 5 strokes each time.



Figure 73: Position of the central lubrication points



Brush lubrication points:

5 strokes 1x week



Drum carrier rollers lubrication points:

5 strokes 1x month

7.9 Screen replacement



Warning against bodies or parts of the bodies being pulled in
Body parts can be pulled in during rotation of the screening drum.
Particular caution is necessary when working on the screening drum.
The screen lining ends may swing out.



Note!

When the screens are mounted, the machine must be "OFF" and secured (see Section 11.4). The machine must also be empty.

Loosen the screen lining:

1. Dismantle the drum in direction of travel of the right side doors.
2. Raise the drum tensioning station to mounting height with your hand and loosen the screws.
3. Release both ends of the screen lining from the tensioning station with a tyre lever.
4. Pull the screen out of the machine carefully.

Mounting the screen lining:

1. Position the drum tensioning station just under the door opening with your hand.
2. Hook up the end of the screen lining without any screwing device.
3. Turn the drum manually until the lining is placed completely in the drum.
4. Put the screen lining end into the tensioning station and tighten with the screws.
(see Figure 11.2)



Figure 7-4: Tensioning and fastening device for screen mesh lining (example)

7.10 Replacement of the brush components



Caution – Injury hazard!

Wear during these works protection clothing, gloves and goggles.

Replace the brush components

1. Disassemble the complete brush arrangement.
2. Remove this arrangement from the machine with an adequate tool.
3. The two bearings (2) for the brush shaft must be disassembled and removed.
4. Now it is possible to take out the distance rings and the individual burst components from the shaft.
5. The burst components can be mounted in the reverse order.

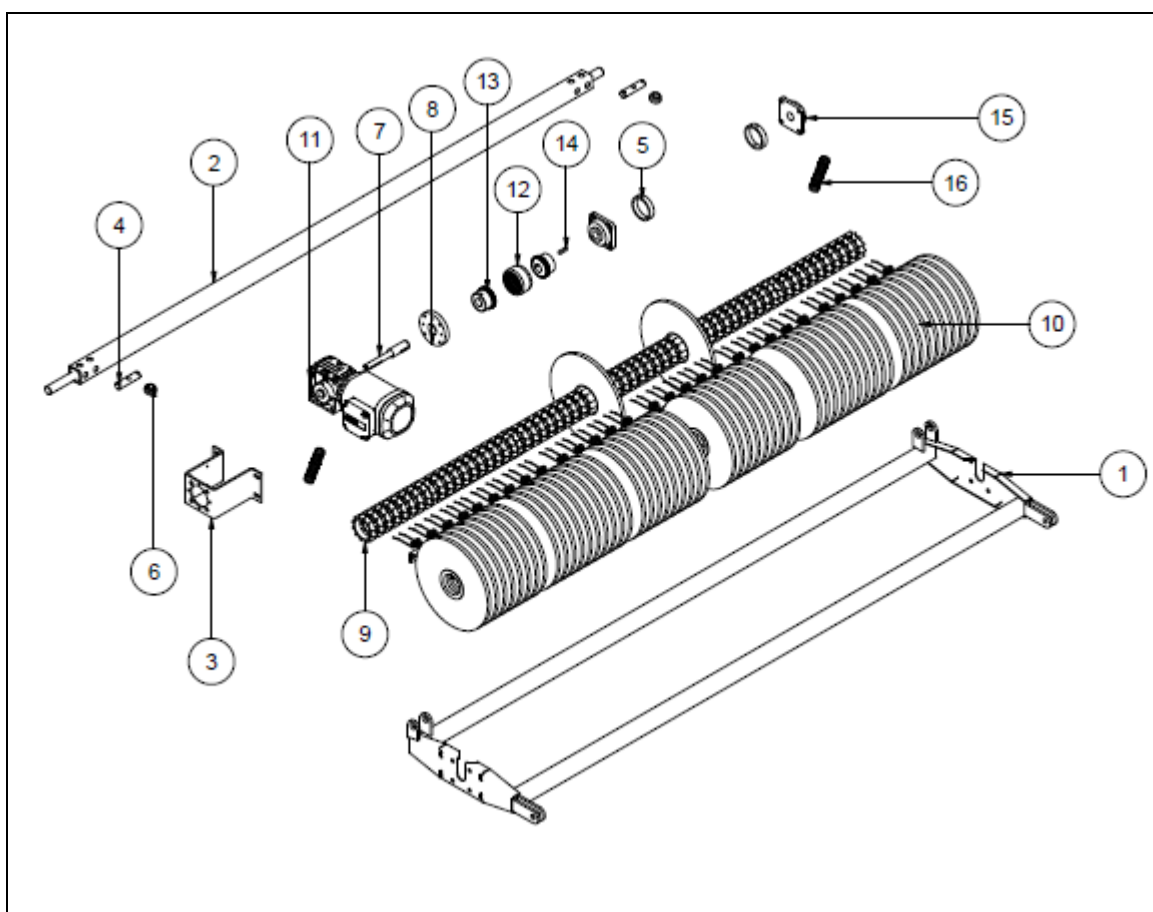


Figure 75: Structure and mounting of the brush components

Item	Quantity	Article number	Designation
1	1	322000_0601_000	Brush frame
2	1	322000_0602_000	Brush shaft

3	1	322000_0600_004	Brush motor intake
4	2	S 10736	Brush spring bolts 100 long
5	2	S 10800	End piece for brush component 19 long
6	2	S 11194	Centring compression spring brush 20 long
7	1	S 11196	Brush drive shaft
8	1	S 11197	Brush motor adapter plate
9	66	80,601	Spacer ring 3"x25 mm plastic
10	60	90_04_00_0001	Brush component Ø350
11	1	30_04_08_0001	Brush gear motor
12	1	30_05_02_0001	Plastic coupling conveyor belt drive
13	2	92,022	Steel hub brush drive Ø30H7
14	1	P8x7x40	Feather key
15	2	90_02_00_0013	Flange bearing UCF 206 - d30mm
16	2	80_06_00_0013	Brush pressure spring

**Note!**

If you need new brush components, please contact ZEMMLER® Siebanlagen. Our employee will be glad to assist you.

7.11 Securing the machine after maintenance

**Attention – damaging the machine!**

Perform a visual inspection of the readiness for operation of the entire machine.
There should be no tools, spare parts, etc. lying around

**Caution – Injury hazard!**

Close and secure all maintenance doors during the visual inspection of the upper side.
All the doors must be secured against unintentional opening by using the padlocks provided for this purpose.

8 Technical data

8.1 The entire machine

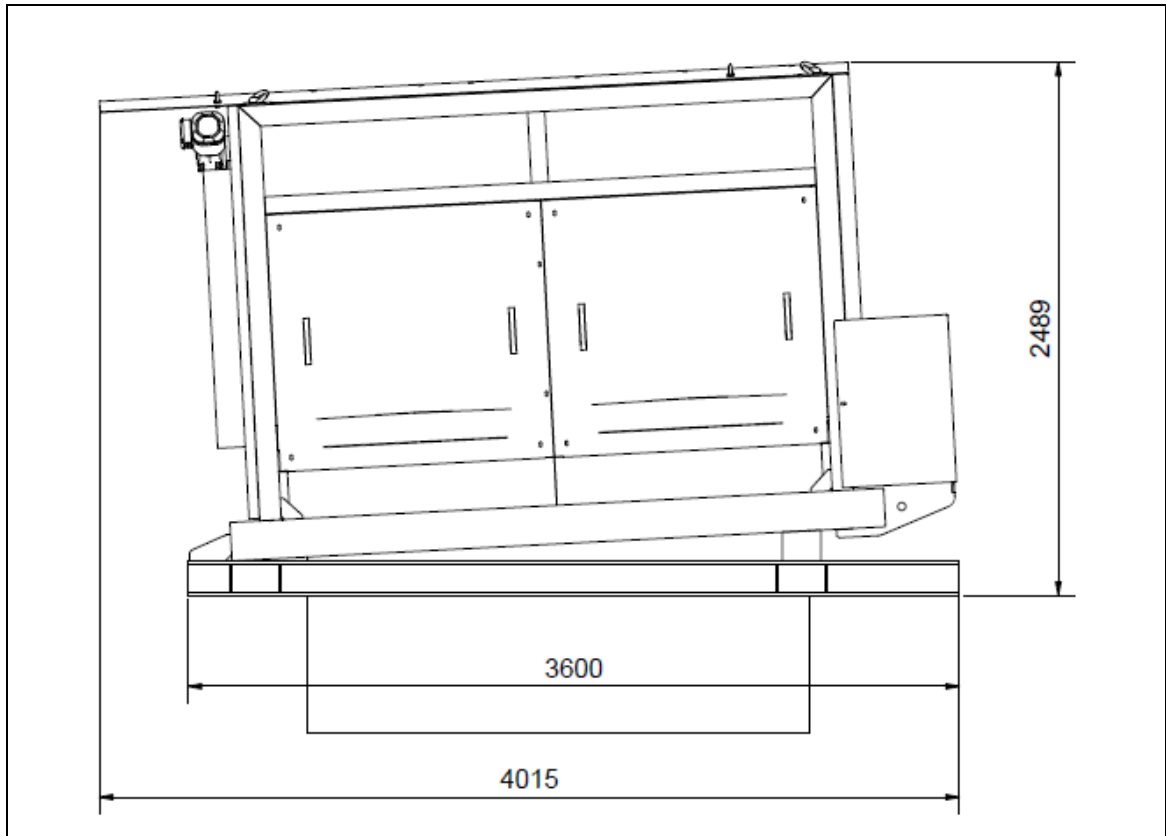


Figure 81: The entire machine in operating position - lengthwise

8.2 The entire machine (Front view)

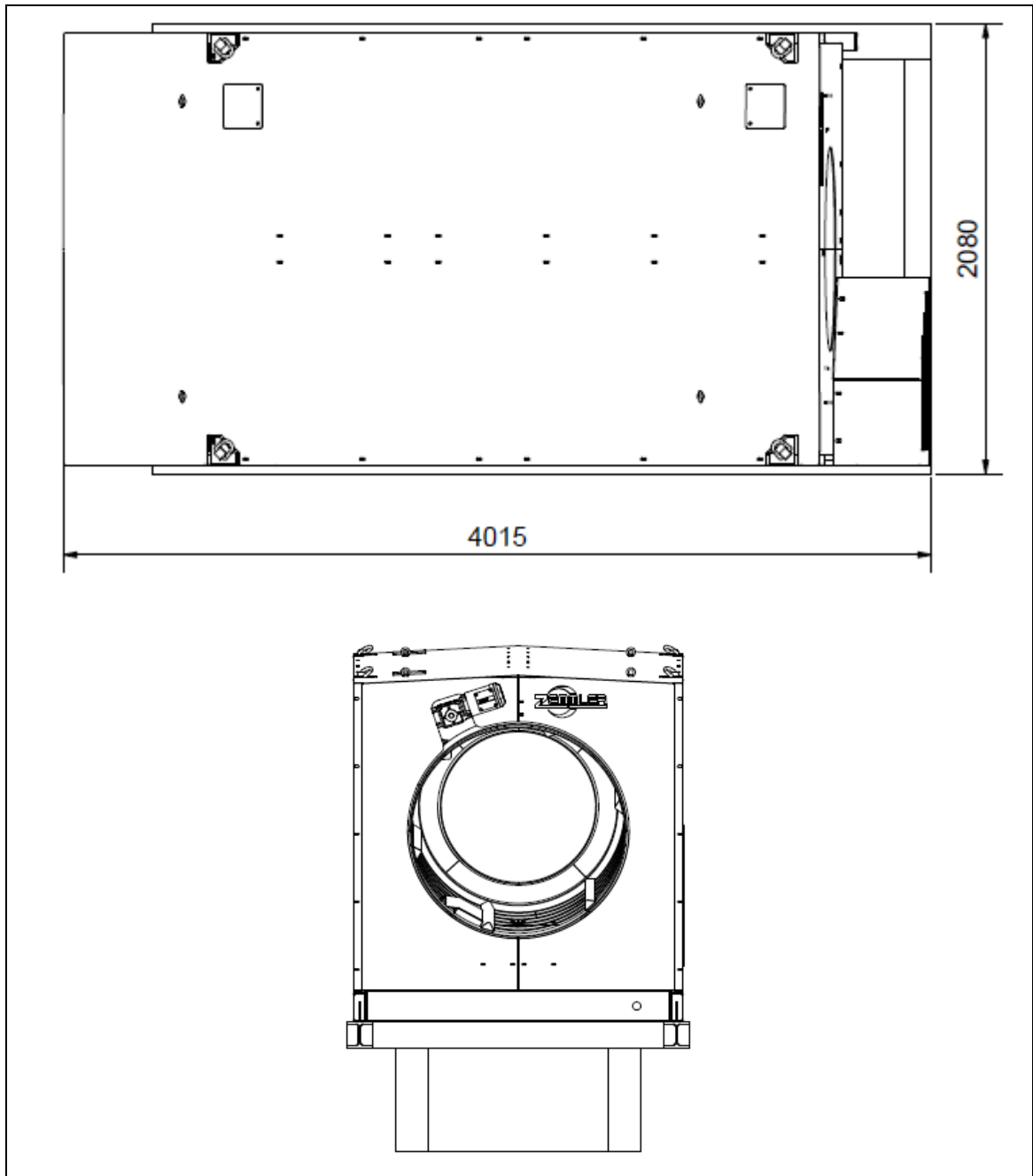


Figure 82: The entire machine – side and front

8.3 Performance characteristics

Sieved materials:

Compost, wood chips, soils, sand, slags, gravel, grit, excavated soil, stones and recycling materials up to max. 170 mm

Operation:

1 person

**Throughput
of the double-drum screening
machine:**

about 20-50 m³ per hour
(depending on the material, charging,
selected fractions and mesh size)

8.4 General data

**Stationary double-drum screening machine MS 3200 – transport dimensions /
operation dimensions**

Length:	4,015 mm
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Width:	2,080 mm
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Height:	2,489 mm
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Weight

Machine (unfilled):	about 3,000 kg
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8.5 Type plate

The type and manufacturer plate is located on the right-hand side of the base frame in the driving direction.

The data on the type plate, in particular the Serial No., must be always provided when ordering spare parts, in order to prevent any errors and to guarantee to you a flawless process of delivery of the spare parts.



Figure 83: Type plate

9 Disposal

Machines, which have been taken out of the work process for a long time, must be disposed in accordance with the legal guidelines. The individual components must be separated in the respective material and substance groups and should be disposed at the corresponding collection points.

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