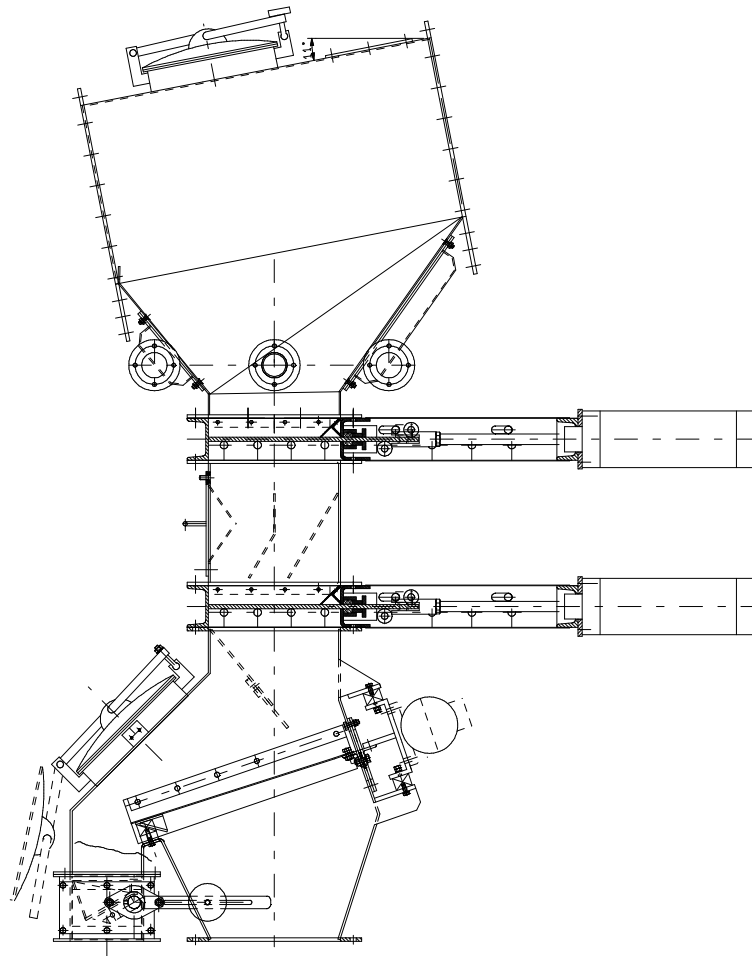


# Operating and Assembly Instructions

(Original)

## Foreign Particle Trap with Shut-off Valve and Inclined Sieve

**9.382.02-19**



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## Preliminary

These assembly instructions contain important information about the foreign particle trap, and should be carefully saved during the service life of the foreign particle trap. The assembly instructions are a component of the foreign particle trap.

The assembly instructions must be available at all times to any persons working with or on the foreign particle trap. They must have read and understood the entire assembly instructions.

The assembly instructions are to be checked regularly for condition and completeness.

In addition to the assembly instructions and the binding regulations for accident prevention regulations, the recognised rules for safety and proper work procedures.

## Layout of the assembly instructions

In the right part of the heading are the contract number, machine number and the machine type, and in the left part is the manufacturer/deliverer of the machine.

The machine numbers are compiled as follows:

Order number:	9.382.02-19
Item number in order:	1
Machine number:	9.382.02-19 /1

## Symbols used

Information about possible dangers is explained in the sections next to the symbols.



Read instructions



Use personal protective gear



Warning of possible danger



Warning – hot surface



Warning – risk of tripping and falling



Warning – risk of falling



Warning - dangerous voltage



Warning – suspended load



Warning – risk of fire



Warning of entanglement hazard



Warning of automatic start-up



No unauthorised entry



Do not stand under suspended or lifted loads



Do not insert fingers.

---

**BBM ehrhardt** GmbH  
Postfach 1351 D-59243 Beckum, Germany

Customer: Christian Pfeiffer GmbH  
Order No.: 170/45527806  
Com. No.: 9.382.02-19  
Syst. Sec.: Foreign Particle Trap NW 500

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## 1. Manufacturer's address

BBM ehrhardt GmbH  
Auf dem Tigge 27, D – 59269 Beckum, Germany  
Post Office Box 1351, D – 59243 Beckum, Germany

Tel: +49 2521 – 93 42- 0

Fax: +49 2521 – 93 42- 19

E – Mail: [kontakt@bbm-ehrhardt.de](mailto:kontakt@bbm-ehrhardt.de)

Homepage: [www.bbm-ehrhardt.de](http://www.bbm-ehrhardt.de)

General Managers: Herbert Baumert, Guido Baumert, Helmut Ehrhardt



## 2. Declaration for the assembly of a partly completed machine

Manufacturer:	BBM ehrhardt GmbH
	Auf dem Tigge 27
	02521 - 93 42- 0

Declares herewith that

Product	Foreign particle trap with shut-off valve and inclined sieve
Machine No.	9.382.01 – 19 / 1
Year of manufacture	2020

Complies with the basic safety and health protection requirements for construction and manufacture according to Appendix I of the Machine Guidelines 2006/42/EC Article 1.1.2, 1.1.3., 1.1.5., 1.3.2., 1.3.4., 1.3.8.1., 1.4.1., 1.4.2.1, 1.5.5.

The special technical documents have been prepared according to Machine Guidelines 2006/42/EC Appendix II Part B.

A risk assessment was performed on the basis of relevant harmonised documents

DIN EN 12100-2010	Machine safety Basic concepts, general design principles Basic terminology, methodology, technical principles
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BBM ehrhardt GmbH declares herewith that with the substantiated claims of national authorities the specific documents for partly completed machines were made available. The documents were sent by post.

Mr Guido Baumert (see manufacturer's address) is authorised to compile the relevant technical documents for the machine listed below.

The specified partly completed machine may only be put into operation once it is determined that the machine in which the partly completed machine is to be installed complies with the regulations of EC Guideline 2006/42/EC.

Beckum 21.01.2020  
Date

Guido Baumert  
GF

### 3. Description of the machine

The foreign particle trap is mainly due to the outlet box, the transfer chute, the shutoff valves, the vibration motor, the foreign particle trap and the single pendulum flap.

The opening or closing of the shut-off valve takes place with pneumatic cylinders.

The vibrating screen is operated by the vibration motor.

Proximity switches are used as monitoring equipment

## 4. Information

### 4.1 General Information



The assembly instructions are a component of the foreign particle trap. The assembly instructions and supporting documents must be carefully read and followed before starting assembly.

The assembly instructions must be available at all time to any persons working with or on the foreign particle trap. They must have read and understood the entire assembly instructions.

The assembly instructions are to be checked regularly for condition and completeness.

The assembly instructions are to be keep and followed during the entire service life of the foreign particle trap.

## 5. Safety

### 5.1 Safety information

Details about the individual risks associated with the foreign particle trap are included in the sections.



Observe any legal and local safety instructions that take precedence over those in the assembly instructions!

### 5.2 General safety informations



Personal safety gear (such as gloves, safety shoes, protective glasses, helmet, etc.) must be worn for any work done on the foreign particle trap.

When working at a height, a safety harness should be worn as well.



Downstream machines must be dimensioned to be the same as or larger in power than the delivered foreign particle trap.



It must not be possible to reach into the foreign particle trap from openings in components situated above it or below it (inspection doors, maintenance doors, covers, etc.) Maintain safe distances in accordance with DIN EN ISO 13857.

If a component (such as a chute) is removed from above or below the foreign particle trap, ensure the trap against unintended activation.



All protective covers and protective equipment must be in proper condition.



A sufficient cool-down time must be observed for any work on the foreign particle trap. The surface temperature shall not exceed 43°C.



No parts may be discarded in the work and maintenance areas.  
The work and maintenance areas are to be kept clean at all times.



Work on electrical system parts must only be performed by qualified electricians.



Assembly, service, maintenance and repair must only be performed by personnel qualified for this work.  
Information on the required qualification can be found on page 15.



Do not work on the machine with long hair or loose clothing (such as ties, loose sleeves).

### 5.3 Protective Design

Guards and protective equipment are mounted in the dangerous areas. The guards and protective equipment are implemented in accordance with the respective EN standards.

Do not operate the foreign particle trap without guards and safety equipment.

### 5.4 Start-up warning

For machines that are not accessible from the control stand or that run automatically, the operator of the system must provide a start-up warning, in accordance with legal and local rules.

### 5.5 Monitoring equipment

#### 5.5.1 Limit switch

The inductive proximity switch, type ifm IG5401, are mounted at the balling press of the sieve unit. The others, type ifm IG5349 are mounted at the side of the frame of the shut-off valve.

## 6. Intended use

### 6.1 Machine limits

The foreign particle trap is only for the transport of dry goods as determined by the specifications named in the contract and these assembly instructions.

Any other or further uses of the foreign particle trap are deemed to be not in accordance with specifications.

The foreign particle trap must only be operated in technically perfect condition in observance of the assembly instructions and safety requirements.

Malfunctions which could compromise security must be immediately resolved!

The assembly instructions, especially the inspection and maintenance information, must be observed.

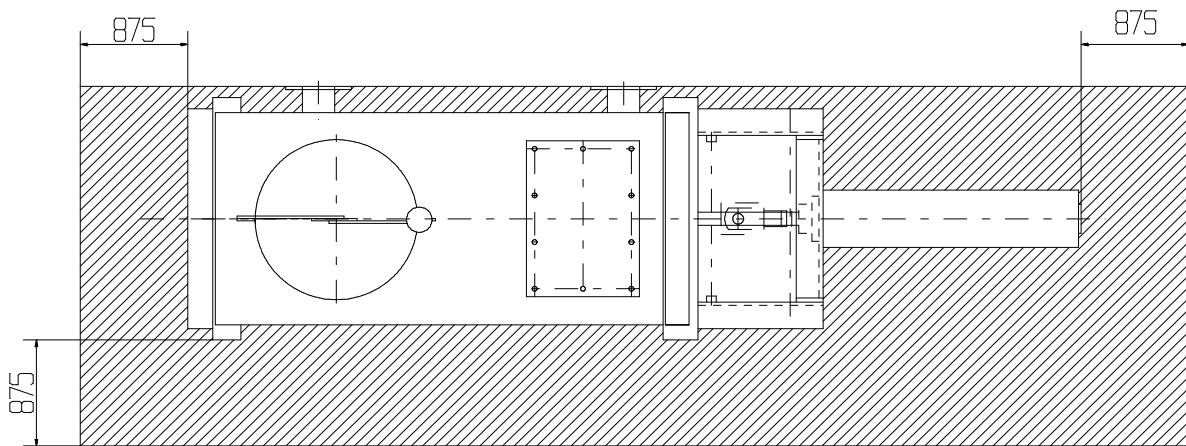
No changes, additions or modifications may be made to the foreign particle trap which could compromise security, without permission of the manufacturer.

Installation location	Inside a building
ambient temperature	ambient temperature
Installation height	Less than 1000 m

The foreign particle trap is only intended for commercial use.

## 6.2 Maintenance and repair area

A maintenance and service area must be specifically observed next to the foreign particle trap, as in the drawing.



## **6.3 Personnel**

In accordance with the Ordinance on Industrial Safety and Health, only qualified personnel are to be employed by the operator of the system.

### **6.3.1 Service personnel**

Servicing and cleaning of the foreign particle trap must only be performed by persons assigned by the operator of the system.

Service personnel must be qualified through their training to work independently on the foreign particle trap.

Service personnel must be informed of the characteristics and risks of the foreign particle trap.

### **6.3.2 Personnel for assembly, maintenance and repair**

Assembly, maintenance and repair of the foreign particle trap must only be performed by qualified professionals.

Professionals are people who are assigned the tasks of maintenance and repair by the operator of the system.

The qualified personnel must have sufficient training to be able to independently perform the task assigned.

Qualified personnel must be informed of the characteristics and risks of the foreign particle trap.

### **6.3.3 Personnel for working on electrical system parts**

Work on electrical system parts must only be performed by qualified electricians.

The electrician is assigned by the operator of the system to work on electrical system parts.

An electrician is a person who, based on their technical training, knowledge and experience as well as knowledge of the respective requirements, can assess their assigned work and recognise possible dangers.

The electrician must be informed of the risks and characteristics of the foreign particle trap.



### **6.3.4 Apprentice workers**

Apprentice workers may only work on the foreign particle trap with constant supervision.

Apprentice workers must be informed of the risks and characteristics of the foreign particle trap.

### **6.3.5 Additional personnel or visitors**

Personnel who usually do not work on the foreign particle trap (employees, visitors, etc.) must be informed of the risks of the foreign particle trap.

They should only inspect the foreign particle trap when accompanied with authorised persons who are aware of the risks of the foreign particle trap.

## 7. Technical Description

### 7.1 Foundation / Substructure

The foreign particle trap is installed between two flanges of an existing conveying system.

Conveying systems situated above or below the foreign particle trap must be dimensioned and anchored so that they can absorb the load of the foreign particle trap.

Required stages and catwalks not a part of the delivery, provided that nothing additional was contractually agreed to.

Stages and catwalks must be implemented in accordance with EN 14122 as well as any further-reaching local regulations.

### 7.2 Lighting

The operator of the system must supply sufficient lighting for the foreign particle trap.

Avoid blinding the service personnel or other persons.

Avoid bothersome shadow from the lighting.

Avoid stroboscopic effects from the lighting.

### 7.3 Positions of markings

A name plate is placed on each **BBM ehrhardt GmbH** machine to identify it.

Painting and accessories are not determined by the nameplate.

## 7.4 Technical data

weight	400 Kg
length	1.679 mm
width	580 mm
height	2.233 mm
output qty/hour	variable
output volume/hour	variable
Noise level emitted	< 80 dB(A)

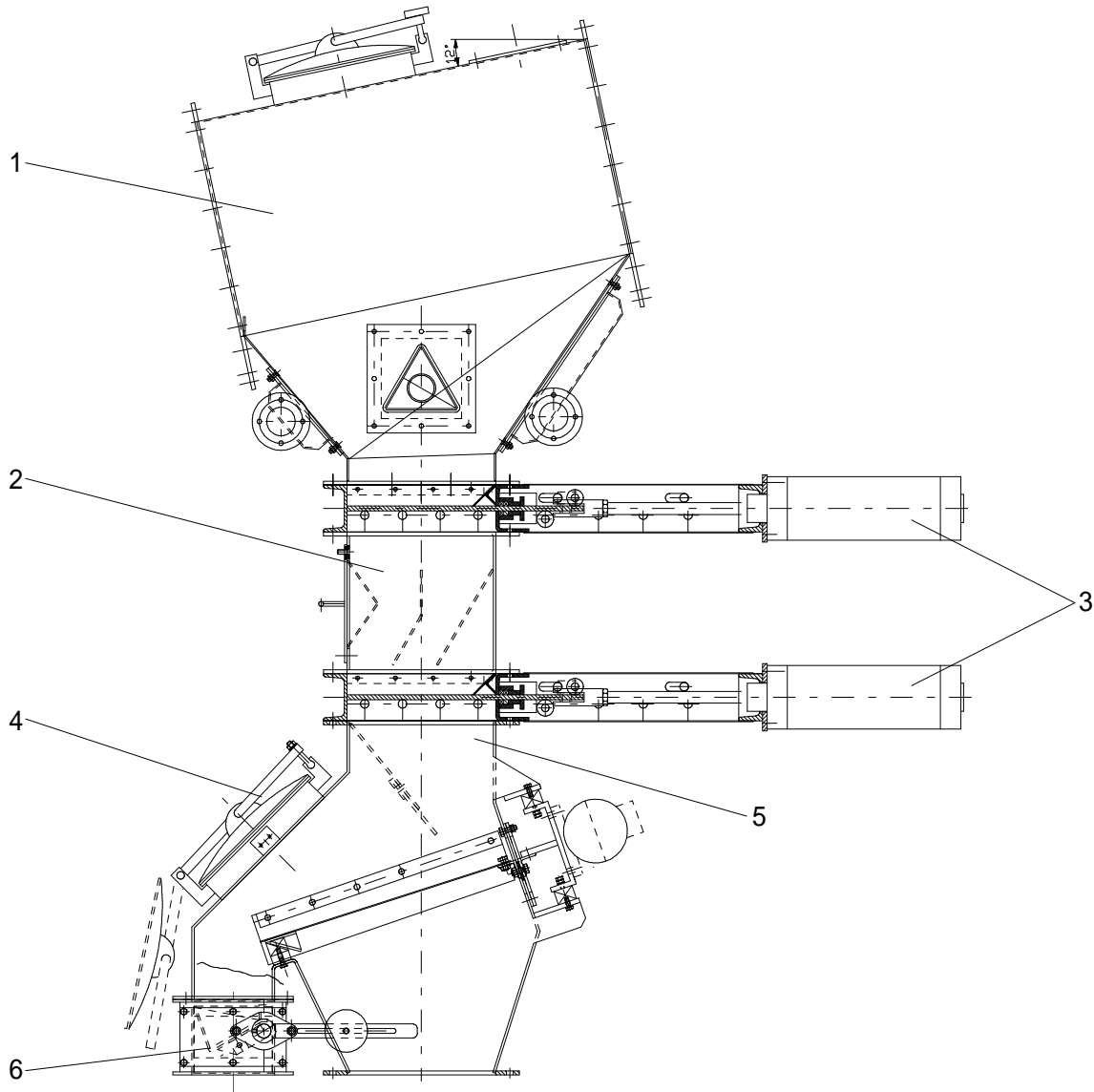
### 7.4.1 Energy supply

Rated voltage for the system	230 / 400 V – 50 Hz
Permissible voltage fluctuations	

### 7.4.2 Material to be conveyed

conveyed material	foreign particles
granulation of foreign particles	0 – 50 mm

## 7.5 Design



Item	Description
1	Foreign particle trap
2	Transfer chute
3	Cylinder
4	Baling press
5	Sieve unit
6	Valve

## 7.6 Function

The capture of foreign particle is introduced for removal of coarse-grained inclusions in the material being conveyed, or foreign particles in the stream of conveyed material.

With the creation of a specific soft bed for the conveyed material by means of suitable pneumatic dispersion devices, the undesired heavy parts of the conveyed material sink to the bottom because of gravity and can be separated with the time-controlled activation of the flat gate valve.

The discharged amount is fed to a sieve device arranged below, where the foreign particles and the conveyed material are separate from each other and additional handling is carried.

The mesh opening of the sieve is 9.5 mm.

The sieve is positioned on a vibration damper and is shaken by a vibration motor. The frequency of activation of the flat gate valve depends solely on the amount of foreign particles that accrues.

The power-on interval must be determined during commissioning and be configured in the control cabinet.

If the intervals are less than 4 minutes, the sieve device remains on continuously. For intervals longer than 4 minutes, the sieve device is switched off for energy reasons.

The gas required for the pneumatic discharge must be free of oil, water and dust.

The minimum required discharge amount is approx. 52 m<sup>3</sup> / h with an initial pressure of max. 0.2 bar overpressure.

## 7.7 Time control of foreign particle trap into air control channels

- ▶ Start the vibration motor (sieve)
- ▶ open upper valve after 15 seconds
- ▶ leave upper valve open for 2 seconds;
- ▶ Close upper valve
- ▶ leave both valves closed for 5 seconds;
- ▶ slowly open lower valve (exhaust throttle)
- ▶ leave lower valve open for 5 seconds
- ▶ Close lower valve
- ▶ Allow the sieve to run for approx. 30-40 seconds;

- ▶ Stop vibration motor (sieve);
- ▶ after stopping the vibration motor, another 10 seconds run after
- ▶ restart cycle after 10 minutes;
- ▶ if many foreign particles are eliminated, shorten intervals, e.g. 5 minutes;
- ▶ if few foreign particles are excreted, extend intervals, e.g. on 15 minutes;
- ▶ When the cleaning flap on the sieve is opened both valves remain closed, or are closed, the screening device is switched off.
- ▶ The valves and the sieve are not in operation with the flap open to put.
- ▶ The cycle can only be restarted after closing the cleaning flap to be started

## 8. Co- applicable documents

Co-applicable documents are:

- ▶ Technical Specification Christian Pfeiffer GmbH
- ▶ Construction plans
- ▶ Part lists
- ▶ Operation - and assembly instructions
- ▶ Camozzi - cylinder, regulator filters, direct operated solenoid valve, solenoid valve, datasheets
- ▶ ifm - initiator datasheet
- ▶ Oli - vibration motor, operating instructions, spare parts list

## 9. Assembly

The assembly of foreign particle traps requires special knowledge and as a rule should be undertaken by qualified personnel from **BBM ehrhardt GmbH**. Depending on the construction process and the space available on site, the assembly can deviate from this.

The foreign particle trap is designed for installation in a machine (acc. to EC Guideline 89/392/EEC, Art. 1). It may only be used in operation with a machine that is complete with regard to safety, and identified with a CE sign. Installation is only permitted in the machine explicitly provided for that purpose.

### 9.1 Safety information



The assembly location is secured against unauthorised entry, such as with a site fence.

Attach safety notices: „No unauthorised entry.”



Personal safety gear (such as gloves, safety shoes, protective glasses, helmet, etc.) must be worn for any work done on the foreign particle trap.

When working at an elevated height, a safety harness should be worn as well.



Be sure that no one is endangered when assemblies are moved.



Secure unanchored machines against falling over.



For assembly at an elevated height, use sufficiently stable scaffolds, platforms, or ladders.



## 9.2 Lifting Devices



Lifting devices must have sufficient bearing capacity for the relevant installation purpose. The weight of assemblies is found on page 18. Use only permitted and suitable, as well as technically perfect lifting devices and load fastening equipment. Fasten loads to a provided point or a suitable point.



Never stand under suspended or elevated loads.

## 9.3 Welding

Corresponding permission must be attained from the operator of the system for any welding, cutting and cauterisation work.



Follow local fire regulations at all times. Protect easily combustible items, like conveyed materials, cables, hoses or other installations that are in area of the welding, cutting or cauterisation work from flying sparks and heat effects. Immediately resolve any sources of embers of fire.

## 9.4 Preparations for assembly

If the installation location of the foreign particle trap is not next to other machines or connection flanges, mark the axes on the assembly location according to the assembly drawings.

## 9.5 Tools

In addition to the usual bench tools, the following special tools are required for assembly:

Ring and open-end spanner  
Torque wrench  
Level, solder, tape measure  
Chain and/or puller hoist

## 9.6 Torque list

If not otherwise indicated, use the following torque for screw connections on the foreign particle trap.

	Tightening torque in Nm for ser screws with standard threads, coefficient of friction $\mu_{tot} = 0,14$ (galv. zinc-plated screws)		
Material quality	8.8	10.9	12.9
M6	10,4	15,3	17,9
M8	25,3	37,2	43,6
M10	51,0	75,0	88,0
M12	87,0	128,0	150,0
M14	139,0	205,0	239,0
M16	214,0	314,0	367,0
M20	431,0	615,0	719,0
M24	743,0	1059,0	1239,0

Tightening torque for screw connections on steel constructions (stages, podiums, and catwalks) are listed on the assembly drawings for the steel constructions.

## 9.7 Pre-assembly

The foreign particle trap is delivered as a complete unit. Delivery must be checked for completeness upon receipt. If the foreign particle trap is delivered incompletely assembled, the individual assemblies are to be assembled on location according to the drawing.

## 9.8 Final assembly

The foreign particle trap is moved to the install position with a suitable means of lifting and transporting. Assemble the foreign particle trap to proper condition. Check the following based on the building installation plan at the installation location:

- ▶ machine alignment
- ▶ given distance to other system parts
- ▶ possibility of electrical installation

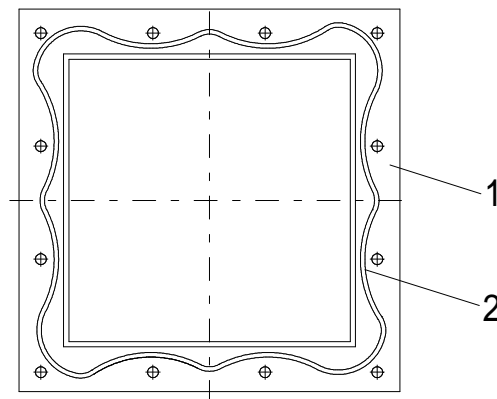


Ensure against falling down when aligning the foreign particle trap by using suitable measures.

Install the foreign particle trap according to the drawing (install location!).  
Before assembly, remove the safety covers on the entrance and exit openings...  
Be sure to assembly the foreign particle trap torsion-free.

Compare the drilling pattern of the foreign particle trap with the drilling pattern of the flange on which the foreign particle trap is to be mounted. The flange holes may possibly need to be adjusted.

Connection flanges are to be sealed with a seal that is suited for the purpose of the foreign particle trap.  
The sealing strip is placed in the flange in a wave-like form.



Item	Name
1	Flange
2	Sealing strip

Then the foreign particle trap is connected dust-tight with the on-site flanges.  
(Sealing material and fastening screws are not part of the scope of delivery).

## 9.9 Electrical Installation

The electrical connection to the foreign particle trap may only be performed by an electrician.

Assembly of the drive motor is done at the manufacturer's works.

Observe the EMC guidelines.

The mains, as well as switching and monitoring devices, must be sufficiently dimensioned by the operator for the type of start-up and peak loads.

It is especially important to observe the following during installation:

- ▶ information in the assembly instructions from the motor manufacturer
- ▶ current information on the nameplate
- ▶ information on the circuit diagram containing the terminal box.
- ▶ that all protective ground wires and connections are securely fastened.

To protect the motor from overload, provide a corresponding motor protection device. Before commissioning, the foreign particle trap is to be inspected with its electrical equipment by an electrician in accordance with the regulations of DIN VDE 0100 and VGB 4.

Electrical components are installed according to the assembly instructions in Appendix on page 46 as well as the circuit diagram.

Electrical circuit diagrams are not part of our scope of delivery, unless otherwise agreed upon.

## 9.10 Testing the assembly

After assembly is completed, all screw connections must be checked for a secure fit. Screws installed in the factory could loosen while in transit!

Drive components (gears, bearings, etc.) must be checked for sufficient lubricant. Observe the assembly instructions for drive components in the appendix on page 46. Eliminate the possibility of reaching into the foreign particle trap through openings above or below it.

## 10. Initial operation

Initial operation of the foreign particle trap is prohibited until after assembly when all necessary and expressly prescribed safety regulations have been met in accordance with EC Machine Guidelines 2006/42/EC. Observe the connection rules for the control and accessory devices.

### 10.1 Safety information

Before switching on for the first time, the following must be checked, at the minimum:

- ▶ the foreign particle trap is assembled according to the assembly instructions and installation plans. The initial operation should be performed by qualified staff from **BBM ehrhardt GmbH**.  
Initial operation of the foreign particle trap is prohibited until a conformity declaration for the entire machine is submitted, in accordance Guideline 2006/42/EC.  
We cannot be held responsible for damages that arise from improper commissioning.
- ▶ all foreign particles on and in the foreign particle trap are removed.
- ▶ the bearings are properly installed and lubricated.
- ▶ the vibration motor and the valve are properly assembled and aligned.
- ▶ the operating voltage and frequency agree with the voltage and frequency indicated on the motor nameplate. All electrical connections are installed.
- ▶ all safety precautions and safety-required monitoring equipment is assembled and their functioning is checked.
- ▶ all control openings are closed and secured.
- ▶ no one is in the machine's danger zone.



When switching on, no person must be endangered by the foreign particle trap.

## 10.2 Conveyed material flow

The air supply in the air channel spacer ensures that lighter material is conveyed further along in the air channel and the heavier material lands in the foreign particle trap.

## 10.3 Turning on the energy supply

Before switching on the energy supply, check that all electrical installations are properly carried out.

## 10.4 Trial run without material to be conveyed

The foreign particle trap is already configured at the factory. After assembly of the foreign particle trap, a functional test must be performed.

The following functions must be tested:

- ▶ air connections and functionality of the valve.
- ▶ vibration motor connections and fastenings
- ▶ monitoring equipment display (if available)
- ▶ running noise

Malfunctions that arise must be promptly resolved.

If no malfunctions occur in a trial run, then the foreign particle trap is ready for operation.

Don't hesitate to contact the manufacturer's customer service to have any questions answered about the assembly or operation of the foreign particle trap. Contact information can be found on page 8.

## 10.5 Initial operation with material to be conveyed

Before conveying material goods, check the downstream conveying unit for functionality and switch it on.

Deactivate the upstream conveying unit before deactivating the system. Then the foreign particle trap is deactivated. The downstream conveying unit will generally be deactivated last...



The downstream conveying member must be monitored with speed sensing switches in order to immediately deactivate the entire system in the event of a failure of the downstream conveying member.

After 8 hours under full load, check the foreign particle trap for the following:

- ▶ heating of the machine parts
- ▶ possible bulk material on the packing gland
- ▶ all screw connections are securely seated

## 11. Normal and safe operation

The foreign particle trap is normally activated and monitored by a central control station or with a process controller.



Caution!  
Automatic start-up of foreign particle trap



Caution!  
The surface of the foreign particle trap can acquire the temperature of the conveyed material passing through it.

The responsibility of the operation, maintenance, and service of the system must be determined and observed. For safety's sake, no ambiguity in responsibilities must exist.

The binding laws, regulations, ordinances and rules for the respective site are to be observed by the operator.

The operator is obligated to use the foreign particle trap only in a technically flawless state.

Any operating mode that impairs the safety of the foreign particle trap must be omitted.



## 12. Trouble-shooting and resolution



For trouble-shooting and resolution, the foreign particle trap must be deactivated and secured against unintended re-activation. All safety systems must be available and in proper working order.

### 12.1 Contamination

Heavy contamination of the bottom of the foreign particle trap	Leaking around the flange connections  Housing worn.	Trace the flange connection, possibly replace seals.  Seal worn areas by shrink-wrapping metal. When doing so, make sure that all moving parts can move freely.
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## 13. Repair and maintenance

### 13.1 General

Schedule the inspection and maintenance work. Perform tests in the prescribed timeframes.

### 13.2 Safety information



During service and maintenance work, insure that the foreign particle trap is deactivated and cannot be unintentionally restarted. For elevated systems, secure the area underneath the assembly area, e.g., by attaching nets and ample barriers. Service work must only be performed by sufficiently qualified professionals. In order to avoid fire, all surface temperatures on the foreign particle trap must cool down to 43°C.

### 13.3 Inspection

Proper functioning of protective equipment (emergency equipment, protective covers, protective grids, start-up warnings, etc. if available on the foreign particle trap) must be checked daily.

Any deficiencies must be resolved immediately.

The foreign particle trap and the work and service area must be checked daily for contamination. Remove contaminants. Observe the instructions on page 35.

Perform an optical inspection with the baling press.



Caution!  
Do not reach into or insert a tool through an inspection door on the top or bottom of the foreign particle trap.



**Danger of death!**

Before opening the maintenance/access doors it must be ensured that no material can slide out from the top of a conveying unit lying above the foreign particle trap.

### 13.4 Maintenance



**Caution!**

If the foreign particle trap must be disassembled for maintenance or repairs, ensure that no intrusion into the danger area above or below is possible through openings in the system.

Attaching sheets that completely cover the openings in the system can serve as protection. The sheets must be held in position with screws.



**Caution!**

Before upgrading the foreign particle trap, all energy supplies must be separated from it.

Ensure that no one is endangered by moving parts before a test run in the workshop.

Ensure that the foreign particle trap will not fall over before starting a test run in the workshop.

### 13.5 Inclined sieve / vibration motor

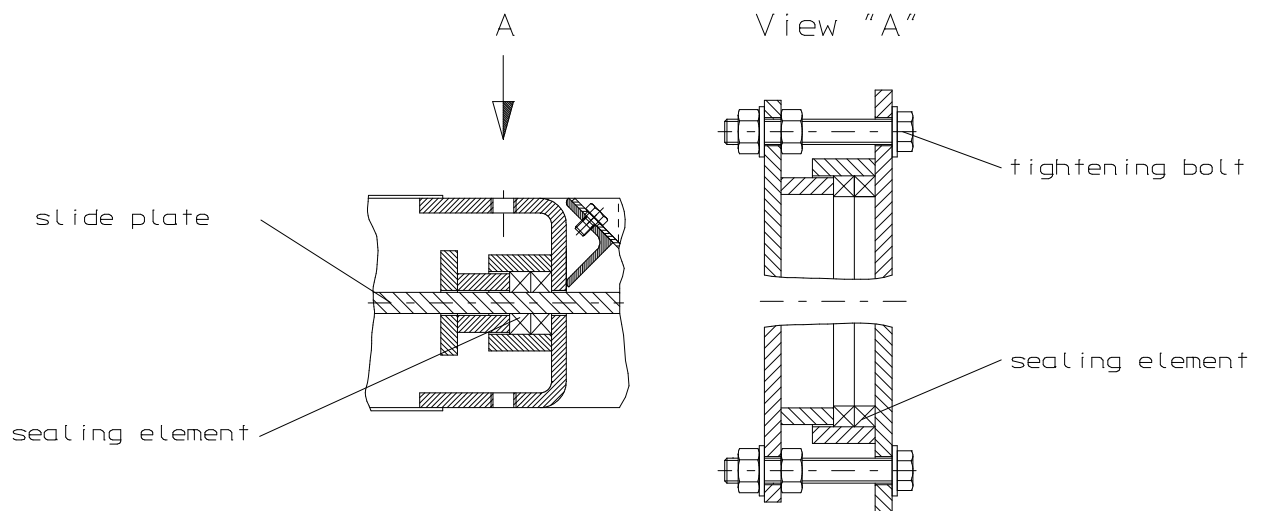
Maintenance work must be performed according to the recommendations of the drive manufacturer.

The screw connections on the vibration motor and the fastening of all moving parts must be checked regularly for a secure fit.

### 13.6 Shut-off valve

Adjust the seals after the seal packaging has been opened and closed one hundred times.

The guidance screws should be adjusted so that the pressing angle runs parallel to the sliding plate. Then the seal is adjusted with the tightening screws so that the sliding plate is well-sealed and not compressed.



### 13.7 Bearings

The bearings must be checked regularly for excessive heating and increased running noise.

## 13.8 Lubrication



All safety systems on the foreign particle trap must be in proper working order.

When working on a running foreign particle trap, hair, clothing, and tools can become drawn into the foreign particle trap.

Observe lubricant manufacturer safety data sheets.

## 13.9 Bearings

The bearings are filled with a sufficient amount of grease at the factory.

Lubricate the bearings yearly with rolling bearing grease (such as ESSO Beacon EP 2).

Clean the grease nipple before lubricating. Insert grease until fresh grease is discharged from the bearing.

Remove discharged grease from the stationary foreign particle trap.

The grease must be completely replaced every two years (maximum 10,000 hours operating time). The used grease must be removed, the bearing washed out and inspected, and refilled with new grease.

## 13.10 Cleaning

Cleaning work on the foreign particle trap can only be performed on a stationary foreign particle trap that is secured against unintentional restarting.

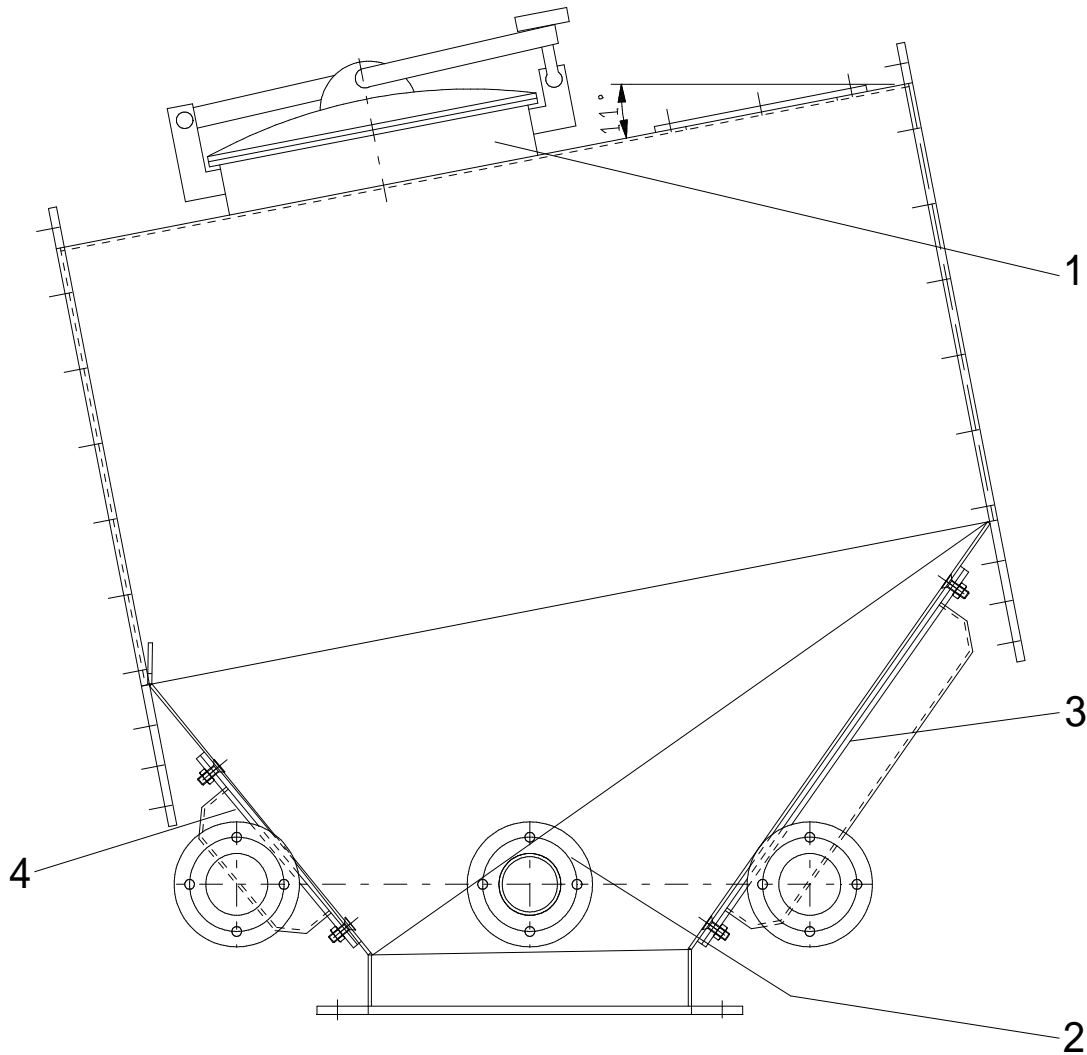
Resolve any contaminations on the foreign particle trap that could lead to increased wear or other operating malfunction.

## 13.11 Cleaning the work and maintenance areas



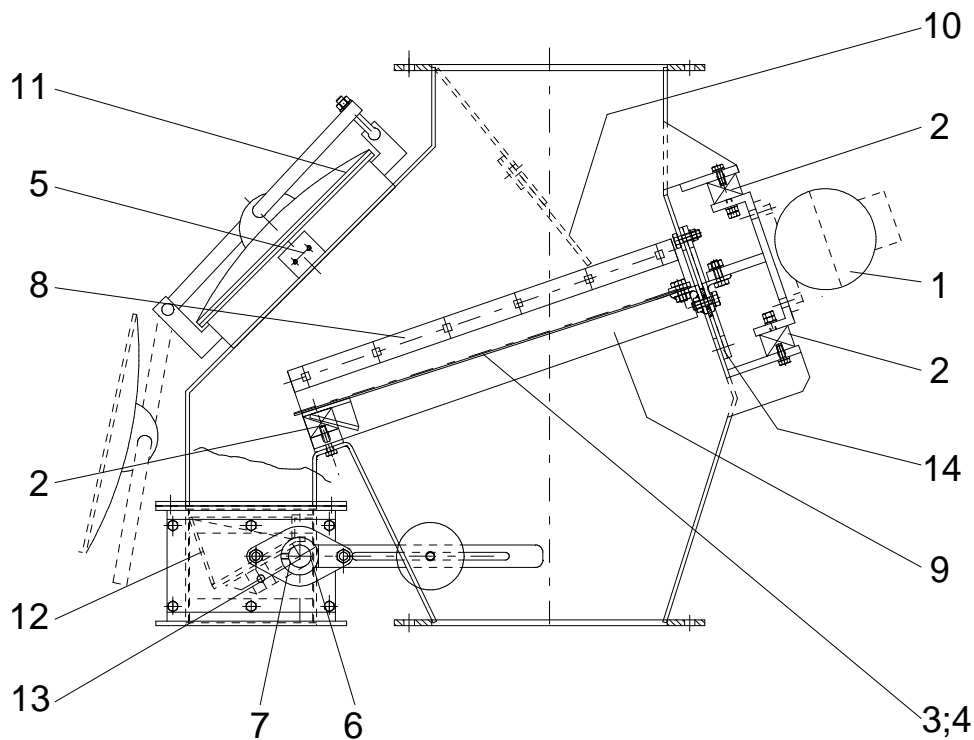
The work and maintenance areas are to be kept clean at all times. Pay special attention to removing conveyed material or other items from the floor.

## 14. List of spare parts and wear parts of Outlet box



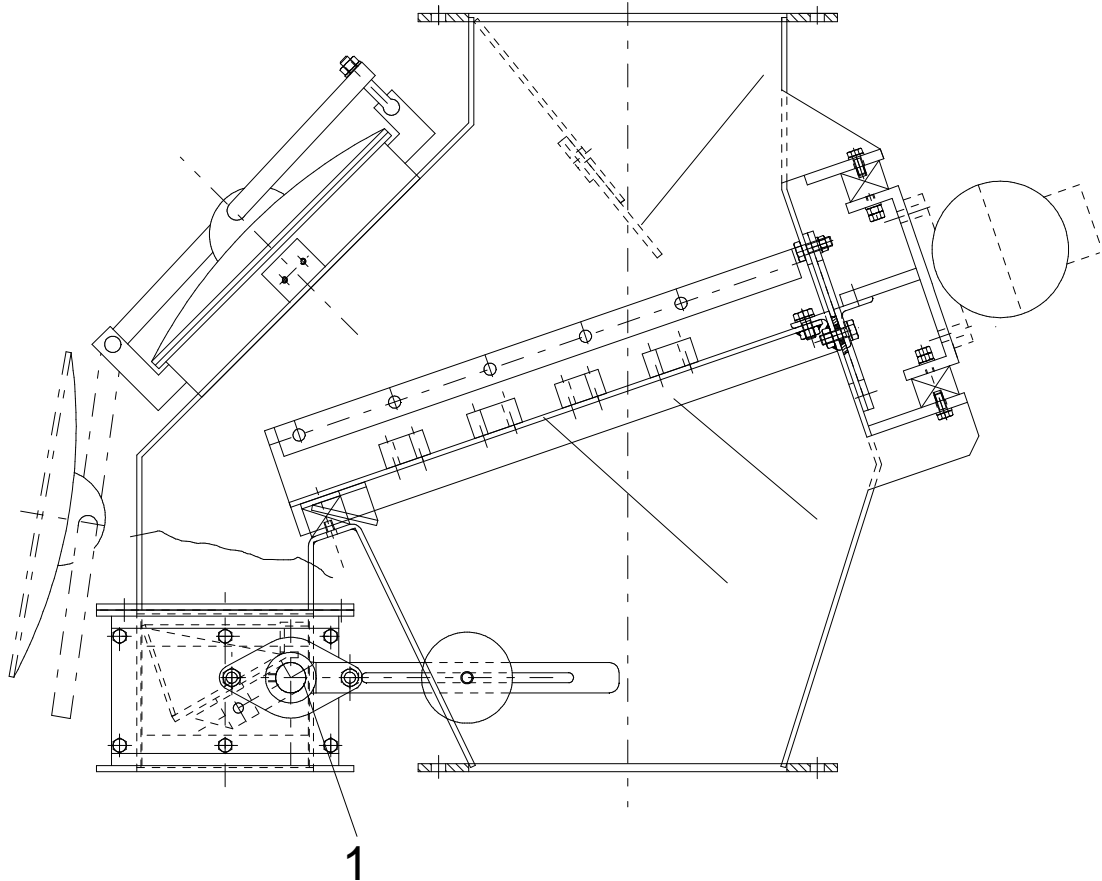
Item	Description	PC s	DIN	Drawing no.	Note
1	Inspection flap	1	BBM	BBM 9204-0 P29	Wear part
2	Ventilation unit	1	BBM	BBM 9204-0 P04,20-23, 28	Wear part
3	Air slice fabric	1	BBM	BBM 9204-0 P09	Wear part
4	Air slice fabric	1	BBM	BBM 9204-0 P14	Wear part

## 15. List of spare parts and wear parts of sieve and flap



Item	Name	Pc.	DIN	Drawing No.	Note
1	Vibrationsmotor MVE200/15	1	Oli	230 / 400V 50Hz 160W 1500U/min	
2	Vibration damper	6	BBM	BBM 6049-13 P11	Wear part
3	Sieve	1	BBM	BBM 6049-13 P07	Wear part
4	Wire mesh	1	BBM	BBM 6049-13 P08	Wear part
5	Proximity switch IG5401 24V	1	BBM	BBM 6049-13 P09	Spare part
6	Seal	2	BBM	BBM 6064-0 P15	Wear part
7	Bearings	2	BBM	BBM 6064-17 P17	Wear part
8	Attachment strip	2	BBM	BBM 6049-13 P39	Wear part
9	PU-strip	2	BBM	BBM 6049-13 P38	Wear part
10	Material guide	1	BBM	BBM 6049-13 P41	Wear part
11	Inspection flap	1	BBM	BBM 6049-13 P34	Spare part
12	Flap sheet	1	BBM	BBM 6064-4 P13	Wear part
13	Flap shaft	1	BBM	BBM 6064-4 P14	Wear part
14	Silicone membrane	1	BBM	BBM 6049-13 P19	Wear part

## 16. Lubrication list for sieve and flap



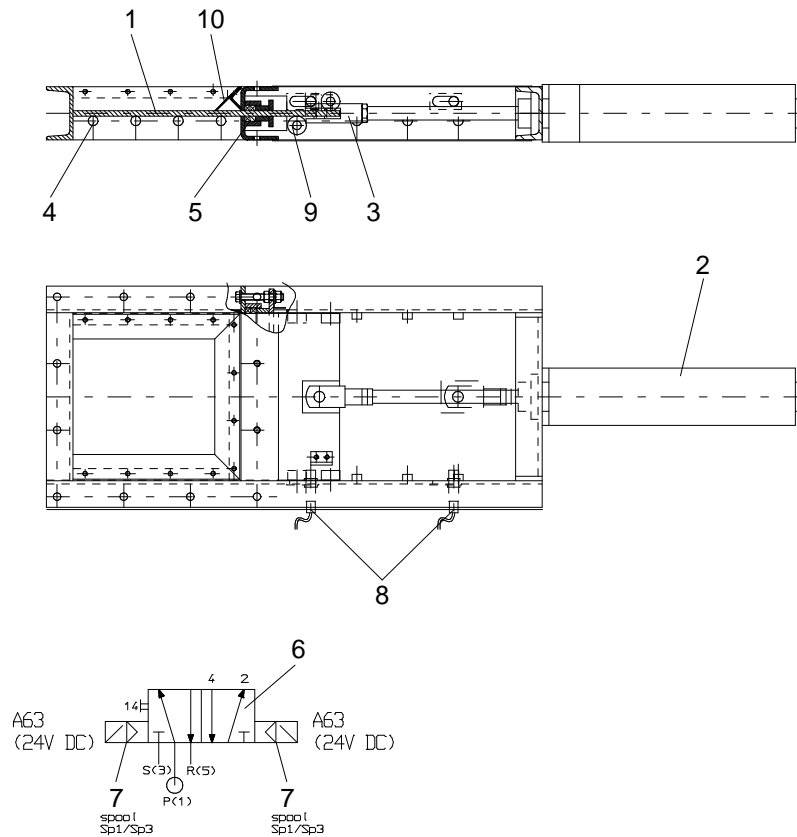
Item	Name	Pc.	Lubricant	Amount	Lubrication interval Remarks	Remarks
1	flange bearing $\varnothing$ 30	2	ESSO Beacon EP 2	70 g	10,000 h max.	A
			Refilling	5 g	Every 2 years	B

A) Observe manufacturer's lubrication instructions.

B) When changing grease, remove the used grease, wash and inspect the bearings, fill with new grease.



## 17. List of spare parts and wear parts in the shut-off valve



Item	Name	Pc.	DIN	Drawing No.	Remarks
1	Slide plate, 1.4301	1	BBM	BBM6009-9 P09	Wear part
2	Pneumatic cylinder	1	BBM	BBM6009-9 P01	Spare part
3	clevis	1	BBM	BBM6009-9 P01	Spare part
4	support screws (1 set)	1	BBM	BBM6009-9 P19	Wear part
5	packing seal (1 set)	1	BBM	BBM6009-9 P26u27	Wear part
6	5/2- directional valve 1/2"	1	BBM	BBM6009-9 P06	Spare part
7	Coil for magnet valve 24V AC	2	BBM	BBM6009-9 P07	Spare part
8	Proximity switch IG5349 24V AC	2	BBM	BBM6009-9 P08	Spare part
9	Bearings	4		BBM6009-9 P05	Wear part
10	Wiper (1 set)	1	BBM	BBM6009-09 P32.33.24	Wear part

## 18. Shutting system down

### 18.1 Safety information



The assembly location must be secured against unauthorised entry, such as with a site fence.  
Attach safety notices: "No unauthorised entry."



Personal safety gear (such as gloves, safety shoes, protective glasses, helmet, etc.) must be worn for any work done on the foreign particle trap.  
When working at an elevated height, a safety harness should be worn as well.



Before disassembly of the foreign particle trap it must be ensured that no material from a conveying unit above the foreign particle trap can slide out.



Be sure that no one is endangered when assemblies are moved.



Secure unanchored machines against falling over.



No danger must result from the disassembled foreign particle trap. Immediately resolve any dangers that may arise.  
In particular, resolve any openings or possibilities for intrusion into adjacent machines.



For disassembly at an elevated height, use sufficiently stable scaffolds, platforms, or ladders.

## 18.2 Lifting devices



Lifting devices must have sufficient bearing capacity for the relevant installation purpose.

The weight of the foreign particle trap, as given on page 18, can increase due to material caking and agglomeration!

Use only permitted and suitable as well as technically flawless lifting devices and load fastening equipment.

Fasten loads to a provided point or a suitable point.



Never stand under suspended or elevated loads.

## 18.3 Welding

Appropriate permission must be attained from the operator of the system for any welding, cutting and cauterisation work.



Local fire regulations are to be followed at all times.

Protect easily combustible items, like conveyed materials, cables, hoses or other installations that are in area of the welding, cutting or cauterisation work from flying sparks and heat effects.

Immediately resolve any sources of embers or fire.

## 18.4 Energy / control



Work on electrical system parts may only be performed by trained electricians.  
Work on pneumatic or hydraulic system parts may only be performed by qualified professionals.  
Separating from the energy supply can lead to unintended movement of the foreign particle trap (e.g., from gravity).  
No one must be in the danger area of the foreign particle trap when separating the energy supply or controller.  
Pneumatic and hydraulic drives could be under pressure after separating the energy supply. Be sure that these drives are depressurised before working on them.  
The energy supply must not be able to be unintentionally remanufactured.

## 18.5 Disassembling

Disassembly of the foreign particle trap must be done by a suitably qualified professional.



When removing assemblies, the rest of the machine can lose its stability. Suitable safety measures, e.g., hanging in chain or puller hoists, must be used.

## 18.6 Disposal

Drain lubricants from the gears and dispose of it properly according to the respective legal regulations. Read the corresponding section in the assembly instructions of the gear manufacturer.

Separate the disassembled components according to their materials.

Recycle plastic (e.g., conveyed materials), metal (machine equipment, etc.) and other materials or dispose of them in accordance with the respective legal requirements.

## 19. Transportation and storage

### 19.1 Unloading

The foreign particle trap is normally delivered as a complete unit. Delivery must be checked for completeness upon receipt. If the foreign particle trap is delivered incompletely assembled, the individual assemblies are to be assembled on location according to the drawing.

Unloading must be done by sufficiently qualified personnel. Use a suitable forklift or crane, observing lifting capacity, to unload.

You can find the weight of the main assemblies on page 18.



Incorrect fastening of the load or imbalanced distribution on the forklift can cause the foreign particle trap or assembly to fall. Assemblies can slide off or overturn if lifted over the load capacity. Suitable measures (supports, etc.) should be used to secure the parts.



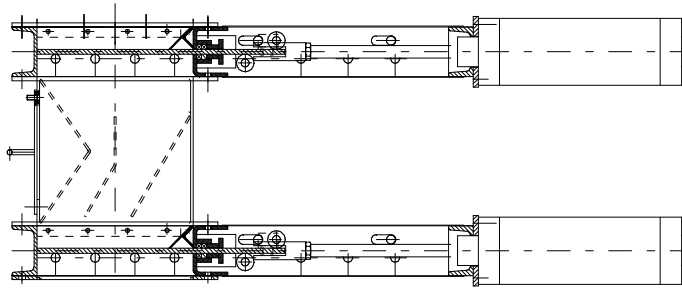
When lifting the load and transporting the assemblies by means of a fork lift, crane or other vehicle, personnel must stay out of the danger area. Maintain eye contact with the driver of the forklift or crane.



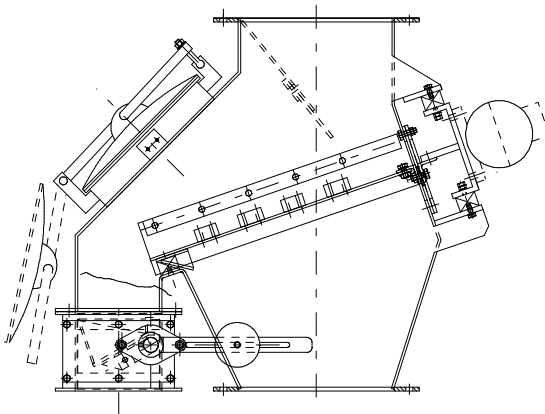
Wearing personal safety equipment (like safety shoes, helmet and gloves) is strongly recommended.

## 19.2 Transport units

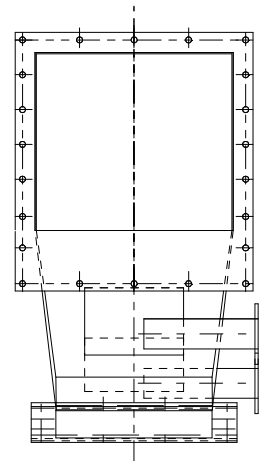
2. Sluice unit (188 Kg)



3. Sieve unit (122 Kg)



1. Outlet box (90 Kg)



Item	Name	Total weight
1	Outlet box	400Kg
2	Sluice unit	
3	Screening unit	

## 19.3 Storing

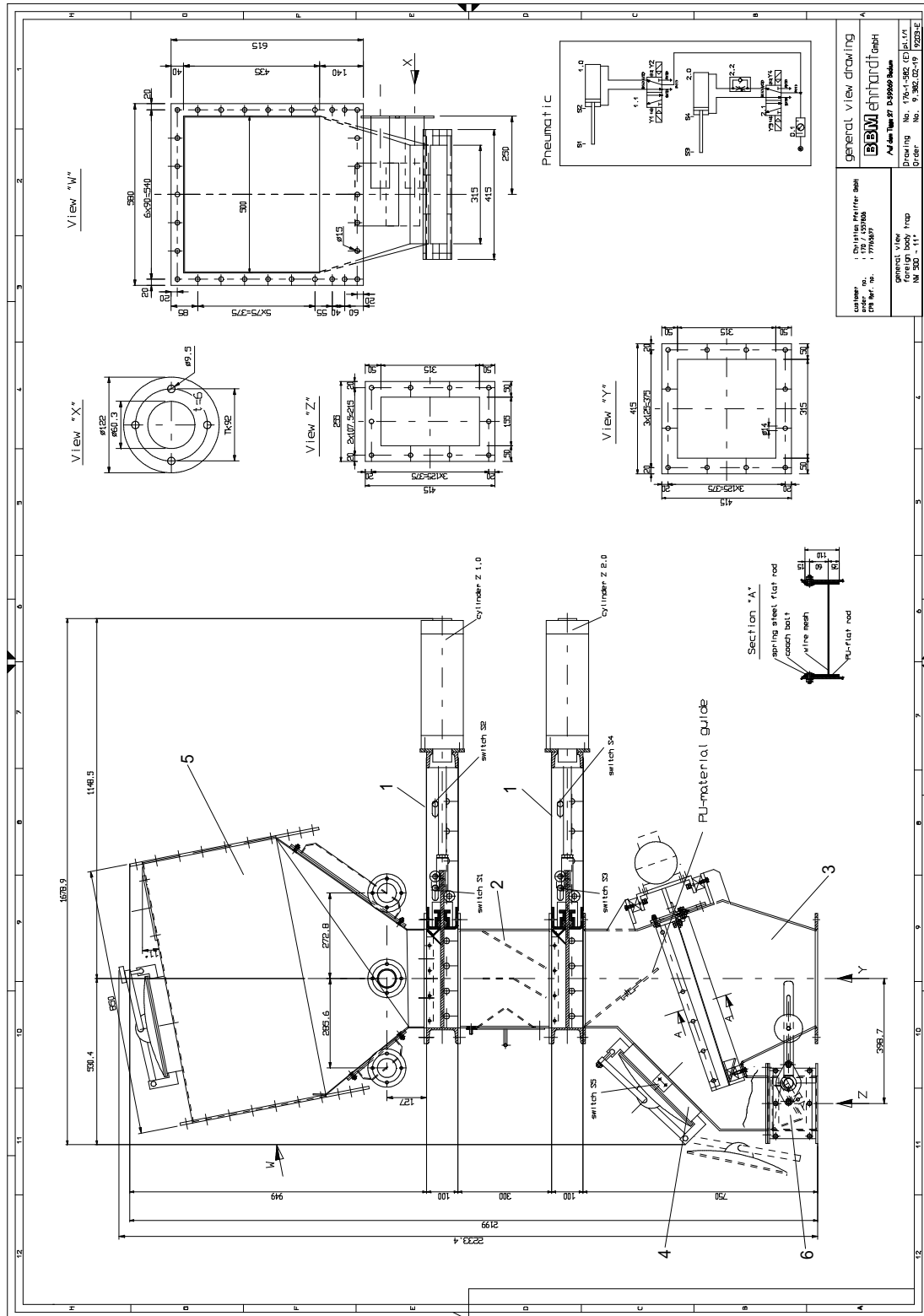
Follow these storage times.

- ▶ the storage temperature is the outside temperature when not otherwise described.
- ▶ do not store in aggressive or oil-bearing atmospheres.
- ▶ for attachment parts, follow the current described storage conditions
- ▶ protect from weather and environmental influences that are in the vicinity of the assembly location.
- ▶ protect against penetration of pests when installing in the food sector.



The foreign particle trap must be stored so that it will not fall over. Dispose of packaging material immediately after unpacking according to legal requirements. No paths, especially to emergency exits, may be blocked in the storage location. The storage location must be secured against unauthorised entry with suitable measures such as site fencing.

## 20. Drawings





## 21. Appendix

**Camozzi**

**ifm**

**OLI**