

Installation, Operation and Maintenance Instructions



METAL SEPARATOR MODEL CFP 30, 40, 50, 60

ERIEZ MAGNETICS HEADQUARTERS: 2200 ASBURY ROAD, ERIE, PA 16506-1402 U.S.A.
WORLD AUTHORITY IN SEPARATION TECHNOLOGIES

Introduction

This manual details the proper steps for installing, operating and maintaining the Eriez Metal Separator.

Careful attention to these requirements will assure the most efficient and dependable performance of this equipment.

If there are any questions or comments about the manual, please call Eriez at 814-835-6000 for Metal Separator assistance.

 **CAUTION**

**Safety labels must be affixed to this product.
Should the safety label(s) be damaged, dislodged
or removed, contact Eriez for replacement.**

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General Information

Introduction

The texts and illustrations in this instruction manual are for the exclusive purpose of explaining how to operate and handle the metal separator. Based on the data in this instruction manual the manufacturer accepts no responsibility for direct or consequential damage resulting from the use or misuse of this equipment. All appropriate safety rules and regulations for the use of this equipment must be adhered to. If you should have any questions with regard to the installation and operation of this equipment please do not hesitate to contact us.

This instruction manual must not be copied, saved on computer or otherwise reproduced without the prior explicit written permission of the manufacturer. Nor should any extract of this instruction manual be similarly reproduced.

Symbols Used

	Danger Possibility of severe or even fatal personal injuries.
	Danger Possibility of severe or even fatal personal injuries from electric current.
	Warning Possibility of minor personal injuries or property damage.
	Caution Possibility of defects or destruction of the equipment.
	Important Information Indicates important information about the function.
	Important Hint Indicates an important hint about the function.

Fields of Applications

The metal separator is specifically designed for inspecting plastics granulates or other free-flowing granulates in slow-moving material columns, as is the case e.g. in the feeding of extruders and injection molding machines. Due to its extremely small overall height it is easy to integrate or retrofit into existing systems.

Application Reasons

- Product liability
- ISO 9000
- TQM (Total Quality Management)
- Protection of machines and quality assurance

System Identification

The information in this instruction manual only applies to the Model CFP metal separator. A label with the respective data is attached at every system.

Important Functional Notes

The stated detection sensitivity (ferrous ball Ø in mm) applies for nonconductive products at the standard operation frequency and refers to the center of the detection aperture (most disadvantageous position). Products that show intrinsic conductivity due to moisture content, electrolytes or other conductive contents may reduce the sensitivity as well as variations of product temperature, environmental effects (mechanical shock and vibration, electromagnetic interference) or the set product angle. The detectable size of metal particles depends on their nature, shape and position while passing the metal detector.

The metal separator is designed and built to provide optimum detection and separation of metal contaminants.

However, it is important to be aware of the circumstances in which metal detection may be compromised when conveying and processing bulk materials.

- Accumulation of metal residues.
- Accumulation of metal particles in a batch of bulk material. This may occur with ground or shredded material if a larger metal piece has been ground.
- Turbulence in the reject unit and reject flap reaction time. If there is an accumulation of metal particles the flap cannot react to the control signals without delay. Occurs when recycled or reground material is processed, even when blended with virgin material.
- Material jamming with gravity feed type metal separators using a reject flap separation system (wrong type of equipment).
- Pipe conveying with high fill ratio. Depends on the bulk material, particularly for gravity and vacuum/pressure systems.
- Conveying rate or fall velocity too high or too low.
- Type, size, and position of the metal contamination.

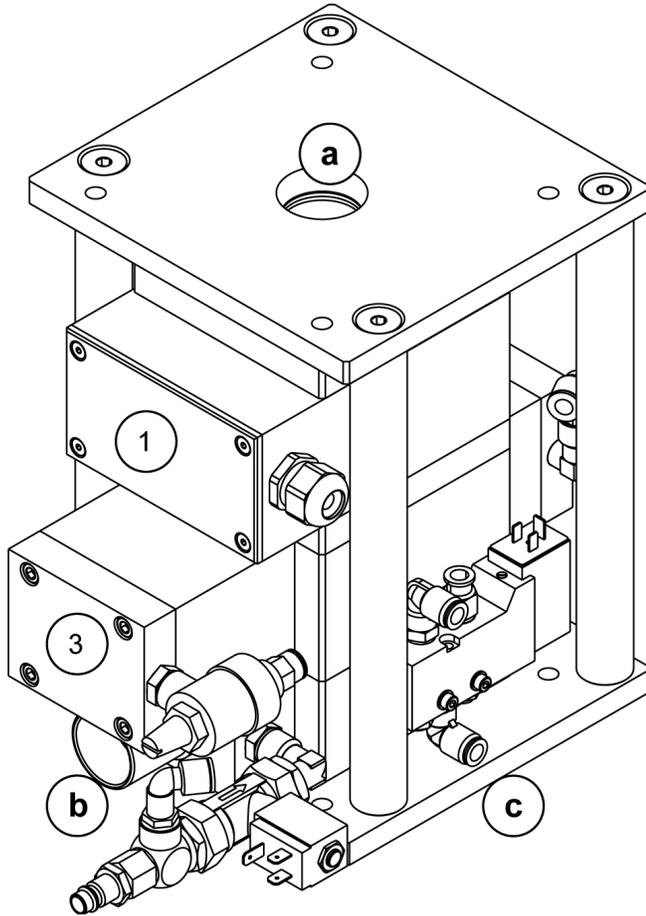
 For these reasons no general guarantee can be given that the unit will operate with 100% accuracy.

For bulk materials containing a high proportion of metal contaminants it is recommended that two or more separators are connected one after the other (for gravity systems) and additional permanent magnets are installed in freefall pipes or hoppers (for pipeline systems).

Suitable metal separators and magnet systems are also available for pre-separation in vacuum and pressure pipes.

Design and Method of Operation

Control Elements/ Complete Unit



Example: CFP Metal separator

- a. Inlet
- b. Reject Outlet
- c. Material Outlet

Basic Elements:

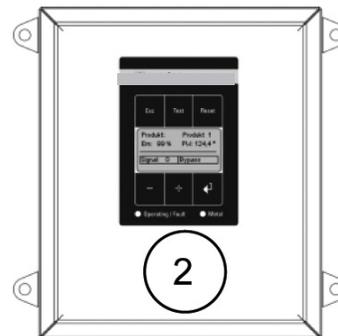
1. Detection unit
2. Control unit
3. Diverter unit
4. Button for manual ejection in a separate housing

Optional Accessories (not Shown):

5. Signalling device (audible alarm, visual alarm or combination alarm)
6. Counter (detection counter) in a separate housing
7. Container (25 l) for reject material with vacuum tube 6.5 feet.
8. UL/CSA certificate
9. Compressed-air monitor in electronics housing
10. Cable set for remote control unit 19.7, 32.8 and 49.2 feet

Special Versions (not Shown):

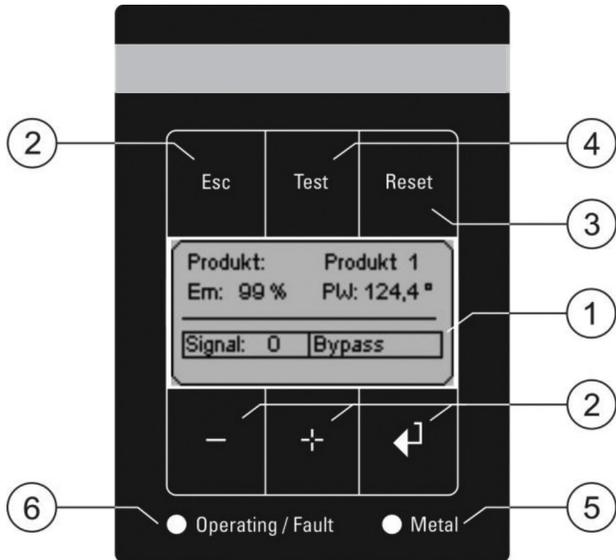
11. Bulk material temperatures of up to 176°F
12. Design for free-fall height of more than 19.69 inches
13. Surface nickel plated



Control Elements/ Control Unit

Control Unit

Used mainly in the plastics industry, equipped with 10 product memories



1	LCD display	Graphic	Display of operating and input masks
2	Operator Keys	+, -, ←, Esc	For operating and machine settings
3	Function Key	Reset	Reset to restore the unit after metal or fault signal
4	Function Key	Test	Test function for metal detectors
5	Red LED	Metal	Illuminates when metal detected
6	Green/Red LED	Operating/ Fault	Lights red in case of fault and error
		Operating/ Fault	Lights green in normal operating mode

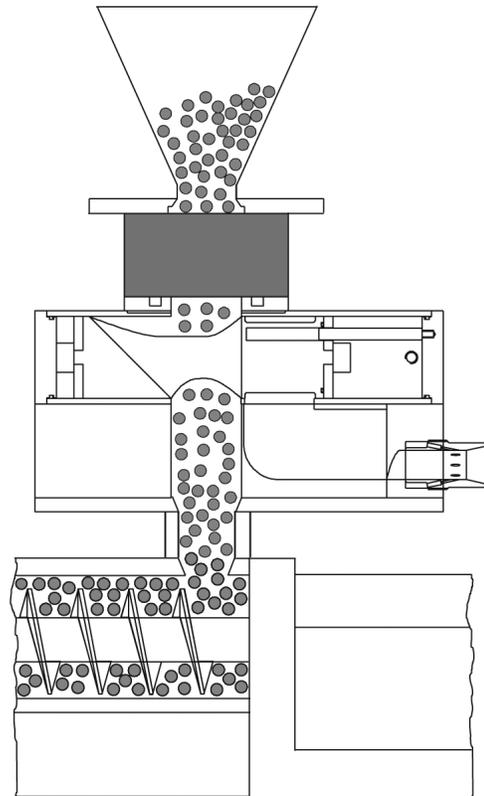
Functional Principle

Design

Metal separator with integrated detection coil, diverter unit ("Quick-Valve") and remote control unit.

Technical Description:

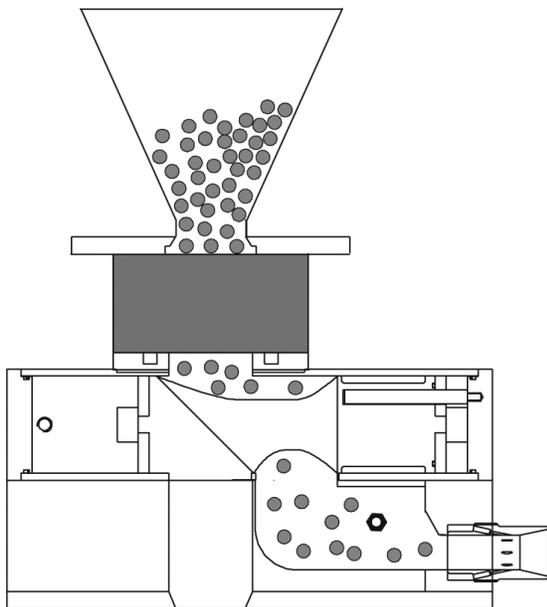
The metal separator is installed between the hopper and the screw-feeder of an injection molding machine using adapter plates. The pellet to be processed is inspected for metal contaminations before it enters the screw-feeder. Starting from the hopper the slow-moving material column passes through the metal separator and then reaches the screw-feeder inlet.



Note: Diverter shaft shown in "normal" position

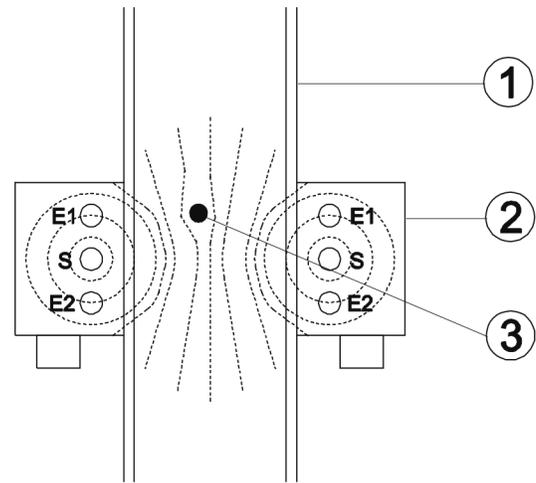
Design and Method of Operation

From the gravity-fed granulate The Model CFP detects metal particles, even if they are embedded in the pellet, and generates a corresponding metal signal of adjustable duration. As a result a compressed-air valve is activated for this duration, and the diverter shaft (reject unit) moves to its reject position. By means of a Venturi nozzle the contaminated material is completely extracted from the base block of the metal separator and fed into a collecting container. If further contaminants should be detected while the unit is in reject position, the pulse will be lengthened and such material also is reliably separated. After this metal separation a signal is sent to the compressed-air valve and the diverter shaft returns to its normal position.



Note: Diverter shaft shown in “normal” position

Detection is performed by a search coil that comprises a transmitter and two receiver coils and operates according to the transmitter-receiver principle. The excitation frequency for the transmitter coil is between 16 kHz and 300 kHz. Identical voltages are induced in the two receiver coils on the left and right side of the transmitter coil. When a metal particle passes through the search coil, it unbalances first the inductive field of receiver 1 and then of receiver 2. These small voltage changes are evaluated by the control unit, which generates a metal signal and triggers a separation process.



- (1) Scanning pipe
- (2) Search coil
- (3) Metal contaminant
- E1) Receiver coil 1
- E2) Receiver coil 2
- S) Transmitter coil

Due to their intrinsic conductivity that is caused by moisture, metal oxides, grease, salts, etc. many bulk materials have a so-called “product effect”. To detect metal contaminations the control unit must suppress or reduce this product effect.

This “suppression” of product effects may lead to a reduction of the stated scanning sensitivity.

Dimensions and Technical Data

Environmental Conditions for Operation, Storage and Transport

The environment of the metal separator should be dry, dust-free, free of vibrations, of other influencing magnetic fields, of chemical vapours such as softeners, chlorine, and similar substances. The metal separator must not be exposed to direct sunlight or to other environmental influences (rain, snow, storm, etc.).

Noise Levels

Sound pressure level measurements
(in acc. with DIN 45 635)

Peak value of sound pressure level at a distance of 1m from the machine surface and 1.60m above the floor, LpA, 1m, max.

Measurement result for the standard version:

Idling: < 70 dB(A)
Activated: < 90 dB(A)

We reserve the right to change the contents due to product innovation or technical improvement.

Safety

The manufactured equipment conforms with all official technical safety regulations. However, as a manufacturer we believe it is our duty to make you aware of the following information.

⚠ The following safety and danger notes are intended for your protection, for the protection of third parties, and for the protection of the equipment. The safety notes therefore should always be observed! Please also observe the chapter on safety in the operating instructions of the control unit!

Intended use

⚠ The metal separator is specifically designed for inspecting plastics pellets or other free-flowing granulates in slow-moving material columns, as is the case e.g. in the feeding of extruders and injection molding machines. The metal separator is installed at the inlet of extruders or injection moulding machines. A tube leading to a collecting container is connected to the reject outlet of the metal separator. The metal separator may only be loaded with a maximum of 1100 lbs over the center axis. At the place where the metal separator is operated there must be no vapours (e.g. plasticizer) or other substances that may attack PVC cable sheathings.

If there is a high proportion of metal contaminants or the bulk materials being inspected are abrasive it is likely that product-contacting components or moving parts of the reject mechanism will show signs of wear (piston). In this case it is important that product-contacting components (scanning pipe, adaptors, reject mechanism, drive unit etc.) are checked in regular weekly or monthly intervals. Worn parts must be replaced to ensure that the machine functions properly.

Please note that any wear-reducing measures which may have been taken at the time of construction will merely delay the onset of wear but will not eliminate it completely. However, such measures may extend the system's operating time before it becomes necessary to replace worn parts.

The metal separator may only be operated with a corresponding control unit!

Safety signs

Warning signs attached at the system and control unit:

The purpose of these symbols is to draw the attention of the system operator to the text of the respective safety notes.

Symbol	Location	Meaning
	Cover of the electronics housing	Main Voltage This symbol indicates that mains voltage is used in the electronics housing, and that any connected external circuits (e.g. at the metal relay) also may be energised. There is danger of electric shocks due to the presence of mains voltage.
	Inlet, Normal Outlet, Reject Outlet	Danger of Crushing This symbol indicates that there is a risk of crushing your hands on account of the pneumatically operated piston.
	Reject outlet	Danger This symbol indicates that there is danger of injuries due to ejected reject material.
Option: High Temperature Version		
	Pipes	Burn Hazard This symbol indicates that at the pipes there is danger of burning due to the high product temperature.

Dangers Arising From Non-Compliance With Safety Notes

DANGER

Any non-observance of safety notes constitutes a danger for life and health.

Safety Information for Operators

MAIN VOLTAGE

The Model CFP metal separator may only be operated according to its intended use and in perfect functioning condition, and all the covers have to be closed during operation. When the separating unit is operating there is danger of crushing due to the movement of the piston. Danger spots can be reached at the inlet and at the normal and reject outlet. Suitable protective measures must be taken at the inlet and at the normal outlet to prevent people from reaching into the separating unit. At the inlet a feed pipe stub of at least 3 feet in length can be attached, for example. The normal outlet for example can be firmly screwed to the enclosed material feeder of the injection molding machine. At the reject outlet of the metal separator a tube must be attached to feed the rejected material into a collecting container and to prevent people from reaching into the reject outlet. If the product temperature is higher than 140°F there is danger of burning at product-contacting parts. It is recommended to use an enclosure or another measure to prevent touching of the metal separator surface. The weight load on the metal separator, aligned above its center axis, must not exceed 1100 lbs. The metal separator may only be operated if all the provided protective devices are installed and reaching the danger spots is reliably prevented. All the safety and warning signs at the system must not be removed and must be kept in well readable condition. The operating instructions always have to be in a legible condition and complete available.

Installation, operation, maintenance and repair work may only be performed by qualified personnel. If any work is to be performed at pneumatic or electric components, the corresponding supply lines must first be interrupted or disconnected.

DANGER

EMITTED INTERFERENCE

Test report according to the provisions of:

BGV B11:2001-06:

Regulations of the professional association for safety and health at work. Accident prevention regulations for electromagnetic fields.

E DIN VDE 0848-3-1: 05-2002:

Safety in electrical, magnetic, and electromagnetic fields, part 3-1: Protection of persons with active



implants in the frequency range of 0Hz to 300 GHz. In the area where the operating personnel is working the electromagnetic field of the metal detector or separator does not exceed the limits stated in the provisions. Therefore there are no health impairments due to electromagnetic fields in this area for persons and for wearers of medical implants such as cardiac pacemakers. Inside the coil of round or closed tunnel coils, or on the surface of flat coils, the limits may be exceeded depending on design and system version. If work is to be performed inside or at the search coil, persons and wearers of medical implants such as cardiac pacemakers may only approach the equipment when it is turned off, provided that size and design allow this.

Safety Information for Operation and Maintenance

MAIN VOLTAGE

There is danger of injuries in the form of electric shocks or burns due to energized parts in the connection box. The cover of the connection box must always be kept closed during operation. Operation and cleaning of the equipment may only be performed by qualified personnel. If the connection box must be opened for maintenance or cleaning purposes, remove any dirt and moisture from the box so that no larger quantities may get into the interior. Always disconnect the power supply and any connected external circuits before opening the cover. Any moisture that has penetrated into the interior must be removed from the box!

DANGER OF CRUSHING

When the separating unit is operating there is danger of crushing due to the movement of the piston. During operation all the protective devices that prevent any reaching into the inlet, normal outlet, or reject outlet must always be attached. The metal separator must be properly installed in the conveyor pipe. If protective devices or the metal separator are removed from the conveyor pipe for maintenance or cleaning purposes, the compressed-air supply must first be interrupted and the compressed-air tubes must be vented. Compressed-air connection may only be established again when the protective devices have been attached again and the metal separator has been successfully mounted to the conveyor pipe again.

DANGER

If the tube is removed from the reject outlet, there is danger of injuries due to ejected reject material. During operation the tube must always be connected, and the reject material must be fed into a collecting container. The compressed-air supply must first be interrupted if the tube is to be removed for maintenance or cleaning purposes.

BURN HAZARD

In case of product temperatures of more than 140°F there is danger of burning at product-contacting parts. During operation suitable protective facilities must be attached that prevent any touching of the danger spots. The product flow must be interrupted before any maintenance or cleaning work is started. Any such work may only be performed after the product-contacting parts have cooled down.

Safety Information for Storage and Transport

DANGER

Always observe the information on page 9 to avoid any transport damage and personal injuries. Especially the piston must be locked during transport to prevent any piston movement.

Notes of Residual Risks

DANGER

Possibly installed compressed air tanks may still contain pressure in spite of an interruption of the compressed air supply. If necessary, vent such tanks!

Notes on Stable Standing Requirements

DANGER

To avoid any loss of stable standing, the information for operation, storing, and transport must always be observed.

Consequences of Unauthorized Modification

! In case of unauthorized modification or repair work all the declarations and guarantees given by the manufacturer will become void.

Inadmissible Operation

! The Model CFP metal separator is not intended for any other applications than mentioned on page 8 – any other applications will be regarded as inadmissible operation.

Inadmissible is the operation out of the specifications given in the technical data and the operation under high mechanical static or dynamic loads (e.g. heavy system parts or strong vibrations). Also inadmissible is the examination of aggressive materials such as materials containing alkaline solutions, acids and solvents, of materials that are sensitive to electromagnetic fields, and of living people and animals.

The metal separator must not be operated in explosive areas.

Basically it is possible to also use the system in other applications than the intended use stated herein, but such applications always require the prior consultation and approval of Eriez.

Installation

Mechanical Installation

! DANGER

Only connect the compressed-air supply when all the covers have been closed, all the required protective measures have been taken, and the machine has been properly installed in the conveyor pipe.

The following essential items must be observed for installation:

- Solid and vibration-free mounting.
- Avoid electromagnetic interference in the area surrounding the detector, e.g. caused by electric motors, frequency converters, power lines etc.
- Indoor mounting and operation
- A tube must be connected to the reject outlet of the metal separator to guide the rejected material into a container.
- Suitable protective facilities, e.g. pipe pieces of at least 3 feet in length, must be attached at the inlet and at the normal outlet to prevent people from reaching into the danger spots.
- Prevent electrostatic charging by grounding the housing parts.

Note: It is recommended to place a lockable opening in the pipe in front of the detector (inlet). This opening allows you to put in test samples for performance checks of the equipment.

Connections

! DANGER

Any work at electric equipment may only be performed by qualified personnel. Before opening the housings make sure the equipment is isolated from mains or external voltage.



- Connect the compressed air supply.
- Check the cable or plug connection of the pneumatic valve.
- Check the air pressure and adjust it to 87psi if necessary.
- For service unit settings see the attached manual.
- Air tube, length 19.7 feet max., and minimum 3/8 inch diameter (to central air supply).
- Air connection only via plug nipple 7.2 mm.

! It is extremely important for effective and reliable removal of contaminants that the compressed air is connected in the correct way; the operating pressure must be more than 72 psi, the air tube length should not exceed 19.7 feet, the tube diameter should not be less than 0.35 inches, and the plug nipple width should not be less than 0.28 inches.

Setting of Operating Parameters

! DANGER

Close the covers of the control unit and the coil connection boxes.

After correct installation and connection of power supply (115/230 VAC; 60/50Hz) and compressed air supply (87 psi), check the eject mechanism manually by activating the pneumatic valve (Test button).

Activate the conveying and adjust the metal separator such that there is no incorrect activation. If necessary, eliminate the reasons for incorrect activations. Convey a suitable test sample, e.g. a plastic ball with embedded metal part of the desired size (see note under 5.1), and check whether it is properly separated. **Info:** In case of highly contaminated material it may be necessary to adjust the separation slide time and the vacuum extraction time.

Errors and Fault Rectification

! DANGER

If products should get jammed in the conveyor pipe, disconnect the system from the mains supply, turn off the compressed-air supply, and vent the air tubes. The jammed products can then be removed without danger.

! DANGER

If you should have any questions, or if there should be any malfunctions, please contact the manufacturer.

! DANGER

If you have any questions, please state the equipment type and serial number!

ERIEZ SERVICE: Telephone: 814-835-6000

Maintenance

! DANGER

Prior to any maintenance and cleaning work, disconnect the system from the mains supply, turn off the compressed-air supply, and vent the air tubes. Always observe the safety information.

! **If there is a high proportion of metal contaminants or the bulk materials being inspected are abrasive it is likely that any surfaces in contact with the product will show signs of wear and tear (e.g. piston, normal and reject outlet).**

General Notes

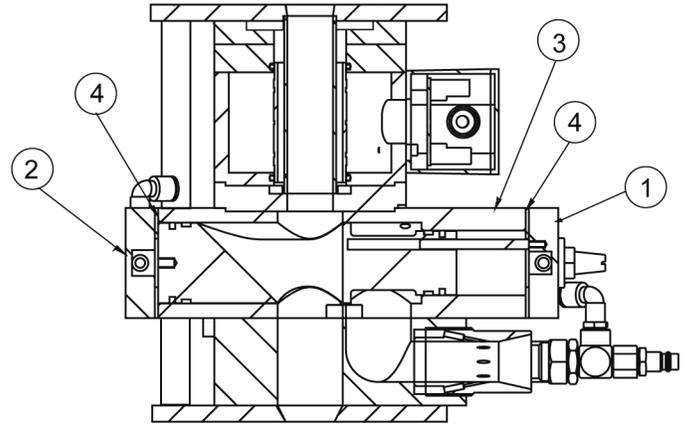
In appropriate periods of time (e.g. every week or month):

- Perform a visual inspection of all the parts in contact with the product, such as scanning pipe, transitions, reject mechanism, and drive elements.
- Replace worn parts to ensure proper function.
- Check all the screws and nuts for tightness, and tighten them if necessary.
- Do not use aggressive cleaning agents.
- When carrying out repairs, clean dirty parts and, if necessary, drain off condensate at the service unit of the compressed air supply.

DANGER

In our company all the bolts are secured against coming loose by means of medium-strength threadlocker. If bolts have to be removed or loosened, they must be reassembled and secured again against coming loose with a medium-strength threadlocker, e.g. Loc-tite 243

Separation unit, replacement of diverter shaft seals



1. Remove the cover plate (2) and the flat gasket (4).
2. Insert one of the cover plate screws into the tapped hole in the end of the piston and pull it out of the cylinder (3).
3. Carry out any necessary repairs, cleaning etc.
4. To re-assemble, reintroduce the piston into the cylinder and turn it slowly until the locking pin of the cover plate (1) fully latches into the hole in the end of the piston.
5. Push the piston fully into the cylinder and remove the screw from the piston (see 2).
6. Reassemble the cover plate (2) and the flat gasket (4).

Cleaning

Advice

- Please make sure you follow the cleaning instructions below!
- Specific machine components must be cleaned with specific substances. Please use the correct materials and clean at regular intervals as suggested!
- Prior to any cleaning work, disconnect all the supply lines and the compressed-air supply!
- If the building is being cleaned ensure the machines are covered up!

The following must not be used for cleaning:

- Sharp, hard or pointed objects
- Water or steam jet devices
- Compressed air
- Hazardous, solvent-containing or chemical cleaning materials
- Cleaning agents that may attack the materials

Cleaning Instructions

We recommend cleaning with a soft, lint-free cloth using warm water and the appropriate cleaning agent. After cleaning wipe up any remaining water with a dry, lint-free cloth. If mainly regrind material is run, cleaning of the mechanical components after approx. 300 rejections or at least every three months is strongly suggested due to the high dust content to ensure proper function of the mechanical components.

Performance check

The performance check of the detection unit is carried out by pressing the test button. It is recommended to use a test piece that is inserted into the conveying pipe, because this procedure ensures that both the detection and the separation unit are checked. If the system works properly the test piece must be separated via the reject outlet. The interval for the performance check depends on the contamination level of the inspected bulk material and on quality assurance specifications. If necessary, a performance check should be performed every day, the minimum interval is every two weeks.



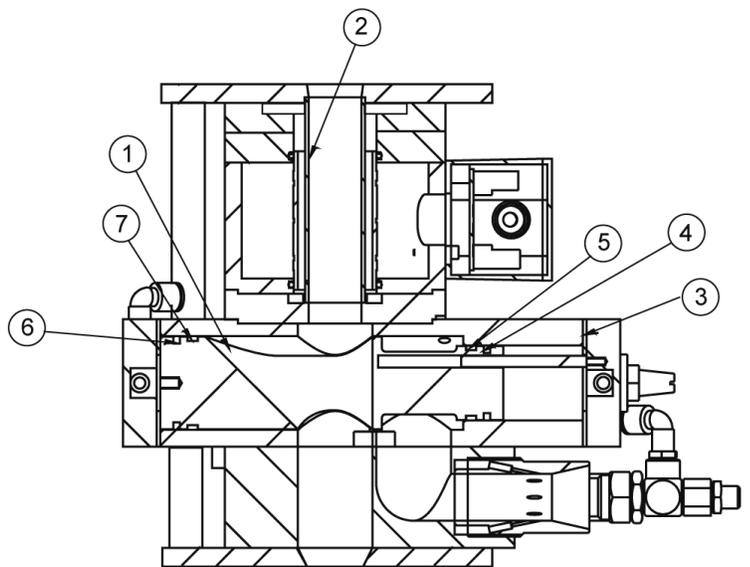
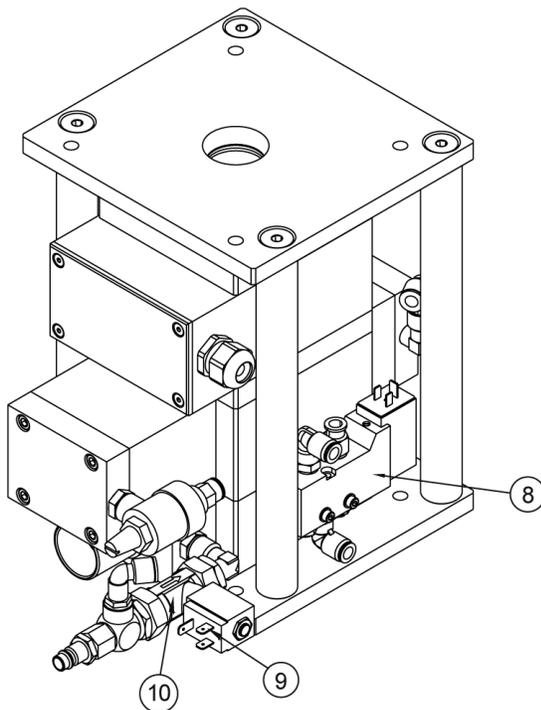
Please take care that the test piece doesn't drop in your good product in case of malfunction of the system.

Spare Parts

If you should have any questions please give equipment type and serial number!

! Spare parts and wearing parts must always be obtained from the manufacturer or from a supplier that is certified by the manufacturer.

CFP Metal Separator, Nominal Widths 30 and 40 Spare Parts List

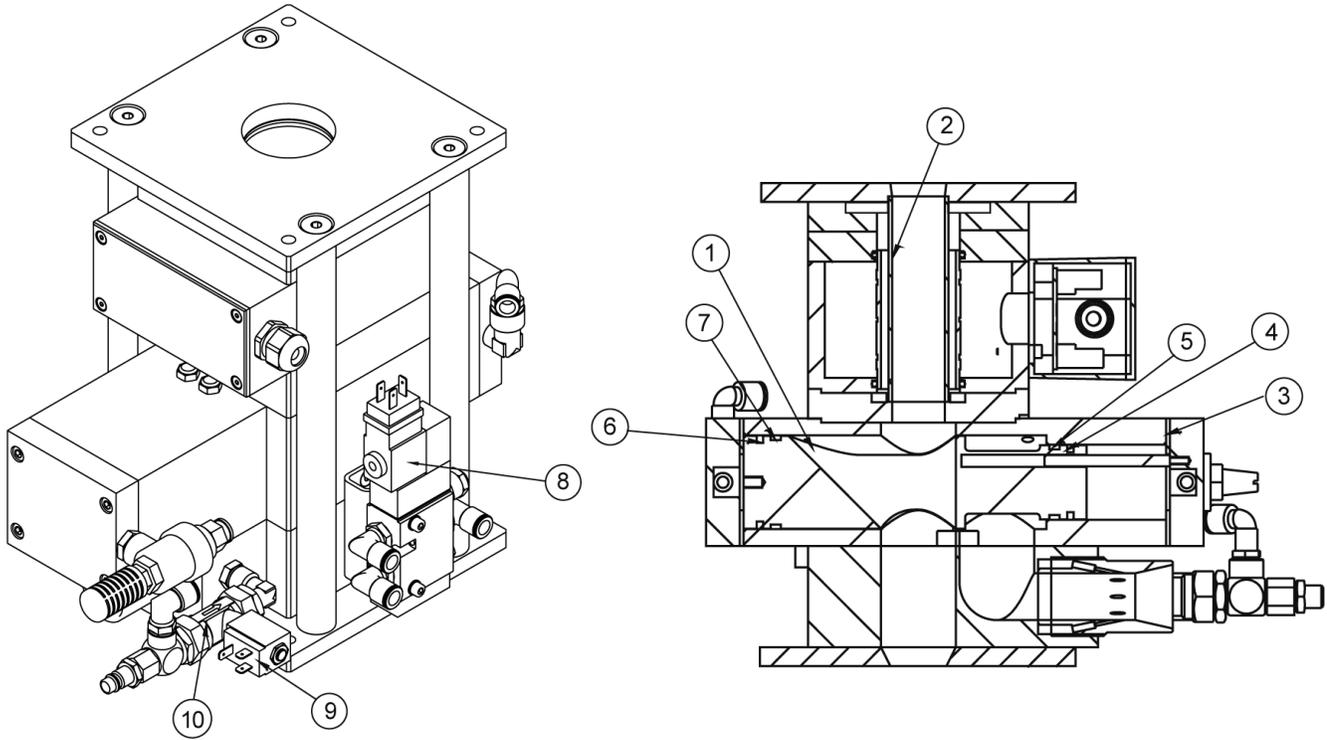


Item	Qty	Part	Drawing no	Item No.	Sp/Con*
1	1	Piston NW 30/40	MM1936.037TE084.3	33005618	Sp
2a	1	Scanning pipe Ø 32 x 1.9 110.4 lg (30)		77065805	Con
2b	1	Scanning pipe Ø 40 x 1.8 110.4 lg (40)		77060687	Con
3	2	Flat seal	Z0005320	77005925	Con
4	1	Piston seal Ø 40 mm		33005520	Con
5	1	Piston guide ring 40 mm		33005476	Con
6	1	Piston seal Ø 50 mm		33005518	Con
7	1	Piston guide ring 50 mm		33005474	Con
8	1	5-2 valve G 1/8"		56201244	Sp
9	1	Magnetic head Römer 24V		21117314	Sp
10	1	Solenoid valve Römer		04001249	Sp

*Sp/Con = Spare part / Consumable
When ordering please state type of equipment



CFP Metal Separator, Nominal Widths 50 and 60 Spare Parts List



Item	Qty	Part	Drawing no	Item No.	Sp/Con*
1	1	Piston NW 50/60	MM1936.018TE011.3	33005534	Sp
2a	1	Scanning pipe Ø 50 x 1.8 109.5 lg (50)		77065816	Con
2b	1	Scanning pipe Ø 63 x 1.8 109.5 lg (60)		77065824	Con
3	2	Flat seal	Z0005379	77006046	Con
4	1	Piston seal Ø 50 mm		33005518	Con
5	1	Piston guide ring 50 mm		33005474	Con
6	1	Piston seal Ø 70 mm		33005516	Con
7	1	Piston guide ring 70 mm		44005112	Con
8	1	5-2 valve G 3/8"		08024871	Sp
9	1	Magnetic head Römer 24V		21117314	Sp
10	1	Solenoid valve Römer		04001249	Sp

*Sp/Con = Spare part / Consumable
When ordering please state type of equipment

Shipping, Preservation, Waste Disposal, Transport, Storage

Shipping, Preservation, Waste Disposal

WARNING

Choose packing that is suitable for the type and size of unit, taking into account whether the shipment is for export by sea or airfreight, or for national or international road transport. The packing material must protect the goods from all damage under normal transport conditions.

WARNING

Depending on the size, weight and nature of the goods packing in cardboard boxes, boxed pallets etc is only suitable for road transport. Use reinforced card, corrugated cardboard, blister packing and shredded paper to fill and protect the goods.

Electrostatic sensitive components (electronic boards, electronic modules, etc.) must be packed in antistatic foil or foil bags prior to packing (this is essential). Stick additional warning labels on the outside of the packaging e.g. "Attention, electronic equipment, do not drop," etc. The packing should be sealed with adhesive tape and, where the weight exceeds 110 lbs, additionally with wrapping tape.

WARNING

When packing for international road transport use the instructions above (see Warning 2). Larger and heavier shipments must also be protected as for export in wooden crates. Care must be taken to ensure that the goods inside the packing are protected against corrosion.

Any parts that will corrode easily must be wrapped in oil paper or corrosion-protective foil. Care must be taken to prevent the components moving around within the packaging.

WARNING

International air freight shipments must be packed in wooden crates or in export pallets.

Care must be taken that the goods are secure and well-protected inside the packing. Any parts liable to corrode must be wrapped in oil paper, protective foil or sprayed with anti-corrosion spray.

WARNING

Sea-freight must be packed in seaworthy export crates. These crates can be obtained from specialist suppliers.

The crates must be lined with oil paper to make them resistant to sea water and prevent corrosion. In addition the goods must be protected against corrosion by use of a spray or be wrapping in protective foil.

Care must be taken to ensure that the goods cannot move around inside the crate. After packing the sea-freight crates must be properly closed. The sea crates must also be fastened externally with securing tapes. During loading care must be taken not to damage the external packaging.

The carrier must certify that the shipment has been accepted and loaded correctly by detailing this on the bill of lading, loading list etc.

WARNING - WASTE DISPOSAL

Observe the national waste disposal regulations.



Transport

WARNING

In order to avoid injury or damage to the unit it must be handled properly. In addition to following the instructions below, general health and safety good practice and specific accident prevention guidelines should be observed

For correct handling and storage comply with the following symbols:



Protect Against
Moisture



Careful: Glass



Up



Center of
Gravity

WARNING

Do not compress the side walls of the unit or any attached parts by pulling obliquely on ropes or chains.

If there is a red transport lock between vibrating and non-vibrating components, this lock must be removed before commissioning.

When handling in a loading area make sure the unit cannot topple over or slip.

Damage caused during transportation must always be reported to the manufacturer.

Storage

WARNING

If possible the unit should be stored in a closed room until final installation.

If the unit is stored in the open it must be covered over with tarpaulins and open underneath, to allow condensation to drain off.

Avoid any higher temperature fluctuations. It is possible that condensed water that has formed in the packing cannot properly drain and may corrode equipment surfaces. If a formation of condensed water cannot be avoided, suitable desiccants e.g. in the form of bags must be placed in the packing.

If the unit has been packed for transportation by sea the packaging must not be damaged or opened during transit and storage.

For storage temperature and permissible air humidity please refer to the technical data sheet.

For correct storage comply with all storage and handling symbols:



Protect Against
Moisture



Careful: Glass



Up

Accessories

- Operating instructions signalling device (visual alarm, audible alarm or combination alarm)
- Filter control valve data sheet
- Counter data sheet
- Button for manual ejection data sheet
- Container for reject material data sheet
- Adapter plate system data sheet
- UL/CSA certificate

Options

- Compressed-air monitor data sheet

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