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**B 0429e**

**04.16**

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## **Translation of the original operating instructions**

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### **Non-ferrous separator with discharge cover and control system**

**0429/0-37/60/8 no. 565697**

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| Belt drive motor                                                                                       |           |
| Rotor drive motor                                                                                      |           |
| <b>In option: Conveying unit, B(0)420(N)_e, B0429e B0428e Appendix belt cleaning, Air conditioner,</b> |           |
| <b>Trellex dust sealing cloth</b>                                                                      |           |
| <b>Discharge cover</b>                                                                                 |           |

# 1. Safety

All persons involved in the assembly, start-up, operation and maintenance of the machine are strictly advised to read and stick to the following instructions very carefully.

Before starting up the machine please observe all items of the operating instructions.

In addition it is essential to observe all relevant safety and accident prevention regulations!

## 1.1 Safety instructions

This WAGNER non-ferrous separator was subject to safety tests.

However, in the event of faulty operation or improper use the following risks are possible:

- danger to neighbouring machinery or other property of the operator
- risk of inefficient operation
- danger to the operator

Legend:

**Danger:**

Below mentioned instructions must be followed in order to prevent the user from damage.



**Danger**

**Warning:**

Please stick to the following instructions in order to prevent the device from being damaged.

**Note:**

This symbol marks important notes for the proper use of the device.  
If the notes are ignored, the machine can be damaged.



## 1.2 Regulations regarding use

The non-ferrous-separator is designed for the automatic separation of light and non-ferrous metals from a feed current.

The percentage of ferrous parts must be reduced to a minimum by using an upstream magnetic separator. Please take into consideration: If the quantity of iron is larger, the life expectancy of belt and rotor casing is shorter.

The dimensions of the smallest possible part to be separated by the machine depend on various factors:

- the material to be separated, itself:
  - material
  - electric conductivity of part
  - specific weight
  - bulk of part
  - shape of part
  - position of part in feed current
- the given feed current:
  - composition of feed current (which materials, dry or moist material,...)
  - grain size of all materials monitored
  - height of feed current
  - number of layers
- the machine setting:
  - direction of rotation of rotor
  - speed of belt
  - position of separating edge
  - position of the magnet system of the optional magnetic drum

All plastics, wood, glass and other electrically not conductive materials are separated by this machine as residual fractions!

Any modifications to the machine are only permitted on the explicit authorization of the manufacturers due to safety reasons! The operability of the machine can be harmed otherwise.

It is not allowed to change the setting points at the frequency regulator!

Part of the proper use is that all activities with and at the machine must be in compliance with this manual. The machine is designed according to the latest technology. All the safety rules, standards, laws and instructions were taken into consideration. Risks to persons and subjects were reduced to a minimum. Errors harming the safety must be removed as soon as possible.

### 1.3 Operating personnel

The users of the machine are strictly advised to make the operating instructions accessible to the operating staff and to make sure that they are read and correctly understood. Only then can the non-ferrous separator be taken into operation.

The operator is obliged to ensure that only persons work at the machine who:

- know the basic industrial safety precautions and accident prevention precautions and who were introduced to the handling of the machine,
- read the chapter about safety precautions and warnings of this manual and who understood and accepted it by signature.

Within the operating area of the equipment the operator is responsible to third persons.

Any works, as for example transport, storage, installation, electric connection, commissioning and any repair works must only be carried out by qualified personnel. We recommend having any repair works on Wagner machines carried out by Wagner service personnel.



The non-ferrous-separator emits magnetic fields. In accordance with today's level of technology, it is possible that they can have an effect on persons with cardiac pacemakers, for example. Unfortunately, no clear medical statements concerning this matter are known up until now. Therefore it is essential to keep a minimum distance of 2 m to the magnet.



Storage media working on a magnetic basis like cheque cards and credit cards, hard disks, video tapes etc. can be impaired by the magnetic field's impact. Therefore there should be a distance of at least 2 m between such items and the separator.



When working within the magnet's sphere of action, magnetizable parts, as for example tools, are attracted with intense force. Risk of bruises!

## 1.4 Noise protection

### Idle running:

For emission sound pressure level LpA, see Technical data.

### During loaded operation:

Please note that the sound level can increase considerably during loaded operation! Higher sound level values can be perceived particularly in connection with the material feed and the use of discharging funnels for the extracted material. The sound level can be decreased by lining the discharging funnels. The operator has to provide suitable noise protection.



## 1.5 Safety measures at installation site



**Danger**

The foundation for this separator must be so dimensioned for static and dynamic load that absolute stability with the adequate additional safety is ensured.

Please take into consideration that vibrations can be caused by the machine during operation to a certain extent. Take all precautionary measures in order to safeguard that the machine is reliably secured at all times!

Pay attention that no one is standing inside the material output zone when the machine is in operation.

Do not handle ferrous materials within the magnet's sphere of action. Risk of bruises!

Please take note of the fact that a permanent magnet is linked to considerable risks even if the current supply is cut off. For example, people can be injured by tools and hoisting equipment that are attracted by the magnet.

Never operate the machine with open protective enclosures or open doors!

Loose clothing, etc. can get caught in rotating parts like axes and shafts. Therefore, do not reach into the machine while it is in operation!

Assembly and maintenance works must only be carried out when the machine stands still. Before carrying out this work, disconnect the machine from the power supply and make sure that it cannot be switched on accidentally or by unauthorized persons. The main switch is located on the electric cabinet. After switching off the main switch secure it by using a padlock.

Never step on the casing panels, the conveyor belt or other machine parts!



The machine manager is responsible for taking all precautions which may be necessary for the protection of the assembly and maintenance personnel (e.g. assembly platform in case of an elevated operation site in order to prevent things/people from falling down).

The users of the entire plant are responsible for an emergency switch in which the non-ferrous-separator is professionally integrated! Please pay attention to the fact that the voltage at the non-ferrous separator is not switched off but that the release signal at the control unit must be taken away.

Surface temperatures of 50° C and more may occur. Maintenance works should only be carried out after the device has cooled down.



Attention in case of cutting and welding engineering. The belt of the conveyor can be damaged through flying sparks. Always cover the belt.

## 2. Technical data

### Non-ferrous separator

Type: 0429/0-37/60/8

Serial number: 565697

Order number: 369077

Belt speed:  
adjustable from 0,5 m/s to 2 m/s

Weight: 1230 kg

Discharge cover ☒ yes ☐ no

Emission sound pressure level LpA=80 dB

Ambient temperature: - 20 to + 45 °C

Drawing ZK4-1068400

### Control system

Type: 0428/0-25

Serial number: 578877

Program-number: D4-0428-04b, S4-0428-04b

Mains supply: 400 V 50 Hz.

Rec. fuse protection: 20 A (slow to blow)

Weight: 175 kg

Protection type: IP 54

Air conditioner (option) ☐ yes ☒ no

Note the manufacturer's operating instructions!

Heating (option) ☐ yes ☒ no

Ambient temperature control system: °C

### Motor-rotor drive

Type: 112MH/2 TF

Connection voltage: 400/690 V

Output: 4,0 kW

### Frequency regulator- rotor drive

Type PM240 SINAMICS G120 PN

It is not allowed to change the setting points  
at the frequency regulator!

|                                       |                                                                                                      |
|---------------------------------------|------------------------------------------------------------------------------------------------------|
| <b>Motor-belt drive</b>               | Type: SK0282NBAFB-90LH/4TF<br>Connection voltage: 230/400 V<br>Output: 1,5 kW                        |
| <b>Frequency regulator-belt drive</b> | Type SINAMICS G120C PN<br>It is not allowed to change the setting points at the frequency regulator! |
| <b>Discharge cover</b>                | Type: 0429-../60 B WH-1<br>Weight:           kg<br>For further technical data please see appendix    |

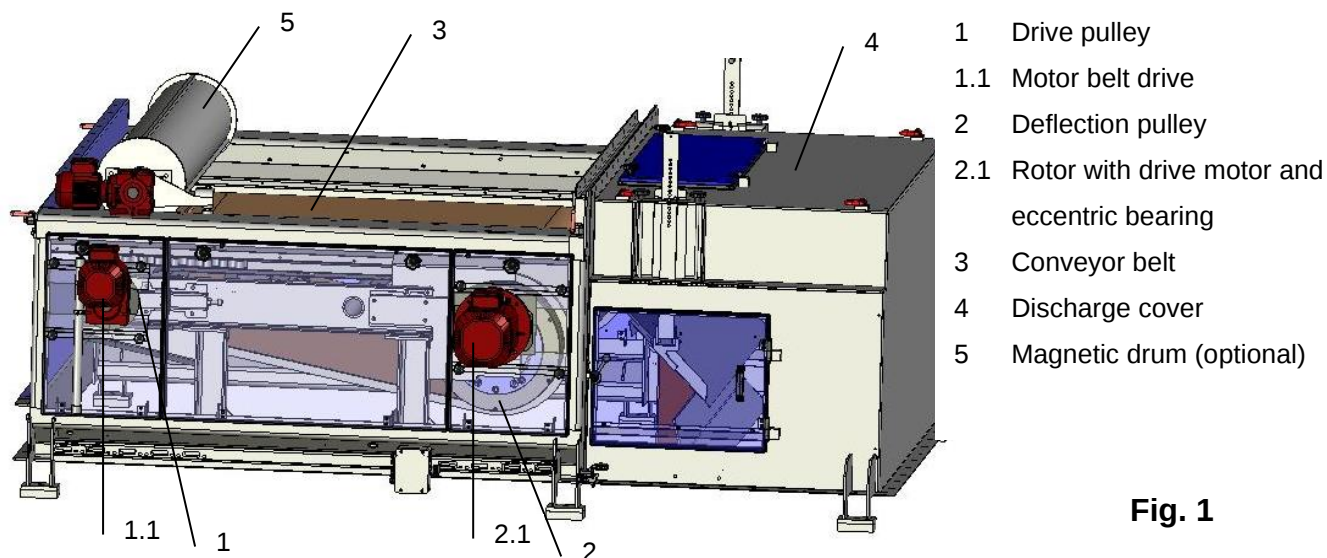
## Optional

|                                                                                              |                                                                                                                            |
|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <b>Conveying unit</b><br><input type="checkbox"/> yes <input checked="" type="checkbox"/> no | Type:<br>Serial number:<br><br>Connection voltage:       V<br><br>Output:                   kW                             |
| <b>Magnetic drum</b><br><input type="checkbox"/> yes <input checked="" type="checkbox"/> no  | Type:<br>Serial number:<br>For further technical data, please refer to the operating instructions for the magnetic drum    |
| <b>Motor-magnetic drum</b>                                                                   | Type:<br>Connection voltage:       V<br><br>Output:                   kW                                                   |
| <b>Cleaning brush</b><br><input type="checkbox"/> yes <input checked="" type="checkbox"/> no | Motor type:<br>Connection voltage:       V<br><br>Output:                   kW<br>Note the appendix on the cleaning brush! |

|                                                                                                          |                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Single roller</b><br><input type="checkbox"/> yes <input checked="" type="checkbox"/> non             | Motor type:<br>Connection voltage:        V<br>Output:                      kW                                                                                                       |
| <b>Trellex dust sealing cloth</b><br><input type="checkbox"/> yes <input checked="" type="checkbox"/> no | antistatic <input type="checkbox"/> yes <input type="checkbox"/> no<br>Note appendix on installation instructions for Trellex dust sealing cloth!                                    |
| <b>Special accessories</b>                                                                               | Discharge funnel iron <input type="checkbox"/> yes <input checked="" type="checkbox"/> no<br>Closed construction <input type="checkbox"/> yes <input checked="" type="checkbox"/> no |

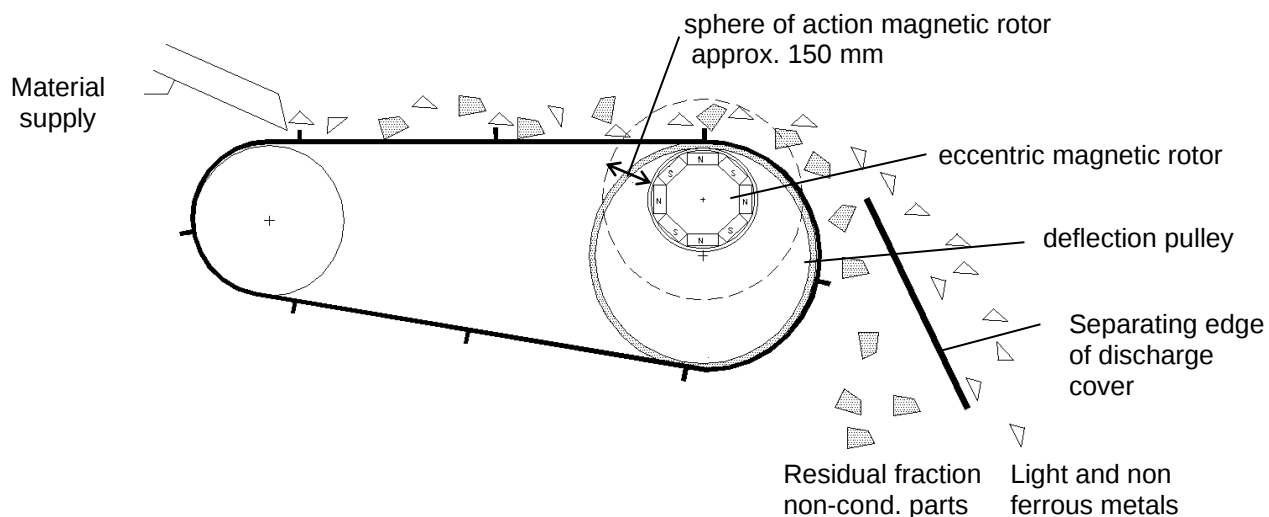
### 3. Product description

#### Design:



#### Principle:

The transported material is fed onto the non-ferrous separator via oscillating chute (conveying unit optional); separation of the remaining ferrous parts (optional magnetic drum) is performed before the actual eddy-current separation. The deflection pulley contains an eccentrically arranged and fast rotating permanent magnetic rotor. It generates eddy currents in the non-ferrous metal parts, which then generate a magnetic field that counteracts the external field. The non-ferrous parts are separated from the material flow. By adjusting the pole system this position can be optimized.



Materials getting into the sphere of action of the separator's magnetic field react differently:

- In all electric conductors eddy currents are induced by the magnetic field as described. Due to these eddy currents the parts get their own magnetic field. The magnetic field of the rotor and the magnetic field of the parts repel each other. If the resulting force is sufficient in order to raise the parts they are separated via a separation edge and collected in a fraction (light and non-ferrous metals).
- Parts with no or little conductivity and ferromagnetic parts are united in the residual fraction (e.g. wood, glass, synthetic material).

#### Influence of the material characteristics:

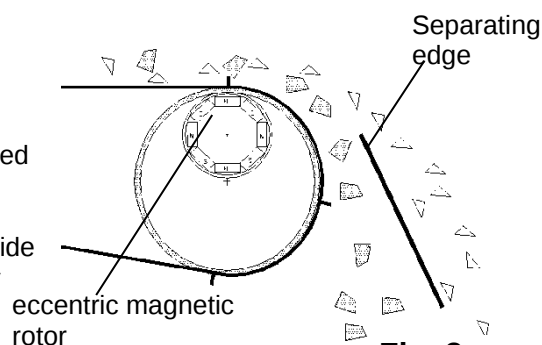
- **Material**

The decisive characteristics of the material for the separation according to the principle of eddy current is the relationship between electric conductivity and specific weight. The higher the electric conductivity with minimum specific weight the better a part is separated by the non-ferrous separator.

- **Size of material**

Best separation results are achieved if the material is supplied to the non-ferrous-separator in most even graining. Grainings of similar size can be better separated than very large grain spectra!

Optional in the discharge cover WAGNER devices provide a simply adjustable separating edge, which allows easy optimizing of the setting.



**Fig. 3**

- **Shape of material**

The shape of the part is also important for how strong a part is deviated from its normal falling parabola due to the magnetic field of the rotor (so-called throw). Area measured parts can be processed more easily than barrel-shaped parts.

- **Degree of cleanliness of the material**

If a part consists of at least two different materials clean separation is not possible. This can be the case, for example, for materials which come from a shredder or crusher.

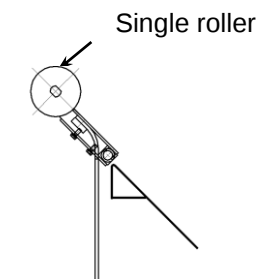
- **Layer height**

Good separation can be achieved if materials are fed in one layer (i.e., the parts do not obstruct one another). Therefore we recommend to feed the material by using vibrating conveyors.

- **Foils in the material flow**

Optionally, the non-ferrous separator can be equipped with a single roller along the separating edge to prevent foils or similar materials from getting caught on the separating edge.

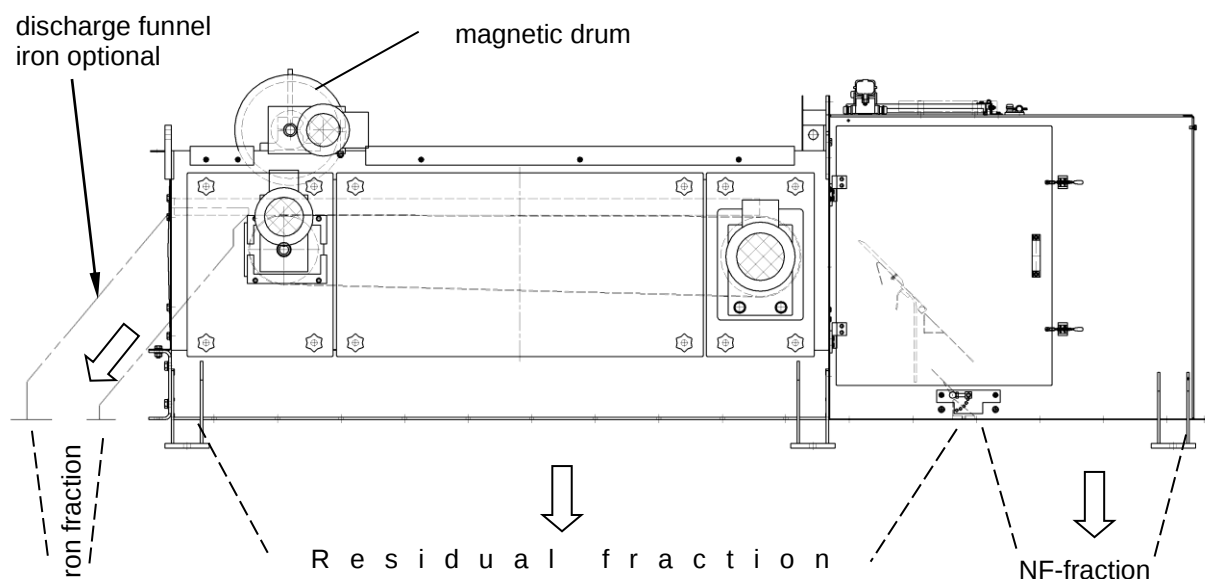
The direction of rotation of the roller can be changed automatically in intervals using the control system; this allows removing any caught parts.



**Fig. 4**

### Optional magnetic drum

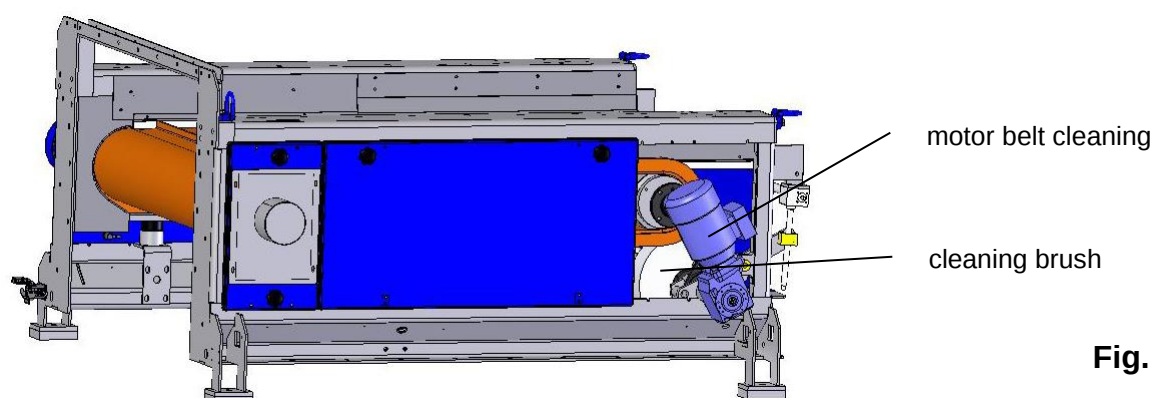
Optionally a magnetic drum can be used as upstream device to separate the ferromagnetic parts. These ferromagnetic parts can optionally be collected in a discharge hopper. In the standard version the separated ferromagnetic parts are fed to the residual fraction.



**Fig. 5**

### Optional cleaning brush

Optionally, cleaning brushes are used, if the material may get stuck on the conveyor.



**Fig. 5a**

### Encapsulation of the unit

The discharge cover directs the material flow with light and non-ferrous metals into a container provided by the customer. This container can be mounted using the flanged angle profiles on the discharge cover. Besides the discharge cover protects the user from parts being thrown out. The non-ferrous separator must not be operated without discharge cover.



The material discharge area for the remaining parts resp. iron fraction (under the non-ferrous separator) must also be safeguarded. At the frame of the non-ferrous separator flange angle profiles are planned where containers for residual fraction can be added by the customer. This ensures full encapsulation of the unit.



For getting to know the respective measurements of the flange angle profiles, please contact the Wagner Company!

## 4. Transport and storage

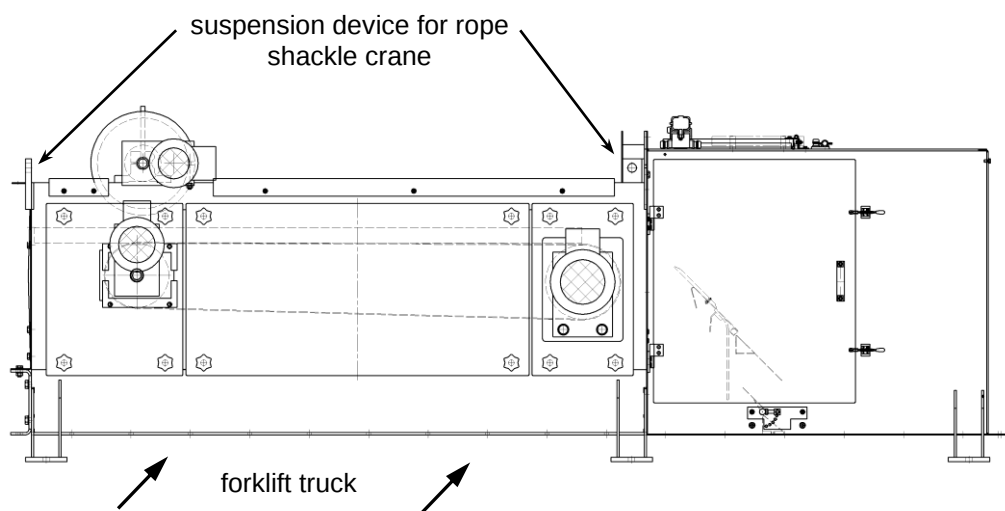
### 4.1 Transport

When selecting your means of transport please bear in mind the total weight of the machine (see section 2). Wagner non-ferrous separators are screwed on wooden pallets for transport.

There are two possibilities for transporting the non-ferrous separator:

- **by crane:**  
Suspension devices are mounted at the corners of the non-ferrous separator. Fix your rope with rope shackles at all four points according to figure 6.

Make sure to observe the relevant stipulations on handling load suspension devices and lifting gears!



- **by forklift truck:**  
Any load suspension must only be carried out through the basic frame of the non-ferrous separator (not underneath the discharge cover). Carefully determine the center of gravity of the machine (see fig. 6).

When selecting your means of transport, please bear in mind the total weight of the machine by all means (see section 2, Technical data).



### 4.2 Packing

The non-ferrous separator is screwed to a wooden pallet for transport and intermediate storage.

Removal of packing:

- Remove the transport screws from the fixing base of the machine
- Lift the separator from the pallet

### 4.3 Storage

This non-ferrous separator is designed in protective system IP 54 (see section 2).

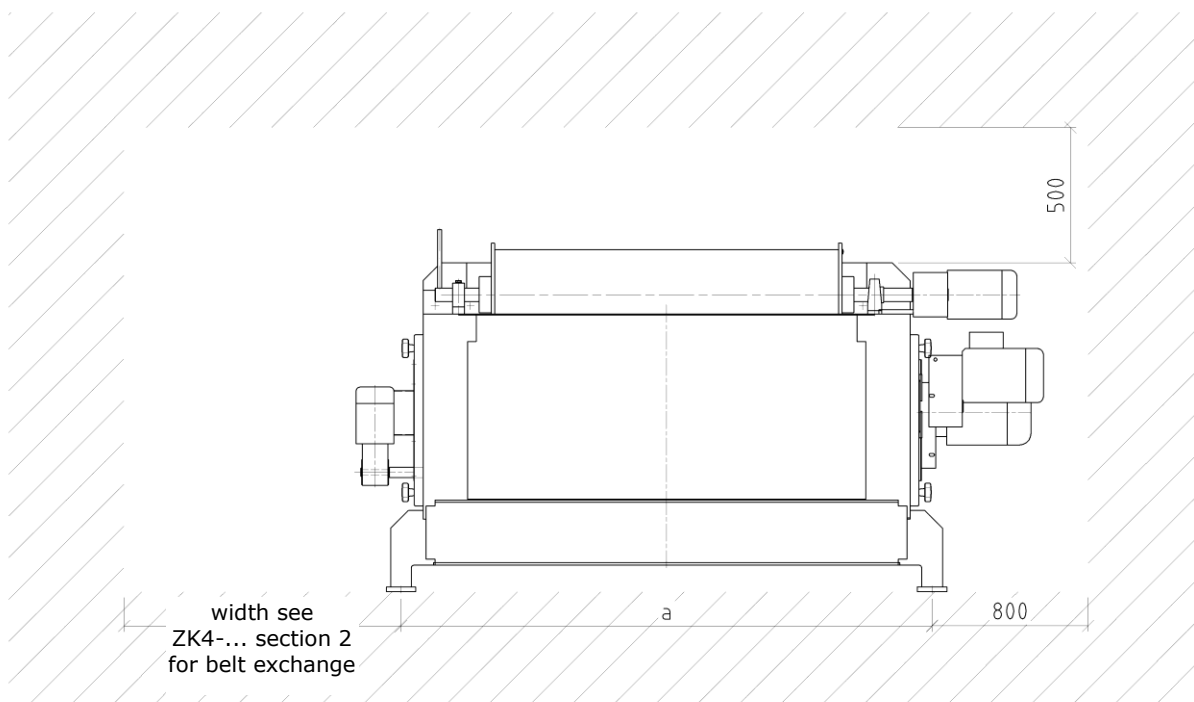
**Do not store outdoors.**



## 5. Mounting

### 5.1 Measures at installation site

- For mounting the non-ferrous separator select a roofed weather-resistant space and stick to the reliable ambient temperatures for machine and control. The control box must be easily accessible and protected from dirt and dust. In unheated halls a control cabinet heating should be planned.
- Make sure that the assembly and maintenance personnel have free access to the machine and that they can carry out their work safely (e.g. erection platform).



**Fig. 7**

- When selecting the site of installation make sure to consider that lifting equipment must have access to the machine, and that there must be sufficient space on the sides of the machine for maintenance and repair works. Please refer to the Wagner drawings (ZK4-...) for correct dimensions (see section 2).
- Please make sure that no vibrations can be transmitted to the non-ferrous separator from the plant.



## 5.2 Fixing the non-ferrous separator

Observe the following items before installing the non-ferrous separator in your plant:

- The machine should be assembled horizontally (max. fluctuations in transverse direction: 1°).
- Bore-holes are available at the bases of the legs for securing the machine in position. Mount the separator onto your supporting structure by the screws through these borings or by screwing the welding plates and subsequent welding with the sub-structure.

### Caution:

There are strong magnetic forces at the rotor range and the magnetic drum. Normal tools such as screwdrivers or hammers will be attracted by the magnet. Risk of injury!



## 5.3 Material supply and discharge

Make sure the material is evenly fed, i.e. over the whole working with and with constant layer thickness. Also make sure that the material to be sorted must fall onto the conveyor of the non-ferrous separator from a maximum height of 100 mm. If necessary, use an oscillating chute or standard chute. The smaller the distance between belt and feeding device, the longer the service life of the conveyor. Make sure that the oscillating chute must not bump against the non-ferrous separator, also not when it is loaded.



Attention: Risk of injury if separated materials are ejected. Enclose the non-ferrous separator. Make sure that the discharge funnel (container) is sufficiently dimensioned. Otherwise materials can get jammed and the machine may be damaged. Design and position the discharge funnel (container) in a way that no material can miss the funnel when discharged. See also chapter 3.



**Danger**

### 5.3.1 Material feeding via magnetic drum (optional)

Material is fed onto the magnetic drum of the non-ferrous separator via vibrating channel. Feed the material onto the drum in a way that the parts are separated evenly on the complete working width of the drum. Make sure to minimize the height of fall of the parts. The dimensions specified must be observed during operation of the unit.



Make sure that the separated ferrous parts sticking to the magnetic drum do not drag on the conveyor. Otherwise too large ferrous parts may get caught between conveyor belt and drum and damage the belt.



When using a magnetic drum, make sure to observe the operating instructions B(0)420(N)\_e!

## Positioning of the magnetic system

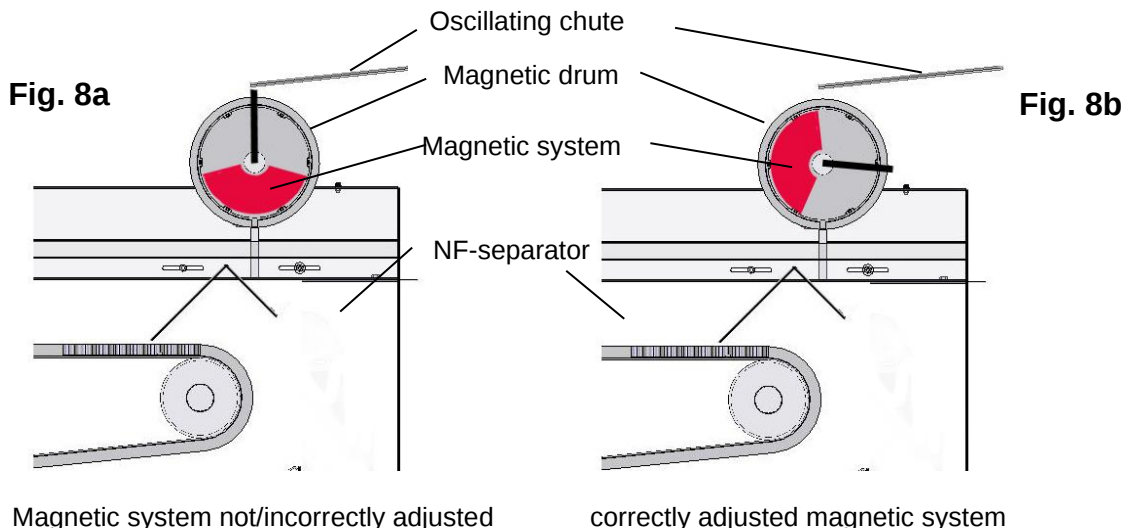
**Positioning of the magnetic system is done according to the specifications and guidelines for the B(0)420(N) e!**

### **Warning! Danger of crushing injuries!**

When opening the clamping fixtures on magnetic drums (clamping screw and clamping set) it is essential to use suitable lifting gears. The magnetic system returns to transport position when unclamping the clamping fixture without proper adjustment (see fig. 8a). Here strong forces are active. Make sure to use adequate lifting gears to hold the magnetic system. Otherwise there is risk of heavy injuries (e.g. adjusting level moves uncontrolled). Risk of bruises!



**Danger**



Magnetic system not/incorrectly adjusted

correctly adjusted magnetic system

## 5.4 Electric connection

Prior to installation, check all cables for damages, and eliminate any damages!

The electric connection must be carried out according to the electro documentation by skilled and instructed electro experts (in the sense of VDE 1000 part 10). Furthermore, the regulations of standard VDE 0100 must be followed. Wiring and grounding must be made according to EMC regulations. Before putting the device into service the correct assembly and voltage values of the installation must be checked. Control the three-phase current systems whether there is a right-hand turning field. Before starting the safety precautions (e.g. earth connection) must be checked. The tests that were carried out must be recorded.



**Danger**

If the wiring is to be used make sure that material feeding is stopped before the non-ferrous separator is switched off. In this case, the conveyor of the non-ferrous separator will continue to run for a present time. This is necessary to prevent metal parts from being left within the magnetic field of the rotor. If parts remain within the changing magnetic field they can heat up so excessively that they burn through the conveyor belt, which can cause considerable damages.



Note: Make sure that shield supports for both motors and control lines on the EMC rail in the electrical cabinet are installed correctly.



Non-ferrous separators need some time until the magnetic rotor reaches its working speed. Ensure that only upon expiry of this time material is fed into the machine by controlling the system. To do this, the potential-free contact – the signal “Feedback Normal operation” - is provided.

The non-ferrous separator is an elevator. Due to the high energy its rotor provides, an EMERGENCY STOP switch has to be installed close to the separator. If the control cabinet with integrated EMERGENCY STOP switch is not installed close to the separator, the EMERGENCY STOP switch can be included in the emergency stop chain (see circuit diagram).

In order to be able to operate the non-ferrous separator from a control room (remote operation) signal exchange must be done via 24v signals (see circuit diagram) or optionally via Profinet/Profibus.

## 5.5 Functional description of the control system

### 5.5.1 Modes for operation

#### Normal operation

##### **On site operation** (fig. 10b)

- Operation is started by pressing the "System ON" button. The magnetic rotor is started frequency-controlled. At the same time, the belt and - if available - the optional components are started.
- After the rotor has reached the nominal speed, the "Normal operation" button lights up green.

For machines with oscillating chute control, the oscillating chute is started.

- By pressing the "System OFF" button the non-ferrous separator is switched off and the rotor is stopped instantly. The "Normal operation" button goes out. For machines with oscillating chute control, the oscillating chute is stopped and switched off instantly. The belt and the optional components continue to run until the magnetic rotor speed has fallen below 300 rpm. The non-ferrous separator is only permitted to be switched off in cases of emergency or if material feeding is stopped:

##### **Remote operation**(fig. 10c)

- The system is operated via external control signals (to be provided by the customer, see circuit diagram).

#### Emergency operation (fig. 10a)

In case of damages on the magnetic rotor which cannot be repaired promptly, the system can be operated without non-ferrous separation in emergency operation. All components required for material conveying must be switched on in this operating mode.

The system is **not** switched on using the "System ON" button.

##### **On site operation**

|            |                                                                                            |
|------------|--------------------------------------------------------------------------------------------|
| Switch on  | Switches on conveyor and optional components (oscillating chute, magnetic drum)            |
| Switch off | Switches off the drives separately using the relevant switches or by pressing "System OFF" |

##### **Remote operation** (to be provided by the customer, see circuit diagram)

|            |                                                                                                             |
|------------|-------------------------------------------------------------------------------------------------------------|
| Switch on  | After applying the external control signal "Emergency operation", the necessary components are switched on. |
| Switch off | By deactivating the external control signal "Separator OFF"                                                 |

Here, a feedback message is sent from the PLC to the customer control system (see circuit diagram).

## 5.5.2 Touch Display

After applying the supply voltage and switching on the main switch the system is ready to start (button "Ready" lights up).

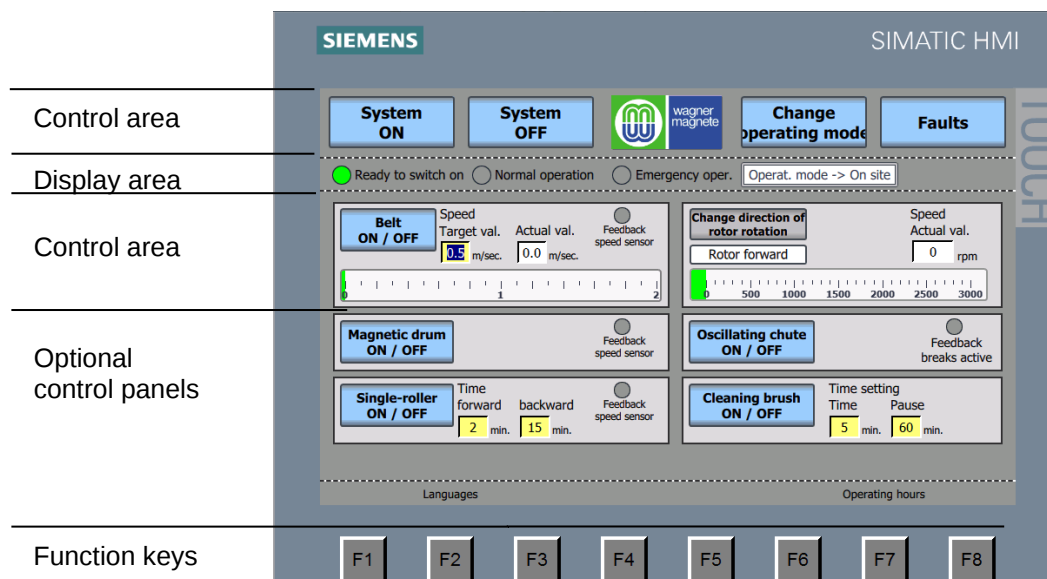


Fig. 10

### Display area(fig. 10)

#### ➤ Ready

Lights up green, if no fault status exists which may lead to machine shutdown. The machine can be switched on.

#### ➤ Normal operation

Lights up green, when all drives have been switched on and the rotor speed is within nominal range.

#### ➤ Emergency operation (fig. 10a)

Flashes orange, see chapter 5.5.1

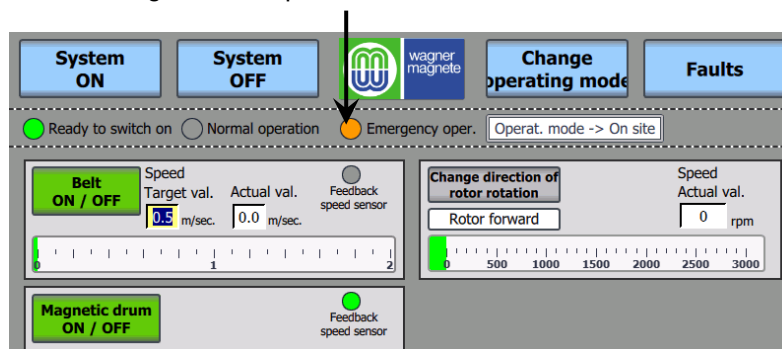


Fig. 10a1.

### General control buttons:

|  |                                                  |
|--|--------------------------------------------------|
|  | Press this button to open the main menu.         |
|  | Press this button to open a help text.           |
|  | Press this button to close the displayed window. |

## Control panels:

### ► System ON

The system is started in normal operation (precondition: button "Ready" lights up green), i.e. "Belt ON" as well as the optional components start automatically (button colour changes from blue to green), and the rotor is started. After the rotor speed has reached the preset speed, the "Normal operation" button lights up.

### ► System OFF

The system is switched off, i.e. the rotor speed is reduced, button "Normal operation" goes out, button "Ready" lights up.

### ► Change operating mode: On site (fig. 10b) or remote operation (fig. 10c)

If remote operation was selected via "Change operating mode", the buttons System ON, System OFF, Belt ON/OFF as well as the optional machine components **cannot** be actuated (they are greyed out). This means that the system can only be controlled from a master control system.

Only the rotating direction of the rotor can be changed on the touch display (fig. 10d), as well as all setting values which are highlighted yellow, such as target belt speed (fig. 10f) and the runtimes for roller and cleaning brush (figs. 10i and 10j).

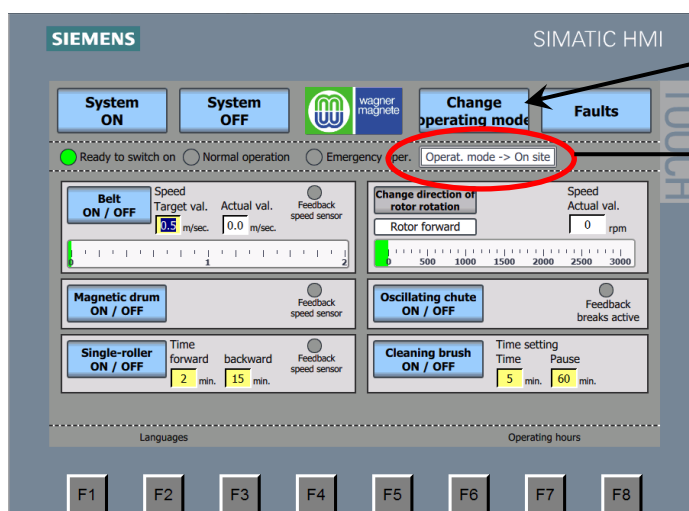


Fig. 10b

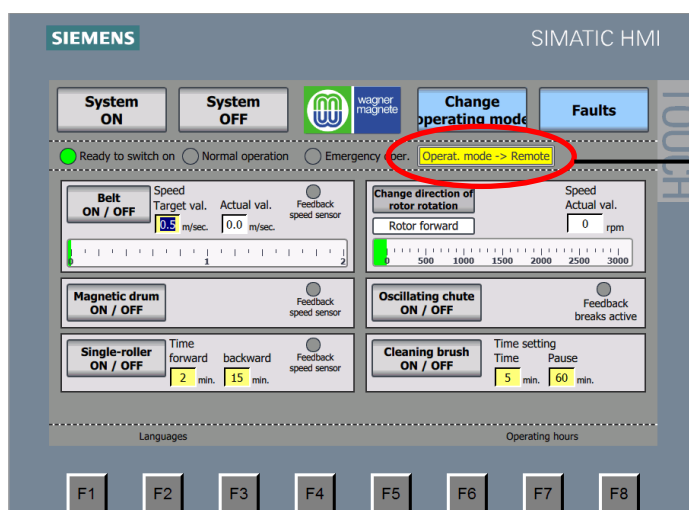


Fig. 10c

### ► Change direction of rotation of the rotor

Here, the rotating direction of the rotor can be selected (fig. 10d).  
The display starts flashing if the rotating direction of the rotor is changed during operation.  
Changing between rotor forward and rotor backward is **possible anytime**.

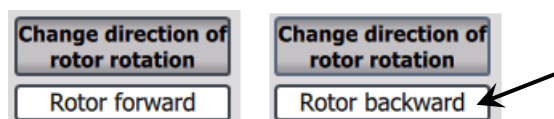


Fig. 10d

Note:

When the rotor direction is changed the speed is slowed down and started in opposite direction. Only after the rotor speed has reached the preset speed, the "Normal operation" button lights up. The actual speed in "Rotor backward" mode is marked with a minus.

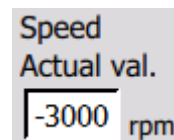


Fig. 10e

### ► Belt speed, set target value

The desired speed (target value) can be changed within the preset limits **anytime**. If the target value is reached, the following window is opened

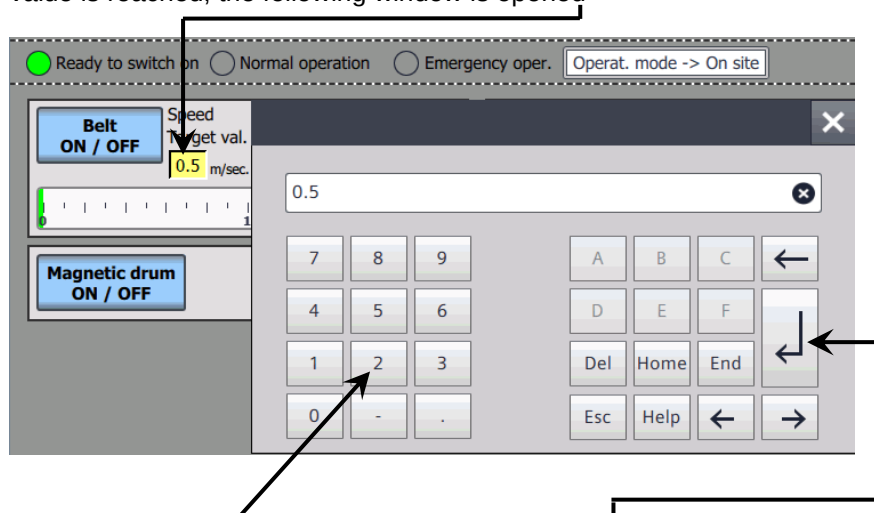


Fig. 10f

Enter the desired value here and confirm with ENTER. Press the Help button to open a help text showing the limit values.

### Optional control panels

Depending on the configuration, the control panels for the optional components (e.g. oscillating chute, magnetic drum, roller, cleaning brush) are available.

Control panel colours:

Blue = component OFF, green = component ON

### ► Switch on/off oscillating chute

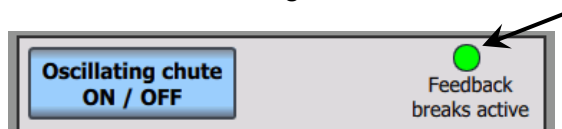


Fig. 10g

After switching off the oscillating chute it is braked by a braking unit. During braking, the display flashes. The machine can only be restarted after the oscillating chute has stopped completely.

➤ **Example: Magnetic drum ON / OFF**



Magnetic drum switched off

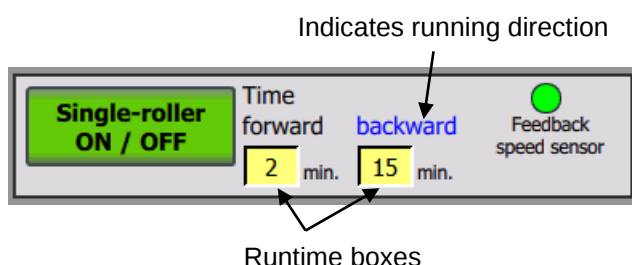
Magnetic drum switched on

**Fig. 10h**

➤ **Roller**

The rotating direction can be changed in intervals automatically so any stuck parts may fall off.  
The roller runtime is preset at works with:  
forward: 2 min, backward: 15 min

Note: For operating the roller, at least one runtime setting is necessary.



**Fig. 10i**

Touching the runtime boxes (highlighted yellow) will open a window. Enter the desired value.

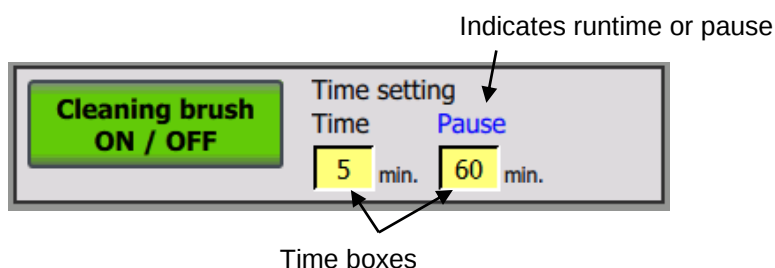
In addition, the current running direction of the rollers is marked blue.

➤ **Cleaning brush**

In order to minimize the wear on belt and brush, the cleaning brush is only put into operation at fixed intervals.

The runtime for the brushes is preset at works with:  
Runtime: 5 min, pause time: 60 min

Note: For operating the cleaning brush, at least one runtime setting is necessary.



**Fig. 10j**

Touching the time boxes (highlighted yellow) will open a window. Enter the desired value.

In addition, the current mode (runtime or pause) is marked blue.

### ► Faults

If a fault is active, the window opens with a fault message (fig. 10k)

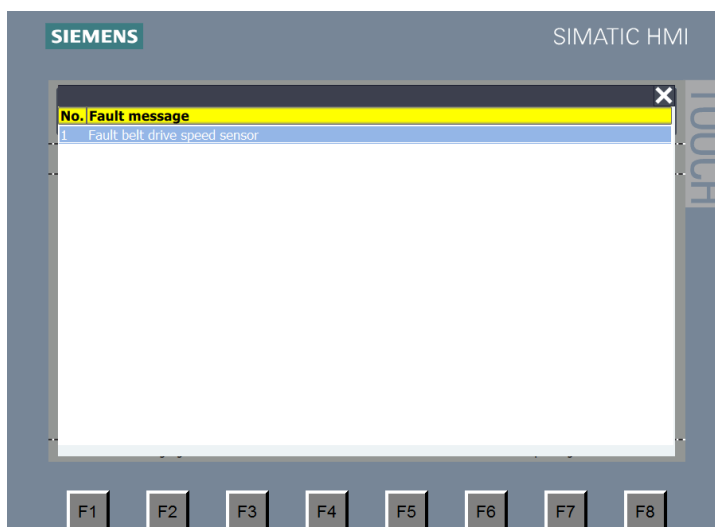


Fig. 10k

Fault in the main menu are marked **red** (fig.. 10l).

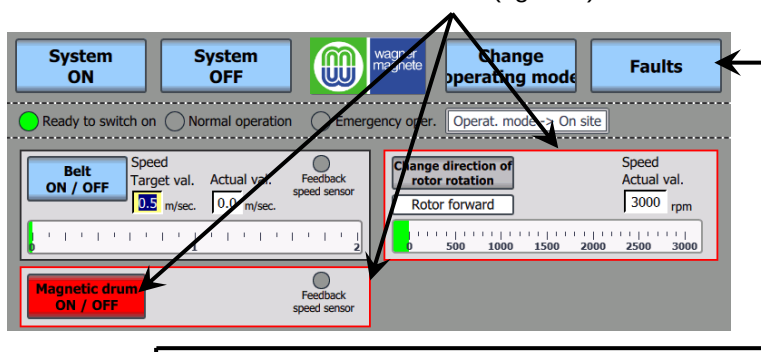


Fig. 10l

Press the fault button to open the fault menu (fig. 10m). Here all the fault available are displayed.. Eliminate the faults and press "Confirm faults".

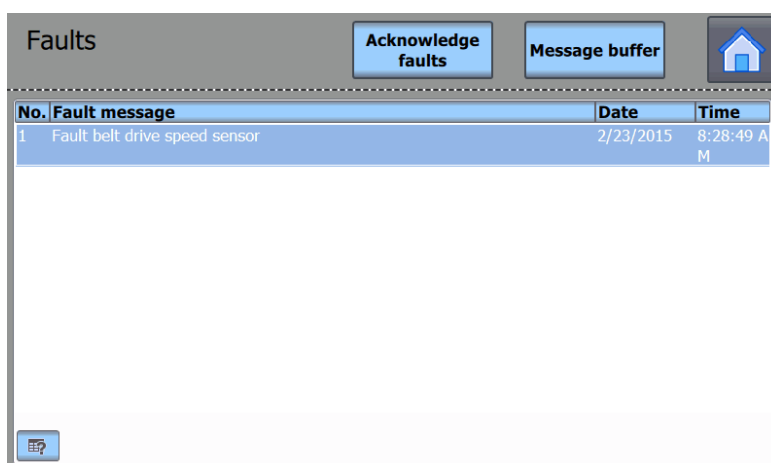
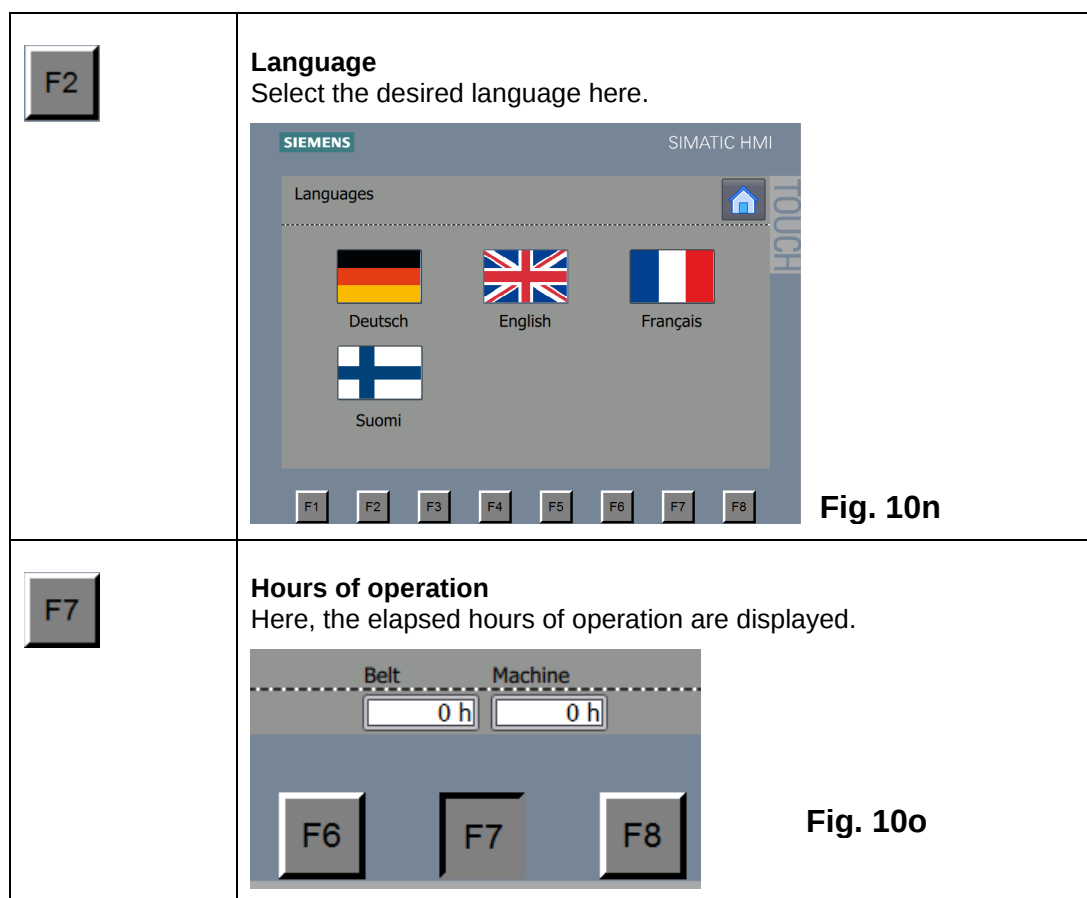


Fig. 10m

For a description of the faults, see chapter 8 Fault messages.

Press the "Message buffer" button to open a menu with the last 256 fault messages.  
Status K = fault received, status Q = fault confirmed

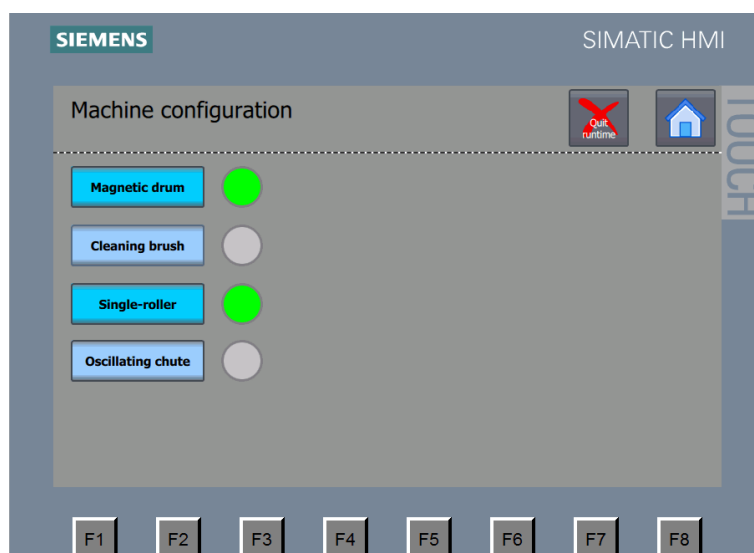
### Function buttons F1 to F7



### Machine configuration

If the button is pressed with the Wagner logo (fig. 10) for at least 15s, the machine configuration screen is displayed (fig. 10p). The values are preset at works (see also chapter 2 Technical data – optional components).

Note: Only installed components may be activated!



## 6. Start-up

Only skilled and instructed personnel must carry out the putting into service of the non-ferrous separator.

Never operate the machine with open protective enclosures or open doors!



For Electrical cabinet heating the following applies:

To ensure safe operation of the machine at ambient temperatures below 0°C, the electrical cabinet heating inside the cabinet must be switched on!



### 6.1. Trial run

Attention:

Before switching on please make sure that nobody is standing in the danger area (see section 1.5 Safety measures at the installation site). During operating state no person must be in the field of the material discharge area! Danger of injury!



It is not allowed to work with ferromagnetic material within the sphere of action.  
Danger of pinching!



Switch on the non-ferrous separator via the „System ON“ switch at the touch display and check the following items:

- Direction of rotation of the magnetic drum (if available)
- Runtime entry for roller (if available)
- Time setting for cleaning brush (if available);  
for further setting instructions, please refer to the appendix on belt cleaning
- Running direction of conveyor belt  
The belt must always run towards the separation plate.
- Belt speed  
You can adjust the belt speed directly in the main menu on the touch panel.
- Direction of rotation of magnetic rotor  
("Rotor vorwärts" = to separating edge)  
The direction of rotation of the rotor is shown in the main menu (see fig. 10d). Depending on the material to be separated, it can be changed there. This does not influence the running direction of the belt.

The direction of rotation of the rotor depends on the grain size.

**Guide numbers:**

K < 5mm ccw (opposite the conveyor direction)  
5mm < K < 20mm determine by testing  
K > 20mm clockwise rotation

## 6.2. Adjustment for optimal separation

### 6.2.1 Adjustment of the separation plate

Depending on the customer design there are different discharge covers available. The technical data specifies the relevant type. In the following the generally valid technical description is outlined. If special procedures are to be observed, then please refer to the appendix and the relevant ZK drawing.



Adjustment of the separation plate – carry out only when machine stands still



Adjustment of the inclination

Adjustment of the intermediate distance

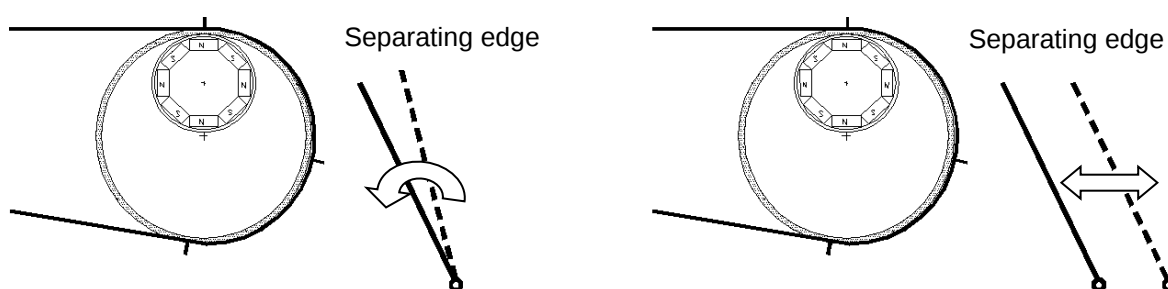


Fig. 11

#### Proceeding:

- The separating edge must be extended in a way that the largest parts in the material flow can easily pass between rotor casing and separating edge.



Please note that the conveyor belt is provided with cross studs, which, if installed with too little distance to the separating edge, may cause collisions and damage to the machine.

- Move the separating edge so close to the material flow that there is just enough room for the material to pass underneath.

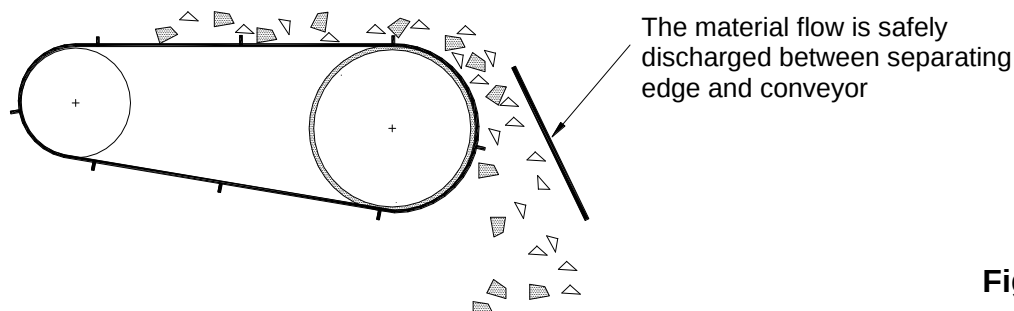


Fig. 12

- Press the "Belt ON" button to start. Only the belt runs, without magnetic rotor (button "System ON" is not permitted to be pressed)  
Determine the optimal setting by way of testing by selecting:
  - distance separating edge
  - inclination separating edge
  - belt speed

- Press the "System ON" button to start (i.e. only with magnetic rotor)  
Material flow is separated by the separating edge. It may be necessary to readjust the separating edge. Make sure that the largest parts contained in the material flow must safely be transported between rotor and separating edge.
- After making this rough setting you should check the separating quality during operation and readjust the setting, if necessary. Normally, fine adjustment by setting the belt speed is sufficient. Please note that material evenly spread on the conveyor is important for the separating quality.

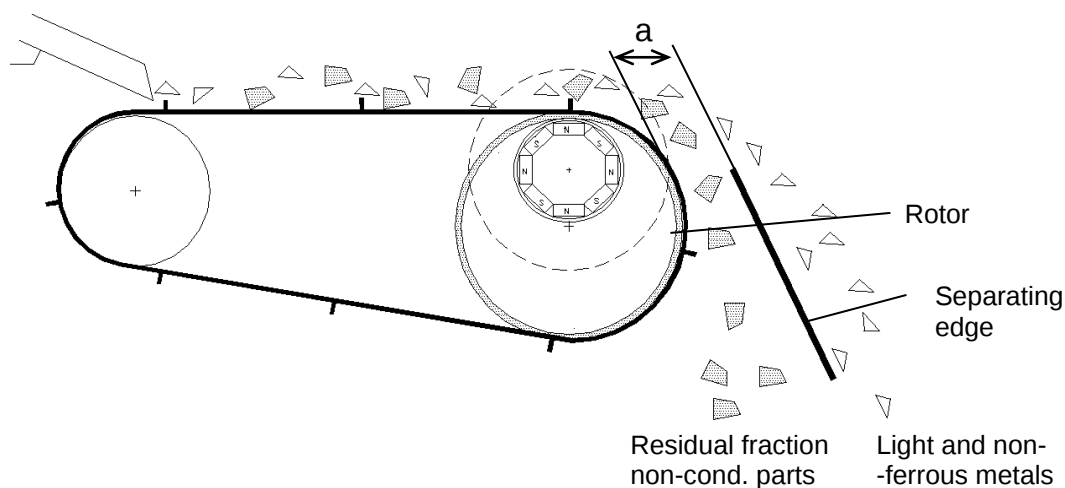


Fig. 13

Reference point:

Distance  $a = 1,5 \times$  largest part, not to be separated via the separating edge.

After finishing the adjustment fix all loosen parts and close the casing!

### 6.2.2 Adjusting the angle position of the magnetic rotor with eccentric bearing

**Only to be carried after the machine has been shutdown**



**Danger**

The discharge parabola depends on both material flow and material. The magnetic rotor with eccentric bearing must therefore be adjusted on site.

When adjusting the magnetic rotor with eccentric bearing make sure to dismount the casing panels.

Strong magnetic forces occur in the area of the rotor. Normal tool like wrenches or hammer are attracted by the magnet. Danger of injury!



Make sure to observe the weight of the installed magnetic rotor. Make sure to use suitable hoisting gears before opening clamping fixtures. The magnetic rotor will rotate downward without any corresponding adjustment. In case of smaller rotors the magnetic system can be held on the motor drive of the rotor and moved to the desired position. Warning! Risk of crushing and shearing!



**Danger**

### Adjustment of type 0429-37/...

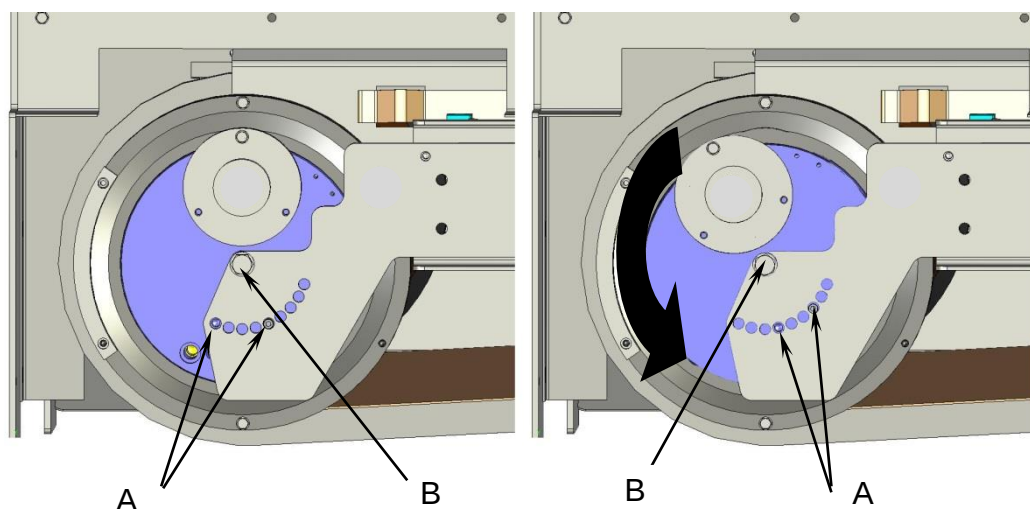


Fig. 14

see fig. 14

Unscrew the screws A on the opposite side of the motor, and **slightly loosen screw B (approx. by 1/2 rotation)**. Attention! Never unscrew screws B completely as they hold the drum in the frame. Then hold the magnetic rotor on the rotor motor on the motor side, remove screws A and **loosen screw B slightly**, and then move the rotor to the desired position.



Then tighten the screws A and B on both sides.

### Adjustment of type 0429-49/...

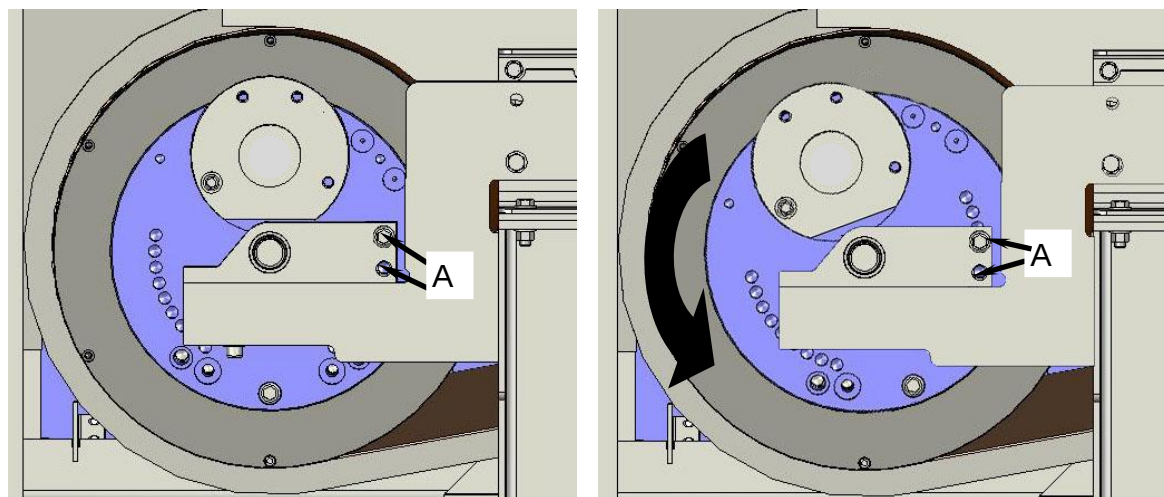


Fig. 15

see fig. 15

First remove screw A on the opposite side of the motor. Then hold the magnetic rotor on the rotor motor on the motor side, remove screws A, and then move the rotor to the desired position.

Then tighten the screws A on both sides.

## 7. Maintenance

Maintenance works must only be carried out when the machine stands still. Disconnect the machine from the power supply and secure it against reconnection (see section 1)!

It is necessary to follow the maintenance plan. If they are ignored warranty claims and liability claims in case of personal injury and damage to property are excluded.

It is essential to adhere to the time intervals and work steps given in the maintenance protocol. In case of non-compliance no guarantee claims can be filed, and there is also risk of injury for persons and malfunctions on the machine.

When carrying out any maintenance work on the machine it is essential to observe the relevant safety instructions!

Surface temperatures of 50° C and more may occur. Let the machine cool down before starting any maintenance work.



### 7.1 Belt tension

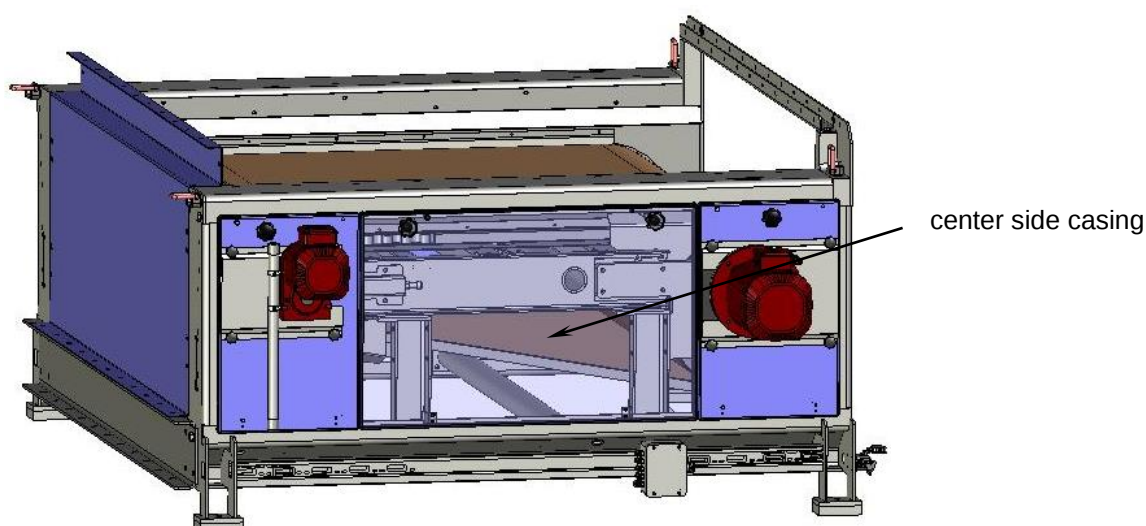
The belt tension is adjusted before leaving our works. Readjustments are normally not necessary.

Excessive belt tension may damage or destroy the casing of the deflection pulley and the bearing. Make sure the belt is always slightly sagging. It is sufficient if carrying of the belt is ensured by the drive pulley.



Adjusting the belt tension:

- \* switch off machine and wait till belt and rotor come to a standstill
- \* open the center side casing on both sides (see fig. 16).



**Fig. 16**

- Slightly loosen nuts Z on the clamping stations on both sides of the machine. They are used to align the drive roller horizontally (Fig. 17).
- Loosen counternut B on the clamping stations on both sides of the machine.
- Change the belt tension evenly on both side with Allen screw A.

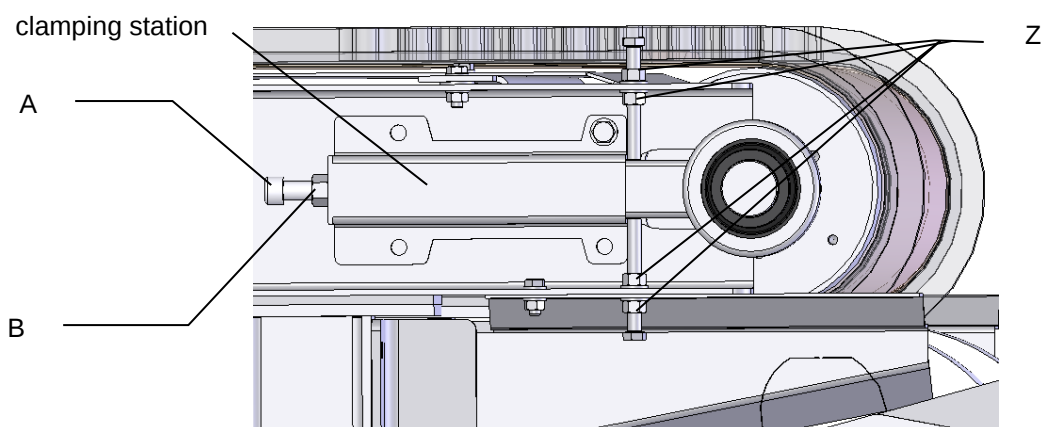


Fig. 17

- Counter with nut B.
- After completing the adjustments, tighten nuts Z. Watch for horizontal alignment of the drive roller.
- Assemble the center side casing on both sides.
- Perform a test run!

## 7.2 Off-track running

Tracking of the belt is preset at the factory.

The guide rollers which guide the belt on both sides are fixed to the frame and can be adjusted via oblong holes. The guide rollers are pre-adjusted at works such that the slightly move every now and again. Should one of the rollers keep moving constantly it was either moved too close to the belt or the belt runs off-track.

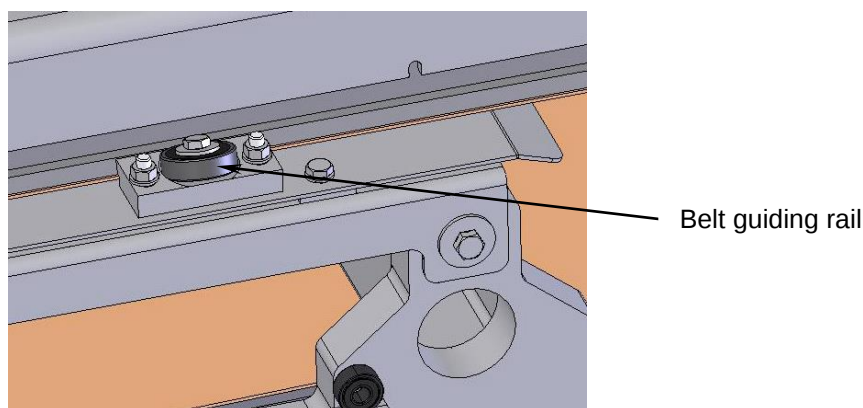


Fig. 18

In case of off-track running, the belt should be re-adjusted as follows (fig. 17):

- Switch off the machine.  
Any maintenance works must only be carried out after the unit has come to standstill.  
Disconnect the machine from power supply and secure it against unintentional reconnection (see chapter 1).
- open the middle side casing at both sides (see fig. 16)
- Loosen the screws on both guide rollers and move them away from the belt (see fig. 18).

- Slightly loosen nuts Z on the clamping stations on both sides of the machine (see fig. 17). They are used to align the drive roller horizontally.
- Loosen counternut B on the clamping station on the side of the machine, where the belt moves inwards (see fig. 17).
- Slightly relieve Allen screw A on the spindle of the belt tensioning station.  
Work with care - often, half a rotation of the spindle is enough.
- Tighten counternut B again.
- After completing the adjustments, tighten nuts Z. Watch for horizontal alignment of the drive roller.
- Perform a test run. Start the Conveyor with switch "Conveyor manual". Attention: Risk of injury! Rotating parts! Do not reach into the machine!
- Move the guide rollers about 5 mm from the V-belt profile of the belt without touching the belt, and tighten the screws. The guide rollers should be arranged symmetrically to the belt body as far as this is possible.
- Then check again for a certain time.



Attention:

If you want to correct any off-track running of the belt, make sure to observe the correct belt tension (see also section 7.1 Belt tension)!



### 7.3 Belt change

Use the Wagner auxiliary tube for changing the belt. The auxiliary tube was dimensioned for the relevant non-ferrous separator, and it is provided with shackles. Use this auxiliary tube as heavy weight forces exist. Risk of severe injuries!



**Danger**

Proceeding:

The belt is changed on the side opposite to the motor! If this cannot be done for lack of space, please contact Wagner Magnete.

Caution:

There are strong magnetic forces within the sphere of the rotor and the magnetic drum. Standard tools, as for example screwdrivers or hammers, are attracted by the magnet. Risk of severe injuries! In case of accidents there is risk of fingers being bruised or cut off.



- Switch off the machine and secure it against reconnection.
- Unscrew and remove all casings.
- Remove the guide roller on the belt change side. Loosen the screws from the guide roller on the motor side and push it away from the belt (see fig. 18).
- Slightly loosen nuts Z on the clamping stations on both sides of the machine (see fig. 17). They are used to align the drive roller horizontally.
- Loosen counternut B on the clamping stations (2) on both sides of the machine (fig. 17).
- Reduce the belt tension as far as possible on both sides of the machine using Allen screw A.

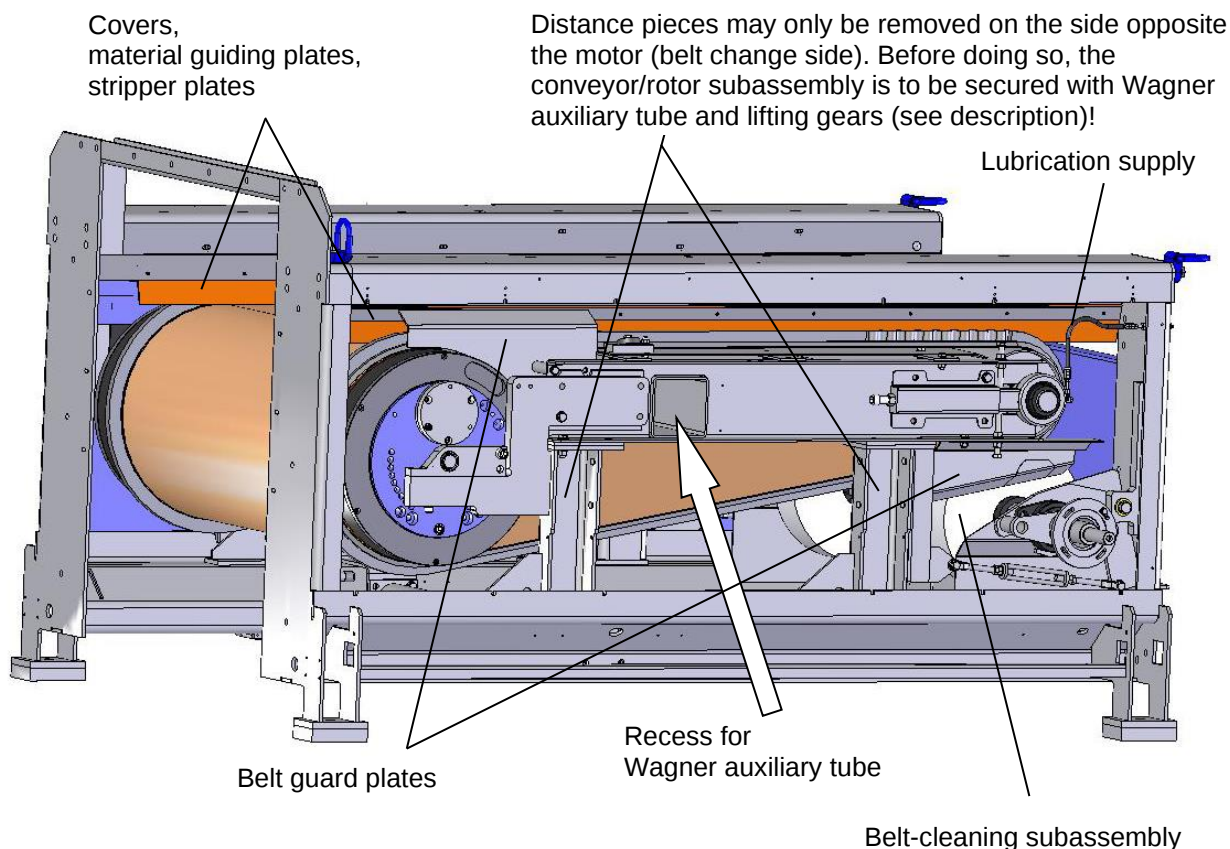


Fig. 20

- Remove the covers on the sides as well as the upper material guiding plates including stripper brushes, the belt guard plates and the lubrication supply (fig. 20).
- For cleaning brush option:  
Remove the helical-bevel geared motor before the belt cleaning and move the belt-cleaning subassembly away from the belt (follow the instructions for belt cleaning in the appendix). When using a turnbuckle, make sure to relieve it on both sides before removing the holder for the distance frame on the side opposite to the motor (belt change side (fig. 21a)!
- Cut and remove the old belt.
- Push the Wagner auxiliary tube into the recess on the frame (figs. 20 and 20a). Follow all the instructions on customer drawing ZK.... which is delivered with the auxiliary tube. In case of large non-ferrous separators, the auxiliary tube is supported by a strut. Fix it to the frame.

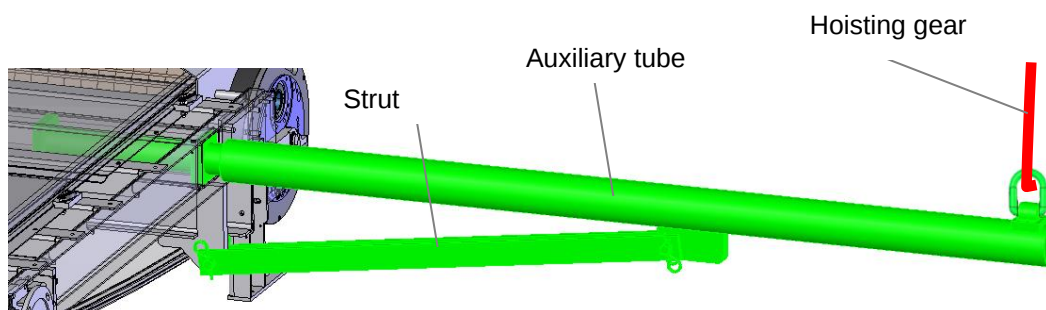
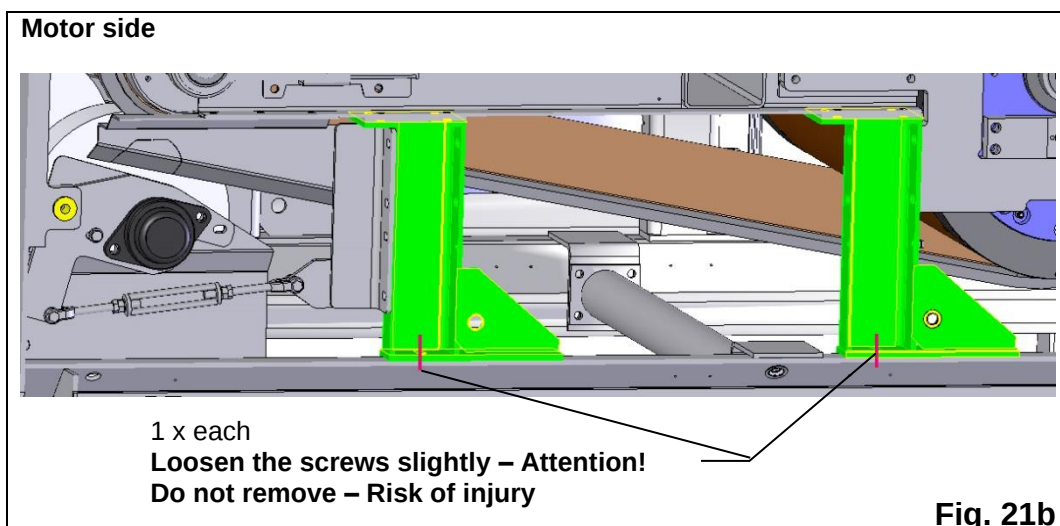
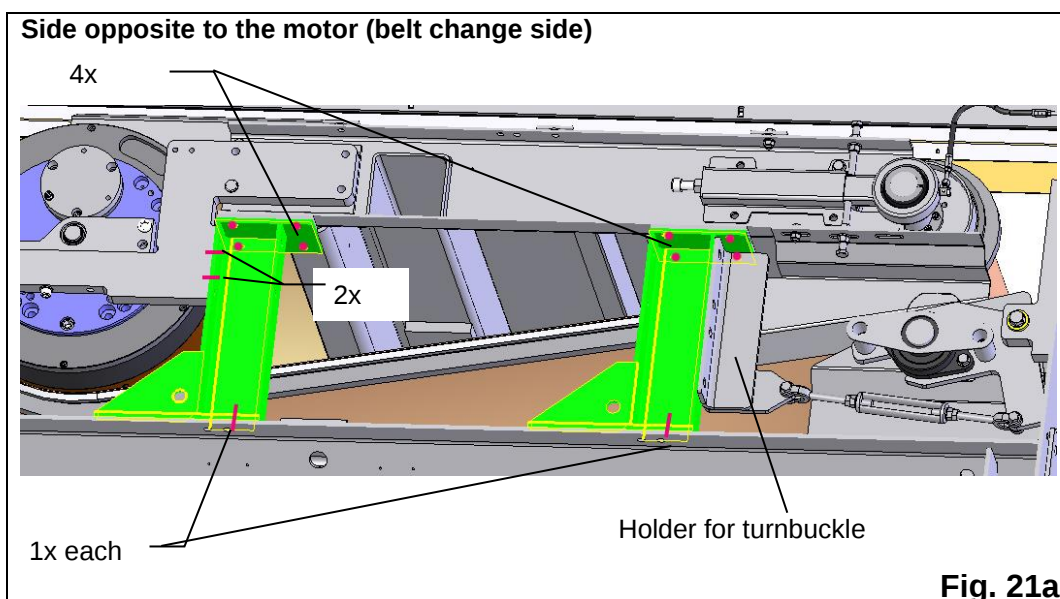


Fig. 20 a

- Push the new belt on the auxiliary tube.

- Loosen (do not remove) the screws on the distance pieces (figs. 21a and 21b).



- Note the weight of the machine. Make sure to dimension the lifting gears appropriately and fix it correct to the shackle (fig. 20a). Lift the frame only until the front distance pieces are relieved. Hold the auxiliary tube in this almost horizontal position and remove the screws on the distance pieces on the side opposite to the motor (see fig. 21a).  
**On the motor side the screws and distance pieces are not permitted to be removed – Risk of injury!** (see fig. 21b)

Warning! Risk of crushing injuries! Do not reach between distance frame and frame of the non-ferrous separator!



- Push the new belt centered on the non-ferrous separator.
- Mount the spacers on the opposite side of the motor. Tighten the screws of the spacers on the motor side. The rope can only be removed from the hoisting gear if the non-ferrous stands safely.
- Any removed parts are to be mounted in reverse order.
- Adjust the belt tension according to chapter 7.1. If necessary, perform the off-track correction according to section 7.2.

## 7.4 Exchange of the rotor casing

Use the Wagner auxiliary tube for changing the rotor casing. The auxiliary tube was dimensioned for the relevant non-ferrous separator, and it is provided with shackles. Use this auxiliary tube as heavy weight forces exist. Risk of severe injuries!



The rotor casing is to change on the side opposite to the motor! If this cannot be done for lack of space, please contact Wagner Company.

### Caution:

There are strong magnetic forces within the sphere of the rotor and the magnetic drum. Standard tools, as for example screwdrivers or hammers, are attracted by the magnet. Risk of severe injuries! In case of accidents there is risk of fingers being bruised or cut off.



### Attention:

Never burden the rotor casing during the repair, i. e. never put the complete rotor onto the casing. This can damage the whole unit. In this case consequential damages may emerge that can only be removed in the works.



- Switch off the machine and secure it against reconnection.
- Remove the belt – see chapter 7.3 "Belt change"
- Fix the spacers on the opposite side of the motor (see fig. 21a) so the non-ferrous separator stands safely.
- Clean the rotor.
- Loosen the flat-head screws on motor side which connect the rotor casing with the side plates (see fig. 22 a). Here it may be helpful to use a hot air blower as they are glued in place. Do not re-use these screws!



Fig. 22 a

- Remove the bearing cover on the side opposite the motor (fig. 22 b)

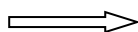
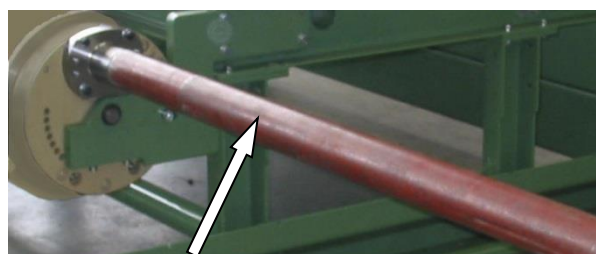


Fig. 22 b

- Fasten the Wagner auxiliary tube with the screws on the point where the bearing cover was removed (fig. 22 c). Note the weight of the rotor and dimension the lifting gears appropriately, and fix it correctly to the shackle. **Hold the auxiliary tube with the lifting gears in this position!**



Wagner auxiliary tube

Fig. 22 c

Warning! As long as the rotor carrier is removed or the screws are loosened, the auxiliary tube (see fig. 22c) must be secured in horizontal position using the lifting gears to prevent the rotor from falling down.



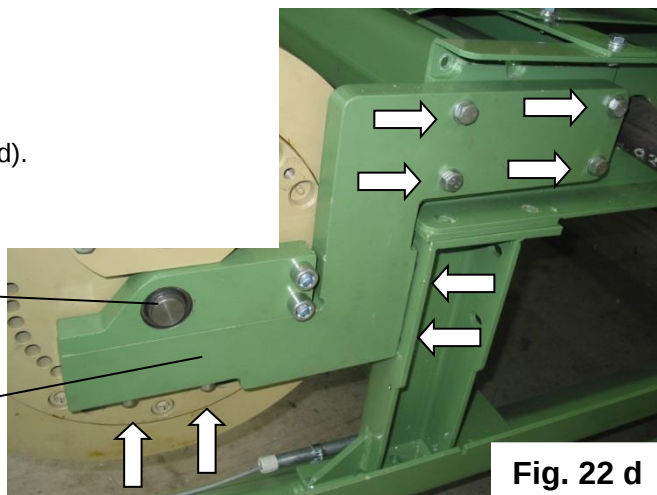
- Dismount the rotor carrier

**typ 0429-49/...**

by removing the 8 screws (see fig. 22 d).

Rotor bearing

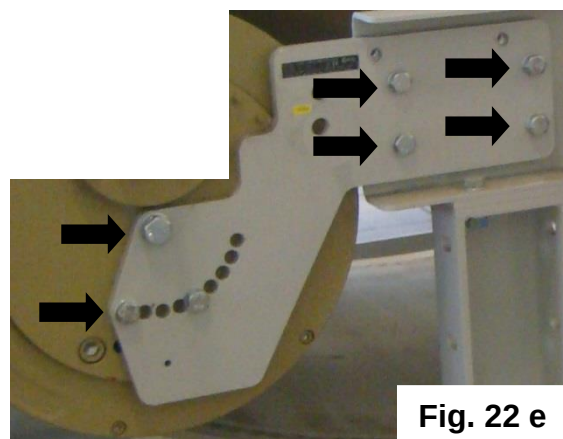
Rotor carrier



**Fig. 22 d**

**typ 0429-37/...**

by removing the 7 screws (see fig. 22 e).



**Fig. 22 e**

- Pull off the old casing via the side plate towards the auxiliary tube (see fig. 22f). Avoid too strong tensile loads, otherwise the stub shaft may be deformed – Risk of machine damage!



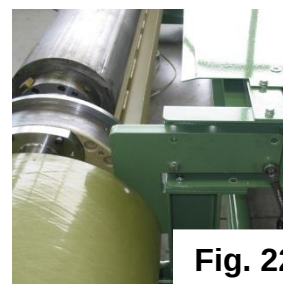
**Fig. 22 f**

Never use an auxiliary pipe on the drive side. There is the danger that the drive pivot is bent.



- **Fix the rotor carrier**, and place down the rotor (see fig. 22 g). Clean the exposed magnetic system carefully. Even the smallest dirt particles may cause instant new damage.

Only place down the rotor on rotor bearings. The magnetic scope of the rotor can be damaged when loaded.



**Fig. 22 g**

At this stage of installation it is advisable to check the magnetizing force, which is essential for the separation force of the non-ferrous separator. If non-ferrous parts are no longer separated correctly with unchanged machine settings the magnetic system is damaged. Any repairs can only be carried out at our work. A measuring unit to check the magnetizing force can be obtained from Wagner Magnete.



- Mount new rotor casing:  
Realize the previously mentioned steps in the opposite order.  
By mounting pay attention to the different diameters on the casing!

Never burden the rotor casing which can damage it.



- Fix the casing screws with Loctite 270 in order to prevent problems caused by the automatic drifting of the screws.
- Any removed parts are to be mounted in reverse order.
- Adjust the belt tension according to chapter 7.1. If necessary, perform the off-track correction according to chapter 7.2.

## 7.5 Bearing control



Every bearing must be checked at regular intervals. To avoid premature malfunctions it is essential to prevent dirt, foreign objects or humidity from penetrating into the bearing.

Check all bearings according to maintenance schedule for signs of heat, unusual noises or discolorings at regular intervals. If there are signs of malfunctions the machine must be shut down instantly and the bearings replaced.

See the maintenance plan (section 7.7) for lubricating smaller amounts and lubricating intervals.

Lubricant to be used:

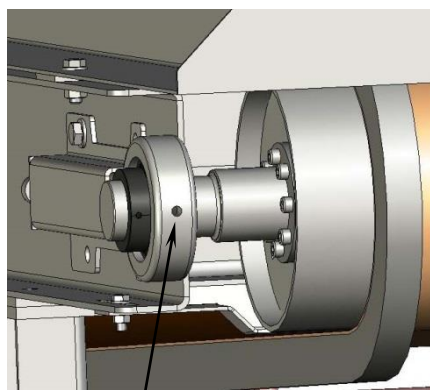
**marking acc. to DIN 51502: KP2N-40 (base: lithium base saponification)**

Prevent excess lubrication. If excess lubricant cannot escape, milling processes inside the bearing can create high temperatures.

Observe the lubricating intervals for smaller lubricating processes (see maintenance plan). It is essential to observe the lubricating quantities to avoid excess greasing and, consequently, unwished high temperatures. If the housing is almost completely filled after several greasing processes, the lubricant must be changed.

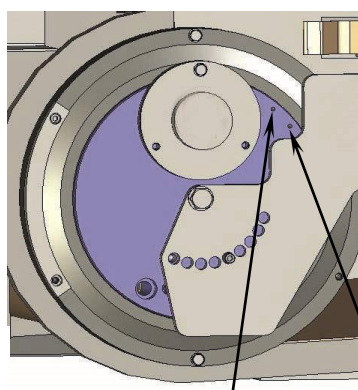
Any greasing process bears the risk of impurities penetrating into the bearing. Always ensure that both the lubricant container and the lubricating device are clean, and that the lubricant is not contaminated during the filling process. Always clean the lubricating nipples before the lubrication procedure! The grease gun must have a suitable counterpiece to the lubricating nipple.

Any lubrication works must only be carried out if the machine is shut down.



**Fig. 23**

Lubricating point on drive pulley  
on both sides

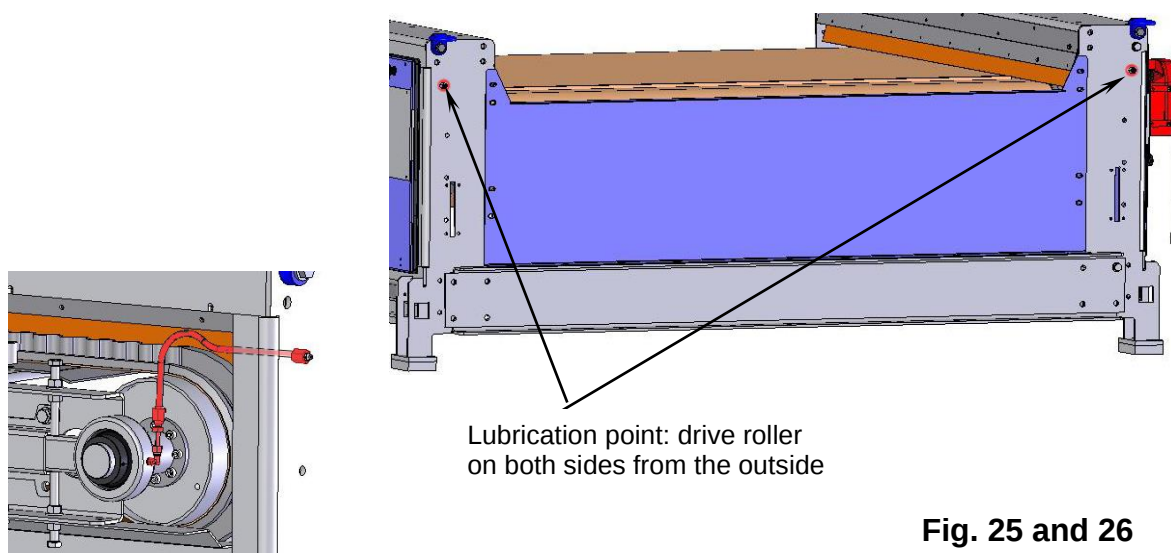


**Fig. 24**

Lubricating point on rotor bearing and deflection  
pulley on both sides

For machines with outside lubrication of the drive roller, the following applies:

If no enclosure plates are removed, the drive rollers may be lubricated when the machine is running (figs. 25 and 26).



### 7.6 Control and cleaning of the drum (optional)

When using a magnetic drum, make sure to observe the operating instructions B(0)420(N)\_e!

Therefore it is essential to carry out regular visual inspections in the area of the magnetic drum and the drum casing to detect damages and foreign parts. Foreign parts must be removed. If the drum casing is damaged the machine must be shut down instantly and the drum casing be replaced.

In the sphere of the magnet you must not use ferromagnetic devices. There are always strong magnetic forces and therefore considerable risks of injury through bruises!



### 7.7 Inspection and cleaning of the filters in the electrical cabinet and the optional air conditioner

Make sure to set the intervals for replacing the filter mat according to the dust accumulation and the operating time. Warning! Always replace the filter at the prescribed intervals. Soiled filter mats will increase the temperature inside the electrical cabinet or air conditioner! Remove the filter elements and clean the filter mats. The filter mat can be cleaned by washing or blowing it off.

Make sure to follow the manufacturer's instructions for the air conditioner option!



### 7.8 Cleaning instructions for the touch panel

Do not use thinners for cleaning the display. Only use a wet cloth.

### 7.9 Maintenance plan

Depending on the working conditions and safety requirements the operator must specify the maintenance intervals himself. To do this, it is necessary to carry out regular checks, at least once a day.

If the results of the checks are OK without further action to be taken several times in a row, the interval can be extended **maximal** up to the values specified in the following table.

| WHEN   | Action                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| daily  | <b>Check condition of belt</b><br>Make a visual check: remove any (metallic) foreign objects, in particular, nails, clamps etc., close holes.<br>Repair (affix) loose or damaged studs or side rails immediately.<br>Check belt and outfeed stud for holes; repair any holes detected immediately.<br>Remove any deposits, but do not use sharp objects.                                                            |
|        | <b>Check all cables and terminal boxes for damage</b> (visual inspection), and replace, if necessary                                                                                                                                                                                                                                                                                                                |
|        | <b>Clean machine</b><br>Always keep the inside of the machine clean!<br>How to proceed: Remove the machine cover. Clean the inside of the machine using an industrial type vacuum cleaner. Remove any ferrous parts sticking to the rotor casing.<br>Attention: Do not use compressed air! This may blow foreign objects inside the machine interior that may cause serious damage to the machine during operation. |
| weekly | <b>Check condition of rotor casing</b><br>Make a visual check. Attention! Any damages to the ceramic coating result from foreign objects in the conveyor or iron parts in the belt interior. These objects must be removed instantly. In case of holes in the casing shut down the machine instantly and contact the Wagner Company.                                                                                |
|        | <b>Check brush bars</b><br>If the brush bars are worn they must be replaced to avoid contamination of the belt interior.                                                                                                                                                                                                                                                                                            |
|        | <b>Control of belt tension</b><br>see section 7.1                                                                                                                                                                                                                                                                                                                                                                   |
|        | <b>Off-track running</b><br>see section 7.2                                                                                                                                                                                                                                                                                                                                                                         |
|        | <b>Clean the intake and outlet filters on the electrical cabinet and the optional air conditioner</b> (see section 7.7)<br>Remove the filter elements, and clean or replace the filter tiles. If necessary, vacuum the interior of the electric cabinet. Make sure to follow the manufacturer's instructions for the air conditioner!                                                                               |
|        | <b>With optional cleaning brush</b><br>Clean parts (e.g. turnbuckle, spindle)<br>Check roller bearings, see chapter 7.5                                                                                                                                                                                                                                                                                             |
|        | <b>With optional magnetic drum</b><br>Control drum casing see section 7.6, interval dependent on feed material.<br>Control of antifriction bearings see section 7.5<br>Follow the regulations for the B0420(N)_e                                                                                                                                                                                                    |

| WHEN                                               | Action                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| every <b>200</b> hours of operation                | <b>Lubricating the drive pulley:</b><br>Use a grease gun to lubricate the bearing at the lubricating nipple.<br>The lubricant to be used (approx. 5 g) see section 7.5                                                                                                                                                                      |
| every <b>1500</b> hours of operation               | <b>Supporting structure of the machine</b><br>Carry out visual checks                                                                                                                                                                                                                                                                       |
|                                                    | <b>With optional magnetic drum</b><br>Check fixing of magnetic drum<br>Carry out visual checks<br>Follow the regulations for the B0420(N)_e                                                                                                                                                                                                 |
|                                                    | <b>With optional magnetic drum</b><br>Lubricating the antifriction bearings see section 7.5<br>Follow the regulations for the B0420(N)_e                                                                                                                                                                                                    |
| every <b>2500</b> hours of operation               | <b>Lubricating deflection pulley and rotor bearing</b><br>Use a grease gun to lubricate the bearing at the lubricating nipple.<br>The lubricant to be used (approx. 5 g) see section 7.5                                                                                                                                                    |
|                                                    | <b>With optional cleaning brush</b><br>Lubricating the antifriction bearings see section 7.5 and appendix belt cleaning                                                                                                                                                                                                                     |
| see attached manufacturer's operating instructions | <b>Rotor drive</b> (maintenance)<br>see attached manufacturer's operating instructions                                                                                                                                                                                                                                                      |
|                                                    | <b>Belt drive</b> (maintenance, oil change or oil level)<br>see attached manufacturer's operating instructions                                                                                                                                                                                                                              |
|                                                    | <b>For optional conveying unit</b><br>Check condition of conveying unit<br>see attached manufacturer's operating instructions                                                                                                                                                                                                               |
|                                                    | <b>With optional magnetic drum</b><br>Check condition of the magnetic drum drive motor<br>see attached manufacturer's operating instructions<br>Follow the regulations for the B0420(N)_e<br><br><b>With optional cleaning brush</b><br>Check the status of the cleaning brush motor<br>see attached manufacturer's operating instructions. |
| In addition for optional cleaning                  | Depending on the operating conditions<br>- replace any worn brush segments<br><br>(see B0428e / B0429e- R - Appendix: Belt cleaning)                                                                                                                                                                                                        |

## 8. Quick help – fault messages

### Column K\* (code letter)

A = This fault leads to shutting down of the machine

M = This fault is displayed as fault message but will not lead to shutting down of the machine.

The fault message is displayed every 5 minutes.

Eliminate the cause of the fault, as otherwise this may damage the machine. In this case we do not assume any liability.



| No. | Fault                                              | K* | possible cause                                                                                                                                             |
|-----|----------------------------------------------------|----|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Fault belt drive speed sensor                      | A  | Speed sensor defective, line to sensor defective, motor stopped, mechanical blocking                                                                       |
| 2   | Fault magnetic rotor speed sensor                  | A  | Speed sensor defective, line to sensor defective, motor stopped, mechanical blocking                                                                       |
| 3   | Fault magnetic drum motor starter                  | A  | Overcurrent motor, motor starter defective, line to motor defective, mechanical blocking                                                                   |
| 4   | Fault air conditioner                              | M  | Fault air conditioner: no supply voltage, air conditioner soiled                                                                                           |
| 5   | Fault oscillating chute                            | A  | Overcurrent unbalance motors, motor starter defective, braking unit defective, line to motor defective, mechanical blocking, fuse for braking unit tripped |
| 6   | Fault separating edge                              | A  | Separating edge not in target position, switch defective                                                                                                   |
| 7   | Fault belt drive frequency converter               | A  | Fault frequency converter, motor defective, line to motor defective, mechanical blocking                                                                   |
| 8   | Emergency stop fault                               | A  | Initiated after pressing the emergency stop button. Acknowledge by pulling the emergency stop button, if the rotor speed is slower than 300 rpm.           |
| 9   | Fault rotor drive frequency converter              | A  | Fault frequency converter, motor defective, line to motor defective                                                                                        |
| 10  | Fault rotor drive, frequency converter OFF2 active | A  | Overtemperature braking resistance or motor                                                                                                                |
| 11  | Fault rotor drive, frequency converter OFF3 active | A  | Emergency stop or safe speed limit exceeded, supply voltage missing                                                                                        |
| 12  | Fault roller speed sensor                          | M  | Speed sensor defective, line to sensor defective, motor stopped, mechanical blocking                                                                       |
| 13  | Fault thermal contact for roller                   | M  | Overcurrent motor, motor starter defective, line to motor defective, mechanical blocking                                                                   |
| 14  | Fault motor starter for roller                     | M  | Overcurrent motor, motor starter defective, line to motor defective, mechanical blocking                                                                   |
| 15  | Fault motor starter for cleaning brush             | M  | Overcurrent motor, motor starter defective, line to motor defective, mechanical blocking                                                                   |

Please check in case of restricted functions:

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Rotor too little separation</b>  | <ul style="list-style-type: none"> <li>• Feeding speed of bulk material is too high</li> <li>• Quantity of bulk material is too high</li> <li>• Piece size of bulk material is too large</li> <li>• Magnetizable construction parts are located within the operating area of the magnet</li> <li>• Compare operating width of the magnetic drum with the width of the feed material</li> <li>• Check position of magnetic drum</li> <li>• Distance between feed material and magnetic drum is too large</li> <li>• Check position of magnetic system</li> </ul> |
| <b>Rotor drum casing is blocked</b> | <ul style="list-style-type: none"> <li>• Check whether roller bearings run smoothly</li> <li>• Check whether drum casing is damaged</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                  |

## 9. Dismantling

Prior to any dismantling works the machine must be disconnected from power supply (de-energized) and secured against reconnection. The removal of the complete electric installation of the machine must be carried out by skilled and instructed electricians only (in the sense of VDE 1000 part 10). Furthermore, the regulations of VDE 0100 standard must be followed.

Dismantling is made in reverse order to the steps in section "Installation". Make sure to follow all the safety instructions specified in the operating instructions!



**Danger**



**Danger**

## 10. Disposal

The machine must be disposed of according to the local regulations.

Particular attention must be paid to the disposal of permanent magnets as they include particular risks (see section 1 "Safety"). Permanent magnets must therefore be demagnetized prior to disposal. We will be pleased to assist you in this. By prior arrangement we return the complete machine or magnetic system at your expense and provide proper disposal.

During disposal make sure that any oils and greases are disposed of according to regulations on waste oils. They must not be contaminated (e.g. solvents).

Furthermore, the various materials have to be separated according to the relevant national regulations, e.g.:

- steel
- grey iron
- aluminium
- non-ferrous metals, e.g. copper
- plastics
- electronic components

Depending on the material these components have to be disposed of in the residual waste or special waste, or have to be recycled.



**Danger**

## 11. Declaration of conformity

within the meaning of the EC-stipulation machines 2006/42/EC, appendix II A

**We, the company**      WAGNER Magnete GmbH & Co. KG  
Spann- und Umwelttechnik  
Obere Straße 15  
D-87751 Heimertingen

**declare that the non-ferrous-separators with discharge cover and control system from typ 0429  
are manufactured in the standard design according to the following appropriate regulations:**

EC-machinery directive 2006/42/EC

EMC-Directive 2014/30/EU

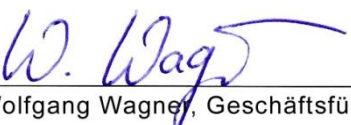
Low voltage directive 2014/35/EU

### **Applicable harmonized standards:**

|                  |                                                                                                            |
|------------------|------------------------------------------------------------------------------------------------------------|
| DIN EN ISO 12100 | Safety of machinery                                                                                        |
| DIN EN 60204-1   | Safety of machinery; Electrical equipment of machines<br>part 1: General requirements                      |
| EN 61000-6-4     | Electromagnetic compatibility (EMC) – Generic standards -<br>Emission standard for industrial environments |
| EN 61000-6-2     | Electromagnetic compatibility (EMC) – Generic standards -<br>Immunity standard for industrial environments |

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Heimertingen, 20.04.2016

  
Wolfgang Wagner, Geschäftsführer

## Appendix