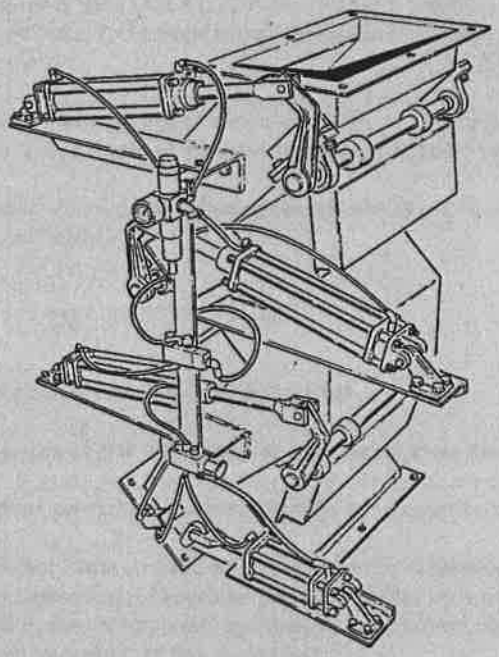
Bakker Magnetics

USER MANUAL

CASCADE MAGNET SYSTEMS



Type number: 26.083/16

Series number: 11381581

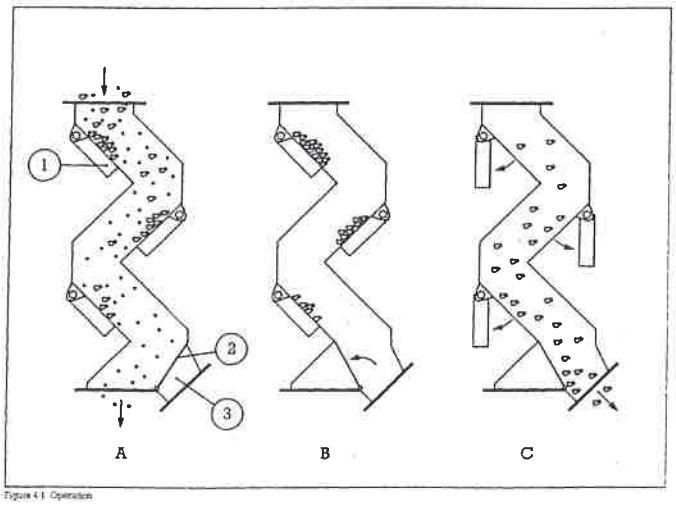
Manual number: 94588A40

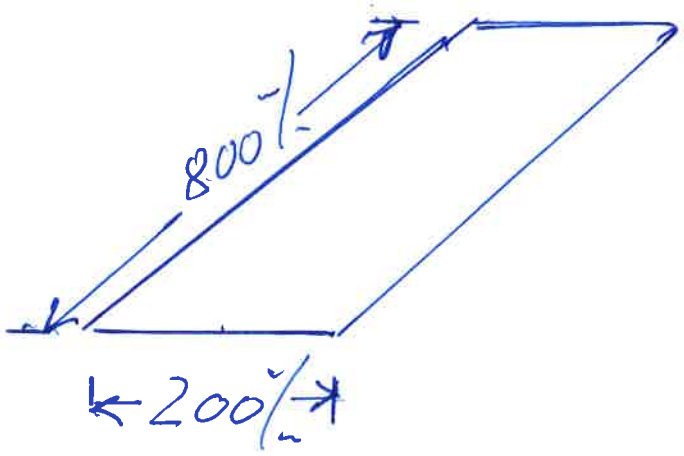
Construction year: 2011

4 USE AND OPERATION

4.1 How the cascade magnet system works

The cascade magnet system is integrated in a supply channel. A solid material flows through the supply channel, In the supply channel there are bends (see figure 4- 1a). Magnets are installed against the inside wall in the first three bends of the supply channel (1). These magnets pull the ferrous metals out of the flow of material against the inside of the channel wall. These metal particles then remain "stuck" to the channel wall.
After a certain amount of time a quantitiy of metal particles will have collected against the wall. These particles can be ejected through the discharge channel (2). To do this, the material flow must first be switched off.
To eject the metal particles, the magnet system closes the bottom of the supply channel with a valve (3) and at the same time opens the discharge channel (see figure 4- 1 b). The magnet system then swings the magnets away from the channel wall. This allows the metal particles to fall downward and they leave the magnet system through the discharge channel (see figure 4- Ic). Measures must be taken to collect the metal particles (container, discharge channel) at the point that they are discharged from the magnet system.
In order to ensure that the magnet system functions optimally, it is necessary for the magnets to lie correctly against the wall of the supply channel. Any material that has accumulated between the magnets and the supply channel wall should therefore be removed.





4.2 Options

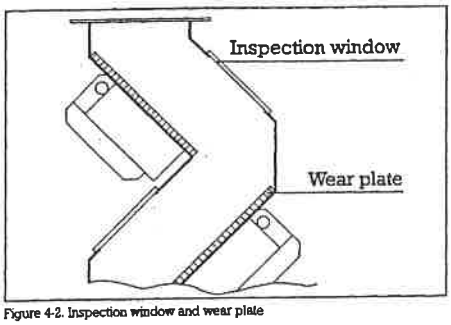


Figure 4-2. Inspection window and wear plate

A number of options are available for the standard cascade magnet system. The desired options are ordered together with the magnet system and mounted by Bakker Mag'netics.
The following parts can be mounted on the magnet system as an option:

- Inspection windows

Inspection windows are mounted on the supply channel wall opposite the magnets. These allow you to monitor how much ferrous metal has collected against the magnets.

- Manganese wear plates

Manganese wear plates are mounted on the inside of the supply channel wall at the same level as the magnets. These wear plates are more durable than the channel wall and can be applied if the channel is used to conduct the flow of an abrasive material.

- Electrically-operated compressed air switch

It is possible to mount an extra electrically-operated compressed air switch. This allows the control of the magnet system to be integrated in a larger (electrical) control system.
The hand-operated compressed air switch remain and can be used for ejecting metal particles by hand.
In this case, the magnet system will have to be operated following different instructions:

* In order to be able to manually eject metal particles from a magnet system with an electrically-operated compressed air switch, follow the instructions provided in paragraph 4.4.
* For instructions regarding the electrical operation of the magnet system, refer to the documentation provided by the supplier of the control system.

-Air buffer tank

The magnet system can be equipped with an air buffer tank. This allows the magnet system to continue to operate for some time if the compressed air supply fails.

Warning!
A magnet system with a buffer tank can carry out several more ejection cycles after the compressed supply has been switched off.

This should be borne in mind when carrying out (maintenance) activities on the magnet system.
After switching off the compressed air supply, üle buffer tank should be ventilated by allowing the magnet to carry out several more ejection cycles.