

Selter



ELECTROMAGNET

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USER'S MANUAL

This user's manual is the document that goes with the lifting magnet since its construction until its dismantling and it is an integral part of it.

It is essential reading this manual carefully before using the lifting magnet.

This manual is an integral part of the lifting magnet and should be accessible to the staff responsible for the use and maintenance.

The operator and maintenance manager must know the contents of this manual.

Maintaining the essential characteristics of the type of equipment described, SELTER reserves the right to make any changes in the components, details and accessories, which considers appropriated to improve the product or for any constructive or business requirements, at any time and without compromise to update this publication.

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APPLICATION

This equipment can have different application depending on the needs.

The most common application is the lifting of pieces and materials.

The risk associated with the lifting magnet is mainly a sudden release caused by:

Incorrect magnetization of the piece (described in paragraph 3).

Power outage.

In case this electromagnet is used to lift pieces or materials, it will be considered as a lifting accessory according Directive 2006/42/EC

Selter security applies a coefficient 3.

This means that the maximum load, is the third part of the effective load shedding, as the static test describes in the certificate of inspection.

. IMPORTANT

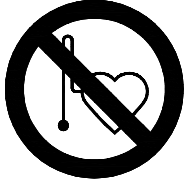
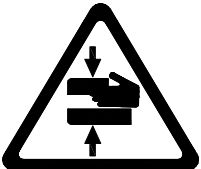

While disconnecting the electromagnet is possible that the piece has a magnetic remanence. That is the piece can retain some residual magnetism and it does not releases easily from the electromagnet.

Depending on needs, it can make a demagnetized cycle, which removes any remaining magnetism in the piece.

See Technical Service Selter.

. ATTENTION

Make sure the piece is separated from the electromagnet before lifting the electromagnet in a vacuum. There is the risk that the piece has remanence, remains attached to the electromagnet and falls unexpectedly.



CAUTION

**This equipment generates magnetic fields.
Careless handling can cause accidents and injuries.
Read the following recommendations before handling.**

- Avoid the presence of iron elements near the magnetic zone (ie, beams, cranes, doors, etc.).
- Be especially careful when unpacking the load with iron objects (ex. knives, scissors, screwdrivers, pliers, etc.).
- When manipulating two or more devices, place them separately at a safe distance between them, so they do not attract each other.
- To release clamped magnets, slide one over the other to prevent pinching fingers.
- Electronic equipment (eg, pacemakers, hearing aids, computers, monitors, watches, measuring instruments and control, etc..) and containers of information (eg, floppy disks, credit cards, magnetic tapes, etc..) can be distorted or damaged by a magnetic field. Keep these items at a suitable distance from the magnetic systems.

. CAUTION

The electromagnet works by passing a current through the internal coils. When the current is interrupted, the electromagnet stops the magnetization.

The electromagnet needs a supplies DC appropriate voltages for the magnetization and demagnetization process (if necessary).

In case of mounting the electromagnet in a machine with incorporated unit control, ensure that it supplies the correct voltage (DC) to the electromagnet and it has enough power (see electrical characteristics in electromagnet)

When the electromagnet runs out of power (power failure, cable breakage ...) the magnetization stops and the piece is fixed only by the residual magnetism. If the electromagnet is connected to a SELTER electronic control, this has a relay for safety functions (alarms activation, stop machine ...)

INSTALLATION

All SELTER electromagnets are sent with grinded top plate and perfectly flat, and are ready to use. To install the electromagnet follow the instructions below:

Carefully clean the top plate of the electromagnet and check for any damage received during transport.

Put the electromagnet in the work area. Remember to place the magnet so as not to impede the output of the power cable.

Depending on the model, the electromagnet can incorporate a feed inlet with wired hose and cable glands, MPM connector, air connector ... or a connection box with terminals. In the first case, connect cables (FIG. 2) to a source of DC power (as specified) or supplied control. If the electromagnet is supplied with terminals, connect cables coming from the power supply DC or control supplied, to the terminals (Figure 1)

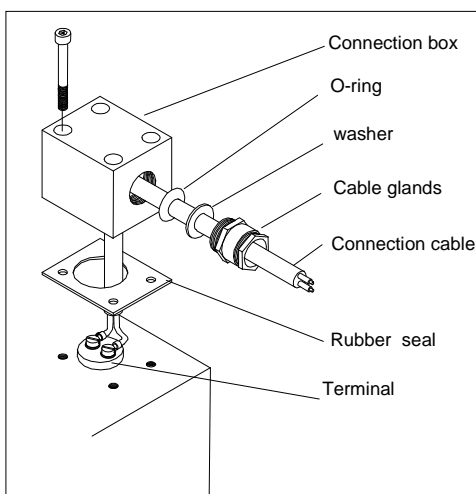


Figure 1

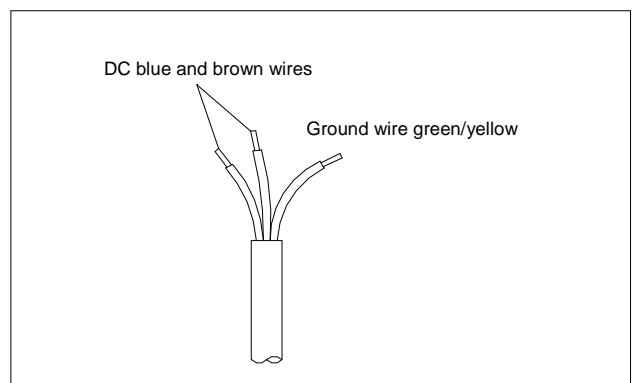


Figure 2

USE INSTRUCTIONS

The contact surfaces of the electromagnet magnet and the load must be clean and polished.

1. Place the electromagnet in the centre of the load.
2. Magnetise.
3. Check the hold and stability by raising the load a little.
4. Carry the load smoothly, without knocking or shaking it.
5. Demagnetise.

Note: Residual magnetism can stay on the electromagnet, and does not release completely the parts.

. TAKE CARE:

Place the electromagnet on the load before magnetizing.

Never stand below or near the raised load piece.

Never exceed the maximum capacities.

. **IMPORTANT!** The effectiveness of an electromagnet depends on various factors which influence its magnetic capacity and which must be read and observed carefully.

MAINTENANCE

The magnetic contact poles should be periodically inspected to ensure that there are no nicks or burring and are free from oxidation. Lifting force may be reduced if this is not done.

The capacity of the electromagnet must be verified periodically by an expert.

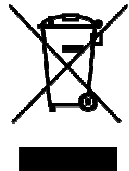
REPAIR WORKS

These equipments can only be checked or repaired by specialists. All the repairs made improperly can cause considerable damages to the machine and user.

END OF USEFUL LIFE

At the end of its useful life, it should be transferred to a suitable storage for a subsequent processing and use of recyclable parts. This equipment contains substances that may be harmful to the environment and human health.

ATTENTION, *this product cannot be disposed as a selectable urban waste. At the end of its useful life it must be deposited to a suitable establishment for storage and further processing and recycling (according directives 2002/96/CE, 2006/12/CE).*



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