



**RECOMMENDATIONS OF USE
FOR PERSONAL SAFETY AND TO HANDLE AND STORE MAGNETS
CORRECTLY**



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RECOMMENDATIONS OF USE TO BE STRICTLY COMPLIED WITH FOR PERSONAL AND WORKER SAFETY

- ✓ Magnets can be hazardous for pacemaker patients. Keep a safe distance.
- ✓ Do not handle coated magnets without wearing nitrile gloves.

The highest risk posed when handling magnets, mainly large ones, is the crushing of fingers or limbs **which may cause bruises, injuries or fractures. It is therefore recommended to:**

- ✓ **Handle the magnets carefully.**
- ✓ Detach one magnet from another by sliding it, without trying to lift it. Remove it away from the magnet/groups of magnets which it was detached from until it is beyond the previous force of attraction.
- ✓ Avoid bringing the magnet near ferromagnetic materials, and place it on non-magnetic surfaces: stainless steel, aluminium, wood, plastic shelves;
- ✓ If it is not possible to control/contrast the force of attraction, do not place yourself between the magnet and the ferromagnetic material.
- ✓ For neodymium magnets or large magnets, always consider the force of attraction before approaching one box of magnets to another.
- ✓ To recreate rows of magnets, in the case of large magnets, it is recommended to place a separator made of rigid non-magnetic material between one magnet and another.
- ✓ The magnets are to slide one on another, firmly holding the separator, if placed between one magnet and another. Do not let the magnet go but accompany it in the movement until it is placed correctly. If it is not possible to control/contrast the force of attraction, do not try to block the magnet in any way with your body.
- ✓ If the magnets must be placed on ferromagnetic material, slide the magnet onto the ferromagnetic piece, accompanying it in the movement until it reaches its correct position. If it is not possible to control/contrast the force of attraction, do not try to block the magnet in any way with your body.
- ✓ Handle the magnets carefully, without knocking them violently so as to prevent splinters from detaching from the magnet itself.
- ✓ Do not hold the magnets in worn clothing.
- ✓ Do not swallow the magnets
- ✓ Keep them away from children.



**CAUTION!
MAGNETIC MATERIAL**

**DANGEROUS FOR HOLDERS
OF HEART DISEASE**



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RECOMMENDATIONS OF USE TO HANDLE AND STORE MAGNETS CORRECTLY

Generic for all magnets:

- All magnets must be stored in environments that are non-radioactive, not humid, ventilated, with temperatures ranging between 10 and 30 degrees and in conditions that are not corrosive for the magnets themselves;
- Do not handle the magnets without wearing nitrile gloves;
- Avoid handling the magnets unnecessarily, detaching them and attaching them from and to each other and to metal structures, so as not to damage them and weaken their magnetic force;
- Do not place the magnets on metal shelves (e.g. Iron) but place them on non-magnetic materials, such as: stainless steel, aluminium, wood and plastic shelves;
- When stored, isolate the boxes of the magnets from iron structures, placing them on wooden platforms;
- Keep them away from watches, SIM cards, credit cards and magnetic cards in general;
- Keep them away from computers, televisions, radios, remote controls, navigation instruments, compasses, mobile phones, electronic devices **and other sensitive devices**;
- Inform magnet users that they may be hazardous for pacemaker patients;
- Avoid storing magnets in damp places, outdoors or in hot or cold places;
- Protect the magnets from dust and do not scratch the coatings so as to prevent corrosive reactions **that could damage the magnet irreversibly**;
- Avoid contact with liquids and food products;
- It is advisable to use the magnets within six months from the date of purchase.
- Do not subject the magnets to thermal shock or sudden temperature changes, from room temperature to values ranging between $-40^{\circ}/+80^{\circ}\text{C}$;
- **Avoid approaching magnets with the same polarity so as not to damage them due to magnetic repulsion.**
- **in some cases, the magnets have high electrical conductivity. If crushed or knocked against each other, they have high flammability.**

	<p style="text-align: center;">RECOMMENDATIONS OF USE FOR PERSONAL SAFETY AND TO HANDLE AND STORE MAGNETS CORRECTLY</p> <p style="text-align: right;"><i>NEW</i> 2018</p>	<p>DOCUMENT CODE 850.IO.19 REV. 5</p> <p>of 20/04/18</p> <p>PAGE 3 / 4</p>
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Samarium Cobalt MPS/Neodymium MPN Magnets:

Samarium Cobalt MPS magnets are obtained by sintering powders, and are therefore highly fragile. They must be handled with special attention and therefore:

- Handle parts very gently and do not subject them to violent mechanical shock
- Avoid exerting pressure on them
- [The protective coating of neodymium magnets contains nickel. Wear nitrile gloves to handle them.](#)

During the dimensional check, the magnets, which are supplied attached to each other in rows, must be detached, measured with plastic or non-magnetic gauges and placed individually and with extreme caution on non-magnetic surfaces, maintaining the correct distance between one magnet and another, as indicated in the section of recommendations of use concerning personal safety.

Phosphated/Passivated MPN Neodymium Magnets:

- must be kept in their vacuum packaging with anti-corrosion paper

Plastimag Profiles:

- Store the magnets in cool and well-ventilated areas;
- Keep the profiles separate until they are ready to be used for assembly;
- Open the doors and windows regularly to prevent any alteration due to climatic changes or chemical agents;
- Clean the profiles with dry cloths and regularly treat them with a layer of talc;



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Air transport.

Air transport requires special precautions as the magnetic field generated by the magnet can interfere with the aircraft flight devices. The packaging must be shielded with iron sheets and the shipment must conform to IATA rules 953.

General document update		10/04/18
Adaptation of Standard UNI EN ISO 9001:2015		08/01/18
Added recommendations of use for personal and worker safety (red parts)		01/09/15
Added plastimag profiles		31/07/12
Added characteristics of Samarium Cobalt		12/01/10
Issue of instruction		09/04/09
Description of Revision	Issue and verification: DIG	Approv. Date