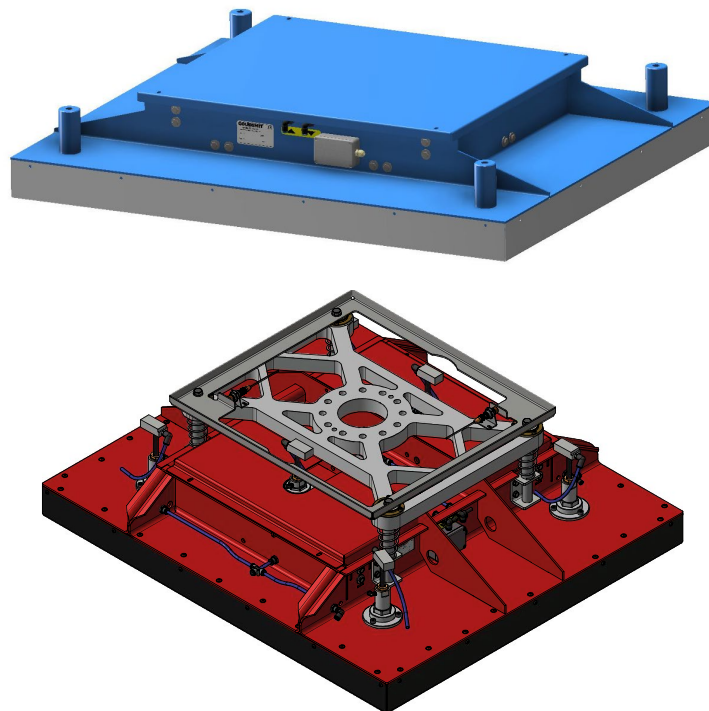


User Manual

Palletizing and depalletizing magnet, type HPA / TPxx...

Suitable for palletizing and depalletizing empty cans and spray cans,
filled and closed cans and filled glass containers with steel lids



*The descriptions and pictures in this manual, used for explanation, may differ from your execution.
We have enclosed the as-built drawing of the delivered article.*

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Versions overview of standard manual

Version	Date	Description
1.0	02/2002	First digitally saved version.
2.0	10/2006	1. Changed to suit all TPxC types. 2. Intended use part added acc. folder.
2.1	04/2008	1. Renewed version in general Goudsmit user manual style. 2. Revisions page added.
2.2	06/2008	Chapter Trouble shooting changed to Malfunctions/service.
3.0	03/2010	Specifications (data sheet) and declaration of conformity separated from manual
3.1	11/2018	Updated version (SB with GS).
3.2	11/2019	New logo and small text changes
3.3	04/2020	Extended with optional vacuum system
3.4	09/2021	Chapter Safety extended with conditions of use

Introduction

Read this manual and make sure that you fully understand its contents before commissioning and operating the machine.

If you have any queries or require further explanation regarding any subject related to the machine, please do not hesitate to contact **GOUDSMIT Magnetic Systems B.V.**

All technical information contained in this manual, together with any relevant drawings and technical descriptions we supply, remain our property. It may not be duplicated or disclosed without our prior written permission.

The user manual can be ordered together with the device description and/or the article number as well as the order number (ORxxxxxx).

- This manual and the declaration by the manufacturer are part of the machine.
- They must remain with the machine, even if it is sold.
- The manual must be made available to all operators, service technicians, and others who work with the machine throughout its life cycle.

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General

This user manual contains information for the correct operation and maintenance of your device. It also contains instructions for avoiding possible injury and serious damage and it allows a safe and as trouble-free functioning of the product as possible. Read this manual thoroughly before putting the device into operation, familiarise yourself with the operation and control of the device and follow all instructions precisely.

- *The data published in this instruction manual is based on the available information at the time of delivery. This is issued subject to later amendment.*
- *We retain the right to amend or modify the construction and/or model of our products at any time whatsoever without any obligation to modify any previously supplied products accordingly.*

Ferromagnetism

The working principle of the device rests on (Ferro)magnetism.

Ferromagnetism is the basic mechanism by which certain materials such as iron cobalt and nickel can get magnetized when exposed to an externally applied magnetic field. Materials that remain magnetized after the external magnetic field is removed, are called permanent magnets. Most magnetic materials lose their magnetism after the external magnetic field is removed. Most alloys of iron, cobalt and nickel are magnetic. However, some stainless steel alloys like AISI304 or AISI316 are only slightly magnetic.

Because in most cases it will be Fe parts that will be Ferro-magnetically influenced, we will use the term 'Fe' in this user manual when we mean ferromagnetic material.

Conditions of supply and guarantee

The conditions of supply are the “**General Conditions for the supply and erection of mechanical, electrical and electronic products**” (SE01), published by *Orgalime*, in Brussels.

These conditions can also- if desired – be requested by writing to Goudsmit Magnetic Systems B.V., as also mentioned in our written quotation.

The guarantee prescriptions are mentioned in these conditions.

The guarantee on your equipment will be void if:

- Service and maintenance are not performed in accordance with the instruction manual or by servicemen who are not especially trained to do the work. We strongly recommend that specific magnetic service and maintenance be carried out by Goudsmit personnel).
- Modifications are made to the equipment without our prior written permission.
- Non-original parts or non 100% exchangeable parts are used.
- Lubrication products other than those prescribed are used.
- The equipment is used injudiciously, incorrectly, negligently or not in accordance with its intent and/or purpose (see chapter “Intended use / user instructions”).

All parts that are subject to wear are excluded from the guarantee.

Remaining remarks / warnings

- Use the device only for the application for which it has been designed (see chapter “*Intended use / user instructions*”).
- Use the device only when it is in technically perfect condition, and ensure that all protective hoods or inspection covers, including all safety circuits, have been fitted and installed in the correct manner.
- Ensure that device maintenance is appropriate and in accordance with the instructions provided in this user manual.
- Any eventual faults, in particular those that may influence safety, should be attended to immediately and remedied before renewed operation. Should you, after estimating the risks of an unsolved fault, still think it is safe to keep the device into operation, then warn the operators and maintenance staff of these faults and the danger(s) caused by these faults.

Delivery

General

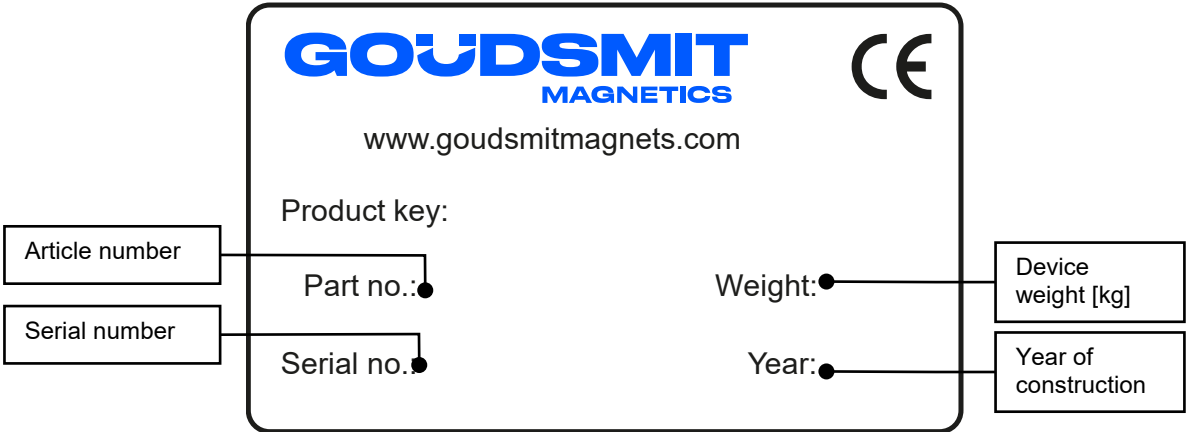
Check the shipment immediately on delivery for:

- Possible damage and/or shortcomings as a result of transport. If so, ask the transporter to draw up a transport damage report.
- Completeness of the delivery/deliveries, the absence of anything (additionally) ordered.

Always immediately contact **GOUDSMIT magnetic systems** in the event of any damage and/or mistaken delivery.

Identification plate

On the device you will find an identification plate as pictured below. **Information on this plate is of great importance in case of service.** That is why we advise to maintain this plate on the device at all times. Ensure that it is always legible by cleaning regularly.



Don't forget to make note of the Serial and Identification number in case of breakdown(s) and or delivery of spare parts.
If your identification plate is damaged, contact us and we will send a new one as soon as possible.

Safety

Regularly check that all warning pictograms are still present and legible, and clean if necessary. Make sure that new pictograms are applied at their correct locations if they have been lost or damaged.

General

The device is provided with safeguards where necessary. Make sure every person who comes in contact with the device, wears adequate personal protection (overalls, safety glasses, hearing protectors, helmet, steel-toed safety shoes etc.).

Areas of the device considered dangerous are marked with warning pictograms.

If the device remains easily accessible to persons, then extra safety precautions (e.g. fencing) must be installed. When safeguards are not possible, make sure clear instructions are given to people using the device.

Conditions for safe use

- Do not switch the magnet plate ON unless the magnet is firmly attached to the products.
- Do not switch the magnet plate OFF unless the magnet is completely immobile in its position.
- There must be no steel objects near the switched ON magnet gripper (minimum distance 100 mm).
- Do not make jerky movements or sudden (de)accelerations when the magnetic gripper is loaded with products.

Falling loads

There is always danger with the transport of lifted loads!

! Danger → falling parts !

There is always danger for people when a load falls off. Take extra protection measures – for instance to place the machine in a closed working space or to place a fence around it – and make sure good instructions and operation prescriptions are provided.

Also never walk under the palletizing magnet.

***For this reason there are no pictograms on the magnet.
Best is to place a pictogram on the fence (or door) where the device is located!***

Danger of magnetic field

The magnets generate a powerful magnetic field that strongly attracts ferromagnetic (Fe) materials. Always take into account that these materials may suddenly be very powerfully drawn towards the magnet. Make use of non-magnetic tools and workbenches fitted with a wooden worktop and preferably a non-Fe frame (for instance stainless steel).



Always be aware that Ferromagnetic parts will be attracted if you are closer than 1 meter to a magnet.



Danger - strong magnetic field!



People fitted with pacemakers should on no account enter the magnetic field (within a radius of at least 2 meter).



Prohibited for people with pacemakers!



Do not bring ferromagnetic objects, e.g. tools, watches, jewellery within a distance of 1 meter from the device. Sudden traction could result in injury and or the magnetic field could result in damage to sensitive devices.



Attraction and projectile risk!



If no air pressure is connected to the device, e.g. after an emergency stop, the magnetic plate may drop to the lower position, depending on the type. The magnet is then switched on!

Device description

The palletizing magnet is a device that can transport products with an iron cap. By the use of a magnetic ground plate, products with a cap with Ferro-magnetic properties can be lifted and transported. As long as the magnetic power is effective (plate down) the product remains hanging under the palletizing magnet.

As soon as the magnetic power is removed (plate up), the products will no longer be attached to the contact plate.

Intended use / user instructions

The palletizing magnet can hold cans and jars (with Ferro-magnetic twist-off caps) in a suspended position, without any risk. Without requiring a power supply, a single layer of products will remain suspended as long as desired. A guiding mechanism makes sure the product(s) will be handled smoothly and quickly.

Make sure the device is installed horizontally!

Palletizing magnets are suited for the (de-)palletizing of:

- Empty steel cans and aerosols.
- Filled and closed steel cans.
- Filled glass jars with steel twist caps.

These can be supplied and/or carried away on for instance a pallet or a conveying belt.

Only use the device for the applications as described above.

Surrounding conditions

The palletizing magnet is heavily constructed and conserved, and therefore needs no special surrounding conditions.

Temperatures

Suitable for surrounding temperature of -20°C to 40°C.

The magnet is to be protected against higher temperatures than prescribed, because the magnet might **lose magnetic force permanently** when exposed to high temperatures

Noise level

The noise level of the device is very low.

Air pressure

Compressed air for operating the air cylinders is 6 to 8 bar.

The required air pressure for the vacuum system is 4 to 6 bar.

Vibrations

The vibrations that are caused by the palletizing magnet, have to be damped out by the means in which it will be hung.

The magnet is to be protected against strong external vibrations, because the magnet might **lose magnetic force permanently** and or the brittle ceramic magnet material might break.

Cleaning

Make sure that the device - and especially the contact plate - is kept clean, by regularly removing dust and other dirt.

Dirt on the contact plate ensures a loss of lifting capacity of the magnet, what can consequently cause danger!

Properties overview

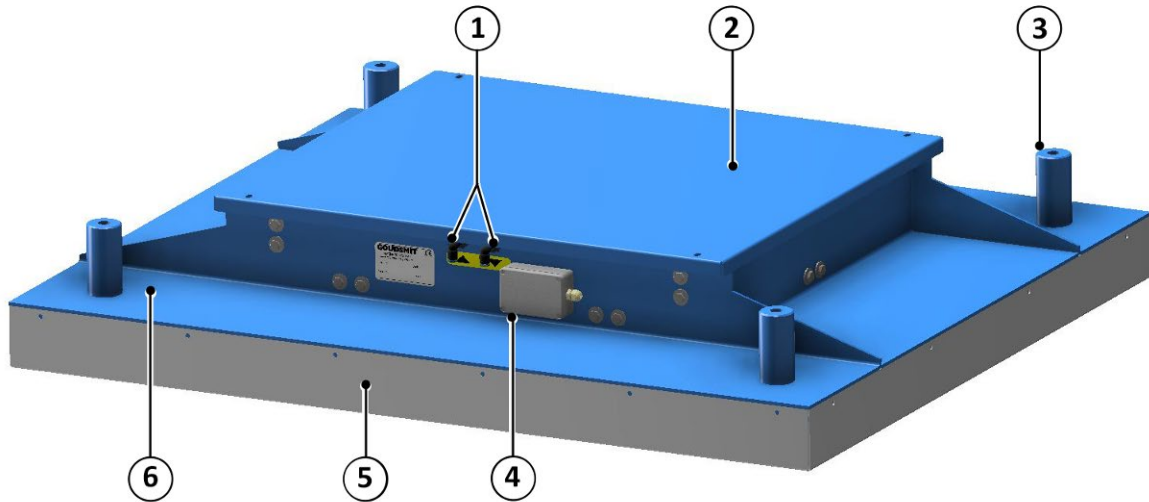
- Sealed housing to keep out dirt and water, so the magnet will not be damaged and the magnetic force will be guaranteed.
- Contact surface made of 2 mm stainless steel plating, with additional reinforcement. This guarantees effective magnetic contact with cans or jars.
- The entire internal magnet system is covered with stainless steel plates, and the plates are sealed with PU resin - for optimum protection against corrosion.
- Safe. If there is a loss of air pressure, no cans or jars will fall off the palletizing magnet. The magnet can hold them in position permanently.
- Improved, double-working "ON – OFF" system with a parallel linked guide mechanism operated by two pneumatic cylinders. This mechanism guarantees effective operation, even if the palletizing magnet is only partially loaded with cans.
- With the use of a 5/2- or 5/3-valve and two air hose couplings (Ø8 mm), it is easy to connect.
- Fitted with two sensors and a terminal box for the magnet's "ON" and "OFF" signalling.
- Easy to maintain; once the top cover of the palletizing magnet is removed, everything is available for inspection (or for service).
- The permanent magnet system works without electric power supply.

Most of the models are (optionally) available with an integrated vacuum system with 8 suction cups, to handle the sheets between the layers of cans.

Working principle and construction

Exterior of the device

Products are transported with the use of magnetic force.
 The product hangs under the (stainless steel) cover plate of the palletizing magnet.



1	Pneumatic connection
2	Service hatch
3	Mounting socket
4	Sensor-switch box
5	Cover plate (contact plate)
6	Housing

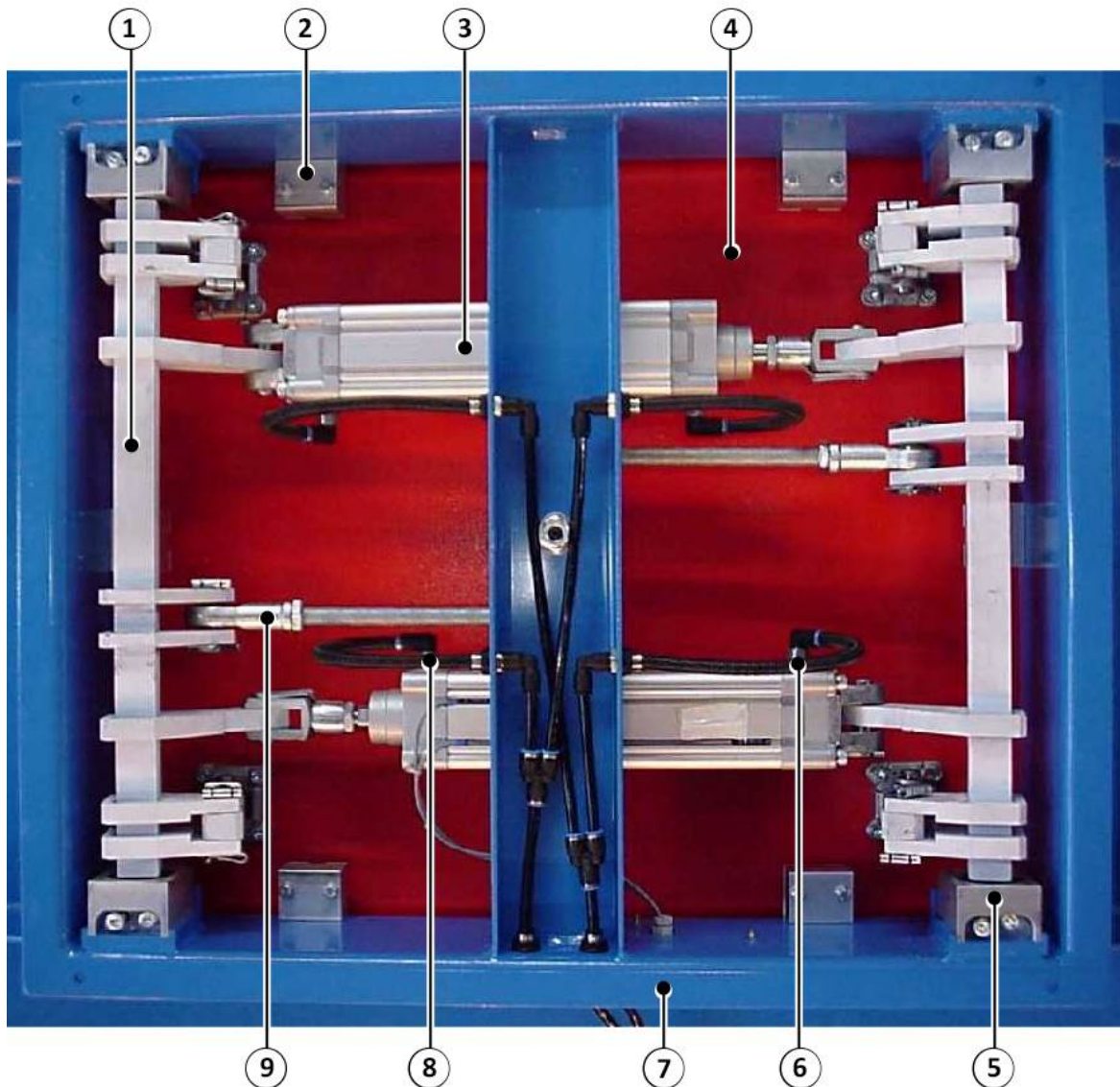
Components, standard palletizing magnet

- A sensor-switchbox (4) - possibility to connect extra sensors
- A pneumatic connection (1) - air supply to the cylinder to move the magnet
- Four mounting sockets (3) - for lifting or suspending the palletizing magnet

Special options

Goudsmit is able to deliver a completely customised palletizing magnet. For instance:

- Pneumatic vacuum devices, attached under the magnets contact plate (to help the magnetic system and to be able to quickly switch from vacuum to magnetic, or vice versa).
- A pneumatic unit to clamp the pallet.
- Extra sensors, for all kinds of measuring.
- etc.

Interior of the device


1	Main axle
2	Damper
3	Pneumatic cylinder
4	Magnet plate
5	Bearing block
6	Sensor
7	Steel housing
8	Sensor
9	Parallel guiding

Pressurised air powers two pneumatic cylinders, which make the magnet plate move vertically. The parallel guiding makes sure that the magnet plate always moves parallel to the housing, so the plate cannot get stuck (even when the load is not in the middle under the magnet). The dampers are there to absorb the shocks, which will be produced by placing the magnet on the product. The sensors signalise if the magnet is switched on or off.

Vacuum system (optional)

The palletizing magnet can be equipped with a vacuum system to pick up and move intermediate sheets (layers) of different materials.

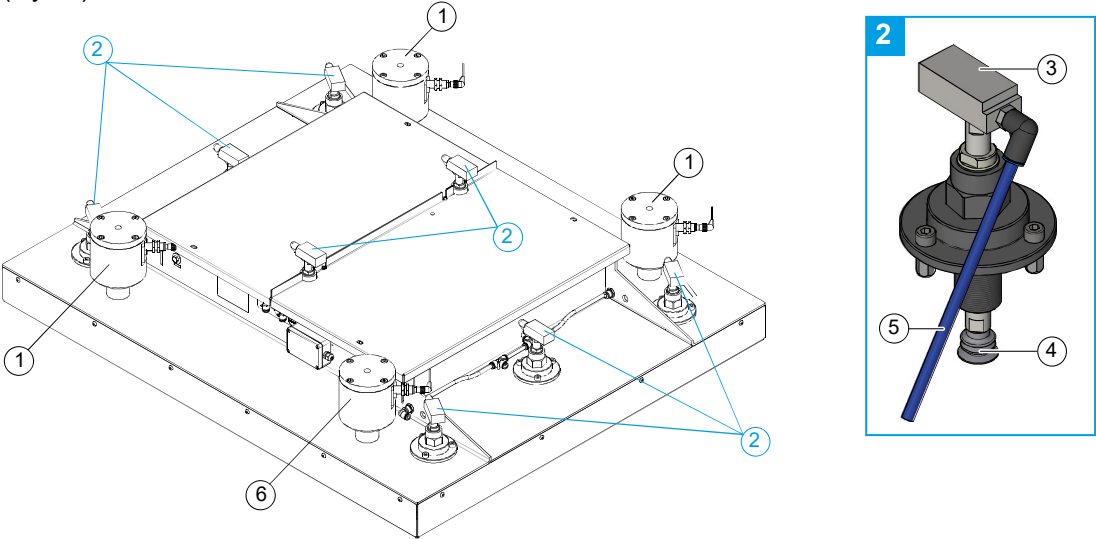


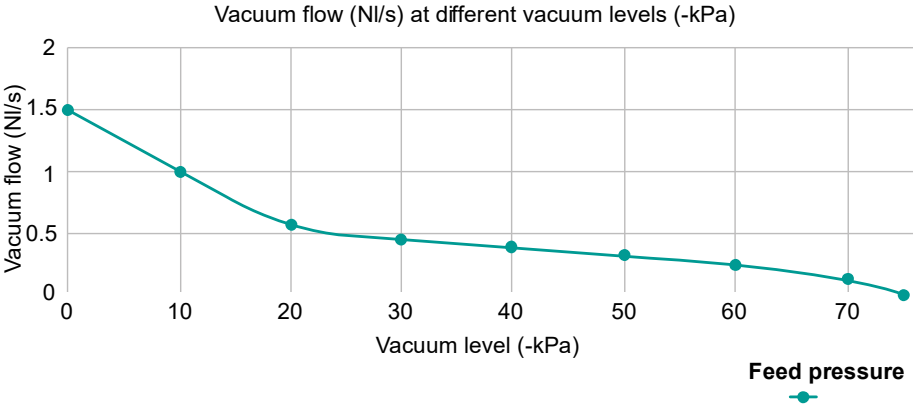
Figure : Example palletizing magnet with vacuum system and spring-loaded lifting units [1]

The vacuum system consists of a number of vacuum tubes [2] with a vacuum pump at the top [3] and a suction cup at the bottom [4]. The system is switched on and off by a 3/2-valve. On the palletizing magnet there is 1 connection for air hose Ø8 mm, which branches out further to all vacuum tubes.

A Ø8 mm air hose [5] is connected to the vacuum pump and connected to all other vacuum pumps. The vacuum is switched on and off from the central control unit. The operating pressure 4 to 6 bar.

The vacuum pump works like a venturi. There is air pressure on the entrance. The air flow is constricted internally and a vacuum is created at the connection of the pipe. The vacuum is led through the pipe to the suction cup, causing the suction cup to contract and thus suck in.

The moment a layer is picked up or deposited, the vacuum switches on via the 3/2-valve. When the layer is released, the 3/2-valve is switched off, stopping the vacuum.



Feed pressure	Air consumption	Vacuum flow at different vacuum levels (-kPa)								Max vacuum	
		0	10	20	30	40	50	60	70		
MPa	NI/s										-kPa
0.6	0.98	1.5	1	0.57	0.45	0.39	0.32	0.24	0.13	75	

The graph above is based on an operating pressure of 6 bar and a flow of 0.98 NI/s (normal-liters per second).

Installing and commissioning

The palletizing magnet uses compressed air (7^{±1} bar) to move the magnetic plate in the device. The air is controlled by a 3/2-valve, which uses electricity to function.

Installing the device

When the device is delivered from the factory, the magnetic plate is in its lowest position. This means: the magnet is "ON".

- Never place the device on a ferromagnetic underground (for instance on a steel roller table or the forks of a lifting truck). All ferromagnetic parts will be strongly attracted by the magnetic plate. This can cause dangerous situations.
- Always place a wooden or plastic pallet under the magnet.
- Clear the area under the device during lifting and transport.

The device must be lifted at the 4 mounting sockets, using lifting eyes.

- Work safely. Only use proper lifting devices that are suited for the device's weight.

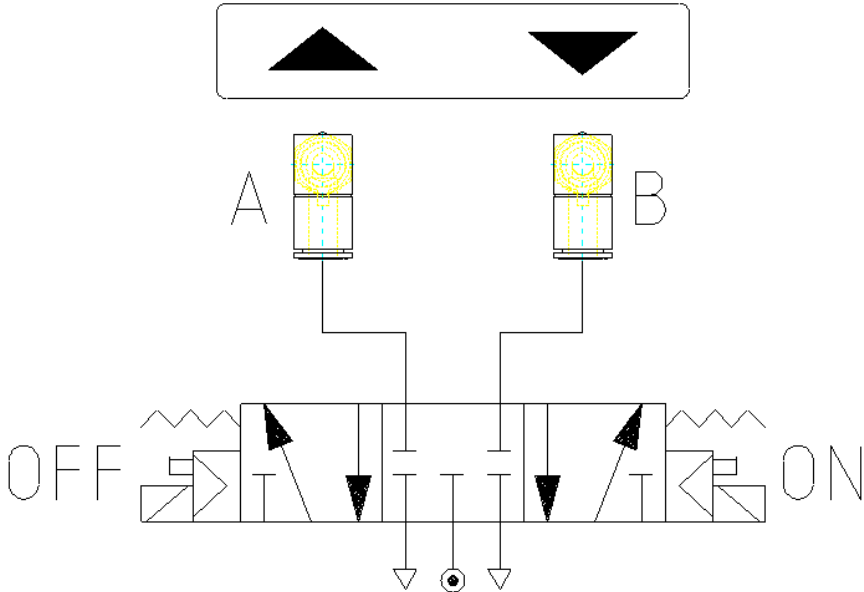
The weight of the device is stated on the identification plate on the device.

- Pay attention to unequal weight distribution.
- Make sure there is enough working space, use proper scaffolding, ladders and other helping materials to safely install the device.
- If the product is located under the palletizing magnet in a a-symmetrical pattern, please note that the magnet can still lift the product, see [Palletizing prescriptions, good magnet-product adhesion](#).

Pneumatically connecting the palletizing magnet

To be able to switch on the magnet (or off), the device uses pressurised air (7±1 bar). Use an 8 mm hose to connect the palletizing magnet to your air supply. The air consumption is 8 litre per stroke, using 2 cylinders and 6 bar operating pressure.

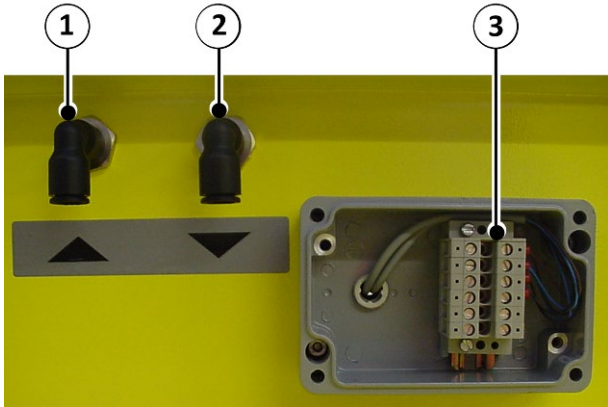
Pay attention to the correct connection of the compressed air. The left knee (A) is the connection for "switching on the magnet". The right knee (B) for "switching off the magnet".



Specifications

- Air pressure: 7 bar
- Dimensions air hose: Ø 8 mm

1	Pressurised air supply, move magnet up.
2	Pressurised air supply, move magnet down.
3	Terminal block, connecting actuators.



1. Connect pressurised air to the air connection (1) - magnet up
2. Connect pressurised air to the air connection (2) - magnet down
3. Connect the electrical supply to the terminal block (3), see "[Electrically connecting the palletizing magnet](#)".

Electrically connecting the palletizing magnet

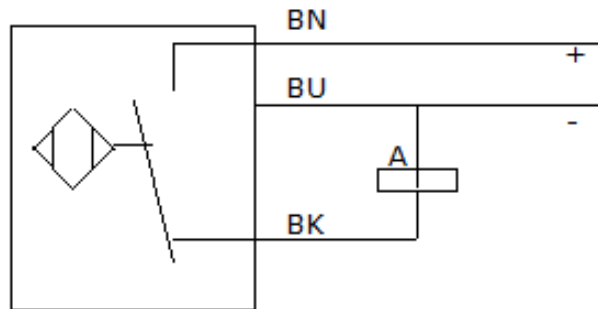
Connect the sensors from the palletizing magnet in the following way.

Specifications

- 12 – 30 V_{DC}
- max. 500 mA
- max. 10 Watt

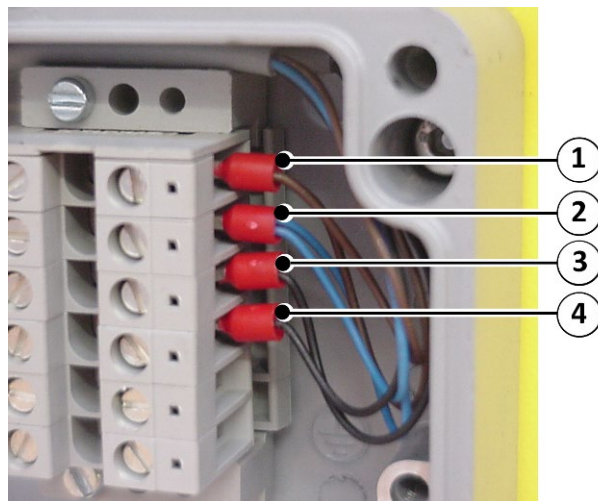
Diagramm electrical connection

BN	Brown
BU	Blue
BK	Black
A	Load



Details terminal block

1	Brown (2x)
2	Blue (2x)
3	Black (1x)
4	Load (1x)



Technical specifications sensors

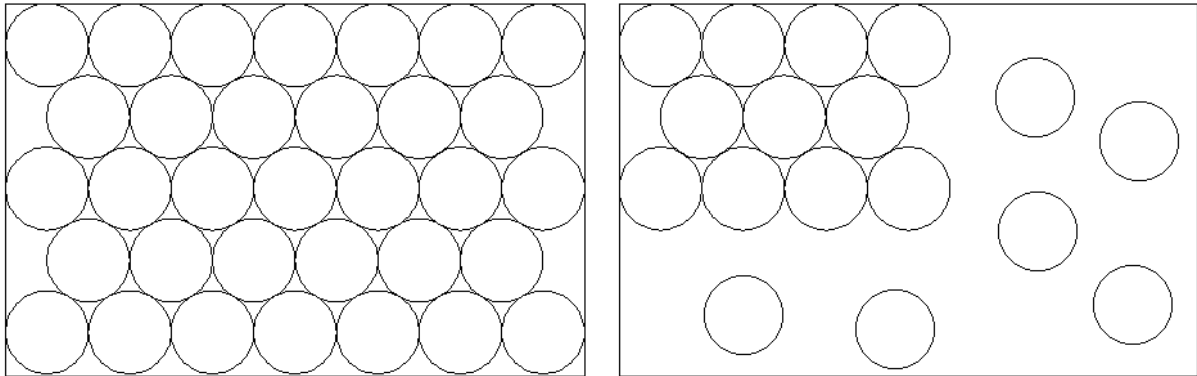
	Data
Voltage	12 – 30 V _{AC} / V _{DC}
Max. per. left wrinkle tension	± 10% V _b /V _b /U _b
Max. per. switch stream	500 mA
Max. per. switch capacity	10 W
Switching time	< 0 ms
Max. per. switch frequency	800 Hz
Shortcut resistant	No
Re-poling resistant	No
Casing material	PC, PET
Cable material	PUR

The + and - connections of the sensors must not be swapped.

Palletizing prescriptions**Good magnet – product adhesion**

Points of attention, to make sure the products to palletise/de-palletise will stick stable to the palletizing magnet:

- Make sure that the cover plate is clean and undamaged.
- The products need to be offered and put away on a flat and horizontal supply- or carry away surface.
- There may be maximum one intermediate sheet between the cover plate of the palletizing magnet and the product layer.
- The products need to be offered to the magnet as per in the inquiry requested product pattern, as the magnet plate is constructed as per this pattern. If the palletizing magnet is loaded as per another product pattern, it may be that the products move away from the side(s) of the palletizing magnet, or even fall off.
- If the product pattern is a-symmetrical, make sure the palletizing magnet is built in correctly.



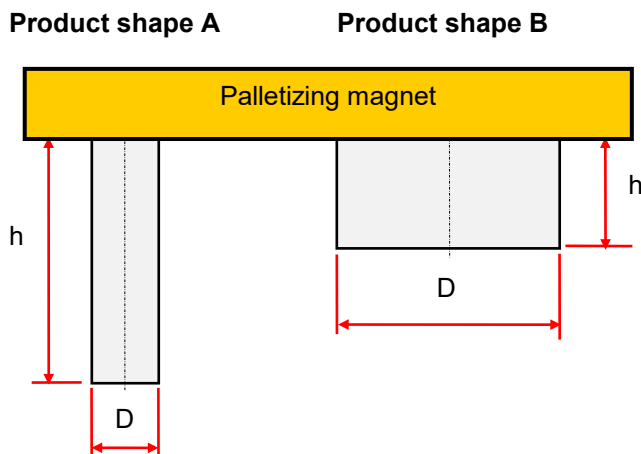
Device acceleration

Avoid shocking movements!

When the magnet starts to move, the acceleration with which it moves is very important. A too big of difference in acceleration will make the products under the magnet fall off.

The (difference in) acceleration is the most when starting and stopping the palletizing magnet. Make sure that all movements of the palletizing magnet are smoothly and without unwanted vibrations.

For a product with a large diameter and a small height, the acceleration of the palletizing magnet can be greater than for a product with a small diameter and a large height. (figure and table below).



Movement	Product shape A (full)	Product shape A (empty)	Product shape B (full)	Product shape B (empty)
Gradual acceleration $0,25 \text{ m/s}^2$	+/-	+	++	++
Quick acceleration 2 m/s^2	--	-	+	++
Gradual transport 1 m/s	+/-	+	++	++
Quick transport 6 m/s	--	-	+	++
Gradual slowing down $- 0,25 \text{ m/s}^2$	+/-	+	++	++
Quick slowing down $- 2 \text{ m/s}^2$	--	-	+	++

- ++ = Very well working combination
- + = Good working combination
- +/- = Sufficient working combination
- = Moderate working combination (disturbance sensitive)
- = Bad working combination (not recommended)

Lifting order

1. Lower the palletizing magnetic vertically on the products to palletise/de-palletise. (magnet in upper position, OFF)
2. Switch ON the magnet by powering the pneumatic cylinders.
The load is now magnetically attached to the magnet plate.
3. Gently move the palletizing magnet up.
Make sure not to move sideways, because the products will move away from the magnet.
4. Move the palletizing magnet **horizontally** to exactly above the (de-)palletizing position.
5. Lower the palletizing magnet **vertically** until the products are on the spot wanted.
6. Switch OFF the magnet by powering the pneumatic cylinders.
The products will loosen from the palletizing magnet.
7. Make sure the “empty” magnet is moved up **vertically**, so the products will not be pushed over.

Start-up

Before start-up, make sure that:

- The device or the installation has no damages or malfunctions.
- All connections (electrical, mechanical, pneumatic) have been made properly.
- The device or the installation is placed and situated correctly.
- All protective covers (if applicable) have been fitted correctly.
- There are no other sources of danger present.

During start-up, make sure that:

- The device or the installation has no damages or malfunctions.
- All other parts of the device or installation function as described.

Maintenance

Magnetic systems attract Ferromagnetic particles. Regular cleaning is essential.

A clean magnet functions considerably better

All parts are best cleaned with pressurized air and/or a soft cloth. *It's also possible to deep clean with special cleaning fluids that do not harm the material. Ensure that these fluids do not contaminate the product*

Regularly check that all warning pictograms and the identification plate are present at the correct locations on the device. If warning pictograms or the identification plate should get lost or damaged, immediately apply new ones to the original locations.

Always inform operating personnel regarding planned inspections, maintenance, repairs or if attending to breakdowns.

Exterior the device

Keep the device clean

Magnets attract dust and Fe-particles.

Regular cleaning of a device with a magnet is necessary.

A clean magnet functions a lot better than a polluted magnet.

Check warning pictograms and type sticker

Regularly check if all warning pictograms and the type plate are still on the correct place on the device housing. If the type sticker or warning pictogram(s) are lost or damaged, place new ones at the same location.

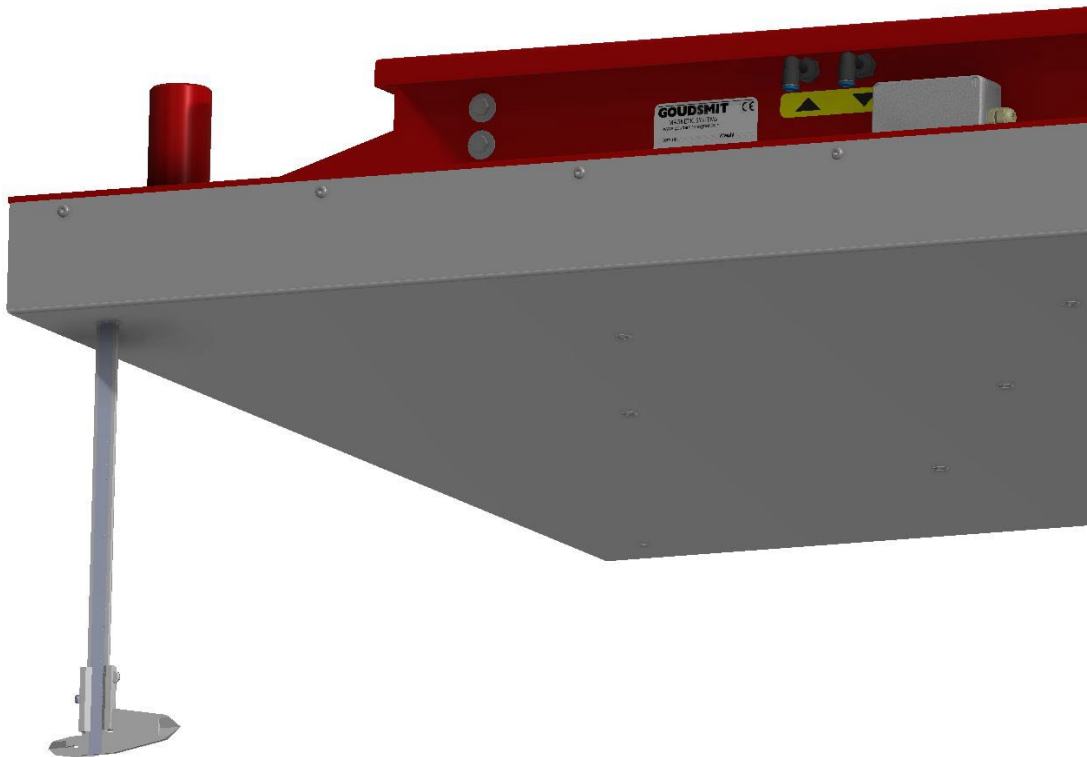
Check the cover plate

Regularly check the cover plate on flatness and possible damages.

Regularly check if the countersunk screws M5 (6x) on the bottom side of the cover plate are tightened.

Take the following steps to dismount or replace the cover plate:

- Make sure that the magnet plate is hanging in the upper horizontal position.
- Move the palletizing magnet over an empty pallet.
- Dismount the countersunk screws M5 (6x) at the bottom side of the cover plate.
- Lower the device on the pallet.
- Dismount the M6 bolts of the cover plate.
- Lift up the palletizing magnet.
- Clean the magnet plate.
- Lower the device in the new cover plate.
- Mount the cover plate by tightening the M6 bolts.
- Secure them with Loctite Screwlock and install the countersunk screws M5 (6x) on the bottom side of the cover plate.

Inspect magnet plate tolerance

Make sure that the magnet plate is in the lowest position, and check the tolerance. In every corner of the cover plate you will find a small inspection hole. This hole will make it possible to measure the tolerance between the magnet plate and the cover plate (using a calliper).

When the measured dimension is more than 3 mm, at any place, the magnet plate must be adjusted. See chapter [Adjusting the magnet plate](#).

Interior of the device

To inspect the inside of the device, remove the service hatch.
Now it is possible to inspect or repair parts at the inside of the device.

The attachment of all parts inside the palletizing magnet is secured with locknuts or glue (Loctite 243 or 270).

When a part is replaced, secure the attachment bolt(s).

Make sure no loose parts (or tools) are left inside the device.
When they come between the magnet plate and the cover plate, they will damage them.

Adjust magnet plate position

To adjust the position of the magnet plate, loosen the bolts at the side of the housing.

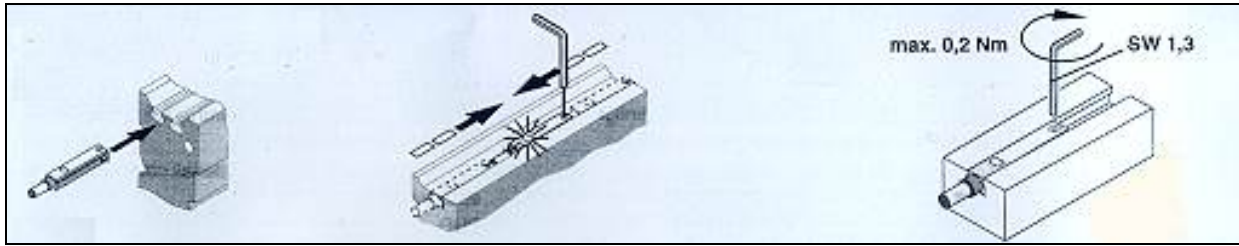


Adjusting the magnet plate:

- Loosen the 2 bolts (1).
- Adjust the set bolts (2) so the gap between the magnet and the cover plate is less than 1 mm. In every bearing block there is one draw bolt and one pressure bolt.
- Tighten and secure the 2 bolts (1).

Adjusting the sensors

Adjust the sensors with the key (included in the delivery).




- Move the piston to the end of the rail.
- Place the sensor in such a way, that the led is about to go out.
- Fasten the hexagon socket bolt with maximum 0.2 Nm torque.
- Then move the piston to the other end of the rail.
- Adjust the sensor position again in such a way, that the led just does not go out.
- Fasten the hexagon socket bolt with maximum 0.2 Nm torque.

Cleaning & ATEX

To prevent explosion risk, avoid dust clouds and the build-up of dust layers.

If dust particles or layers heat up they may ignite and burn. This in turn can ignite airborne dust clouds and cause an explosion.

Malfunctions/Service

	CAUTION!
	<p>Improper handling of the magnet device may lead to damages. Potential injuries!</p> <ul style="list-style-type: none"> Any repair to GOUDSMIT magnet devices may be performed by qualified personnel only. Be aware that permanent magnetic material attracts ferromagnetic material with great force when it gets in reach of the magnetic field. Consult GOUDSMIT Magnetic Systems B.V. for service.

Malfunctions

In case of malfunctions, consult the following table in order to determine the cause of the malfunction and its possible remedy. In case a specific malfunction can't be found in the table, consult **GOUDSMIT Magnetic Systems B.V.** for service.

Malfunction	Possible cause	Possible remedy
Cans or pots move or fall off the palletizing magnet.	Device is built in wrong (with asymmetric offer of the products only.)	Build in device correctly. (see chapter Commissioning procedures)
	Acceleration of the machine is too high.	Lower acceleration. (see chapter Palletizing prescriptions)
	Products are not being offered as mentioned in the offer.	Offer products as mentioned in the offer.
	Cover plate is damaged.	Replace cover plate. (see chapter Maintenance)
No signal of the sensor(s).	Sensor(s) not connected.	Connect sensors (see chapter Electrically connecting the palletizing magnet)
	Sensor(s) not adjusted well.	Adjust sensors again. (see chapter Adjusting the sensors)
	Sensor(s) defect.	Replace sensors.
Magnet plate does not move.	Compressed air not connected to the device.	Connect compressed air (see chapter Pneumatically connecting the palletizing magnet)
	Air hose came loose inside the installation. (a hissing sound will be heard)	Connect hose again.
Magnet plate does not move down all the way.	A loose part got stuck between the magnet plate and the cover plate.	Dismount cover plate and remove the loose part. Mount and lock the part again via service hatch. (see chapter Maintenance)

Customer service

Please have the following information available if you require service assistance:

- Identification plate (complete).
- Type and extent of the problem.
- Time the problem occurred and any accompanying circumstances.
- Assumed cause.

Spare parts

As a result of the robustness and quality of GOUDSMIT magnetic systems products the device possesses high operational reliability.

When however a specific component requires replacement, the correct component can be ordered by quoting the type number stated on the *identification plate* or on one of the drawing(s) added to this user manual in the added data sheet.

The spare parts are mostly wear parts, such as:
pneumatic cylinders, bearing blocks and cover plate.

Following mutual consultation, Goudsmit Magnetic Systems B.V. will arrange rapid and correct delivery.

Storage and Dismantling

Storage

If the device will not be used for a long period of time, we advise to store the device in a dry, safe place and to conserve fragile and/or sensitive parts.

Dismantling / scrapping

On scrapping and/or disposal of the device's parts separately, take into account the different nature and dangers of the components (magnets, iron, aluminium, electrical parts, insulating materials, etc.) and ensure safe disposal. Preferably entrust the task to a specialised company, and always observe the local regulations in regard to disposal of industrial waste.