







# **EVERYTHING IN MAGNETS!**

Sales of magnets and magnet applications. We develop, design and manufacture magnet systems.

# INDUSTRIAL PRODUCTS

We design and build high-performance magnetic products for various industrial needs and applications

# MAGNET SOLUTIONS

We always hold a wide range of quality assured magnets on stock - a solution for each requirement

# **CUSTOMER** APPLICATIONS

A magnetic solution to any problem. We design, produce and package custom solutions for 25+ different industries



#### Magnet -experience since 1964

With the highest technical competence we can offer you fast and unique customer solutions.



### More than 2000 products in stock

We have one of Europe's widest range of magnets, with more than 2000 articles in stock, so we can deliver to you "Just in time".



#### Large contact network

We have many suppliers and customers abroad, which gives us opportunities to be able to deliver the best solution for the best price.

Hyab's customer connections extends to all industries and customer categories. Everything from global customers in the car, truck and aircraft industry to niche specialists in the advertising industry. Magnets are used over an equally wide spectrum, from speaker elements and oil plugs in cars to accessories to pacemakers and X-ray devices in the medical field. We design, for example, lifting magnets, electric motors and generators, separators, solenoids etc, to meet varying demands from our customers. Hyab puts in great effort to do our best and satisfy all customers.

We also offer in-depth tech support that allows our customers to feel secure, both in their current purchases and in the knowledge of being able to get help when new needs arise. We help you as a customer with special services in design, calculations and measurements. Of course, we also help you with the choice of shape, materials and surface treatments, etc.



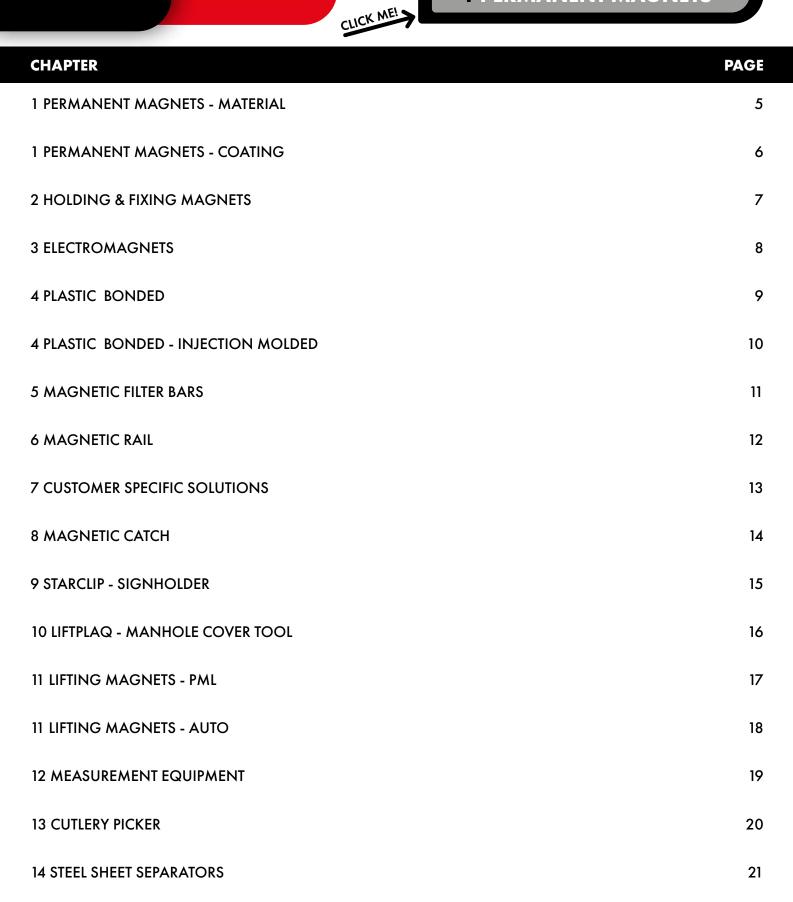
Hyab Magneter is ISO 9001:2015 & 14001:2015 certified and meets the demands of ISO/TS-16949:2002. Rohs, Reach and Code of Conduct documents will be given upon request. Suppliers are regularly checked and meets requirements for Quality, Environment and CoC.

## CONTENT



CLICK CHAPTER HEADER FOR DIRECT LINK TO WEBSITE

**1 PERMANENT MAGNETS** 



TIP

## **1 PERMANENT MAGNETS - MATERIAL**



**PERMANENT MAGNETS** are the core to any magnet application. The material choice will determine the end product and its limitations. Hyab has one of Europe's largest stock of permanent magnets. This results in short delivery times and competitive prices. We stock these in 4 different materials and many different shapes.

WEB DIRECT LINK ————	Strength	Lowest price	Damp resist.	Max temp
1	Neodymium	Ferrite	Ferrite	Alnico
2	Samarium	Neodymium	Alnico	Samarium
3	Alnico	Alnico	Samarium	Ferrite
4	Ferrite	Samarium	Neodymium	Neodymium



### NEODYMIUM

The strongest commercially available magnets, offering high magnetic strength in a small size. They are ideal for compact applications and maintain magnetism well. Brittle, prone to corrosion without coating, cannot handle as high temperatures as other materials.

#### FERRITE

 $\blacksquare$ 

Inexpensive, corrosion-resistant, and perform well at high temperatures, making them ideal for industrial and outdoor use. They are widely available and durable.



Lower magnetic strength and are bulkier compared to neodymium magnets, limiting their use in compact or high-performance applications.





#### SAMARIUM COBALT

Samarium Cobalt magnets are highly resistant to corrosion, oxidation, and demagnetization at high temperatures, with excellent strength-to-size ratios. They work well in extreme environments. More expensive and brittle than other magnets, and their magnetic strength is lower than neodymium magnets, limiting use in costsensitive applications.

#### ALNICO

Offer excellent temperature stability, corrosion resistance, and durability. They can withstand extreme temperatures without losing magnetism and are easy to machine into complex shapes.



Lower magnetic strength compared to neodymium and ferrite magnets, and their higher cost limits use in high-strength, cost-sensitive applications.



## **1 PERMANENT MAGNETS - COATING**

**NEODYMIUM MAGNETS** are made with a high part iron. Because of this, surface treatment is an important process to be able to protect the magnet against corrosion. The other materials has less iron - meaning they dont always need to be treated with surface protection.

Material	Salt spray	Thickness	Appearance	Properties
Nickel Ni-Cu-Ni	> 48 hr	10 - 30 µm	Silver shiny	<ul> <li>A standard surface treatment for neodymium magnets.</li> <li>Suitable for indoor use.</li> <li>Great performance/price ratio.</li> <li>The surface treatment is with a copper (Cu) layer for better adhesion.</li> </ul>
Zink Zn	> 24 hr	6 - 15 µm	Silver/blue Shiny	<ul> <li>A standard surface treatment, with a more matte finish than Nickel for easier adhesion to tape eg.</li> <li>Preferred if you need to avoid nickel (eg allergy).</li> <li>Suitable for indoor use.</li> <li>Great performance/price ratio.</li> </ul>
Epoxy Ni-Cu-Epoxy	> 96 hr	10 - 30 µm	Black shiny	<ul> <li>Perform better in humid environments.</li> <li>More expensive production cost than NiCuNi and Zn, especially in smaller orders.</li> <li>Can add extra Ni layer before Epoxy (Ni-Cu-Ni-Epoxy) for further protection.</li> </ul>
Gold Ni-Cu-Ni-Au	> 12 hr	10 - 15 µm	Gold shiny	<ul> <li>The gold plating is mostly for the look and does not directly have any practical function.</li> <li>The price of this treatment is higher in comparison to NiCuNi and Zn.</li> </ul>
Rilsan Thermoplastic	< 1 mm corrosion after 2000 hr		Black shiny	<ul> <li>The best surface treatment to protect against moisture. The default is black surface.</li> <li>Rilsan means more production steps, longer production time and a more expensive end product.</li> <li>The slighty thicker scratch/plastic surface gives the magnet a slighty worse dimension tolerance.</li> <li>The safest treatment to use in eg, food production and where medical requirements are set.</li> </ul>
Parylene	> 96 hr	3 - 10 µm	Transparent	<ul> <li>FDA-approved coating for use when the magnet should sit in the body.</li> <li>Good protection against moisture, water and salt water. The coating will slowly but surely corrode in salt water, so an undercoating may be needed.</li> <li>Relatively easy to get scratches/damage due to the thin coating, after that the magnet can corrode easily. Can be double treated with Parylene, but this increases the dimensions of the magnet.</li> </ul>
Rubber		0.5 - 1 mm	Black	<ul> <li>Toolcost for new dimensions &amp; restictions for very small magnets.</li> <li>Requires larger order quantities.</li> <li>Improved shear force.</li> <li>Shock, scratch and water resistant! This makes it ideal for outdoor use and tough conditions.</li> <li>Rubber adding distance resulting in lower strength compared to non rubbercoated magnet.</li> </ul>
Phosphated		1 - 3 µm	Silver gray	<ul> <li>Rare treatment.</li> <li>Good for lubrication/oily systems (motor/pump), where oil dissolves other surface treatments.</li> <li>The magnet must be kept in vacuum throughout the process from fabrication to assembly to be insulated against oxygen.</li> </ul>



Nickel



Rilsan





Rubber





Gold

#### **ADVANTAGES**

- The iron housing increases the strength.
- More durable than a single permanent magnet.
- Many mounting options.





WEB DIRECT



Our holding magnets are perfect for fixating and holding its counterpart in place. A permanent magnet surrounded by a iron housing increases the strength of the magnet immensely. The same parameters applies to holding magnets as they do for permanent magnets.

The housing fixates the magnetic field in one direction which increases the magnetic strength. This also increases the durability of the magnet since it shielded in the majority of planes. Since most magnet materials are brittle it is not possible to produce magnets with threads. Magnets with hole or countersunk are common but has increased risk of breaking if not careful when mounting. This is where the steel housing comes handy - it creates many posibilites with mounting of the magnet system.

### CHOOSE YOUR MATERIAL

	Strength	Lowest price	Damp resist.	Max temp
1	Neodymium	Ferrite	Rubber coated	Alnico
2	Samarium	Neodymium	Ferrite	Samarium
3	Rubber coated	Rubber coated	Alnico	Ferrite
4	Alnico	Alnico	Samarium	Neodymium
5	Ferrite	Samarium	Neodymium	Rubber coated

### **CHOOSE YOUR MOUNTING SOLUTION**



Whenever you want a male thread, female thread or a countersunk hole as mounting option we got you covered. With a wide range of close to 500 unique articles as standard stock we are positive you will find the holding magnet for your needs!





Hyab stocks a large variety of **ELECTROMAGNETS**. Our standard sortiment is 12-24V with 100% ED.



#### **ELECTRO HOLDING MAGNET**

Electro holding magnets provide reliable magnetic force for securely holding, lifting, or positioning ferrous objects. Ideal for automation, assembly lines, or security applications.

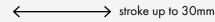
💋 up to 250mm in diameter

up to 502mm in length



## **SOLENOID (PUSH & PULL MAGNET)**

Solenoids provide precise push-and-pull motion for locking, actuating, and positioning in automation and machinery, ensuring reliable and efficient performance.









#### **ELECTROPERMANENT MAGNET**

Electropermanent magnets are opposite to regular electro holding magnets. They release when given power. Which is great for when it needs to be powered on for a long duration.

💋 up to 150mm in diameter

up to 450kg in strength

### **EXTREME ELECTROMAGNET**

Designed for short distance handling ferrous resides such as raw steel, scrap, cast iron, ferrous chips etc. Thanks to their dependedability and swiftness they are ideal for fixed and mobile lifting.

Ø up to 600mm in diameter



up to 5160kg in strength



## **4 PLASTIC BONDED**



### WHAT IS IT?

**PLASTIC BONDED MAGNETS** are flexible, lightweight, versatile magnets made by combining magnetic powders with plastic, allowing for complex shapes.

### WHAT IS IT GOOD FOR?

The materials adapt well to arched surfaces, can easily be cut and comes in laminated options for prints which makes it excellent for signs, decals for cars, etc.

### **MAGNETIC SHEET**



We have a wide range of MAGNETIC SHEETS on Roll or Cut piece. With or without Tape. Laminated or non Laminated for printable media.



#### **MAGNETIC STRIP & INVENTORY LABELING**



Our MAGNETIC STRIPS are on Roll or Cut piece. We have laminated Rolls aswell as Rolls and Cut pieces with tape.



#### WHAT IS IT?

**INJECTION MOLDED MAGNETS** composed of a mixture of Thermo Plat polymers and magnetic powder. This mixture can then form a syringe to the magnets with very fine tolerances. It makes it possible to express complex materials that require no post processing. By applying a magnetic field through the tools Anisotropic magnets are made.

Hyab produces products with customers dimensions in both Ferrite and Neodymium.

#### **ADVANTAGES**

• It is easy to manufacture magnets in complicated shapes with tight tolerances. Gear is an example and is used in stepmotors which are then translated into the speedometer and other instruments on the vehicle's dashboard.

• Their weigh is not as much as other conventional magnets.

- No post production. A finished magnet comes out of the tool, making it a cost-effective production.
- It is possible to injection mold magnetic and non-magnetic components using twocomponents-injection molding.



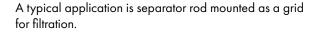


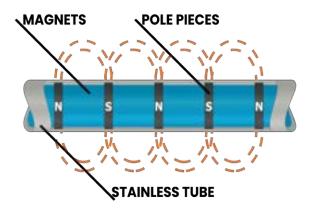




#### WHAT IS IT?

**MAGNETIC FILTER BARS** are for filtering magnetic chips and fine iron-containing particles/dust. The rods are very corrosion resistant, are fast and easy to clean and is therefore a good choice when handling food/groceries.





#### **HOW DO THEY WORK?**

Magnetic filter bars have magnets with the same polarity facing eachother, squeezed in a stainless steel tube, with steel discs inbetween them.

This design will increase the range of the magnetic field. It will not have the same strength on short distances but the goal is to reach as long as possible for optimal collection of unwanted debris.

In food processing, magnetic filter bars are essential for maintaining high safety and quality standards. They remove metal contaminants like iron filings, stainless steel particles, and other ferrous debris that might accidentally enter during production. These bars are strategically placed in equipment such as hoppers, chutes, or pipelines where food ingredients flow. By preventing metal contamination, magnetic bars protect consumers, comply with food safety regulations, and reduce equipment wear or damage.



Our neodymium rods are available in 6000, 8000 or 10000 Gauss. By default, we specify them for 10000 Gauss. They can be used up to temperatures of 80°C. However, it is possible to increase the maximum temperature by using more heat-resistant magnets. Contact us to customize your separator bar, or why not a complete filter system.

Also available with ferrite magnets. Then with a typical Flux Density of 1500 Gauss and a max temperature up to 150°C.



#### WHAT IS IT?

A **MAGNETIC RAIL** is a type of magnet system. Similar to a regular holding magnet but with more customizable length options. Great for holding longer fixtures with a single magnetic system. We use a rail with folded up edges to put magnets in.

The length, width & thickness of the rail is all up to the customer. Also holes and threads are fully customizable.

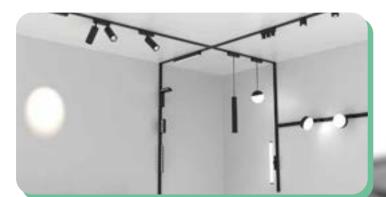
Most common is Ferrite magnets for these rails since they often are large. But if you have limited space or you need the strongest system you can get, we use supermagnets, or also known as Neodymium magnets.

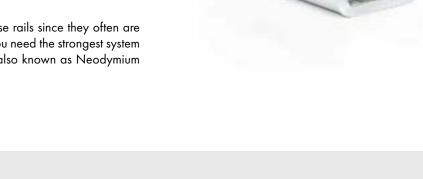
#### **HOW DO THEY WORK?**

As stated previously, these magnetic rails work similar to holding magnets. By putting magnets inside a iron housing, the magnetic field is forced into one direction which increases its strength greatly.

Magnetic rails are often used in areas where long profiles or large panels needs to be held fixed in one place. But at the same time have the availability to be modular and swapped without the need for tools.

With the most common option - Ferrite magnets - the rails can be used outdoors for many many years without the fear of corrosion or breakage.







## **7 CUSTOMER SPECIFIC SOLUTIONS**

#### YEARS OF EXPERIENCE

With decades of expertise in the magnet industry, Hyab has delivered customized solutions for all kinds of customers countless of times. From small-scale prototypes to large, complex systems. Our portfolio includes collaborations with startups developing innovative technologies and established global enterprises optimizing critical components.

We take pride in crafting magnets that meet unique requirements, ensuring precision, reliability, and performance. Whether designing specialized magnetic assemblies or scaling production to meet high-volume demands, our team has consistently exceeded customer expectations.

#### **NEW CUSTOMER PROJECTS** We see your application as a whole and design the best possible magnetic system for your needs. **EVERY STEP OF THE WAY** > > > > **PROJECT MEETING** DRAWING **MATERIAL PURCHASE** PROTOTYPE TESTING w of required specifications CAD / Constructio Quality-assured suppliers Adaptation Physical & magnetic < < < **SERIE PRODUCTION** WAREHOUSING QUALITY CHECK PACKAGING ISO9001 & ISO14001 Manufacturing Storage Acc. to requirements **IN EVERY INDUSTRI IMAGINABLE**

We deliver custom made magnet systems to more than 25 different industries. Here are a few examples.



**ELECTRIC MOTORS** 

## **8 MAGNETIC CATCH**

**MAGNETIC CATCHES** are simple and effective locking mechanisms used for cabinets, doors, and other enclosures. A typical magnetic catch consists of a magnet and a metal plate or a magnetic counterpart. The magnet is installed on one object, whereas the armature plate is installed on the other object. After installing both components, a magnetic force will hold the two objects together. You can then separate the joined objects by pulling them away from each other, thus breaking the magnetic force.



While there are other hardware solutions available to hold objects together, magnetic catches offer several benefits. They are easy to install. You just have to install the magnet on one object and the armature plate on the other object. Most magnetic catches feature holes for screws. You can drive screws into the magnet and armature plate to install them on the appropriate objects.

We have a wide range of magnetic catches in various strengths to suit different door sizes and materials. Magnetic catches are widely used in homes, offices, and industrial settings for their reliable and maintenance-free performance.

#### Here are a few examples.





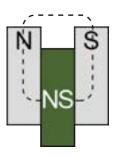




**3.5 KG FORCE** 

#### HORIZONTAL MOUNTING **4 KG FORCE**

#### A COMMON CONSTRUCTION



A magnet in the middle with two iron pieces that leads the magnetic field. This increases both strength and durability.

## **9** STARCLIP - SIGNHOLDER



**STARCLIP** is an great product that can be used in many areas. Some examples are; put up notes on the refrigerator, use a clamp to hold together material and of course to have as a name holder. StarClip is available with or without tape and comes in many different colors. You open StarClip by pressing the handles together.

VICTOR



Comes in two different models.

 $\cdot$  A linked clipper with tape on one side or tape on both sides.

 $\cdot$  A bracket with a separate steel plate. With or without tape. In two different sizes.

All models comes with Neodymium magnets. This makes them strong and ensures that they stay on!



## **10 MAGLIFT - MANHOLE COVER TOOL**

# **MAGLIFT** MICRO

A rod with a strong magnet system on the end. A strong, flexible tool for handling smaller covers and other lifting jobs. The magnet can lift up to 190 kg in optimal conditions.



STRENGTH: 190 KG\*
WEIGHT: 1 KG
LENGTH: 850 mm

# **MAGLIFT** MINI

A transformed and the surface of the

#### A tool designed to ergonomically handle and lift manhole covers and plugs as well as \*any surface. It is equipped with a push button for easy release and makes the handle stand straight on the metal surface. MAGLIFT Mini handles standard covers up to 600 mm.



# 📕 WEIGHT: 3 KG

## 🔐 LENGTH: 850 mm (adjustable)

# **MAGLIFT EXTREME**

Easily handles 600 mm standard manhole covers aswell as grid covers. Due to its strength it is an great alround tool for many lifting jobs. It is as ergonomic as it is easy to use. Easy to remove from the manhole plate with use of the push button.

# STRENGTH: 900 KG \* 👌 WEIGHT: 6 KG 📥

## LENGTH: 850 mm (adjustable) 🔐





\*Stated strength is tested on 10mm flat polished metal in optimal conditions. Manhole covers have uneven surfaces - always use margin.

# **MAGLIFT BEAST**

Use with a skewer as leverage. The MAGLIFT Beast makes it possible to lever the cover. A magnet system that is explosivly filled with supermagnets makes it possible to work on all manhole covers (skewer not included).



Hyab Magneter AB · info@hyab.se · +46 8 26 10 80 · www.hyal

Addo

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In our PML series we have lifting magnets that can handle weights from 100kg to 6000kg. These have a 2.5:1 safety factor rating.

All PML articles are on/off switchable systems that easily become non-magnetic by pressing the button and then dragging the lever to the off position.





## LIFTERS FOR FLAT SURFACE

Artno	Lift cap. flat surface [kg]	Lift capacity cylinder [kg]	Test-load [kg]	B [mm]	L [mm]	H [mm]	Max temp [°C]	Weight [kg]
PML100	100	50	250	62	98	72	< 80	3
PML300	300	150	750	93	160	95	< 80	10.5
PML600	600	300	1500	118	226	118	< 80	22
PML1000	1000	500	2500	135	260	140	< 80	35
PML2000	2000	1000	5000	234	378	212	< 80	66
PML3000	3000	1500	7500	286	458	261	< 80	86
PML6000	6000	3000	10500	296	720	266	< 80	220

### LIFTERS FOR ROD AND CYLINDER

Artno	Lift cap. flat surface [kg]	Lift capacity cylinder [kg]	Min Ø [mm]	Max Ø [mm]	Max L [mm]	B [mm]	L [mm]	H [mm]	Max temp [°C]
PML300A	300	150	12	300	1500	87	203	89	< 80
PML600A	600	300	20	400	2000	112	266	109	< 80



The AUTOMATIC LIFTING MAGNETS offers powerful and efficient lifting capacity of up to 2000 kg, with a user-friendly design and ergonomic features. It is perfect for quick and easy handling of heavy objects in industrial environments.

The magnet features automatic on and off functionality. When placed on a surface, it turns on (becomes magnetic), and once you're done with the lift and has put down the object, it turns off (becomes demagnetized). This makes lifting jobs simple and safe without the need to physically interact with the tool.

Its compact size and long operating time make it a reliable tool for all types of lifting tasks on ferromagnetic metal surfaces.





#### · Automatic function: Turns on and off automatically upon contact with the lifting surface for quick and safe operation.

- · Ergonomic and user-friendly: Designed to ease lifting and reduce strain on the user.
- · Quick lifting mode switch: Lifting mode changes quickly, allowing the user to work efficiently.
- · Compact design: Small size enables easy handling in tight spaces.
- · Lifting capacity: Our models range from 500 kg to 2000 kg strength on ferromagnetic steel surfaces (S235 S  $\ge$  20 to 50mm).
- Battery: Standard removable battery (18V)

The recommended battery is the Makita BL1850B-2 18V LXT Lithium-Ion 5.0 to 6.0Ah NOTE: BATTERY NOT INCLUDED.

- · Lifting strap included: A lifting strap is included to further simplify lifting.
- · Warranty: 12-month warranty included for added peace of mind.



### **PRODUCT LINE**

Weight

18

		Lift cap. flat surface [kg]	Test-load [kg]	ØD [mm]	H [mm]	Weigh [kg]
Batt		550	1050	164	308	17.5
here and here	re )	1000	2100	220	330	30.2
		2000	4100	300 x 340	380	69
	, •	Hyak	o Magneter AB · info	o@hyab.se • +46 8 2	6 10 80 · www	w.hyab.com

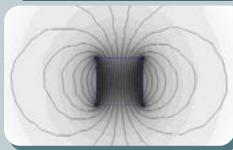
## **12 MEASUREMENT EQUIPMENT**

We supply a handful of **MEASUREMENT EQUIPMENT** depending of what measurement needs to be taken.

From a simple pole check (NORTH / SOUTH) to a magnetic field strength measurement. We have the tool for you.

We also do customer controll. If you have a material that needs to be checked and maybe even de- or remagnetized we will do that for you with our expert equipment inhouse.

MAGNETIC FIELD FROM A NEODYMIUM CYLINDER





#### GAUSS- / TESLAMETER **MODEL: FH52** For magnetic field measuring



A FEW PRODUCT EXAMPLES

GAUSS- / TESLAMETER **MODEL: TM-801** For magnetic field measuring.



CALIBRATIONMAGNET **MODEL: 91-0500** For calibration or check of gauss- /teslameter.



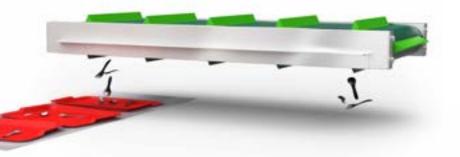
## **13 CUTLERY PICKER**

Simplify cutlery collection with our inhouse designed, constructed and built Cutlery Picker. The Cutlery Picker is trusted by some of the world's busiest kitchens. This machine saves time, minimizes manual effort and ensures seamless operations.

WEB DIRECT LINK

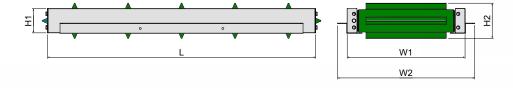
The magnetic cutlery picker lifts knives, forks and spoons as they pass underneath it and transports them to your washing basket or box. The system has been carefully designed and optimized to fit into most industrial kitchens.

The picking magnet, constructed via a magnet system, will lift cutlery up to 100mm\* from the tray. We have several different models that can be mounted either in parallel or at an angle to the conveyor belt.



The models include a unique demagnetizer solution, which results in all cutleries being demagnetized at the end of the transport belt. This ensures that the cutlery will not stick together or cause any damage to sorting machines.

We do offer customized versions of our cutlery pickers to fit your exact needs.



### **OUR STANDARD MODELS**

#### **MODEL 1100-6**

Our most popular model, perfect for standard kitchen operations. Compact, versatile, and highly effective.

L: 1120mm	W1: 490mm	W2: 565mm	H1: 100mm	H2: 145mm	WEIGHT: 70kg			
MODEL 15 Kitchens requirir		or cutlery transport	t. Its flat-picking de	sign ensures precis	e and efficient handling.	/		
L: 1520mm	W1: 490mm	W2: 565mm	H1: 100mm	H2: 145mm	WEIGHT: 90kg	/		
<b>MODEL 1500-7</b> For applications needing unloading at a higher level. This model is mounted at a 30–60° angle for easier, elevated unloading.								
L: 1520mm	W1: 490mm	W2: 565mm	H1: 100mm	H2: 145mm	WEIGHT: 100kg			

## **14 STEEL SHEET SEPARATORS**



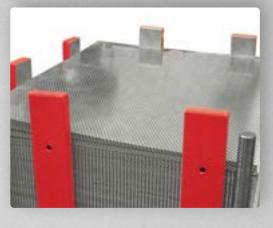
One of the tasks of the steel sheet separator is to separate plates, so that you can easily avoid tangles and easily access plates, regardless of whether they are oily, sticky, large or small. The separator ensures a smooth production process by making sure you pick up one sheet at a time.



#### **MULTIPLE SEPARATORS IN A SYSTEM**

If you have large and uneven plates that needs to be separated. A system with several Steel Sheet Separators can be used. This way you have many contact points and the material is more evenly separated for pickup.





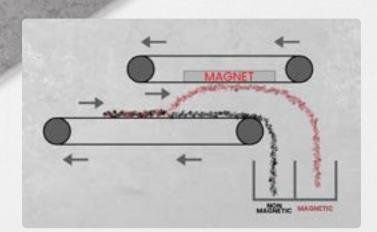
#### **USED AS CONVEYOR SEPARATORS**

The separators can also be used as a conveyorseparator and the use of separation of metals in sewage and in chemical lab etc. We often adapt these "separators" for machines with built in demagnetizing.

Hyab has made huge conveyorseparators for de-mining and locating metals in concrete foundations, etc.









## Hyab Magneter AB

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