

# PERMANENT MAGNETIC LIFTER

Magnetic lifter is a quick, safe and easy way to lift ferrous materials and work pieces. These are two Pole Permanent Magnetic Lifters. The two poles are at the bottom of the magnetic lifter. These magnetic lifters use high grade Magnets for producing strong magnetic flux path through the two poles.

The magnetic lifter is placed on the MS flat/block that is to be lifted. The turn of the handle in its ON position with MS flat/block/cylinders (to be lifted) at the bottom ensures completion of magnetic flux path through the MS body. The MS body gets attached to the lifter. The turn of the handle in its OFF position detaches the MS body from the magnetic lifter.



## THE PARTS OF MAGNETIC LIFTER

Permanent magnetic lifter is made up of two parts, such as permanent sucker and discharge device. The permanent sucker is made up of permanent magnet and magnet-conductive plate. The magnetic force wire generated by the permanent magnet will go through the magnet-conductive plate, attracted materials and form a closed circuit thus to achieve the purpose of lifting the steel materials. It is suitable for being used to lift and transport magnet-conductive billets, plates and rounds in industries of mechanical engineering, metallurgy, shipyard, car factory, dock and etc.

## THE ADVANTAGE OF MAGNETIC LIFTER

- Compact and lightweight.
- Suitable for Flat and round material.
- Very High Lift to its weight ratio.
- Quick & Easy Operation with ON/OFF System.
- Neodymium Magnetic Powered System.
- Improves Plant Safety No direct contact with men.
- Large and Heavy work piece can be moved/handled safely easily by only one operator.

## THE APPLICATION OF MAGNETIC LIFTER

- For handling of steel plates, blocks, rounds, press molds and loading/unloading on machines
- Commonly used near flame cutting.
- Very handy during fabrication.
- Can handle finished components without leaving behind any scratch marks, unlike binding and slinging.
- Can be used with spreader beam hanging multiple magnets for long plates/pipes /bars.
- Can be used with mobile cranes.

# LIFTING MAGNET OPERATING INSTRUCTION

**NOTE:** Please read the Operating Instructions carefully before using this Product. If any doubt remains, please contact company for further details.

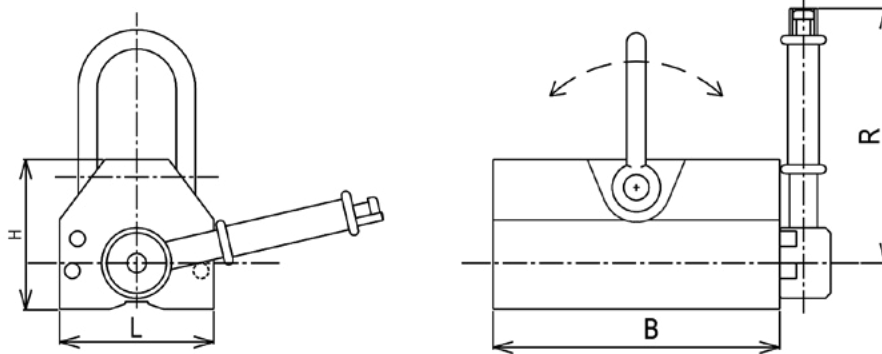
## 1. APPLICATION AND FEATURES

Permanent magnet lifters have the features of strong attraction, smaller volume, lighter weight, powerful lifting effort, easy and safe to operate, long-period effort and without power supply. They can hoist moving iron block, cylindrical and other magnetic material. They are easy for operation, safe in handling, lightly and ingeniously structured. Hence they are widely used as hoist devices in factories, docks warehouses and transportation industries. By using them, you can improve your working conditions and increase your working efficiency.

## 2. CONSTRUCTION AND SPECIFICATION

**2.1 CONSTRUCTION:** Permanent Magnetic Lifter has strong magnetic path produced by NdFeB magnetic materials. On and off the magnetic path is controlled by turning the manual nozzle. These are shackles on the top of Magnetic Lifting Hoist for lifting, a veto slot on the holding face for holding cylindrical component firmly.

## 2.2 SPECIFICATIONS



Item #	Item Name	Rated lifting strength (lbs)	Cylindrical lifting strength (lbs)	L	B	H	R	Operation (C) temperature (C)	Dead Weight	Max. pull-off strength (lbs)
PML100	Portable Neo Lift Magnets	220 lb	110 lb	2.44 Inch	3.62 Inch	2.64 Inch	4.96 Inch	<80 Degrees	6.6 lb	770 lb
PML200	Portable Neo Lift Magnets	440 lb	220 lb	3.18 Inch	5.70 Inch	3.62 Inch	8.89 Inch	<80 Degrees	17.6 lb	1540 lb
PML300	Portable Neo Lift Magnets	660 lb	330 lb	3.62 Inch	6.37 Inch	3.58 Inch	6.10 Inch	<80 Degrees	21 lb	2300 lb
PML500	Portable Neo Lift Magnets	1100 lb	550 lb	3.97 Inch	8.15 Inch	4.72 Inch	8.66 Inch	<80 Degrees	34 lb	3850 lb
PML600	Portable Neo Lift Magnets	1320 lb	660 lb	4.80 Inch	9.13 Inch	4.6 Inch	7.71 Inch	<80 Degrees	50 lb	4620 lb
PML1000	Portable Neo Lift Magnets	2200 lb	1100 lb	6.92 Inch	10.15 Inch	6.41 Inch	11.22 Inch	<80 Degrees	110 lb	7700 lb
PML2000	Portable Neo Lift Magnets	4400 lb	2200 lb	9.21 Inch	14.88 Inch	8.34 Inch	16.77 Inch	<80 Degrees	275 lb	15430 lb
PML3000	Portable Neo Lift Magnets	6600 lb	3300 lb	11.25 Inch	18.03 Inch	10.27 Inch	20.51 Inch	<80 Degrees	484 lb	23140 lb
PML6000	Portable Neo Lift Magnets	13200 lb	6600 lb	16.92 Inch	23.62 Inch	13.97 Inch	7.08 Inch	<80 Degrees	924 lb	46290 lb

### 3. OPERATIONS

**3.1 DURING OPERATION:** You should clear away the components surface such as rust and burr. The center line of lifter had better overlap with the centerline of component. Then place the Magnetic Lifting Hoist on the face of component, pulling up the handle, then turn the handle from "OFF" to "ON" until "holding". Make sure that the security key on the handle is automatically locked, and then start to hoist.

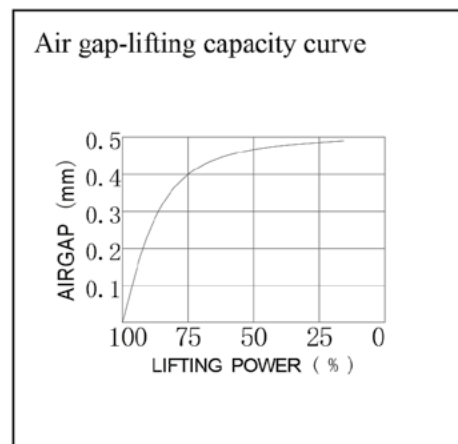
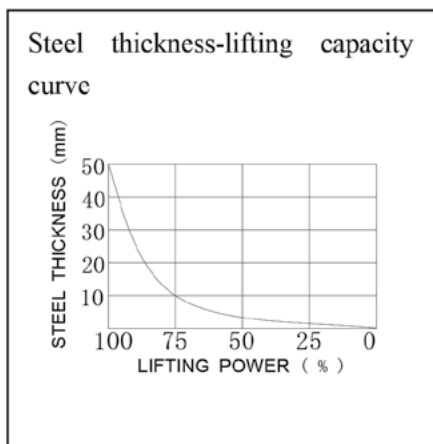
**3.2 LIFTING AND HANDING COMPONENTS:** During lifting and handing components, overloading is forbidden, Nobody is allowed to pass through under the component held by Magnetic Lifting. Components temperature and ambient temperature shall be between  $+80^{\circ}\text{C}$  to  $-40^{\circ}\text{C}$ . No strong vibration and impact.

**3.3 LIFTING AND HANDING CYLINDRICAL COMPONENTS:** When lifting and handing cylindrical components, keeping the cylindrical surface contacting the V Slot of lifter on two lines.

**3.4 LIFTING AND HANDING OPERATION IS FINISHED:** When lifting and handing operation is finished, pulling up the handle, then turn the handle "ON" to "OFF" until "Release". The lifter is now in the neutral condition, it can be taken away from the component.

### 4. MAIN FACTORS WHICH INFLUENCE THE LIFTING CAPACITY OF PERMANENT MAGNETIC LIFTER.

**4.1 INFLUENCED BY THICKNESS AND SURFACE QUALITY OF THE COMPONENT:** Before operation, it is necessary to find out the percentage of the steel thickness –lifting capacity according to the thickness of the component and capacity curve (see the following page). If its surface roughness  $R_a$  is less than  $6.3\mu\text{m}$ , the lifter surface gap will not exist, the lifting capacity will be 100%. If the surface roughness  $R_a$  is above  $6.3\mu\text{m}$  or even worse, the lifter surface gap should be estimated. Find out the percentage that lifting capacity of the lifter may reach from the air gap–lifting capacity curve shown in the performance chart (see the following page). Combine these two factors and calculating the lifting capacity that the lifter may reach. The curves are on the two sides of lifter too.



### 4.2 INFLUENCED BY THE COMPOSITION OF STEEL COMPONENT.

After measurement, if low-carbon steel component is regarded as a reference and the coefficient of lifting capacity is fixed: the coefficient for middling-carbon steel is 0.95; the coefficient for high-carbon steel is 0.90; the coefficient for low-alloy steel is 0.75, and the coefficient for cast iron is 0.50.

## 5. MAINTENANCE AND SAFETY MEASURES

**5.1 WHILE CARRYING AND USING PERMANENT MAGNET:** Lifter beware of the bumping and roughing of surface, so as not to influence its property and working life. After using, the lifter had better be protected by oil. What's more, do not place the magnet lifter directly onto a grounded floor. Use a non-conductive spacer.

**5.2 PLEASE CHECK THE QUALITY OF THE HANDLE BUTTON FREQUENTLY:** Make sure that the security key can be moved flexibly and the security pin can be locked firmly.

**5.3 TEST CAPABILITY AND SAFETY COMPONENTS EVERY YEAR:** Must take a test for the capability every year and check the safety of all of the components in order to ensure its use capability. Maintenance must be strictly according to the instructions by the professional authorized technical personnel.

**5.4** Do not weld in close proximity to the magnet lifters, in order to protect its property.

**5.5** Do not turn the handle, when magnet lifter is not in contact with ferromagnetic material of component.

**5.6** Do not hoist a load weighing more than the lifer's rated holding capacity.

**5.7** Forbid anyone to stand below the magnetic lifter.



**Happy  
Lifting!!!**