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OPERATING INSTRUCTIONS



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

1.APPLICATION AND FEATURES

In loading and unloading, Permanent Magnetic Lifters (Model PML) can hoist iron blocks, cylinder and others onto magnetic materials for linkage or connection. They are convenient for operation, safe in handling, lightly and ingeniously structured, hence they have been widely used as hoisting devices in factories, docks warehouses and transportation industries. With using them, you can improve your working conditions and increase your working efficiency.

2.STRUCTURE AND SPECIFICATION

2.1Structure: Permanent Magnetic Lifters (Model PML) have strong magnetic path supplied by NdFeB magnetic materials. On and off the magnetic path is controlled by turning the handle. There are shackles on the top of Permanent Magnetic Lifters for lifting, a V-shaped slot on the bottom for holding cylindrical component firmly.

2.2 Specifications Table 1

Model	L	w	h	I	Operation temperature	Dead Weight	
						(Kg)	
PML-100	125	166	120	145	-40℃ ~ +80℃	3	
PML-300	200	235	165	195	-40℃ ~ +80℃	10	
PML-600	278	265	220	220	-40℃ ~ +80℃	23	
PML-1000	330	375	300	315	-40℃ ~ +80℃	55	
PML-2000	450	495	390	460	-40℃ ~ +80℃	125	
PML-3000	525	765	475	735	-40℃ ~ +80℃	218	
PML-6000	695	995	482	830	-40℃ ~ +80℃	430	

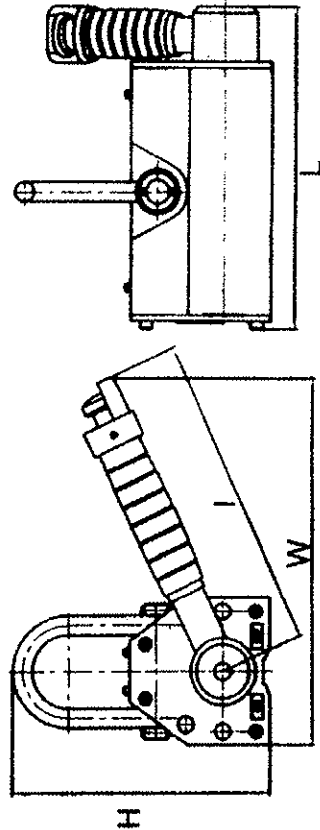




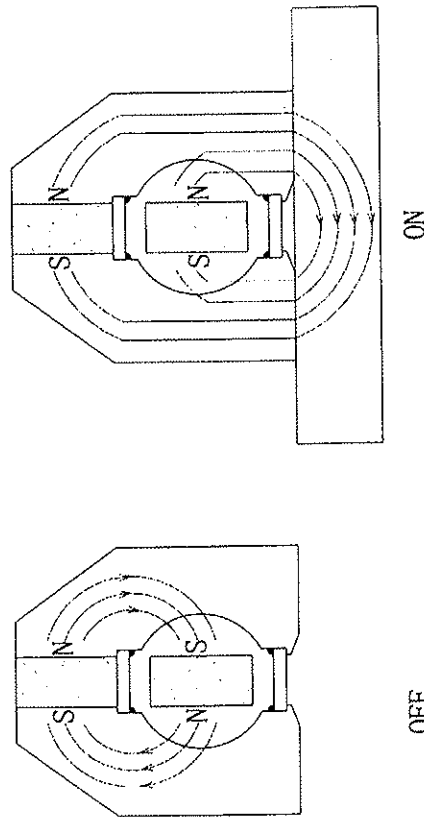
Table 2

Model	Flat		Cylinder	
	Rated lifting strength (Kgf)	Safe factor	*Minimum diameter (mm)	*Minimum diameter (mm)
PML-100	100	>3	40	φ 80
PML-300	300	>3	40	φ 100
PML-600	600	>3	40	φ 100
PML-1000	1000	>3	50	φ 150
PML-2000	2000	>3	60	φ 200
PML-3000	3000	>3	80	φ 250
PML-6000	6000	>3	100	

Remarks:

*Minimum thickness and *Minimum diameter mean when the minimum thickness and Minimum diameter reach these listed, the pull force could reaches the Rated lifting strength (Safe factor>3).

2.3 Operating principle graph



3. OPERATION

3.1 During operation, you should clear away the components surface first, such as the rust and the burr. The centre line of Permanent Magnetic Lifter should overlap with the center line of the component. Then place the Permanent Magnetic Lifter on the flat surface of component, 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 During lifting and handing components, overloading is forbidden, and nobody is allowed to pass through under the component held by Permanent Magnetic Lifter. Components temperature and ambient temperature shall be between -40° and +80°C.No strong vibration and impact.

3.3 When lifting and handling cylindrical components, keep the cylindrical surface contacts the V-shaped Slot of Permanent Magnetic Lifter on two lines, the actual lifting strength will generally be 40-50% of the rated lifting strength.

3.4 When lifting and handing operation is finished, press down the button to disengage the security key from the security pin, and then turn the handle from "ON" to "OFF" until "Release". The Permanent Magnetic Lifter is now in the neutral condition, and it can be taken away from the component.

4. Attention Points

4.1 Avoid operating in the high temperature, or high humidity, or acid, or alkaline environment, otherwise Permanent Magnetic Lifter may be corroded.

4.2 Operators must be well trained first, since wrong act may cause accidents.

4.3 During operation, transportation and storage, bumping should be avoided, or may affect the lifting strength of Permanent Magnetic Lifter and shorten the life time of Permanent Magnetic Lifter.

4.4 During operation, transportation and storage, Permanent Magnetic Lifter should be kept away from radioactive materials, or may affect the lifting strength.

4.5 Permanent Magnetic Lifter only can lift one component each time.

5. Main factors which influence the lifting strength of permanent Magnetic Lifter.

5.1 Influenced by thickness and surface quality of the component.

Before operation, you should find out the percentage of the steel thickness to lifting strength, according to the component thickness and lifting strength curve (on the following page).If its surface roughness Ra is less than 6.3um, the Permanent Magnetic Lifter surface gap will not exist, and the lifting strength will be 100%.If the surface roughness Ra is above 6.3um or even worse, the Permanent Magnetic Lifter surface gap should be calculated. Find out the percentage that lifting strength of the lifter may reach from the air gap and lifting strength curve shown in the performance chart. Combine these two factors and calculate the lifting strength that the Permanent Magnetic Lifter may reach. The curves are on the two sides of Permanent Magnetic Lifter.

5.2 Influenced by the composition of steel component.

After measurement, if low carbon steel component is regarded as a reference and the coefficient of lifting strength is fixed: the coefficient for medium 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.