

Reference table for load characteristics of permanent magnet jacks(1)

model	Rated load (KG)	Lifting steel plate thickness(mm)	Maximum size of steel plate(mm)
PML-100	100	15-30	1000
PML-300	300	20-40	1300
PML-400	400	20-40	1500
PML-600	600	25-50	2000
PML-1000	1000	40-80	2500
PML-1500	1500	45-90	2500
PML-2000	2000	55-110	3000
PML-3000	3000	60-120	3000
PML-5000	5000	80-160	3500

According to your needs, choosing the most suitable permanent magnet jack model will bring you great convenience. If the model is not selected properly, sometimes you will feel that the wrench is heavy (such as lifting a thin steel plate with a large model jack), or sometimes you will not be able to lift the desired weight. (For example, the thickness of the steel plate is not within the lifting range, and the magnetism cannot be fully released.)

user's manual

table of contents

1. Main uses and characteristics
2. The main structure and parameters
3. How to use
4. Maintenance and safety instructions

1. Main uses and characteristics

The permanent magnet jacks of the PML model series are mainly used to hold plate-shaped or cylindrical iron material workpieces during lifting. It has the characteristics of light structure, convenient operation, strong holding force, safety and reliability, etc., and is conducive to improving labor efficiency. Therefore, it has been widely used as a lifting tool in factories, docks, warehouses and transportation industries.

2. Main structure and parameters

PML series permanent magnet jacks use high-performance permanent magnetic material of neodymium iron boron, which produces a strong holding force in the magnetic circuit. With the help of the handle, the jack mandrel can be put into operation or closed without external power supply. When the jack is in working state, the holding surface at the bottom of the jack forms a pair of longitudinal magnetic poles, which firmly holds the workpiece of iron material. The holding surface is also made with a V-shaped groove, so it can hold both plate-shaped workpieces and cylindrical workpieces.

The main technical parameters

Model	Rated lifting Capacity(kg)	Max breakaway force(kg)	Dimensions(mm)			N.W (kg)
			length	width	height	
PML-100	100	350	110	63	68	4
PML-300	300	1050	154	92	91	9
PML-400	400	1400	235	92	91	13
PML-600	600	2100	270	112	118	22
PML-1000	1000	3500	335	152	164	40
PML-1500	1500	4500	380	152	164	50
PML-2000	2000	6000	460	174	164	80
PML-3000	3000	9000	540	213	212	135
PML-5000	5000	15000	665	255	262	260

If the size data is changed in the future without notice

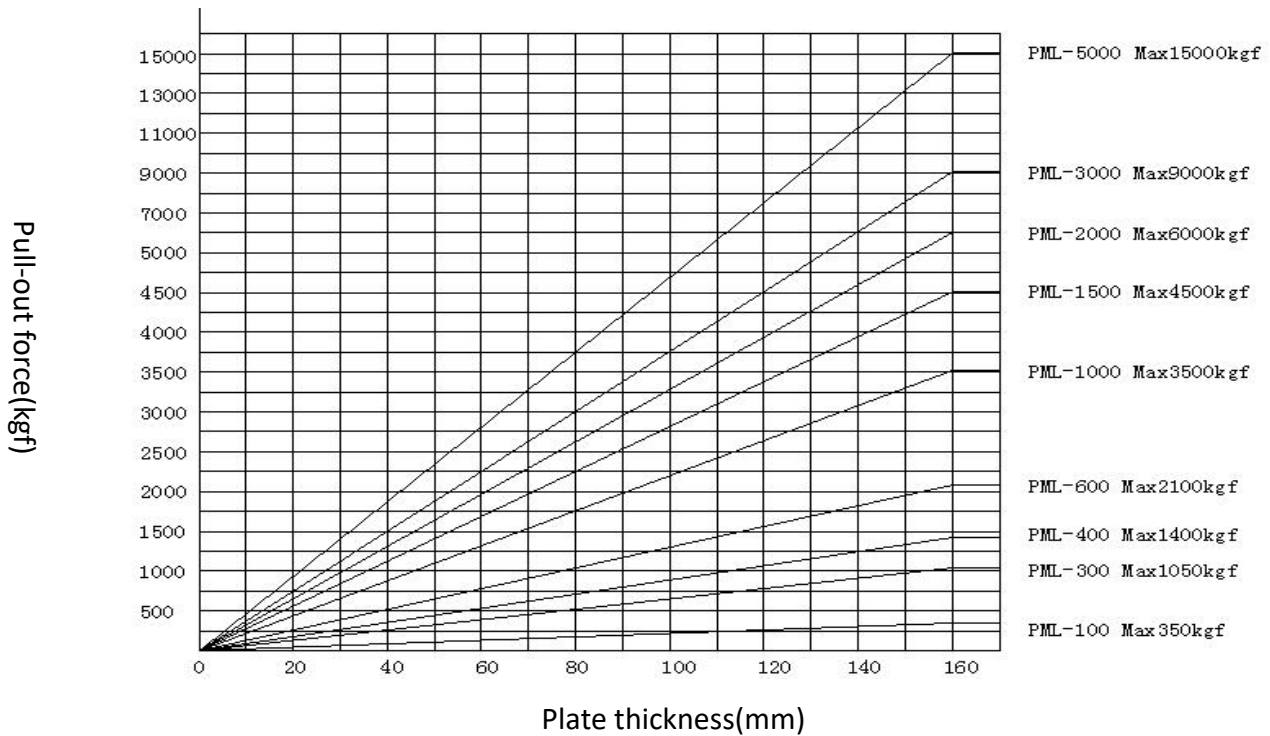
3. Instructions

(1) The permanent magnet jack must be used within the rated lifting range, and overload is strictly prohibited to prevent accidents.

(2) The thickness and surface quality of the workpiece to be lifted will affect the lifting capacity of the permanent magnet jack, so you should refer to the performance curve chart before use, and then determine the actual lifting capacity of the jack.

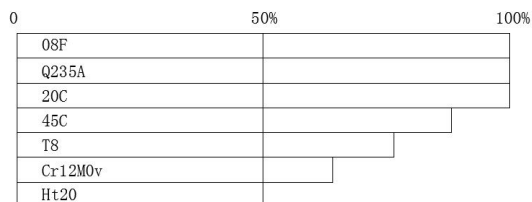
Illustration one

Relationship between plate thickness and pull-out force



(3) The material of the workpiece also affects the lifting capacity of the jack. For low carbon steel workpieces, the lifting can be taken as 100%, while for medium carbon steel workpieces it is 95%, and for high carbon steel workpieces it is 90%. The alloy steel workpiece is 75%, and the cast iron workpiece is 50%

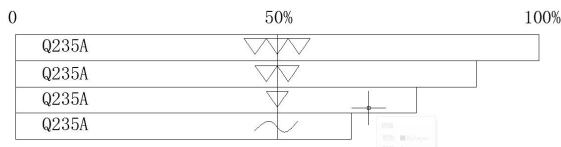
Schematic diagram two



The relationship between material and magnetic force

(4) The effect of the surface roughness of the workpiece on the lifting capacity, see diagram three

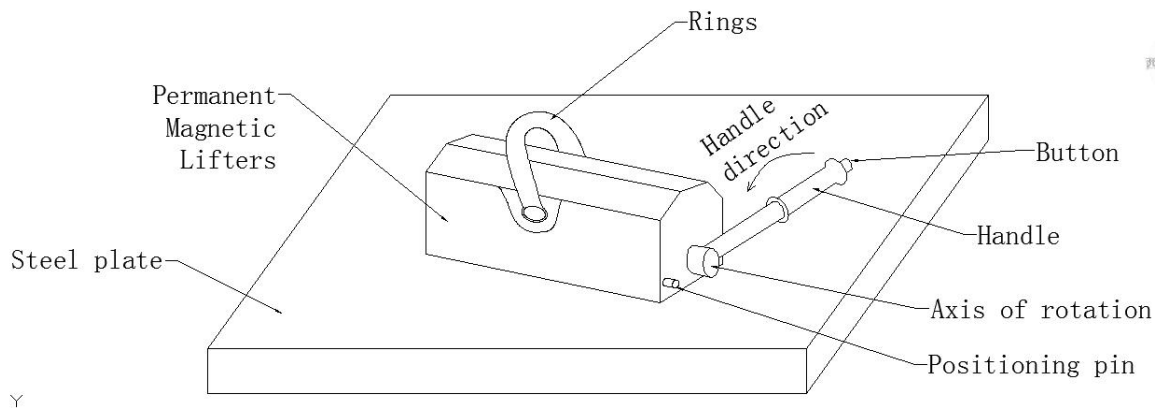
Illustration three



Relationship between surface roughness and magnetic attraction

(5) Installation method

When installing the rotating handle, the permanent Magnetic jack should be placed on the Steel plate, so that under the condition of magnetic flux, the handle will turn easily and freely, otherwise, it will be difficult to turn the handle even with a large force. Please refer to the following diagram: Do not install the handle in the wrong direction. If it is installed in the Wrong direction, there will be no suction. Once the wrong direction is found, you can use a small iron rod to turn the shaft 180 to restore the normal position, and then reinstall the handle



(6) When lifting the work piece, the permanent magnet jack should be placed at the center of gravity of the work piece to ensure that the work piece is balanced after being lifted, and then the handle is moved from the release position (OFF) to the holding position (ON), Check whether the sliding key of the handle is locked by the positioning pin, and then lift it after confirming that the handle is locked. The vehicle should walk smoothly to avoid excessive vibration, which may cause the work piece to be dropped and cause an accident.

(7) When lifting a cylindrical work piece, the v-shaped groove at the bottom of the permanent magnet lifter should be in contact with the work piece, but the lifting capacity is generally 30% 50% of the rated lifting capacity (diameter and lifting capacity Weight reduction).

(8) After lifting the work piece, the button on the top of the handle should be lowered to disengage the sliding key of the handle from the positioning lock, and then the handle should be reset to release the position, so that the jack is in the closed state and finally the jack is removed

(9) Ambient conditions for use of permanent magnet jacks

A. The ambient temperature is not greater than 80C Demagnetization will occur quickly when the temperature exceeds 80C. The higher the temperature, the faster the demagnetization speed

B No severe vibration and impact

C No corrosive metal etchants in the surrounding medium

4. Maintenance and safety instructions

(1) In the process of using the permanent magnet jack, it is necessary to prevent knocking and injury, so as not to affect the performance.

(2) The bottom surface of the permanent magnet jack cannot contact the steel and cannot move the handle.

(3) During hoisting, no one is allowed to stand or pass under the workpiece held by the permanent magnet jack.

(4) The suction and holding surface of the permanent magnet Jack should be kept clean and flat at all times. If it is oily, it should be wiped clean

(5) The quality of the sliding buttons and positioning pins on the top of the handle should be checked frequently to ensure reliable locking and safe use

(6) After lifting the workpiece, the crane should ensure balanced walking to avoid excessive shaking the jack is hit, and the handle is damaged. In particular, care should be taken not to crack, break, or cause the shaft to continue before lifting Normal use. If the jack head is found to have been cracked, broken, or damaged internally, making it unusable, you should contact the factory for repair in time, and never repair it yourself.

(7) The permanent magnet jack must be calibrated every two years from the date of use to ensure safety

(8) The operation of permanent magnet jacks shall also strictly comply with the national regulations for safe operation of jacks.