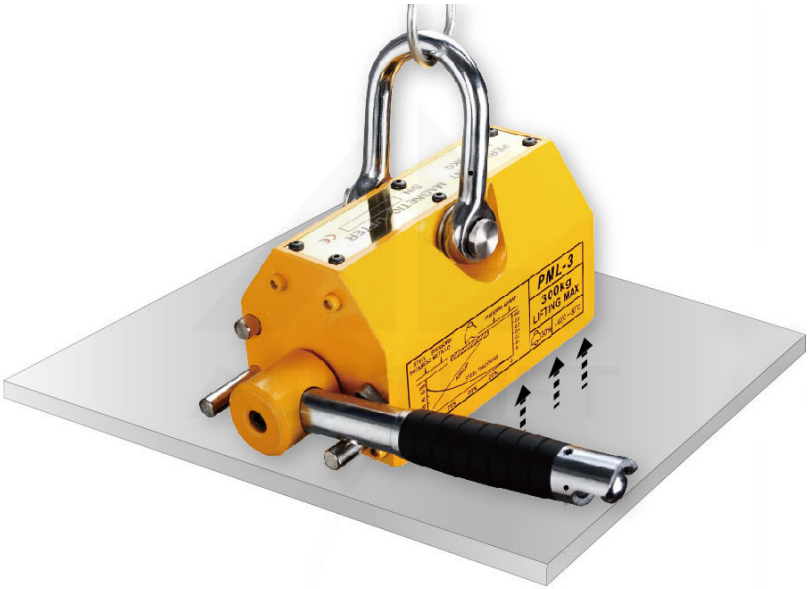
AUSTLIFT®

Lifting Your Business to A Higher Level

# USER MANUAL

## PERMANENT MAGNETIC LIFTER PML-1

144101, 144103, 144106, 144110, 144111, 144115, 1441200, 1441300, 1441500, 1441600




1300 100 120
www.austlift.com.au
AUSTRALIAN LIFTING CENTRE PTY LTD

ALC UIM PML-1 144xxx_19

**WARNING**
**New operator must be trained prior to use!**

## Permanent Magnetic Lifter PML-1

Austlift permanent magnetic lifter have a wide variety of uses for lifting and shifting steel. This versatile lifting device has the advantage of moving material without damaging the steel surface.

- Capacities available from 100kg to 6000kg.
- No power source required with less than 1% residual magnetism.
- Simple to operate with safety button design.
- Comes with its own test certificate.

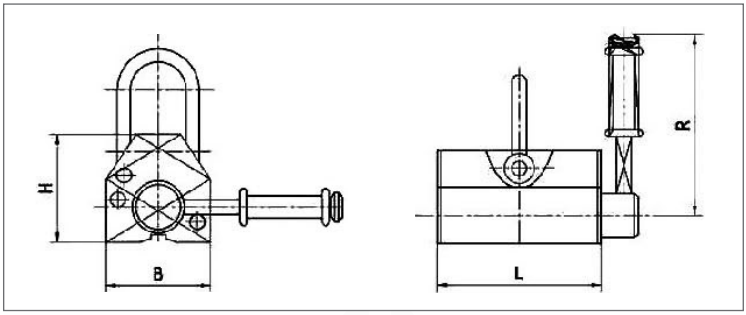
AS/NZS 4991 | Certified | MBS x3 WLL | RLS From 100-6000kg

## Application and Feature

Model PML-1 permanent magnetic lifter is mainly used to fasten or hold iron workpiece during lifting or handling operation. It can hold moving iron plate, cylindrical steel workpiece and other magnetizer. Easy and safe for operation, convenient for carrying, durable and firm for structure, that they are widely used as hoist devices in factories, docks, warehouses and transportation industries. By using them, you can improve the working environment and enhance the efficiency greatly.

# Construction and specification

**Construction:** Model PML-1 permanent magnetic lifter has strong magnetic circuit produced by Neodymium magnet materials. ON/OFF the magnetic circuit is controlled by turning the handle. There is locking key in the handle to offer safety control and Vee slot on the bottom surface for cylindrical workpiece's holding.




| RATED CAPACITY (kgf) | CODE | VERTICAL / CYLINDRICAL CAPACITY (Kgf) | MAX. PULL-OFF STRENGTH (kgf) | DIMENSIONS (mm) | | | | OPERATION TEMP. (°C) | N.W (kg) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | L | B | H | R | | |
| 100 | 144101 | 30 | 300 | 92 | 64 | 70 | 142 | <80˚C | 3 |
| 300 | 144103 | 100 | 900 | 165 | 88 | 96 | 176 | <80˚C | 10 |
| 600 | 144106 | 200 | 1800 | 216 | 118 | 120 | 219 | <80˚C | 20 |
| 1000 | 144110 | 300 | 3000 | 264 | 148 | 140 | 266 | <80˚C | 37 |
| 1500 | 144115 | 500 | 4500 | 308 | 172 | 168 | 285 | <80˚C | 50 |
| 2000 | 144200 | 600 | 6000 | 397 | 172 | 168 | 380 | <80˚C | 70 |
| 3000 | 144300 | - | 9000 | 443 | 226 | 217 | 512 | <80˚C | 100 |
| 5000 | 144500 | - | 15000 | 582 | 290 | 265 | 627 | <80˚C | 299 |
| 6000 | 144600 | - | 18000 | 713 | 290 | 265 | 707 | <80˚C | 320 |

* 1. Specifications shall be subject to any changes without additional notices;

* 2. For model of 3000KG and above, we suggest using them only to lift iron plate rather than the circular iron material to avoid the risk. When using it for circular shape, it will be difficult to turn the handle to working status and when release it the rebound strength of handle will be big that may hurt the operator.

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# How to use Permanent Magnetic Lifter

Before operation, you should clean the surface of the workpiece and the bottom of the lifter such as rust and burr. Place the lifter on surface of the workpiece and make the centerline of the lifter and the workpiece overlaped. Then turn the handle from "OFF" to "ON" until the inner slide key of handle pass the lifter's stop pin. Make sure the handle's inner slide key is automatically locked by the stop pin. Only after that, the operator can start to hoist.

1. During lifting and handling operation, overloading is prohibited. It is also forbidden to pass by or stand under the lifted workpiece holded by magnetic lifter. The temperature of workpiece and surrounding should be between -40˚C to 80˚C. It's unsafe with heavy vibration or any impact in the course of lifting.

2. When we lift cylindrical workpiece, keep the workpiece contacting to the lifter's Vee slot lines. The capacity for cylindrical iron is generally 30% of the rated capacity for plate.

3. After lifting or handling operation is finished, press down the button of the handle to disengage the slide key from the stop pin, and accordingly turn the handle from "ON" to "OFF" until it is released. After that, the lifter is in neutral condition that can be taken away from the workpiece.

# Care in use

## Affected by thickness and surface of the workpiece.

Before operation, it is necessary to find out its effective capacity on that thickness according to STEEL THICKNESS percentage curve. Also, care and estimate the effective capacity on that surface condition according to the AIRGAP percentage curve. For surface quality, if the roughness(Ra) is less than 6.3um, the effective lifting capacity can be as 100%.

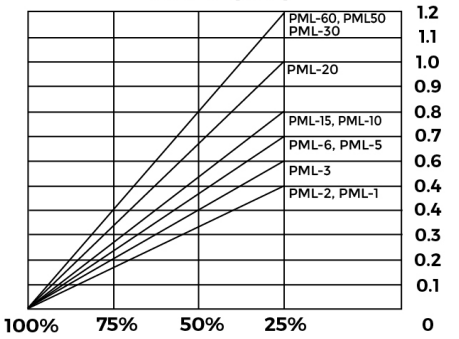
If the surface roughness(Ra) is above 6.3um or even worse, the airgap between lifter and workpiece should be estimated. Find out the effective capacity on this airgap from the curve percentage. Combining both factors then calculate the actual lifting capacity on this condition. The curve is also printed on both sides of each lifter.

## Affected by the composition of the workpiece

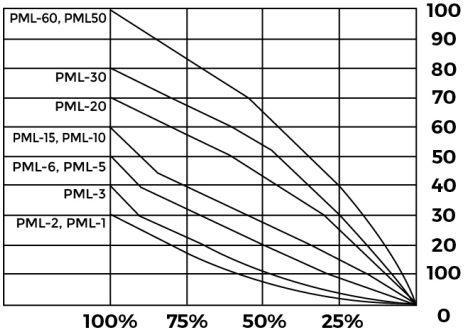
Taking lifter's capacity for low-carbon steel plate as standard in coefficient 1, after measurement, the capacity coefficient for medium-carbon steel is 0.95, for high-carbon steel is 0.90, for low-alloy steel is 0.75 and for cast iron is 0.50.

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**AIRGAP (MM)**




**STEEL THICKNESS (MM)**




## Safety capacity date for thickness

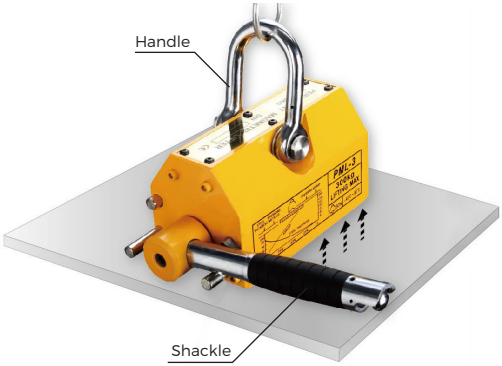
| RATED LIFTING STRENGTH (%) | PLATE THICKNESS (mm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 100 | 90 | 80 | 70 | 60 | 50 | 40 | 30 | 20 |
| 100kg | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 80% |
| 300kg | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 90% | 70% |
| 600kg | 100% | 100% | 100% | 100% | 100% | 100% | 90% | 70% | 50% |
| 1000kg | 100% | 100% | 100% | 100% | 100% | 90% | 75% | 55% | 35% |
| 1500kg | 100% | 100% | 100% | 100% | 100% | 90% | 75% | 55% | 35% |
| 2000kg | 100% | 100% | 100% | 100% | 80% | 60% | 45% | 30% | 20% |
| 3000kg | 100% | 100% | 100% | 80% | 60% | 45% | 35% | 25% | - |
| 5000kg | 100% | 85% | 70% | 55% | 45% | 35% | 25% | - | - |
| 6000kg | 100% | 85% | 70% | 55% | 45% | 35% | 25% | - | - |

## Storage and Maintenance

Before using, please read the operating instruction carefully to avoid accident.

Avoid of being bumped, which affected its life-span and never bump handle or damage holding surface. After using, it's better to protect the lifter' holding surface by anti-rust oil.

## Magnetic Lifter Spare Parts




| Magnetic Lifter Spare Parts (100kg - 2000kg) | | | |
|---|---|---|---|
| **WLL** | **SUIT** | **HANDLE** | **SHACKLE** |
| **100** | 144101 | 033010SP | - |
| **300** | 144103 | 033030SP | 034030SP |
| **600** | 144106 | 033060SP | - |
| **1000** | 144110 | 033100SP | - |
| **1500** | 144115 | 033150SP | - |
| **2000** | 144200 | 033200SP | - |



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