



# Permanent Lift Magnet



## Applications:

Compact Permanent Lifting magnets, turned ON and OFF manually by a lever, provide smooth operation for hundreds of lifting and positioning applications. The ERICH Permanent Lift Magnets are ideally suited for in plant handling, loading and unloading of machine tools, in machine shops, plastic moulds, machined components, etc.

## Features:

- ❑ Powerful magnets tested to hold over three times the rated load for maximum safety.
- ❑ Eliminates dangerous straps and slings.
- ❑ No electricity needed, no batteries to recharge or replace don't threaten safety.
- ❑ Guarantees a continuous, complete magnetic power, even after years of intensive use.
- ❑ Available with 'V' face for pipes, rods and other hard-to-handle shapes. Withstand temperature up to 80 degree C.

## Dimensions (in mm)

Model: RE	Lifting Capacity (Kg.)	Breaking Lifting Cap. (Kg.)*	Length	Width	Weight (Kg.)
PLM-100	100	330	95	65	2.6
PLM-300	300	990	165	95	12.5
PLM-500	500	1650	200	95	15
PLM-600	600	1890	235	115	20
PLM-1000	1000	3150	260	175	48
PLM-2000	2000	6600	400	180	96
PLM-3000	3000	9600	460	210	145



\*Recommended lifting capacities a 3 to 1 safety factor over maximum potential ratings on 2" thick plate. Thin sheets, rough and irregular surfaces, odd shapes and scale all affect holding power and must be considered in establishing a safety factor.

### Calculating Maximum Lifting Magnet Loads

Maximum lifting magnet power is different for plate and round / cylindrical material lifting, and also depends upon carbon content of stock, stock thickness, and surface finish.

Calculation Example: PLM-500, rated magnetic lifting capacity (SWL) is 500kg.

The formula for calculating range of lifting magnets capacity is:  $T \times F \times M \times \text{Capacity}$

T = thickness, F = surface finish, M = material,

PLM-500 Example: T8, F1, and M2,  $90\% \times 125\% \times 85\% \times 500 = 478\text{kg}$ .

Lifting Power by Material				Effect of Surface Finish								
Carbon Content		0%	50%	100%	Surface Finish		0%	50%	100%	150%		
	M1	Low Carbon				100%	F1	▽▽▽ Ground Surface				125%
	M2	Moderate Carbon				85%	F2	▽▽ Rough Machined			100%	
	M3	High Carbon				75%	F3	▽ Foundry Finish			90%	
	M4	Cast Iron				70%	F4	~ Rough Cast			65%	

### Percentage of Magnetic Lifters Power (by thickness of material)

Thickness	Depth	PLM- <u>100</u>	PLM- <u>300</u>	PLM- <u>500</u>	PLM- <u>1000</u>	PLM- <u>2000</u>	PLM- <u>3000</u>
T1	60mm	100%	100%	100%	100%	100%	100%
T2	55mm	100%	100%	100%	100%	100%	100%
T3	50mm	100%	100%	100%	100%	95%	95%
T4	45mm	100%	100%	100%	100%	90%	90%
T5	40mm	100%	100%	100%	100%	85%	85%
T6	35mm	100%	100%	100%	90%	75%	75%
T7	30mm	100%	100%	100%	80%	65%	65%
T8	25mm	100%	100%	90%	70%	55%	55%
T9	20mm	100%	90%	75%	60%	45%	45%
T10	15mm	100%	70%	60%	50%	35%	35%
T11	10mm	70%	50%	45%	35%	25%	25%
T12	05mm	40%	30%	25%	20%	15%	15%

## ERICH MAGNETICS

295-Functional Industrial Estate, Patparganj, Delhi-110092

Phone: 91-11-22149235, 43092850 Fax: 91-11-22165315. Mobile:9810509691

Email: [erichmagnetics@gmail.com](mailto:erichmagnetics@gmail.com) Web: [www.erichmagnetics.com](http://www.erichmagnetics.com)