

# LIFTING MAGNETS

## Model HL HAND LIFMA\*



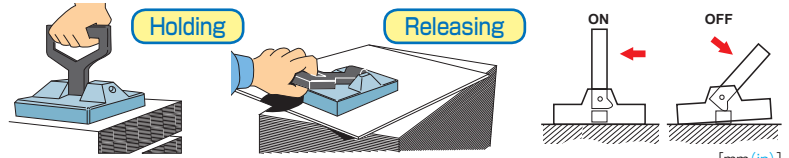
### [Application]

Suitable for pulling out steel materials or steel plates and carrying metal frames, raw materials, press molds, semi-finished products, etc.

### [Features]

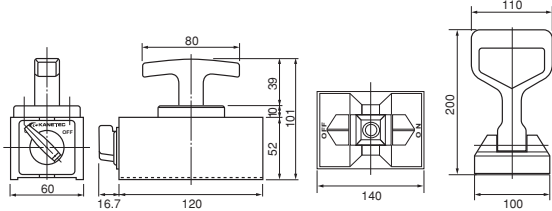
- A new cam mechanism is employed so as not to apply friction due to holding and releasing directly to the surface of workpieces to transport. (HL-20A)
- Workpieces are held and released quite smoothly.
- The magnetic force can be turned on and off by lever operation. (HL-15)
- The T-handle is robust and held by hand comfortably for stable workpiece transportation. (HL-15)

### How to use (HL-20A)



HL-15

HL-20A



Model	Max. Holding Power		Lifting Capacity	Dimensions			Handle Length	Mass
	Lateral	Lift		Width	Length	Height		
HL-15	350N (35kgf)	1.5kN (150kgf)	20kg/44.1 lb	60 (2.36)	120 (4.72)	52 (2.04)	49 (1.92)	3.0kg/6.6 lb
HL-20A	500N (50kgf)	2 kN (200kgf)	30kg/66.1 lb	100 (3.93)	140 (5.51)	32 (1.26)	200 (7.87)	2.5kg/5.5 lb

※The holding power is based on a test piece of 15 mm thick soft steel. The holding power and lifting capacity drop depending on the thicknesses, materials of workpieces and other factors. ※Do not use this Lifma for a hoist.

## Model PL PERMANENT MAGNETIC LIFMA\*



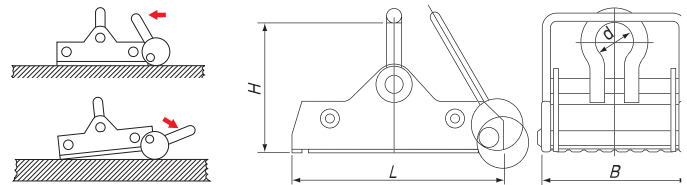
PL-40B

### ■ Holding

Place the Lifma on a workpiece to transport and pull the lever upright.

### ■ Releasing

Put the lever in the horizontal position to release the Lifma from the workpiece.



[mm (in)]

Model	Lifting Capacity	Dimensions			Shackle "d" (Lifting ring ID)	Mass
		B	L	H		
PL-20B	200kg/440 lb	122 (4.80)	255 (10.0)	150 (5.90)	BC14 (0.55) (φ40 (1.57))	8.5kg/18lb
PL-40B	400kg/881 lb	212 (8.34)	181 (7.12)	BB20 (0.78) (φ58 (2.28))		14.0kg/31lb

※The lifting capacity is indicated by a quarter of the max. holding power.  
※The dimension "H" is up to the top end of the inside diameter of the shackle.

### [Application]

These Lifmas are suitable for transporting such raw materials as mill scale iron plates and flat iron products and lifting and transporting semi-finished products having flat surfaces such as machine parts, press dies and plastic molds.

### [Features]

- These are of permanent magnetic type requiring no power source. Thus, there is no risk of falling workpieces due to power failure or failure of wiring systems.
- The employment of a cam system facilitates holding and releasing of workpieces.

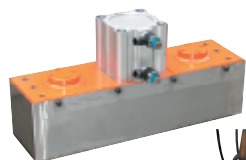
### ⚠ Precautions for use

When you plan to use the Lifma for special steel materials such as hardened materials, please consult with us prior to purchasing the Lifma. The operation of the cam to hold and release workpieces exerts physical friction to the workpieces. Therefore, the surfaces finished by polishing, for example, may be scratched. Do not use the Lifma for workpieces whose width or length is short and the cam operation does not work on them. Operate the ON/OFF select cam by a foot.

### Steel plate lifting standard (Mill scale soft steel plate) [mm (in)]

Model	Thickness		PL-20B		PL-40B	
	mm	(in)	mm	(in)	mm	(in)
5-7	□450 (17.7)	350 (13.7) × 550 (21.6)	□950 (37.4)	650 (25.5) × 1300 (51.1)		
	□500 (19.6)	350 (13.7) × 700 (27.5)	□1100 (43.3)	750 (29.5) × 1500 (59.1)		
8-12	□550 (21.6)	400 (15.7) × 700 (27.5)	□1000 (39.4)	700 (27.5) × 1400 (55.1)		
	□450 (17.7)	350 (13.7) × 550 (21.6)	□750 (29.5)	550 (21.6) × 1000 (39.4)		
13-16	□350 (13.7)	250 (9.84) × 500 (19.6)	□600 (23.6)	450 (17.7) × 700 (27.5)		
	□250 (9.84)	200 (7.87) × 300 (11.8)	□500 (19.6)	350 (13.7) × 700 (27.5)		

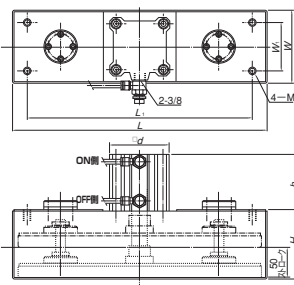
## Model LM-P UP-DOWN TYPE PERMANENT MAGNETIC LIFMA\*



An example of usage



LM-P1242  
An example of special fabrication



### [Application]

Suitable for lifting and moving bent plates, floor plates, pressed workpieces having concave or convex sections, iron doors of buildings, deck plates, guard rails, cans, etc.

### [Features]

- The attraction is turned on and off by moving up and down the built-in magnet with an air cylinder, which facilitates remote operation and automated operation.
- Compared with the electromagnetic type, this model has a larger holding power on thin sheets (less than 5 mm thick) and its capacity drops less when clearance is present. Accordingly, this model is most suitable for lifting pressed workpieces having concave or convex sections.
- Energy saving type as no electric power source is required.
- The ON state is maintained if the air source is shut down and therefore there is no risk of falling workpieces, thus enhancing safety.

[mm (in)]

Model	Dimensions								Air Pressure	Mass
	W	L	H	h	W <sub>1</sub>	L <sub>1</sub>	d	M		
LM-P1242	120 (4.72)	420 (16.5)	112 (4.40)	93.5 (3.68)	80 (3.14)	370 (14.5)	98 (3.85)	M12, (0.47) depth 14 (0.55)	0.49 MPa or over	Approx. 17kg/ 37 lb
LM-P2442	240 (9.44)	119 (4.69)	133 (5.23)	150 (5.90)	300 (11.8)	142 (5.59)	M20, (0.78) depth 30 (1.18)			Approx. 38kg/ 83 lb

※An air source, select valve and other air control equipment must be provided by the user.

※This model is not suitable for thick workpieces and workpieces stacked closely. The specifications vary according to workpieces to lift. Please contact us to select the best design.