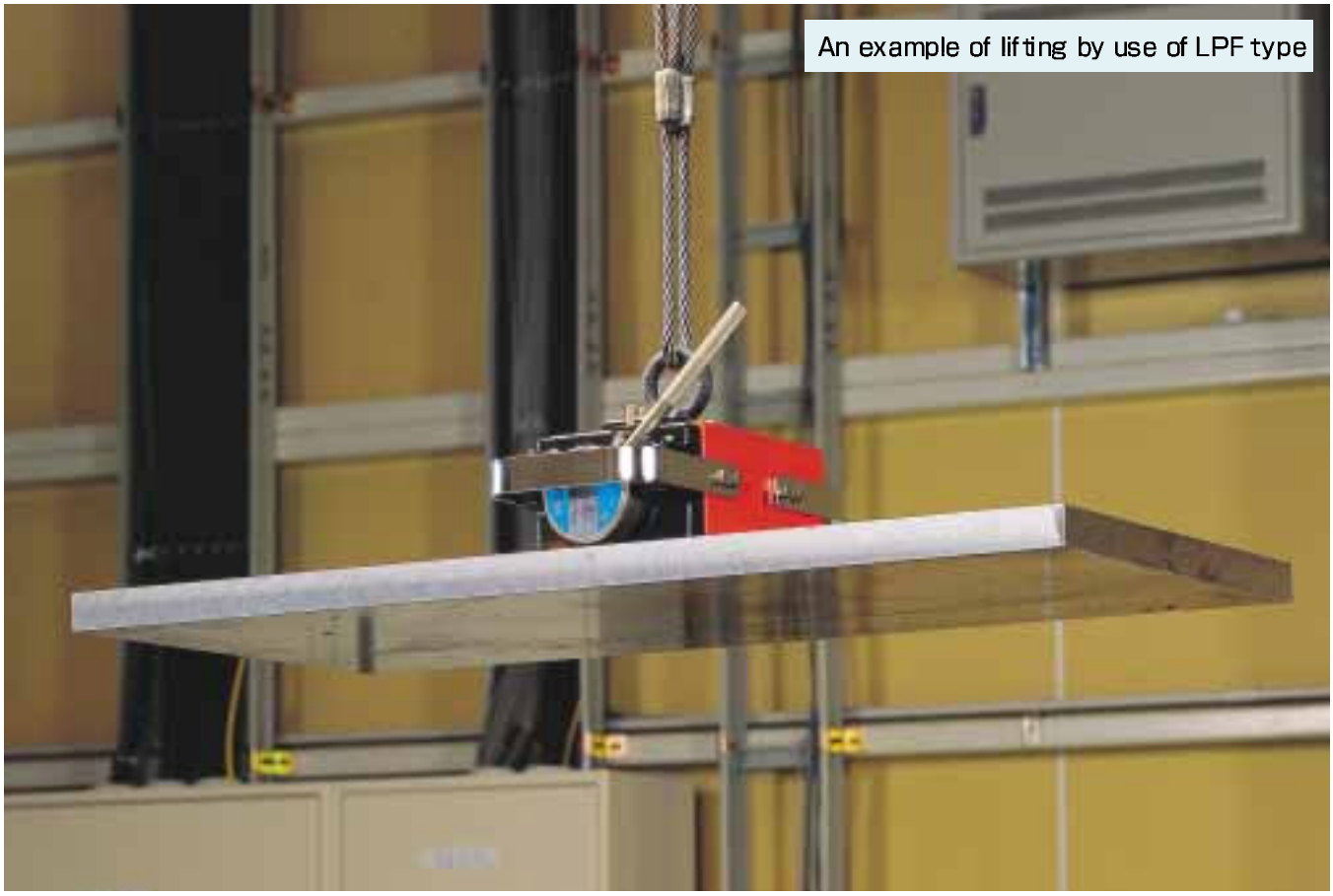
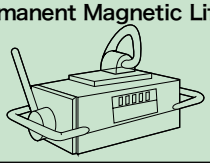
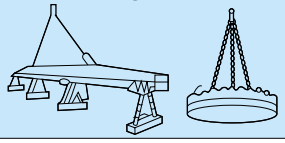
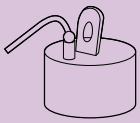
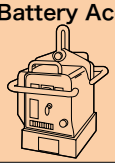


Type And Features

Type	Permanent Magnetic Lifma	Electromagnetic Lifma	LIFTING MAGNET	Battery Ace
				
Features	●You don't need power source for the mgnet.You can eliminate the worry of potential trouble and danger due to power service interruption. ●As a result, you can use it anywhere without wiring and without need for a rectifier. ●Powerful magnetic force in spite of small size.	●You can easily adjust the intensity of magnetic force (for controling the number of suspending steel plates). ●Lifting magnets of larger type and coupling type are available. ●The magnet is operated by remote control and is useful for process automation.	●High degree of safety as a strong permanent magnet is used for holding. ●Remote control and serial connection enables automation. ●Power is applied only when attaching and detaching works, thus the power consumption is very low.	●You don't need the power source and can use it anywhere . ●Accordingly, potential trouble is eliminated if power interruption or wire disconnection occurs. ●Built-in battery ensures high operatability and is controllable remotely.
Model	LPF, LPF-V, PL	LMU, LMU-SR, LM-EC, LM-EP	LEP	LME

INSTRUCTIONS FOR USE

〈Holding power〉

Holding power changes depending on: the thickness of material, clearance size between the material and magnet ; and the quality of the material. Please see the graph.

〈Maximum holding power〉

Work must be thick enough, and the surface must be free of dust film. Magnetic attraction is best with mild-soft steels.

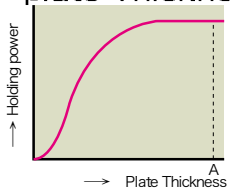
〈Lifting capacity〉

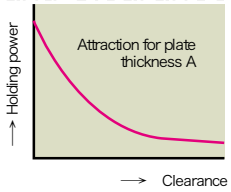
The mass of the material that can be lifted by the maximum holding power under the optimum condition is quoted as the maximum lifting capacity. The lifting capacity of the magnet is quoted by 1/2 of the maximum holding power for the electromagnetic Lifma (LMU, LMU-SR, LM-EP) and Battery Ace; 1/3 of it for the permanent magnetic Lifma, LPE; and 1/4 of it for Model PL and permanent electromagnetic Lifma as reference for capacity. However, it is impossible to lift the material having a weight indicated by the lifting capacity if it is thinner (the holding power drops if the plate is thinner).

〈Determining sizes of objects to lift〉

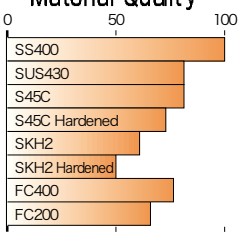
Please determine a size of steel plates, etc. to lift in consideration of such factors as the plate thickness, gap created by deflection and dust, attracting area, material and balance of objects to lift and the safety factor.

Change in Holding power by plate Thickness and Clearance

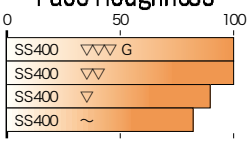




Difference in Holding power by Material Quality



Difference in Holding power by Attractive Face Roughness



Model LPF

The lifting magnet LIFMA varies largely in lifting capacity depending on work thickness.

LPF－25B

LPF－8VB

LPF－20VB

Lifting Magnet Model LPF

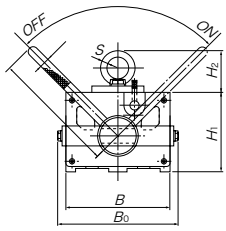
[Application]

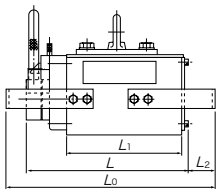
These are permanent magnet type holding tools that are used as a lifting means mounted on cranes and hoists for transporting steel materials in warehouses and work sites and moving works up and down on machine tools. They are suitable for transporting semifinished products having flat surfaces such as machine parts, press dies and plastic forming molds and for transporting black iron plates and flat steel materials.

[Features]

- Permanent magnetic type, requiring no power supply, thus eliminating hazards due to failure of wiring system or by service interruption. It features powerful magnetic force ; small, and light weight.
- Operation is quite easy for attracting/removing.
- Internal on /off changeover machanism eliminates possible scratches on the work surface when loading/unloading.
- Combine several LPFs so as to meet the specific shape and weight of carrying material.

〈LPF-A type〉





(The external sample in the dimension drawing is LPF-40B)

[mm (in)]

Model	Holding Power	Dimension									Mass
		B	B0	L	L0	L1	L2	H1	H2	S	
LPF- 25B	250kg/ 555 lb	132 (5.19)	153 (6.02)	247 (9.72)	325 (12.7)	180 (7.08)	43 (1.69)	102 (4.01)	71 (2.79)	ϕ12.5 (0.49)	about 18kg/40 lb
LPF- 40B	400kg/ 888 lb	180 (7.08)	208 (8.18)	277 (10.9)	360 (14.1)	198 (7.79)	47 (1.85)	137 (5.39)	105 (4.13)	ϕ20 (0.78)	about 37kg/82 lb
LPF- 80B	800kg/ 1777 lb			457 (17.9)	540 (21.2)	378 (14.8)					about 67kg/148 lb

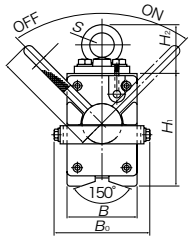
※The lifting capacity is indicated by one third of the maximum holding power.
※LPF-G120 is of drip-proof construction for outdoor use.

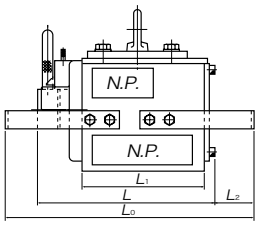
V-Attractive Face Permanent Magnet LIFMA

[Features]

- Bottom face is provided with a V-slit for lifting round bar as well as steel plate.

〈LPF-VA type〉





(The external sample in the dimension drawing is LPF-8VB)

[mm (in)]

Model	Holding Power		Diameter of round bar	
	Round Steel	Steel Plate	Min.	Max.
LPF- 8VB	80kg/177 lb	80kg/177 lb	ϕ28 (1.10)	ϕ100 (3.93)
LPF-20VB	200kg/444 lb	250kg/555 lb	ϕ30 (1.18)	ϕ160 (6.29)
LPF-30VB	300kg/666 lb	400kg/888 lb	ϕ35 (1.37)	ϕ240 (9.44)

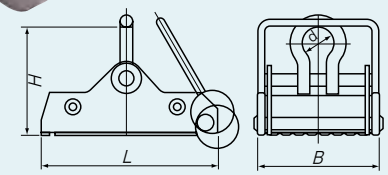
※The lifting capacity is indicated by one third of the maximum holding power.
※LPF-G30V is of drip-proof construction for outdoor use.

[mm (in)]

Model	Dimension									Mass
	B	B0	L	L0	L1	L2	H1	H2	S	
LPF- 8VB	70 (2.75)	96 (3.77)	177 (6.96)	250 (9.84)	122 (4.80)	40 (1.57)	112 (4.40)	50 (1.96)	ϕ8 (0.31)	about 8kg/17 lb
LPF-20VB	100 (3.93)	132 (5.19)	317 (12.4)	395 (15.5)	250 (9.84)	43 (1.69)	149 (5.86)	71 (2.79)	ϕ13 (0.51)	about 27kg/60 lb
LPF-30VB	114 (4.48)	149 (5.86)	445 (17.5)	525 (20.6)	378 (14.8)	45 (1.77)	152 (5.98)	75 (2.95)		about 46kg/102 lb

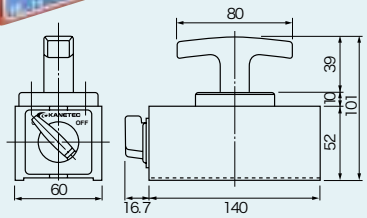
Model PL

PL－40B

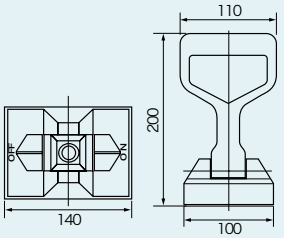


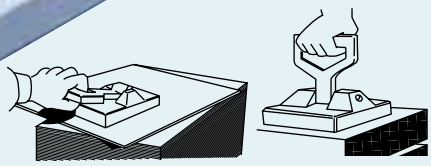
Model HL

HL－15



HL－20A





Lifting Magnet Model PL

[Application]

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

[Features]

- The use of a permanent magnet eliminates the need of electric power, thus eliminating troubles due to power interruption and failure of the power supply line. The strong magnetic force can be used semi-permanently.
- The employment of cam system facilitates attaching and detaching of works.

[Precautions for use]

- The operation of the cam for attaching and detaching will apply physical friction to the work. If they are used on finished surfaces such as a polished surface, such surface may be damaged.

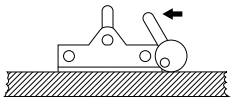
[mm(in)]

Model	Holding Power	Dimension			d (Shackle lifting inside diameter)	Mass
		B	L	H		
PL-20B	200kg/444 lb	122(4.80)	255(10.0)	150(5.90)	BC14(0.55) (ϕ40(1.57))	8.5kg/18 lb
PL-40B	400kg/888 lb	212(8.34)		181(7.12)	BB20(0.78) (ϕ58(2.28))	14.0kg/31 lb

※The lifting capacity is indicated by a quarter of the maximum holding power.
※Dimension "H" up to the top end of the inner diameter of the shackle lifting ring.

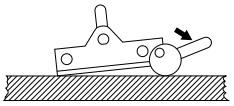
■Attraction

Place Lifma on the transporting material and pull the lever up in vertical position.



■Removal

Put the lever in horizontal position to remove Lifma from the transporting material.



Hand Lifma Model HL

[Application]

Most suitable for pulling out steel material or steel sheet and carrying material,metal mold,press die and so on.

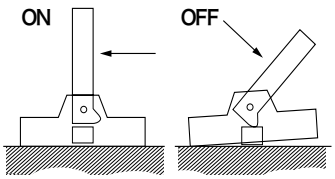
[Features]

- A new cam machanism is employed so as not to cause scratches on the surface of work. (HL-20A)
- Work is hold and released quite smoothly.
- The lifting capacity is 20 kg on steel plates. (HL-15)
- The magnetic force can be turned on and off by lever operation. (HL-15)
- The T-handle is robust and fixed for stable work transportation. (HL-15)

■How to Use (HL-20A)

[Application]

- Place Hand Lifma on the carrying object with handle right up and pull it out after ensuring that it attracts perfectly.



[Removal]

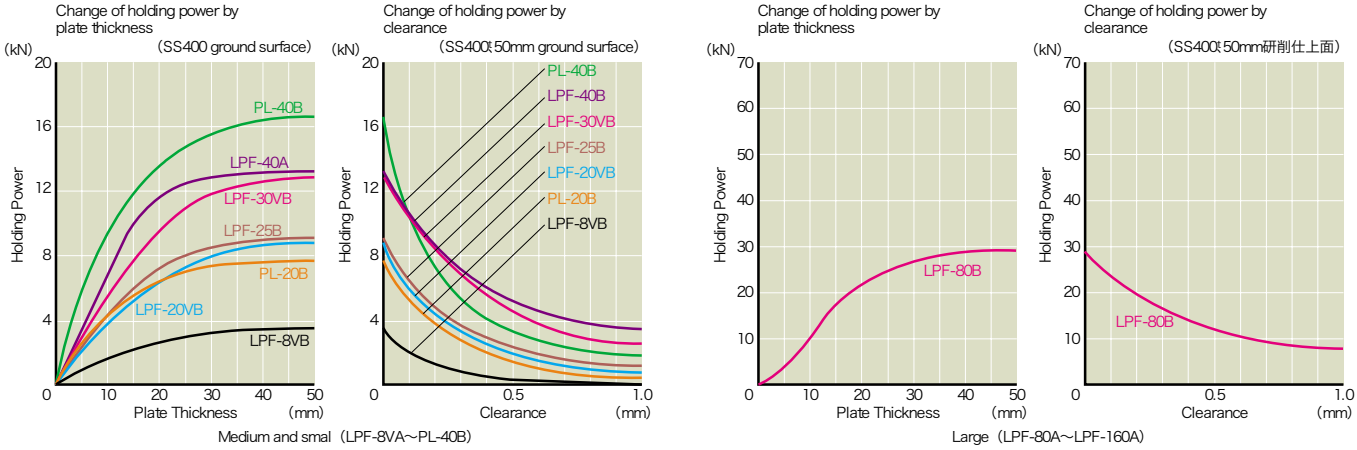
- Hand Lifma removes from the carrying object with handle right down to off direction.

[mm(in)]

Model	Holding Power		Dimension			Handle Length	Mass
	Lateral Pulling	Lifting up	Width	Length	Height		
HL-15	See next page		60(2.36)	120(4.72)	52(2.04)	49(1.92)	3.0kg/6.6 lb
HL-20A	500N(50kgf)	2kN(200kgf)	100(3.93)	140(5.51)	32(1.25)	200(7.87)	2.5kg/5.5 lb

※Max. attraction shows the figures for 15mm thick soft steel. Attfaction reduces if the sheet is thinner.
※Do not employ it as a hoist.

Objects to lift and model selection



■Round steel lifting standard (Black soft steel plate)

[mm(in)]

Dia \ Model	LPF-8VB	LPF-20VB	LPF-30VB
40	2000(78.7)	6000(236.2)	6000(236.2)
60	1000(39.3)	3000(118.1)	
100	500(19.6)	1500(59.0)	3000(118.1)
160	–	500(19.6)	1000(39.3)
240	–	–	500(19.6)

■Column material lifting capacity (Lifting column horizontally at its center)

[mm(in)]

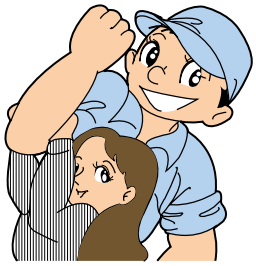
Bore	Thickness	LPF-80B Allowable max. length
□250(9.84)	9(0.35)	2000(78.7)
□300(11.8)	12(0.47)	3000(118.1)
□400(15.7)	19(0.74)	3400(133.8)
□500(19.6)	22(0.86)	2700(106.2)
□550(21.6)		2400(94.4)
□600(23.6)	25(0.98)	2000(78.7)
□650(25.5)		1800(70.8)
□700(27.5)		1700(66.9)

■Safety Coefficient is Taken Larger to Ensure Use in Safety

The lifting capacity of our Permanent Magnetic Lifmas is indicated as 1/3 (safety coefficient = 3) of maximum attraction for LPF and LPF-V and as 1/4 (safety coefficient = 4) for PL. Although the figure for lifting capacity is the same, the attraction will remarkably reduce due to clearance for those products with small safety coefficient. But our products take larger safety coefficient with consideration for ensuring the use in safety.

Product	Lifting capacity	Maximum	Attraction at the time when clearance in 0.2mm is made.
Product with safety coefficient 3	250kg/555 lb	7.5kN(750kgf)	4.5kN(450kgf)
Product with safety coefficient 2		5kN(500kgf)	2kN(200kgf)

Please choose a lifting magnet from a wide variety of Kanetec products of high performance according to your applications.



■Steel plate lifting standard (Black soft steel plate)

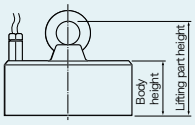
[mm(in)]

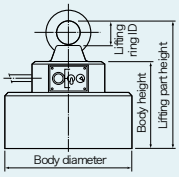
Thickness \ Model	LPF-25B	LPF-40B	LPF-80B	LPF-8VB	LPF-20VB	LPF-30VB	PL-20B	PL-40B
5~ 7	□600(23.6) × 450(17.7) × 700(27.5)	□750(29.5) × 600(23.6) × 950(37.4)	□ 850(33.4) × 700(27.5) × 1050(41.3)	□500(19.6) × 350(13.7) × 700(27.5)	□650(25.5) × 500(19.6) × 800(31.4)	□850(33.4) × 600(23.6) × 1200(47.2)	□450(17.7) × 350(13.7) × 550(21.6)	□ 950(37.4) × 650(25.5) × 1300(51.1)
8~ 12	450(17.7) × 800(31.4)	□900(35.4) × 650(25.5) × 1300(51.1)	□1200(47.2) × 800(31.4) × 1700(66.9)	□300(11.8) × 350(13.7) × 500(19.6)	□700(27.5) × 500(19.6) × 1000(39.3)	□800(31.4) × 600(23.6) × 950(37.4)	□500(19.6) × 350(13.7) × 700(27.5)	□1100(43.3) × 750(29.5) × 1500(59.0)
13~ 16	□650(25.5) × 450(17.7) × 900(35.4)	□950(37.4) × 700(27.5) × 1300(51.1)	□1400(55.1) × 900(35.4) × 1900(74.8)	350(13.7) × 450(17.7)		□900(35.4) × 700(27.5) × 1150(45.2)	□550(21.6) × 400(15.7) × 700(27.5)	□1000(39.3) × 700(27.5) × 1400(55.1)
17~ 25		□850(33.4) × 650(25.5) × 1100(43.3)	□1300(51.1) × 900(35.4) × 1850(72.8)	□350(13.7) × 300(11.8) × 400(15.7)	□550(21.6) × 450(17.7) × 700(27.5)	□850(33.4) × 650(25.5) × 1100(43.3)		□ 950(37.4) × 650(25.5) × 1300(51.1)
26~ 40	□550(21.6) × 400(15.7) × 700(27.5)	□750(29.5) × 550(21.6) × 1000(39.3)	□1200(47.2) × 800(31.4) × 1700(66.9)	□300(11.8) × 250(9.84) × 350(13.7)	□500(19.6) × 350(13.7) × 700(27.5)	□750(29.5) × 550(21.6) × 1000(39.3)	□450(17.7) × 350(13.7) × 550(21.6)	□ 750(29.5) × 550(21.6) × 1000(39.3)
41~ 65	□450(17.7) × 350(13.7) × 600(23.6)	□650(25.5) × 450(17.7) × 950(37.4)	□1000(39.3) × 750(29.5) × 1300(51.1)	□250(9.84) –	□400(15.7) × 300(11.8) × 600(23.6)	□650(25.5) × 450(17.7) × 950(37.4)	□350(13.7) × 250(9.84) × 500(19.6)	□ 600(23.6) × 450(17.7) × 700(27.5)
66~100	□350(13.7) × 250(9.84) × 500(19.6)	□500(19.6) × 350(13.7) × 700(27.5)	□ 800(31.4) × 600(23.6) × 1050(41.3)	–	□350(13.7) × 250(9.84) × 500(19.6)	□500(19.6) × 350(13.7) × 700(27.5)	□250(9.84) × 200(7.87) × 300(11.8)	□ 500(19.6) × 350(13.7) × 700(27.5)

Model LMU

〈LMU dimensions〉

〈LMU-SR dimensions〉





Model KR

Model LBB

〈Various types of uninterruptible power units〉

■Lifting Reference for Single Unit《for Black Soft Steel, Plate》

[mm (in)]

Plate thickness \ Model	LMU-10D	LMU-15D	LMU-20D	LMU-25D	LMU-30D
5	600 (23.6) × 600 (23.6)	700 (27.5) × 700 (27.5)	800 (31.4) × 800 (31.4)	900 (35.4) × 900 (35.4)	1000 (39.3) × 1000 (39.3)
9		850 (33.4) × 850 (33.4)	1000 (39.3) × 1000 (39.3)	1200 (47.2) × 1200 (47.2)	1300 (51.1) × 1300 (51.1)
12	700 (27.5) × 700 (27.5)		1100 (43.3) × 1100 (43.3)		
16		1000 (39.3) × 1000 (39.3)	1300 (51.1) × 1300 (51.1)	1500 (59.0) × 1500 (59.0)	1600 (62.9) × 1600 (62.9)
25	550 (21.6) × 550 (21.6)				1700 (66.9) × 1700 (66.9)
50	400 (15.7) × 400 (15.7)	700 (27.5) × 700 (27.5)	1000 (39.3) × 1000 (39.3)	1250 (49.2) × 1250 (49.2)	1500 (59.0) × 1500 (59.0)
100	300 (11.8) × 300 (11.8)	500 (19.6) × 500 (19.6)	700 (27.5) × 700 (27.5)	800 (31.4) × 800 (31.4)	1000 (39.3) × 1000 (39.3)

※Please contact us for using Lifma to lift plate stacks with uneven load ; This case should consider a larger safety confficient.

■Maximum Usable Number of Small Electro-magnetic Lifmas LMU to Rectifier KR

Rectifier \ Small electromagnetic lifma		LMU-10D Capacity 58W	LMU-15D 110W	LMU-20D 145W	LMU-25D 210W	LMU-30D 290W
KR-P203 KR-A203 KR-R203B	Capacity 540W	8	4	3	2	1
KR-P208 KR-A208 KR-R208B	1440W	21	10	8	5	4

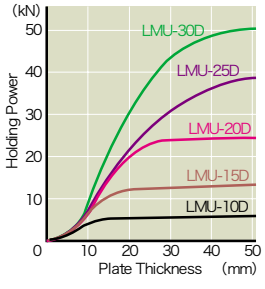
■Magnet Selection Standard to Steel Plate Size

[mm (in)]

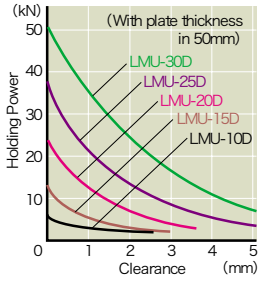
Steel Plate	Plate Width	914 (35.9)	914 (35.9)	1219 (47.9)	1219 (47.9)	1524 (60.0)	1524 (60.0) ~ 1826 (71.8)
	Plate Length	1829 (72.0)	3658 (144)	2438 (95.9)	4877 (192)	3048 (120)	6096 (240)
	Nominal size	3 (0.11) × 6 (0.23)	3 (0.11) × 12 (0.47)	4 (0.15) × 8 (0.31)	4 (0.15) × 16 (0.62)	5 (0.19) × 10 (0.39)	5 (0.19) ~ 6 (0.23) × 20 (0.78)
Magnet	Thickness 4.5 (0.17) ~ 12 (0.47)	LMU-15D				LMU-20D	
	Thickness 12 (0.47) ~ 32 (1.25)	LMU-20D				LMU-25D	
	Number of unit in parallel	2					
	Number of units in series	2			3		4
	Total units	4			6		8

※Please contact us when using two or more magnets by suspending them from one ceiling.

Change of holding power by plate thickness



Change of holding power by clearance



Lifting Magnet Model LMU

[Application]

Most suitable for materials handling of process or finished steels, materials, products.

[Features]

●We've succeeded in miniaturizing this powerful electromagnet. It has wide applications in conveying small materials up to large steel plates when magnets are placed in connection with a flame.

●When attaching our non-interruption device, you can use LMU safely even during sudden interruption of electric service.

●A rectifier unit is required to power this electromagnet, we suggest Model Series KR.

[mm(in)]

Model	Holding Power	Dimension		Eyebolt	Voltage	Power Consumption	Mass
		Main Unit	Lifting Part Height				
LMU-10D	250kg/ 555 lb	ϕ105(4.13)×60(2.36)	108(4.25)	M16(0.62) (ϕ35(1.37))	DC180V	58W	4kg/ 8.8 lb
LMU-15D	600kg/1333 lb	ϕ156(6.14)×70(2.75)	125(4.92)	M20(0.78) (ϕ40(1.57))		110W	11kg/ 24.4 lb
LMU-20D	1200kg/2666 lb	ϕ206(8.11)×88(3.46)	173(6.81)	M30(1.18) (ϕ60(2.36))		145W	23kg/ 51.1 lb
LMU-25D	1800kg/4000 lb	ϕ256(10.0)×93(3.66)	193(7.59)	M36(1.41) (ϕ70(2.75))		210W	40kg/ 88.8 lb
LMU-30D	2500kg/5555 lb	ϕ306(12.0)×95(3.74)	210(8.26)	M42(1.65) (ϕ80(3.14))		290W	60kg/133.3 lb

※Working rate at 50%ED (EFFECTIVE DUTS by cycle of repeating to electrify for 5minutes and to pause for 5 minutes).
※Lifting capacity is indicated as 1/2 of maximum attraction with SS400 black steel face.
※For continuous operation, use Lifma under 110VDC. But the capacity reduces by approx. 20% at 110VDC for 20mm thick steel plate.
※H Dimension indicates the size up to the upper end of inside diameter for eyebolt lifting. ※Cord 2m is provided.

Lifting Magnet Model LMU-SR

〈Rectifier-built in type〉

[Application]

Suitable for loading and unloading works to and from the work table of machine tools, moving small steel materials and steel plates and for use as a single unit with a power supply built in.

[Features]

●A separate rectifier is not required. This unit has its own, built in.

●Easy to release the lifting material by the inverse exciting switch provided.

●Adopting the printed wiring board, it is compact without trouble.

●Attraction is same capacity as LMU (see the attraction graph and ligting reference for model LMU).

[mm(in)]

Model	Holding Power	Dimension		Eyenut	Voltage	Power Consumption	Mass
		Main Unit	Lifting Part Height				
LMU-10SRD	250kg/ 555 lb	ϕ105(4.13)×130(5.11)	189.5(7.46)	M16(0.62) (ϕ35(1.37))	Single-phase, AC200V	60W	5kg/ 11.1 lb
LMU-15SRD	600kg/1333 lb	ϕ156(6.14)×142(5.59)	212 (8.34)	M20(0.78) (ϕ40(1.57))		110W	13kg/ 28.8 lb
LMU-20SRD	1200kg/2666 lb	ϕ206(8.11)×160(6.29)	270 (10.6)	M30(1.18) (ϕ60(2.36))		145W	25kg/ 55.5 lb
LMU-25SRD	1800kg/4000 lb	ϕ256(10.0)×165(6.49)	295 (11.6)	M36(1.41) (ϕ70(2.75))		210W	43kg/ 95.5 lb
LMU-30SRD	2500kg/5555 lb	ϕ306(12.0)×170(6.69)	319 (12.5)	M42(1.65) (ϕ80(3.14))		290W	63kg/140.0 lb

※Working rate at 50%ED (EFFECTIVE DUTS by cycle of repeating to electrify for 5minutes and to pause for 5 minutes).
※Lifting capacity is indicated as 1/2 of maximum attraction with SS400 black steel face.
※For continuous operation, use Lifma under input voltage, 100VAC, but lifting capacity reduces by approx. 30% for 20mm thick steel plate. In this case, replace the lamp bulb by the one for 100V.
※H Dimension indicates the size up to the upper end of inside diameter for eyebolt lifting. ※Cord 5m is provided.

Rectifier Model KR

[Application]

A rectifier is required to operate Lifma, LMU. 3 models, KR-P, KR-A and KR-R, are available to meet this purpose.

■Model KR-R 《Rectifier with reverse exciting circuit》

When lifting works having a flat attractive face or works made of such materials as FC where magnetism tends to remain, they may not be released only by turning off the power.

In such a case, a current is let flow in the reverse direction of attraction to cancel the residual magnetism. The equipment listed here are capable of supplying a reverse current momentarily.

[mm(in)]

Model	Input	Output			Dimension			Remote Switch	Ammeter	Auto Reverse	Mass
		Voltage	Current	Capacity	Width	Depth	Height				
KR-P203	Single-phase, AC200V	DC180V	3A	540W	200 (7.87)	90 (3.54)	250 (9.84)	○	×	×	3kg/ 6.6 lb
KR-P208			8A	1440W							
KR-A203			3A	540W				×	○	×	
KR-A208			8A	1440W							
KR-R203B			3A	540W	300 (11.8)	170 (6.69)	400 (15.7)	○	×	○	12kg/ 26 lb
KR-R208B			8A	1440W							

Power Converter Units Model LBB

In some cases the Electromagnetic Lifma requires an emergency power converter unit for safety. Select the proper converter unit according to the input voltage and required output capacity.

■Applicable Rectifier

LBB-NI	KR-P KR-A ※KR-R LMU-SRD

※Not compatable with the standard KR-R unless slightly modified.

■Connection Diagram

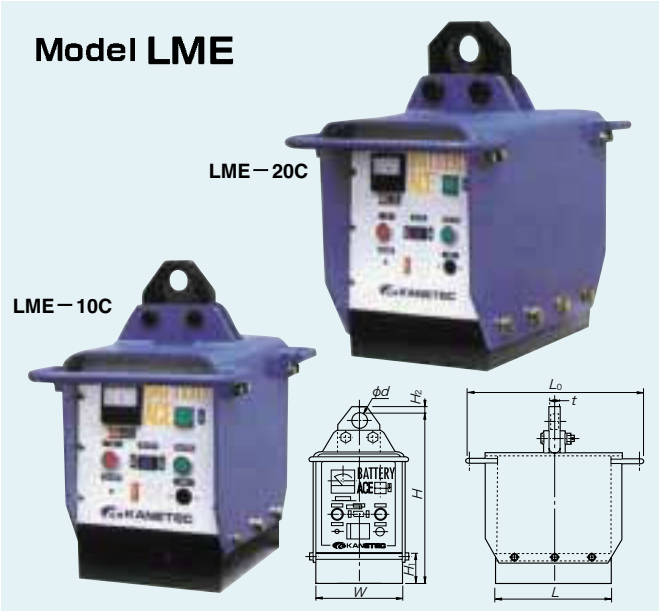
Power — Power Converter unit — Rectifier — LMU

Power — Power Converter unit — LMU-SRD

[mm(in)]

Model	Type	Output Capacity	Input		Form	Dimension			Mass
			Voltage	Herz		Width	Depth	Height	
LBB-NI- 70-10-5	Wall-mount type	70W	Single-phase AC100V	50Hz 60Hz	Rectangular wave	350 (13.7)	153 (0.60)	320 (12.5)	20kg/ 44 lb
LBB-NI- 70-10-6									
LBB-NI- 70-20-5			Single-phase AC200V	50Hz 60Hz					
LBB-NI- 70-20-6									
LBB-NI-140-10-5		140W	Single-phase AC100V	50Hz 60Hz		400 (15.7)	164 (6.45)	410 (16.1)	35kg/ 77 lb
LBB-NI-140-10-6									
LBB-NI-140-20-5			Single-phase AC200V	50Hz 60Hz					
LBB-NI-140-20-6									
LBB-NI-210-10-5		210W	Single-phase AC100V	50Hz 60Hz					40kg/ 88 lb
LBB-NI-210-10-6									
LBB-NI-210-20-5			Single-phase AC200V	50Hz 60Hz					
LBB-NI-210-20-6									
LBB-NI-350-20-5	Self-standing type	350W	Single-phase AC200V	50Hz 60Hz		530 (20.8)	260 (10.2)	660 (25.9)	50kg/ 111 lb
LBB-NI-350-20-6									

※Capacity: Guaranteed power interruption time is 10 minutes for all models. ※ All models are of closed type.
Note: These models are powered off for about 3/100 second. If no power interruption is allowed during switchover, please contact us.



Battery Ace Model LME

〈Standard type〉

[Application]

The Battery Aces can offer about the same lifting and transporting capacity as electromagnetic types using a built-in battery where no power supply is available on indoor work sites. When they are mounted as a lifting means on cranes and hoists, they work well in organizing and arranging steel plates and steel materials and loading and unloading works to and from large machine tools.

- LME-10C to -30C are suitable for transporting small steel plates, waste materials and light steel frames.
- LME-60W-A is suitable for transporting wide and relatively thick steel plates weighing up to 6 tons.
- LME-60L-A is suitable for transporting steel plates that tend to warp, in addition to long steel plates and form steels.

[Features]

- Since no cord is used, they can be used in a wide variety of work sites.
- The battery used is a commercially available automotive battery for easy replacement.
- There is no fear of accidents due to fallen works caused by power interruption and power supply cable problem.
- The selection by the switch enables automation of repeating attaching and detaching of lifted works, thus allowing lifting work to be done without remote inputs. (Repetition of attach and detach for each touch down on floor)
- The pushbutton switch on the operation panel facilitates manual attaching and detaching of lifted works.
- The rigid body and guard acting as a grip also ensure high impact resistance and durability in severe work conditions.
- For releasing works, the demagnetizing function is automatically activated regardless of manual or auto mode.
- The remaining capacity of the battery can be checked at a glance on a 7-rank level meter. When the battery nears its life, the buzzer sounds.
- The ammeter tells the state of power application to the electromagnet.
- By using a spare battery, while one battery is being used, the other battery can be charged to improve work efficiency.

[mm (in)]

Model \ Work	Angle Steel Type	Angle Steel Length	I or H-shaped Steel Type	I or H-shaped Steel Length	Chennel Steel Type	Chennel Steel Length
LME-20C	75 (2.95) × 75 (2.95) × t9 (0.35)	3000 (118.1)	100 (3.93) × 75 (2.95)	4000 (157.4)	100 (3.93) × 50 (1.96)	3000 (118.1)
	100 (3.93) × 100 (3.93) × t10 (0.39)		150 (5.90) × 75 (2.95)		150 (5.90) × 75 (2.95)	
	150 (5.90) × 150 (5.90) × t15 (0.59)		200 (7.87) × 150 (5.90)		200 (7.87) × 80 (3.14)	
	200 (7.87) × 200 (7.87) × t20 (0.78)		300 (11.8) × 150 (5.90)		300 (11.8) × 90 (3.54)	
LME-30C	75 (2.95) × 75 (2.95) × t 9 (0.35)	5000 (196.8)	100 (3.93) × 75 (2.95)	6000 (236.2)	100 (3.93) × 50 (1.96)	5000 (196.8)
	100 (3.93) × 100 (3.93) × t10 (0.39)		150 (5.90) × 75 (2.95)		150 (5.90) × 75 (2.95)	
	150 (5.90) × 150 (5.90) × t15 (0.59)		200 (7.87) × 150 (5.90)		200 (7.87) × 80 (3.14)	
	200 (7.87) × 200 (7.87) × t20 (0.78)		300 (11.8) × 150 (5.90)		300 (11.8) × 90 (3.54)	

[mm (in)]

Model	Holding Power	Dimension W	L	L_0	H (Stand-by～Up)	H_1	H_2	d	t	Battery Cap.	Working Hours (50%ED)	Mass	Battery Charge	Charging Time
LME-10C	1000kg/ 2222lb	220 (8.66)	300 (11.8)	450 (17.7)	445 (17.5) ～460 (18.1)	80 (3.14)	15 (0.59)	40 (1.57)	25 (0.98)	12V 12Ah	7～9h	62kg/137 lb	In AC100V Out DC12V	5～ 7h
LME-20C	2000kg/ 4444lb	260 (10.2)	380 (14.9)	590 (23.2)	520 (20.4) ～535 (21.0)		25 (0.98)	60 (2.36)	38 (1.49)	12V 35Ah		100kg/222 lb		10～15h
LME-30C	3000kg/ 6666lb		490 (19.2)		550 (21.6) ～565 (22.2)	110 (4.33)					6～8h	140kg/311 lb		
LME-60L-A	6000kg/13333lb	270 (10.6)	900 (35.4)	–	755 (29.7)	–	–	118 (4.64)	–	12V 35h×2	6～8h	300kg/666 lb	In AC100V Out DC24V	6～10h
LME-60W-A		540 (21.2)	450 (17.7)											

※Lifting capacity is indicated as 1/2 of maximum attraction. ※50% ED……efective ※Accessories……A set of spare batteries.A standard battery charger Hydrometer

Max. Liftable Dimension of Steel Plate

[mm (in)]

Work Thickness \ Model	LME-10C			LME-20C			LME-30C			LME-60L-A, 60W-A		
6	□ 550 (21.6)	500 (19.6) × 600 (23.6)	1000 (39.3) × 300 (11.8)	□1300 (51.8)	1000 (39.3) × 1600 (62.9)	2000 (78.7) × 800 (31.4)	□1400 (55.1)	1000 (39.3) × 1800 (70.8)	2000 (78.7) × 800 (31.4)	□1700 (66.9)	1000 (39.3) × 2500 (98.4)	2000 (78.7) × 1300 (51.1)
9	□ 650 (25.5)	500 (19.6) × 800 (31.4)	1000 (39.3) × 400 (15.7)				□1650 (64.9)	1000 (39.3) × 2500 (98.4)	2000 (78.7) × 1200 (47.2)	□2000 (78.7)	1000 (39.3) × 3200 (125.9)	2000 (78.7) × 2000 (78.7)
12				□1500 (59.0)	1000 (39.3) × 2200 (86.6)	2000 (78.7) × 1100 (43.3)	□175 (6.88)	1000 (39.3) × 2700 (106.2)	2000 (78.7) × 1300 (51.1)	□2200 (86.6)	1000 (39.3) × 4500 (177.1)	2000 (78.7) × 2500 (98.4)
16	□ 800 (31.4)	500 (19.6) × 1100 (43.3)	1000 (39.3) × 600 (23.6)				□1800 (70.8)	1000 (39.3) × 3000 (118.1)	2000 (78.7) × 1600 (62.9)			
20	□ 900 (35.4)	500 (19.6) × 1400 (55.1)	1000 (39.3) × 850 (33.4)	□1700 (66.9)	1000 (39.3) × 2800 (110.2)	2000 (78.7) × 1400 (55.1)						
25	□1100 (43.3)	500 (19.6) × 2000 (78.7)	1000 (39.3) × 1200 (47.2)				□1850 (72.8)	1000 (39.3) × 3300 (129.9)	2000 (78.7) × 1700 (66.9)	□2400 (94.4)	1000 (39.3) × 5500 (216.5)	2000 (78.7) × 3000 (118.1)
30	□1000 (39.3)	500 (19.6) × 1800 (70.8)	1000 (39.3) × 1000 (39.3)		1000 (39.3) × 2700 (106.2)	2000 (78.7) × 1500 (59.0)						
40	□ 950 (37.4)	500 (19.6) × 1600 (62.9)	1000 (39.3) × 900 (35.4)	□1600 (62.9)	1000 (39.3) × 2500 (98.4)	2000 (78.7) × 1400 (55.1)	□1750 (68.8)	1000 (39.3) × 3000 (118.1)	2000 (78.7) × 1500 (59.0)			
50				□1400 (55.1)	1000 (39.3) × 1900 (74.8)	2000 (78.7) × 950 (37.4)	□1700 (66.9)	1000 (39.3) ×2700 (106.2)	2000 (78.7) × 1400 (55.1)			
100	□ 550 (21.6)	500 (19.6) × 600 (23.6)	1000 (39.3) × 300 (11.8)	□1000 (39.3)	1000 (39.3) × 1000 (39.3)	2000 (78.7) × 500 (19.6)	□1200 (47.2)	1000 (39.3) × 1500 (59.0)	2000 (78.7) × 700 (27.5)	□1700 (66.9)	1000 (39.3) × 2700 (106.2)	2000 (78.7) × 1500 (59.0)

■ROBUST GUARD PLATES ENSURE SAFETY
Made of strong, steel plates. These guard plates protect the main body from severe shock from outside.

■BATTERY EASILY REPLACED
Continuous operation is assured by using the spare battery.

■NEED FOR RECHARGING ENSURED BY LIGHT AND SOUND
In addition to the battery meter and indicating lamp, the bulit-in alarm buzzer audibly indicates when the battery should be recharged, thereby ensuring added safety during oparation.

■POWER TEMPORARY STOP
Useful for stacked steel plates to lift one sheet by one by residual holding power. (OFF when pressed, ON when released)

■CONFIRMATION OF TIME FOR RECHARGING
The meter indicates the battery voltage at hand and helps you judge the discharge status in advance.

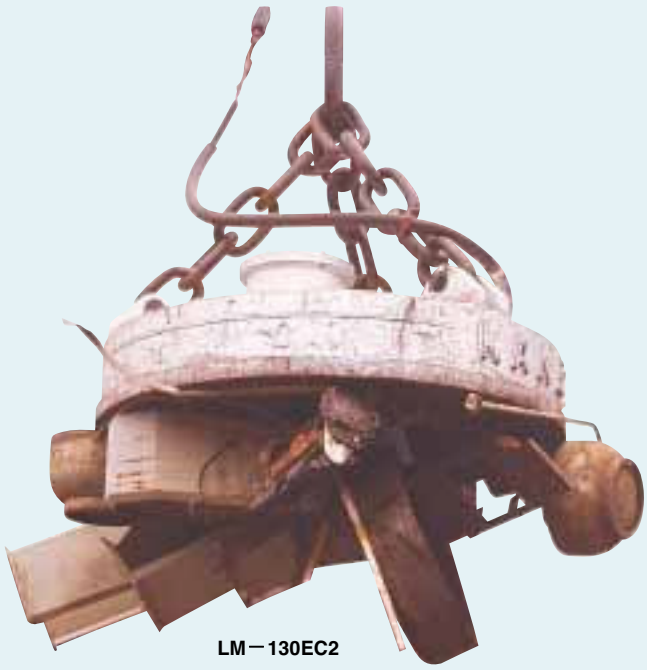
■EXCITATION INDICATING LAMP
This lamp lights on when normal excitation or reverse excitation is being conducted.

■LIGHT TOUCH OPERATING SWITCH
Normal and reverse excitation are easily changed with this switch.

■ROMOTE CONTROL AVAILABLE
Oparation switch selectable between auto and manual.

■COMPACT BUT POWERFUL
Efficient circuit design provides outstanding powerful magnetic force despite its compact size.

Model LM-EC



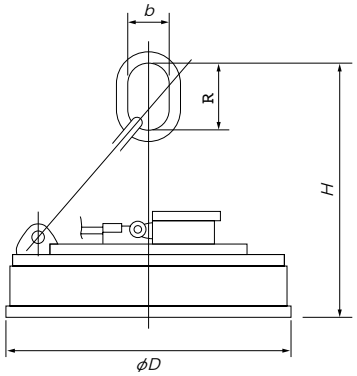
LM－130EC2

Lifting Magnet Model LM-EC

[Application]
Most suitable for tranporting iron wastes and iron lumps such as scraps, slabs and ingots.

[Features]
- Designed with electromagnetic coil in H-grade insulation for maximum magnetic effect and minimum power consumption.
- Robust and tough, designed to withstand the hard operation.

[Standard Accessories]
- DC power unit
- Operating pushbutton switch
- Instrument box
- ＊Output voltage regulator and uninterruptible power unit are also manufactured, and available as an option.
- Cable connector
- Cable reel



[mm(in)]

Model	Max. Holding Mass				Dimennsion				Voltage	Current	Power Consumption	Mass	Applicable Power Unit	Duty Cycle
	Ingot	Pig Iron	Steel Cut Wastes	Slice Tip	D	H	b	ℓ						
LM- 40EC2	1000kg/2222 lb	60kg/133 lb	20kg/ 44 lb	10kg/ 22 lb	400(15.7)	–	–	–	DC 220V	2.5A	0.55kW	130kg/ 288 lb	LBR-04E	50%ED by cycle for reperating to electrify for 5 minutes and to pause for 5 minutes.
LM- 50EC2	1800kg/4000 lb	120kg/266 lb	90kg/ 200 lb	25kg/ 55 lb	500(19.6)	610(24.0)	70(2.75)	140(5.51)		4.3A	1.0kW	290kg/ 644 lb	LBR-05E	
LM- 60EC2	3000kg/6666 lb	250kg/555 lb	120kg/ 266 lb	40kg/ 88 lb	600(23.6)	740(29.1)	90(3.54)	160(6.29)		5.8A	1.28kW	400kg/ 888 lb	LBR-06E	
LM- 70EC2	5000kg/11111 lb	350kg/777 lb	200kg/ 444 lb	100kg/ 222 lb	700(27.5)	880(34.6)	110(4.33)	180(7.08)		18A	4.0kW		LBR-07E	
LM- 90EC2	9000kg/20000 lb	500kg/1111 lb	300kg/ 666 lb	200kg/ 444 lb	900(35.4)	1050(41.3)	150(5.90)	220(8.66)		28A	6.2kW	600kg/1333 lb	LBR-09E	
LM-110EC2	14000kg/31111 lb	900kg/2000 lb	500kg/1111 lb	300kg/ 666 lb	1100(43.3)	1150(45.2)	175(6.88)	250(9.84)		42A	9.2kW	1400kg/3111 lb	LBR-11E	
LM-130EC2	19000kg/42222 lb	1400kg/3111 lb	800kg/1777 lb	500kg/1111 lb	1300(51.1)	1250(49.2)	190(7.48)	290(11.4)		63A	13.9kW	1900kg/4222 lb	LBR-13E	
LM-150EC2	24000kg/53333 lb	1900kg/4222 lb	1100kg/2444 lb	800kg/1777 lb	1500(59.0)	1330(52.3)	210(8.26)	350(13.7)		74A	16.3kW	2900kg/6444 lb	LBR-15E	
LM-180EC2	31000kg/68888 lb	2700kg/6000 lb	1600kg/3555 lb	1100kg/2444 lb	1800(70.8)	1450(57.0)	230(9.05)	370(14.5)		110A	24.0kW	4200kg/9333 lb	LBR-18E	