MAGNETIC LIFTER

INSTRUCTION MANUAL



Imported exclusively by Pacific Hoists Pty. Ltd. &
Pacific Hoists Ltd.
In support of cancer charities in Australia & New Zealand

IMPORTANT

PLEASE READ THIS OPERATION MANUAL BEFORE USING THIS PRODUCT. THIS MANUAL CONTAINS IMPORTANT INFORMATION REGARDING SAFETY, OPERATION, INSTALLATION & MAINTENANCE.

ALWAYS OPERATE, INSPECT AND MAINTAIN THIS PRODUCT IN ACCORDANCE WITH AS4991

INTRODUCTION

Thank you for purchasing your new Challenger Magnetic Lifter. This manual lifting device now uses the latest technology to ensure you of a higher quality, robust design with a high level of operator safety which is easier and safer to use, ensuring a longer service life. Choosing the Challenger brand also directly supports cancer charities in Australia and New Zealand.

It is important that this manual be kept in a safe place where any operator of the Challenger Magnetic Lifter can refer to it and understand the operating principles of this device. All users of this Challenger Magnetic Lifter should read this manual in full and understand the safe operating principles of the device.

FEATURES

FEATURES OF THE CHALLENGER MAGNETIC LIFTER INCLUDE THE FOLLOWING:

- Designed in accordance with AS4991
- Ergonomic design
- Safety of design has been prioritised to alleviate unexpected accidents
- High quality machining
- All Challenger Magnetic Lifter are individually load tested in accordance with AS4991

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OPERATING INSTRUCTIONS

NOTE: Please read the operating instructions carefully before using this product. If any doubt remains, please contact our company.

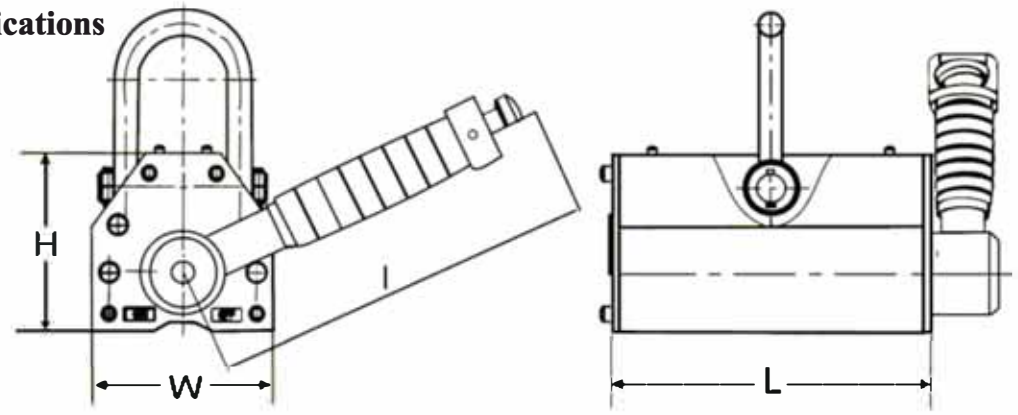
1. APPLICATION AND FEATURE

Model CMG Challenger 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.

2. CONSTRUCTION AND SPECIFICATION

Construction: Model CMG Challenger Magnetic Lifter has strong magnetic circuit produced by NdFeB magnetic 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.

2.1 Specifications



MODEL	Rated capacity(plate) (kgs)	Cylindrical capacity (kgs)	Max pull-off strength (kgs)	L	W	H	I	Working temperature (°C)	Net weight (kgs)
CMG010	100	30	350	92	64	70	142	<80	3
CMG020	200	60	700	158	64	70	142	<80	5
CMG030	300	100	1050	165	88	96	176	<80	10
CMG050	500	150	1750	216	118	120	219	<80	20
CMG060	600	200	2100	236	118	120	219	<80	24
CMG100	1000	300	3500	264	168	168	266	<80	50
CMG150	1500	500	5250	353	172	168	380	<80	70
CMG200	2000	600	7000	378	230	217	462	<80	125
CMG300	3000	—	10500	453	290	265	567	<80	220
CMG500	5000	—	17500	647	290	265	707	<80	355
CMG600	6000	—	19200	713	290	265	707	<80	398

*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.

OPERATING INSTRUCTIONS

3. OPERATIONS

3.1 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.

3.2 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 -40ºC to 80ºC. It’s unsafe with heavy vibration or any impact in the course of lifting.

3.3 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.

3.4 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.

4.MAIN FACTORS

4.1 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.

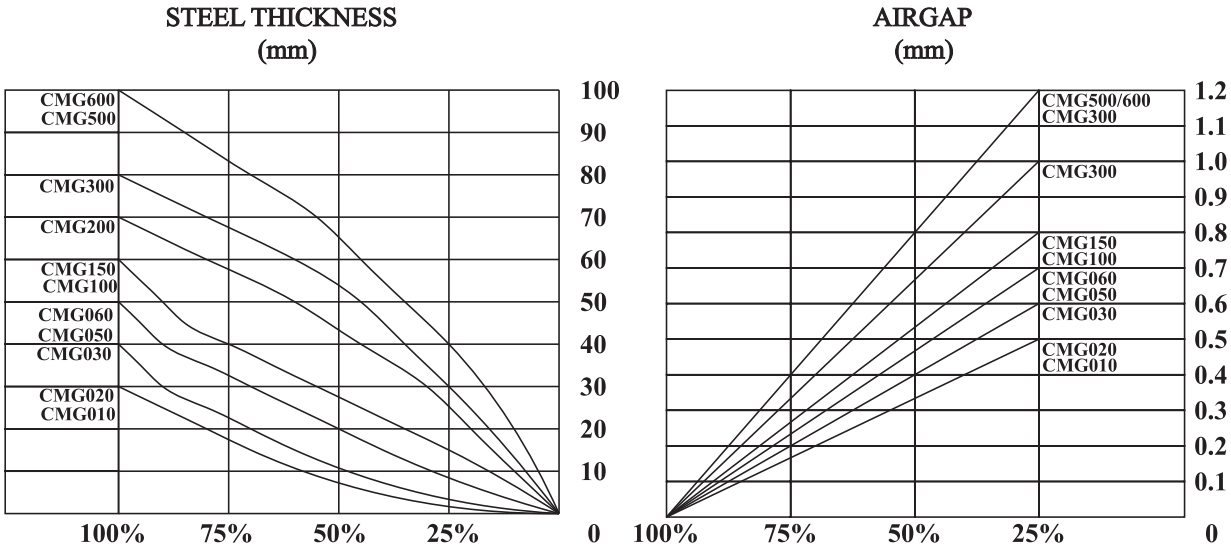
4.2 Affected by the composition of the workpiece

Taking lifter’s capacity for low-carbon steel plate as standard in coefficient 1, after measurment, 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.

5. MAINTENANCE AND SAFETY NOTICE

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

5.2 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.



Safety capacity curve

Thickness (mm)	Effective percentage of rated capacity						
	CMG600 CMG500	CMG300	CMG200	CMG150 CMG100	CMG060 CMG050	CMG030	CMG020 CMG010
100	100%						
90	85%						
80	70%	100%					
70	55%	80%	100%				
60	45%	60%	80%	100%			
50	35%	45%	60%	90%	100%		
40	25%	35%	45%	75%	90%	100%	
30	-	25%	30%	55%	70%	90%	100%
20	-	-	20%	35%	50%	70%	80%

Safety Capacity Data for Thickness(Reference)

5.3 Inspect the handle frequently that make sure its slide key can move flexibly and the stop pin can lock firmly.

5.4 It is forbidden to turn the lifter's handle without the iron workpiece contacting to its holding surface.

5.5 Maintenance must be executed by authorized or professional technicians and must strictly follow the instructions.

5.6 It is forbidden to modity the magnetic lifter to avoid safety risk.

5.7 It must to take a test for lifter's actual capacity annually and inspect all parts' conditions to ensure it is in normal working status.

5.8 If its main body and turning parts is damaged that can not work again, then it should be discarded as useless.

INSPECTION LOG

INITIAL SERVICE DATE: SERIAL NO:

DATE	NOTES	AUTH SIGNATURE

Thank you for choosing the Challenger brand. Not only are you choosing a quality and reliable brand but you are also helping to support cancer charities in Australia & New Zealand.

Imported exclusively by Pacific Hoists Pty. Ltd. & Pacific Hoists Ltd.
For further information in relation to this product,
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