

# Optimag E

Electronically switched permanent magnetic lifter

Datasheet no. 305



Magnetic gripper supplied as a modular system in 4 standard sizes. Circular pole configuration ensures maximum clamping power is applied when the workface is covered by a component of the minimum thickness material.

Used for clamping or lifting of materials with a flat smooth surface and a minimum thickness of 10mm. For maximum performance, full magnetic saturation of the material should be realised, which means using the correct size of Optimag for the material. Please contact us for sizing information.

Optimag E provides a greater clamping force on thicker materials than the Optimag P (pneumatically switched) (see datasheet 306).

## Fail Safe

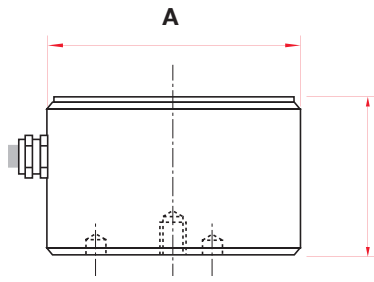
Power is only required to switch the unit on and off. The Optimag E houses high performance neodymium magnets that remain magnetised in the same direction at all times and alnico magnets that can have their magnetic polarity reversed by an electrical charge. When both magnets are of the same polarity, magnetism flows through the working face and clamps the component. Reversing the polarity of the alnico magnets means the magnetism is diverted internally and the component is released. The state and performance of the magnet remains fixed indefinitely until the controller is connected to the magnet and operated. If the electricity fails while a load is being held, it will not be dropped.

## Typical Uses

- Robotics
- Pick and place
- Transfer machinery
- End of arm grippers for manipulators
- Jigs and fixtures
- General lifting
- Turnover applications

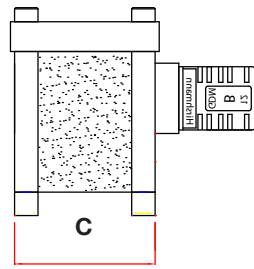
## Benefits

- Fail-safe operation
- Power only required for on/off switching operation
- On/off switching takes less than 0.2 seconds
- Can be controlled by push button, signal from a PLC or a robot/computer interface
- No moving parts
- Low maintenance
- Pole extensions can be profiled to the shape of the component to be clamped

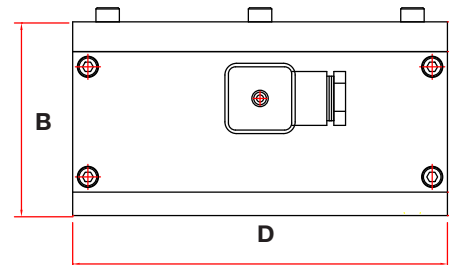


Circular Optimag E

B



Rectangular Optimag E



## Product Information

Product	Load Profile	SWL* kg	Dimensions mm				Unit Weight kg	Rating
			A	B	C	D		
<b>Circular</b>								
ESPM80C	Flat	85	80	55	N/A	N/A	1.5	1.30
ESPM100C	Flat	150	105	55	N/A	N/A	3	1.90
ESPM125C	Flat	250	130	80	N/A	N/A	5.7	4.1
ESPM150C	Flat	400	155	80	N/A	N/A	8	5
<b>Rectangular**</b>								
ESPM284	Flat	42	N/A	83	40	80	1.4	1
ESPM286	Flat	49	N/A	83	60	80	1.9	2
ESPM2166	Flat	97	N/A	83	60	160	3.8	4
ESPM2246	Flat	146	N/A	83	60	240	5.9	6
ESPM2177H	Flat	300	N/A	130	75	170	11	12
ESPM2257H	Flat	450	N/A	130	75	250	16.5	18
ESPM2347H	Flat	600	N/A	130	75	340	22	24

Control Unit	Operating Voltage v	Rating	Dimensions mm		
			Width	Height	Depth
M24388/SC	240	50	300	300	155
M24388/DC	240	100	300	300	155
6001CONT	415	180	400	300	155
M24388/HAND	N/A	N/A	112	65	55
6001/MH	N/A	N/A	112	65	55

\*Safe working load

\*\*Can be manufactured to lift flat or round

For lifting applications a SWL of 3:1 is recommended

## Controller

### Enclosure

Lockable, steel enclosure powder painted

### Size

300mm x 300mm x 165mm supplied to IP65

### Operation

Illuminated push buttons that indicate the state of the magnet

### Safety interlock

Current sensing circuits sense and measure the input voltage to the magnets

### Voltage

240v/50hz standard, 110v/50hz available as an option

### Current draw

maximum 40a per channel. Maximum of 2 channels

## Specification

### Temperature

Maximum + 80°C (176°F)

### Cable connection

Gland to IP65

### Cable type

0.75Mm2 three core double insulated pvc

### Cable length

5 metres

## Materials

### Outer shell

Steel

### Finish

Epoxy powder painted – red

### Magnetic material

Rare earth neodymium iron boron & alnico

If you have any more questions, require technical assistance or would like a quotation, please contact us.

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While every effort has been made to ensure the accuracy of the information in this publication please note that specifications may change without notice.



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