

EnerSys®
Power/Full Solutions

BATTERY HANDLING EQUIPMENT

MINI AUTO CHANGER BATTERY HANDLING EQUIPMENT

The automatic battery changer, the Mini Auto Changer (MAC) battery handling equipment uses a fully integrated PLC control system providing precise control and responsiveness for faster battery changes, setting the industry standard in automated battery changing.

Developed for use with Automated Guided Vehicles (AGVs), the MAC battery handling equipment eliminates the need for any human intervention when changing batteries, adding value to the fully automated proposition. The MAC battery handling equipment has a 15 year pedigree and is in use in a variety of industrial applications across the globe.

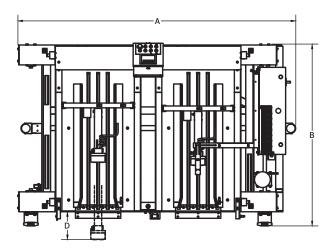
FEATURES AND BENEFITS

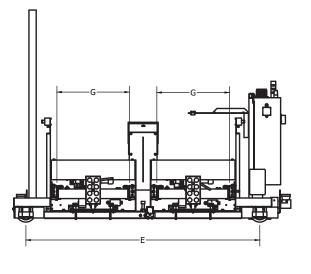
- Fully Programmable
 - Logic-based AC power system gives the system precise control and responsiveness for faster changes
- Detailed Self-diagnostics and logging
 - Allow significant decreases in both downtime and servicing, maximizing production times
- Complete user Compartment & Controls
 - Allow for manual over-ride and operation if required
- Intelligent interface with AGV
 - AGV & changing systems are entirely customizable to suit your automation needs
- Integrated safety systems
 - Every MAC battery handling equipment system has a built in emergency override & quick access stop button
- Low cost automation
 - Available as full or semi-automated systems for small battery fleets
- Single level roll out height applications
 - For more compact operations
- Maximum efficiency with in-cart battery staging
- Ultra-low maintenance
 - Servicing required every 300 hours
- Acid proof powder coating
 - Protects your investment keeping it looking good and maximizing service life

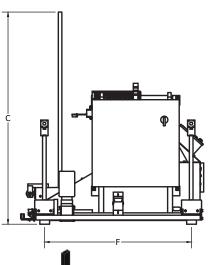


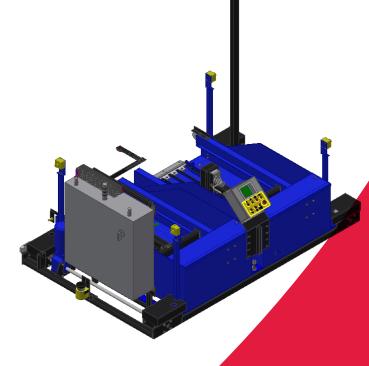
MINI AUTO CHANGER BATTERY HANDLING EQUIPMENT

Dimensions











MINI AUTO CHANGER BATTERY HANDLING EQUIPMENT

Specifications

	MODEL NO. Travel Speed (meters per minute)	MAC2-2-30-SG		
1		0-175 MPM	0-53.3 MPM	
2	Machine Duty Cycle (per year)	5,50	5,500 hrs	
3a	Input Voltage / Frequency / Max Current Drawn	415 V / 50	415 V / 50 Hz / 9.5 A	
3b	Input Voltage / Frequency / Max Current Drawn	460 V / 60	460 V / 60 Hz / 9.5 A	
3с	Input Voltage / Frequency / Max Current Drawn	575 V / 60	575 V / 60 Hz / 9.5 A	
4	Control Voltage	110 VAC	110 VAC / 24 VDC	
5	Draw Bar Pull Magnet	817 kg /	817 kg / 1,800 lbs	
6	Magnet Break Off Point (1/4"/3/16"/1/8" battery tray thickness)		817 / 544 / 818 kg 1,800 / 1,200 / 700 lbs	
7	Urethane Wheel (Dia x Width)	203 x 102 r	203 x 102 mm / 8" x 4"	
8	Capacity (Fully Loaded)	3,629 kg	3,629 kg / 8,000 lbs	
9	Service Weight (Empty)	1,543 kg	1,543 kg / 3,400 lbs	

Dimensional Data

	MODEL NO.	MAC2-2	MAC2-2-30-SG	
Α	Overall Length	103 in	2616 mm	
В	Overall Width	80.25 in	2038 mm	
С	Overall Height	90.25 in	2292 mm	
D	Maximum Magnet Arm Reach	Customiz	Customized to suit	
Е	Wheel Base	90.75 in	2305 mm	
F	Centreline of Drive Wheels	62 in	1575 mm	
G	Battery Compartment Overall Width	30 in	762 mm	
Ga	Maximum Battery Length	Customiz	Customized to suit	
Gb	Maximum Battery Width	28 in	711 mm	
Gc	Maximum Battery Height	32 in	813 mm	
Gd	Minimum Battery Width	6 in	152 mm	
Ge	Minimum Battery Height	13 in	330 mm	
Gf	Floor Level Variance (+ or - in 10 ft fully customizable)	0.25 in	6 mm	

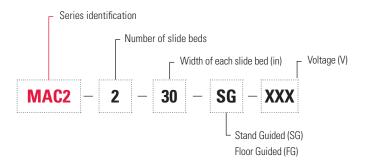


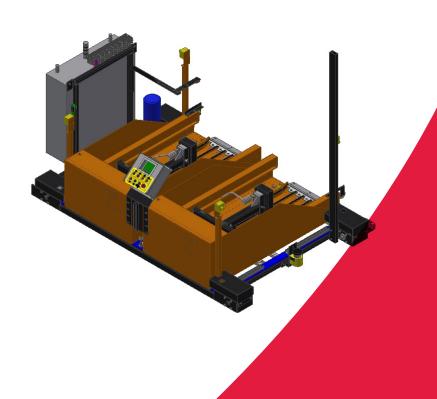
OPTIONS AT ADDITIONAL COST

- Systems can be designed with a fixed roll-off height anywhere between 178mm 660mm (7" 26")
- MAC battery handling equipment can be customised to work with conventional material handling equipment –
 please contact us for details

MODEL/PART NUMBER BREAKDOWN

Example: MAC2-2-30-SG-480





BATTERY HANDLING EXPERTISE

Whatever the size of your battery fleet, PRO Series® battery handling solutions can help you streamline your battery changing operation with a safe, productive and cost-efficient system. From initial design, drawings and engineering through to complete installation and project management, PRO Series® battery handling solutions can support your operation with everything you'll ever need for effective battery charging and changing. Let us plan your success.

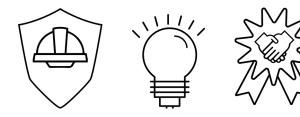
PRO Series® battery handling solutions include a range of systems and equipment that comply with health and safety regulations. Using the latest CAD software, we will design a system that matches the needs of your business. With PROSeries® battery handling solutions, you'll enjoy the highest degree of safety and ease of operation of any equipment available today — all backed by our skilled design and installation capabilities.

OUR EXCLUSIVE PARTNERSHIP WITH CARNEY BATTERY HANDLING LTD

Since 1984, Carney Battery Handling Ltd has globally provided EnerSys® with turn-key battery room solutions, sharing our mission to innovate, design, and create quality critical battery room solutions as dedicated partners.

Our dependable alliance allows us to provide dedicated support, delivering tailored engineering and design individualized for every customer.

With an emphasis on quality and safety, all our equipment is rigorously tested for real-world environments ensuring its readiness to meet the demands of any application.



COMMITTED TO QUALITY EVERYWHERE FOR EVERYONE.



WHEREVER YOU DO BUSINESS, ENERSYS® CAN SUPPORT YOU WITH MOTIVE POWER ENERGY.

ABOUT ENERSYS®

EnerSys, the global leader in stored energy solutions for industrial applications, manufactures and distributes energy systems solutions and motive power batteries, specialty batteries, battery chargers, power equipment, battery accessories and outdoor equipment enclosure solutions to customers worldwide.

Energy Systems, which combine enclosures, power conversion, power distribution and energy storage, are used in the telecommunication, broadband and utility industries, uninterruptible power supplies, and numerous applications.

Motive Power batteries and chargers are utilized in electric forklift trucks and other industrial electric powered vehicles requiring stored energy solutions. Specialty batteries are used in aerospace and defense applications, large over-the-road trucks, premium automotive, medical and security systems applications.

EnerSys also provides aftermarket and customer support services to its customers in over 100 countries through its sales and manufacturing locations around the world. With the recent NorthStar acquisition, EnerSys has solidified its position as the market leader for premium Thin Plate Pure Lead batteries which are sold across all three lines of business.

More information regarding EnerSys can be found at www.enersys.com.



EnerSys EMEA

EH Europe GmbH Baarerstrasse 18 6300 Zug Switzerland EnerSys Ltd (UK)

Oak Court, M60 Office Park, Wynne Avenue, Swinton, Manchester, M27 8FF

 $Please\ refer to\ the\ website\ address\ for\ details\ of\ your\ nearest\ Ener Sys\ office: {\color{blue} www.enersys.com}$

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