



# MA-ROB 660

**ARTICULATED ARM ROBOT PALLETISER**



## Main features

This is a fast 4 axis robot that combines a 3,15 m reach with a 250 kg payload (including gripping head), making it ideal for palletizing bags, boxes, crates, buckets, shrink bundles and more.

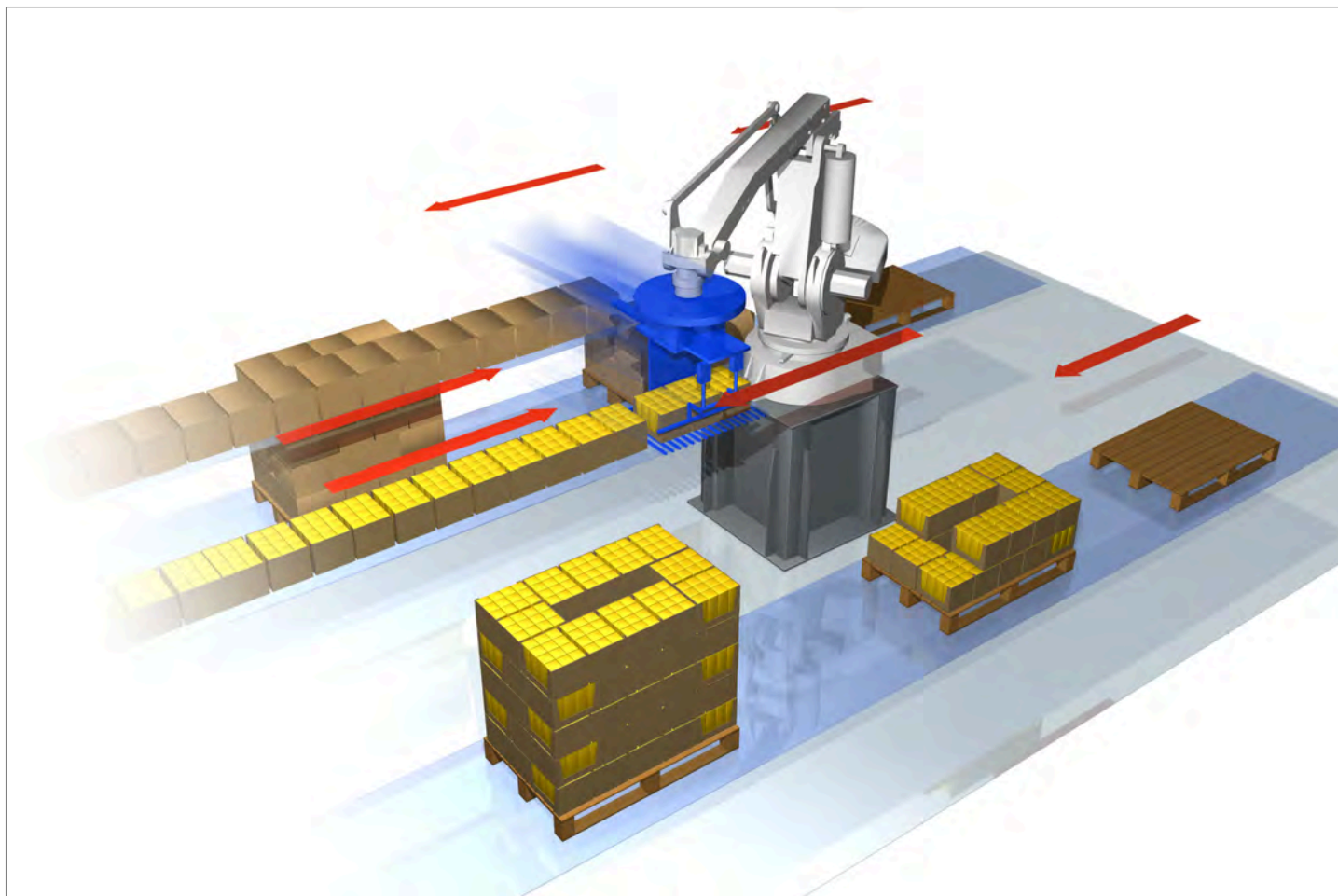
The MA-ROB robot palletiser offers superior flexibility and maximum reliability in every small space.

Each solution is specifically designed for the most efficient handling of the specific type of product to handle.

Speed rate: over 12 cycles for minutes

Packs dimensions: min. 70 x 70 x h 40 mm  
 max. 600 x 400 x h 600 mm

A flexible palletising solution to respond quickly to changing markets and challenging palletising applications



## Technical characteristics

- Compact footprint
- Formats and palletising patterns can be controlled through PLC (all working area is controlled by PLC as master control panel, robot as slave control panel)
- Easy adaptation according to the space available
- Fast and simple head changing
- AUTOMATIC head change in option
- Special design requiring minimum maintenance time
- Simple management with user-friendly functions
- Machine can be equipped with personalised options

## Accessories

Empty Pallet Magazine, Pallet Trolley, Independent Intersheet Applicator, Elevator and other devices according to the layout.





Mariani offers a comprehensive range of gripping heads to manage a large variety of packs, multipacks, pallet and sheets.

Gripping heads are supplied with **carbon elements** to minimize the weight and maximize the net payload.



## Technical data

- ▶ Fast - Short cycle time
- ▶ Accurate - Consistent parts quality  
Outstanding position repeatability ( $\pm 0,03$  mm) and very good path accuracy.
- ▶ Robust - Harsh production environment  
The robot's rugged design makes for steady performance in even the toughest environments.
- ▶ Versatile - Flexible integration  
The robot's impressive reach means it can service up to four in-feed conveyors.



## Datasheet

### Robot versions

	Ma-Rob 660-180/ 3.15	Ma-Rob 660-250/3.15
Handling capacity	180 kg	250 kg
Reach	3.15 m	3.15 m

### Specification

Number of axes	4
Protection class	IP67
Mounting	Floor
IRC5 controller variants	Single cabinet, dual cabinet

### Physical

Robot base	1136 x 850 mm
Weight	1650 kg

### Electrical connections

Supply voltage	200-600 V, 50/60 Hz
Power consumption	ISO cube: 2.7 kW
	Normal movements: 3.2 kW

### Performance

Axis number	Axis movements
Axis 1	+180° to -180° Opt: +220° to -220°
Axis 2	+85° to -42°
Axis 3	+120° to -20°
Axis 6	+300° to -300° default +150 rev. to -150 rev. max
Position repeatability	0.1 mm
Path repeatability	0.3 mm

### Max. velocity

Axis number	Ma-Rob 660-180/ 3.15	Ma-Rob 660-250/3.15
1	130°/ s	95°/ s
2	130°/ s	95°/ s
3	130°/ s	95°/ s
6	300°/ s	240°/ s

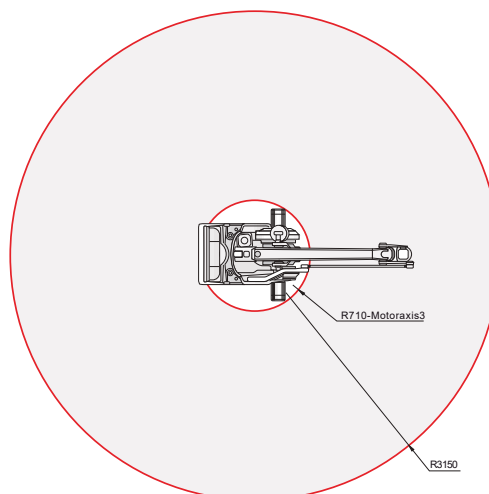
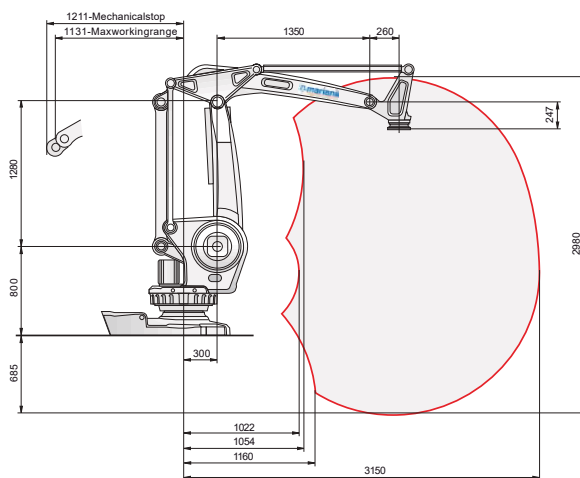
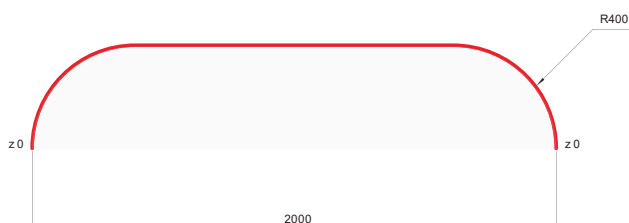
### Cycles per hour

Load	Cycles per hour
60 kg	2190
110 kg	2040

### Environment

Ambient temperature for mechanical unit	During operation	+0°C to +50°C
	During transport/storage	-25°C to +55°C
	Short periods (max 24 h)	Up to +70°C
	Relative humidity	Max. 95 %
Noise level	Max 73 dB (A)	
Safety	Double circuits with supervision, emergency stops & safety functions, 3 position enabling device	
Emission	EMC/EMI shielded	

### Standard palletizing cycle



## Machine layout

Lay-out of plant with Mechanical Empty Pallet Magazine

