

# MR-MQ100

## Single Axis Motion Controller

### Leading while following

Cost effective, easy to use axis synchronization



SELF  
CONTAINED 

Run any single axis application from a standalone, compact unit

EASY  
SET-UP 

Graphic based programming mimics actual mechanical system

COMPLETE  
SOLUTION 

Motor options from 50 W to 55 kW

NETWORKING  
FLEXIBILITY 

High performance, noise free optical fibre amplifier connection

# One axis, but a whole solution



Apply the MR-MQ100 in a wide variety of motion applications.

## Technology from a world leader

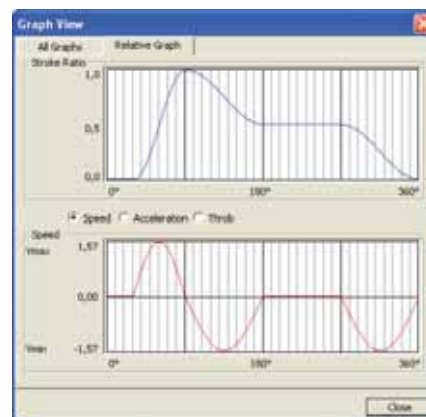
Mitsubishi Electric is recognized as a world leader in motion control. We listen to our customers and respond with patented technology, dependable systems and unmatched performance. This in turn has led to our global leadership positions in servo motors, amplifiers and associated motion controllers and software. The new MR-MQ100 single axis standalone motion controller continues to provide what our customers need to address their motion challenges in a cost-effective manner.

## Only use what you need

For most applications, a complete control platform of a PLC and motion controller will do the job. However, for smaller systems, this may not address competitive cost pressures. The MR-MQ100 allows a single axis to be completely controlled and synchronised to a separate encoder or virtual axis with no additional controller hardware. Hence applications such as rotary cutters, flying saws and labelling can be economically accomplished without exceeding a tight control budget.

## Limit cost, not options

While the MR-MQ100 is an economical solution, this doesn't mean lacking in features. A complete range of essential functions are available, including encoder and virtual axis synchronization, registration, point to point positioning and user defined cam profiles. In addition, the hardware complements these powerful software features with built-in I/O and SSCNET III motion networking capability as well as an Ethernet port.



Cam profiles are easily created

## Reduced wiring

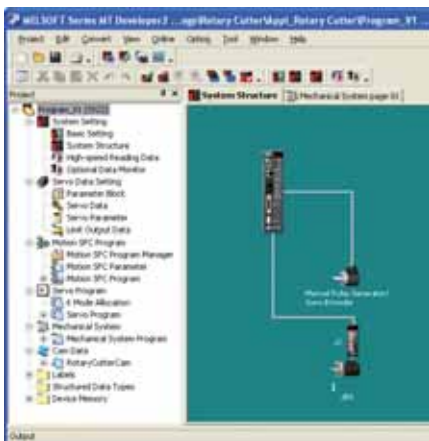
The MR-MQ100 also helps keep system costs down with its use of SSCNET III, Mitsubishi's simple but rugged optical fiber motion network. A single fiber connection is all that's needed to provide full communication and control over all functions of the MR-J3B servo amplifier regardless of capacity. A standard Ethernet connection is also provided to link the MR-MQ100 to the MT Developer 2 software.

## Fast, easy system set-up

High performance is less valuable if it's hard to use. The MR-MQ100 avoids this with the intuitive MT Developer 2 software that replaces abstract programming with graphical models of the actual mechanical system. It's easy to create virtual clutches, gears and cam profiles by simple drag and drop selection.



Program by creating virtual mechanical systems



See system configuration at a glance



The powerful combination of the MR-MQ100 and the MR-J3-B can be used in many applications across a broad range of industries.

## Complete motion systems

Specifying the MR-MQ100 simplifies overall system design. Instead of searching for a compatible servo source, just choose from Mitsubishi's broad MR-J3-B product line to complete the system. The MR-J3-B ranges from 50 W to 55 kW and offers patented technology to improve system performance such as real time vibration suppression and auto tuning. Further design flexibility is offered by the option of rotary or linear motors.

## Application flexibility

Sophisticated controller features and servo technology creates a powerful combination. The MR-MQ100 and MR-J3-B have been designed to excel in applications across a wide variety of industries, including:

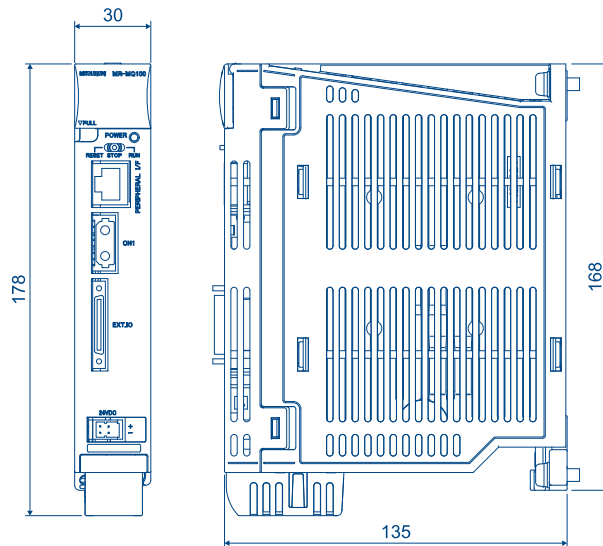
- flying saws
  - labelling
  - rotary cutters
  - form, fill & seal/pillow packaging
- plus many more



Advanced servo technology: the MR-J3-B

# Specifications ///

Items		Specifications
Power supply		24 V DC $\pm 10\%$ (required current capacity: 400 mA)
Digital inputs (mark sensors)		4 inputs (24 V DC)
Digital outputs		2 outputs (24 V DC)
Synchronous encoder	Signal type	A/B phase pulse train input
	Voltage input/open-collector type (5 V DC)	Up to 800 kpps (after magnification by 4), up to 10 m
	Differential input type	Up to 4 Mpps (after magnification by 4), up to 30 m
Peripheral interface		100 Mbps/10 Mbps Ethernet (for programming and additional options)
Number of conral axis		1 axis
Operation cycle		0.44 ms
Servo amplifier		MR-J3B servo amplifier (over SSCNETIII)
Programming language		Motion SFC, dedicated instruction, mechanical support language (SV22)
Memory back up (included)		Q6BAT
Cam function	Number of cams	Up to 256 cam profiles may be stored internally.
	Resolution per cycle	256, 512, 1024, 2048
	Stroke resolution	32767
	Control mode	Two-way cam, feed cam
Weight	kg	0.7
Dimensions (W x H x D)	mm	30 x 178 x 135



All dimensions in mm

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