

Vertical, multiple-joint type robots

RV-FR SERIES

- Optimized arm length and 6 joints for a broader range of movement support complex assembly and process operations.
- Compact body and slender arms capable of covering a large work area and large load capacity.
- Suitable for a broad range of layouts, from transporting machine parts to assembling electrical components.
- Designed to withstand environmental conditions, making it ideal for a wide range of applications without having to worry about the installation environment.



Horizontal, multiple-joint type robots

RH-FR SERIES

- With a wealth of operating areas and variations, it is the perfect fit for a variety of applications.
- Highly rigid arms and cutting-edge servo controls provide superb precision and speed.
- Ideal for a wide range of fields, from high-volume production of foodstuffs and pharmaceuticals that demands fast operation, through to assembly work where high levels of precision are required.



■ Vertical, multiple-joint type (RV) series

Type	RV-2FR	RV-2FRL	RV-4FR	RV-4FRL	RV-7FR	RV-7FRL	RV-7FRL	RV-7FRL	RV-13FR	RV-13FRL	RV-20FR	
Maximum load capacity	3kg		4kg		7kg			13kg				20kg
Maximum reach radius	504mm	649mm	515mm	649mm	713mm	908mm	1503mm	1094mm	1388mm	1094mm		

■ Horizontal, multiple-joint type (RH) series

Type	RH-3FRH	RH-6FRH	RH-12FRH	RH-20FRH	RH-3FRHR			
Maximum load capacity	3kg		6kg		12kg	20kg	3kg	
Maximum reach radius	350mm	450mm	550mm	350mm			350mm	
	350mm		450mm	550mm	700mm	850mm	1000mm	
Z stroke	150mm ^{*1}		200mm		350mm		150mm ^{*2}	
			340mm		450mm			

*1 Clean specification: 120mm

*2 Clean and waterproof specification: 120mm

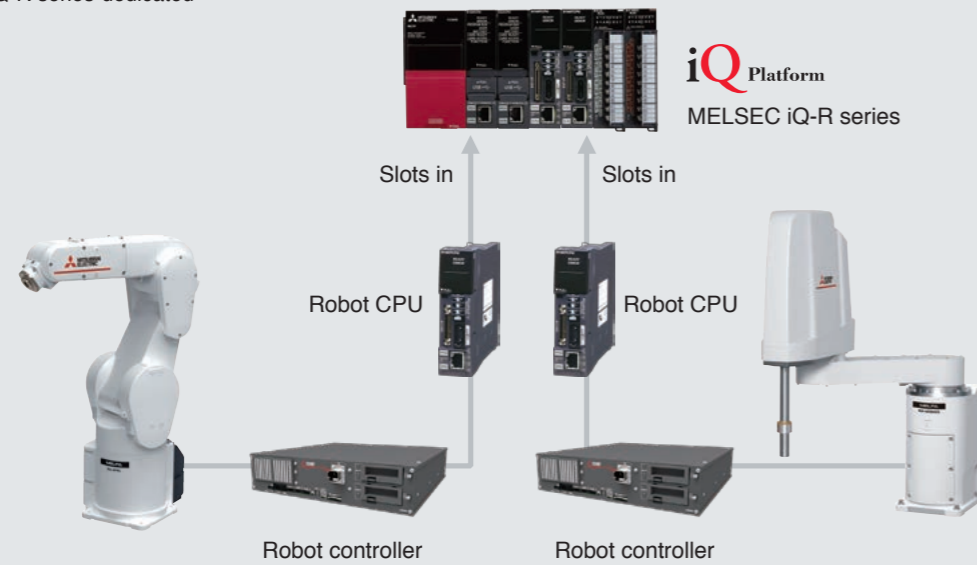


Controller Types

R TYPE Controller

This controller is compatible with the "iQ Platform", which seamlessly integrates the various controllers used in a production site with HMIs, the engineering environment and the network. It uses a multi-CPU configuration that dramatically improves its interaction with FA equipment and also offers highly precise control and fast yet simple information management.

MELSEC iQ-R series-dedicated



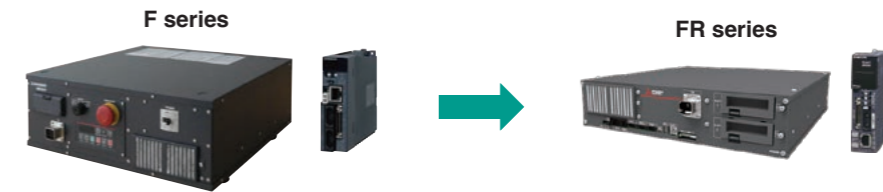
D TYPE Controller

A standalone controller similar to existing models. Enables the construction of cells using robot controllers as the control nucleus. Comes with various interfaces as standard, allowing customers to build a system optimized for their applications.



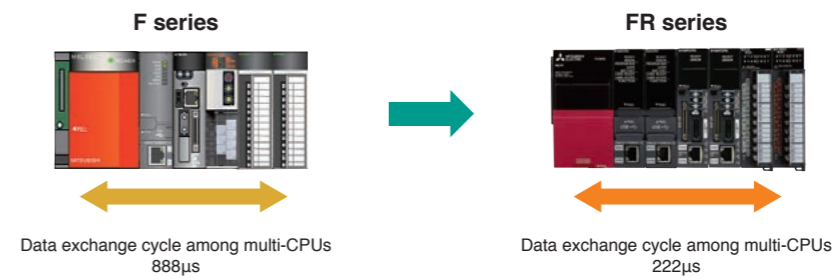
Improved controller performance

Control cycles on FR series controllers take just half the current time, improving robot control performance. The faster calculation speed gives better robot processing capacity and shorter cycle times for improved productivity. Integration with the various sensors also makes precision operation possible.



Control cycle
1/2
compared with current
ME figures

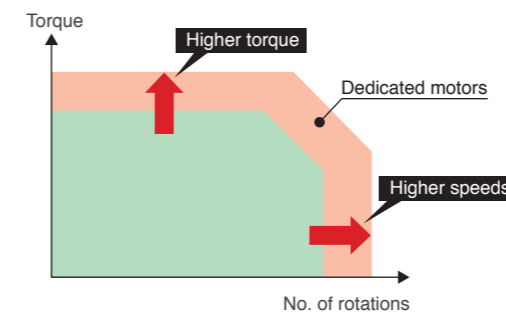
The R Type controllers supported by the MELSEC iQ-R series dramatically improve compatibility with FA equipment, allowing information to be shared mutually and data to be collected and processed. Improved system bus performance has also reduced communication cycles to 1/4 of current levels, allowing shorter cycle times for production facilities.



Communication cycle
1/4
compared with current
ME figures

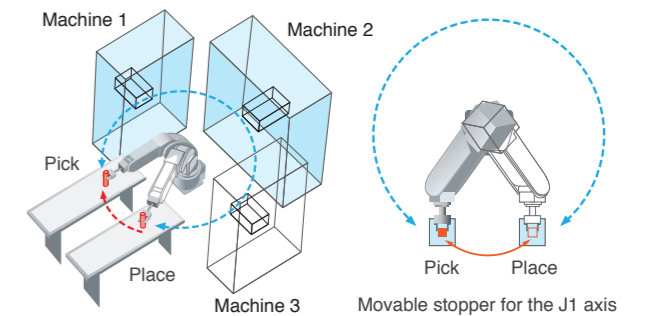
Dedicated motors for high-speed operation

Using motors developed in-house, highly rigid arms and our original drive control technology, these machines are capable of high-torque output at high rotation speeds, giving better operating performance. Their capacity for continuous operation is also improved, with higher productivity due to the shorter cycle times.



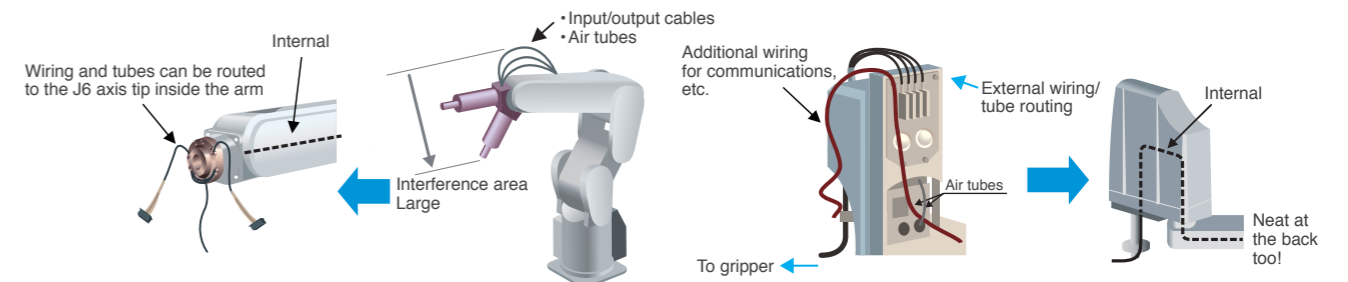
Expanded pivotal operating range

Improved flexibility for robot layout design considerations. Enabling more effective use of access space around the entire perimeter including to the rear. Shortened movement distances, enabling cycle times to be shortened.



Preventing cable interference

Internal wiring channels provided in the tip axis. Allows wiring and tubes to be routed internally up to the gripper mount. By routing the body cables internally, areas where body cables might interfere with peripheral equipment can be minimized and the problem of wiring and tube tangles can be eliminated.



Note) Specify models with internal cabling (-SHxx). The types of cable that can be internally routed may vary depending on the model.