

# MELSERVO-J5 SERIES


MELSERVO-J5 servo products set the standard for servo performance in the world of factory automation. Cutting-edge technology, industry-leading performance, and advanced servo features allow users to unlock unused potential in their machines and factories.




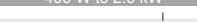


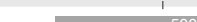
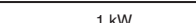
Take advantage of Mitsubishi Electric's complete line of automation products including PLC, HMI, inverters, CNC, and robots to build a complete system that meets your exact needs.



## HIGH PERFORMANCE SERVO MOTORS

The MELSERVO-J5 Series provides industry-leading performance and precision in a compact footprint to meet a wide range of application needs. Featuring an expanded capacity range, single cable connection, and a 26-bit batteryless encoder. Sizing and selection is made easy with our new Motorizer sizing software and our servo selection tool.

 : Future release planned


| Series     | Inertia        | Motor Type | Power Supply  | Capacity   |
|------------|----------------|------------|---|--|
| HK-KT      | Low Inertia    | HK-KT_W    | 200 V AC  |                |
|            |                |            | 400 V AC  |                |
| HK-KT_4-W  |                | 200 V AC   |               |  |
|            |                | 400 V AC   |               |  |
| HK-ST      | Medium Inertia | HK-ST_W    | 200 V AC  |  Up to 11.0 kW |
|            |                |            | 400 V AC  |                |
| HK-SET_4_W |                | 200 V AC   |  Up to 5.5 kW |  |
|            |                | 400 V AC   |               |  |







0.1 kW                      1 kW                      10 kW



## FLEXIBLE SERVO AMPLIFIERS

MELSERVO-J5 Series amplifiers allow for high-speed precise control of MELSERVO-J5 Series motors. Built-in servo functions automatically tune an axis, suppress vibrations, predict failures, and enable easy trouble shooting and maintenance. Choose single, dual, and three axis configurations. This reduces servo system footprint, decreases settling time, simplifies wiring, and reduces the total cost of ownership (TCO) for a Mitsubishi Electric servo system.

 : Future release planned

| Model      | Power Supply | Command Interface              | Capacity   |
|------------|--------------|--------------------------------|--|
| MR-J5-G-RJ | 200 V AC     | CC-Link IE Field TSN           |  Up to 22 kW |
|            | 400 V AC     |                                |              |
| MR-J5W2-G  | 200 V AC     |                                |               |
| MR-J5W3-G  | 400 V AC     |                                |               |
| MR-J5-A    | 200 V AC     | Pulse Train/<br>Analog Voltage |  Up to 22 kW |
|            | 400 V AC     |                                |              |

0.1 kW                      1 kW                      10 kW                      100 kW



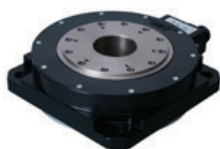
## LINEAR SERVO MOTORS

LM Series linear servo motors are available with three different core types and one core-less option for maximum flexibility.

| Series | Type                    | Max Speed | Capacity      |                 |
|--------|-------------------------|-----------|---------------|-----------------|
| LM-U2  | Coreless                | 2 m/s     | 50 to 800 N   | 150 to 3200 N   |
|        | Core                    | 3 m/s     | 70 to 960 N   | 175 to 2400 N   |
| LM-H3  | Core with Counter Force | 2 m/s     | 120 to 2400 N | 300 to 600 N    |
| LM-K2  | Core, Natural Cooling   | 2 m/s     | 300 to 3000 N | 180 to 180000 N |
| LM-F   | Core, Liquid Cooling    | 2 m/s     | 600 to 6000 N | 180 to 180000 N |

Legend:   
 Rated Torque   
 Maximum Torque

X-axis: 10 N, 100 N, 1,000 N



## DIRECT DRIVE MOTORS

The TM-RFM Series direct drive motor offering fits perfectly into applications requiring low speed and high torque.

| Series                            | Type     | Capacity     |                  |
|-----------------------------------|----------|--------------|------------------|
| TM-RG2M<br>TM-RU2M<br>Low-Profile | Ø 130 mm | 2.2 Nm       | 8.8 Nm           |
|                                   | Ø 180 mm | 4.5 Nm       | 13.5 Nm          |
|                                   | Ø 230 mm | 9 Nm         | 27 Nm            |
| TM-RFM<br>High-Rigidity           | Ø 130 mm | 2 to 6 Nm    | 6 to 18 Nm       |
|                                   | Ø 180 mm | 6 to 18 Nm   | 18 to 24 Nm      |
|                                   | Ø 230 mm | 12 to 72 Nm  | 36 to 216 Nm     |
|                                   | Ø 330 mm | 40 to 240 Nm | 120 Nm to 720 Nm |

X-axis: 1 Nm, 10 Nm, 100 Nm



## MOTION CONTROL

Total system performance, not individual component specifications, leads to maximum performance. Based on this view, the iQ-R Series of motion controllers offers you an ideal solution to maximize your system productivity and meet your performance requirements.

|                                   | MELSEC iQ-R Series   |  |
|-----------------------------------|--|--|
|                                   | RD78GH   | RD78G  |
| Maximum Number of Control Axes    | RD78GHV: 128 axes<br>RD78GHW: 256 axes   | RD78G4: 4 axes<br>RD78G8: 8 axes<br>RD78G16: 16 axes<br>RD78G32: 32 axes<br>RD78G64: 64 axes |
| Minimum Operation Cycle           | 31.25 $\mu$ s  | 62.5 $\mu$ s   |
| Communication Speed               | 1 Gbps   |  |
| Command Interface                 | CC-Link I/TSN  |  |
| Control Mode                      | Positioning Control    Speed Control<br>Torque Control    Synchronous Control<br>Cam Control                             |  |
| Positioning Control               | Linear Interpolation    Circular Interpolation   |  |
| Acceleration/Deceleration Process | Trapezoidal acceleration/ deceleration    Jerk acceleration/ deceleration<br>Acceleration/deceleration time fixed method |  |

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