

The new 6-DOF robots from Mitsubishi: MELFA RV-6S/SL, RV-12SL

Exceptional Power and Reach

Mitsubishi Electric is defining a completely new performance class in the articulated-arm robot market. The current robots with six degrees of freedom combine high payload handling capacity with an exceptionally long reach.



Common platform for maximum compatibility

The current RV-S articulated-arm robots add three new 6-DOF models to Mitsubishi's highly-successful robot line. As in the smaller models, compatibility was a high priority for the design team.

The programming language, options and handling have all been retained to provide an optimum common platform for the entire robot programme.

Higher, stronger, more precise

With handling payloads of up to 12 kg, a truly impressive maximum workspace radius of 1,384 mm and exceptional precision (repeatability: ± 0.05 mm) the new RV-S series is predestined for

handling parts in industrial production and for chaining plant stations.

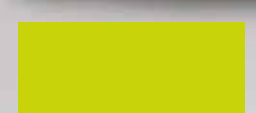
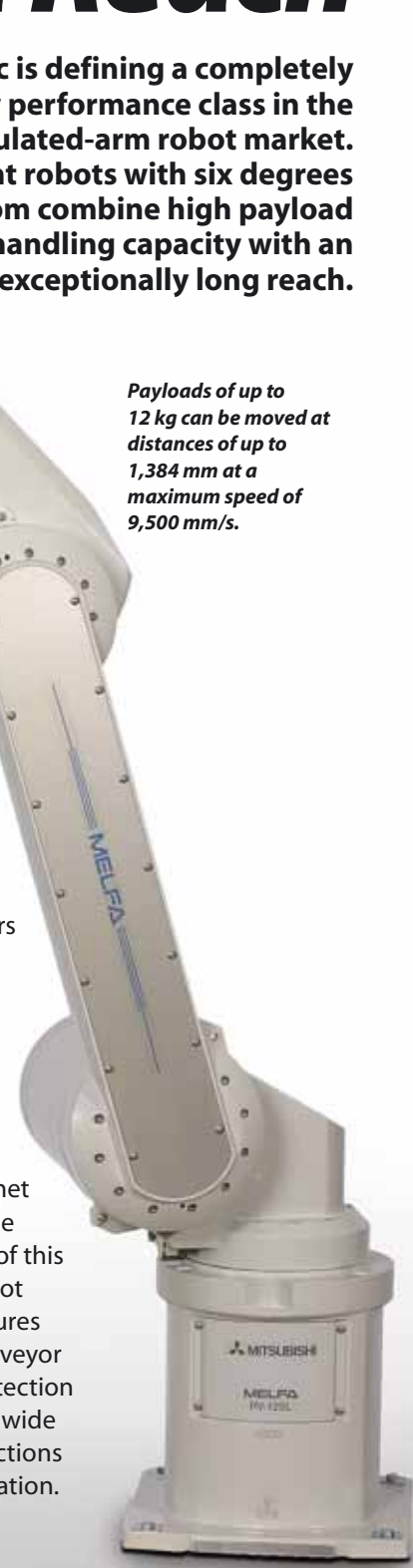
An IP65 protection rating provides the capabilities needed for heavy-duty applications, like those in the motor industry suppliers sector. The state-of-the-art technology used in this series significantly increases robot speed and drastically reduces work cycle times. All the new robots complete the 12-inch test in less than a second!

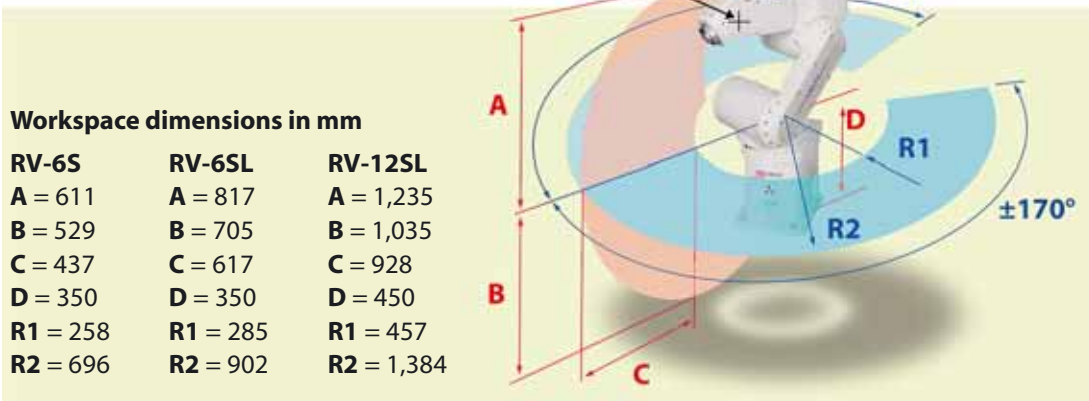
Payloads of up to 12 kg can be moved at distances of up to 1,384 mm at a maximum speed of 9,500 mm/s.

Multifunctional robot controllers

The robots are controlled by the multitasking controllers CR2B or CR3. Connection of any image processing system, control of up to 8 additional axes and high-speed communication with the robot via an Ethernet link are just a few of the impressive highlights of this high-performance robot controllers. Other features include automatic conveyor belt tracking, crash detection without sensors and a wide range of powerful functions for work cycle optimisation.

No matter whether you choose floor, wall or ceiling installation: Your 6 or 12 kg handling payloads are transported with a repeatability of up to ± 0.05 mm.





Key benefits of the CR2B and CR3 robot controllers:

- Redundant safety circle
- Crash detection without sensors
- Can control up to 8 additional axes
- Automatic service date calculation
- Multitasking operating system
- Powerful programming language

| MELFA RV robot | RV-6S | RV-6SL | RV-12SL |
|------------------------------|-------------------------------|------------|------------|
| Degrees of freedom | 6 | 6 | 6 |
| Drive system | AC servo motors, incl. brakes | | |
| Position measuring system | Absolute position encoders | | |
| Max. handling payload (nom.) | 6 (5) kg | 6 (5) kg | 12 (10) kg |
| Working radius (ref. to Q) | 696 mm | 902 mm | 1,384 mm |
| Max. resultant speed | 9,300 mm/s | 8,500 mm/s | 9,500 mm/s |
| Work cycle period (12" test) | 0.4 sec | 0.6 sec | 0.7 sec |
| Repeatability (x/y) | ±0.02 mm | ±0.02 mm | ±0.05 mm |

| Robot controller | CR2B, CR3 |
|-----------------------------------|--|
| Standard functions | Axial, linear or circular interpolation, multitasking (up to 32 tasks), Compliance Control, palletising function, interrupt handling, subroutines, conveyor belt tracking etc. |
| Programming language | MELFA-BASIC IV |
| Programs | 88 |
| I/Os | 32 I / 32 O (expandable to 256 I / 256 O) |
| Options | Interfaces for Ethernet, CC-Link, Profibus/DP and additional axes, RS-232/422 expansion, remote I/Os |
| Safety class (EMERG. OFF circuit) | IV |
| Power supply | RV-6S/SL: 1~ 180-253V AC, RV-12SL: 3~ 400V AC |
| Controller dimensions (W x H x D) | CR2B: 460 x 200 x 400 mm CR3: 450 x 975 x 380 mm |
| Weight | CR2B: 35 kg CR3: 120 kg |

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