



Kawasaki Robot e-News is an electronic bimonthly newsletter that provides our customers with useful information on robotics.

### SEMICON Japan 2011

The 35th SEMICON Japan 2011 will be held at Makuhari Messe December 7 to 9, 2011. Together with SEMICON West (USA) and SEMICON Europe (Germany),

SEMICON Japan stands as one of the three major semiconductor exhibitions. Our company has taken part in this exhibition since 2000. This year we will showcase our latest developments in clean robots for semiconductors and solar panel manufacturing equipment.

If you are planning to visit the exhibition, feel free to stop by the KAWASAKI booth (7D912, Hall 7). (SEMICON Japan <http://www.semiconjapan.org/ja/index.htm>)



### New BX series of spot welding

We are pleased to announce the launch of BX series of dedicated spot welding robots.

The outstanding features of the newly released BX series builds on the strengths of the high-performing, heavy-duty industrial Z series of robots. The BX series is a vertical multi-articulated robot ideal for spot welding of bodies and parts of automobiles. Able to perform at high speeds, the BX series features just the kind of small footprint that automotive and automotive part manufacturers are looking for in spot welding robots. These machines are designed to deliver higher output and shorter production lines for enabling dramatic cuts in equipment costs.

#### High Speed Operating Capability

Boasting an arm that's more than 400 kilograms lighter than its predecessor's arm, a compact, high-output motor, and advanced anti-vibration control technology for quicker point-to-point movement, the BX series outperforms all other robots in its class. In addition to everything else, the welding gun's axial movement has also been optimized. The superior features all add up to about a 25% cut in cycle time.

#### Compact Layout Minimizes Space

A hollow section in the arm that holds the welding gun cable and hoses eliminates interference from peripheral equipment and adjacent robots that are ordinarily a problem in conventional methods, in which the cable and hoses are externally extended. Besides boosting efficiency in pre-production line simulations and post-installation teaching tasks, the compact body takes up 50% less space than comparable models so it can operate in extremely dense or cramped spaces.

The BX family of robots includes two models. There is the high-speed, compact, and easy to use BX100N (max. payload 100 kg, max. reach 2,200 mm) designed to handle the new smaller, lighter weight welding guns. The other is the BX200L (max. payload 200 kg, max. reach, 2,600 mm) that replaces older models and comes with a choice of options to suit welding gun weight and operating layout.



### Robot Motion Monitoring Safety Unit (Cubic-S)

Cubic-S is a safety unit that monitors the robot motion status. If it detects unexpected condition,

it stops the robot.

The Cubic-S uses software to monitor the robot motion status. Unlike conventional mechanical units or electric hardware, it can set restrictions on the XYZ area and monitor the motion speed. The Cubic-S delivers the following benefits:

- Minimizes the motion range of the robot, thereby reducing the area for the safety fence.
- Eliminates a zone limit switch and other mechanical safety devices, which are costly and difficult to install and maintain.
- Selects and restricts the motion range of the robot to fit the working area of operators, thereby eliminating the need for light curtains to monitor the robot.
- Monitors the direction of tools. Stops the robot and issues a stop signal to the laser oscillator when the laser beam deviates from the specified range.
- Provides controlled stop to minimize the impact on work at emergency stop. This is effective for glass handling application.

Cubic-S is certified by third-party certification bodies such as TÜV SÜD and UL.

