

# NEWS RELEASE

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For Immediate Release

## ROBOTS WITH REGENERATIVE BRAKING HELP TO REDUCE ENERGY COSTS

Reducing energy consumption in today's highly competitive industrial environment is likely to be higher on most, if not all of today's manufacturers' agendas, especially due to current higher energy costs. With automation playing an increasingly important role in many applications maximising the efficiency of robots will be of significant interest across all manufacturing sectors.

Features such as **regenerative braking** can make a big difference to the efficiency of robots, recovering braking energy and feeding it back into the power grid without the need for additional hardware. **Motion control** and **Robotics specialists YASKAWA** has developed an important solution for the recovery of robot braking energy and offers this feature as standard on its larger Motoman robot's with a payload upwards of 50kg.

Their latest **YRC1000 robot controls** are able to convert kinetic energy from the down and sideways movements directly into 400V AC at 50 Hz and feed in back into the grid. Depending on the movement pattern of the application, the robot's energy requirements can be significantly reduced.

In applications such as handling, palletising, joining and processing, industrial robots make many down or sideways movements during which the servomotors dissipate energy thereby potentially generating electricity. Up until now, in older or other robot models on the market, the resulting energy has been converted to waste heat by control technology through electrical resistance and lost to the environment. In the Yaskawa solution the electric energy is fed back into the operator network – without the need for additional hardware so it can be re-used.

The extent of savings obviously depends on the specific application and the robots individual movement patterns, although realistically savings ranging from 8 to 25% can be anticipated which may result in annual feed-ins of about 2,800 kWh, equivalent to around 1600 kg CO2 and £1200.

This regenerative braking feature represents a unique technical solution with Yaskawa applying its experience as a leading global manufacturer of drive technology including servo drives and control packages which can be specifically tailored to industrial robots. In addition, the slim and compact design of Motoman robots with low moving masses and fast application of brakes during movement intervals enables the active position control to be switched off when not in use which increase the potential for greater efficiency.

More at: [https://www.yaskawa.eu.com/header-meta/news-events/article/yaskawa-robots-with-regenerative-braking\\_n18865](https://www.yaskawa.eu.com/header-meta/news-events/article/yaskawa-robots-with-regenerative-braking_n18865). ENDS

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