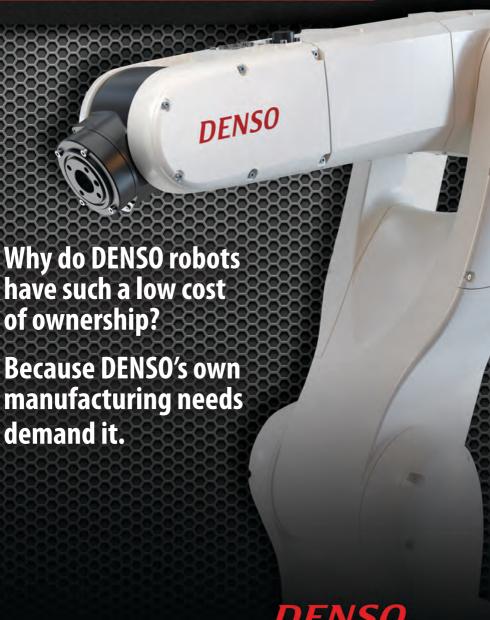
## The DENSO Difference



DENSO robotics



DENSO, a pioneer and industry leader in robot development since the 1960s, is the world's largest manufacturer of small assembly robots, with an installed base of more than 94,000 units.

Unlike most other robot manufacturers, however, DENSO's primary business is not manufacturing robots, but automotive parts.

In fact, DENSO is a leading global supplier of advanced automotive technology, systems and components, employing more than 17,000 of its own robots in its manufacturing facilities.

And that's exactly why DENSO robots are built the way they are. Because in order to succeed in the fiercely competitive automotive sector, DENSO requires its robots to deliver not only the highest levels of productivity, but also the lowest cost of ownership.

#### Low maintenance

DENSO robots are designed to run trouble-free with only minimal scheduled maintenance. This results in significant savings in maintenance costs as well as the cost of production downtime due to overly frequent or lengthy maintenance procedures.

## **Ease of integration**

DENSO's compact robot design saves valuable factory floor space and reduces integration time and costs. Internally routed electrical wires and air lines prevent interference with other equipment, eliminating the cost of replacement due to unnecessary wear and tear.

# The DENSO Difference

# Ease of setup, programming and networking

DENSO robot controllers come preconfigured, substantially cutting down on setup and development time. Programming is made quick and easy by DENSO's offline programming software, which includes 3–D simulation as standard. And networking is only a matter of entering an IP address.

## Low energy consumption

DENSO's lightweight robot arms and energy-efficient motors result in lower energy consumption and therefore lower operating costs.

## **High reliability**

DENSO's use of harmonic-drive motors allows its robots to maintain their high speeds in continuous two- and three-shift duty, year after year, essential to maximizing productivity.

In addition, the motors' high maximum moment of inertia means the robots can handle higher payloads with less strain, reducing wear and thus minimizing the risk of downtime due to repair.

## Long working life

Many robot manufacturers introduce new models every few years and quickly stop supporting older models, which then become obsolete and need to be replaced. In contrast, DENSO

offers support and upgrades for up to 10 years after a robot model has been discontinued. This eliminates the need for unnecessarily premature equipment replacement, greatly reducing capital investment costs

#### Learn more

The robots DENSO has developed to meet the stringent demands of the automotive industry are the same ones it offers its customers.

To learn more about how you can benefit from DENSO's many years of manufacturing experience and expertise, contact DENSO today.





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