

Robokara®

Machining applications



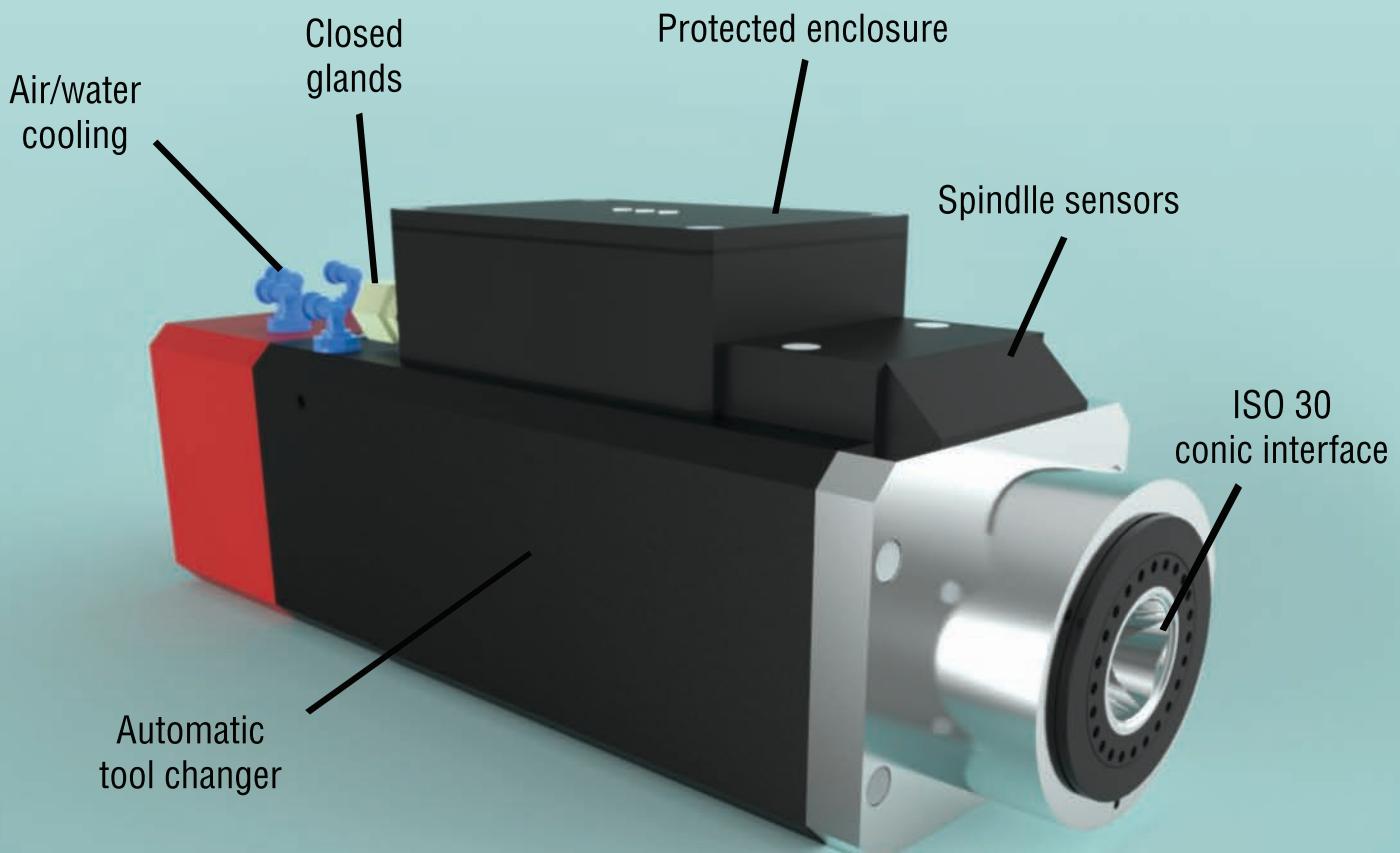
Rich set of features in a small package.

Selection of this spindle model was carefully made by considering its features, power, size, and weight. The most crucial feature is the ability to use tool holders. With this feature, you can use shorter tools, and get the needed length with a ridged tool holder.

This spindle has 3,6 kilowatts (4,8 hp) of power which is enough even for harder materials. The maximum RPM can be selected from three options, 12.000, 18.000 and 24.000. With lower maximum RPM, you get more power to lower speeds. Since the spindle can give feed back to the frequency inverter, you get more torque when using low RPM.

The automatic tool changer operates with compressed air. To make machining more comfortable, the robot can be set with tool changing routine, where the robot would change the tool automatically.

Cooling can be done by compressed air or with water chiller system. This enables an effortless introduction, but reserves more efficient cooling method for demanding conditions.



Tailored package assures high productivity

The design process of the end effector body starts from defying the machining application. Capabilities of the robot and the stock materials affect which materials and components should be used.

The position and angle of the spindle changes the robots reach. With steep angle, you can reach farther in planar parts, but in complex parts more gradual angle gives better results.

Most common materials are Romax, stainless steel and aluminum. Different materials and designs can be used when light weight or rigidity is desired.

The effector body is modular, which gives the possibility to use the same body partially in different setups. This generates savings, if the robot or the spindle is changed afterwards.

All the electronics are tailored to support the selected spindle. When a higher RPM spindle is selected, the frequency inverter needs to match the spindles maximum frequency. Other variables are used voltage, number of phases and the required power.

Commonly used voltages and maximum outlet power is different in other countries. This factor will be also taken into account in the selection process.

The spindle speed can be changed programmatically or by a control knob. Manual control switch for the automatic tool changer can be also installed, if customer prefers to change tools by hand.



Services and software packages.

With right tools, robots can be programmed as easily than normal CNC machines. Mastercam is the world leading CAM-software especially within multi-axis machines. Robotmaster add-on takes care of robot specific features and handles the simulation. With this package you can drive your robots directly.

There are two levels to choose from. First is aimed more of track type of paths, like cut off or similar. The second is more aimed for full multisurface roughing and finishing operations, which is needed for mold making and prototyping.



You can contact us directly or through your local Mastercam or Robotmaster dealer. We are more than happy to reply in any type of end effector requests and other robot specific jobs.

Our contracting chain is capable of producing devices on all sizes and has the experience for most demanding jobs.

Contact us for more details!

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