

■ Handling / Robotik

# Perfect Team

**CNC production in the workshop can be automated at low cost with Sinumerik and industrial robots.**

In the workshop, it must be possible to manufacture individual parts quickly. But it is equally important to be able to produce small and medium-sized series fully automatically. Only modular and reusable solutions that are easy to implement are quickly amortized – and this is extremely important to medium-sized companies.

## Proven combination

The combination of the Sinumerik CNC controller and industrial robots makes the use of robots in series production efficient and economical and has already proven successful in various applications. Sinumerik, the open and flexible CNC control system for almost all technologies and applications, features easy operation and programming and is suitable for up to 31 axes in 10 processing channels. It is optimally enhanced by flexible, robust, and dynamic industrial robots from the world's leading manufacturers. These can also work in confined spaces thanks to their lightweight, slim design.

The use of robots offers many advantages over manned loading and unloading: higher production quality, fatigue-free operation for a consistently high output, and lower error rates. The machines can be utilized optimally without additional personnel and ensure all the necessary flexibility with regard to future part series and supplementary tasks.

## Rapid return on investment

If production conditions change, the appropriate modifications and extensions can be implemented at any time. The machines can also be utilized better with robot automation, even during the night and on weekends. This brings users a rapid return on investment regardless whether they equip lathe

machines, milling machines, grinding machines, or other machine tools with robots. It is also possible to load several machines with one robot and to ensure unmanned operation for this.

Open interfaces allow the easy connection of the industrial robots and Sinumerik. The combination



Sinumerik and industrial robots offer the right solution for every application

always offers the right solution, via a low-cost I/O interface or convenient Profibus link, for new equipment or for a retrofit. A particularly clever trick of our Solution Partners: the robot control is integrated both physically and methodically into the Sinumerik interface in the sense of a "single point of operation." This makes the robot a perfectly integrated part of the machine tool. ■

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