

AUTOMATION SOLUTIONS FROM EMAG

Automated production technology, precisely tailored to the requirements of components and material flow – with this goal in mind, EMAG develops a wide range of automation solutions. As a result, the entire production process becomes faster, less prone to errors, and more cost-effective.

Our wide range of automation systems spans from gantry systems to our TrackMotion and robotic cells, all the way to our stacking cells in the SCS series. Thanks to this range of automation solutions, EMAG can implement a wide variety of manufacturing scenarios.

Automation Systems: Integrated Material Flow for Increased Productivity

Do you want to compensate for labor shortages while simplifying processes and reducing unit production costs at the same time? Our automation solutions provide the ideal foundation for this. It is by no means necessary to commit to a large-scale system from day one. On the contrary: EMAG offers scalable automation solutions, such as EMAG's own TrackMotion or our modular robot cell. Best of all, everything comes from a single source and is provided with precision, tailored to the customer's requirements.



Image without safety fences

TRACKMOTION AUTOMATION SYSTEMS

With TrackMotion, the TransLift moves along a rail system ("track") through the automation aisle between the machines. The TransLift handles the tasks of picking up parts at various heights, as well as positioning and turning the workpiece. This makes it very easy to perform link-ups between machines, whether for parallel processing of identical operations or for sequencing successive operations.

- + **Minimal setup time:** The Track-Motion automation system is ready for use once the workpiece height and part diameter have been entered.
- + **Integration** of measuring devices, marking systems, cleaning machines, and many other functions is possible
- + **Space-saving,** since the automation system is installed entirely behind the machines
- + **Easy to maintain:** The Track-Motion automation system is easily accessible from all sides.
- + **High reliability** thanks to its simple and sturdy design
- + **Short component transport time:** Travel speeds: 150 m/min horizontally and 35 m/min vertically



The raw-parts are supplied via a parts magazine. This magazine has a storage capacity of up to 400 components, depending on the workpiece geometry.

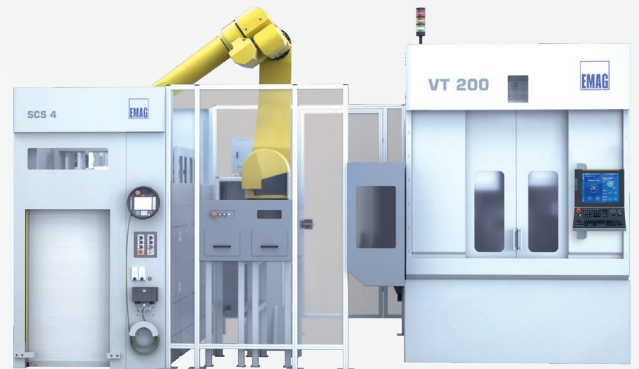


From small to large without retooling. The tool-free NC gripper ensures the fastest possible machine setup.

SCS STACKING CELL

Highly productive production in a confined space – this is what is promised by the new stacking cells of the SCS series

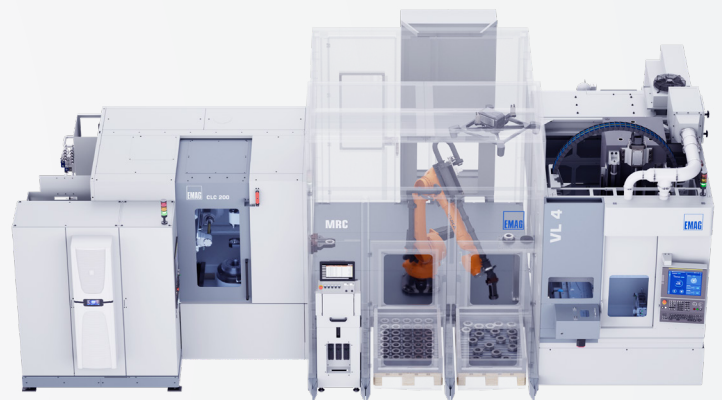
Whether for machining sleeve or shaft components, when combined with SCS stacking cells, EMAG machines become compact, fully automated manufacturing systems capable of operating autonomously for hours on end. While the SCS 1 is designed for smaller components fed on workpiece carriers, the SCS 4 can handle wire baskets up to 600 x 500 mm in size and weighing up to 40 kg. Part handling as well as machine loading and unloading are performed by a robot.



MRC ROBOT CELL: BIN PICKING

Among other things, the modular automation solution enables the loading of machines with raw-parts directly from bulk material.

EMAG's vertical pick-up turning machines are highly automated in their own right; that is, both machining and unloading/loading via the pick-up spindle from the integrated workpiece conveyor are fully automated. The MRC is the perfect complement to this system, increasing autonomy and enabling the integration of secondary processes such as cleaning, measuring, or marking. If necessary, unsorted raw-parts can also be fed via a bin-picking module. A 3D camera system determines the positions of the raw-parts in the feed container. This data is used for the robot's path planning, enabling it to pick the individual components one by one from the container (bin picking) and then place them on the machine's workpiece conveyor.



CRC ROBOT CELLS

Automation of Machine Tools with CRC robot cells – reliable, fast and efficient

The CRC stacking cell is perfectly designed for handling smaller components. Loading occurs using workpiece carriers housed in drawers, each of which can hold up to 45 kg. An integrated robot handles the components as well as the loading and unloading of the machines. The machine operator is only responsible for replacing the workpiece carriers. If necessary, this can be done in parallel with the main machining time to ensure a continuous production flow.

