You want shorter chip-to-chip time.  
You need maximum precision.  
We are your pathway to more productive machines.

→ WE ARE THE ENGINEERS  
OF PRODUCTIVITY.

Machines for maximum productivity
Top speed and maximum precision are the main requirements for machine tools. Both are crucial when it comes to complete machining processes with all operations in one machine as well as for 6-sided processing of parts with few re-clamping operations.

Other requirements machine tool users have these days are for very short chip-to-chip times for maximum system efficiency, integrated parallel processes like tool magazines or loading and unloading, and high machine availability.

As an established supplier in many industry segments like the automotive and Tier 1 supplier industry, Festo develops cross-technology solutions combining pneumatics, electrics and mechatronics. This allows the most appropriate technology to be used for your application.

For more benefits of our solutions:  
www.festo.com/machinetools
Solutions developed in partnership

We are always happy to discuss your requirements with you right from the beginning since that is the only way to create a solution that best fits your machine concept. You can benefit from rapid prototyping as well as from the finite element method (FEM) or simulations and analysis. Our experts pay particular attention to a high level of modularity and open interfaces for all common CNC machinery. We prefer the simplest possible concepts based on configurable products or system solutions, but also use industry segment-specific and customised solutions where necessary.

Fit for operation

Our solutions are characterised by their high availability and easy, cost-effective installation. In addition, they are easy to maintain and compatible with cooling lubricants, while also offering reduced installation space.

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Energy efficiency@Festo
Design your future economically and sustainably with Festo’s perfectly matching energy efficiency concept which incorporates all the phases of your value creation process. Our Energy Saving Services ensure that your system designs are always energy efficient.

Safety@Festo
Reduce risk – think preventively. With our safety-related automation technology you can achieve optimum safety. And be in full compliance with the EC Machinery Directive.

Industry 4.0
Solutions are becoming ever faster, more flexible and more intelligent. Higher availability, energy efficiency, communication between objects – these are the trends in Industry 4.0 and Festo is playing an important role in shaping them.

Engineering tools
Our engineering tools simplify your work and greatly shorten your time to market. You can use our engineering tools like the Handling Guide Online (HGO), FluidDraw or PositioningDrives for your project planning, design and engineering tasks.
An eye on everything: our integrated approach to machine tools

For maximum efficiency and productivity it is not enough to simply improve the core process of the machine tools. Getting the best out of them also involves keeping an eye on the non-productive and setup times as well as on how workpieces are handled. Here is what we can do for you:

### In the machine tool

- Adapting the electromechanical or pneumatic axes and grippers to your specific industry segment to increase their durability.
- Modular system for selecting the right sealing and cushioning components in accordance with your particular requirements for cooling lubricants and chips.
- Suitable cushioning systems for increasing the speed of pneumatic drives in hatches and doors.

### Functions

- Stopping, gripping and clamping functions
- Contact and tool seating monitoring
- Handling solutions for loading and unloading
- Automating loading doors, loading hatches and tool change flaps
- Weight compensation for vertical machining axes

### On the machine tool

Considerably shorten your non-productive and setup times on the machine!

- Automated background magazines and tool changers enable you to realise smaller batch sizes more economically.
- Standard and customised handling systems for loading and unloading.
- Solutions for automatic door applications with corresponding safety technology.

### Functions

- Tool changers, background magazines
- Compressed air preparation, sealing air
- Stopping, gripping and clamping functions
- Handling solutions for loading and unloading

### Around the machine tool

- Components and ready-to-install subsystems for a speedy completion of your automation tasks: simply Festo plug and work.
- Complete system solutions for handling workpieces – from loading the unmachined part to removing the finished workpiece. With Festo, you can ensure all your handling operations will be efficient, precise and fast.

### Functions

- Solutions for automating cooling and lubrication circuits
- Interlinking transfer systems
- Handling solutions for loading and unloading
- Tool changers, background magazines
<table>
<thead>
<tr>
<th>Safety @Festo</th>
<th>Industry 4.0 @Festo</th>
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<tbody>
<tr>
<td><strong>Sealed gripper technology</strong> for parallel grippers and three-point grippers</td>
<td><strong>Weight balancing cylinder</strong>, optionally with safety brake, for compensating the weight force of vertical axes</td>
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<tr>
<td><strong>Modular kit to adapt pneumatic drives and electromechanical axes</strong></td>
<td><strong>Rotary/lifting module EHMB</strong>: compact, space-saving mechatronic unit, e.g. for unloading parts in lathes with a bar feeding system</td>
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<tr>
<td><strong>Modular sealing kit for the optimum combination of sturdy scrapers and chemical-resistant seals</strong></td>
<td><strong>Rotary/lifting module EHMB</strong>: compact, space-saving mechatronic unit, e.g. for unloading parts in lathes with a bar feeding system</td>
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<th>Contact monitoring: air gap sensor SOPA for sensing in the µm range</th>
<th>Valve technology: standard valve terminal VTSA</th>
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<td><strong>Pneumatic afterblow module</strong></td>
<td><strong>Function-optimised valve terminal</strong>: VUVS, VUVG</td>
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<tr>
<td><strong>Pulse blow valve</strong>: for air and energy savings of up to 50% through precisely timed activation of blow valves</td>
<td><strong>Sensor technology</strong>: sensors, proximity sensors and vision systems that match your application</td>
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<tr>
<td><strong>Compressed air preparation</strong>: MS series, also for sealing air applications, as well as high-speed spindles or linear encoders</td>
<td><strong>Industry 4.0 @Festo</strong></td>
</tr>
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| **Complete systems such as complete tool change/storage systems, loading/unloading systems or alignment/reversing systems** | **Process automation assemblies for cooling and lubrication circuits consisting of ball valves, actuators, Namur valves and sensor boxes.** |
Maximum productivity is a question of ambition
Do you share this attitude? We will be glad to help you achieve this goal – through our four outstanding qualities:
• Security • Efficiency • Simplicity • Competency

We are the engineers of productivity.

Discover new dimensions for your company:
→ www.festo.com/whyfesto

Some highlights from our product range

**Rack and pinion Z-axis module EHMH**
- Ready-to-install module with options that meet your requirements for workpiece handling using gantries
- Easily integrated into our handling solutions – Festo plug and work

**Modular kit to adapt with modified pneumatic drives and electro-mechanical axes**
For applications in contact with coolants, lubricants and chips

**Pneumatic afterblow module**
The compressed air is supplied until the timer switches off. The valve is not supplied with power during the delay time. The energy is buffered or stored internally. This solution is found in current lists of approved components for the automotive industry since it conforms to ISO-1.