

***powertrain*hone**  
Precision Honing Machines



 **Advanced Honing Technology**

Maximum productivity

The innovative powertrainhone machine system can be applied to all known honing processes. In addition to conventional honing, innovative processes such as form honing can also be handled. The high processing and cutting speeds, and the optimised workflows significantly boost productivity even further. The modular concept provides the highest levels of flexibility in configuring modern production solutions – for stand-alone machines as well as

integrated production lines. Standard function modules combined with customised solutions guarantee optimal results.

Optimally equipped for the future

The compact spindle unit with a powerful stroke and spindle drive stands for the highest level of flexibility. This unit satisfies a broad spectrum of applications, with diameters ranging from 68 to 105 mm. The integrated electromechanical feeding unit with force control (EMZ-F)

ensures that the process to reproduce the desired results is capable.

The powerful tool changing system offers you the best solution for a range of part types, as well as tool changing as a result of wear or process modifications. Typical areas of applications are all types of car crankcases – meaning that inline blocks or V-blocks can be optimally processed, not to mention crank bores.

High precision technology with exclusive designer looks

Another highlight of the current product line is the design which optimally combines innovative technologies with a stylish appearance. Outstanding features such as a modern operator panel and a large graphic interface provide for an excellent overview and optimum operating conditions. The new control panel also gives a stylish design accent. The combination of state-of-the-art technology and exclusive design set

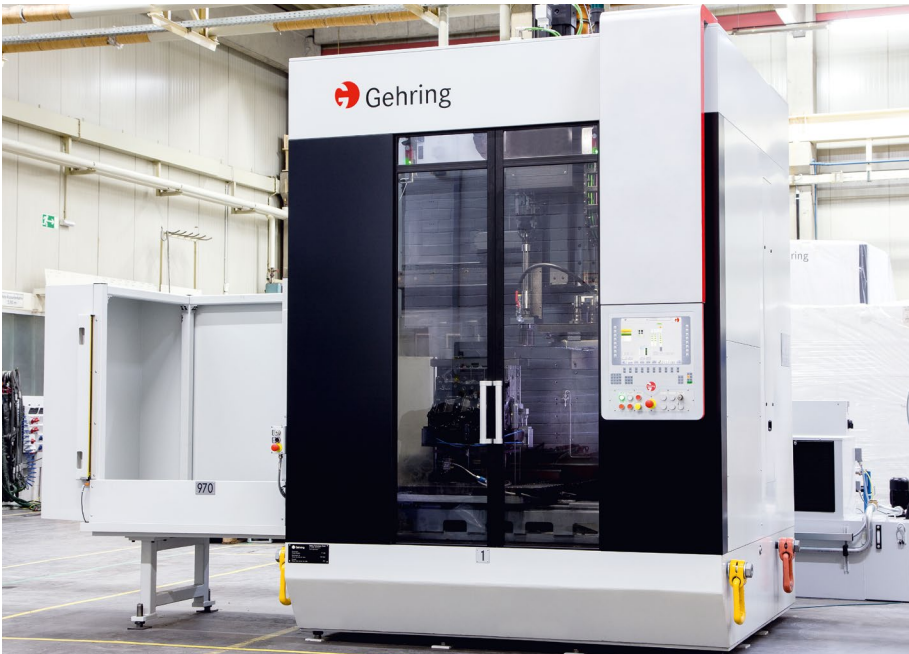
the course for Gehring’s continued success in future.

Modular Machine Systems

The size of the standard module which is exclusively developed for honing inline cylinder blocks is significantly reduced. The compact construction gives the machine a smaller footprint, and with its attached control cabinet, it is optimised for shipment. The PT 600 comes with an optional automatic tool changer for up to 6 tools.

Complete solutions

Whether you require a conveyor, gantry or shuttle, we can offer you the most suitable configuration depending on your application. You can procure the complete production line including a Gehring automation system from a single source. We can optimally coordinate the machine, automation, gauging systems and the tooling needed for a seamless solution.



PT-module with shuttle



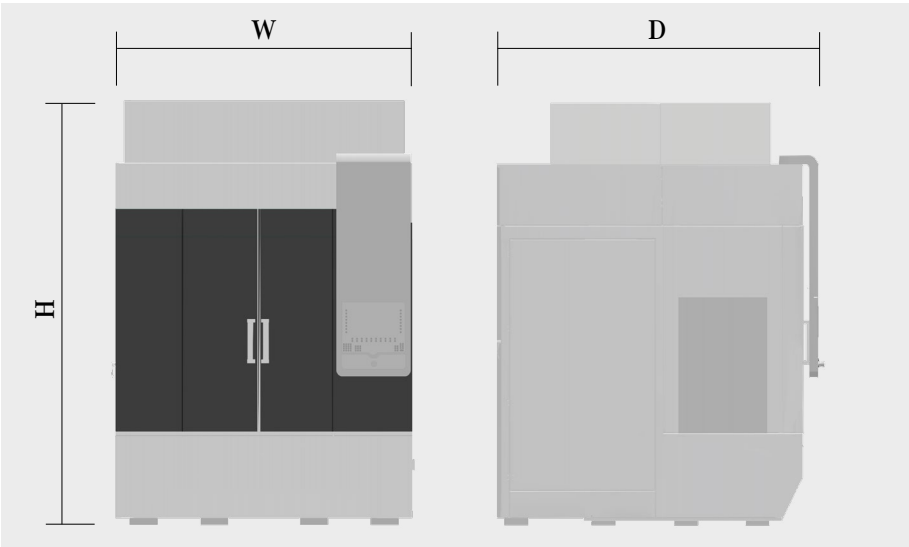
PT-module connected via Gehring conveyor



Tool changing system in a PT-module

| Technical data         |       | PT 600 (module)            | PT 600 (transfer)      |
|------------------------|-------|----------------------------|------------------------|
| Stroke length          | mm    | 600                        | 600                    |
| Diameter, nominal      | mm    | 68 - 105                   | 68 - 105               |
| Spindle drive          |       | Servomotor                 | Servomotor             |
| RPM, max               | 1/min | 600                        | 600                    |
| Torque                 | Nm    | max.140                    | max. 140               |
| Stroke drive           | kW    | Ball screw                 | Ball screw             |
| Stroke speed, max      | m/min | 40                         | 40                     |
| Required space (WxDxH) | m/s²  | 2400 x 2200 x 3900         | model-based x 4900 (H) |
| Weight, net            | mm    | approx. 11                 | Depending on the model |
| Noise emissions        | t     | < 75 dB(A)                 | < 75 dB(A)             |
| Honing control         |       | Gehring Control Unit (GCU) |                        |

Subject to technical changes and variations in design and configuration.



Honing unit in a PT-module



*From the left: PT-transfer, PT-module*

### Sophisticated technology

- independently moveable honing spindles
- rigid spindle bearings
- automatic tool changing system for up to 12 tools
- short cycle times thanks to high cutting speeds
- uses standard function groups/subassemblies
- for processing thermally-coated function surfaces
- high stock removal rate
- high switch-off accuracy
- optional inner cooling of the tool
- spindle drive via servomotors
- latest hone control technology with simple, user-friendly operating interface
- direct force-controlled electro-mechanical feeding systems
- direct in-process gauging system for dimension and form control

### Easy configuration

- transfer system solution or modular integrated stand-alone modules
- flexible number of spindles
- for inline and V cylinder blocks
- with automatic tool change system
- compatible with a range of Gehring loading and unloading systems (conveyor, gantry, robots, etc.)

### Precision with the Gehring tool system

Precision and longevity are the hallmarks of our tooling systems. Our tools guarantee the highest levels of efficiency, optimised surfaces, and the best possible bore geometries.

Profit from the Gehring tool system which is especially customised for each machine.



*PT honing tool with connecting piece*

**Trust in the technology leader with many years' experience and global presence!  
Innovative technology combined with an economical mindset set us apart.**