

*powertrain*hone  
Precision Honing Machines



## Maximum productivity

The innovative powertrainhone machine concept can be applied to all known honing processes. In addition to conventional honing, innovative processes such as position 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

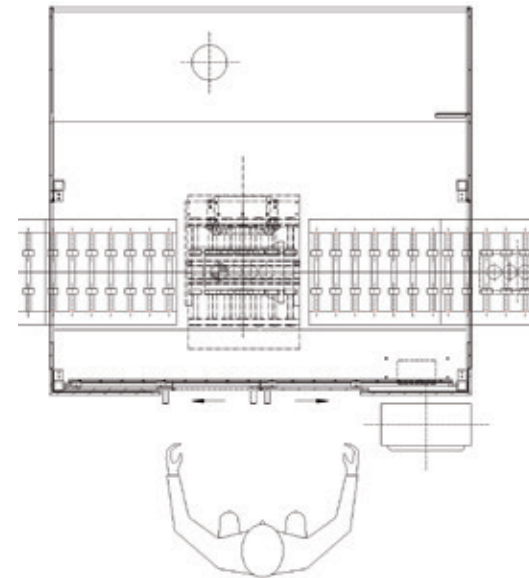
integrated production lines. Standard function modules combined with customised solutions guarantee optimal results.

## Optimally equipped for the future

The compact spindle unit with a powerful stroke and efficient spindle drive stands for the highest levels of flexibility. The different sizes of the models satisfy 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 fast and efficient tool change system, with its short tool change times, provides you with 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.



*PT-module*

*PT-module with linkage*

Technical data		PT 600 (module)	PT 600 (transfer)	PT 500 K (module)
Stroke length	mm	780	780	500
Diameter, nominal	mm	68 - 105	68 - 105	68 - 105
Spindle drive		Servomotor	Servomotor	Servomotor
RPM, max	1/min	600	600	2000
Torque	Nm	max.140	max. 140	max 90
Stroke drive	kW	Ball screw	Ball screw	Ball screw
Stroke speed, max	m/min	40	40	40
Stroke acceleration, max	m/s <sup>2</sup>	30	30	15
Required space (WxDxH)	mm	2400 x 2200 x 3900	model-based x 4900 (H)	model-based x 4280 (H)
Weight, net	t	approx. 11	Depending on the model	11
Noise emissions		< 75 dB(A)	< 75 dB(A)	< 75 dB(A)
Honing control		Gehring GCU 2.3		

*Subject to technical changes and variations in design and configuration.*

## High precision technology with exclusive designer looks

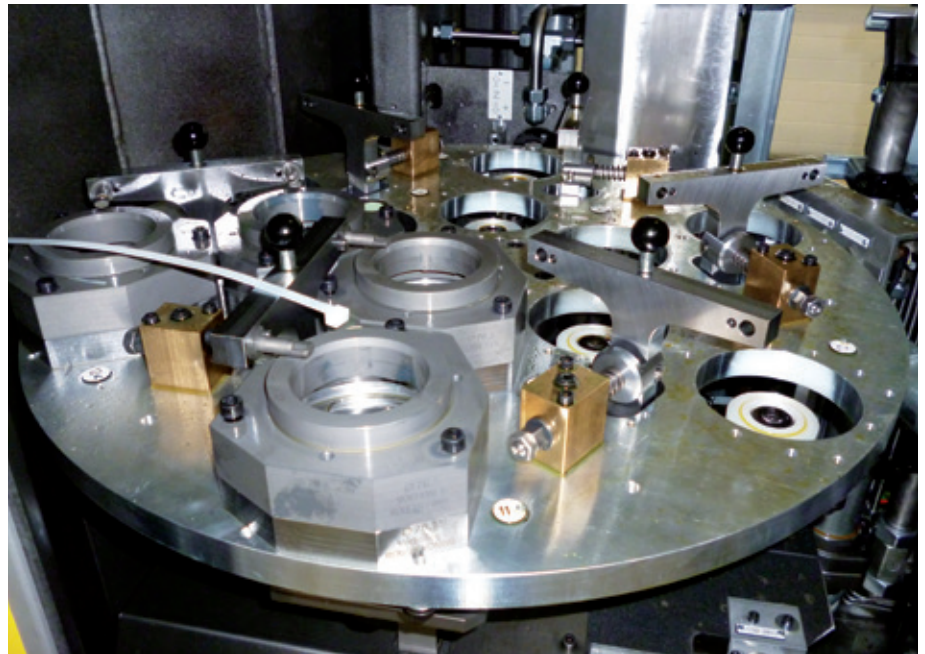
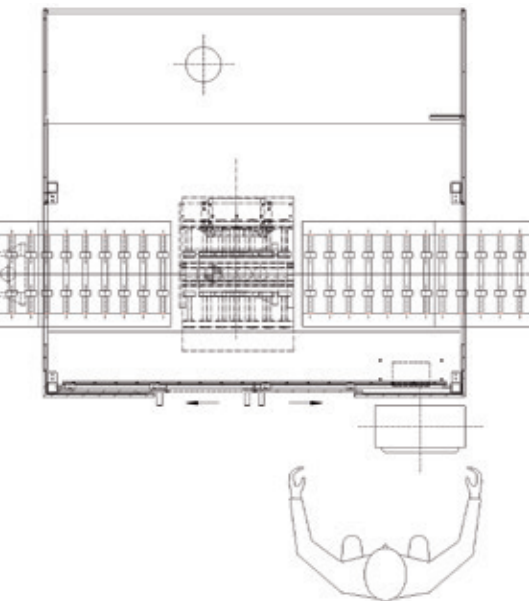
Another highlight of the current product line is the design which optimally combines innovative technologies with a stylish appearance. Outstanding features such as an extremely flat operator panel and a large graphic interface provide for an excellent overview and optimum operating conditions. The new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

technology and exclusive design set the course for Gehring's continued success in future.

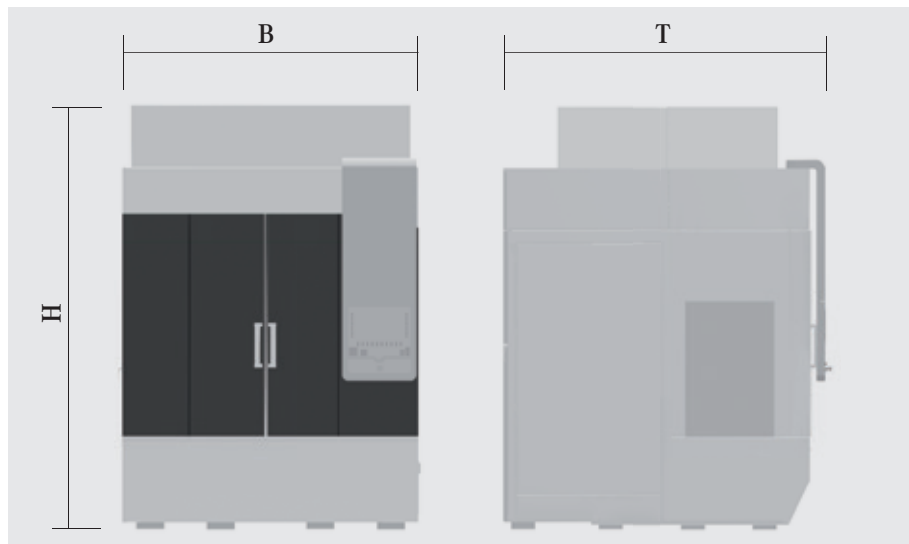
### PT 600

The PT 600 is the most recent addition to this product line. For customers who do not require position honing, this new machine is an interesting alternative. As no power needs to be kept in reserve for position honing, the PT 600 machine can operate with less energy. The size of the machine 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.



*Tool changer for PT-module and transfer with up to 12 tools*



*Honing unit in a PT-module*



From the left: PT-transfer, PT-module

### Sophisticated technology

- independently moveable honing spindles
- rigid spindle bearings (e.g. for position honing)
- 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
- stock removal of up to 0.5 mm in 20 seconds
- switch-off accuracy of approx. 10 µm when removing 0.4 mm
- internal coolant supply through the honing 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

- single modules
- 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 loading and unloading systems (roller belts, portal loaders, robots, etc.)

### Precision with the Gehring tool concept

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

Profit from the Gehring tool concept 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.**