

*deep*hone
Horizontal Honing Machines



Maximized efficiency and productivity without compromise

Gehring offers most modern technology in a new exclusive design. The deephone series from the Gehring horizontal honing machine product line combines maximum efficiency with a balanced, compact design.

This allows for an efficient and economical inner as well as outer honing of e.g. precision or telescope cylinders. Once put into operation, the machine stands out for its high productivity and availability. The overall package is optimally rounded off by very short delivery times for machines and tooling.

Finishing with lowest piece costs

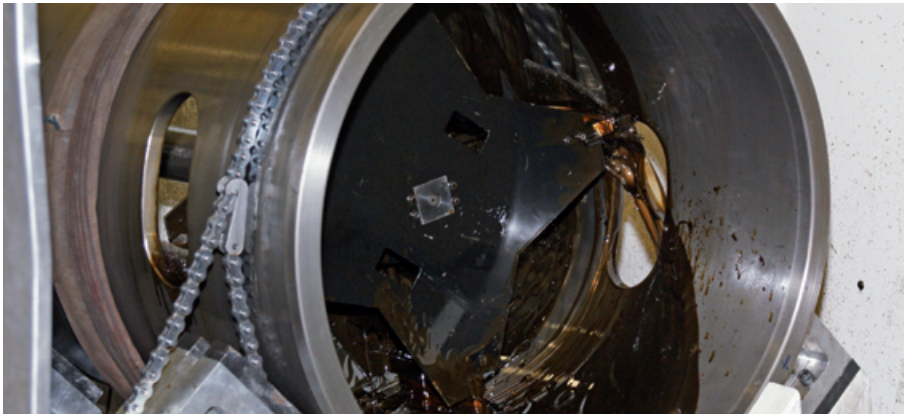
High performance drive systems and a high-precision feeding unit ensure a perfect configuration for the lowest piece costs in your production line. The spindle drive is powered by a high performance servomotor with max. 9.7 kW.

A 3-step transmission unit with an range of max. 375 rpm covers a large operating range. The stroke drive is powered by a servomotor and a high-performance chain. A position sensor along the entire stroke length guarantees precise stroke reversal and maximum process capability.

Inner and outer honing on one machine

The deephone offers a completely new concept which makes it possible to hone inside and outside on one machine. Instead of external grinding you can achieve higher qualities and better tribological characteristics by honing.

A larger spectrum of material can be processed. The machining of aluminium cylinders with thin walls for example is no longer a big challenge. If you take a look at the economics, the invest for a deephone lies under the one of a comparable grinding machine.



Bushing while inner honing



Outer honing

Technical data		Inner honing					Outer honing				
Diameter	mm	25-1000					100-300				
Spindle drive	kW	5.5 (9.7 max.)					9.7				
RPM	1/min	10-375					10-375				
Stroke drive	kW	4.7 (9.7 max.)					5				
Stroke speed, max	m/min	40					40				
Feeding system	kW	0.4					0.9				
Stock removal rate up to	cm ³ /h	approx. 1400 (depending on material and part geometry)					approx. 800 (depending on material and part geometry)				
Stroke length	mm	2000	3000	4000	5000	6000	8000	10000	12000	15000	
Space required (D x H)	cm	160 x 200 (with coolant unit 240 x 200)									
Space required (W)	cm	825	1025	1225	1425	1625	2025	2425	2825	3425	
Weight, net	kg	3500	3900	4500	5100	6300	7200	9000	11000	14000	

Subject to technical changes and variations in design and configuration.

Easy operation thanks to the program assistant

The simple control increases the user friendliness. The programme assistant considerably eases machine operation for honing newcomers as well as experienced operators. After entering the relevant parameters of the component, material and tool, the process and stock removal can be defined, and honing can be started right after the tool has been positioned. The stroke position and all the other relevant parameters for machining the component are automatically calculated.

Precision with the Gehring tool system

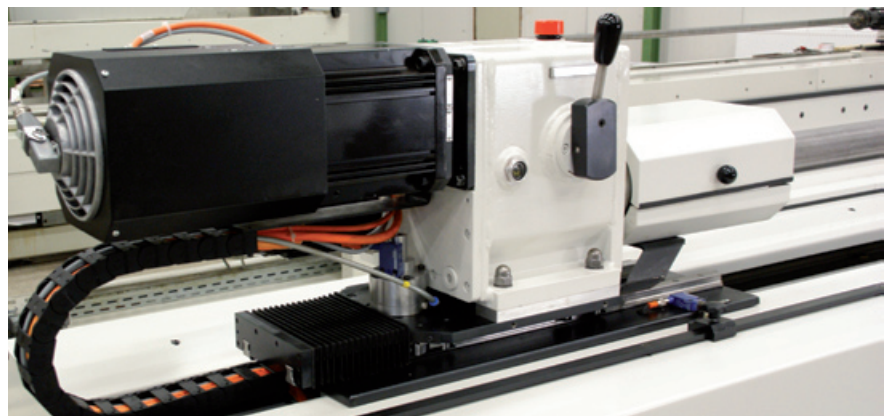
Precision and longevity are the hallmarks of our tooling systems. Equipped with abrasives customised for the specific applications, our tool systems guarantee the highest level of efficiency, optimised surfaces, and the best possible bore geometries. A high degree of standardization results in reduced production costs - an additional customer benefit in respect of economics in the application. Profit from the Gehring tool system which is especially customized for each machine.

Optimally equipped for flexible production right from the start

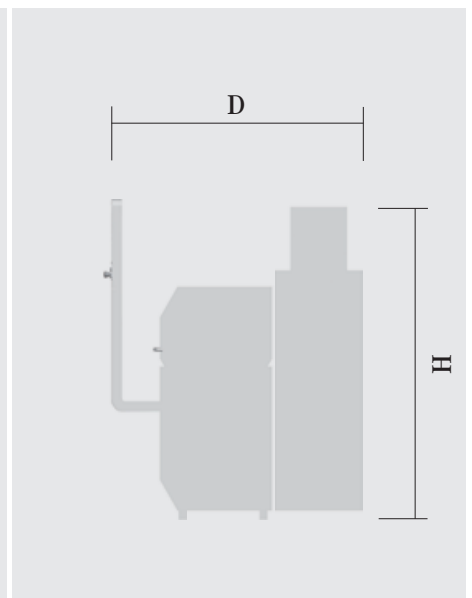
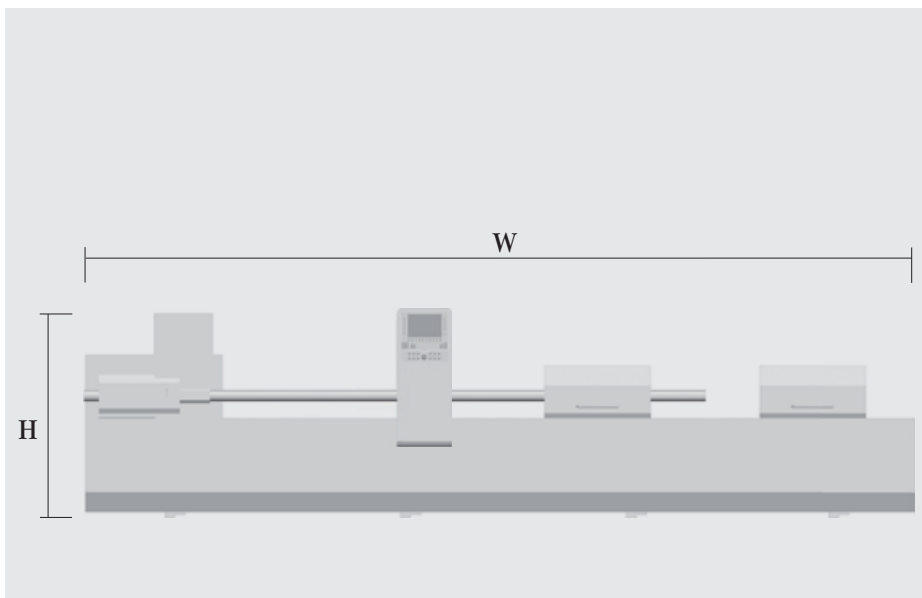
- graphical operator interface for fast and easy control
- electro-mechanical feeding system
- flexible component clamping devices with prism holders and clamping chain for parts with external diameters up to 360 mm
- manual retractable tool support
- automatic honing process workflow
- magnetic filter with 60 l/min flow rate
- infinitely variable rpm and stroke speed
- modern safety systems such as safety on Board and DMS



Gehring Operator Panel



Spindle drive with integrated tool feeding unit for highest efficiency

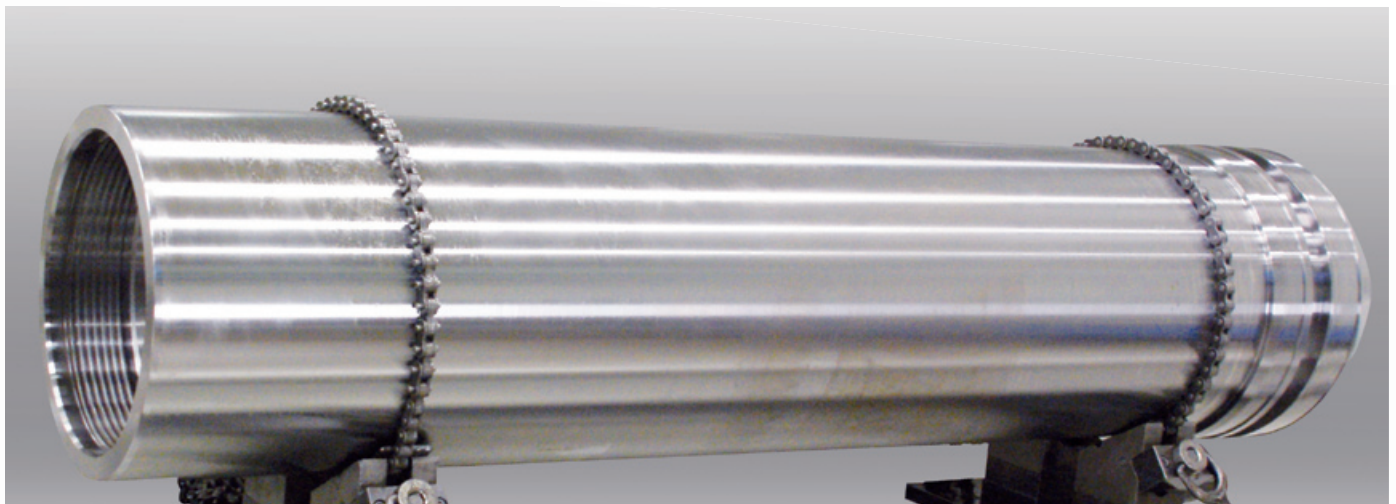




Optional equipment

Upgrade the deephone to meet your specific requirements:

- enlarge the clamping range for external part diameters of up to 1,200 mm
- special clamping tools
- conical honing using the program selection on the Gehring Operator Panel (GOP)
- application-specific cooling and filtering systems for honing oil or emulsion
- automatic retractable tool support
- controls for automatic shape correction
- reverse turning direction for maximum stock removal and optimum bore geometries
- gauge regulation for automatic dimension control
- use of all standard tooling systems on the market
- safety installations as complete perimeter guarding or with light barrier technology
- software upgrade with set up assistant via database and work process documentation



Cylinder liner

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