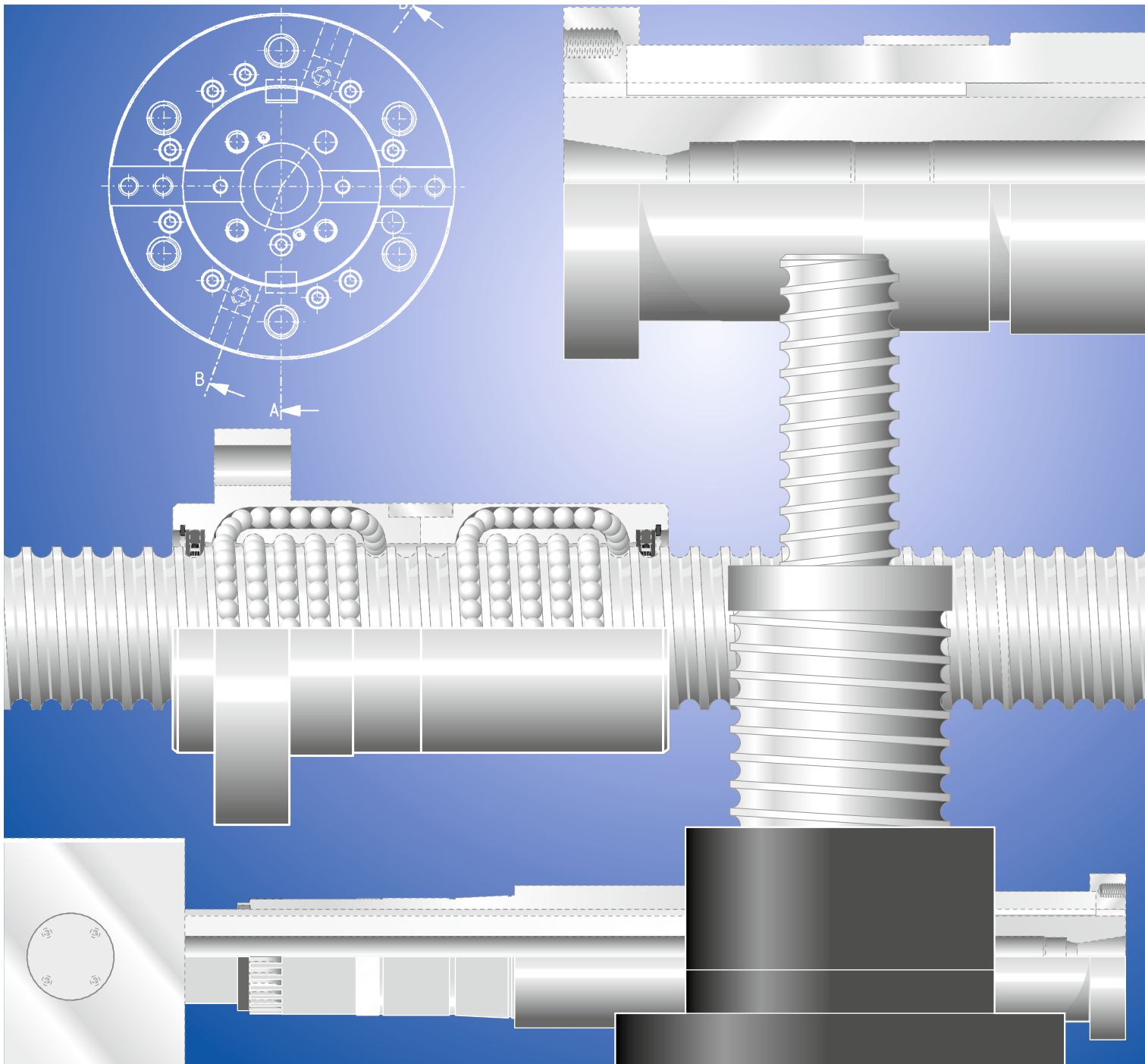




**A.MANNESMANN**  
A member of  
**SCHNEEBERGER** linear technology

# Company Profile





## The Company

A.MANNESMANN MASCHINEN-FABRIK is specialist in the production of geometric demanding, high precision machine components. Founded in 1796 and now with 180 employees, the company produces components with high degrees of slenderness in lengths up to 15 m. The unit of measurement for the manufacture tolerances – even with large dimensions – is the  $\mu\text{m}$  (micrometer).

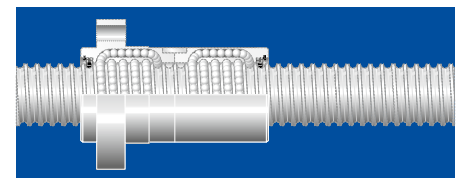
AM Machine Components are used in machines and plants of different industrial branches, e. g. wind energy

and solar technology, generators, semiconductor industry, laser technology, automotive industry, aircraft and space, medical technology, oil industry, marine engineering, compressors, rolling mills and nuclear power plants.

A.MANNESMANN manufactures ball screws, boring and milling spindles, grinding spindles as well as complete spindle assemblies, quills, drive shafts, spline shafts, threaded spindles, reel axles, cutting rollers, piston rods, compressor shafts, control shafts and much more.

All operation steps are executed in our own factory, including thermal treatments, such as stress-relief heat treatment and nitriding in vertical furnaces. The quality management system is certified according to DIN EN ISO 9001:2000.

The excellently trained and motivated staff of AM works with most modern machines and information systems: expert competence for customers' advantage!



**The continuous runner – even after more than 20 millions revolutions wear-free!**

e.g. 63 x 40 x 1,000 mm travel  
n = 3,730 rpm  
n x d = 235,000  
a = 20 m/s<sup>2</sup>  
v = 150 m/min

AM  
high performance  
ball screws

### High Performance Ball Screws

AM high performance ball screws achieve speeds up to 150 m/min, accelerations of 20 m/s<sup>2</sup> and characteristic values (n x d) of more than 200,000. AM ball screws are marked by their long service life and have been proved in practice for many years. A.MANNESMANN supports its customers during new projects with consultancy advice from the beginning, on a absolutely confidential basis. The support comprises suggestions concerning the functional, manufacturing and cost optimization of the design.

Thanks to the ingenious design, the best possible selection of materials and the extreme high precision of its production, AM high performance ball screws achieve maximum axial stiffness and positioning accuracy at lowest torque and minimum operation temperatures. The very hard and high-precision ground surfaces of the nut and spindle result in a very strong resistance to wear and guarantee long years of trouble-free operation.

## Boring Spindle Assemblies

Based on its know-how A.MANNESMANN has in recent years pushed ahead with the production of external driven boring spindle assemblies (without integrated electric motor) in close cooperation with customers. This was a substantial contribution to the further development of classical boring machines into new high-dynamic boring mills. Well-known machine producers use this know-how for their customers' benefit and for their own market success.

The boring spindle assemblies are marked by their very smooth running, highest precision and long operating life.

A typical example is a boring spindle set with a boring spindle 160 x 2,800 mm (diameter x length) and a hollow spindle 260 x 1,355 mm, balancing quality < G1, revolutions up to 5,000 rpm and more. Both components are deep nitrided, ground and lapped, paired on lubrication film thickness within a range of 4 to 5  $\mu\text{m}$  gap. The machining of the components by a special grinding technology results in low heat generation during operation and enables highest speeds and dynamics.

A.MANNESMANN also offers the machining of the ram, belonging to the boring spindle assembly. In this way the customer gets a complete assembly to be mounted in his machine at clearly defined interface points. In the production of rams A.MANNESMANN is specialized in the inside grinding of bearing seats in depths up to 2,500 mm.

## Telescopic Ball Screws

As a producer of telescopic ball screws A.MANNESMANN has a further unique marketing position. Telescopic ball screws are based on the proven AM ball screw technology and have two or more stages, depending on the required stroke proportion (maximum stroke in relation to the total length in retracted position). Besides the high stroke proportion and the resulting extremely compact design, AM telescopic feed screws are characterized by the prevention of backlash, low frictional torques, high efficiency, high stiffness, smooth start-up as well

as great quietness of operation and long-term precision. The accuracy of the positioning is in the micrometer area.

A major advantage of AM telescopic feed screws is the possibility of combination with numerical control units of machining centers and their measuring systems. The automation of set-up and positioning processes by AM telescopic ball screws increases the process reliability and also reduces set-up times permanently.



AM Boring  
spindle assemblies

The characteristic performance values of AM products offer users the possibility of realizing highly dynamic machining processes in the design of machines, in an economical way for the benefit of customers.

AM Telescopic  
ball screws



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