

A double combination

WITTENSTEIN combines TK+ with ball screw drive / Powerful solution for compact machines

High-performance, integrated and versatile – those are the key adjectives which describe WITTENSTEIN's new ball screw solution. This pairing of the TK+ hypoid right angle gearhead with a high-quality ball screw drive is mainly used to carry out stroke movements, for positioning, feeding or pressing in the machine building industry in particular. The aim is to translate rotary and high-precision movements into linear movements. This unique combination of motor mounting, gear ratio, axial bearing with built-on assemblies and ball screw drive is perfect for this purpose. The combination of a TK+ with ball screw is available in sizes TK+ 010, TK+ 025, TK+ 050 and TK+ 110. The optimal alignment of the individual components makes for a powerful and versatile drive solution as well as unbeatable all-round system performance. The high power density of the TK+ linear actuator permits a highly flexible machine design.

High-performance system solution

WITTENSTEIN's new combination is especially recommended for customers who are looking for a ball screw system solution. WITTENSTEIN AG's biggest Business Unit is able to draw the components for the entire drive train from a single source and calculate customised designs using the cymex® 3.1 sizing tool. The heart of the combination consists of a TK+ servo right angle gearhead that can be integrated with an intermediate flange, a spindle nut, a motor mounting and a lead screw to form a compact linear actuator.

Important detail: the alpha intermediate flange

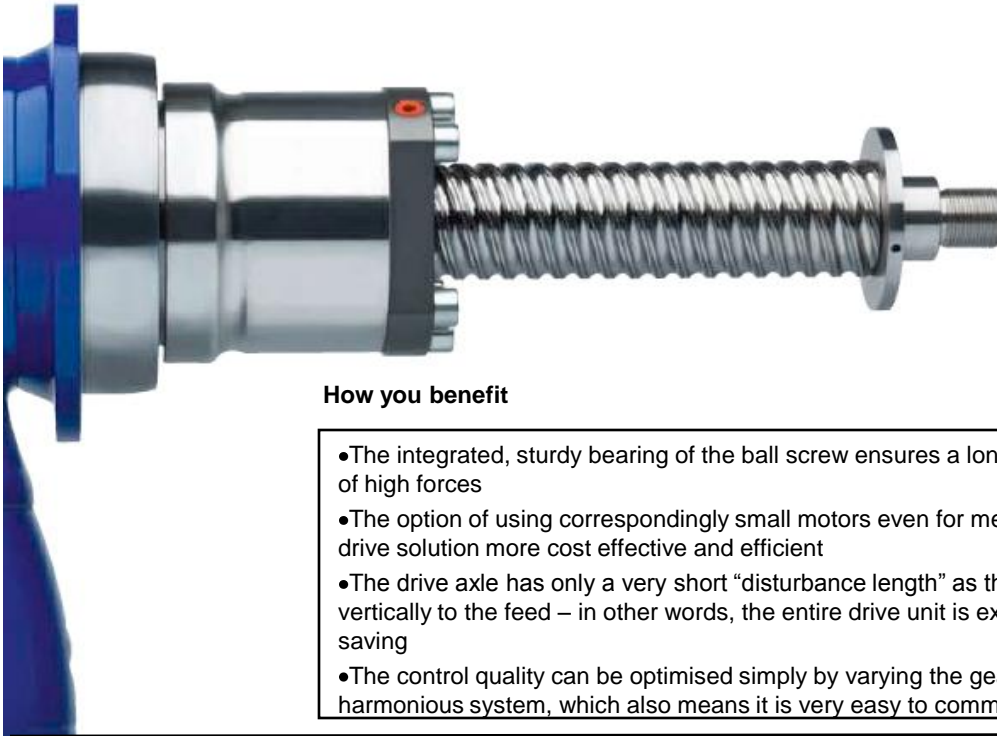
One particularly interesting design detail is the way the spindle nut is connected to the gearhead's output flange by means of an intermediate flange that is assembled and aligned on modern assembly equipment. These components prolong the service life of the entire configuration and ensure a high level of reliability in day-to-day operation by preventing the occurrence of radial loads on the ball screw drive.

The exceptionally smooth running of the unit produced by this novel solution reliably avoids vibrations throughout the entire machine.

TK+ and ballscrew: New system solution for ball screws WITTENSTEIN has again gone back to the drawing board to come up with a perfect combined TK+ and ball screw system solution for spindle drives. The new system launched on the market offers unparalleled reliability and flexibility.



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How you benefit

- The integrated, sturdy bearing of the ball screw ensures a long service life and the absorption of high forces
- The option of using correspondingly small motors even for medium-to-high loads makes the drive solution more cost effective and efficient
- The drive axle has only a very short “disturbance length” as the motor is always mounted vertically to the feed – in other words, the entire drive unit is extremely compact and space saving
- The control quality can be optimised simply by varying the gear ratio and pitch of this harmonious system, which also means it is very easy to commission

With its attractive and yet functional design, it unites customisability with a long service life. The high power density which can be achieved in a very small space allows machines to be designed in a way that reconciles power with compactness. The drive can be used for slow, highly precise applications or whenever high dynamics are demanded in conjunction with controllable travel speeds. The TK+ and ball screw configuration is consequently just right for integrated linear drive solutions that are also economically efficient. It goes without saying that WITTENSTEIN's services additionally include consulting support from the design phase through to sale and customer service.

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