



Press-information

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Systemized Dynamics:

New drive units transmit more power

item's MB Building Kit System has recently been extended to include additional innovative devices for the drive units. The Timing Belt Reverse Unit, Timing Belt Counter-Reverse Unit and Synchronising Shafts are a logical extension to the systematic approach of this company, based in Solingen, Germany, towards a modular concept for building special machines.

The users of the item Building Kit System can now choose from even more Dynamic Elements when constructing their applications. The tried-and-tested drive units series has been expanded to include such assemblies as the Timing Belt Reverse Unit 8 80 R50 II, Timing Belt Counter-Reverse Unit 8 R50 and two Synchronising Shaft models.

These latest components from the Solingen company extend the application possibilities for powered linear axes using the powerful 50mm Timing Belt, for tensile loads of up to 4200 N and torques of up to 100 Nm.

Compact Timing Belt Reverse Unit

The new Timing Belt Reverse Unit 8 80 R50 II for Timing Belt reversal through 90° or 180° has impressively compact dimensions making it easier to fit into a smaller space than its predecessors.

At the same time, it features considerably strengthened, sealed bearings, making it more sturdy and well able to deal with demanding operating conditions such as alternating loads or low rotary speeds.

The housing of the Timing Belt Reverse Unit comes ready for direct connection to the System Profiles using standard fasteners and can be directly bolted onto the item Coupling Housing 8 D80. By including the coupling, any motor and drive combination can be used to power item linear axes.

item's modular system philosophy makes complex machining operations on the building units within the MB Building Kit System unnecessary. This is one of the reasons why torque transmission can best be realised using splined shafts – although a version with a bore that can be machined to suit individual requirements is also available. The Timing Belt Reverse Unit 8 80 R50 II, the coupling and the new Synchronising Shaft design all make use of splined hubs VK 32. The shaft is simply slid into position and secured with retaining rings to prevent axial movement.

Timing Belt Counter-Reverse Unit reduces moved masses

Timing Belt Counter-Reverse Unit 8 R50 enables linear axes to become the moving construction element and thus adds versatility to the application of Timing Belt R50. The main advantage of this method, which is often a preferred application for vertical axes, is that the carriage itself can be fixed together with the drive components such as the motor and Timing Belt Reverse Unit. It is then only necessary to move the Support Profile of the axis and the Timing Belt itself – reducing the masses to be moved to a minimum.

Synchronising Shafts manufactured quickly and easily

The new Synchronising Shaft Profiles are available as two different models; their splined hubs VK 32 or VK 14 are designed to match the splined shafts in the item MB Building Kit System. Synchronising Shafts can now easily be applied to driving dual Timing Belt Reverse Units, or transmitting torque between various drive components of any required length by using Synchronising Shaft Profiles, a pair of half-shafts and the corresponding connecting components.

The addition of these new item MB Building Kit System components is a continuation of the company's consistent policy of extending the availability of modular Dynamic Elements to higher power levels. The coherent, uniform interconnectivity of the components, the arrangement of functional elements into power levels and the design of the assemblies so that they complement each other, all combine to ensure the main requirements of a modular kit system, i.e. versatility and interchangeability, are adhered to throughout.



Fixation of multi-spline shaft in Synchronising Shaft Profile VK32.
(Name of graphical metafile: synchronwellenprofil.tif)



Timing Belt Reverse Unit 8 80 R50 II driving an item-Roller Guide.
(Name of graphical metafile: zahnriemenumlenkung.tif)

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