

Guide rollers for wire, multi-wire, cable, and tube

Process materials are manufactured and delivered in various forms. Guiding is one of the final steps in production and one of the first in further processing.



Guide roller "IR 50 D" with individually adjustable, cylindrical guide rollers.
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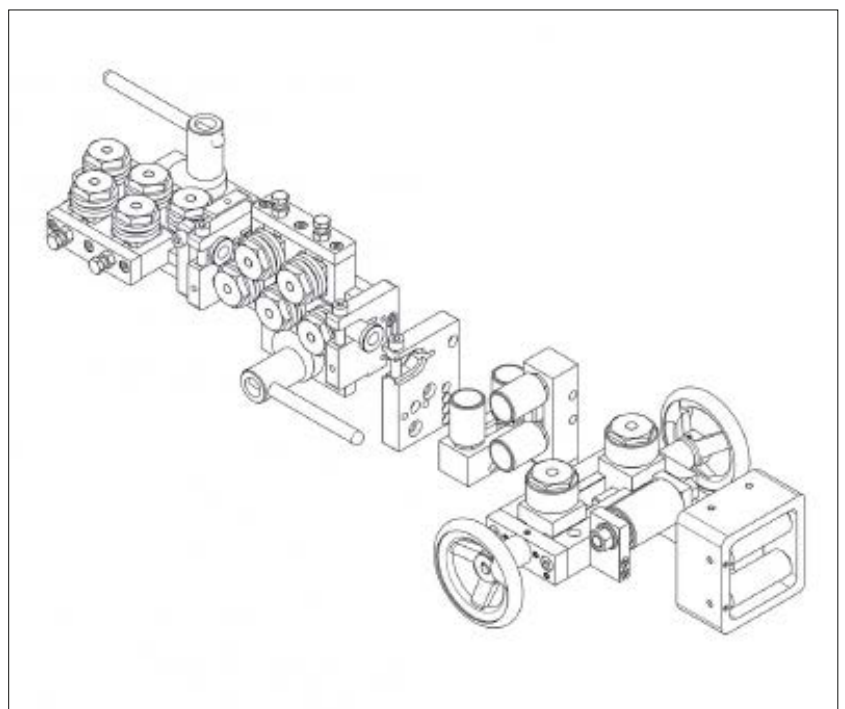
Additionally, guiding plays a crucial role in manufacturing and processing lines when it comes to ensuring a defined position of the process material, which is necessary, for example, when using measurement technology or handling and automation. The required precision, the direction of material flow, and speed can be influential parameters in selecting suitable components for guiding. These components must fundamentally be capable of withstanding the static and dynamic forces and moments over an extended period. Wear in the tribological system is of high technical and economic significance and significantly determines the suitability of a component. Wear on the process material must be excluded. Macroscopic markings and microscopic surface changes that could adversely affect critical quality characteristics of the final product must be avoided. In this regard, components with rotating tools offer advantages over those using stationary tools for guiding process materials.

For good reason, Witels-Albert GmbH offers almost exclusively components with rotating tools for the guiding process. The goal is to supply process material to upstream and downstream processes and components with-

out collisions. Boundary conditions such as the cross-sectional geometry of the process material, the variety of geometries, and the design of upstream and downstream components determine whether guiding is required with respect to the neutral axis/zero line or with a fixed lower and/or rear edge. Due to the variety of boundary conditions, there are numerous models of guide rollers equipped with fixed, partially adjustable, or individually adjustable rollers.

Among the best-selling products of Witels-Albert are the centric guide rollers of the "ZR" series, which are manufactured in 6 sizes and 5 different versions each. Depending on the application conditions, the guide rollers can be equipped with Cromax rollers, through-hardened rollers, or PET rollers. Sometimes, specific roller groove geometries are desired, which can be incorporated into the cylindrical rollers.

In response to the increasing demand for guide rollers with individual roller adjustment, Witels-Albert offers new standardised models of the "IR" series. The designation "IR" stands for the feature of individual roller adjustment. The standard models of the "IR" series come equipped with corresponding spindles, adjustment elements, and Cromax rollers. As with the "ZR" series, alternative roller designs can be supplied upon request. The "IR" series models cover process materials with a maximum outer geometry of 250mm.



Integration of guiding and straightening, exemplified by straightening devices of the "ER" series.
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For guiding strips, the models of the new “IRB” series are recommended. Similar to the “IR” series models, the rollers are individually adjustable. Characteristic of the “IRB” series are the vertically reduced rollers, which are through-hardened to



Model “IRB 50 D” for strip processing with individually adjustable and through-hardened guide rollers. © WITELS-ALBERT

meet the high demands of strip processing. The “IRB” series models support the guiding of strip widths up to 250mm.

Basically, the thickness and width range of the process material determine the required “IR/IRB” model. If the maximum opening of a selected “IR/IRB” model is too small, the model's structural width can be customised with minimal effort. This applies, subject to technical review by WITELS-ALBERT, to all models in the new “IR” and “IRB” series.

The integration of guiding and straightening, i.e., the combination of components for guiding and straightening process materials into a system, is supported by both new series of guide rollers. All versions of the “IR/IRB 12” and “IR/IRB 50” models serve straightening devices of the “ER”, “RB”, “RT”, and “RTS” series, supporting straightening ranges from 0.5mm to 1.5mm, 1.5mm to 3.0mm, and 3.0mm to 7.0mm. Customers benefit from being able to use compact, ready-to-install guiding and straightening systems.

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