

The Integration of Guiding & Straightening

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Achieved with two new sets of connecting brackets for material straighteners.

The straightening results of long products such as wire, tube, rope and strip depend on the design of the sub-processes upstream and downstream to the straightening processes. Guiding is an important sub-process and is carried out with the objective of supplying and discharging a process material to and from the straighteners without collision. Boundary conditions such as the cross-sectional geometry of the process material, the variety of geometries and the design of the straighteners determine whether guiding is required taking into account the zero line or guiding with a fixed bottom and/or back edge.

Roller guides whose tools are rotatably mounted guide rollers are widely used. The design principles of guide rollers are influenced by the objective of minimizing wear through surface removal or surface application. The cylindrical rollers can be made of different materials, can be coated and can be designed with or without profiling. The advantages over guides with stationary tools such as guide bushings or pins, are a longer service life of the tools and protection of the process material surface.

Due to the diversity of boundary conditions, there are numerous models of roller guides equipped with fixed rollers, partially adjustable rollers or with individually adjustable rollers. Roller guides with individually adjustable rollers are popular and dominate the sales statistics.

The new models RKO VK A seen in **Figure 1**, and RKO VK B serve the trend and represent the revised series RKO VK of WITELS-ALBERT GmbH. Compared to the RKO VK models no longer in the product range, all rollers of the RKO VK A and RKO VK B guides are designed to be adjustable. This means that they can be used on the infeed and/or outfeed side of straighteners with partially adjustable straightening rollers as well as of straighteners with individually adjustable rollers. And this is independent of the respective infeed variant VW, which is influenced by the transport direction of the process material, the spool or coil axis and the direction of rotation of the spool or coil.

All of the models consist of two identical main body parts, which are assembled to the main body by screw connections. Also, the arrangement of the main body parts is individual and results in either a model RKO VK A or a model RKO VK B.

The integration of guiding and straightening, i.e., the combination of components for guiding and straightening process material into a single system, is achieved with two new sets of connecting brackets. One bracket set serves ER and RB series straighteners seen in **Figure 2**, and another bracket set serves RT and RTS series straighteners seen in **Figure 3**.



Fig. 1 — Individually adjustable roller box RKO VK A.

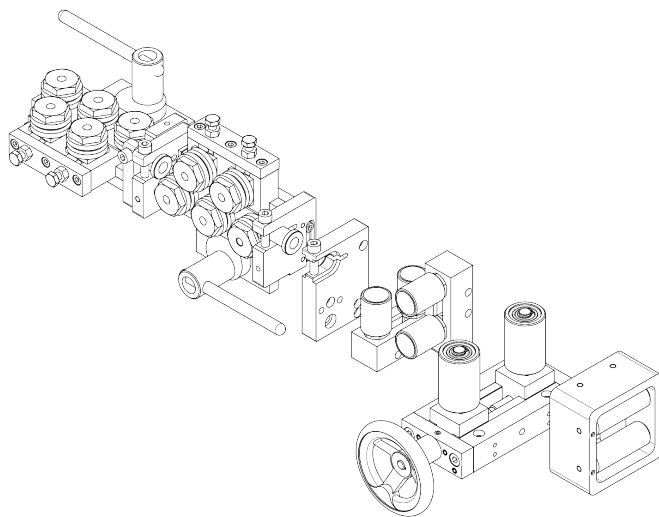


Fig. 2 — Integration of guiding and straightening for ER and RB series straighteners.

Each set is available for three guiding or straightening ranges determined by the process material thickness ranges of 0.5 to 1.5 mm, 1.5 to 3.0 mm and 3.0 to 7.0 mm. The connecting brackets can be used to connect the RKO VK A and RKO VK B roller guides to straighteners or guides of the RK, RK VE, RK VE SH and ZR series.

The new standard represents high flexibility and agility

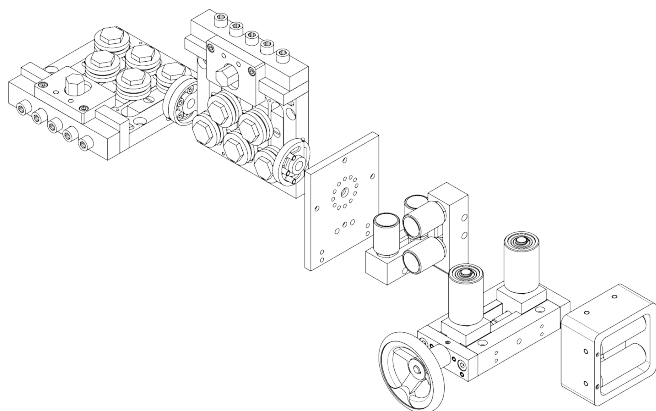


Fig. 3 — Integration of guiding and straightening for RT and RTS series straighteners.

for WITELS-ALBERT GmbH as a manufacturer of systems for guiding and straightening. Interested parties can choose from a high number of variants, which are assembled in a short time to suitable, ready-to-install systems for guiding and straightening process materials.

During the life span of the products, users benefit from the technical advantages, which also include the possibility of retrofitting the systems at any time.

For additional technical specifications, contact the author at WITELS-ALBERT GmbH in Germany or visit the company's website. www.witels-albert.com

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Company Profile:

As a specialist in straightening, transporting and guiding processes, Germany-based **WITELS-ALBERT GmbH** manufactures equipment and machines for the manufacture and processing of wire and stranded process materials. The history of the company dates back to 1898. Supported by a branch in the USA and more than 20 agencies worldwide, the company's export share is around 65%. An optimal production organization (KANBAN) ensures the rapid availability of all standard products and also customer-specific solutions. Permanent investments in research and development result in innovative products that offer customers the creation of added value. WITELS-ALBERT standard products and services are grouped into the eight categories of straighteners, straightening rolls, roller guides, drive units, preform heads, stripping systems, accessories and process design. Rotor and roller straighteners are manufactured in over 20 different types for process materials with a thickness between 0.03 and 120 mm. The straightening rollers of the apparatus are designed for process material speeds of up to 70 mps and for straightening forces up to 300 kN. Roller guides with a guide gap of up to 300 mm can be recommended for guiding wires, tapes, pipes, cables and ropes. The constant or intermittent transport of the process materials is achieved within tight tolerances using powerful drive units. www.witels-albert.com