



Straightener CS Easy IV

# New multifunctional units

Witels-Albert will be presenting at *wire* both new and field-proven solutions from its range of straightener, roll, guide, feed and pre-former products on 56m<sup>2</sup> of exhibition space. Using "straightening power@your command" as its motto, the company will turn the spotlight onto engineering solutions for straightening applications, which give users what they have been asking for, namely automatic straightening of process materials using defined settings. The machines and systems in the new Easy product range feature simple construction, low component count and a user-friendly human-machine interface, and this all adds up to an unparalleled price/performance ratio for the customer.

## Feeding units NA S and NAD S series

Wires, pipes, tubes, ropes and cables are generally fed relative to tools, such as straightening units. Drive units fitted with transport rolls are capable of performing the role of process material transport system. The transport force that can be reliably achieved is determined by a range of factors and relationships, with the main factors being the friction between the transport rolls and the process material, the maximum pressure of the transport material, which determines the contact pressure of the transport rolls, and the drive rating. In view of these factors and laws of physics, Witels-Albert has developed a series of drive units that feature

perfectly tailored part systems. The high capacity of these part systems results in very efficient overall constructions that are capable of transporting materials with very low slip. Despite the fact that drive units NA S and NAD S series clamp the process material pneumatically, high transport forces can be achieved.

## Multifunctional units NAR series

The new multifunctional units, NAR series, offer very high transport, straightening and bending forces. These units have been developed preferably for high strength process materials with a diameter or cross-sectional height of between 5.0mm and 25.0mm. With process materials with



Multifunctional unit NAR



Straightening station ABR Easy

a lower yield point the maximum allowed diameter or cross-sectional height is increased to 30.0mm. The NAR designation stands for the possibility to pre-bend, straighten, transport and bend a process material with just one single unit. The number of rolls and the roll alignment varies. Depending on the total number of tasks a NAR unit is equipped with at least five or more rolls. By adjusting bending or respectively straightening rolls in between upstream and downstream located transport roll pairs, process materials can be transported and straightened simultaneously in a defined manner. In case of aligning and adjusting a bending roll after a final pair of transport rolls a wire can be bent to a specific curvature radius, e. g. for coiling. Picture 2 highlights a NAR unit mounted on a traversing unit. During its defined travel, supported by the traversing unit, the NAR unit transports and bends the wire. If the unit is equipped with an additional pre-bending mechanism and straightening rolls in between the shown roll pairs, four tasks in total could be performed. A pre-bending mechanism always should be part of a NAR unit if the first section of a coil has to be straightened for easy wire threading or handling. Because of the modular design and a unique concept for aligning, driving and adjusting rolls in a defined manner the multifunctional units NAR series offer maximum performance on a minimum space with an unbeatable cost.

### Transport and straightening machines ABR Easy and ABR Easy POS series

Harmonized engineering solutions, which help make the process simpler and more efficient, can counteract the disadvantages that users face due to a large component mix, small lot sizes, time pressures and low staffing levels. It takes an uncompromising modular design and optimized, userfriend-

ly elements and subsystems to transport and straighten process materials which are essentially endless. With this in mind, Witel-Albert has developed its ABR Easy and ABR Easy POS series of feed and straightening machines. The same controller is used for both series. It identifies the elements in a machine (e.g. straighteners, drive units, etc.) as functional modules and uses standard interfaces to communicate with the units. This makes it very easy and cost effective to implement operations such as continuous, discontinuous or intermittent material transport. Users can also link ABR Easy and ABR Easy POS series machines to upstream and downstream equipment and processes. Picture 3 shows an example of an ABR Easy series feed and straightening station which is used to straighten round wire up to a diameter of 1.5mm.

### Guiding units ZR PG series

The rolls on the integrated roll guides have to be specifically set on many machines and systems which are used to process wire and multi-wire shaped process materials. A large variety of parts and flexible production programs often lead to situations at the process interfaces which make it necessary to use rolls which can be positioned centrally and non-centrally. The new ZR PG series guide units give users the flexibility they need to react easily and effectively to these varying production conditions. Conical clamping elements ensure proper positioning and firm seating of the guide rolls. No tools are needed to adjust the rolls.

### Semi-automatic straighteners CS Easy series

Traditional differentiation strategies are no longer adequate in the competitive environment which exists in many industries today. In the mechanical engineering sector, this means that to sell a product successfully, producers will have to place greater emphasis on the production process which the product supports rather than just focusing on the product itself. For process equipment such as straighteners, the positions of the adjustable straightening rolls have to be determined objectively beforehand and this information must be translated into defined settings to ensure that the process produces the desired finished product characteristics (straightness, etc.). With this in mind, Witel-Albert developed its SimData software which was introduced in 2004. The company has been supplying semi-automatic straightening systems for 10 years. These systems are widely used, and they have a proven track record in the field.

Building on its familiar semi-automatic straightening technology and the know-how which the company has accumulated in precision positioning of straightening rolls and advance calculation of roll positions, the company is now introducing the next generation of semi-automated CS Easy straighteners (picture 1 and 4). The new series features simple construction, low component count and a user-friendly human-machine interface. CS Easy series devices do not need a PLC or IPC and initiators. The software has been designed to ensure that any user can generate defined settings at the press of a key. As you would expect, the user can save parameters and settings. From the engineering standpoint, the strategies which are used for zero-backlash positioning of the straightening rolls is the most outstanding feature of the CS Easy series of semi-automated straightening units. The unprecedented price/performance ratio of the semi-automatic straightening systems will be good news to business management. ◀



Straightener CS Easy LE

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