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Press Release 9/2019

* **ROEMHELD at the EMO focuses on digitalisation and automation of processes**
* **Clamping elements with digitalised stroke measurement and integrated sensor technology**
* **Fair novelty: STARK robot gripper with media supply and zero point clamping system**

*Laubach, August 27, 201*9. The ROEMHELD Group will focus this year’s EMO presentation on digitalisation and automation. The innovations include a series of clamping elements with integrated electrical stroke measurement, new sizes of fully electrical swing clamps as well as the zero point clamping systems STARK.connect and STARK.airtec with fully integrated sensor technology.

Also, the first STARK robot gripper with zero point clamping system for automated pallet change even on machine tables without their own media supply will celebrate its trade fair premiere.

On display for the first time is a pneumatic swing clamp whose clamping force is maintained in the case of a pressure drop. The ROEMHELD Group will be presenting all new products and a selection from its comprehensive product range for clamping technology in Hall 4, Stand E 54.

**Electrical stroke control for clamping elements**

For the digitalisation of clamping elements, ROEMHELD has developed a compact electrical stroke measurement which is already integrated in several products. It can be used to monitor the entire stroke range in steps of tenths of a millimetre. This enables the clamping element, for example, to detect different workpiece heights. The measured data is passed on to a higher-level control.

**New eccentric bore clamps for machining on 5 sides**

For space-saving axial clamping and positioning, ROEMHELD shows a new series of eccentric bore clamps. Thanks to their slim design, the elements can be placed very close to the contour of the workpiece. The eccentric arrangement of the clamping segment also improves the accessibility of the component.

Thanks to its slim design, the eccentric bore clamp can be placed very close to the workpiece contour. The bore size can be easily adjusted using easily exchangeable clamping bushings, while the clamping element remains in its fixture. Also, the height of the support can be adapted: if the bore edges are lower than the rest of the support surface, different sizes are available. The support face will be cleaned with blast air, if required.

Numerous query options ensure process-safe clamping: it will be checked whether the workpiece is clamped or unclamped, whether the workpiece is correctly placed and whether the clamping bolt is intact. Thus, the bore clamp can also be used in automated applications.

**New sizes of electrical swing clamps**

In addition to innovations, the expansion of existing model series expands the ROEMHELD range of digitalised clamping technology. For example, the series of electrical swing clamps for clamping workpieces where the clamping points for loading and unloading the fixture must be free has been extended by two sizes. The clamping element is ideal for use in non-hydraulic environments and in automated systems or when the clamping force is to be maintained after disconnection from the power supply.

**Pneumatic swing clamp maintains clamping force even when the pressure drops**

If clamping forces in the range of 400 N are sufficient, the pneumatic swing clamp with force intensification is suitable for clamping fixtures with automated loading and unloading. The new mechanical locking system ensures that the clamping force is maintained in the case of a pressure drop. A pneumatic function control makes it possible to query the unclamped piston position to make loading and unloading of the clamping device safer. For dry machining or minimum quantity lubrication, the wiper can be protected from adhering small particles by an additional wiper ring.

**STARK.connect and STARK.airtec with fully integrated sensor technology**

The zero point clamping systems STARK.connect and STARK.airtec are equipped with a fully integrated sensor technology. The sensor system differentiates between the clamping states "clamped without retractable nipple", "retractable nipple clamped" and "unclamped". All signals are forwarded to a PLC control via PNP outputs. In addition, the clamping status is indicated by LEDs on the back of the elements.

Both quick-clamping systems clamp and unclamp pneumatically and are characterised by compact designs, very short clamping and unclamping times and high clamping forces. They are used wherever workpieces, fixtures, pallets and machine elements are to be connected safely, quickly, automatically and reproducibly with machine tools, robots and manipulators. STARK.connect and STARK.airtec are extremely insensitive and even suitable for environments with welding robots, e.g. for flexible and automated production in body-in-white.

**STARK.connect with active retraction and compensation**

STARK.connect excels by a floating holder with active retraction, which guarantees an optimum flat face contact of the workpiece. Its unique design allows the retractable nipple to be retracted and extended at an angle. In the event of changes to the workpiece, for example, due to a temperature change, the clamping mechanism can move sideways. Thanks to the compensation mechanism, the STARK.connect can compensate position errors of up to 1.5 mm. The retractable nipple is retracted automatically and with high force. Within half a second the system is clamped mechanically and self-locking with springs and pneumatically force amplified.

**STARK.airtec – the alternative without active retraction**

STARK.airtec, which is also equipped with an electronic monitoring system, is ideal for applications in which an active feed is not required. The system offers holding forces of 20 kN and very short clamping and unclamping times from 0.2 s. The STARK.airtec is also extremely sturdy and can be operated maintenance-free for at least 2 million clamping cycles.

**Robot gripper with media supply and zero point clamping system**

The new STARK robot gripper with its own media supply and matching zero point clamping system enables automated pallet changes even on machines without their own media supply. The hydraulic, pneumatic and electrical supplies required for unclamping and clamping operations are transferred via a multiple coupling integrated into the pallet gripper. This makes this innovation suitable for retrofitting without any problems.

**About ROEMHELD:**

Whether for aircraft, automobiles, machine tools or cases for smartphones: technologies and products of the ROEMHELD Group have been used to manufacture numerous industrial commodities and goods for end users for more than 60 years.

Efficient clamping technology solutions for workpieces, as well as for dies in forming technology and plastics processing, form the core of our ever-increasing portfolio. This is supplemented with components and systems for assembly and handling technology, drive technology and locking mechanisms for rotors on wind energy systems.

As well as a wide range of approximately 20,000 catalogue items, the ROEMHELD Group is also specialised in the development and realisation of customised solutions and is internationally respected as one of the market leaders for quality today.

Innovation through tradition: ROEMHELD was established in 1707 with a foundry in Friedrichshütte, which still belongs to the ROEMHELD Group today and counts as one of the oldest active industrial businesses in Germany.

The owner-managed group of companies employs approximately 560 workers in its three locations of Laubach, Hilchenbach and Rankweil/Austria, and is represented in over 50 countries by service and sales organisations. With customers from the mechanical engineering sector, as well as the automobile, aviation and agricultural industries, the ROEMHELD Group generates an annual turnover of more than 100 million Euro.

**Photos:**

Ein Bild, das Himmel, Straße enthält.

Automatisch generierte Beschreibung

Photo 1:

For space-saving axial clamping and positioning, ROEMHELD shows a new series of   
eccentric bore clamps. (Photo: ROEMHELD). Ein Bild, das Wand, drinnen, Himmel, Mikroskop enthält.

Automatisch generierte Beschreibung

Photo 2:

With the new pneumatic swing clamp, a newly developed mechanical locking system ensures that the clamping force is maintained even when the pressure drops and that the workpiece remains safely in its position (Photo: ROEMHELD).

Ein Bild, das Elektronik enthält.

Automatisch generierte Beschreibung



Photos 3 (above front) and 4 (below, back)

The zero point clamping systems STARK.connect and STARK.airtec are equipped with a fully integrated sensor technology. The sensor system differentiates between the clamping states "clamped without retractable nipple", "retractable nipple clamped" and "unclamped", which are indicated by LEDs on the rear side (photo 4) (photos: STARK).

Ein Bild, das drinnen, Wand, Himmel, Tisch enthält.

Automatisch generierte Beschreibung

Photo 5:

With the new STARK robot gripper, the hydraulic, pneumatic and electrical supplies required for unclamping and clamping operations are transferred via a multiple coupling integrated into the pallet gripper. (Photo: STARK).

**You can download the press release as a word document and the image material in print quality:**

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