DREISTERN

Forming success. Together.

RF*4.0*

INTELLIGENT STRAIGHTENING DEVICE

Detects errors in the profile longitudinal geometry

The specialist for your roll forming technologies

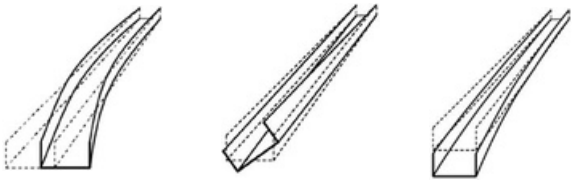
Ever since it was founded in 1949, DREISTERN GmbH & Co. KG has repeatedly set new standards in the field of roll forming. We have established ourselves as one of the market leaders worldwide through the application of the very latest technologies in roll forming machines, our comprehensive know-how concerning roll forming units, and our ability to provide complete process integration. More than 2,000 units from DREISTERN are in use, producing more than 8,000 different profiles, more than 40 patents have already been applied for.

We work for companies from these sectors, among others

- Automotive & transport
- Electrical industry
- Construction industry
- Storage & logistics
- Furniture industry
- Roll forming plants
- Tube industry

THE TASK OF STRAIGTHENING DEVICE

Straightening devices have been established in roll forming systems for a long time. Its basic task is compensating any deviations in the longitudinal direction, especially camber, bow and twist.



CAMBER TWIST BOW

These geometric defects are caused by unevenly distributed strains across the cross-section in the longitudinal direction of the profile. These strains ‘relax’ again after the forming process. To correct these defects, one or more straightening devices are used in roll forming systems, usually at the end of the roll forming line. These stress the profile so that inverse longitudinal strains are applied, which can compensate the deviations caused in the roll forming process.

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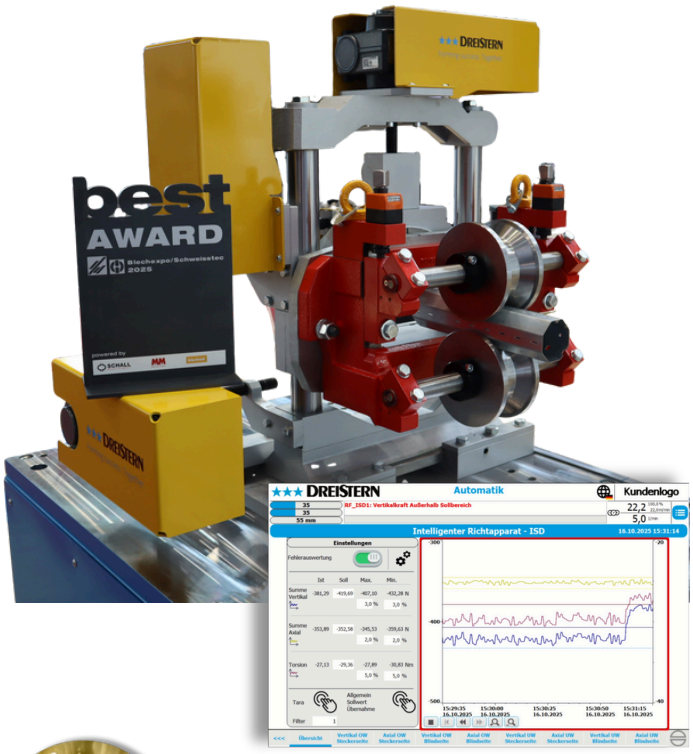
NEW

The aim of the new, intelligent straightening device is:

- To identify changes in the process straight away.
- To make operating personnel aware of need for action.
- To provide information about the cause of the problem and the most effective countermeasure.
- Ensure processes are transparent and provide a data basis for automation algorithms.
- To prevent material waste, to increase efficiency.

THE INTELLIGENCE

Sensors in the straightening device's axes measure axial and vertical forces. Changes in the longitudinal geometry also result in changes in the forces. This enables changes in the geometry to be detected at an early stage. The force exerted by the straightening device on the profile being produced can then be adjusted to achieve the desired result.



The 'best-Award 2025' recognises companies for outstanding technological innovations, excellence and teamwork in sheet metal processing and joining technology.

CONTROL INTEGRATION

The sensor values are displayed on the Dreistern HMI. The sensor signals are aggregated and combined into three characteristic signals. These values are displayed alongside their respective tolerance ranges. If the tolerance range is exceeded, automated actions specific to the customer can be triggered on the machine, such as issuing an error message, illuminating a lamp or stopping the system.
The HMI provides the operator with direct information on the current cause of the error and offers targeted support for process optimisation. Additionally, Dreistern offers data output via standardised interfaces to the customer's systems.

Benefit from our roll forming expertise

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