

SERVICES4.0

# THE SENSING DRIVE SHAFT

Easy measurement of torques - at the heart of your roll forming line

## The specialist for your roll forming technologies

Ever since it was founded in 1949, DREISTERN GmbH & Co. KG has always set exceptional 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 lines, our comprehensive know-how concerning roll forming procedures, and our ability to provide complete process integration. More than 2,000 units from DREISTERN are in use, producing more than 10,000 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

### UNIVERSAL JOINT DRIVE SHAFTS

The shafts transmit power from the variable speed drive system to the profile rolls.

In roll forming, this power transmission takes place via the joint drive shaft from the gearbox to the upper and lower shafts in the stand. The joint balances the vertical offset of the two shafts. The upper and lower shafts ultimately drive the profile roll.

To compensate for different tool diameters, the upper and lower shafts can be operated at different speeds.

### MEASURING WHERE IT GETS INTERESTING

The mechanics are known, but the integrated torque sensor technology is new! This allows us to measure drive shaft loads safely and reliably. We measure directly on the shaft, where the measurement data provides the optimal feedback.





## LET DREISTERN OPTIMIZE YOUR PLANT

During an on site DREISTERN service visit, our service team brings the complete hardware pre-configured, your drive shafts are exchanged for the sensing shafts, and a reference measurement is performed.

Based on the data obtained, if necessary, adjustments can be made to the configuration of the roll forming system. The success of the adjustment is confirmed by a new measurement. These steps are repeated until the optimum performance is reached.

A final measurement is performed and all data is stored in the cloud. The drive shafts are replaced again, and at the end of the operation you receive a service log with the analyzed data and any necessary preventive measures.

### THE BENEFIT?

With the help of the sensing intelligent drive shaft, we are able to provide numerical evidence of possible poor production conditions. The collected data brings helpful insights for:

- faster troubleshooting and correction of errors
  - Current measured values can be compared with target values with a simulation or a previous production batch. In the event of an error, this comparison can be used to narrow down the cause of the error.
- tool wear
- roll forming line wear
  - e.g. due to increased stress on the gearboxes
- product quality through process control
  - e.g. running marks and scratches on the metal strip surface, additional elongations or possible deformations.
- long-term monitoring, as well as predictive maintenance
  - enables condition-based maintenance, which saves resources compared to time-based maintenance
  - Production interruptions in the event of changed conditions indicating defective components
- energy demands of the roll forming system

### THE SOFTWARE

A specially developed interface for tablets and cell phones ensures compatibility with DREISTERN's gateway for easy connection to the measuring computer. As a result, the measurement data of up to 44 joint drive shafts can be read out simultaneously.



## Benefit from our roll forming expertise

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