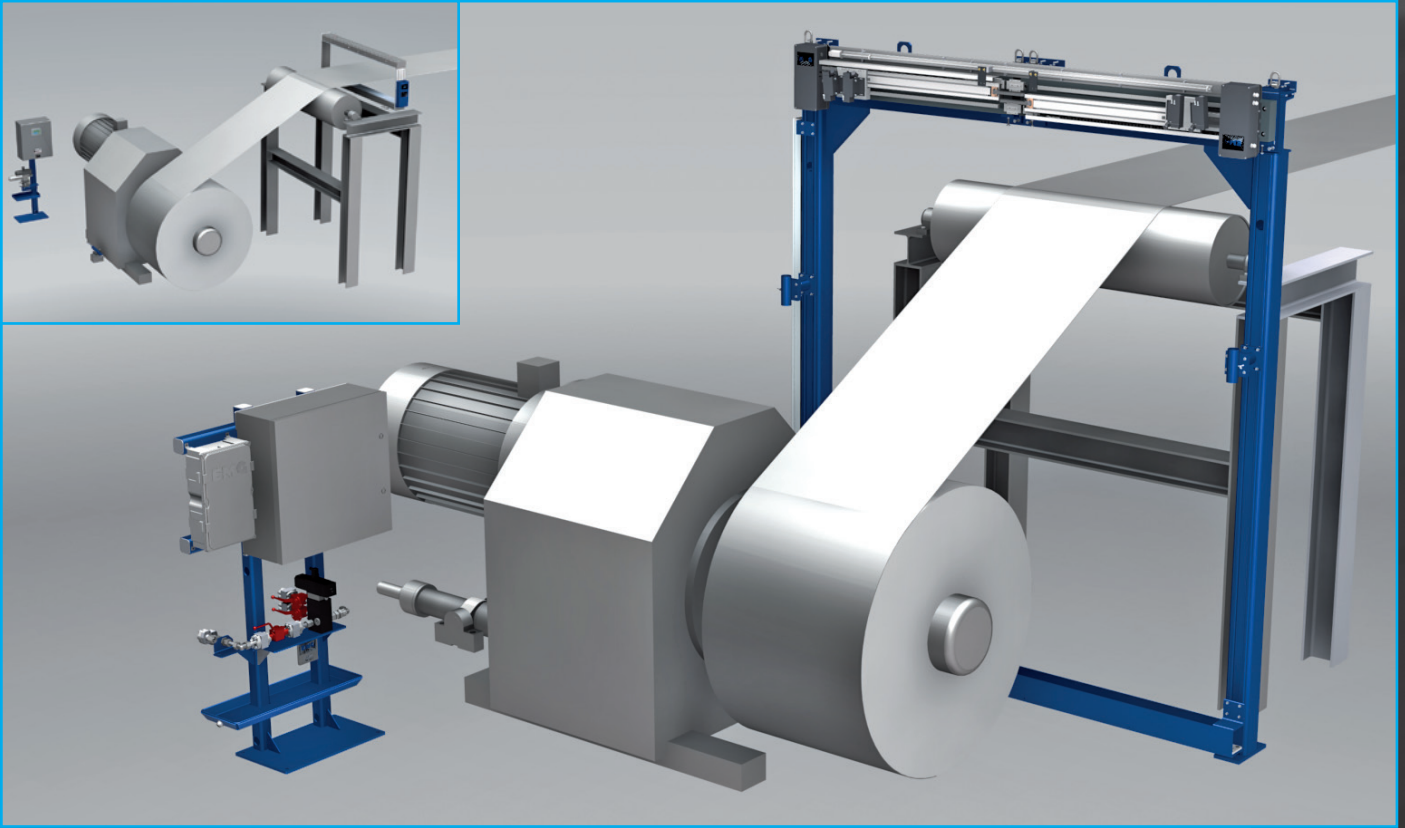


## Strip guiding on the uncoiler



### Application / Function principle:

If a strip centre or strip edge guiding system is provided on the uncoiler, the uncoiler moves the coil, from which the strip is being uncoiled, transversally to the line axis and thus acts against lateral deviation of the strip. Deviation of the strip from the reference position is detected by the sensing equipment and transmitted to the electronic control amplifier. The output of the amplifier continuously activates a servo valve which moves the hydraulic cylinder of the uncoiler accordingly, so that the uncoiled strip is returned to the position preselected on the sensing equipment. For control reasons, the sensing equipment should detect any strip deviation close to the uncoiler. The high-frequency alternating light sensing equipment, which is impervious to ambient light, allows a maximum distance between the receivers and the light source of 4 m.

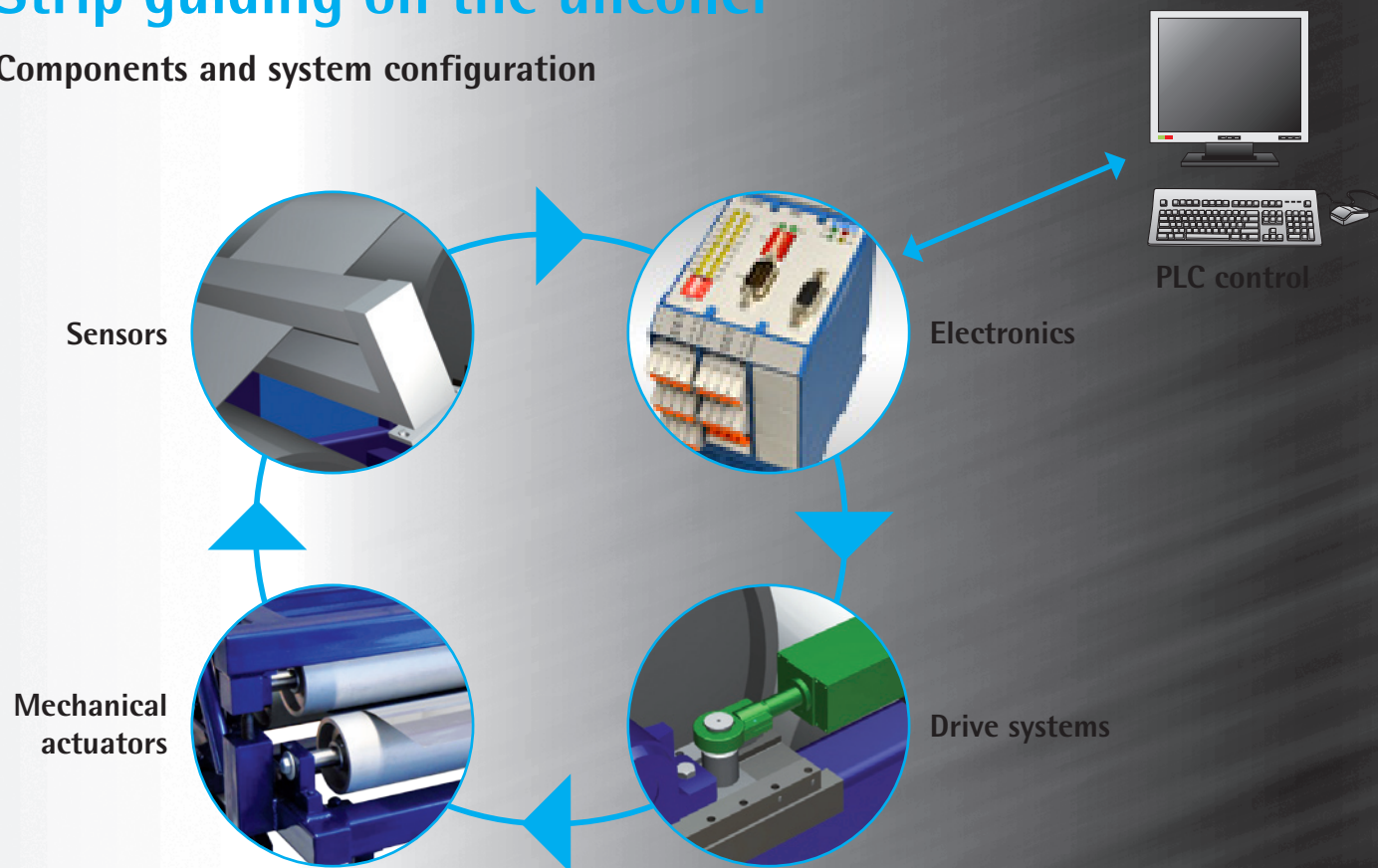
For production lines with a side trimmer or slitter installed immediately downstream of the deflector roll, we can offer an alternative by coupling the uncoiler and the deflector roll mechanically or

electro-hydraulically. This has the advantage that guiding with a very high degree of precision is achieved when using a precise sensing system, e. g. a SMI-HE inductive strip centre sensing system. In lines where the distance to the trimming or slitting knives is greater, an additional steering unit should be installed upstream of the knives and connected to the uncoiler control system, see: HQT system.




Modern fully automated lines, with coil handling equipment in close proximity to the mandrel, frequently leave insufficient space for the sensor, and it has to be positioned after the deflector roll (anchor point). Thus a time delay between the movement of the mandrel and an answer in the sensor is generated. This leads particularly at slow strip speeds to control loop instability. By using a method patented by EMG which takes into account the strip speed which holds the mandrel in a position control loop a stable control system is possible (see little picture above).

# Strip guiding on the uncoiler

## Components and system configuration



### Further product brochures and data sheets:

<b>Sensors</b> 	EVK – Sensor positioner
	EVM – Sensor positioner centre
	SMI – Inductive strip measurement
	EMI – Strip position measurement
<b>Electronics</b> 	EMG iCON® – Digital controller
<b>Actuators</b> 	SV1-10 – Servo valves (single-stage)
	SV2-... – Servo valves (double-stage)
	ESZ – Electro-Servo-Cylinder

For further technical information of our products please contact us or visit the download area on our homepage.

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