ELFEED KRS60

The tenter guider ELFEED KRS60 sets new standards for precise pinning at high production speeds.

The KRS60 is the world's first tenter guider to use an "all in one" compact actuator with integrated controller for direct line operation (100 V to 240 V).

The combination of a CCD infrared sensor with a resolution of 0.1 mm and dynamic control ensures the webs are always pinned with precision.

The actuator KR 60 is a maintenance-free, brushless motor. Combined with a planetary gearbox, it impresses with very high dynamic performance and excellent efficiency. The power is transmitted to the feed rail via a pinion on a rack. This simple, robust system has been proven over decades, also in adverse ambient conditions.

In addition, the sensitivity and the actuating speed of the controller and the sensitivity of the sensor can be adjusted. As a result the mechanical load on the bearing/pinion is reduced to a minimum. The result is an optimal response always, even at high production speeds.

The KRS60 with digital control is designed for fast running tenters and drying machines up to approx. 150 m/min. The left and the right KRS60 systems are independently operating control loops.

Actuator KR 60

Terminal strip KR 60

Sensor FR 5513

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Sensor FR 5503

The infrared edge sensor FR 5503 makes it possible to scan optically and mechanically.
The usage of infrared light also permits the interference-free scanning of textile webs with high contrast, as well as highly transparent or only weakly reflective textile webs.
In case of very uneven web edges (e.g. protruding threads), mechanical scanning by pivoting in the scanning lever will dampen the control. The mechanical scanning lever is optional and can be added at any time.

Positioning tenter feed rails

The sensor signal is sent via CAN bus to the digital controllers that position the tenter feed rails.

Interfaces

Interfaces for the integration of peripheral devices such as switches for articulated joint monitoring are available.
The integrated mechanical/electronic logic monitors the end positions of the feed rail and prevents damage to the chain and chain webs if the permissible articulation angle is exceeded.

Overview of KRS60 tenter guide system

Basic system KRS60:
- 2x actuator KR 60 with integrated digital controller
- 2x infrared edge sensor FR 55

plus web spreader or selvedge uncurling devices, alternatively:
- 2x selvedge uncurler LA 8 with 2, 3 or 4 motorized threaded spindles
- 2x mechanical selvedge opener LS 3
- 2x pneumatic selvedge opener LP 03

Technical data actuator KR 60 with integrated controller

Nominal voltage	100 to 240 V AC, 50/60 Hz
Current consumption max. (110 V AC)	4 A
Nominal power	350 W
Nominal actuating force	1300 N
Actuating speed max.	120 mm/s
Protection class	IP 54
Ambient temperature Storage temperature	+10 to +60 °C -10 to +80 °C
Weight Without flange pillar With flange pillar	 16 kg 23 kg
Installation altitude max.	2000 m above sea level
VDE test	in acc. with DIN EN 61010-1

Technical data sensor FR 55.3

Supply voltage Nominal voltage Permissible range	 24 V DC 20 to 30 V DC (ripple included)
Current consumption	100 mA
Power consumption	2.4 W
Scanning frequency	100 Hz
Measuring range	+/-10 mm
Distance edge sensor - web	36 mm
Protection class	Max. IP 65 with suitable connector when connected
Ambient temperature Storage temperature	+10 to +60 °C -10 to +80 °C
Weight With scanning lever (FR 5503) Without scanning lever (FR 5513)	 0.46 kg 0.37 kg

Subject to technical change without notice