ELFEED KRS 52

Tenter infeed ELFEED KRS 52 is a further development of KRS 51. KRS 52 uses a pancake motor with planetary gear. This means higher dynamics and higher efficiency.

The ELFEED KRS 52 tenter infeed assures that the web is reliably taken up at the tenter infeed by the clips or pins of the transport chain. The KRS 52 version with digital control is designed for high-speed stenter and drying machines of up to about 130 m/min.

The left and right edges of the web are detected by two digital sensors which send signals to a controller. The controller triggers a DC actuator. Power transmission is via pinion and rack. The actuating speed can be varied manually via a setup programme.

The consistently digitalised system guarantees precision adjustment to the position of the guided web and prevents the rail heads oscillating, thus positively influencing the feeding precision and the service life of the mechanical moving parts.

The left and right system operate independently of one another.



Drive unit KR 52



Digital controller DC 55



Sensor FR 55

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Design

The ELFEED KRS 52 infeed system mainly consists of:

- web spreader (x 2)
- edge sensor FR 55 (x 2)
- power source
- controller/amplifier DC 55
- DC actuators KR 52 with incremental encoder (x 2)

Motor-driven edge uncurlers with 3 or 4 scroll rollers or alternatively, pneumatically-operated devices, are predominantly used to uncurl the web edges.

Edge sensor FR 55 with infra-red scanning, combines contact-free and mechanical scanning in one unit. Due to its digital resolution capability it is also suitable for patterned or strongly contrasted webs, very transparent and poorely reflective materials with a reflection degree of at least 2%.

The controller transfers the sensor signals to the DC actuators for positioning the infeed rails.

Adjustment in relation to the web speed is available as an option.

The controller also contains the necessary interfaces for connecting peripheral units.

A built-in mechanically/electronically operated safety logic monitors the end positions of the rail heads and reliably prevents damage to the rail joints caused when the permissible kinking angle is exceeded.

Technical Data Edge Sensor FR 5502

Supply voltage Nominal value Permissible range (including ripple)	 24 V DC 20 - 30 V DC
Current input (for 24 V)	approx. 100 mA
Power input (for 24 V)	approx. 2.4 W
Scanning frequency	100 Hz
Measuring range	±10 mm
Measuring range resolution	0.1 mm
Admissible ambient temperature	+10 to +65 °C
Storage temperature	0 to +85 °C
Line length	max. 25 m
Distance between edge sensor / web	36 mm
Protection class	IP 65
Weight	0.8 kg

Technical Data Power source / Transformer

Supply voltage	110 to 600 V AC
Rated output	680 VA
Nominal voltage	34 V AC
Output current	20 A AC

Technical Data Controller / amplifier DC 550.

Supply voltage	34 V AC
Power input	550 VA
Power output (*T_a < +45 °C)	2 x 225 W
Output current	2 x 8 A
Admissible ambient temperature	+60 °C
Protection class DC 55 mounted on base plate Switch panel SE 405. mounted in E+L cabinet	 IP 20 IP 54

Technical Data Drive KR 52 with DC 550.

Admissible ambient temperature	+65 °C
Protection class	IP 54
Nominal positioning speed	120 mm/s
Nominal positioning force (*T_a = +40 °C)	1230 N

Subject to technical modifications without notice

*T_a = ambient temperature