



FMS winderGLIDE BKS.D.4 Installation Manual

Linear Actuator for Winding and Unwinding Stations

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This operation manual is also available in English.

Please contact your local representative.

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2 Safety Information

All safety information, operating and installation regulations listed here ensure proper function of the device. Safe operation of the system requires compliance at all times. Noncompliance with the safety information or using the device outside of the specified performance data can endanger the personal safety.

Work with respect to operation, maintenance, retrofit, repair, or setting the device described here must only be performed by qualified personnel.

2.1 Presentation of Safety Information

2.1.1 Danger that Could Result in Personal Injury



Danger, warning, caution

Type of danger and its source

Possible consequences of nonobservance

Measure for danger prevention

2.1.2 Note Regarding Proper Function



Note

Note regarding proper operation

Simplification of operation

Ensuring function

2.2 General Safety Information



The linear actuators may not be subjected to loads outside of the specified values during installation and operation. In particular, the device must not be used outside of the temperature range and protection class.



The installation points on the machine frame must be designed correctly to properly accommodate the installation of the actuator.



The linear actuator and related web guiding controller must be wired correctly.

3 Product Information

3.1 Mode of Operation

The FMS winderGLIDE linear actuators feature a backlash-free ball screw driven by a stepper motor. This enables precise corrections at high adjusting speeds. The linear actuator is connected to the web guiding controller using one cable only and an easily accessible connector. Its compact dimensions and various mounting options make the FMS winderGLIDE the ideal candidate for retrofit on existing systems.

3.2 Dimensions

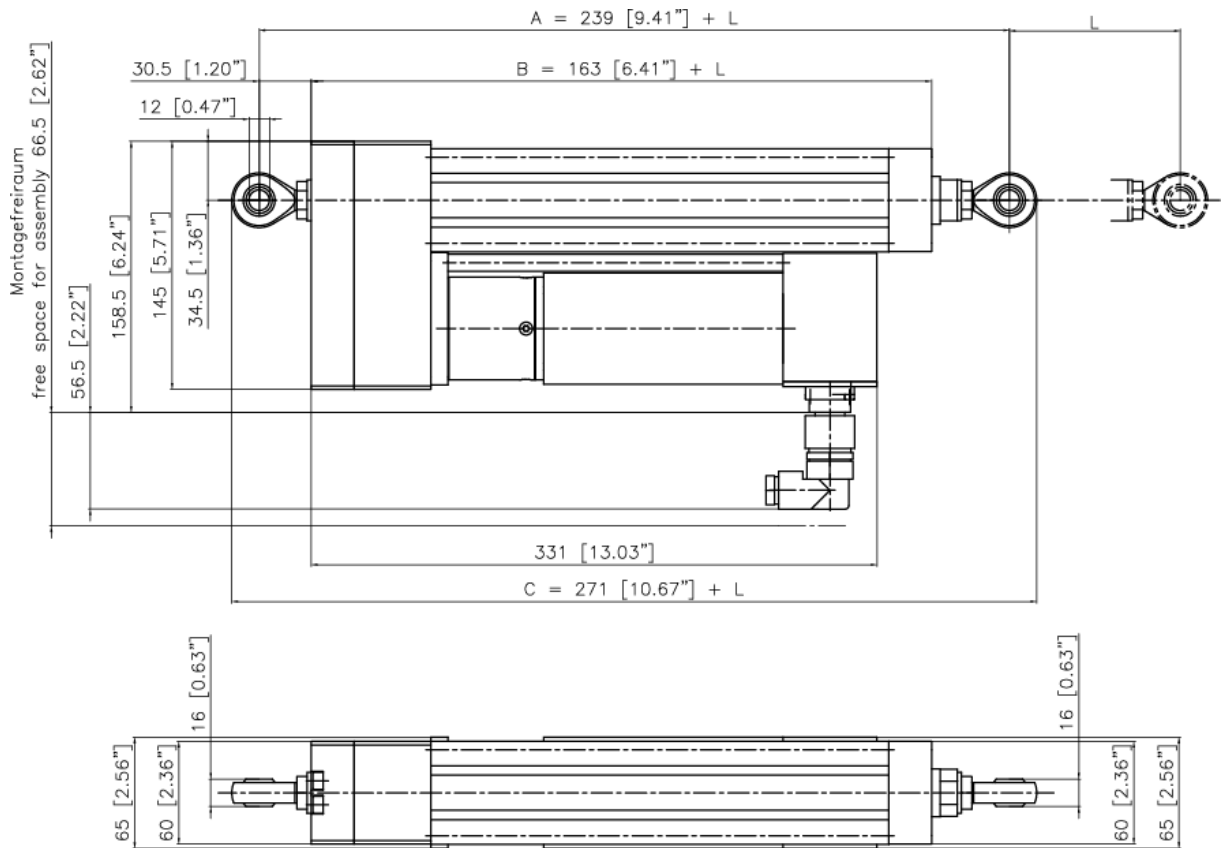


Figure 1: Dimensions

BKS_D_4_Abmessungen.ai

Dimensions mm (in.)		
	BKS.D.4.125	BKS.D4.200
Stroke	125 (4.9)	200 (9.8)
A Centers of rod ends, fully retracted	364 (14.3)	439 (17.3)
B Total length main body	288 (11.3)	363 (14.3)
C Overall length, fully retracted	396 (15.6)	471 (18.5)

Table 1: Dimensions

3.3 Order Code

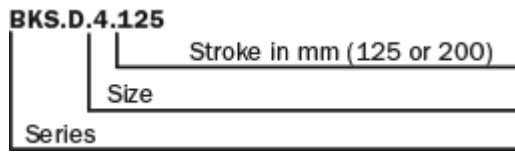


Figure 2: Order Code

3.4 Scope of Supply

The following is included in the scope of supply

- Linear actuator, rod ends on both sides
- Installation manual

The following is not included in the scope of supply

- Web guiding controller
- Mounting material
- Material sensor
- Connection cable to web guiding controller

4 Installation

4.1 Preparation

The FMS winderGLIDE linear actuators are defined as an “incomplete machine” in line with EC Directive 2006/42/EC, Article 2. When installing the FMS winderGLIDE, the following conditions must be met to ensure proper function and installation in a machine without negative impact on safety and health of persons:



The linear actuators may not be subjected to loads outside of the specified values during installation and operation. In particular, the device must not be used outside of the temperature range and protection class.



The installation points on the machine frame must be designed correctly to properly accommodate the installation of the actuator.



The linear actuator and related web guiding controller must be wired correctly.

4.2 Mounting Accessories

Overview and combination of mounting accessories		
	Attachment to static end	Attachment to moving end
Rod end (in scope of supply)	Yes	Yes
Clevis (accessories)	Yes	Yes
Hinge (accessories)	Yes	No
Flange	Yes	No

Table 2: Overview of mounting accessories

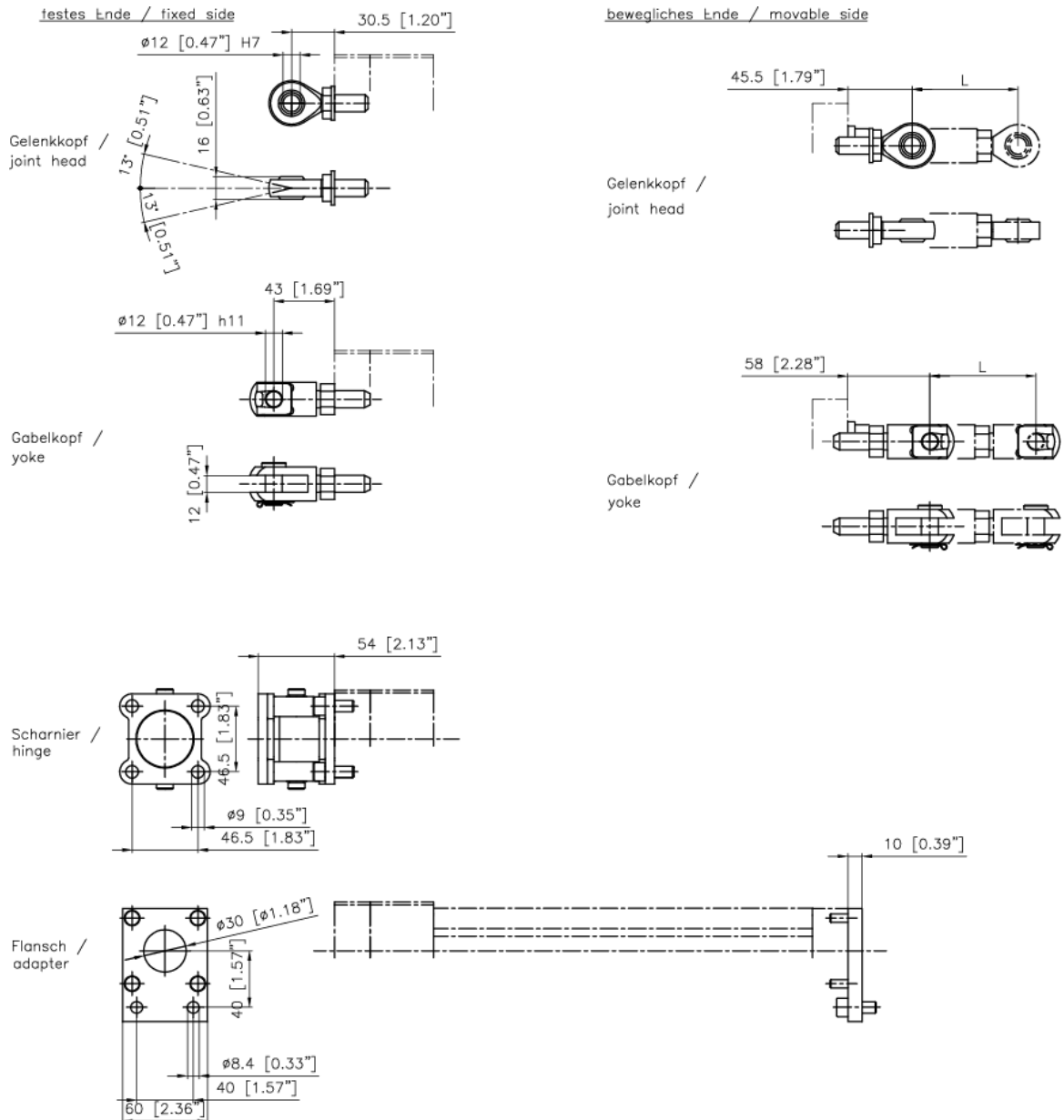


Figure 3: Mounting Accessories

Warning



Damaging the push rod

When tightening the rod end, you must secure the push rod against twisting using a hexagon wrench, otherwise the thread of the push rod may be damaged!!

The static part of the linear actuator must be mounted to the machine frame, e.g., using the rod end on the housing or using the flange on the front part of the spindle housing. The push rod of the actuator is mounted to the take-up or pay-off station.

The FMS winderGLIDE is designed for installation in horizontal position.

4.3 Installation on Pay-off (Undwind) Station

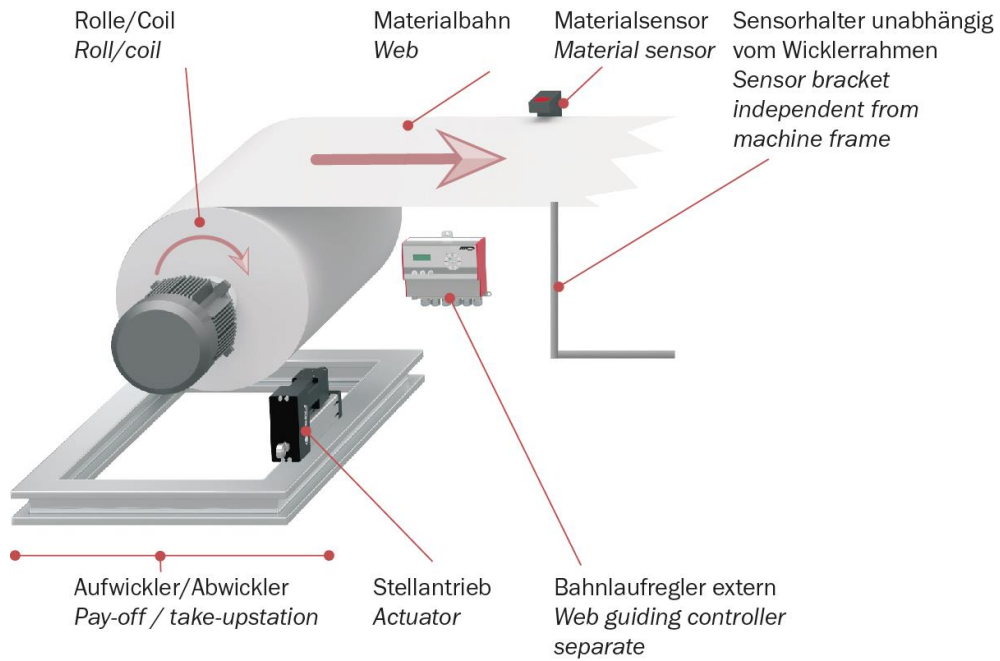


Figure 4: Installation on pay-off station
Tension_Control_Web_Guiding_Scheme_Schema.ai

4.4 Installation on Take-up (Rewind) Station

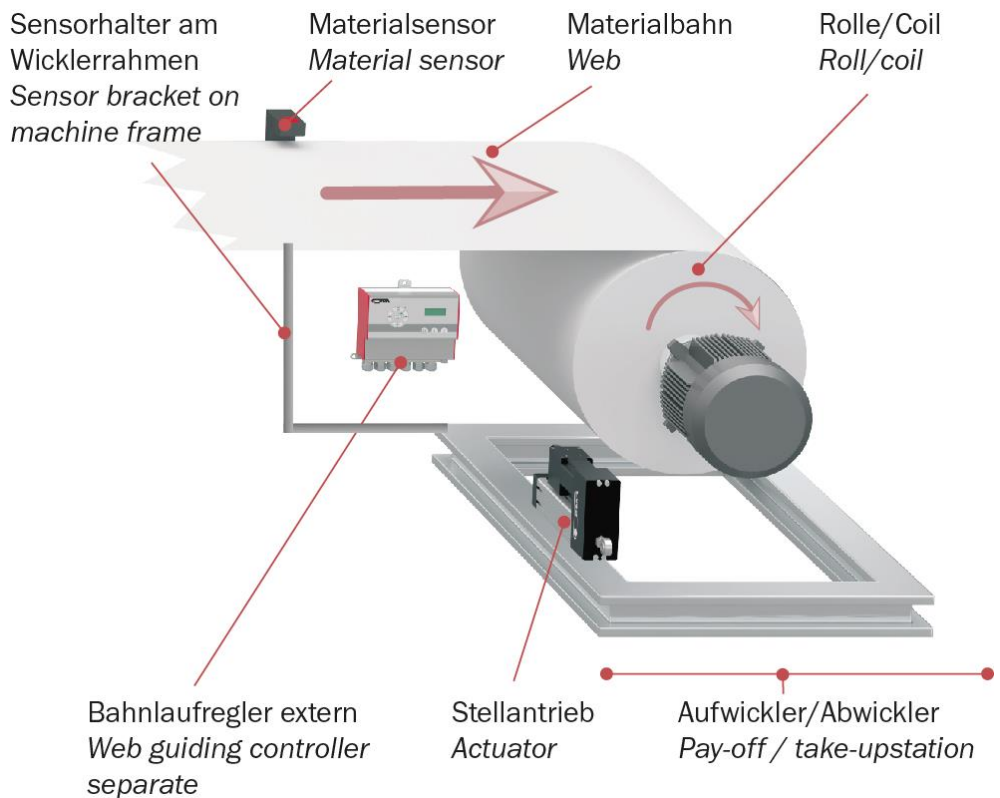


Figure 5: Installation on pay-off station
Tension_Control_Web_Guiding_Scheme_Schema.ai

4.5 Electrical Connection to Web Guiding Controllers of the BKS309 Series

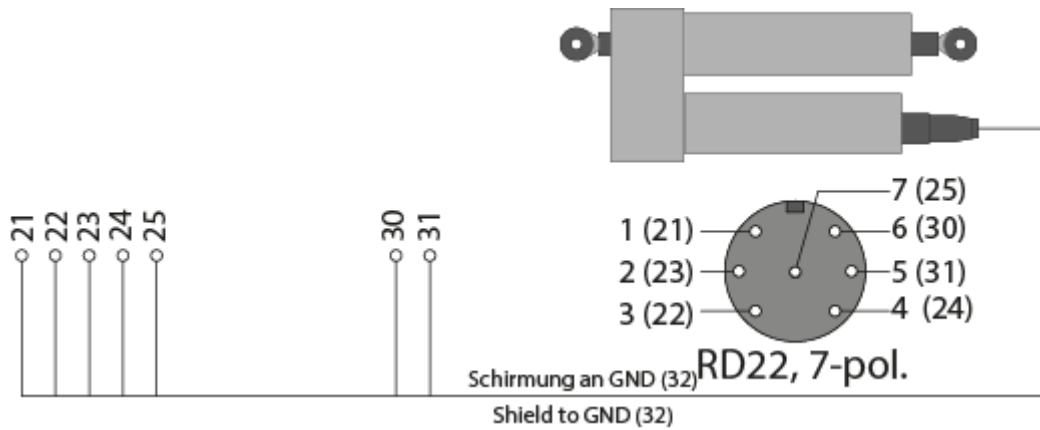


Figure 6: Pin assignment of connector (and terminal assignment on web guiding controller BKS309) BKS309_BA_Manual.ai

Pin assignment of connector	
PIN	Assignment
1	24 V motor
2	Motor direction
3	Motor pulse
4	GND logic
5	Actual position potentiometer
6	10 V potentiometer
7	GND motor

Table 3: Terminal assignment on Web guiding controller BKS309
BKS309_BA_Manual.ai

5 Technical Data

Technical Data	
Max. thrust force	1,250 N (281 lbf)
Max. adjusting speed	25 mm/s (0.98 in/s)
Drive	Stepper motor, 16 mm ball screw with 5 mm pitch
Temperature range	-10 to +50 °C
Protection rating	IP42
Control accuracy	<±0.1 mm
Power consumption	Max. 110 W
Stroke limiting, travel measurement	Potentiometer

Table 4: Technical Data



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