Automated Format Adjustment
Reliable and precise

in cooperation with
LENORD +BAUER
Finding solutions. Founding trust.

03/2020
RK Rose+Krieger and LENORD+BAUER benefit from the synergies that arise from the sensible combination of their product ranges. RK Rose+Krieger GmbH and Lenord, Bauer & Co. GmbH from Oberhausen both work together to meet customer demands for fully automated infeed axes.

The linear units and actuators complement each other to create a practical complete package. The package features E-II single-tube actuators, EP/EPX(II) twin-tube actuators and quad® EV profile actuators from the Move-Tec range. There is also the option of a short or long actuator with either an aluminium or stainless steel housing. The devices provide a rated torque of 3.5 Nm or 5 Nm.

Lenord+Bauer offers the torque supports necessary in fitting the SeGMo to the corresponding linear actuators. Once the torque support has been fitted, the actuator is simply placed onto the axis and pushed into position. A clamping ring fixes the drive firmly onto the drive shaft of the linear unit. In addition to the positive shaft connection, a flexible motor support also forms the necessary floating bearing on the torque support.

The actuators can be used either as stand-alone components or as a modular overall system, and can be plugged directly into the machine control system using the integrated fieldbus interface. The only things then needed to commission the linear actuator with automatic adjustment are a 24 V power supply and connection to the bus communication.

The two companies also work in close collaboration to fit even complex machines with multiple linear units and a local communication unit. In these cases, actuators with hybrid cables and SeGMo boxes are used, along with a compact PLC control system with operator terminal. Both of these are supplied by Lenord+Bauer on request, in the form of a connection-ready module with operator software included. Integration into an existing control environment is really simple, as the SeGMo system supports standard interfaces such as PROFIBUS and PROFINET.

E-II single-tube actuators – versatile all-rounders – with a simply unbeatable price-performance ratio – now also corrosion-resistant in sizes 30 + 40

Bearing cover
✓ Dust/spray protection on Type 30-60
✓ Option of screw with slide bearing (resistant to fine dust/abrasion)

Cover clips
✓ Slot cover as dust protection or stroke limitation

Carriages/fixing elements
✓ Wide range of models facilitates connection to your set-up
✓ Option of carriage with slide bushing (lower input torque, wear minimised)
Compact and versatile quad® EV profile actuator – for the medium load range

Profile actuator quad® EV

Twin-tube actuator EP-II/EPX-II
EP/EPX

Protected screw

Unprotected screw

Your application takes center stage

Screw covered by guiding tube

Twin-tube actuator

EP-II/EPX-II
EP/EPX

The EP/EPX twin-tube actuator generation
- compensates for high bending moments
- now also in the new generation EP-II/EPX-II in sizes 30 + 40

Protected screw

Choice of carriages/fixing elements
- Wide range of models for optimal integration into existing structures
- Adjustable slide guide

Cover strip
- The drive screw is protected against contamination

Shafts
- Choice of 1 or 2 ball-bearing shafts

Choice of carriages/fixing elements
- Wide range of models for optimal integration into existing structures
- Adjustable slide guide

Unprotected screw

Screw with choice of slide bearing or ball bearing
- Ideal for use in environments with fine dust/abraded particles thanks to slide bearings

Carriages available with optional slide bushing
- Lower input torque
- Wear minimised on carriage
- High torque capacity

Large fixing plate
- The EPX version is equipped with two carriages that are connected via a large fixing plate

Compact and versatile quad® EV profile actuator – for the medium load range

The EP/EPX twin-tube actuator generation
- compensates for high bending moments
- now also in the new generation EP-II/EPX-II in sizes 30 + 40

Screw with choice of slide bearing or ball bearing
- Ideal for use in environments with fine dust/abraded particles thanks to slide bearings

Carriages available with optional slide bushing
- Lower input torque
- Wear minimised on carriage
- High torque capacity

Large fixing plate
- The EPX version is equipped with two carriages that are connected via a large fixing plate

Flatness:
10 µm max.

The protective screws are standard. The protective sleeves are available on request.

The drive screw is protected against contamination.

Shafts
- Choice of 1 or 2 ball-bearing shafts

The drive screw is protected against contamination.

Wide range of models for optimal integration into existing structures

Adjustable slide guide

The drive screw is protected against contamination.

Wide range of models for optimal integration into existing structures

Adjustable slide guide

Wide range of models for optimal integration into existing structures

Adjustable slide guide

Wide range of models for optimal integration into existing structures

Adjustable slide guide
## Technical data

### E-II units – General information

<table>
<thead>
<tr>
<th>Type</th>
<th>Lead accuracy</th>
<th>Operational performance (m)</th>
<th>Permitted forces/torques</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-II 30</td>
<td>± 0,2/300mm</td>
<td>5000</td>
<td>800</td>
<td>500</td>
</tr>
<tr>
<td>E-II 40</td>
<td>± 0,2/300mm</td>
<td>5000</td>
<td>1000</td>
<td>2100</td>
</tr>
<tr>
<td>E-II 50</td>
<td>± 0,2/300mm</td>
<td>5000</td>
<td>1700</td>
<td>3000</td>
</tr>
<tr>
<td>E-II 60</td>
<td>± 0,2/300mm</td>
<td>5000</td>
<td>2500</td>
<td>4500</td>
</tr>
<tr>
<td>E-II 30</td>
<td>± 0,2/300mm</td>
<td>5000</td>
<td>800</td>
<td>500</td>
</tr>
<tr>
<td>stainless steel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-II 40</td>
<td>± 0,2/300mm</td>
<td>5000</td>
<td>1000</td>
<td>2100</td>
</tr>
<tr>
<td>stainless steel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*in relation to an overall length of 500 mm

### Versions

- Right- or left-hand threaded screw
- Right- and left-hand threaded screw
- Split screw
  (only E-II stainless steel on request)
### EP/EPX units – General information

<table>
<thead>
<tr>
<th>Type</th>
<th>Lead accuracy</th>
<th>Operational performance (m)</th>
<th>Permitted forces/torques</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP 30</td>
<td>+ 0,2/300mm</td>
<td>5000</td>
<td>800</td>
<td>1000</td>
</tr>
<tr>
<td>EP 40</td>
<td>+ 0,2/300mm</td>
<td>5000</td>
<td>1000</td>
<td>3500</td>
</tr>
<tr>
<td>EP 50</td>
<td>+ 0,2/300mm</td>
<td>5000</td>
<td>1700</td>
<td>3800</td>
</tr>
<tr>
<td>EP 60</td>
<td>+ 0,2/300mm</td>
<td>5000</td>
<td>2500</td>
<td>6600</td>
</tr>
<tr>
<td>EPX 30</td>
<td>+ 0,2/300mm</td>
<td>5000</td>
<td>800</td>
<td>1400</td>
</tr>
<tr>
<td>EPX 40</td>
<td>+ 0,2/300mm</td>
<td>5000</td>
<td>1000</td>
<td>6000</td>
</tr>
<tr>
<td>EPX 50</td>
<td>+ 0,2/300mm</td>
<td>5000</td>
<td>1700</td>
<td>7700</td>
</tr>
<tr>
<td>EPX 60</td>
<td>+ 0,2/300mm</td>
<td>5000</td>
<td>2500</td>
<td>11000</td>
</tr>
<tr>
<td>EP-II 30</td>
<td>+ 0,2/300mm</td>
<td>5000</td>
<td>800</td>
<td>1000</td>
</tr>
<tr>
<td>EP-II 40</td>
<td>+ 0,2/300mm</td>
<td>5000</td>
<td>1000</td>
<td>3500</td>
</tr>
<tr>
<td>EPX-II 30</td>
<td>+ 0,2/300mm</td>
<td>5000</td>
<td>800</td>
<td>1400</td>
</tr>
<tr>
<td>EPX-II 40</td>
<td>+ 0,2/300mm</td>
<td>5000</td>
<td>1000</td>
<td>6000</td>
</tr>
</tbody>
</table>

*in relation to an overall length of 500 mm

### Versions
- Right- or left-hand threaded screw
- Right- and left-hand threaded screw
- Split screw

### quad® EV units – General information

<table>
<thead>
<tr>
<th>Type</th>
<th>Lead accuracy</th>
<th>Operational performance (m)</th>
<th>Permitted forces/torques</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>EV 30</td>
<td>+ 0.15/300 mm</td>
<td>6000</td>
<td>800</td>
<td>600</td>
</tr>
<tr>
<td>EV 40</td>
<td>+ 0.15/300 mm</td>
<td>6000</td>
<td>1200</td>
<td>1500</td>
</tr>
<tr>
<td>EV 50</td>
<td>+ 0.15/300 mm</td>
<td>6000</td>
<td>1800</td>
<td>2200</td>
</tr>
<tr>
<td>EV 60</td>
<td>+ 0.15/300 mm</td>
<td>6000</td>
<td>2100</td>
<td>4070</td>
</tr>
</tbody>
</table>

*in relation to an overall length of 500 mm

### Versions
- Right- or left-hand threaded screw
- Right- and left-hand threaded screw
- Split screw
The SeGMo reduces the setup times for format adjustment

Lenord + Bauer offers a modular application for the automation of linear actuators, consisting of:

- Fully automated actuators SeGMo-Positioning and SeGMo-Motion
- Electronic control unit SeGMo-Box for up to 5 actuators
- Pre-packaged software modules SeGMo-Lib
- Single-cable wiring (hybrid cable) SeGMo-Connect

SeGMo – actuators for RK Rose+Krieger linear actuators

- Fully automated actuators SeGMo-Positioning and SeGMo-Motion
- Sturdy housing in aluminium or stainless steel
- Magnetic multiturn sensor for precise positioning
- Wide temperature range from -10°C to +60°C
- Support-Tool for setup

For further information, please refer to our “SeGMo system” brochure on our website www.lenord.com
Technical data

<table>
<thead>
<tr>
<th>SeGMo-Positioning</th>
<th>GEL 6110 compact design</th>
<th>GEL 6110 short design</th>
<th>GEL 6109 compact design</th>
<th>GEL 6109 short design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (W × H × D)</td>
<td>60 × 100 × 163 mm</td>
<td>60 × 100 × 125 mm</td>
<td>50 × 125 × 96 mm</td>
<td>50 × 125 × 76 mm</td>
</tr>
<tr>
<td>Degree of protection</td>
<td>IP 67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housing material</td>
<td>Aluminium (AlMgSi); stainless steel (1.4301)</td>
<td>Aluminium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated torque</td>
<td>2 Nm; 5 Nm; 10 Nm; 15 Nm</td>
<td>1.4 Nm; 3.5 Nm; 7 Nm</td>
<td>2.5 Nm; 5 Nm</td>
<td></td>
</tr>
<tr>
<td>Screw speed (U/min)</td>
<td>230; 100; 40; 30</td>
<td>230; 100; 40</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>Position sensor</td>
<td>Magnetic, multiturn (Drive end), batteryless</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensor detection range</td>
<td></td>
<td>342 revolutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>in de-energized condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor</td>
<td>BLDC (24 V)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gear types</td>
<td>Spur gear</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>-10 °C bis +60 °C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connections</td>
<td>Connector M12; M23; hybrid cable; hybrid connector</td>
<td>connector M12; M23; hybrid cable; hybrid connector; M17 Connector</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lenord + Bauer** support you in implementing your automation requirements with the SeGMo system

Depending on customer requirements and the technical circumstances, the SeGMo system is either integrated into the existing control-system architecture or constructed as a cost-effective parallel system. And if you wish, we can also integrate the system into your machine control system for you. We are on hand with expert advice at every stage of your project.

Take advantage of our expert knowledge and benefit from our comprehensive range of consultancy and support services!

**SeGMo-Support** +49 208 9963 - 220
 info@lenord.de
### E-II/E-II stainless tubular linear unit

**Features:**
- Units for light to heavy moving applications
- Different sizes can be combined
- Comprehensive range of accessories

### EP/EPX/EP-I/EPX-II tubular linear unit

**Features:**
- High torque capacity
- Version available with large fixing plate

### quad® EV linear unit

**Features:**
- Screw covered by steel band
- Wide range of available carriages and fixing elements
- Comprehensive range of accessories

---

#### RK Rose+Krieger

<table>
<thead>
<tr>
<th>RK Rose+Krieger</th>
<th>Size</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="#">E-II-E tubular linear unit</a></td>
<td>E-II 30 E-II 40</td>
<td>Freely selectable stroke/simple ordering process</td>
</tr>
<tr>
<td><a href="#">Choice of carriage models</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td><a href="#">Choice of axis fixation</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td><a href="#">Attachment of RH torque support</a> *Catalogue page: 153</td>
<td></td>
<td></td>
</tr>
<tr>
<td><a href="#">E-II-E tubular linear unit E-II stainless</a></td>
<td>E-II 50 E-II 60</td>
<td></td>
</tr>
<tr>
<td><a href="#">Choice of carriage models</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td><a href="#">Choice of axis fixation</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td><a href="#">Attachment of RH torque support</a> *Catalogue page: 153</td>
<td></td>
<td></td>
</tr>
<tr>
<td><a href="#">quad® EV linear unit</a></td>
<td>EV 30 EV 40</td>
<td></td>
</tr>
<tr>
<td><a href="#">Choice of carriage models</a></td>
<td>EV 50 EV 60</td>
<td></td>
</tr>
<tr>
<td><a href="#">Choice of axis fixation</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td><a href="#">Attachment of VH torque support</a> *Catalogue page 154</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

For further information, please refer to our "Linear Technology" catalogue and "Connecting Technology" *catalogue, on our website [www.rk-rose-krieger.com](http://www.rk-rose-krieger.com) and at [www.lenord.com](http://www.lenord.com)
Possible applications

- Packaging system (EP 40 linear unit)
- Format adjustment (E-II 30 linear unit)
- Conveyor line with format adjustment
- Conveyor line with format adjustment
- Width adjustment (EP-II 30 linear unit)
- Height adjustment (EPX 40 linear unit)
If you want to focus your resources on other tasks and are looking for an expert partner you can rely on, our specialists will work closely with you to develop tailor-made solutions. If you wish, we can also assemble and commission the units on site.

Product Consultancy   +49 (0) 571 9335 - 0  
anfrage.vertrieb@rk-online.de

- Just make a sketch of your requirements

- Our product specialists will devise a solution for you

- We can deliver your turnkey solution or assemble and commission it for you on site
Our product ranges

CONNECTING TECHNOLOGY
✓ Fittings for the secure clamp connection of round and square tubes
✓ Elements made of aluminium, stainless steel and plastic
✓ Sizes from 8 mm to 80 mm

PROFILE TECHNOLOGY
✓ The tried and tested BLOCAN® aluminium assembly system
✓ Sections from 20 mm to 320 mm for all applications
✓ Connecting technology with an unsurpassed combination of flexibility and reliability

LINEAR TECHNOLOGY
✓ Manual adjustment units
✓ Electric cylinders
✓ Lifting columns
✓ Linear axes
✓ We can move loads for you of up to 3 t and 12 m dynamically, reliably and with great precision

MODULE TECHNOLOGY
✓ Machine frames
✓ Workstations
✓ Machine guards
✓ Multidimensional linear axis modules
✓ Complete drive solutions