Cantilever axis with gear rack EHMH

Ideal for heavy loads

Its ability to move high payloads of up to 200 kg extremely dynamically, precisely and easily makes the EHMH very suitable for handling systems. It can be used, for example, for palletising and stacking in the packaging and automotive industries or unloading and loading machine tools. The rack and pinion technology contributes to its long service life.

Precise, even for long stroke lengths
The cantilever axis masters every challenge completely effortlessly. The combination of a solid steel profile and high-quality recirculating roller bearing guide stands for high rigidity and repetition accuracy, which are particularly desirable for demanding positioning tasks with long strokes.

Drop guard in vertical applications
The two options that are available for safe operation are the pneumatic locking unit and the clamping unit.

High efficiency
The direct, slip-free transmission of torque from the drive pinion to the gear rack ensures a high feed force.

Highlights

- For payloads of up to 200 kg
- Stroke length up to 2500 mm
- Very high rigidity and torsional resistance
- Safety functions can be easily implemented
- Many suitable options for the application

Sturdy, strong, powerful!
Made for peak performance

Every application is different. That’s why our modular kit provides a variety of options that allow the cantilever axis EHMH to be perfectly tailored to meet the most individual needs. So you can decide if you want to increase the ease of service and maintenance, the safety on the axis, or the protection of the axis itself.

If the axis is installed vertically, it is advisable to protect your application against dropping down. Otherwise, the risk that staff could be harmed becomes incalculable. Many other targeted protective measures also ensure that machine operators are safe and that the axis is protected.

Safety options

Pneumatic locking unit
During standstill, for example for commissioning or maintenance, the pneumatic locking unit ensures a positive, hard mechanical lock.

Clamping unit
The frictionally engaged clamping unit directly on the guide rail acts as an emergency brake.

External displacement encoder
An incremental measuring method is used for additional position detection and can be used as a second channel in safety applications.

Protection options

Scraper on both sides
Having scrapers on both sides protects the axis from external influences, such as dust, dirt particles and liquids. This significantly increases the life of the recirculating roller bearing guide in the guide carriage, and also extends the maintenance intervals.

Covered drive pinion
The covered drive pinion not only protects it against contamination, but also protects the operator from contact, which could potentially result in pinched fingers, for example.

Energy chain
Mounting an energy chain is a neat and tidy way to ensure that the flange plate is supplied with energy and data. It helps to protect the cabling and tubing, significantly reduces wear and tear, and thus increases their service life.
Efficient lubrication enables you to considerably extend the service life of the axis and to reduce wear and tear. This will result in less machine downtime, savings on spare parts, fewer unproductive staff hours and reduced energy consumption. In a word, everything that causes unnecessary costs. We therefore provide a central lubrication connector for both manual and automatic lubrication. There are other extras for convenient operation.

**Easy-to-maintain lubrication**

- **Central lubrication connector**
  A single connection is sufficient to distribute the lubricant to all required locations on the drive pinion and guide carriage.

- **Additional lubrication pinion**
  Together with the central lubrication connection, an additional rigid foam lubrication pinion ensures that the rack and pinion are optimally lubricated even during operation.

**Further options**

- **Mounting kit for sensors**
  The mounting kit for sensors comprises a mounting strip including two switch lugs and sensor mounts for end position detection. The sensors are available as accessories.

- **End-position buffer**
  An end-position buffer cushions the impact in vertical operation to prevent damage to the axis, e.g. during set-up.

- **Noise reduction**
  The foam lining in the steel profile makes the axis particularly quiet.
**EHMH as Z-axis**

Your complete handling system for heavy loads from a single source

Efficient, reliable and perfectly matched: this is what we at Festo mean by complete solutions. From front units to axes, suitable motors and motor controllers to the control system – everything comes from a single source. This also includes, on request, suitable control cabinets and our very special range of services. We provide support for on-site commissioning, maintain your handling system and are there for you in the event of any failures, faults and malfunctions.

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**Technical data of the cantilever axis with gear rack EHMH**

<table>
<thead>
<tr>
<th>Size</th>
<th>80</th>
<th>140</th>
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</thead>
<tbody>
<tr>
<td>Guide</td>
<td>Recirculating roller bearing guide</td>
<td></td>
</tr>
<tr>
<td>Max. payload, vertical [kg]</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>Working stroke [mm]</td>
<td>250 ... 2500</td>
<td></td>
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<tr>
<td>Guide carriage</td>
<td>2</td>
<td>4</td>
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<tr>
<td>Max. feed force [N]</td>
<td>2500</td>
<td>4900</td>
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<tr>
<td>Max. speed [m/s]</td>
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<tr>
<td>Max. acceleration [m/s²]</td>
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<tr>
<td>Repetition accuracy [mm]</td>
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<tr>
<td>Service life at max. load [km]</td>
<td>5000</td>
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