Modular Assembly Automation
Product Overview
Superior Clamping and Gripping

Jens Lehmann stands for safe, precise gripping and holding. As a brand ambassador of the SCHUNK team, the No. 1 goalkeeper represents our global competence leadership for clamping technology and gripping systems. The top performance of SCHUNK and Jens Lehmann are characterized by dynamics, precision, and reliability.

For more information visit our website: www.gb.schunk.com/Lehmann
Top Performance in the Team

SCHUNK is the world’s No. 1 for clamping technology and gripping systems – from the smallest parallel gripper to the largest chuck jaw program.

In order to boost efficiency, SCHUNK customers have bought more than 2,000,000 precision toolholders, 1,000,000 SCHUNK grippers, and 100,000 lathe chucks and stationary workholding systems so far.

This makes us proud and motivates us to attain new top performances.

As a competence leader, we recognize and develop standards with a large potential for the future, which will drive the rapid progress in many industries.

Our customers profit from the expert knowledge, the experience, and the team spirit of more than 2,500 employees in our innovative family-owned company.

The Schunk family wishes you improved end results with our quality products.

Heinz-Dieter Schunk
Henrik A. Schunk
Kristina I. Schunk
SCHUNK Modular Assembly Automation
Product Overview

Comprehensive Ranges from the Modular System.

With pneumatic and electrically driven grippers, rotary units, rotary gripping modules, and linear modules, the modular assembly system from SCHUNK makes it possible to achieve custom handling solutions in different versions and sizes. The heart of the design is the pillar assembly system that is unique in scope with numerous standardized pillar profiles, adapter plates, centering and connection elements. The modular system is enhanced by the SCHUNK pick & place units and standard gantries. Take advantage of this unique range of possibilities.

What you gain from our system advantages:

- Complete range of products
- Pneumatic and electric drives
- High precision of all individual components
- Full compatibility among all actuators
- Reproducible connection technology
- Extensive assembly adaptation system
- Planning security using software tools

SCHUNK Grippers

With more than 2,000 possible combinations within the modular system, SCHUNK grippers enable a wide range of individual solutions.

- Gripper for small components
- Universal gripper
- Angular and radial gripper

Rotary Modules

The comprehensive range of compact SCHUNK rotary and swivel units for every handling task and for a fast and easy integration.

- Rotary actuators
- Rotary indexing tables
- Rotary gripping module

Linear Modules

The most extensive portfolio of linear modules. Including pneumatic, direct electric drive or with spindle/belt drive with short or long strokes. The perfect module for any application.

- Linear modules
- Gantry modules
Our superior components can unlock potential you didn’t even know you had. In your machine. SCHUNK SYNERGY – the perfectly harmonized relationship between clamping technology and gripping systems turns our customers into productivity champions.

It’s time to use your machine’s full potential!

Pick & Place Module
SCHUNK pick & place units are the fastest choice for compact and time-efficient high-speed precision with up to 110 picks per minute.
- Pneumatic
- Electric

Pillar Assembly, Connecting Elements
Comprehensive modular system of standardized pillar profiles, adapter plates, centering and connecting elements, as well as different standard elements with the option of media feed-through.

Accessories
With around 150 sensor variants and a wide range of high-quality accessory components, SCHUNK offers the greatest variety on the market.
- Measure forces exactly
- Sense positions
- Monitor workpieces
- Minimize energy consumption

... in your automated handling system
... in your automated machine loading
... in your machining center
... in your automated assembly line
... in your service robotics application

PPU-E
SAS pillar assembly system
MMS 22-PI
100% Flexibility from the Modular System.

Design an infinite number of applications for micro part handling and assembly automation with the SCHUNK modular assembly system. An incredible variety of automation solutions can be realized with just a few standard modules from the SCHUNK modular system.

Rotary Modules
High technology for rotary movements.
Over 600 available components.
Variable from 180° to infinite rotation.

SCHUNK Grippers
The most extensive gripper portfolio in the world with over 2,550 pneumatic and electric components.
SCHUNK Modular Assembly Automation

Product Overview

SCHUNK Pillar Assembly System
100% flexible. Achieves a virtually infinite number of possibilities for combining components. Pillars up to 1,000 mm long.

Linear Modules
More than 450 pneumatic and electric components with up to 7,000 mm stroke. The most comprehensive program on the market.
# SCHUNK Grippers

## Modular Assembly Automation

### 2-finger parallel gripper

<table>
<thead>
<tr>
<th>Pneumatic</th>
<th>MPG-plus</th>
<th>MPG</th>
<th>KGG</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image of gripper" /></td>
<td><img src="image2.png" alt="Image of gripper" /></td>
<td><img src="image3.png" alt="Image of gripper" /></td>
<td></td>
</tr>
</tbody>
</table>

#### Technical data

<table>
<thead>
<tr>
<th></th>
<th>MPG-plus</th>
<th>MPG</th>
<th>KGG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of sizes</td>
<td>7</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Gripping force [N]</td>
<td>25 .. 350</td>
<td>7 .. 270</td>
<td>45 .. 300</td>
</tr>
<tr>
<td>Gripping moment [Nm]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stroke per jaw [mm]</td>
<td>1.5 .. 10</td>
<td>1 .. 10</td>
<td>10 .. 30</td>
</tr>
<tr>
<td>Opening angle per jaw [*]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight [kg]</td>
<td>0.022 .. 0.63</td>
<td>0.01 .. 0.7</td>
<td>0.09 .. 0.77</td>
</tr>
<tr>
<td>Recommended workpiece weight [kg]</td>
<td>0.17 .. 1.25</td>
<td>0.05 .. 1.0</td>
<td>0.23 .. 1.3</td>
</tr>
<tr>
<td>Closing/opening time [s]</td>
<td>0.011 .. 0.08/0.011 .. 0.08</td>
<td>0.01 .. 0.06/0.01 .. 0.06</td>
<td>0.03 .. 0.17/0.03 .. 0.17</td>
</tr>
<tr>
<td>Max. permissible finger length [mm]</td>
<td>20 .. 80</td>
<td>10 .. 64</td>
<td>42 .. 100</td>
</tr>
<tr>
<td>Repeat accuracy [mm]</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
</tr>
<tr>
<td>Power supply [V]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IP protection class</td>
<td>30</td>
<td>30</td>
<td>40</td>
</tr>
<tr>
<td>Clean–room class ISO 14644–1</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Comprehensive ranges</td>
<td>++</td>
<td>++</td>
<td>++</td>
</tr>
</tbody>
</table>

#### Options/variants

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed version</td>
<td></td>
</tr>
<tr>
<td>Gripping force maintenance</td>
<td></td>
</tr>
<tr>
<td>High temperature version</td>
<td></td>
</tr>
<tr>
<td>Precision design</td>
<td></td>
</tr>
<tr>
<td>Dust-prot. version</td>
<td></td>
</tr>
</tbody>
</table>

#### Description

- 2-finger parallel gripper with smooth roller guides of the base jaws
- Narrow 2-finger parallel gripper with large stroke

#### Field of application

- Gripping and moving
- For small to medium-sized workpieces
- In the areas of assembly, testing, laboratory, pharmacies

- Gripping and moving
- For small to medium-sized workpieces
- In the areas of assembly, testing, laboratory, pharmacies

- Universal use
- For light to medium- sized workpiece weights
- With a large range of stroke

#### Ambient conditions

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean</td>
<td></td>
</tr>
<tr>
<td>Contaminated/ fine dust and liquids</td>
<td></td>
</tr>
<tr>
<td>High temperature range &gt; 90°C</td>
<td></td>
</tr>
<tr>
<td>Clean–room</td>
<td></td>
</tr>
</tbody>
</table>

#### Notes

- = highly suitable/fully supported
- = suitable in special design (on request)
- = suitable to a limited extent

* Servo controlled concept for mechatronic SCHUNK components, see page 32.

The products listed here are examples from the extensive SCHUNK product portfolio and are especially suitable for modular assembly automation.
### Modular Assembly Automation

#### 2-finger parallel gripper

- Pneumatic
- Electric*

<table>
<thead>
<tr>
<th>MPG-plus</th>
<th>EGP</th>
<th>NEW PGN–plus-Electric</th>
<th>MPZ</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
</tbody>
</table>

#### Technical data

<table>
<thead>
<tr>
<th></th>
<th>MPG-plus</th>
<th>EGP</th>
<th>NEW PGN–plus-Electric</th>
<th>MPZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of sizes</td>
<td>7</td>
<td>10</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Gripping force [N]</td>
<td>123 .. 3220</td>
<td>20 .. 215</td>
<td>110 .. 570</td>
<td>20 .. 340</td>
</tr>
<tr>
<td>Gripping moment [Nm]</td>
<td>0.01 .. 2.8</td>
<td>3.3 .. 114</td>
<td>20 .. 340</td>
<td></td>
</tr>
<tr>
<td>Stroke per jaw [mm]</td>
<td>1.5 .. 10</td>
<td>1 .. 10</td>
<td>10 .. 30</td>
<td></td>
</tr>
<tr>
<td>Opening angle per jaw [°]</td>
<td>15</td>
<td>15</td>
<td>30 .. 90</td>
<td></td>
</tr>
<tr>
<td>Weight [kg]</td>
<td>0.022 .. 0.63</td>
<td>0.01 .. 0.7</td>
<td>0.09 .. 0.77</td>
<td>0.11 .. 0.51</td>
</tr>
</tbody>
</table>

#### Recommended workpiece weight [kg]

<table>
<thead>
<tr>
<th></th>
<th>MPG-plus</th>
<th>EGP</th>
<th>NEW PGN–plus-Electric</th>
<th>MPZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.17 .. 1.25</td>
<td>0.05 .. 1.0</td>
<td>0.23 .. 1.3</td>
<td>0.62 .. 11.2</td>
<td>0.2 .. 1.05</td>
</tr>
</tbody>
</table>

#### Closing/opening time [s]

<table>
<thead>
<tr>
<th></th>
<th>MPG-plus</th>
<th>EGP</th>
<th>NEW PGN–plus-Electric</th>
<th>MPZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.011 .. 0.08/0.011</td>
<td>0.08</td>
<td>0.01 .. 0.06/0.01 .. 0.06</td>
<td>0.03 .. 0.17/0.03 .. 0.17</td>
<td>0.02 .. 0.12/0.02 .. 0.12</td>
</tr>
</tbody>
</table>

#### Max. permissible finger length [mm]

<table>
<thead>
<tr>
<th></th>
<th>MPG-plus</th>
<th>EGP</th>
<th>NEW PGN–plus-Electric</th>
<th>MPZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 .. 80</td>
<td>10 .. 64</td>
<td>42 .. 100</td>
<td>54 .. 180</td>
<td>32 .. 64</td>
</tr>
</tbody>
</table>

#### Field of application

- Gripping and moving
- For small to medium-sized workpieces
- In the areas of assembly, testing, laboratories, pharmacies

#### Ambient conditions

<table>
<thead>
<tr>
<th></th>
<th>Clean</th>
<th>Contaminated/ fine dust and liquids</th>
<th>High temperature range &gt; 90°C</th>
<th>Clean-room</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>●</td>
<td>◀</td>
<td>●</td>
<td>○</td>
</tr>
</tbody>
</table>

#### Options/variants

- Speed version
- Gripping force maintenance
- High temperature version
- Precision design
- Dust-protection version

#### Description

- 2-finger parallel gripper with smooth roller guides of the base jaws
- Narrow 2-finger parallel gripper with large stroke
- Universal 2-finger parallel gripper
- Electric 2-finger parallel gripper with smooth-running base jaws guided on roller bearings
- Electric 2-finger parallel gripper with integrated motor and electronics as well as reliable multi-tooth guidance
- Small 3-finger centric gripper
- Universal centric gripper with high gripping force and maximum moments thanks to multi-tooth guidance
- Narrow double-acting 2-finger angular gripper
- Robust 2-finger angular gripper with oval piston and bone drive
- 2-finger angular parallel gripper

#### Repeat accuracy [mm]

<table>
<thead>
<tr>
<th></th>
<th>MPG-plus</th>
<th>EGP</th>
<th>NEW PGN–plus-Electric</th>
<th>MPZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
</tr>
</tbody>
</table>

---

* Servo controlled concept for mechatronic SCHUNK components, see page 32.
### SCHUNK Grippers
#### Modular Assembly Automation

**Technical data**

- **Number of sizes**: 7, 10, 5, 6, 3, 1, 6, 5, 8, 5, 4

<table>
<thead>
<tr>
<th></th>
<th>MPG-plus</th>
<th>MPG KGG</th>
<th>PGN-plus</th>
<th>EGP NEW</th>
<th>PZN-plus</th>
<th>SWG</th>
<th>GAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grip force [N]</td>
<td>25 .. 350</td>
<td>7 .. 270</td>
<td>45 .. 300</td>
<td>123 .. 3.220</td>
<td>20 .. 215</td>
<td>110 .. 570</td>
<td>20 .. 340</td>
</tr>
<tr>
<td>Stroke [mm]</td>
<td>1.5 .. 10</td>
<td>1 .. 10</td>
<td>10 .. 30</td>
<td>2.5 .. 13</td>
<td>3 .. 8</td>
<td>8 .. 1 .. 5</td>
<td>2.5 .. 10</td>
</tr>
<tr>
<td>Opening angle [°]</td>
<td>15</td>
<td>15</td>
<td>30 .. 90</td>
<td>0.01 .. 0.02</td>
<td>0.06 .. 0.01</td>
<td>0.09 .. 0.35</td>
<td></td>
</tr>
<tr>
<td>Weight [kg]</td>
<td>0.022 .. 0.63</td>
<td>0.01 .. 0.7</td>
<td>0.09 .. 0.77</td>
<td>0.08 .. 1.85</td>
<td>0.11 .. 0.51</td>
<td>1.01</td>
<td>0.01 .. 1.15</td>
</tr>
<tr>
<td>Recommended workpiece weight [kg]</td>
<td>0.17 .. 1.25</td>
<td>0.05 .. 1.0</td>
<td>0.23 .. 1.3</td>
<td>0.62 .. 11.2</td>
<td>0.2 .. 1.05</td>
<td>3</td>
<td>0.05 .. 1.15</td>
</tr>
<tr>
<td>Closing/opening time [s]</td>
<td>0.011 .. 0.08/0.011</td>
<td>0.08</td>
<td>0.01 .. 0.06/0.01 .. 0.06</td>
<td>0.03 .. 0.17/0.03 .. 0.17</td>
<td>0.02 .. 0.12/0.02 .. 0.12</td>
<td>0.09 .. 0.21</td>
<td>0.26/0.26</td>
</tr>
<tr>
<td>Max. permissible finger length [mm]</td>
<td>20 .. 80</td>
<td>10 .. 64</td>
<td>42 .. 100</td>
<td>54 .. 180</td>
<td>32 .. 64</td>
<td>125</td>
<td>16 .. 45</td>
</tr>
<tr>
<td>Repeat accuracy [mm]</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.01</td>
<td>0.02</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Power supply [V]</td>
<td>24</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IP protection class</td>
<td>30</td>
<td>30</td>
<td>40</td>
<td>40/64</td>
<td>30</td>
<td>40</td>
<td>40/64</td>
</tr>
<tr>
<td>Clean-room class</td>
<td>ISO 14644-1</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

#### Options/variants

- Speed version ● ● ● ● ●
- Gripping force maintenance ● ● ● ● ●
- High temperature version ● ● ● ● ●
- Precision design ● ● ●
- Dust-protection version ●

#### Description

- **2-finger parallel gripper** with smooth roller guides of the base jaws
- **2-finger parallel gripper** with smooth roller guides of the base jaws
- **Narrow 2-finger parallel gripper** with large stroke
- **Universal 2-finger parallel gripper** with large gripping force and high maximum moments due to multi-tooth guidance
- **Electric 2-finger parallel gripper** with smooth-running base jaws guided on roller bearings
- **Electric 2-finger parallel gripper** with integrated motor and electronics as well as reliable multi-tooth guidance
- **Small 3-finger centric gripper** with base jaws guided on T-slots
- **Universal centric gripper** with high gripping force and maximum moments thanks to multi-tooth guidance
- **Narrow double-acting 2-finger angular gripper**
- **Robust 2-finger angular gripper with oval piston and bone drive**
- **2-finger angular parallel gripper** with gripper finger actuation of up to 90 degrees per jaw

#### Field of application

- **Gripping and moving**
- **For small to medium-sized workpieces**
- **In the areas of assembly, testing, laboratory, pharmacies**
- **Universal use**
- **For light to medium-sized workpiece weights**
- **With a large range of stroke**
- **Optimum standard solution for many fields of application**
- **Gripping and moving**
- **For small to medium-sized workpieces with flexible force and high speed**
- **In the areas of assembly, testing, laboratories**
- **Optimum standard solution for many fields of application**
- **Universal use**
- **Especially suitable for gripping small workpieces**
- **Universal use due to numerous product variants; also in areas where there are special demands on the gripper (temperature, chemical durability, contamination, and much more)**
- **Universal use**
- **Suitable for applications which require a stacked, space-optimized gripper arrangement**
- **Universal use**
- **Gripping and moving**
- **For small to medium-sized workpieces**
The NEW SCHUNK Grippers**

The NEW PGN–plus

The world-proven gripper on the market – now with NEW permanent lubrication in the multi-tooth guidance. Lifelong maintenance-free.* Guaranteed!

Your benefits:
- **Up to 50% longer gripper fingers** due to higher maximum moments
- **More power** due to the increased surface of the drive piston
- **Maximum life span** due to lubrication pockets in the robust multi-tooth guidance
- **Maximum process reliability** due to limited surface pressure
- **Variety in accessories**

* More than 50 million cycles under normal, clean operating conditions.

** Size 64: Available starting August 2016, sizes 50, 80 – 175: Available starting September/October 2016

The NEW PGN–plus Electric

The first simple electric gripper with reliable multi-tooth guidance. Multi-tooth guidance, digital actuation and 24 V drive with permanent lubrication.

Your benefits:
- **Up to 50% longer gripper fingers** due to higher maximum moments
- **Easy gripping force adjustment**
  The gripping force can be adjusted quickly, safely, and manually in four stages
- **Maximum life span** due to lubrication pockets in the robust multi-tooth guidance
- **Maximum process reliability** due to limited surface pressure
- **Integrated sensor system**

** Available starting September 2016
## Rotary Modules

### Modular Assembly Automation

<table>
<thead>
<tr>
<th>Rotary Actuators</th>
<th>Electric*</th>
<th>Rotary indexing tables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pneumatic</td>
<td>RM-F</td>
<td>RM-W</td>
</tr>
<tr>
<td>Electric*</td>
<td>ELD</td>
<td>RST-D</td>
</tr>
<tr>
<td>RM-F</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>RM-W</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ELD</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>RST-D</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Drive type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Double piston rack and pinion drive</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Rotor drive</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Torque motor</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Technical data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of sizes</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Torque [Nm]</td>
<td>0.05 .. 1.9</td>
<td>0.7 .. 22</td>
</tr>
<tr>
<td>Angle of rotation [°]</td>
<td>10 .. 190</td>
<td>90 .. 180</td>
</tr>
<tr>
<td>End position adjustability [°]</td>
<td>90</td>
<td>5</td>
</tr>
<tr>
<td>Weight [kg]</td>
<td>0.046 .. 1.16</td>
<td>0.65 .. 8.3</td>
</tr>
<tr>
<td>Max. permissible mass moment of inertia [kgm²]</td>
<td>0.023</td>
<td>0.27</td>
</tr>
<tr>
<td>Repeat accuracy [°]</td>
<td>0.082 .. 0.15</td>
<td>0.036 .. 0.046</td>
</tr>
<tr>
<td>IP protection class</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Options/variants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Center position</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Rotary feed-through</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Description</td>
<td>Light and flat rotary actuator</td>
<td>Rotor with high torque for fast swiveling tasks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Powerful torque motor with absolute-value transducer and electric and pneumatic rotary feed-throughs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ring indexing unit for endless turning with a rotation angle up to 90° per cycle</td>
</tr>
<tr>
<td>Field of application</td>
<td>The optimum solution for easy to moderately difficult swiveling tasks</td>
<td>For use in clean to slightly dirty environments.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use as highly dynamic electrical turning and positioning unit with a flexible angle of rotation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use as a stationary indexing table for fast movement and cycle times</td>
</tr>
<tr>
<td>Ambient conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clean</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Slightly dirty</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Extremely dirty</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

● = highly suitable/fully supported

* Servo controlled concept for mechatronic SCHUNK components, see page 32.

The products listed here are examples from the extensive SCHUNK product portfolio and are especially suitable for modular assembly automation.
### Rotary gripping modules with 2-finger parallel gripper

**Technical data**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value 1</th>
<th>Value 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of sizes</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Gripping force (N) opening angle (Nm)</td>
<td>33 .. 162</td>
<td>50 .. 420</td>
</tr>
<tr>
<td>Stroke/opening angle per jaw (mm/°)</td>
<td>1.5 .. 10</td>
<td>2.5 .. 8</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>0.37 .. 1.51</td>
<td>0.5 .. 1.94</td>
</tr>
<tr>
<td>Torque (Nm)</td>
<td>0.35 .. 2.7</td>
<td>0.38 .. 1.9</td>
</tr>
<tr>
<td>Angle of rotation (°)</td>
<td>0 .. 180</td>
<td>0 .. 190</td>
</tr>
<tr>
<td>Recommended workpiece weight (kg)</td>
<td>0.2 .. 0.61</td>
<td>0.25 .. 1.4</td>
</tr>
<tr>
<td>Closing/opening time (s)</td>
<td>0.01 .. 0.05/0.01 .. 0.05</td>
<td>0.015 .. 0.06/0.015 .. 0.06</td>
</tr>
<tr>
<td>Max. permissible finger length (mm)</td>
<td>32 .. 64</td>
<td>40 .. 75</td>
</tr>
<tr>
<td>Repeat accuracy (mm)</td>
<td>0.02</td>
<td>0.02</td>
</tr>
<tr>
<td>Power supply (V)</td>
<td>30</td>
<td>40</td>
</tr>
<tr>
<td>IP protection class</td>
<td>30</td>
<td>40</td>
</tr>
</tbody>
</table>

**Options/variants**

- Gripping force maintenance ●
- Intermediate position ●
- Rotation adapter ●

**Description**

- Compact rotary gripper combination, consisting of a powerful rotor drive and a 2-finger parallel gripper
- Compact 2-finger parallel rotary gripper module with double piston rack and pinion swivel drive

**Field of application**

- For gripping and swiveling small to medium-sized workpieces in clean environments
- For gripping and swiveling workpieces in clean environments

**Ambient conditions**

- Clean ●
- Slightly dirty ●
- Extremely dirty ●

* = highly suitable/fully supported

* Servo controlled concept for mechatronic SCHUNK components, see page 32.
### Rotary Modules

**Modular Assembly Automation**

<table>
<thead>
<tr>
<th><strong>Electric</strong></th>
<th><strong>Pneumatic</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>RMPG</td>
<td>EGS</td>
</tr>
<tr>
<td>Gripping modules with 3-finger centric grippers</td>
<td>Gripping modules with 2-finger angular grippers</td>
</tr>
</tbody>
</table>

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Technical Data

- **Number of sizes**: 4
- **Gripping force [N]/opening angle [Nm]**:
  - RMPG: 33 .. 162 / 50 .. 420
  - EGS: 10 .. 28 / 30
  - RC: 1.2 .. 2.2 / 3
  - RW: 0.1 .. 0.223 / 0.55
- **Stroke/opening angle per jaw [mm]/[°]**:
  - RMPG: 1.5 .. 10 / 2.5 .. 8
  - EGS: 1.2 .. 2.2 / 3
  - RC: 0 .. 185 / 0 .. 270
  - RW: 0 .. 0.014 / 0.15
- **Weight [kg]**:
  - RMPG: 0.37 .. 1.51
  - EGS: 0.5 .. 1.94
  - RC: 1.0 .. 2.2
  - RW: 0.5 .. 2.25
- **Torque [Nm]**:
  - RMPG: 0.35 .. 2.7
  - EGS: 0.38 .. 1.9
  - RC: 0.05 .. 0.224
  - RW: 0.38 .. 1.9
- **Angle of rotation [°]**:
  - RMPG: 0 .. 180
  - EGS: 0 .. 190
  - RC: 0 .. 185
  - RW: 0 .. 270
- **Recommended workpiece weight [kg]**:
  - RMPG: 0.2 .. 0.61
  - EGS: 0.25 .. 1.4
  - RC: 0.05 .. 0.14
  - RW: 0.15
- **Closing/opening time [s]**:
  - RMPG: 0.01 .. 0.05 / 0.01 .. 0.05
  - EGS: 0.015 .. 0.06 / 0.015 .. 0.06
  - RC: 0.01 .. 0.03
  - RW: 0.05 / 0.05
- **Max. permissible finger length [mm]**:
  - RMPG: 32 .. 64
  - EGS: 40 .. 75
  - RC: 12 .. 20
  - RW: 32
- **Repeat accuracy [mm]**:
  - RMPG: 0.02
  - EGS: 0.02
  - RC: 0.02
  - RW: 0.02 .. 0.05
- **Power supply [V]**:
  - RMPG: 30
  - EGS: 30
  - RC: 40
  - RW: 40
- **IP protection class**:
  - RMPG: 30
  - EGS: 40
  - RC: 30
  - RW: 40
- **Options / variants**:
  - Gripping force maintenance ● ● ● ●
  - Intermediate position ● ● ● ●
  - Rotation adapter ● ● ● ●

### Description

- **Compact rotary gripper combination**, consisting of a powerful rotor drive and a 2-finger parallel gripper.
- **Compact 2-finger parallel rotary gripper module** with double piston rack and pinion swivel drive.
- **Compact 2-finger miniature rotary gripper module** with junction roller guide for high accuracy when gripping.
- **Compact electrical 2-finger parallel rotary gripper module** with smooth-running roller bearing guide.
- **Compact 3-finger centric rotary gripper module** with double piston rack and pinion swivel drive.
- **Compact 2-finger angular rotary gripper module** with double piston rack and pinion swivel drive.

### Field of Application

- For gripping and swiveling small to medium-sized workpieces in clean environments.
- For gripping and swiveling workpieces in clean environments.
- For gripping and swiveling small workpieces in clean environments.
- For the electrical gripping and swiveling of small to medium-sized workpieces up to 270°.
- For the centric gripping and swiveling of small workpieces in clean environments.
- For gripping and swiveling small workpieces in clean environments.

---

*Servo controlled concept for mechatronic SCHUNK components, see page 32.*
ERS Electric Rotary Module with DDF Rotary Feed-through

Compact, dynamic and uniquely versatile

The SCHUNK ERS electric rotary module offers the option of a pneumatic and electrical rotary feed-through. This module is driven by a torque motor with a hollow shaft and features a rotary feed-through, making it one of the most compact electric rotary modules with an integrated pneumatic and electrical feed-through on the market. As standard, the rotary feed-through has more than eight signal feed-throughs and a pneumatic air duct.

Your benefits:
• Extremely low-profile design
• Pneumatic and electrical feed-throughs
• Endless turning at up to 250 rpm
• Great process versatility due to free choice of intermediate positions
• Easy system integration
• High acceleration and short cycle times due to high torque

www.gb.schunk.com/ERS_with_DDF

EGS Electric Rotary Gripping Unit

The world's most compact electric rotary gripping unit

For the first time, the SCHUNK EGS electric gripping and swiveling unit successfully combines electric gripping and swiveling in confined spaces in one single housing. The affordable and low-maintenance standard component paves the way for highly efficient pneumatic-free systems. Coupling of the gripping and rotation gear, patented by SCHUNK, allows endless turning without an electric feed-through.

Your benefits:
• Small dimensions 58 mm x 45 mm x 89 mm
• Backlash-free pre-loaded junction roller guides for high-precision gripping and virtually constant gripping force over the entire finger length
• Swiveling time 0.18 s/180°
• Gripping time 0.05 s/stroke
• Gripping force is 30 N
• Freely definable rotating angle between 40° and 320°
• Torque from 0.04 Nm
• Brushless 24 V-DC motors
• 4 digital inputs (open gripper, close gripper, turn left, turn right)

www.gb.schunk.com/EGS
## Linear Modules

### Modular Assembly Automation

<table>
<thead>
<tr>
<th>Linear modules</th>
<th>Pneumatic</th>
<th>CLM</th>
<th>KLM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piston rod cylinders</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Rodless cylinder</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Direct drive (linear motor)</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Spindle drive</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toothed belt drive</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rack and pinion drive</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical data</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of sizes</td>
<td>5</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Useful stroke [mm]</td>
<td>0 .. 450</td>
<td>0 .. 150</td>
<td>0 .. 300</td>
</tr>
<tr>
<td>Driving force [N]</td>
<td>50 .. 753</td>
<td>25 .. 482</td>
<td>50 .. 753</td>
</tr>
<tr>
<td>Repeat accuracy [mm]</td>
<td>±0.01</td>
<td>±0.01</td>
<td>±0.015</td>
</tr>
<tr>
<td>Weight [kg]</td>
<td>0.44 .. 15.65</td>
<td>0.07 .. 5.25</td>
<td>0.5 .. 12.6</td>
</tr>
<tr>
<td>Max. number of intermediate stops</td>
<td>3</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Adjustable end positions</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Actuation</td>
<td>Pneumatic valve</td>
<td>Pneumatic valve</td>
<td>Pneumatic valve</td>
</tr>
<tr>
<td>IP protection class</td>
<td>40</td>
<td>40</td>
<td>40/64</td>
</tr>
<tr>
<td>Measuring system</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guidance type</td>
<td>Junction roller guide</td>
<td>Junction roller guide</td>
<td>Junction roller guide</td>
</tr>
<tr>
<td>Options/variants</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dust-tight</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rod lock</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Load compensation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>Universal linear module for challenging positioning tasks</td>
<td>Mini-slides for universal use</td>
<td>Robust linear module for versatile moving tasks</td>
</tr>
<tr>
<td>Field of application</td>
<td>• For demanding requirements with respect to precision, flexibility and rigidity</td>
<td>• Ideal for short stroke applications with high demands for precision</td>
<td>• Optimal use as Z-axle in handling modules</td>
</tr>
<tr>
<td>Ambient conditions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clean</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Slightly dirty</td>
<td>●</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

● = fully supported
* Servo controlled concept for mechatronic SCHUNK components, see page 32.

The products listed here are examples from the extensive SCHUNK product portfolio and are especially suitable for modular assembly automation.
## Modular Assembly Automation

**Linear modules Gantry axes**  
- **Pneumatic**  
- **Electric**  

<table>
<thead>
<tr>
<th>Drive type</th>
<th>HLM</th>
<th>ELP</th>
<th>ELB</th>
<th>ELM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piston rod cylinders</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Rodless cylinder</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct drive (linear motor)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Spindle drive</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Toothed belt drive</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rack and pinion drive</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Technical data

<table>
<thead>
<tr>
<th>Number of sizes</th>
<th>5</th>
<th>6</th>
<th>4</th>
<th>4</th>
<th>3</th>
<th>1</th>
<th>2</th>
<th>2</th>
<th>2</th>
<th>2</th>
<th>2</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Useful stroke [mm]</td>
<td>0 .. 450</td>
<td>0 .. 150</td>
<td>0 .. 300</td>
<td>0 .. 150</td>
<td>0 .. 200</td>
<td>0 .. 125</td>
<td>0 .. 260</td>
<td>0 .. 260</td>
<td>0 .. 2700</td>
<td>0 .. 7770</td>
<td>0 .. 7340</td>
<td></td>
</tr>
<tr>
<td>Driving force [N]</td>
<td>50 .. 753</td>
<td>25 .. 482</td>
<td>50 .. 753</td>
<td>50 .. 482</td>
<td>17 .. 104</td>
<td>150</td>
<td>160</td>
<td>150</td>
<td>100 .. 250</td>
<td>18.000</td>
<td>10.000</td>
<td></td>
</tr>
<tr>
<td>Repeat accuracy [mm]</td>
<td>±0.01</td>
<td>±0.01</td>
<td>±0.015</td>
<td>±0.01</td>
<td>±0.01</td>
<td>±0.01</td>
<td>±0.05</td>
<td>±0.01</td>
<td>±0.02</td>
<td>±0.03</td>
<td>±0.03</td>
<td></td>
</tr>
<tr>
<td>Weight [kg]</td>
<td>0.44 .. 15.65</td>
<td>0.07 .. 5.25</td>
<td>0.5 .. 12.6</td>
<td>0.5 .. 5.57</td>
<td>1.8 .. 8.3</td>
<td>2.3 .. 2.9</td>
<td>1.5 .. 5.5</td>
<td>1.2 .. 4.7</td>
<td>3 .. 8.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. number of intermediate stops</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>Freely programmable</td>
<td>Freely programmable</td>
<td>Freely programmable</td>
<td>Freely programmable</td>
<td>Freely programmable</td>
<td>Stroke-dependent</td>
<td></td>
</tr>
<tr>
<td>Adjustable end positions</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actuation</td>
<td>Pneumatic valve</td>
<td>Pneumatic valve</td>
<td>Pneumatic valve</td>
<td>Pneumatic valve</td>
<td>Digital signals</td>
<td>External controller</td>
<td>External controller</td>
<td>Controller onexternal motor</td>
<td>Controller on external motor</td>
<td>Pneumatic valve</td>
<td>Controller on external motor</td>
<td></td>
</tr>
<tr>
<td>IP protection class</td>
<td>40</td>
<td>40</td>
<td>40/64</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measuring system</td>
<td>Incremental or absolute</td>
<td>Motor-dependent</td>
<td>Hall-effect sensor</td>
<td>Motor-dependent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Options / variants</td>
<td>Dust-tight</td>
<td>Bellow</td>
<td>Rod lock</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Description

- **Universal linear module** for challenging positioning tasks
- **Mini-slides** for universal use
- **Robust linear module** for versatile moving tasks
- **Compact stroke module** with base, linear module with 24 V power supply, integrated control unit, backlash-free pre-loaded junction roller guides
- **Short-stroke axis** with linear motor drive and junction roller guides
- **Compact stroke module** with direct drive and integrated measuring system

### Field of application

- For demanding requirements with respect to precision, flexibility and rigidity
- Ideal for short stroke applications with high demands for precision
- Optimal use as Z-axle in handling modules
- For lifting workpieces
- Ideal for space-optimized applications
- Electric alternative to pneumatic linear modules
- For light moving tasks and short strokes with high precision
- For dynamic and precise shifting or for controlled press-in operation of workpieces
- For the versatile and dynamic movement of small loads

### Ambient conditions

- Clean | ● | ● | ● | ● | ● | ● | ● |
- Slightly dirty | ● | ● | ● | ● | ● |   |   |

* Servo controlled concept for mechatronic SCHUNK components, see page 32.
### Linear Modules

**Modular Assembly Automation**

<table>
<thead>
<tr>
<th>Gantry axes</th>
<th>Pneumatic</th>
<th>Electric*</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELS</td>
<td>PMP</td>
<td>Beta</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Drive type</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Piston rod cylinders</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Rodless cylinder</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct drive (linear motor)</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Spindle drive</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Toothed belt drive</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Rack and pinion drive</td>
<td>●</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technical data</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of sizes</td>
<td>5</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Useful stroke [mm]</td>
<td>0 .. 450</td>
<td>0 .. 150</td>
<td>0 .. 300</td>
</tr>
<tr>
<td>Driving force [N]</td>
<td>50 .. 753</td>
<td>25 .. 482</td>
<td>50 .. 753</td>
</tr>
<tr>
<td>Repeat accuracy [mm]</td>
<td>±0.01</td>
<td>±0.02</td>
<td>±0.01</td>
</tr>
<tr>
<td>Weight [kg]</td>
<td>0.44 .. 15.65</td>
<td>0.07 .. 5.25</td>
<td>0.5 .. 12.6</td>
</tr>
<tr>
<td>Max. number of intermediate stops</td>
<td>3</td>
<td>Freely programmable</td>
<td>Freely programmable</td>
</tr>
<tr>
<td>Adjustable end positions</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Actuation</td>
<td>Pneumatic valve</td>
<td>Pneumatic valve</td>
<td>Digital signals</td>
</tr>
<tr>
<td>IP protection class</td>
<td>40</td>
<td>40</td>
<td>40/64</td>
</tr>
<tr>
<td>Measuring system</td>
<td>Incremental or absolute</td>
<td>Hall-effect sensor</td>
<td>Motor-dependent</td>
</tr>
<tr>
<td>Guidance type</td>
<td>Junction roller guide</td>
<td>Junction roller guide</td>
<td>Profiled rail guide</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Options / variants</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust-tight</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Bellow</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rod lock</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Load compensation</td>
<td>Yes, via MagSpring</td>
<td>Yes, via MagSpring</td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **Universal linear module for challenging positioning tasks**
- **Mini-slides for universal use**
- **Robust linear module for versatile moving tasks**
- **Compact stroke module with base**
- **Linear module with 24 V power supply, integrated control unit, backlash-free pre-loaded junction roller guides**
- **Short-stroke axis with linear motor drive and junction roller guides**
- **Compact stroke module with direct drive and integrated measuring system**
- **Compact stroke module with spindle drive**
- **Pneumatic gantry axis for broad stroke ranges**
- **Gantry axis with different drive concepts for universal use**
- **Flat height gantry axis for large loads with different drive concepts**
- **For applications with high driving force and precision**
- **Robust and precise gantry systems**
- **Spindle drive for high precision and driving force**
- **Toothed belt drive for dynamic movements**
- **Spindle drive for high precision and driving force**
- **Toothed belt drive for dynamic movements**

**Field of application**

- For demanding requirements with respect to precision, flexibility and rigidity
- Ideal for short stroke applications with high demands for precision
- Optimal use as Z-axle in handling modules
- For lifting workpieces
- Ideal for space-optimized applications
- Electric alternative to pneumatic linear modules
- For light moving tasks and short strokes with high precision
- For dynamic and precise shifting or for controlled press-in operation of workpieces
- For the versatile and dynamic movement of small loads
- For applications with high driving force and precision
- Robust and precise gantry systems
- Spindle drive for high precision and driving force
- Toothed belt drive for dynamic movements
- Spindle drive for high precision and driving force
- Toothed belt drive for dynamic movements

**Ambient conditions**

- Clean
- Slightly dirty

---

* Servo controlled concept for mechatronic SCHUNK components, see page 32.
**LM Pneumatic Linear Module**

Standard solution for high-precision applications

The linear modules of the LM series are equipped with pre-loaded junction rollers in hardened prismatic running rails as guides. This precision guidance system ensures absolute freedom from play in the overall system and offers high load capacities in all directions.

- Closed slide construction for high rigidity
- Shock absorbers and proximity switches integrated in the projecting surfaces for vibration-free movements and end position monitoring
- Compact dimensions for minimal interfering contours in the entire system
- Pre-loaded junction roller guides and therefore free from play
- High load capacity in all directions
- Standardized mounting bores for numerous combinations with other components from the modular system
- Rod lock by means of a clamping cartridge for safety in case of emergency stops

**ELP Electric Linear Module**

The new benchmark for mechatronic linear modules.

The SCHUNK ELP is the most easily adjusted electric linear module on the market and is put into operation more quickly than the pneumatic linear module. As there is no shock absorber installed, the SCHUNK ELP is practically wear-free, making it robust and long-lasting. Actuation can be distributed using a fieldbus distributor or directly over digital signals.

- Simple 1:1 replacement of pneumatic components with mechatronic components
- Start-up in only 2 steps
- Simple speed adjustment using two rotary switches
- 0.01 mm repeat accuracy
- No shock absorber, meaning fewer wear parts and longer maintenance intervals
<table>
<thead>
<tr>
<th>Linear pick &amp; place</th>
<th>Lifting/rotary unit</th>
<th>Standard gantries</th>
</tr>
</thead>
<tbody>
<tr>
<td>pneumatic</td>
<td>electric*</td>
<td>pneumatic</td>
</tr>
<tr>
<td>PPU-P</td>
<td>PPU-E</td>
<td>DRL</td>
</tr>
<tr>
<td>pneumatic</td>
<td>pneumatic</td>
<td>pneumatic</td>
</tr>
<tr>
<td>LPE</td>
<td>RPE</td>
<td>LPP</td>
</tr>
</tbody>
</table>

**Technical data**

<table>
<thead>
<tr>
<th></th>
<th>2</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of sizes</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Horizontal stroke in Y [mm]</td>
<td>121 .. 210</td>
<td>0 .. 280</td>
<td>300 .. 1.500</td>
<td></td>
</tr>
<tr>
<td>Horizontal stroke in X [mm]</td>
<td></td>
<td></td>
<td>500 .. 1.500</td>
<td></td>
</tr>
<tr>
<td>Vertical stroke [mm]</td>
<td>30 .. 45</td>
<td>0 .. 150</td>
<td>23 .. 40</td>
<td>25 .. 225</td>
</tr>
<tr>
<td>Rotating angle [°]</td>
<td></td>
<td></td>
<td>90 .. 180</td>
<td></td>
</tr>
<tr>
<td>Useful load [kg]</td>
<td>0 .. 3</td>
<td>0 .. 5</td>
<td>0 .. 3</td>
<td>0 .. 5</td>
</tr>
<tr>
<td>Repeat accuracy [mm]</td>
<td>±0.01</td>
<td>±0.01</td>
<td>±0.01</td>
<td>±0.01</td>
</tr>
<tr>
<td>Weight [kg]</td>
<td>4.5 .. 15.5</td>
<td>15 .. 35</td>
<td>2.7 .. 5</td>
<td></td>
</tr>
<tr>
<td>Max. cycle time/picks per minute</td>
<td>95</td>
<td>0</td>
<td>75</td>
<td></td>
</tr>
</tbody>
</table>

**Actuation**

- Pneumatic valve
- External controller
- Pneumatic valve
- Pneumatic valve
- Controller on external motor
- Controller on external motor
- Pneumatic valve
- Pneumatic valve

**IP protection class**

- 40
- 40
- 40
- 40
- 40
- 40
- 40
- 40

**Guidance type**

- Junction roller guide
- Profiled rail guide
- Guidance/deep groove ball bearing
- Profiled rail/junction roller guide

**Number of possible combinations**
234

**Options/versions**

<table>
<thead>
<tr>
<th></th>
<th>2</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rod lock</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Center position</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrated valve</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional C-axis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drive package</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- Compact 2-axis unit for running a typical pick & place motion
- Compact 2-axis unit for flexible running of any curve on one plane
- Compact lifting/rotary unit consisting of a powerful short-stroke cylinder and a rack and pinion swivel actuator
- Line gantry with a horizontal, pneumatic gantry axis, and a vertical, pneumatic linear module
- Line gantry with a horizontal, electric belt drive axis, and a vertical, electric spindle axis
- Line gantry with two electric toothed belt axes in a horizontal direction, and one electric spindle axis in a vertical direction

**Field of application**

- For rapid and precise transfer of workpieces in high-speed assembly
- For rapid and precise transfer or controlled press-in operation of workpieces in high-speed assembly
- For rapid and precise transfer and turning of workpieces in high-speed assembly
- For easily conducting the most common two-dimensional handling and assembly tasks for small to medium-sized workpieces
- For easily conducting the most common two-dimensional handling and assembly tasks for medium-sized and large workpieces
- For easily conducting the most common three-dimensional handling and assembly tasks for medium-sized and large workpieces

**Ambient conditions**

<table>
<thead>
<tr>
<th></th>
<th>2</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slightly dirty</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

● = fully supported
* Servo controlled concept for mechatronic SCHUNK components, see page 32.

The products listed here are examples from the extensive SCHUNK product portfolio and are especially suitable for modular assembly automation.
### Pick & Place Modules

**Modular Assembly Automation**

#### Technical data

<table>
<thead>
<tr>
<th>LPE</th>
<th>RPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>500 .. 1.500</td>
<td>500 .. 1.500</td>
</tr>
<tr>
<td>100 .. 500</td>
<td>100 .. 500</td>
</tr>
<tr>
<td>0 .. 20</td>
<td>0 .. 20</td>
</tr>
<tr>
<td>±0.01</td>
<td>±0.01</td>
</tr>
</tbody>
</table>

- Controller on external motor
  - Controller on external motor
- Profiled rail guide
  - Profiled rail guide
- 40
  - 40
- 90
  - 150

#### Options / versions

- Rod lock ● ● ● ●
- Center position ● ●
- Integrated valve ●
- Additional C-axis ●
- Drive package ● ●

#### Description

- Compact 2-axis unit for running a typical pick & place motion
- Compact 2-axis unit for flexible running of any curve on one plane
- Compact lifting/rotary unit consisting of a powerful short-stroke cylinder and a rack and pinion swivel actuator
- Line gantry with a horizontal, pneumatic gantry axis, and a vertical, pneumatic linear module
- Line gantry with a horizontal, electric belt drive axis, and a vertical, electric spindle axis
- Room gantry with two electric toothed belt axes in a horizontal direction, and one electric spindle axis in a vertical direction

#### Field of application

- For rapid and precise transfer of workpieces in high-speed assembly
- For rapid and precise transfer or controlled press-in operation of workpieces in high-speed assembly
- For rapid and precise transfer and turning of workpieces in high-speed assembly
- For easily conducting the most common two-dimensional handling and assembly tasks for small to medium-sized workpieces
- For easily conducting the most common two-dimensional handling and assembly tasks for medium-sized and large workpieces
- For easily conducting the most common three-dimensional handling and assembly tasks for medium-sized and large workpieces

#### Ambient conditions

- Clean ● ● ● ●
- Slightly dirty ● ●

*= Servo controlled concept for mechatronic SCHUNK components, see page 32.*

---

### Pick & Place Units

Cycle times, repeat accuracy and process reliability – these are three critical factors for the automated assembly of small and medium-sized parts. SCHUNK pick & place units are specially designed for these exact factors.

The modular solutions from SCHUNK cover any individual requirement imaginable. The compact pick & place units are especially adept with high-speed applications.

#### Your benefits:

- **Up to 110 picks** per minute possible
- **Up to 50% shorter cycles** possible with the PPU-P pick & place unit due to forced guidance over curved rollers
- **100% compatible** with modules from the SCHUNK modular assembly automation system
- **Up to 100% less cable breakage** with the PPU-E pick & place unit, as there is no moving motor cable
- Repeat accuracy up to **0.01 mm** for maximum precision
- **Five solutions** for all weight classes – handling a few grams up to several kilograms
SCHUNK SAS Pillar Assembly System.
Over 10,000 possible Combinations.

With more than 10,000 possible combinations, SCHUNK offers the world’s most extensive modular range of pillar assembly applications. The SCHUNK pillar assembly system allows for a combination of diverse handling modules without mechanical adaptation by means of mounting and centering holes, for an exact fit and angular precision as well as the safe, stable, and reproducible mounting of components.
**VEH Adjustment Unit**  
For easy fine adjustments to the finished assembly  
- For linear and rotary compensation  
- Adjustable with hexagon socket wrench  
- Suitable for single and double sockets

**Pillar Assembly System**  
Flexible. Quick. Precise.  
- 3 different pillar diameters  
- 17 elements, combined as desired  
- Direct screw connection for SCHUNK components

**Media Feed-through**  
Fast and easily combined from the modular system  
- Exact hose guide and cable feed-through possible  
- Either through the hollow pillars or attached with clips along the pillars  
- The media hose for actuator supply can be directly attached
## Pillar Assembly

### Connecting Elements

<table>
<thead>
<tr>
<th>Adjustment unit</th>
<th>Pillar assembly system</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VEH</strong></td>
<td><strong>SOE</strong></td>
</tr>
</tbody>
</table>

### Application with

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
<th>Field of application</th>
<th>Advantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum, hard-anodized</td>
<td>The adjustment unit simplifies mechanical adjustment of complete handling systems</td>
<td>For universal use with structures that must be readjusted during assembly.</td>
<td>Mechanical adjustment, High degree of flexibility</td>
</tr>
<tr>
<td>Aluminum, hard-anodized</td>
<td>The base support is the base used for the pillar assembly system and can be directly mounted onto a firm surface. A 2-pillar assembly can be mounted with the SOD</td>
<td>For all assembly systems and frames as a mounting option for automation components</td>
<td>Robust and highly precise, Weight-reduced due to hollow profile, Can be used as a hose and cable channel</td>
</tr>
<tr>
<td>Aluminum, hard-anodized</td>
<td>The base support is the base used for the pillar assembly system and can be directly mounted onto a firm surface. Versatile steel pillars can be inserted at various lengths and provide high rigidity</td>
<td>For attaching SCHUNK linear modules with horizontal and vertical movement</td>
<td>Robust and highly precise, Standardized interface for many SCHUNK products</td>
</tr>
<tr>
<td>Steel, hard-chromium plated</td>
<td>The mounting plates connect the various SCHUNK modules of the modular system to the pillar system</td>
<td>For attaching SCHUNK linear modules with horizontal and vertical movement</td>
<td>Robust and highly precise, Flexible mounting options</td>
</tr>
</tbody>
</table>

### Symbols

- ● = highly suitable/fully supported
- ○ = suitable to a limited extent

---

*Note: The table and images on the page provide a detailed overview of the pillar assembly system, including material, description, field of application, and advantages. The symbols indicate the suitability of the system for different applications.*
### Pillar Assembly

**Description**

- **Adjustment unit**
  - High degree of flexibility
  - Fine adjustment
  - Robust and highly precise
- **Application with**
  - Suitable to a limited extent
- **Material**
  - Aluminum, hard-anodized

**Highlights**

- **Pillars Ø 35 mm**
- **Pillars Ø 20 mm**

---

#### Accessories

<table>
<thead>
<tr>
<th>Pillar Assembly</th>
<th>Connecting Elements</th>
<th>Pick &amp; Place Modules</th>
<th>Linear Modules</th>
<th>Rotary Modules</th>
<th>SCHUNK Grippers</th>
<th>25</th>
</tr>
</thead>
</table>
Accessories
Modular Assembly Automation

SCHUNK Modular Assembly Automation
Our response to flexibility: a variety of accessories.
### Modular Assembly Automation

#### SCHUNK Sensor System Accessories

<table>
<thead>
<tr>
<th>Switching behavior</th>
<th>Position monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 digital point</td>
<td>MMS-PI 1/2</td>
</tr>
<tr>
<td>2 digital point</td>
<td>IN</td>
</tr>
<tr>
<td>5 digital point</td>
<td>RMS</td>
</tr>
<tr>
<td>Analog</td>
<td>FPS</td>
</tr>
<tr>
<td></td>
<td>APS-M1</td>
</tr>
</tbody>
</table>

#### Ambient conditions

- **Clean**: ● ● ● ● ●
- **Slightly dirty**: ● ● ● ● ●
- **Extremely dirty**: ●

#### Technical data

- **Number of sizes**: 1 11 2 6 1
- **Operating principle**: Magnetic Inductive Reed Magnetic Mechanical
- **IP protection max.**: 67 67 67 67 67
- **Supply voltage [V DC]**: 24 24 24 24 24
- **Supply current [mA]**: < 50 < 200 < 10 < 10 < 150
- **PNP version**: ● ● ● ● ●
- **NPN version**: ● ● ●
- **LED display**: ● ● ●
- **Measurement switching distance [mm]**: Not adjustable 0.8 .. 2.5 Not adjustable Not adjustable Not adjustable
- **Closer**: ● ● ●
- **Opener**: ● ● ●

#### Connection type

- **Number of wires**: 3 (PI1)/4 (PI2) 3 3 7 3
- **Cable version**: ● ● ● ● ●
- **Connection plug M8 version**: ● ● ●
- **Connection plug M12 version**: ● ● ●

---

**ECM controller.**

**Modular 24/48 V controller for SCHUNK modules**

Fast and easy commissioning

The modular SCHUNK ECM controller has been developed specifically for electrically driven gripping and rotary modules with an input voltage of 24 V or 48 V. Equipped with standardized plug connections, it can be quickly and easily connected.

**Your benefits:**

- **Service interface USB** and **two rotary encoding switches**
- **Standardized plug connections** for communication and **cage clamp terminals** for power
- **DIP switches** with first test and start-up functions
- Clear information on current controller status via **7-segment display** and **4 LEDs**
- **Toolless connection** of the cables with spring cage terminals and plug connectors
- Maximum interface flexibility thanks to **Profinet**
IN inductive proximity switch

Inductive proximity switches are used to scan the current status of automation components. SCHUNK supplies them in two versions: IN (sensor with 30 cm molded cable and cable connector) and INK (sensor with 2 m supply cable and wire strands for connecting).

Your benefits:
• Bracket mounting for easy and fast assembly
• Version with LED display for checking the switching condition directly at the sensor
• Version with plug connector for fast and easy extension cable replacement
• Highly flexible PUR cable for a long service life and resistance against many chemicals
• Proximity switch can be installed flush to reduce interfering contours in the application

FMS Force Measuring System

The SCHUNK FMS force measuring system is used for measuring forces acting in the direction of the jaw movements on the base jaw. The FMS intermediate jaws are screwed on between the gripper base jaw and the top jaw, which comes in contact with the workpiece. Gripping forces on the top jaw result in a flow of force through the FMS intermediate jaw. Intelligently arranged strain gauges inside the intermediate jaw react to the resulting deformation. The FMS processor detects the change in the strain gauges and emits an analog signal indicating the force.

Your benefits:
• Easy handling via a control line that is directly connected to a PLC
• It is easy to measure the gripping force that is actually acting
• Result output via analog voltage value
• Simple linear relationship between output voltage and gripping force
• Simple zero adjustment with button or via control line
• Integrated LC display for visual monitoring
• Easy assembly
• Dirt and water-tight for applications even under extreme ambient conditions
## SCHUNK Accessories
### Modular Assembly Automation

<table>
<thead>
<tr>
<th>ABR/SBR</th>
<th>BSWS-B/-A</th>
<th>ABR/SBR-BSWS</th>
<th>BSWS-AR/-UR</th>
<th>UZB</th>
<th>SDV-P</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="ABR/SBR" /></td>
<td><img src="image2" alt="BSWS-B/-A" /></td>
<td><img src="image3" alt="ABR/SBR-BSWS" /></td>
<td><img src="image4" alt="BSWS-AR/-UR" /></td>
<td><img src="image5" alt="UZB" /></td>
<td><img src="image6" alt="SDV-P" /></td>
</tr>
</tbody>
</table>

### Jaw quick-change system
- ●
- ●
- ●
- ●

### Adjustable intermediate jaw
- ●

### Top jaws blank
- ●
- ●

### Pressure maintenance valve
- ●

### Field of application
- For quick and easy creation of top jaws by adding the clamping contour
- With highly diverse workpieces for quick jaw changes with any clamping contours
- With highly diverse workpieces for quick jaw changes with simple clamping contours
- With highly diverse workpieces that can be covered by increasing the clamping width
- For applications in which the force or position must be maintained temporarily

### Description
- Finger blanks made of aluminum or steel for rework for the specific application
- The BSWS consists of one base and two adapter pins. The form-fit locking mechanics assures a fast exchange of the gripper fingers
- The BSWS consists of two adapter pins and one finger blank with locking mechanism. The form-fit locking mechanics assures a fast exchange of the gripper fingers
- The BSWS consists of two adapter pins and the locking mechanism located in the customer-specific finger. The form-fit locking mechanics assures a fast exchange of the gripper fingers
- Allows fast tool-free and reliable plugging and shifting of top jaws
- With a loss of air pressure, venting of the module will be prevented temporarily by the pressure maintenance valve

### Advantages
- Matching finger blanks for commonly used gripper types
- Clamping contour can be machined rapidly and easily
- One gripper can be used universally in various applications
- Quick and easy for high flexibility
- Firm up to the max. loadability of the base jaws
- Matching finger blanks for commonly used gripper types
- Clamping contour can be machined rapidly and easily
- One gripper can be used universally in various applications
- Quick and easy for high flexibility
- Firm up to the max. loadability of the base jaws
- Clamping contour can be machined as required
- Toolless adjustment and clamping for quick and easy conversion
- Stable guide bar, suitable for long gripper fingers
- Versatile in application due to its standard air connections
- Manual air bleed screw means no removal of pressurized hoses
Benefit from the SCHUNK modular system with more than 4,000 standard components.

More than 30 years of expertise in gripping forms the basis for the largest standardized range of gripping technology in the world with more than 4,000 components, a modular system with perfectly matching standard components on linear modules, turning and rotary actuators and robot accessories.

**SCHUNK CWS compact change system**
The flat and weight-reduced CWS manual change system from SCHUNK, ensures the fast manual change of grippers at the robot when re-equipping for a new range of parts. A noticeable increase in productivity can thus be achieved in particular for small and medium batch sizes.

- Simple tool change on the robot due to the simple working principle
- Full compatibility due to integrated ISO robot flange
- The screw connection diagram is used to mount the most important SCHUNK gripping and compensation modules directly on the change system without an adapter plate

**SCHUNK TCU compensation unit**
SCHUNK presents the TCU, a compensation unit with base plates connected together by elastomer elements. As a result, the TCU can compensate in the X and Y directions, allowing it to correct angle errors and provide rotational compensation.

- Suitable for gripper types PGN-Plus, PZN-Plus, DPG-Plus and DPZ-Plus
- The compensation travel distances in X/Y directions are two to four millimeters depending on the size, while the compensation angles are between 1.5 and 3.5°
- Maximum handling weights between 1 to 24 kg, depending on gripper size

**SCHUNK SRU-Plus Universal Rotary Actuator**
Universal pneumatic unit for rotary and turning movements in both clean and dirty areas.

- Graduated series with a steady increase in torque
- Swivel angle can be selected as either 90° or 180°
- Choice of end position adjustability: +3°/-3° (small) or +3°/-90° (large)
- Middle position can be selected as pneumatic or locked
- Fluid feed-through of gases, fluids and vacuums without bothersome hoses, as well as electric rotary feed-through for long-lasting and safe operational feed-through of sensors and actuator signals. Optionally with bus feed-through.
- Electronic magnetic switches or inductive proximity sensors for absolute variability in position sensing
1. **PGN-plus Universal Gripper**
   Universal 2-finger parallel gripper with high gripping force and high maximum moments due to multi-tooth guidance.

2. **IN... Inductive Proximity Switch**
   Inductive proximity switch with molded cables and optional axial/lateral cable outlet.

3. **IN...-SA Inductive Proximity Switch**
   Inductive proximity switch with molded cables and lateral cable outlet.

4. **FPS Flexible Positioning Sensor**
   Digital measuring system for monitoring up to five different, freely selectable positions.

5. **APS-Z80/M1S Analog Positioning Sensor**
   Inductive measuring system for accurate detection of the gripper jaw position with analog output.

6. **RMS Reed Switch**
   Round version of the reed switch.

7. **MQL 22 Electronic Magnetic Switch**
   Magnetic switch with axial cable outlet for position monitoring.

8. **MQL 22-PI1/-PI2 Programmable Magnetic Switch**
   Magnetic switch with optional axial/lateral cable outlet for monitoring a (-PI1) or two (-PI2) programmable positions.

9. **MQL 22-SA Programmable Magnetic Switch**
   Magnetic switch with lateral cable outlet for position monitoring.

10. **MQL 22-PI1-SA Programmable Magnetic Switch**
    Magnetic switch with lateral cable outlet for monitoring a freely programmable position.

11. **MQL-P Programmable Magnetic Switch**
    Magnetic switch with axial cable outlet for monitoring two freely programmable positions with integrated teaching function.

12. **RMS 22 Reed Switch**
    Reed switch for direct assembly in the C-slot.

13. **CWS Compact Change System**
    Manual change system with integrated air feed-through for simple exchange of the handling components.

14. **TCU Tolerance Compensation Unit**
    Tolerance compensation unit for compensation of small tolerances in the plane.

15. **ASG Adapter Plate**
    Adapter plate for combining various automation components in the modular system.

16. **CLM Compact Slide**
    Linear module with pneumatic drive and clearance-free pre-loaded junction rollers.

17. **LM Linear Module**
    Versatile linear modules with junction roller guide.

18. **ELB Linear Module**
    Compact linear module for precise strokes in limited space.

19. **MPG-plus Miniature Parallel Gripper**
    For small to medium components in assembly automation.

20. **EGP Gripper for Small Components**
    Highly dynamic electric gripper for small components for challenging pick & place applications.

21. **OAS Optical Distance and Presence Sensor**
    Optical distance and presence sensor for detecting the presence of a workpiece as well as its distance.

22. **UZB Universal Intermediate Jaw**
    The universal intermediate jaw allows fast, tool-free, reliable displacement of top jaws at the gripper.

23. **FMS Force-measuring Jaws**
    Force-measuring jaws for measuring gripping forces, workpiece weights or deviations in dimension.

24. **BSWS-AR Jaw Quick-change System**
    Adapter coupling of the jaw quick-change system for fast, manual change of top jaws.

25. **BSWS-B Jaw Quick-change System**
    Locking mechanism of the jaw quick-change system for fast, manual change of top jaws.

26. **BSWS-A Jaw Quick-change System**
    Adaptor coupling of the jaw quick-change system for adaptation to the customized finger.

27. **Customized finger**
    Finger blank made of aluminum with the interface of the jaw quick-change system.

28. **BSWS-UR Jaw Quick-change System**
    Locking mechanism for integration of the jaw quick-change system into customized fingers.

29. **BSWS Finger Blank**
    Finger blank made of steel with the interface of the jaw quick-change system.

30. **ABR/SBR Finger Blank**
    Finger blanks made of steel or aluminum with standardized screw connection diagram.

31. **ZBA Intermediate Jaws**
    Intermediate jaws for re-orienting the mounting surface.
Standard mechatronic SCHUNK components offer the greatest flexibility when it comes to connecting customized control concepts. A number of versions are available, depending on your requirements:

- Direct pneumatic set and actuators
- Modular SCHUNK components with **external drive** and **external drive controller**
- Modular SCHUNK components with **integrated drive** and **external drive controller**
- Modular SCHUNK components with **integrated drive** and **drive controller**

<table>
<thead>
<tr>
<th>Provided by the customer</th>
<th>Optionally available from SCHUNK:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>Communication interface**</td>
</tr>
<tr>
<td></td>
<td>Drive controller</td>
</tr>
<tr>
<td></td>
<td>Standard cable set</td>
</tr>
<tr>
<td></td>
<td>Transducer interface*</td>
</tr>
</tbody>
</table>

The controller serves as the interface with the application and is specified by the customer.

- SIEMENS
- Rexroth
- BECKHOFF
- B&R
- Schneider Electric
- Lenze
- More on request

- Profibus
- CAN
- ProfiNet
- EtherCAT
- DeviceNet
- SERCOS Interfaces
- EtherNet/IP
- Modular SCHUNK components with **integrated drive** and **drive controller**

- Power cable
- Encoder cable
- I/O cable

* Dependent on drive ** Dependent on drive controller

- HIPERFACE
- SSI
- DRIVE-CLiQ
- EnDat 2.2
- HIPERFACE
- SSI
- DRIVE-CLiQ
- (On request)
- **vss**
Matching cables also optionally available. A variety of transducer and fieldbus interfaces make the concepts compatible with any controller.

<table>
<thead>
<tr>
<th>Drive</th>
<th>Mechatronic SCHUNK components</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct pneumatic set and actuators</td>
</tr>
<tr>
<td></td>
<td>Alternative like-for-like pneumatic replacements with no change in power</td>
</tr>
<tr>
<td></td>
<td>Adaptable Driven by conventional motors</td>
</tr>
<tr>
<td></td>
<td>Intelligent Motor and controller fully integrated</td>
</tr>
<tr>
<td></td>
<td>Intelligent Controller external, motor integrated</td>
</tr>
</tbody>
</table>

- **Standard servo motors**
  - Modular SCHUNK components with external drive and external drive controller
  - Direct pneumatic set and actuators

- **Modular SCHUNK components with integrated drive and external drive controller**
  - Alternative like-for-like pneumatic replacements with no change in power
  - Adaptable Driven by conventional motors
  - Intelligent Controller external, motor integrated

- **Modular SCHUNK components with integrated drive and external drive controller**
  - Direct pneumatic set and actuators
  - Alternative like-for-like pneumatic replacements with no change in power
  - Adaptable Driven by conventional motors
  - Intelligent Controller external, motor integrated

- **Standard servo motors**
  - Modular SCHUNK components with external drive and external drive controller
  - Direct pneumatic set and actuators
  - Alternative like-for-like pneumatic replacements with no change in power
  - Adaptable Driven by conventional motors
  - Intelligent Controller external, motor integrated
Handling Small Components

Metal Industry

Task
Metal parts must be efficiently moved and positioned during a mounting process.

SCHUNK Solution
The SCHUNK mechatronic SCHUNK ELP linear module, in combination with the EGS gripping swivel unit, achieves the fastest linear and gripping swivel movement with higher positioning accuracy. Due to the auto-learn function of the compact SCHUNK ELP linear modules, no knowledge of mechatronics is required to commission them. The drive and controller are completely integrated into the axes.

SCHUNK Products

- ELP Electric linear module
- EGS Electric gripping swivel unit

Handling Plastic Gears

Plastics Industry

Task
Plastic gears must be moved fast and positioned accurately during a mounting process.

SCHUNK Solution
Pneumatic and mechatronic SCHUNK pick & place units from the SCHUNK modular system of the modular assembly come individually designed for use. As well as grippers for small components such as the SCHUNK MPG-plus.

SCHUNK Products

- ELP Electric linear module
- EGS Electric gripping swivel unit
- PPU-P Pneumatic PPU-P pick & place unit
- LM Pneumatic linear module
- MPG-plus Pneumatic grippers for small components
Handling of Hinge Parts

Metal Industry

Task
Hinge parts have to be reliably transferred to the workpiece carrier in the linear transfer system.

SCHUNK Solution
Electric and pneumatic SCHUNK pick & place components with pillar assembly system and a compact pick & place unit, SCHUNK EGP gripper for small components and PGN-plus 2-finger parallel gripper as well as an SRU-mini rotary unit come available for use.

SCHUNK Products

- PPU-E Electric pick & place unit
- PGN-plus Pneumatic 2-finger parallel gripper
- SRU-mini Pneumatic rotary actuator
- LDN Electric linear module
- ERD Electric linear module
- WSG Electric 2-finger parallel gripper

Handling Plastic Gear Parts

Metal-cutting Industry

Task
Gear wheels must be gripped and positioned using high-performance components with sensor-controlled gripping force.

SCHUNK Solution
The pillar assembly system from the SCHUNK modular system for modular assemblies with LDN linear module as well as a highly sensitive electric WSG 2-finger parallel gripper with controllable gripping force and an electric ERD rotary module.

SCHUNK Products

- PPU-E Electric pick & place unit
- PGN-plus Pneumatic 2-finger parallel gripper
- SRU-mini Pneumatic rotary actuator
- LDN Electric linear module
- ERD Electric linear module
- WSG Electric 2-finger parallel gripper
Competent and skilled personnel ensure optimal availability of your SCHUNK products, and make sure that their value will be maintained.

**Your advantage:**
- Fast supply of original spare parts
- Reduction of down-times
- The complete spectrum of components from one source
- Quality and availability that can only be guaranteed by the original manufacturer
- 12-month warranty

---

**Initial operation**
- Professional assembly
- Fast and trouble-free

**Inspection**
- Inspection is carried out by skilled service engineers
- Avoiding unplanned failures of workholding and toolholding equipment

**Maintenance**
- Regular maintenance carried out by skilled service engineers
- Increasing and ensuring the availability of your workholding and toolholding equipment

**Repairs**
- Short down-times due to fast intervention of the SCHUNK service engineers
- Spare parts and accessories
Training

- Fast and practical training
- Efficient use of your SCHUNK products by training of the operating personnel
- The basis for proper machining of workpieces
- Ensures longevity of your SCHUNK products

Individual service – for better results

- Hotline to our inside technical consultants weekdays from 7 a.m. to 6 p.m.
- Project-oriented and on-site technical advice at your location
- Training on innovations and SCHUNK products – across the world in our local subsidiaries

Online service – for a fast overview

All information in digital form, clearly structured and up-to-date on our website at www.schunk.com

- List of contact persons
- Online product search based on product descriptions
- Product news and trends
- Data sheets
- Order forms for easy and convenient ordering
- Free download area for pages from our product catalogs and technical data, for software and calculation programs for your gripping and rotary modules
- Free 2D/3D CAD design models, provided in a wide range of different CAD formats – for easy integration into your design!
Subsidiaries

Germany – Head Office SCHUNK GmbH & Co. KG
Spanns- und Greifechnik Rahnhoferstr. 106 – 114 76494 Lauffen/Neckar
Tel. +49-7133-103-0 Fax +49-7133-103-2199
info@de.schunk.com www.schunk.com

Austria SCHUNK Intec GmbH Friedrich-Schunk-Stadt 1 4511 Althaming
Tel. +43-7277 223 99-0 Fax +43-7277 210 99
info@at.schunk.com www.at.schunk.com

Belgium, Luxembourg SCHUNK Intec N.V./S.A.
Industrielaan 4 | Zuid ll Schoten 3078
Tel. +32-53-853504 Fax +32-53-836351
info@be.schunk.com www.be.schunk.com

Brazil SCHUNK Intec BR Av. Santos Dumont, 733 BR 09015-330 Santo André – SP Tel. +55-11-4468-6888 Fax +55-11-4468-6883
info@br.schunk.com www.br.schunk.com

Canada SCHUNK Intec Corp.
370 Britannia Road E, Units 3 Mississauga, ON L4T 3P9
Tel. +1-905-702-2200 Fax +1-905-702-2200
info@ca.schunk.com www.ca.schunk.com

China SCHUNK Intec Precision Machinery Trading (Shanghai) Co., Ltd.
18, Building 1, No. 420 Chundong Road, Minhang District Shanghai 201108
Tel. +86-21-54420007 Fax +86-21-54420067
info@cn.schunk.com www.cn.schunk.com

Czech Republic SCHUNK Intec s.r.o.
Tufánka 18A 151 00 Brno
Tel. +420-513 036 219 Fax +420-513 036 219
info@cz.schunk.com www.cz.schunk.com

Germany SCHUNK Intec A/S c/o SCHUNK Intec AB
Morabergsvägen 28 752 42 Södertälje Sweden
Tel. +45-3603339 Fax +45-3603492
info@dk.schunk.com www.dk.schunk.com

Finland SCHUNK Intec Oy Hatanpään valitatie 34 A/B 33300 Tampere
Tel. +358-9-21-193861 Fax +358-9-21-193652
info@fi.schunk.com www.fi.schunk.com

France SCHUNK Intec SAR
Parc d’Activités des Trois Noyers 15, Avenue James de Rothschild
Ferrères-en-Brie 77200 Marne-la-Vallée, Cedex 3
Tel. +33-1-64663824 Fax +33-1-64663823
info@fr.schunk.com www.fr.schunk.com

Great Britain, Ireland SCHUNK Intec Ltd.
Cromwell Business Centre 10 Howard Way Interchange North
Newport Pagnell MK16 9DS
Tel. +44-1908-603127 Fax +44-1908-605525
info@gb.schunk.com www.gb.schunk.com

Hungary SCHUNK Intec Kft.
Szlachetny ut. 70. I 1330 Miskolc
Tel. +36-46-50990-7 Fax +36-46-50990-8
info@hu.schunk.com www.hu.schunk.com

Indonesia Trade Representative Office of SCHUNK Intec Pte. Ltd.
JL Boulevard Utama BSD Forest Business Loft 9 Blok C No. 16 Tangerang, 15399
Tel. +62-21-2211-9093 Fax +62-21-3001-2995
info@id.schunk.com www.id.schunk.com

Italy SCHUNK Intec S.r.l.
Via Barozzo 12, 22075 Saronno (Va) Tel. +39-031-495131 Fax +39-031-4951301
info@it.schunk.com www.it.schunk.com

Japan SCHUNK Intec K.K.
45-28 3-Chome Sanno
Ohta-Ku Tokyo 143-0023
Tel. +81-3-37766500 Fax +81-3-37743731
info@jp.schunk.com www.jp.schunk.com

Netherlands SCHUNK Intec B.V.
Titaniumlaan 14
3220 CK ’s-Hertogenbosch
Tel. +31-73-6444797 Fax +31-73-6444825
info@nl.schunk.com www.nl.schunk.com

Norway SCHUNK Intec AS
Verneverveienvei 45 | 3511 Hønefoss
Tel. +47-210-33106 Fax +47-210-33107
info@no.schunk.com www.no.schunk.com

Poland SCHUNK Intec Sp.z o.o.
ul. Puławska 4/6
55-500 Płock, Poland
Tel. +48-22-7262500 Fax +48-22-7262525
info@pl.schunk.com www.pl.schunk.com

Russia SCHUNK Intec Ltd.
ul. Belosostrovskaya, 17, korp. 2, lit. A
St. Petersburg, 197342
Tel. +7-812-326-78-38 Fax +7-812-326-78-39
info@ru.schunk.com www.ru.schunk.com

Singapore SCHUNK Intec Pte. Ltd.
25 International Business Park
63-1515 Crescent Centre
Singapore 069916
Tel. +65-6240-6851 Fax +65-6240-6852
info@sg.schunk.com www.sg.schunk.com

Slovakia SCHUNK Intec s.r.o.
Levická 7 | SK-949 01 Nitra
Tel. +421-32-3260610 Fax +421-32-3260699
info@sk.schunk.com www.sk.schunk.com

South Korea SCHUNK Intec Korea Ltd.
#707 ACG HIGH-END Tower 11th, 361 Simin-dong, Anyang-si, Gyeonggi-do, 140-651, Korea
Tel. +82-31-382-6140 Fax +82-31-382-6142
info@kr.schunk.com www.kr.schunk.com

Spain, Portugal SCHUNK Intec S.A.
Avenida Ernest Lluch, 32
03163-002 Terrassa (Barcelona)
Tel. +34-937 908 692 Fax +34-937 908 692
info@s.pt.schunk.com www.es.schunk.com

Sweden SCHUNK Intec AB
Morabergsvägen 28 152 42 Södertälje
Tel. +46-8 554 621 00 Fax +46-8 554 621 01
info@se.schunk.com www.se.schunk.com

Switzerland, Liechtenstein SCHUNK Intec AG Im Ilang 12 | 8307 Effretikon
Tel. +41-52-35431-30 Fax +41-52-35431-10
info@ch.schunk.com www.ch.schunk.com

Turkey SCHUNK Intec Bağlama Sistemleri ve Otomasyon San. ve Tic. Ltd. Şti.
Kıraç Yokuşu İş Merkezi, Girne Mahallesi
İrmak Sokak, A Blok, No: 9 34452 Maltepe | İstanbul
Tel. +90-216-366-219 Fax +90-216-366-2127 info@tr.schunk.com www.tr.schunk.com

USA SCHUNK Intec Inc.
211 Kitty Hawk Drive
Morristown, NJ 07960
Tel. +1-973-572-2705 Fax +1-973-572-2707
info@us.schunk.com www.us.schunk.com

Singapore SCHUNK Intec Pte. Ltd.
25 International Business Park
63-1515 Crescent Centre
Singapore 069916
Tel. +65-6240-6851 Fax +65-6240-6852
info@sg.schunk.com www.sg.schunk.com

Slovakia SCHUNK Intec s.r.o.
Levická 7 | SK-949 01 Nitra
Tel. +421-32-3260610 Fax +421-32-3260699
info@sk.schunk.com www.sk.schunk.com

South Korea SCHUNK Intec Korea Ltd.
#707 ACG HIGH-END Tower 11th, 361 Simin-dong, Anyang-si, Gyeonggi-do, 140-651, Korea
Tel. +82-31-382-6140 Fax +82-31-382-6142
info@kr.schunk.com www.kr.schunk.com

Spain, Portugal SCHUNK Intec S.A.
Avda. Ernest Lluch, 32
03163-002 Terrassa (Barcelona)
Tel. +34-937 908 692 Fax +34-937 908 692
info@s.pt.schunk.com www.es.schunk.com

Sweden SCHUNK Intec AB
Morabergsvägen 28 152 42 Södertälje
Tel. +46-8 554 621 00 Fax +46-8 554 621 01
info@se.schunk.com www.se.schunk.com

Switzerland, Liechtenstein SCHUNK Intec AG Im Ilang 12 | 8307 Effretikon
Tel. +41-52-35431-30 Fax +41-52-35431-10
info@ch.schunk.com www.ch.schunk.com

Turkey SCHUNK Intec Bağlama Sistemleri ve Otomasyon San. ve Tic. Ltd. Şti.
Kıraç Yokuşu İş Merkezi, Girne Mahallesi
İrmak Sokak, A Blok, No: 9 34452 Maltepe | İstanbul
Tel. +90-216-366-219 Fax +90-216-366-2127 info@tr.schunk.com www.tr.schunk.com

USA SCHUNK Intec Inc.
211 Kitty Hawk Drive
Morristown, NJ 07960
Tel. +1-973-572-2705 Fax +1-973-572-2707
info@us.schunk.com www.us.schunk.com
## Distribution Partners

**Australia**

Nomfeld Automation Pty. Ltd.  
Unit 30 | 175 Woodpark Road  
Lunchbowl NSW 2040  
Tel. +61-2-92701799  
Fax +61-2-92703666  
sales@nomfeld.com.au  
www.nomfeld.com.au

**Chile**

Camalina Automática y CIA. LTDA.  
Quinta Norma  
Veguas Fonse M-A 4550 | Santiago  
Tel. +56-2-2470303  
Fax +56-2-2703336  
camalina@rotar.cl | www.rotar.cl

**Colombia**

Cra 8 Col. Centroy Automatización Virtual Ltda.  
No Oficina 101-A Vía de Expresión N. 178  
Bogotá D.C.  
Tel. +57-1-9-0400999  
Fax +57-1-9-0401064  
info@caviotech.com  
www.caviotech.com

**Costa Rica**

RECTIFICACIÓN ARAUJILIENCE, S.A.  
100 m al Oeste y 79m al sur del  
Cementerio Central de Alajuelita, Alajuela  
Tel. +506-2440-7111

**Croatia**

Bibus Zagreb d.o.o.  
Avenija 101 | 10000 Zagreb  
Tel. +385-1-2028403  
Fax +385-1-1838305  
info@bibus.hr | www.bibus.hr

**Cuba**

Día d.o.o.  
Majapita 16 | 12227 Kastel Luksic  
Tel. +385-1-2226849  
Fax +385-1-2226804  
info@olvet.hr

**Ecuador**

ELMINED CIA. LTDA.  
Calle 90 Progreso 211-11 y Manglaralto  
Guayaquil  
Tel. +59-3-7784740

**Estonia**

ET-Tools OÜ  
Peterburi tee 174-1 | 10161, Tallinn  
Mobile Phone +372-56-555159  
Tel. +372-6609258  
info@et-tools.eu

**Greece**

Sang Goussous Co. D.E.  
27, Rigas Feraiou St.  
10624 Metaxias-Athens  
Tel. +30-210-2302456  
Fax +30-210-2302456  
mall@goussous.gr | www.goussous.gr

**Iceland**

Forniisa 1  
Breslamsçon 25 | P.O. Box 161  
105 Reykjavík  
Tel. +354-5772220 | Fax +354-5772216  
formulas.is

**Indonesia**

METALTECH Indonesia  
Unit 6, Gajah Subur Blok 8 | Tangerang 15156  
Tel. +62-21-9658751  
Fax +62-21-9891355  
info@metaltechindonesia.com  
www.metaltechindonesia.com

**Iran**

Iran Int. Procurement of Industries Co.  
P.O. Box 12, First alley, Gohsham St.,  
Behshahrshahr Ave. | Tehran, 1554547711  
Tel. +98-21-88703906  
Fax +98-21-88705665  
info@ipico.ir

**Israel**

Sun and Gandhi Automation Service Ltd.  
59, Shemek St. | Onlin-Arie 44001  
P.O. Box 31110 | Metlach-Tsabe 44001  
Tel. +972-3-9-29878  
Fax +972-3-9-29878  
info@israel-gac.co.il  
www.israel-gac.co.il

**Latvia**

Sia Instru  
Lazepala 81 | Riga, 1011  
Tel. +371-67-283564  
martins@instru.lv | www.instru.lv

**Malaysia**

PrecitecTech Sdn. Bhd.  
Plastik T, 15 Jalan Persisirama Haji 11  
13850 Perai | Penang  
Tel. +604-5080288  
Fax +604-5080288  
sales@precitectech.com.my  
www.precitecTech.com.my

**Peru**

AMOS TECHNOLOGY S.A.F.  
Avenida Flora Tintor 765  
Lima  
Tel. +51-1-2941031

**Philippines**

Bon Industrial MACHINERY  
35 Maysac St. | Sta. Mesa Heights  
Quezon City  
Tel. +63-2-7142870  
Fax +63-2-7142871  
bon@boschin.com

**Romania**

S.C. INMACRO S.R.L.  
Industrial Machines and Accessories Romania  
Bopro Siret N. 66  
305560 Săcărești-Bacău  
Tel. +40-13-665920  
Fax +40-13-667920  
info@inmacro.ro  
www.inmacro.ro

**Saudi Arabia**

Almuai Machine Tools Co. Ltd.  
Head Office  
P.O. Box 157 | Alkhobar 15152  
Tel. +966-3-8940949  
Fax +966-3-8940950  
mailto@amss.com  
www.amss.com

**Singapore**

BALLYST AIA LTD  
18 Shing Ming Lane  
Bedok | Woodlands Park  
Singapore 737960  
Tel. +65-621-22084  
Fax +65-621-22080  
ballyst@ballyst.com.sg  
www.ballyst.com.sg

**South Africa**

ASA Machinery Importers Pty. Ltd.  
42 Somersfield Road, East Village  
Sunward Park 4957, Bloemfontein  
Tel. +27-12-190-2152  
Fax +27-12-190-2150  
info@asa-machinery.com  
www.asa-machinery.co.za

**South Korea**

Mapal Hiteco Co., Ltd.  
996-102, Shinna Ind. Complex 1254-10,  
Jungdong-dong, Shingchon-ri,  
Gunpo-ku, 412-910  
Tel. +82-31-3190-861  
Fax +82-31-3190-877  
hiteco@hiteco.net | www.hiteco.co.kr

**Taiwan**

AccuPine Engineering Co., Ltd.  
1 F. No. 889, Youan-Chou East 1st. Rd.  
40077 Taichung City  
Tel. +886-4-22784886  
Fax +886-4-22069711  
sales@accupine.com.tw  
www.accupine.com.tw

**Thailand**

BRANNDWEG CO., LTD.  
20/1-122 Soi Mahanakhon 2/7, Tha Phra  
Bang Phan, Bangkok 10220  
Tel. +66-2-2649420  
Fax +66-2-2649421  
chatchai@branndweg.co.th  
www.brandweg.co.th

**Ukraine**

Center of Technical Support ₴m™ LLC  
Makitobud 10, 02103  
Dniprospitbank k5005  
Tel. +380-50-235-9470  
Fax +380-50-235-9470  
maxim.bayer@gmail.com  
www.ctp-mem.com.ua
Catalog Order
Copy, complete, fax to +49-7133-103-2779

The SCHUNK Gripper Catalog
The world's most comprehensive gripper portfolio of more than 1,800 pages. Order now!

www.schunk.com/catalogorder
Competence

Competence Catalog Clamping Technology | Gripping Systems
The SCHUNK No. 1 service provider for your processing machines and automated production processes.

Gripping Systems

Complete Program Gripping Systems
Catalogs SCHUNK Grippers, Rotary Modules, Linear Modules, Robot Accessories

SCHUNK Grippers
The compact SCHUNK Gripping Competence on over 1,760 pages

Linear Modules
The whole variety of SCHUNK Linear Modules on over 700 pages

Rotary Modules
High technology for rotary movements on more than 610 pages

Robot Accessories
The SCHUNK End-of-Arm Competence on over 830 pages
The optimal interaction between the robot arm and gripper

Product Overview Gripping Systems
SCHUNK Gripping Systems at a glance

Product Overview Mechatronics³
Alternative – Adaptable – Intelligent

Product Overview Linear Modules
SCHUNK Linear Modules at a glance

Product Overview Robot Accessories
SCHUNK Robot Accessories at a glance

Highlights New Products
Current innovations in SCHUNK Gripping Systems

Depanelling Machine

Product Overview Depanelling Machine
Solutions for the complete spectrum of depanelling technology

Clamping Technology

Complete Program Clamping Technology
Catalogs Toolholders, Stationary Workholding, Lathe Chucks, Chuck Jaws

Toolholders
The complete precision toolholders range for perfect machining on around 520 pages

Lathe Chucks
Lathe chucks for sophisticated machining of world-renowned quality compact on 650 pages

Chuck Jaws
With 1,200 Types – the world’s largest chuck jaw program on over 720 pages

Stationary Workholding
The largest modular system for individualists with more than 500 variants for workpiece clamping on around 830 pages

Product Overview
SCHUNK Clamping Technology at a glance

MAGNOS Magnetic Clamping Technology
5-sided workpiece machining in one set-up

Hydraulic Expansion Technology Special Solutions
More than 75,000 implemented customized clamping solutions for tool and workpiece

PLANOS Vacuum Clamping Technology
The universal, modular designed clamping system with high holding forces

SINO-R Expansion Toolholder
The specialist for thread milling

TRIBOS Polygonal Clamping Technology
The No. 1 in micro cutting

Highlights New Products
Current innovations in SCHUNK Gripping Technology

Company Name Department

Street ZIP City

Tel. Fax E-Mail
No. 1
for safe, precise gripping and holding.

852 minutes without a goal against him in the Champions League

681 minutes without a goal against him in the national team

2 intercepted penalties in the 2006 World Cup

1 headed goal as a goalie

0 defeats English Soccer Champion

More than 2,000,000 sold precision toolholders

About 1,000,000 delivered SCHUNK grippers

More than 100,000 lathe chucks and stationary workholding systems are in use worldwide

More than 16,000,000 sold standard chuck jaws

More than 75,000 implemented hydraulic expansion customer-specific solutions

SCHUNK GmbH & Co. KG
Spann- und Greiftechnik
Bahnhofstr. 106 – 134
D-74348 Lauffen/Neckar
Tel. +49-7133-103-2503
Fax +49-7133-103-2189
greifsysteme@de.schunk.com
www.schunk.com

Jens Lehmann, German goalkeeper legend, SCHUNK brand ambassador since 2012 for safe, precise gripping and holding.
www.gb.schunk.com/Lehmann

www.youtube.com/SCHUNKHQ
www.twitter.com/SCHUNK_HQ
www.facebook.com/SCHUNK.HQ