New SCHUNK Products and Innovations

Gripping Systems
Depaneling Technology
Clamping Technology
The easy way to automate – MTB application kits

Diverse automation scenarios can now be implemented in no time and with minimal effort. With its MTB application kits, SCHUNK offers easy-to-integrate packages for automated gripping, clamping and changing of workpieces. Components that are well matched to one another down to the very last detail merge seamlessly into the machine environment. The kits are equally suitable for automation beginners and professionals.
New SCHUNK Products and Innovations
Highlights at a Glance

Super magnetic! The invisible force in workpiece handling
Straightforward, easy-to-handle and really strong! As if by superpower, our magnetic grippers move ferromagnetic components in all positions and sizes. No matter where or how – safe gripping of workpieces every time.

SCHUNK is your Life-Science Partner with Application Know-how
In the “Science of Life” – biotechnology, medical technology and pharmaceutics all work together in this field. The aim of this multi-discipline collaboration is to work towards a future with more focus on health and safety, while producing new medical technology products, treatment methods and medicines.
Next level generation: the first intelligent toolholder on the market

With the new iTENDO®, we are taking our portfolio of toolholders to the next level: With intelligent real-time sensors for simple process monitoring and maximum possible service life. With speeds of rotation of up to 30,000 RPM and an interfering contour that corresponds 1:1 to that of a SCHUNK standard toolholder, it is predestined for use in a wide range of tasks without any time-consuming adjustments.

- Speeds of rotation of up to 30,000 RPM make a wide range of applications possible
- Intelligent real-time sensor system for easy process monitoring and maximum tool service life
- 3 customized product packages offer a suitable solution for any task or complexity level
Enormous diversity of variants

With TANDEM³, SCHUNK has not only succeeded in expanding the existing modular system by adding further technical refinements – these further developments also already provide the basis for the modular systems of tomorrow. And because of SCHUNK’s decades of know-how in developing clamping force blocks, there are virtually no limits here.
**ADHESO**

Adhesive Grippers

The new gripping technology is bionically inspired and ensures energy-efficient gripping without residues.

- **Energy-efficient gripping**
  without additional hoses and cables

- **Residue-free gripping**
  Gripping without residue on the gripping object

- **Customized gripping unit**
  individually adapted and tested to each customer application

1. **Robot adapter**
   individually adaptable to different robots

2. **Pad bracket**
   available in four standard sizes

3. **Foam**
   in different degrees of hardness to compensate for irregularities

4. **Pad**
   in different structure sizes for a wide range of applications

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**Technical data**

<table>
<thead>
<tr>
<th>Size</th>
<th>Pad diameter [mm]</th>
<th>Weight [g]</th>
<th>Max. workpiece weight [kg]</th>
<th>Change interval for pads [million cycles]</th>
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<tr>
<td>3</td>
<td>24</td>
<td>22</td>
<td>3</td>
<td>1.5</td>
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<td>5</td>
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<tr>
<td>16</td>
<td>56</td>
<td>55</td>
<td>16</td>
<td>1.5</td>
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</table>

schunk.com/adheso
Collaborative Gripper for Small Components

The world’s first certified industrial gripper for collaborative operations

New: Now also available for ABB GoFa

Certified gripping unit saves time and effort when carrying out the safety assessment of the overall application

Plug & Work for a variety of different cobots

1. Collision protection cover
2. Gripper for small components EGP
3. LED light band for status display
4. Integrated sensor system to monitor the jaw position

Technical data

<table>
<thead>
<tr>
<th>Size</th>
<th>Stroke per jaw [mm]</th>
<th>Min. gripping force [kN]</th>
<th>Max. gripping force [kN]</th>
<th>Recommended workpiece weight [kg]</th>
<th>Max. permissible finger length [mm]</th>
<th>Weight [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>6</td>
<td>35</td>
<td>140</td>
<td>0.7</td>
<td>50</td>
<td>0.59 .. 0.9</td>
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<tr>
<td>64</td>
<td>10</td>
<td>65</td>
<td>230</td>
<td>1.15</td>
<td>80</td>
<td>1.11 .. 1.38</td>
</tr>
</tbody>
</table>
EMH Magnetic Grippers

The first compact electropermanent magnetic gripper with integrated electronics.

New: Sizes EMH-MP for special requirements like metal sheet handling and EMH-DP for bin picking

Integrated electronics
Compact design, as no additional controller is required

High holding forces at small spaces for reliable part handling in compact machines

1. Control electronics
   integrated control and power electronics

2. Copper coil
   for pole reversal of the AlNiCo-magnets

3. Polarity reversible AlNiCo-magnet surrounded by an electromagnetic coil

4. Non-pole reversing neodymium permanent magnets lead the magnetic flux via the workpiece

Technical data

<table>
<thead>
<tr>
<th>Size</th>
<th>Weight [kg]</th>
<th>Payload for horizontal magnetic surface [kg]</th>
<th>Activation time [ms]</th>
<th>Nominal voltage [V]</th>
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<td>19</td>
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<td>MP 060</td>
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<td>14</td>
<td>200</td>
<td>24</td>
</tr>
<tr>
<td>RP 036</td>
<td>1</td>
<td>8.5</td>
<td>300</td>
<td>24</td>
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<td>RP 045</td>
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<td>300</td>
<td>24</td>
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<tr>
<td>RP 084</td>
<td>6.5</td>
<td>89</td>
<td>500</td>
<td>24</td>
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<tr>
<td>RP 114</td>
<td>8</td>
<td>175</td>
<td>700</td>
<td>24</td>
</tr>
</tbody>
</table>

schunk.com/emh
FGR
Customizable Gripper Fingers

Four steps to the individual gripper finger

1. SCHUNK gripper PGN-plus-P
2. FGR individually configured gripper finger
3. SCHUNK ID for ordering the gripper finger
4. Optional customer material number for internal materials management

Configure Individual gripper fingers quickly

- Step 1: Gripper selection
- Step 2: Finger configuration
- Step 3: Contact details
- Step 4: Complete configuration

Configure online now: schunk.com/fgr

Matching Series
- PGN-plus-P
- JGP-P
- PGB
- PZN-plus
- JGZ
- PZV
- PZB-plus
- PGN-plus-E
- EGI
- EGN
- EZN

Short delivery time fast availability, without tying up your own resources

Attractive price eliminates the need for in-house design and production of gripper fingers

Immediate display of price and delivery time enables shortest request and order processes

Configure online now: schunk.com/fgr
Perfect match
Due to the high application specialization of the application kits, you do not have to search long for a suitable solution. Use your time for more important things.

Increased productivity
You don’t have an employee available for a third shift? Let the robot work for you.

Reducing employee’s workload
Protect your employees from dirty, dangerous and tedious tasks such as manual loading and cleaning operations.

1. Single gripper
   Perfect for use in confined spaces

2. Double gripper
   Increased machine productivity due to loading and unloading in just one cycle

3. Clamping force block
   Reliable holding of the workpiece during machining

Technical data

<table>
<thead>
<tr>
<th>Designation</th>
<th>Stroke per jaw</th>
<th>Weight</th>
<th>Closing force</th>
<th>Opening force</th>
<th>Recommended workpiece weight</th>
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<tbody>
<tr>
<td>Single gripper JGP-P 80</td>
<td>8</td>
<td>0.99</td>
<td>550</td>
<td>610</td>
<td>2.75</td>
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<tr>
<td>Single gripper JGP-P 100</td>
<td>10</td>
<td>1.38</td>
<td>870</td>
<td>930</td>
<td>4.35</td>
</tr>
<tr>
<td>Double gripper JGP-P 64</td>
<td>6</td>
<td>1.62</td>
<td>350</td>
<td>375</td>
<td>1.75</td>
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<tr>
<td>Double gripper JGP-P 80</td>
<td>8</td>
<td>2.1</td>
<td>550</td>
<td>610</td>
<td>2.75</td>
</tr>
<tr>
<td>Vise PG53 100</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
JGP–P Universal Gripper

The high-performance gripper with diverse monitoring options – including inductive

- A firm focus on the essentials for maximum profitability
- Sturdy T-slot guidance for the precise handling of different workpieces
- Comprehensive sensor accessory program for versatile position identification possibilities and stroke position monitoring

1. T-slot guidance
   Loadable, robust base jaw guidance for extremely long gripper fingers

2. Wedge-hook design
   For high power transmission and minimal wear as a result of larger diagonal pull surfaces

3. Piston
   Maximum force through maximum surface of drive piston

4. Bracket for sensor system
   Brackets for proximity switches and adjustable control cams in the housing

Technical data

<table>
<thead>
<tr>
<th>Size</th>
<th>Stroke per jaw (mm)</th>
<th>Closing force [N]</th>
<th>Opening force [N]</th>
<th>Recommended workpiece weight [kg]</th>
<th>Weight [kg]</th>
<th>Max. permissible finger length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>2.5</td>
<td>180 .. 235</td>
<td>200 .. 260</td>
<td>0.9</td>
<td>0.08 .. 0.1</td>
<td>55 .. 60</td>
</tr>
<tr>
<td>50</td>
<td>2 .. 4</td>
<td>220 .. 490</td>
<td>235 .. 520</td>
<td>1.1 .. 1.9</td>
<td>0.17 .. 0.2</td>
<td>68 .. 75</td>
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<tr>
<td>64</td>
<td>3 .. 6</td>
<td>350 .. 920</td>
<td>375 .. 1050</td>
<td>1.75 .. 3.6</td>
<td>0.27 .. 0.35</td>
<td>80 .. 90</td>
</tr>
<tr>
<td>80</td>
<td>4 .. 8</td>
<td>550 .. 1500</td>
<td>610 .. 1600</td>
<td>2.75 .. 5.5</td>
<td>0.51 .. 0.63</td>
<td>100 .. 110</td>
</tr>
<tr>
<td>100</td>
<td>5 .. 10</td>
<td>870 .. 2200</td>
<td>930 .. 2400</td>
<td>4.35 .. 8.75</td>
<td>0.9 .. 1.1</td>
<td>125 .. 145</td>
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<td>125</td>
<td>6 .. 13</td>
<td>1400 .. 4200</td>
<td>1520 .. 4450</td>
<td>7 .. 15</td>
<td>1.4 .. 1.9</td>
<td>160 .. 180</td>
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<tr>
<td>160</td>
<td>8 .. 16</td>
<td>2500 .. 6100</td>
<td>2800 .. 6900</td>
<td>12.5 .. 24.5</td>
<td>3 .. 3.8</td>
<td>200 .. 220</td>
</tr>
<tr>
<td>200</td>
<td>25</td>
<td>3800 .. 5050</td>
<td>4050 .. 5500</td>
<td>19</td>
<td>5.4 .. 7</td>
<td>240 .. 280</td>
</tr>
<tr>
<td>240</td>
<td>30</td>
<td>5300 .. 7800</td>
<td>600 .. 8300</td>
<td>26.5</td>
<td>8.7 .. 11.8</td>
<td>280 .. 320</td>
</tr>
<tr>
<td>300</td>
<td>35</td>
<td>6600 .. 8200</td>
<td>6800 .. 8400</td>
<td>33</td>
<td>13.7 .. 17.2</td>
<td>300 .. 350</td>
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</table>
MPG–plus with Protective Cover
Gripper for Small Components

The most powerful pneumatic miniature parallel gripper on the market

New: Now also available with protective cover for sizes 25, 32 and 40

Cross roller guide for precise gripping due to a backlash–free base jaw guidance

Base jaws guided on double roller bearings ensuring low friction and smooth running

1 Base jaw for the connection of workpiece–specific gripper fingers
2 Wedge–hook design for high force transmission and centric gripping
3 Cross roller guidance precise gripping through base jaw guidance with minimum play
4 Oval piston drive for power generation

Technical data

<table>
<thead>
<tr>
<th>Size</th>
<th>Stroke per jaw [mm]</th>
<th>Closing force [kN]</th>
<th>Opening force [kN]</th>
<th>Recommended workpiece weight [kg]</th>
<th>Weight [kg]</th>
<th>Max. permissible finger length [mm]</th>
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<tbody>
<tr>
<td>25</td>
<td>3</td>
<td>38 .. 48</td>
<td>12 .. 41</td>
<td>0.19</td>
<td>0.06 .. 0.11</td>
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<td>32</td>
<td>4</td>
<td>80 .. 105</td>
<td>70 .. 90</td>
<td>0.43</td>
<td>0.1 .. 0.19</td>
<td>40</td>
</tr>
<tr>
<td>40</td>
<td>6</td>
<td>115 .. 170</td>
<td>110 .. 135</td>
<td>0.7</td>
<td>0.18 .. 0.33</td>
<td>50</td>
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</tbody>
</table>

schunk.com/mpg-plus
BSWS–M
Jaw Quick-change System

The first jaw quick-change system with tool-free actuation on the market

Universal application possibilities using the BSWS–M means that just one gripper can be applied universally for various applications

Tool-free jaw change via the unlocking button Quick and easy for highly flexible grippers

Saving time when converting applications Different workpieces can be handled by exchanging the gripper fingers

Sizes
50 .. 200

Weight
0.02 .. 0.85 kg

Technical data

<table>
<thead>
<tr>
<th>Base BSWS–BM</th>
<th>Weight [kg]</th>
<th>Adapter pin BSWS–A</th>
<th>Number of pins per ID</th>
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<tr>
<td>BSWS–BM 50</td>
<td>0.02</td>
<td>BSWS–A 50</td>
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<td>BSWS–BM 64</td>
<td>0.04</td>
<td>BSWS–A 64</td>
<td>2</td>
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<td>BSWS–BM 100</td>
<td>0.13</td>
<td>BSWS–A 100</td>
<td>2</td>
</tr>
<tr>
<td>BSWS–BM 125</td>
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<td>BSWS–A 125</td>
<td>2</td>
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<tr>
<td>BSWS–BM 160</td>
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<td>BSWS–A 160</td>
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<tr>
<td>BSWS–BM 200</td>
<td>0.85</td>
<td>BSWS–A 200</td>
<td>2</td>
</tr>
</tbody>
</table>

1 Unlocking button
2 Spring preloaded locking pin
3 Adapter pin BSWS–A for fastening the gripper finger to be exchanged
4 Screw connection for mounting on the gripper

schunk.com/bsws-m
Compensation can be adjusted by means of a double-acting pneumatic cylinder for a constant contact force independent of the orientation of the tool.

Optional media change system for automated exchange of grinding or polishing wheels.

Optional connection for suction for reduced contamination and susceptibility to faults.

1. Vane-type air motor for a high torque and a short stopping time.
2. Dust cover protects the bearing against contamination.
3. Backer pad for adhesive grinding or polishing wheels.
4. Bore holes for extraction of grinding and polishing dust.

Technical data

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<thead>
<tr>
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<tr>
<td>10</td>
<td>125 mm (5'') .. 150 mm (6'')</td>
<td>12.7</td>
<td>13.3</td>
<td>66.7</td>
<td>10000</td>
<td>2.68</td>
</tr>
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</table>
Flexible, pneumatic deburring tool for narrow and tight workpiece geometries

Flexible use on the robot arm or as a stationary unit

The compensation force can be adjusted means of compressed air for high-quality deburring results in any installation position

Use of proven files for simple automation of manual deburring processes

1. Toolholder for files
2. Gimballed system for a robust compensation function
3. Locking function for y-axis for an oscillating compensation in the x-axis
4. Air connection for adjusting the compliance force

Technical data

<table>
<thead>
<tr>
<th></th>
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<td>8</td>
<td>18</td>
<td>62</td>
<td>5</td>
<td>12000</td>
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</table>
R·E·MENDO MFT-R
Deburring Spindle

The most robust polishing spindle with radial compensation on the market

Adjustable rigidity of the spindle via compressed air for high-quality deburring results in any installation position

Flexible use on the robot arm or as a stationary unit

Rotating piston air engine with high torque for short stopping times and reduced processing times

1. Vane-type air motor for a high torque and a short stopping time
2. Gimballed system for a robust compensation function
3. Air connection for adjusting the compliance force
4. Tool holder for DA collet chucks

Technical data

<table>
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<tr>
<td>490</td>
<td>390</td>
<td>5600</td>
<td>7.1</td>
<td>7.1</td>
<td>9.4</td>
<td>70</td>
<td>Collet chuck DA 6 mm and 8 mm</td>
<td>4.42</td>
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schunk.com/mft-r
R·E·MENDO PCFC
Compensation Unit

Universally applicable compensation unit with integrated stroke measuring system for a constant compensation force in any position.

Adjustable compensation by means of a double-acting pneumatic cylinder for a constant contact force

Integrated path measuring system for monitoring and control of the process

Integrated weight force compensation for constant contact forces independent of tool orientation, especially in robot-guided applications

Technical data

<table>
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<td>12</td>
<td>18 .. 49</td>
<td>85 .. 240</td>
<td>3.54 .. 3.63</td>
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</tbody>
</table>

Piston

Linear guide

Mounting for tool provided by customer

Integrated stroke measuring system

schunk.com/pcfc
R·EMENDO CDB
Deburring Tool

The world’s only compliant tool for robot-guided deburring with conventional deburring tools

Adjustable rigidity of the tool via compressed air for flexible use and ideal results with different materials

Optional tool change system for the automatic exchange of different deburring tools

Use of proven deburring tools for simplifying automation of manual deburring processes

### Technical data

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>8</td>
<td>5.5</td>
<td>8</td>
<td>1.04 .. 1.09</td>
<td>76</td>
<td>67</td>
</tr>
</tbody>
</table>

1. **Gimballed system**
   - for robust and flexible absorption of forces and moments

2. **Tool holder**
   - for simple and fast exchange of deburring tools

3. **Locking function for y-axis**
   - for an oscillating compensation in the x-axis

4. **Air connection**
   - for adjusting the contact pressure to the workpiece
Flexible use on the robot arm or as a stationary unit

The compensation force can be adjusted using compressed air for high-quality deburring results in any installation position

Rotating piston air engine with high torque for high feed rates and a reduced machining time

1. Vane-type air motor for a high torque and a short stopping time
2. Gimballed system for a robust compensation function
3. Air connection for adjusting the compliance force
4. Tool holder for ER-11 collet chucks

Technical data

<table>
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<tr>
<th></th>
<th></th>
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<tr>
<td>490</td>
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<td>40000</td>
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<td>Collet chuck ER-11 6 mm and 8 mm</td>
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<tr>
<td>490</td>
<td>490</td>
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<td>7</td>
<td>53</td>
<td>Collet chuck ER-11 6 mm and 8 mm</td>
<td>3.36</td>
</tr>
</tbody>
</table>
FT-AXIA
Force/Torque Sensor

Attractively priced, compact force/torque sensor with integrated electronics.

New: FT-AXIA 90 and FT-AXIA 130 open up new possibilities for new entrants to automation

Compact design due to space-saving set-up with integrated electronics

- **Electronics**: no interfering contour, as integrated in the housing
- **Strain gauges**: Silicon gauges provide a signal 75 times stronger than conventional foil gages. This signal is amplified resulting in near-zero noise distortion.
- **Interfaces**: Data evaluation via Ethernet, EtherCAT, RS-422 or RS-485
- **Protection class IP**: Sizes FT-AXIA 90 and FT-AXIA 130 with IP67

**Sizes**
90 .. 130

**Force measurement range**
±1000 .. ±6,000 N

**Moment measurement range**
±50 .. ±300 Nm

[https://schunk.com/ft-axia]
Depending on the workpieces and processes, various testing and measuring procedures can be automated. Quality inspection and quality assurance serve to ensure product quality during production. Handling and sensor components enable automated quality inspection and support documentation of measuring and inspection values.

### Technical data

<table>
<thead>
<tr>
<th>Evaluation via</th>
<th>FTx-AXIA90 SI-1000-50</th>
<th>FT-AXIA130 SI-2000-125</th>
<th>FT-AXIA130 SI-4000-300</th>
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<tbody>
<tr>
<td>Weight [kg]</td>
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<td>Calibration</td>
<td>SI-1000-50</td>
<td>SI-2000-125</td>
<td>SI-4000-300</td>
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<tr>
<td>Range of measurement Fₓ, Fᵧ, Fz [N]</td>
<td>±1000±±2000</td>
<td>±2000±±4000</td>
<td>±4000±±6000</td>
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<tr>
<td>Range of measurement Mₓ, Mᵧ, Mz [Nm]</td>
<td>±50±±50</td>
<td>±125±±125</td>
<td>±300±±300</td>
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<tr>
<td>Resonant frequency Fₓ, Fᵧ, Mz [Hz]</td>
<td>2300</td>
<td>2500</td>
<td>2450</td>
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<tr>
<td>Resonant frequency Fz, Mₓ, Mᵧ [Hz]</td>
<td>2900</td>
<td>4000</td>
<td>2900</td>
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<td>Resolution Fₓ, Fᵧ, Fz [N]</td>
<td>0.4/0.4</td>
<td>0.625/0.625</td>
<td>1.67/1.67</td>
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<td>Resolution Mₓ, Mᵧ, Mz [Nm]</td>
<td>0.01/0.01</td>
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<td>Protection class IP</td>
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<tr>
<td>Dimensions Ø D x Z [mm]</td>
<td>89.9 x 26.9</td>
<td>130 x 39.2</td>
<td>130 x 39.2</td>
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</table>
ILR-Compact
Inline Paneling Machine

The economical depaneling machine with high productivity

- **Economical and efficient** due to low investment and high productivity.
- **Versatile and productive** due to the modular design and standard accessories.
- **Robust, reliable and precise** in large-scale production due to high milling accuracy and availability.

### Technical data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length/width/height (mm)</td>
<td>1900/2115/2285</td>
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<tr>
<td>Depaneling in-height (mm)</td>
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<tr>
<td>X-, Y-linear motor axes (mm/s)</td>
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<tr>
<td>Z-axis linear motor axis (mm/s)</td>
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</tr>
<tr>
<td>Repeat accuracy/Positioning accuracy (mm)</td>
<td>±0.02/±0.02</td>
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<tr>
<td>Milling accuracy without vision system (mm)</td>
<td>±0.13</td>
</tr>
<tr>
<td>Milling accuracy with vision system (mm)</td>
<td>±0.08</td>
</tr>
<tr>
<td>Max. panel size X- and Y-direction (mm)</td>
<td>460 x 350</td>
</tr>
</tbody>
</table>

- **Speed of axes** up to 2,000 mm/s.
- **Milling area** 460 x 350 mm.
- **Repeat and positioning accuracy** ±0.02 mm.
- **Milling accuracy** ±0.01 mm.
SAR-Compact
Stand-alone Depaneling Machine

The economical depaneling machine
with simple operation

- Economical and efficient due to low investment, high productivity and small footprint
- Versatile and productive modular design, flexible workpiece carriers and connectivity to MES systems
- Robust, reliable and precise high milling accuracy and availability

**Technical data**

<table>
<thead>
<tr>
<th></th>
<th></th>
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<td>Milling area</td>
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<tr>
<td>Repeat and positioning accuracy</td>
<td>±0.02/±0.02</td>
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<tr>
<td>Milling accuracy</td>
<td>±0.01 mm</td>
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SAR-Compact
Stand-alone Depaneling Machine

The economical depaneling machine
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- Economical and efficient due to low investment, high productivity and small footprint
- Versatile and productive modular design, flexible workpiece carriers and connectivity to MES systems
- Robust, reliable and precise high milling accuracy and availability

**Technical data**

<table>
<thead>
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<tr>
<td>Speed of axes</td>
<td>up to 1,000 mm/s</td>
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<td></td>
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<tr>
<td>Repeat and positioning accuracy</td>
<td>±0.02/±0.02</td>
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<tr>
<td>Milling accuracy</td>
<td>±0.01 mm</td>
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</table>
Jaw Quick-change Chuck

Completely sealed jaw quick-change chuck with permanent lubrication for constantly high clamping forces

Jaw quick-change system
for jaw change in less than 60 seconds

Sealed power lathe chuck
for up to 20 times longer maintenance intervals and optimal protection of the chuck kinematics

Consistently high clamping forces
through permanent grease lubrication

1. Wedge hook drive in ring piston design
   offers high run-out accuracy across the entire speed range

2. Patented sealing system
   for consistently high clamping forces

3. Jaw quick-change system
   shortest conversion times due to individual unlocking of jaws

4. Base jaw with straight serration (GBK)
   compatible with ROTA THW plus, ROTA THW, ROTA-G and the "R" (Reishauer) system

Technical data

<table>
<thead>
<tr>
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<tbody>
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<td>ROTA THW3 200-52</td>
<td>6000</td>
<td>64</td>
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<td>ROTA THW3 225-66</td>
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<td>41</td>
<td>7.4</td>
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<td>ROTA THW3 265-81</td>
<td>4000</td>
<td>115</td>
<td>59</td>
<td>8.2</td>
<td>24</td>
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<td>ROTA THW3 315-104</td>
<td>3600</td>
<td>150</td>
<td>80</td>
<td>8.6</td>
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<tr>
<td>ROTA THW3 400-128</td>
<td>3000</td>
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<td>8.6</td>
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<td>ROTA THW3 500-165</td>
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<tr>
<td>ROTA THW3 630-165</td>
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<td>240</td>
<td>128</td>
<td>10.5</td>
<td>30</td>
<td>165</td>
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</tbody>
</table>

schunk.com/rota-thw3
**ROTA-M flex 2+2**

**Compensation Chucks**

Sealed 2+2 jaw chuck with large compensation stroke allows maximum flexibility on mill/turn machines

- Flexible clamping system for clamping round, cubic or geometrically bulky workpieces
- Sealed manual lathe chuck for optimal protection of the internal chuck kinematics
- Extremely lightweight design from size Ø 630 mm for a maximum additional payload of workpiece weight
- Drive ring system as a basis for centrical, compensating workpiece clamping
- Sealed design to protect the chuck kinematics
- Visual indicator pin for safe workpiece clamping
- Optional use as a centric clamping vise by simply exchanging the center cover

**Technical data**

<table>
<thead>
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<tbody>
<tr>
<td>ROTA-M flex 2+2 260</td>
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<td>100</td>
<td>120</td>
<td>9.5</td>
<td>5.1</td>
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<td>ROTA-M flex 2+2 315</td>
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<td>5.1</td>
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<td>ROTA-M flex 2+2 400</td>
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<td>150</td>
<td>200</td>
<td>14.5</td>
<td>7.9</td>
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<td>ROTA-M flex 2+2 500</td>
<td>1100</td>
<td>180</td>
<td>250</td>
<td>17.8</td>
<td>10</td>
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<td>ROTA-ML flex 2+2 630</td>
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<td>250</td>
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</table>
SRKL and SRKL-AL Soft Jaws

with chamfering for clamping smallest workpiece diameters

- Chamfering of the clamping surface for the smallest workpiece diameter
- For universal use Soft top jaws can be flexibly turned to the desired clamping diameter
- Individually modifiable Specific modifications are possible flexibly and at short notice

Extended top jaw enables workpiece diameters from 4 mm to be clamped
Finely milled tongue and groove ensures high repeat accuracy and above-average service life
In steel and aluminum The weight-reduced aluminum version ensures lower centrifugal forces

Technical data

<table>
<thead>
<tr>
<th>Designation</th>
<th>ID</th>
<th>Serration</th>
<th>Width B [mm]</th>
<th>Height H [mm]</th>
<th>Height H2 [mm]</th>
<th>Length L [mm]</th>
<th>Bundle</th>
<th>material</th>
<th>m/set [kg]</th>
<th>Min. workpiece diameter [mm]</th>
<th>The suitable chuck size</th>
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<tbody>
<tr>
<td>SRKL 112</td>
<td>1496961</td>
<td>Tongue and groove</td>
<td>25</td>
<td>30</td>
<td>26</td>
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<td>Set</td>
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<td>SRKL 160</td>
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<td>Tongue and groove</td>
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<td>60</td>
<td>54</td>
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<td>Set</td>
<td>Steel</td>
<td>3.5</td>
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<td>165</td>
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<tr>
<td>SRKL-AL 112</td>
<td>1496963</td>
<td>Tongue and groove</td>
<td>25</td>
<td>30</td>
<td>26</td>
<td>61.5</td>
<td>Set</td>
<td>Aluminum</td>
<td>0.27</td>
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<tr>
<td>SRKL-AL 160</td>
<td>1496969</td>
<td>Tongue and groove</td>
<td>40</td>
<td>60</td>
<td>54</td>
<td>88</td>
<td>Set</td>
<td>Aluminum</td>
<td>1.3</td>
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</table>
RAPIDO
Jaw Quick-change System

Tool-free jaw quick change from the modular system that can be fully automated

- Significantly reduced set-up time due to tool-free change of three chuck jaws in less than 60 seconds
- Fully automatable Jaw change can be fully automated by robot
- Double locking for maximum security even in an unclamped condition

1. Supporting jaw available in inch and metric fine serration
2. Clamping insert Individual clamping contours available at short notice due to an extensive blank concept
3. Lock bolts tool-free change, put on chuck jaw, push backwards, done

Technical data

<table>
<thead>
<tr>
<th>Supporting jaws</th>
<th>Jaw interface</th>
<th>Clamping insert, low, induction hardened</th>
<th>Clamping insert, high, induction hardened</th>
<th>Clamping insert, low, tempered</th>
<th>Clamping insert, high, tempered</th>
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<tbody>
<tr>
<td>TRR-M 210, 1452176</td>
<td>1.5 mm x 60°</td>
<td>RSE-I 210, 1499871</td>
<td>RSE-V 210, 1499859</td>
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<td>TRR-M 260, 1449746</td>
<td>1.5 mm x 60°</td>
<td>RSE-IN 260, 1499866</td>
<td>RSE-IH 260, 1499873</td>
<td>RSE-VN 260, 1499853</td>
<td>RSE-VH 260, 1499862</td>
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<td>TRR-M 315, 1452178</td>
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<td>RSE-IN 315, 1499867</td>
<td>RSE-IH 315, 1499874</td>
<td>RSE-VN 315, 1499854</td>
<td>RSE-VH 315, 1499863</td>
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<td>TRR-M 400, 1452181</td>
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<td>RSE-IN 400, 1499868</td>
<td>RSE-IH 400, 1499875</td>
<td>RSE-VN 400, 1499856</td>
<td>RSE-VH 400, 1499864</td>
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<td>TRR-Z 210, 1445381</td>
<td>1/16&quot; x 90°</td>
<td>RSE-I 210, 1499871</td>
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<td>TRR-Z 260, 1435822</td>
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<td>RSE-IV 260, 1499873</td>
<td>RSE-VN 260, 1499853</td>
<td>RSE-VH 260, 1499862</td>
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<td>TRR-Z 315, 1452177</td>
<td>1/16&quot; x 90°</td>
<td>RSE-IN 315, 1499867</td>
<td>RSE-IV 315, 1499874</td>
<td>RSE-VN 315, 1499854</td>
<td>RSE-VH 315, 1499863</td>
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<td>RSE-IV 400, 1499875</td>
<td>RSE-VN 400, 1499856</td>
<td>RSE-VH 400, 1499864</td>
</tr>
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</table>
**New: Sizes 200 and 315**
the right-sized vise for
every clamping task available
as standard

**Patented monitoring of**
the base jaw position
via dynamic pressure
Know whether the vise is
open or clamped

**Workpiece presence**
control through the
base jaw
enables automated loading
of the clamping force block

---

1. **Wedge-hook drive**
depending on stroke version for standard
stroke, long stroke or fixed jaw

2. **Ideal external contour**
for best accessibility and optimal chip fall

3. **Control of the clamping modules**
from the side or bottom as desired

4. **Lubrication channels in the**
cover plate
allow bottom lubrication

---

**Technical data**

<table>
<thead>
<tr>
<th>Series</th>
<th>Actuation</th>
<th>Sizes</th>
<th>Clamping force amplification for O.D. clamping</th>
<th>Workpiece presence control/air purge</th>
<th>Inductive jaw monitoring</th>
<th>Jaw quick-change system</th>
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<tr>
<td>KSP3</td>
<td>Pneumatic</td>
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<td>No</td>
<td>Yes</td>
<td>No</td>
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</table>
**PGS3**

Lean Clamping Force Blocks

Perfection and reliability for a start in simple, automated machine loading

Base body made of light aluminum highly combinable with easy machining and simple automation

Ready for immediate use due to lateral air connections on the clamping force block

Integrated console plate Direct mounting on T-slot tables as well as VERO-S clamping modules with torque pin

**Technical data**

<table>
<thead>
<tr>
<th>Series</th>
<th>Actuation</th>
<th>Number of versions</th>
<th>Clamping force amplification for O.D. clamping</th>
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<th>Inductive jaw monitoring</th>
<th>Jaw quick-change system</th>
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<td>No</td>
<td>No</td>
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Depaneling Machines

Lathes

Machining Center

Robot Accessories
KONTEC KSX-C2

5-axis Vise

5-axis vise with jaw quick-change and active jaw pull-down for precise machining of the sixth side

Active jaw pull-down optionally allows complete and precise machining of the sixth side

Jaw quick-change without any tools
Adjustment to new clamping tasks within seconds

Adjustable clamping center
Small and large workpieces are always clamped in the center

1. Jaw quick-change system
System jaws can be exchanged in seconds, completely without tools

2. Jaw pull-down mechanism
for the most accurate clamping of pre-machined workpieces

3. Completely encapsulated spindle
offers optimal protection against coolant and chips

4. Two heights are available
2¼ mm as well as 175 mm (including jaws) for optimal accessibility of the machine spindle

Technical data

<table>
<thead>
<tr>
<th>Size</th>
<th>Width of the clamping vise [mm]</th>
<th>Vise length [mm]</th>
<th>Max. clamping force [kN]</th>
<th>Max. torque [Nm]</th>
<th>Basic clamping stroke [mm]</th>
<th>Clamping range [mm]</th>
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<td>KSX-C2 125-330</td>
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<td>330</td>
<td>40</td>
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<td>130</td>
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<td>KSX-C2 125-500</td>
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<td>40</td>
<td>120</td>
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<td>KSX-C2 125-800</td>
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<td>120</td>
<td>130</td>
<td>4 - 687</td>
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</table>
Jaw quick-change system
system jaws can be exchanged in seconds, completely without tools

Spindle drive
for maximum clamping forces

Quick-change jaws
in jaw widths 45 and 70 mm, which can be used on all sizes

Diverse applications
for first and second-side machining

Technical data

<table>
<thead>
<tr>
<th>Size</th>
<th>Width of the clamping vise [mm]</th>
<th>Vise length [mm]</th>
<th>Max. clamping force [kN]</th>
<th>Max. torque [Nm]</th>
<th>Clamping range [mm]</th>
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<tr>
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<td>100</td>
<td>16</td>
<td>50</td>
<td>7 - 77</td>
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</table>

Precise small parts vise with a high clamping force
VERO-S AFS3 IOL Monitoring Box

Condition monitoring for VERO-S quick-change pallet systems

- Adaptable to VERO-S NSE3 quick-change pallet systems for NSE3 138 and NSE3 99
- Monitoring of clamping slide position and of pallet presence for reliable automation
- Signal transmission via IO-Link for simple integration in commonly used field bus systems

1. Sensor for monitoring of pallet presence
2. LED for status display of correct clamping
3. Interface Plug connection M8 (4-pin)
4. Sensor for monitoring of clamping slide position

Technical data

<table>
<thead>
<tr>
<th>Size</th>
<th>Pallet presence</th>
<th>Clamping slide position</th>
<th>Interface</th>
<th>Adaptable to</th>
<th>pallet detection</th>
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<td>Yes</td>
<td>Yes</td>
<td>IO-Link</td>
<td>NSE3 138, NSE3 99</td>
<td>Steel, aluminum</td>
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**TRIBOS-RM/-Mini ER**

**Polyconal Toolholder**

Coolant-proof variants and variants with depth stop

- **Polyconal clamping technology**
  Can be combined with your ER collet chuck for more precision and brilliant surfaces

- **Depth stop**
  Repeat accuracy during tool change due to simple and reproducible adjustment of the tool clamping depth

- **Coolant seal**
  Process-safe transmission of the cooling medium through the tool shank

---

**Technical data**

<table>
<thead>
<tr>
<th>Series</th>
<th>TRIBOS-Mini clamping diameter Ø [mm]</th>
<th>TRIBOS-Mini KD clamping diameter Ø [mm]</th>
<th>TRIBOS-RM clamping diameter Ø [mm]</th>
<th>TRIBOS-RM KD clamping diameter Ø [mm]</th>
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<td>ER 25</td>
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<td>ER 32</td>
<td>1 - 6</td>
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<td>3 - 12</td>
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</table>
Hydraulic Expansion Toolholder

The intelligent way to the optimal process

Intelligent real-time sensor system
Easy process monitoring and maximized tool service lives

Speeds of rotation of up to 30,000 RPM
Wide range of applications

100% compatibility
1:1 exchange with SCHUNK standard toolholders without time-consuming reprogramming of your system

Case
This means that all components can be protected during storage and offers highly flexible transportation to the machine also in case of temporary process monitoring.

Tablet PC
Direct connection to the tablet without machine connection

iTENDO² easy connect
Use of iTENDO² data for other systems and easy monitoring.

iTENDO² pro
Full machine integration and application software for different applications (under development)

Technical data

<table>
<thead>
<tr>
<th></th>
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</table>

Battery service life
10 h

Acceleration sensor
100 G

Speed of rotation
30,000 RPM

Balance quality
G2.5 at 25,000 RPM or \( U_{\text{max}} < 1 \text{ gmm} \)

External/ internal cooling
up to 80 bar

schunk.com/itendo2
High radial rigidity
Complex design enables higher radial stability as compared to conventional ER collet chucks

Precise run-out accuracy
≤ 0.003 mm in combination with ER precision collet chuck

High clamping force
Twice as high tool clamping force as compared to conventional ER collet chucks

Sizes
ER16 .. ER40

Scope of Delivery
Including clamping nut

Run-out accuracy
≤ 0.003 mm at 2.5 x D

Max. speed of rotation
40,000 RPM

Number of versions
103

Technical data

<table>
<thead>
<tr>
<th>Series</th>
<th>HSK-A 63</th>
<th>HSK-A 100</th>
<th>HSK-E 40</th>
<th>SK 40</th>
<th>SK 50</th>
<th>JIS-BT 30</th>
<th>JIS-BT 40</th>
<th>JIS-BT 50</th>
<th>SCHUNK CAPTO C6</th>
<th>CAT 40</th>
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</tbody>
</table>
Plug & Work
Can be used in existing processes without reprogramming

Micron precise tool change in seconds without peripheral equipment
Time saving due to reduction of set-up time and no investment or energy costs due to additional clamping devices

Permanent run-out and repeat accuracy ≤ 0.003 mm
Even cutting action, increased tool service life, and reduced costs for regrinding or buying new tools

Technical data

<table>
<thead>
<tr>
<th>Series</th>
<th>Clamping diameter Ø [mm]</th>
<th>Run-out accuracy</th>
<th>Min. torque [Nm]</th>
<th>Max. speed of rotation [RPM]</th>
<th>Perm. radial force [N]</th>
<th>MQL applications (Minimum Quantity Lubrication)</th>
<th>Bore hole for data carriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSK-A 63</td>
<td>6 – 20</td>
<td>≤ 0.003 mm at 2.5 x D</td>
<td>16 – 330</td>
<td>30000 – 50000</td>
<td>113 – 1490</td>
<td>Optional</td>
<td>Standard</td>
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<td>HSK-A 100</td>
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<td>≤ 0.003 mm at 2.5 x D</td>
<td>16 – 330</td>
<td>30000 – 50000</td>
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<td>Optional</td>
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<td>SK 40</td>
<td>6 – 20</td>
<td>≤ 0.003 mm at 2.5 x D</td>
<td>16 – 330</td>
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<td>16 – 330</td>
<td>30000 – 50000</td>
<td>113 – 1490</td>
<td>Optional</td>
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<td>JIS-BT 30</td>
<td>6 – 20</td>
<td>≤ 0.003 mm at 2.5 x D</td>
<td>16 – 330</td>
<td>30000 – 50000</td>
<td>113 – 1490</td>
<td>Optional</td>
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<tr>
<td>JIS-BT 40</td>
<td>6 – 20</td>
<td>≤ 0.003 mm at 2.5 x D</td>
<td>16 – 330</td>
<td>30000 – 50000</td>
<td>113 – 1490</td>
<td>Optional</td>
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<td>SCHUNK CAPTO C6</td>
<td>6 – 20</td>
<td>≤ 0.003 mm at 2.5 x D</td>
<td>16 – 330</td>
<td>30000 – 50000</td>
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<td>CAT 40</td>
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<td>≤ 0.003 mm at 2.5 x D</td>
<td>16 – 330</td>
<td>30000 – 50000</td>
<td>113 – 1490</td>
<td>Optional</td>
<td>Optional</td>
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</tbody>
</table>

New interfaces
HSK-A 100
SK 50
JIS-BT 30
SCHUNK CAPTO C6

Run-out accuracy ≤ 0.003 mm at 2.5 x D

Min. torque
16 .. 330 Nm

Max. speed of rotation
30,000 .. 50,000 RPM

Diameter
6 .. 20 mm
TENDO Cool Flow
Hydraulic Expansion Toolholder
with Peripheral Cooling

Coolant is fed through two coolant bores directly to the cutting edge of the tool.

Optimized coolant supply
Targeted cooling through beam guidance to the cutting edge of the tool.

Best workpiece surface quality
Micro-blowouts are prevented, machine spindle is protected from wear and the tool service life is increased.

Precision and process safety
Optimal chip removal due to the 4 x 90° cooling slot fitted directly in the clamping diameter.

Technical data

<table>
<thead>
<tr>
<th>Series</th>
<th>Run-out accuracy</th>
<th>Balance quality</th>
<th>Tool shank quality</th>
<th>Axial length adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td>TENDO Slim 4ax</td>
<td>≤ 0.006 mm at 2.5 x D</td>
<td>G2.5 at 25000 RPM or U₉₉₉ &lt; 1 gmm</td>
<td>h₆</td>
<td>With set-screw for axial length adjustment</td>
</tr>
<tr>
<td>TENDO Platinum</td>
<td>≤ 0.006 mm at 2.5 x D</td>
<td>G2.5 at 25000 RPM or U₉₉₉ &lt; 1 gmm</td>
<td>h₆</td>
<td>With set-screw for axial length adjustment</td>
</tr>
</tbody>
</table>

Diagram:

- Chamber system
- Expansion sleeve
- Base body
- Coolant channel

Technical details:

- TENDO Slim 4ax
  - Number of interfaces: 8
  - Diameter: 6 .. 20 mm
- TENDO Platinum
  - Number of interfaces: 26
  - Diameter: 6 .. 32 mm
  - Number of variants with Cool Flow: approx. 400

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