New SCHUNK Products and Innovations

Gripping Systems
The Powerhouse
The new SCHUNK Co-act EGL-C is the world's first certified long-stroke gripper developed for collaborative operations with a stroke of 42.5 mm per finger, and a gripping force up to 450 N.

Smart Factory
In touch with Big Data. Already today, intelligent and interconnected SCHUNK components form the basis for the Smart Factory within the meaning of Industry 4.0 as an interface for the communication between workpiece and machine.
Digital Services
For the digitalization of products, SCHUNK components and services play a decisive role. Whether it’s a webshop for additively manufactured gripper fingers, digital twins, or even our digital services like the SCHUNK gripper design tool and the 3D online configurator.

Equipped by SCHUNK
Unique component selection for equipping your robots and machine with gripping and clamping technology. This means for you: 11,000 standard components. Everything from a single source.
The world’s first certified long-stroke gripper for collaborative operations.

Integrated status display
Visual response on the state of the application.

Plug & Work
Pre-assembled gripping unit with robot interface for a fast and easy assembly.

Compact design
With a fully integrated control electronics based on 24 V technology.

High handling weight
The collaborative operation allows force-fit handling of workpiece weights up to 2.25 kg.

The new SCHUNK Co–act EGL-C Gripper

schunk.com/egl-c
**Size**

90

**Weight**

2.2 kg

**Gripping force**

450* N

**Stroke per finger**

42.5 mm

**Workpiece weight**

up to 2,25 kg

* Maximum force at a workpiece distance of < 4 mm

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**Sectional diagram**

1. **Force-measuring jaw**
   for monitoring of the gripping force

2. **Collision protective cover**

3. **LED light band**
   for status display

4. **Flange**
   with integrated electronic system and cabling

5. **Path measuring system**
   for monitoring the gripper position

6. **Drive with gear**

7. **Electronic system**

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Technical advise and sales: Tel. +49-7133-103-3444
The world’s first certified industrial gripper for collaborative operation.

Plug & Work
Pre-assembled gripping unit with robot interface for quick and easy assembly. Directly compatible with the cobots from Universal Robots, KUKA, and FANUC.

Integrated status display
Visual response on the condition of the application.

Accessories attachment finger set
with 3 different variants for variable gripping processes.

DGUV-certified gripping unit
in accordance with ISO/TS 15066 simplifies the safety review of the overall application.

schunk.com/egp-c
Sizes
25 .. 64

Weight
0.36 .. 1.38 kg

Gripping force
20 .. 230 N

Stroke per finger
3 .. 10 mm

Workpiece weight
0.2 .. 1.15 kg

Sectional Diagram

1 Collision protection cover
2 Gripper for small components EGP
3 Flange
   with integrated electronics and wiring
4 LED light band
   for the status display
5 Sensor system
6 Service flap
   for adjusting the sensor system
7 Service flap
   for adjusting the gripping force

Technical advice and sales: Tel. +49-7133-103-3444
New: Dust-tight version SD
For the use in dirty environments. Absolutely dust-proof with increased protection against the ingress of materials like splash water and dirt.

New: Portfolio expansion
New sizes PGN-plus-P 40, 160, and 240.

Variety in accessories
A broad range of high-quality accessory components and suitable sensor systems.

* Under normal, clean operating conditions

schunk.com/pgn-plus-p
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Sizes</strong></td>
<td><strong>Weight</strong></td>
<td><strong>Gripping force</strong></td>
<td><strong>Stroke per finger</strong></td>
</tr>
<tr>
<td>40 .. 240</td>
<td>0.1 .. 37.5 kg</td>
<td>0.18 .. 21.8 kN</td>
<td>2 .. 45 mm</td>
</tr>
</tbody>
</table>

**Sectional Diagram**

1. **Multi-tooth guidance**
   Maximum service life due to lubricant pockets in the robust multi-tooth guidance and absorption of high forces and torques by means of the large guidance support

2. **Base jaws**
   with standardized screw connection diagram for the adaptation of workpiece-specific gripper fingers

3. **Sensor systems**
   Brackets for proximity switches and adjustable control cams in the housing

4. **Housing**
   Weight-optimized due to the use of high-strength aluminum alloy

5. **Centering and mounting option**
   for universal assembly of the gripper

6. **Wedge-hook design**
   for high power transmission and minimum wear as a result of larger diagonal pull surfaces

7. **Piston**
   Maximum force through maximum surface of drive piston

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Technical advice and sales: Tel. +49-7133-103-2503

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Patented Precision! Patentierte Präzision!
Multi-tooth guidance Vielzahnführung
The new SCHUNK Gripper EGI

Electric gripper for small components for simple commissioning and with reliable gripping force maintenance.

24 V technology
Fully integrated control electronics. Compatible with the SCHUNK 24 V product line.

PROFINET interface
PROFINET-certified, ensured compatibility according to industry standards.

Convenient commissioning
by integrated web server with commissioning aid and possible control of operations.

Active gripping force maintenance
An especially developed brake ensures a virtually complete gripping force maintenance in the event of voltage drop or an emergency stop situation of the system.

schunk.com/egi
**Sectional diagram**

1. **Integrated electronic system**
   Integrated control and power electronics for decentral control of the servomotor

2. **Encoder**
   for position evaluation and positioning of the gripper

3. **Drive**
   DC servomotor with planetary gear

4. **Brake**
   The full gripping force and the gripping position will be maintained in the event of a standstill or a power failure

5. **Kinematics**
   Force transmission from the servomotor via bevel gear and synchronization via toothed belt

6. **Finger connection**
   for adaption of workpiece-specific gripper fingers

7. **Electric connection**
   for connecting the power supply and communication

---

**Technical advice and sales:** Tel. +49-7133-103-2503
The new SCHUNK Gripper PGN-plus-E with IO-Link

The world’s first electric gripper with multi-tooth guidance and IO-Link technology.

- 24 V drive and actuation via either digital I/O or IO-Link Class B connection for simple commissioning and rapid integration into existing systems.

- Four-stage adjustable gripping force for easy adaption to sensitive workpieces.

- New: Dust-tight version SD For the use in dirty environments.

- New: Up to 50% longer gripper fingers The higher maximum moments of the perfected SCHUNK multi-tooth guidance enable the use of longer gripper fingers.

schunk.com//pgn-plus-e
### Technical Specifications

<table>
<thead>
<tr>
<th>Sizes</th>
<th>Weight</th>
<th>Gripping force</th>
<th>Stroke per finger</th>
<th>Workpiece weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>80 .. 100</td>
<td>1.01 .. 1.73 kg</td>
<td>110 .. 810 N</td>
<td>8 .. 10 mm</td>
<td>2.85 .. 4.05 kg</td>
</tr>
</tbody>
</table>

### Sectional Diagram

1. **Multi-tooth guidance**
   - Maximum life time due to lubricant pockets in the robust multi-tooth guidance

2. **Base jaw**
   - with standardized screw connection diagram for the connection of the workpiece-specific gripper fingers

3. **Sensor systems**
   - Integrated proximity switches and adjustable control cams in the housing

4. **Housing**
   - made of high-strength aluminum alloy

5. **Centering and mounting options**

6. **Wedge-hook design**

7. **Spindle nut**
   - transforms the rotary movement into the axial movement of the wedge-hook

8. **Drive**
   - Brushless DC servomotor

9. **Control electronics**

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Technical advice and sales: Tel. +49-7133-103-2503
SCHUNK Gripper for Small Components
EGP now new with IO-Link

The most compact electric gripper for small components in assembly automation. Now with IO-Link technology.

Flexible gripping force adjustment
Software control for flexible gripping force adjustment for various workpieces.

Maintenance and diagnostics reporting
Timely information on defined maintenance intervals or error message from the machine control system.

Integrated sensor system
for position detection of the gripper finger within the entire stroke range.

Variable position setting
Via IO-Link technology, gripping positions can be adjusted variably and the gripper fingers pre-positioned.

IO-Link
Sizes: 40 .. 64  
New: 50, 64

Weight: 0.32 .. 0.8 kg
Gripping force: 140 .. 300 N
Stroke per finger: 6 .. 10 mm
Workpiece weight: up to 1.25 kg

Sectional Diagram

1 Base jaws  
for adaptation of the workpiece-specific gripper fingers

2 Junction roller guide  
for precise gripping using a backlash-free base jaw guidance

3 Gear  
Rack and pinion design for centric clamping

4 Drive  
Brushless DC servomotor

5 Control electronics  
Integrated control and power electronics for decentralized actuation via IO-Link

Technical advice and sales: Tel. +49-7133-103-2503
The new SCHUNK Magnetic Gripper EMH with 24 V Technology

The first compact electro-permanent magnetic gripper with integrated electronics.

Compact design
The integrated electronics reduces the interfering contour. No external controllers required.

Response
on magnetization condition and workpiece presence.

24 V voltage supply
Simple wiring and digital actuation via digital I/O.

Short cycle time
Magnetization in just 300 ms for more gripping cycles in less time.

schunk.com/emh
Application Example

1 Magnetic gripper EMH
2 Compensation unit AGE-Z

Sizes Weight Workpiece weight Cycle time
36 .. 114 1 .. 8 kg 3.5 .. 70 kg 300 .. 700 ms

Technical advice and sales: Tel. +49-7133-103-2503
The new SCHUNK End-of-Arm Modular System

The most comprehensive modular gripping system for all Universal Robots on the market.

Up to 36 product combination possibilities.

schunk.com/end-of-arm-modular-system
The new SCHUNK End-of-Arm Modular System

exclusively for Universal Robots: It facilitates the individual and fast automation of handling and assembly tasks. Besides the conventional automation, a gripper for collaborative operation is also included in the modular system.

Simple automation

In the area of handling and assembly, the SCHUNK modular system combined with Universal Robots is reducing the time for the implementation of an application several times over.

Plug & Work

Compatible interfaces as well as suitable grippers. Plug-in for fast assembly and commissioning.

Diversity

Complete SCHUNK modular system for the individual automation with electric and pneumatic SCHUNK grippers, change system and force/torque sensor, precisely fitting and exclusively for Universal Robots.

Modular system overview

Modular system components for change and measuring operations

1. 6-axis force/torque sensor FT-AXIA 80 incl. adapter plate
2. Manual change system SHS 50 made up of: Quick-change master (SHK) and Quick-change adapter (SHA)

Mechatronic gripping systems with direct connection and integrated sensor system with connection cable

3. Gripper for small components EGP 40
4. Collaborative gripper for small components SCHUNK Co-act EGP-C 40

Pneumatic gripping systems with direct connection and integrated micro valves, sensor system with connection cable

5. Gripper for small components KGG 100-80
6. Long-stroke gripper PSH 22-1
7. Universal gripper PGN-plus-P 80
8. Universal gripper PGN-plus-P 100
9. Centric gripper PZN-plus 64
10. Universal gripper JGP 80
11. Universal gripper JGP 100

Technical advice and sales: Tel. +49-7133-103-2503
The new SCHUNK Swivel Module SRM

The most robust and powerful, pneumatic swivel module on the market.

Most powerful
Compact housing, increased torque and inertia, at shorter swiveling time.

Large center bore
for feeding through power supply lines and cables. Can also be used for versions with media feed-through.

Simple commissioning and maintenance
For many application cases, the throttle setting is suitable, as the shock absorber stroke has already been pre-adjusted. Low maintenance costs due to modular design.

Durable and modular
Backlash-free, pre-loaded bearing, high-quality piston seal made of polyurethane and viton seal. Optionally available with air feed-through (MDF) or electrical feed-through (EDF).

schunk.com/srm
### Sectional Diagram

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Housing</td>
<td>Weight-optimized due to the use of hard-anodized aluminum alloy</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>Pinion</td>
<td>Extremely stable pinion for transforming the piston movement into a rotary movement</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td>Swivel angle adjustment</td>
<td>for fast and simple adjustment of the end position</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4</td>
<td>Damping</td>
<td>Hydraulic shock absorbers for high moments of inertia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Drive</td>
<td>Pneumatic, powerful double piston drive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Bearing</td>
<td>Pre-tensioned bearing without any clearance</td>
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</tr>
</tbody>
</table>

Technical advice and sales: Tel. +49-7133-103-2503
The new electric SCHUNK Swivel Module ERP

No other electric swivel module on the market is as easy to adjust.

- **New: Unique auto-learn function with permanent memory**
  Automatic speed adjustment during commissioning and storage of the motion profile for a smooth operation.

- **24 V drive and control via digital I/O**
  Simple actuation and integration into existing control concepts. Fully compatible in the SCHUNK 24 V technical portfolio.

- **Direct drive**
  Maximum reliability and speed, also very quiet-running with max. 68 db(A).

- **Fine adjustment of the speed**
  Sensitive adjustment of the speed of rotation due to manual rotary switch on the module. Individual adjustment to various applications.

schunk.com/erp
Sectional Diagram

1. **Drive**
   Rotational direct drive

2. **Control electronics**
   Integrated control and power electronics for decentralized actuation of the module

3. **End position adjustment**
   Mechanical adjustment of end positions via stop screws

4. **Sensor system**
   C-slot for the use of magnetic sensors for end position monitoring

5. **Connecting plug**
   Standard plugs for easy connection to sensor and power distributors

6. **Drive flange**
   for mounting the set-up to be swiveled

Technical advice and sales: Tel. +49-7133-103-2503
The world's first angular compensation unit for the use on robots and simultaneous rotational and angular compensation.

**Compensation**

in the direction of the X-, Y- and Z-axes, with angular and rotational compensation.

**Spring-supported reset**

An optimal deflection is ensured by adjusting the compressed air supply.

**Efficient**

Compensates inaccuracies in component positioning, avoids programming efforts and is ideal for tasks such as „bin picking”.

schunk.com/age-u
Sectional diagram

1. **Housing**
   - made of anodized aluminum for weight optimization despite the solid design

2. **Locking piston**
   - Pneumatically driven locking in centric position

3. **Integrated piston stroke monitoring**
   - Stroke monitoring of the locking piston with magnetic switches

4. **Spring for pre-clamping**
   - for simple reset

Technical advice and sales: Tel. +49-7133-103-2503
The new SCHUNK Quick-change System SWS

Compact quick-change system for handling weights up to 50 kg

ISO flange pattern
for simple assembly on the robot.

No-touch locking system
Patented locking system with self-locking effect. Ensures a process-reliable connection in the event of power failure.

Integrated piston stroke monitoring
via proximity switch ensures a high process safety.

Optional attachable modules
Up to five modules can be attached via lateral connection faces.

schunk.com/sws
<table>
<thead>
<tr>
<th>Size</th>
<th>Max. handling weight</th>
<th>Max. moment load</th>
</tr>
</thead>
<tbody>
<tr>
<td>046</td>
<td>50 kg</td>
<td>( M_{xy} ) 678 Nm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>( M_z ) 882 Nm</td>
</tr>
</tbody>
</table>

**Sectional diagram**

1. Module for communication transmission
2. Module for signal transmission
3. Module for fluid feed-through
4. Module for power transfer
5. Module for servo signal transfer

Technical advice and sales: Tel. +49-7133-103-2503
The new SCHUNK Force/Torque Sensor FT-AXIA

The first compact force/torque sensor with two calibrations.

Compact design
due to completely integrated electronics and status display via LEDs.

Simple configuration
Two calibrations can be controlled in the sensor via web interface.

Robust and durable
Even at short-term overload, the sensor is protected from damage.

Plug & Work
directly compatible for KUKA and Universal Robots via installations module.

schunk.com/ft-axia
Sectional Diagram

1. **Electronics**
   No interfering contour due to compact integration into the housing

2. **Resistance strain gauges**
   made of silicone ensure a strong signal

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Technical advice and sales: Tel. +49-7133-103-2503
Rapid entry into the simulation and virtual commissioning of handling solutions.

**Everything from a single source:**
Software, digital twins, support, and hardware.

**SCHUNK starter kit for simultaneous engineering**
consisting of the simulation software Siemens MCD including support, as well as a component library with selected SCHUNK components.

schunk.com/mcd
Virtual Commissioning and Simulation in the Engineering Process

With the aid of the Mechatronics Concept Designer from Siemens PLM Software and the Digital Twins from SCHUNK, designers and system planners are able to virtually depict the entire engineering process from the concept to mechanics, electronics, and software, right up to full commissioning.

- **Free-of charge test license available**
  The full version of the simulation software can be tested free of charge for six months.

- **Everything from a single source**
  From design with the digital tools, to the implementation of the complete system with components, up to service, SCHUNK is a reliable partner for a holistic cooperation.

- **Complete, digital system planning**
  Based on the tried and tested simulation software Siemens Mechatronics Concept Designer MCD.

- **Up to 30% time saving**
  Due to the virtual commissioning in the Mechatronics Concept Designer Program MCD.

- **Realistic simulation**
  The intelligent 3-D modell can be created with the Siemens software MCD, and allows computer-aided simulation in real time for calculating cycle times and for synchronization of the work processes.

- **Plug & Work capable complete system**
  The proper system operation can be already tested with the Siemens Mechatronics Concept Designer via a real PLC control, therefore enabling an easy implementation into the real operation.

Technical advice and sales: Tel. +49-7133-103-2992
GRIPconnect
the new SCHUNK App

Technology carrier for data evaluation and status display for the electric SCHUNK gripper EGL 90.

schunk.com/app-egl90
Mobile information
Status and operating status of the SCHUNK gripper EGL 90 is available anywhere and at any time.

Condition monitoring
All relevant information and measurement values available at a glance. Increased accuracy of the data due to the optional "plus functions".*

Predictive maintenance
Avoids gripper downtimes due to early intervention on the basis of the information and evaluations from the app.

Flexible data evaluation
Statistical analysis can also be carried out easily by the parameters defined in advance for each specific process.

Flexible applications
The app is tailored to the SCHUNK gripper EGL 90 and provides relevant information regardless of the process. Therefore, the gripper including the app can be used very flexibly in the Industry 4.0 environment, for instance in quality management.

Digital
Robot Accessories
Rotating
Gripper

SCHUNK is the world’s first provider to give users the possibility to access information on the current status and operating status of the gripper on mobile devices via an app.

Optional additional functions for app extension

* Optional additional functions for app extension

Technical advice and sales: Tel. +49-7133-103-3452

Digital Robot Accessories Rotating Gripper
Numerous digital products & services for every stage of the components’ life cycle.

schunk.com/digital-services
Digitally supported engineering processes
for faster processes and cost optimization.

**SCHUNK 3D online configurator**
For the three-dimensional configuration of gripper swivel units or for three-dimensional configuration of Pick & Place handling constructions in the field of assembly automation.

**MCAD data CADENAS**
Through the PARTcommunity, the SCHUNK CAD models are available in all common 2D and 3D formats for individual use in various CAD systems.

**ECAD data EPLAN**
On the platform Data Portal of the company EPLAN, SCHUNK is providing standardized information for customers for the design of circuit diagrams. Circuit diagrams (macro), technical data, as well as website links with full documentation of SCHUNK products in the latest version are available.

**eGRIP**
Online configurator with integrated webshop for automatic creation of gripper fingers including gripping contour. Fingers are manufactured with a 3D printer: schunk.com/egrip

**3D print service**
Online tool for ordering self-designed components. The first 3D print service with integrated printability analysis for gripping systems and clamping technology: schunk.com/3d-print-service.

**EGL commissioning assistant**
The SCHUNK online commissioning assistant is an interactive tool for simple and fast commissioning of intelligent SCHUNK grippers.

**GRIPconnect – the new SCHUNK app**
Technology carrier for data evaluation and status display for the electric SCHUNK gripper EGL 90.

Technical advice and sales: Tel. +49-7133-103-2992
The world’s most precise stand-alone depaneling machines with the widest range of workpiece holder solutions

Workpiece holder solutions and depaneling machines from a single source
Save set-up time and disconnect sensitive depaneling machines without any stress.

Maximum milling accuracy
due to the use of highly precise work-piece carriers and linear motor axes ±100 µm.

Over 98% technical availability
for absolute process stability.

Large milling range
from 500 mm x 600 mm for the separation of large standard or longboards.

schunk.com/depaneling-machines
Application Example
SAR-1700 – The first collaborative loading for depaneling machines

1. SCHUNK Co-act EGP-C gripper for collaborative operations
2. SCHUNK MAGNOPLATE universal workpiece carrier replaces custom-made products and saves enormous costs
3. Highly dynamic linear motor axes for 35% shorter cycle times
4. Milling head can optionally be upgraded with a vision system or scanner
5. Circuit board storage rack

Technical advice and sales: Tel. +49-7725-9166-0
SCHUNK Newsletter

We let you know first!

Current
Information on SCHUNK and product news

Exclusive
Offers and price advantages

Innovative
Insights into trends and developments of the industry

Attractive
Notes on shows and events

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

852 minutes without a goal against him in the Champions League

681 minutes without a goal against him on the national team

2 intercepted penalties in the 2006 World Cup

1 headed goal as a goalie

0 defeats English Soccer Champion

and

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 implement hydraulic expansion customer-specific solutions

SCHUNK GmbH & Co. KG
Spann- und Greiftechnik
Bahnhofstr. 106 – 134
D-74348 Lauffen/Neckar
Tel. +49-7133-103-0
Fax +49-7133-103-2399
info@de.schunk.com
schunk.com

Follow us

Jens Lehmann, German goalkeeper legend, SCHUNK brand ambassador since 2012 for safe, precise gripping and holding.
schunk.com/lehmann
New SCHUNK Products and Innovations
Clamping Technology
For safely machining various workpieces in unmanned, automated production processes, the components have to be equipped with intelligence “closest-to-the-part”. The answer from SCHUNK: The new iTENDO – the first intelligent toolholder on the market. Due to its real-time capable data communication, it allows process control in real time, and therefore a production with optimum parameters is ensured.

Modular system VERO-S NSE3
The high-performance pneumatic quick-change pallet system for universal milling operations. Now with 150% higher rigidity and increased pull-down force in order to be able to absorb higher tilting moments and transverse forces. The modular system for stationary workholding from SCHUNK offers you more than 1,000 VERO-S versions for workpiece clamping.
Product Quickfinder online
SCHUNK is setting benchmarks with the complete toolholder program for every application, and the world’s largest standard chuck jaw program with more than 1,200 jaws types. Your fastest and easiest way to the suitable product of both programs is the available product quickfinder – easy and online.

Equipped by SCHUNK
Unique component selection for equipping your robots and machines with gripping and clamping technology. This means for you: 11,000 standard components. Everything from a single source.
Autonomous process optimization enables real-time data communication, process analysis, and parameter optimization.

Proven toolholder technology
No change of the outer contour, no restrictions for the use of cooling lubricants apply, high rigidity.

Process transparency due to intuitive user interface and process-specific apps.

Data security The process data remain within the closed control loop of the machine.

gschunk.com/itendo
Principle of function

1 iTENDO
2 Wireless, digital data transmission
3 icotronic communication module in the machine room
4 icotronic control unit
5 Real time communication
6 Machine control
7 Process control and adaption by app (OPC UA able to communicate)

Technical advice and sales: Tel. +49-7133-103-2500
The world’s first hydraulic expansion toolholder with standardized heat shrinking contour.

**The ultimate for axial machining**
Boring, countersinking, reaming, and treading in 5-axis centers and in the die and mold making industry.

**Plug & Work**
1:1 interchangeable. Insert a hydraulic expansion toolholder – replace a heat shrinking toolholder.

**Excellent vibration damping**
The hydraulic system ensures high surface finish, the machine spindle’s performance is enhanced, the tool’s service life is increased, and costs are reduced.

**Fast tool change**
Micron-precise without peripheral equipment. Turn to dead stop.

schunk.com/tendo-slim-4ax
Sectional Diagram

1. **Chamber system**
   When the chamber system is filled with hydraulic fluid, it has a damping effect on the clamped tool.

2. **Expansion sleeve**
   The expansion sleeve evenly expands against the tool shank. This clamping process first centers the tool shank before fully clamping it over the whole surface.

3. **Base body**
   The machine-side interface is located on the base body.

4. **Length adjustment screw**
   for fast and easy tool presetting.

5. **Dirt groove**
   The enormous clamping pressure of the TENDO Slim 4ax hydraulic expansion toolholder creates a displacement of oil, grease, or coolant residues in the groove, which results in the clamping faces remaining dry.

---

**Sizes**

New: SK 40
HSK-A 63
Ø 6 .. 32 mm

**Run-out accuracy**

0.003 at 2.5 x D

**Repeat accuracy**

< 0.003 mm

**Torque**

Ø  6  16 Nm  Ø  8  23 Nm  Ø 16  185 Nm  Ø 32  650 Nm

---

Technical advice and sales: Tel. +49-7133-103-2500
Patented TRIBOS polygonal clamping technology for your grinding machine.

Change of mounted points in a matter of seconds
Quick and simply mounted point change reduces set-up times in no time at all.

Process-reliable mounted point clamping
Even with the smallest of shank diameters.

Rotationally symmetrical design
For maximum speeds and precise shape and position tolerances for filigree machining operations.

One-piece design
No moving parts, making it a low-maintenance system.

schunk.com/mounted-point-holder
Sizes | Clamping diameter | Available from
---|---|---
HJND 50 TRIBOS Mini | Ø 3 .. 4 mm | middle of 2019
HJND 50 TRIBOS RM | Ø 6 .. 8 mm |
HJND 21 TRIBOS RM | Ø 7 .. 12 mm |
HJND 28 TRIBOS Mini | Ø 5 .. 8 mm |
HJND 28 TRIBOS RM | Ø 9 .. 12 mm |

Sectional Diagram

1. **Thread**
   - for the connection to the grinding machine
2. **Compact design**
   - for the highest requirements
3. **Mounted point**

Technical advice and sales: Tel. +49-7133-103-2500
Process reliable
Direct clamping of smallest shanks.

Slim-design interfering contour
for machining in areas which are difficult to access.

Rotationally symmetric design
for highest rotational speed and exact dimensional and geometrical tolerances during filigree machining operations.

Highest stability
for high tool life of the turning tools.

Patented TRIBOS polygonal clamping technology for your lathe.

schunk.com/tribos-er
Sizes | Clamping diameter | Available from
--- | --- | ---
ER 11 TRIBOS Mini | Ø 1 .. 4 mm | the beginning of 2019
ER 16 TRIBOS Mini | Ø 1 .. 6 mm |
ER 20 TRIBOS RM | Ø 3 .. 8 mm |
ER 25 TRIBOS RM | Ø 3 .. 12 mm |
ER 32 TRIBOS RM | Ø 3 .. 12 mm |

Sectional Diagram

1 ER interface
2 Stability
   through high radial rigidity
3 Tool

Technical advice and sales: Tel. +49-7133-103-2500
Fully equipped automation module with anti-twist protection V4 and integrated media transfers.

**High-precision anti-twist protection V4**
for easy positioning in automated solutions.

**Cone seal integrated in the standard version**
for a fully protected clamping pin interface.

**Integrated media transfer**
for transfer of fluids of up to 300 bar.

**Stepped flat surfaces with integrated cleaning function**
in order to prevent chips from accumulating and to ensure an uncontaminated environment around the clamping pallet or clamping device.

[Schunk website](https://schunk.com/vero-s-nse-a3)
Sectional Diagram

1. **Standard cone seal**
   - for protection of changing interface

2. **Anti-twist protection V4**
   - for high-precision positioning of single clamping pallets

3. **Patented dual stroke system**
   - between piston and clamping slide ensures maximum pull-down forces

4. **Turbo function**
   - for reinforcing the pull-down forces

5. **Completely sealed system**
   - therefore absolutely maintenance-free

6. **Monitoring of the clamping slide positions**
   - “open condition” and “locked condition” possible by means of dynamic pressure

7. **Stepped flat surfaces**
   - with integrated cleaning function

8. **Integrated media transfer**
   - for transfer of fluids of up to 300 bar

---

Technical advice and sales: Tel. +49-7572-7614-1301
Optional cone seal for a fully protected clamping pin interface.

Increased pull-down force due to optimized module kinematics in every clamping position.

Optimized design for high system rigidity.

High-precision anti-twist protection V4 for easy positioning in automated solutions and the possibility of turning single pallets by 90°.

The high-performance, pneumatic quick-change pallet system with anti-twist protection V4.

schunk.com/vero-s-nse3-v4
### Sectional Diagram

| 1 | Optional: cone seal  
for protection of changing interface |
|---|---|
| 2 | Anti-twist protection V4  
for high-precision positioning of single clamping pallets |
| 3 | Patented dual stroke system  
between piston and clamping slide ensures maximum pull-down forces |
| 4 | Turbo function  
for reinforcing the pull-down forces |
| 5 | Completely sealed system  
therefore absolutely maintenance-free |
| 6 | Monitoring of the clamping slide positions  
“open condition” and “locked condition” possible by means of dynamic pressure |
| 7 | Flat seal to protect the interface  
dampens the mounting of the workpiece or the clamping pallet |
| 8 | Sliding bearing in the force flow  
for maximum pull-down forces and a long service life |

---

Technical advice and sales: Tel. +49-7572-7614-1301

---

### Specifications

<table>
<thead>
<tr>
<th>Size</th>
<th>Pull-down force</th>
<th>Holding force</th>
<th>Repeat accuracy</th>
<th>Pneumatic pressure</th>
</tr>
</thead>
</table>
| 138  | 8 kN (with turbo)  
28 kN (without turbo) | 35 kN (M10)  
50 kN (M12)  
75 kN (M16) | < 0.005 mm | 6 bar |
Including all the benefits of the NSE mini 90-25 module such as completely sealed, increased pull-down forces and increased dimensional stability due to the new module design.

100% compatible with NSE mini modular system Fast and simple adaption of pre-existing clamping pallets and clamping devices with NSE mini clamping pins.

Simple integration and alignment of the clamping stations into the machine tool transverse or longitudinally oriented alignment grooves.

Central connection for simultaneous actuation of all modules of the clamping station.

The clamping stations with compact dimensions and high performance.
Sizes
1-way, 2-way, 4-way

Pull-down force module
1.5 kN (without turbo)
6 kN (with turbo)

Holding force pins
15 kN (M6)
25 kN (M8)

Pneumatic pressure
6 bar

Sectional Diagram

1 100% compatible
with the large NSE mini modular system

2 NSL mini 100–25 clamping stations
available in 1-way, 2-way, and 4-way version

3 Sealed system
due to the design of the NSE mini 90–25

4 Central connection
for open module and turbo function

5 Alignment groove
or simple integration and alignment of the clamping stations

Technical advice and sales: Tel. +49-7572-7614-1301
Coolant drain holes
make sure that any penetrating cooling lubricant is conducted outwards.

Chip-repellent design
prevents permanent settling of chips.

Ideal “clamping force to weight” ratio
for use on “20 kg robots”.

Tried-and-tested lubrication system
either manual lubrication or central lubrication via connections at the bottom side.
Sizes
New: 140
64 .. 250

Clamping force
4.5 .. 55 kN

Jaw stroke
2 .. 15 mm

Sectional Diagram

1 Wedge-hook drive
offers constantly high clamping forces in operation

2 Hardened and extremely rigid base body
allowing longer service life at maximum precision. Even with maximum clamping force

3 Optimized lubrication system
for a high degree of efficiency

4 Long jaw guidance
offers optimum support for O.D.- and I.D.-clamping

5 Standard jaw interface
for use of standard SCHUNK chuck jaws

6 Optimized outside contour
for best accessibility and optimum chip falling

7 Actuation of the clamping module
optionally from the side or the base

8 Chuck piston guided in the lathe chuck
for mounting machining forces along the guideway

Technical advice and sales: Tel. +49-7572-7614-1301
Extremely flat design for maximum use of the machine room and maximum rigidity of the system.

Vast chuck jaw program for fast adaption to new clamping tasks.

Third-hand function Easy and safe loading of several workpieces on tombstones.

VERO-S interface for direct clamping onto the VERO-S quick-change pallet systems without intermediate plate.

Manual double clamping vise for third-hand function for clamping two workpieces.

schunk.com/kontec-ksc-d
Sizes
80 .. 125

Tightening torques
90 .. 100 Nm

Clamping force
25 .. 40 kN

Clamping width
0 .. 331 mm

Sectional Diagram

1 Spindle drive
   for maximum clamping forces

2 Long chuck jaw guidance
   offers optimum support for O.D.-clamping

3 Third hand function
   holds the first workpiece while the second is being clamped in

4 Fastening thread
   for workpiece stops

5 Standard chuck jaw interface
   for the use of standard top jaws from SCHUNK

6 Central jaw
   for clamping two components

7 Actuation via hexagonal connection
   thereby simplified operation

Technical advice and sales: Tel. +49-7572-7614-1301
Sealed power lathe chuck for significantly longer maintenance intervals.

- **Permanent grease lubrication**
  for constantly high clamping forces.

- **Completely sealed design**
  for up to 20 times longer maintenance intervals.

- **Large through-hole**
  for machining of all conventional bar diameters.

- **Weight-reduced design**
  for significantly reduced acceleration and braking times.

[Link to website: schunk.com/rota-nca]
Sizes
160 .. 330

Clamping force
45 .. 160 kN

Jaw stroke
4 .. 5.3 mm

Max. RPM
3,500 .. 5,500 RPM

Through-hole
32 .. 104 mm

Sectional Diagram

1 Wedge–hook drive in annular piston design offers constantly high clamping forces in operation.
2 Hardened and extremely rigid base body allowing longer service life at maximum precision. Even with maximum clamping force.
3 Large through-hole for machining all conventional raw material diameters.
4 Fastening thread for workpiece stops.
5 Base jaw serration freely selectable between inch or metric sizes.
6 Sealing of the lathe chuck for up to 20 times longer maintenance intervals.
7 Weight–optimized design for great economy in daily use.

Technical advice and sales: Tel. +49–7572–7614–1302
Weight-optimized design with minimum mass moment of inertia for significantly reduced acceleration and braking times.

100% compatible with Kitagawa BB200 series (up to size 260)
Exchange of the existing chucks can be done quickly and easily.

Large through-hole for machining of all common bar diameters.

DIN EN ISO 50001
Suitable for energy management certification according to DIN EN ISO 50001.

Extremely weight-reduced wedge-hook power lathe chuck with minimum mass moment of inertia.

schunk.com/rota-nce
Sectional Diagram

1. **Wedge–hook drive**
   - Offers constantly high clamping forces in operation

2. **Hardened and extremely rigid base body**
   - Allows longer service life at maximum precision. Even with maximum clamping force

3. **Large through-hole**
   - For machining all conventional bar diameters

4. **Optimized lubrication system**
   - For high efficiency

5. **Mounting thread**
   - For workpiece stops

6. **Base jaw serration**
   - Freely selectable between inch or metric sizes

7. **Jaw stroke display**
   - For monitoring the jaw stroke

8. **Blank draw nut**
   - For turning the required mounting thread onto draw tube or drawbar

9. **Weight-optimized design**
   - For shorter cycle times and lower energy costs

---

Technical advice and sales: Tel. +49-7572-7614-1302
Sealed 6-jaw power lathe chuck for significantly longer maintenance intervals.

**Compensating 6-point clamping**
or low-deformation clamping of thin-walled workpieces.

**Sealed Design**
for up to three times longer maintenance intervals.

**Integrated pendulum mechanism**
for best roundness tolerance values of deformation-sensitive workpieces.

**High-low clamping**
Suitable for machining workpieces with different clamping forces.

schunk.com/rota-nca
<table>
<thead>
<tr>
<th>Sizes</th>
<th>Clamping force</th>
<th>Jaw stroke</th>
<th>Max. RPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>190 .. 1,000</td>
<td>36 .. 300 kN</td>
<td>6 .. 25 mm</td>
<td>600 .. 4,000 RPM</td>
</tr>
</tbody>
</table>

**Sectional Diagram**

1. **Angle lever drive**
   - offers constantly high clamping forces in operation

2. **Hardened and extremely rigid base body**
   - allowing longer service life at highest precision. Even with maximum clamping force

3. **Optimized lubrication system**
   - for high efficiency

4. **Standard chuck jaw interface**
   - with tongue and groove (up to Ø 225 mm), inch or metric (starting from Ø 250 mm)

5. **Centrifugal force compensation as an option**
   - for consistent clamping force even at highest speed

6. **Long jaw guidance**
   - offers optimum support for O.D.- and I.D.-clamping

7. **Sealing of the chuck**
   - for up to 3-fold longer maintenance intervals

8. **Central media feed-through**
   - for central lubrication, air control or coolant as an option

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Technical advice and sales: Tel. +49-7572-7614-1302
Hydraulic Compensation Jaw

Chuck jaw with oil chamber system for low-deformation workpiece clamping.

Low-deformation clamping of thin-walled or sensitive workpieces.

Centrifugal force compensation
The minimum loss of clamping force ensures safe clamping.

Adjustable run-out for higher precision on the workpiece.

Vibration damping for better surface quality of the workpiece.

schunk.com/hydraulic-compensation-jaw
Comparison:
Clamping of deformation-sensitive workpieces

1 Conventional 3-point clamping
2 6-point clamping with hydraulic chuck jaw

for deformation-minimized and compensating workpiece clamping with centrifugal force compensation. The doubling of the clamping points enables a low-deformation clamping and improves the concentricity of the workpiece threefold

Technical advice and sales: Tel. +49-7133-103-3888
**Lightweight Jaw**

Weight-optimized chuck jaw reduces the centrifugal force.

- **Reduction of the centrifugal force**
  The minimum loss of clamping force ensures safe clamping.

- **Improved interfering contour**
  and therefore a reduced risk of collision.

- **Weight reduction up to 45%**
  compared to standard chuck jaws without lightweight design option.

[Schunk website for Lightweight Jaw](http://schunk.com/lightweight-jaw)
Faster cycle times with higher production safety!
This could be achieved by combining the SCHUNK lathe chuck ROTA NCE and SCHUNK lightweight jaws.

Two steps to receive pull-down jaws:
Step 1: Select standard type of claw or stepped jaw
Step 2: Request with standard jaw and lightweight option at cms@de.schunk.com. You will receive a quotation shortly.
SCHUNK Digital Products & Services

Digital products & services for every stage of the SCHUNK components’ life cycle.

Numerous digital products & services for every stage of the components’ life cycle.

schunk.com/digitale-services
Digitally supported engineering processes
for faster processes and cost optimization.

**Toolholder quickfinder**
SCHUNK product finder supports our customers in finding products quick and easy, and display them clearly arranged. Moreover, the integrated product recommendations help in selecting the desired SCHUNK product.

**DIN 4000**
Drawings of SCHUNK toolholders are available worldwide in DXF/DWG format according to BMG 3.0 in the SCHUNK PARTcommunity. Layer assignment, model structure and drawing standards are conform to DIN 4000.

**MCAD data CADENAS**
Through the PARTcommunity, the SCHUNK CAD models are available in all common 2D and 3D formats for individual use in various CAD systems.

**Mechatronics Concept Designer MCD**
With the aid of the Mechatronics Concept Designer from Siemens PLM software and the Digital Twins from SCHUNK, designers and systems planners will be able to virtually depict the entire engineering process from the concept to mechanics, electronics and software, right up to full commissioning.

**Electronic Data Interchange EDI**
EDI allows data transmission between application systems, and supports the whole purchase-to-pay process with SCHUNK due to the automatic, electronic exchange of documents.

**BMEcat electronic catalogs**
The electronic catalogs from SCHUNK allow lean purchasing processes, and therefore a cost reduction due to digitalization. Digital information allows low warehousing costs, an easy product comparison, and offers many more advantages.

**3D print service**
Online tool for ordering self-designed components. The first 3D print service with integrated printability analysis: schunk.com/3d-print-service.

**Technical advice and sales:** Tel. +49-7133-103-2992
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 on 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 implement hydraulic expansion customer-specific solutions

SCHUNK GmbH & Co. KG
Spann- und Greiftechnik
Bahnhofstr. 106 - 134
D-74348 Lauffen/Neckar
Tel. +49-7133-103-0
Fax +49-7133-103-2399
info@de.schunk.com
schunk.com

Follow us

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