First half of 2024

SCHUNK

New products and innovations

Toolholding and Workholding
Gripping technology
Automation technology
Depaneling technology

Hand in hand for tomorrow

Machine Tending

Increasing variance, ever smaller batch sizes, fluctuating demand and increasing global competitive pressure are just some of the reasons why companies have to think more and more about automated loading and unloading of machine tools, in addition to issues such as a shortage of skilled workers due to demographic change, but also continuous process optimization with the help of current technologies. SCHUNK is the right partner for increasing the productivity of your machine tool.

Find the right type of automation for your production now with SCHUNK!

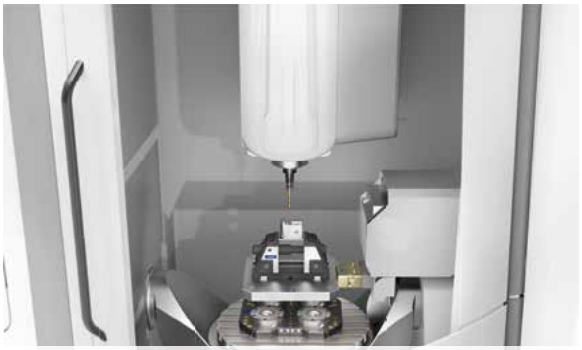
schunk.com/machine-tending

Your advantages of Machine Tending:

- Increase in productivity
- Increase in flexibility
- Process safety
- Constant quality

Lean automation

Workpiece automation



Pallet automation

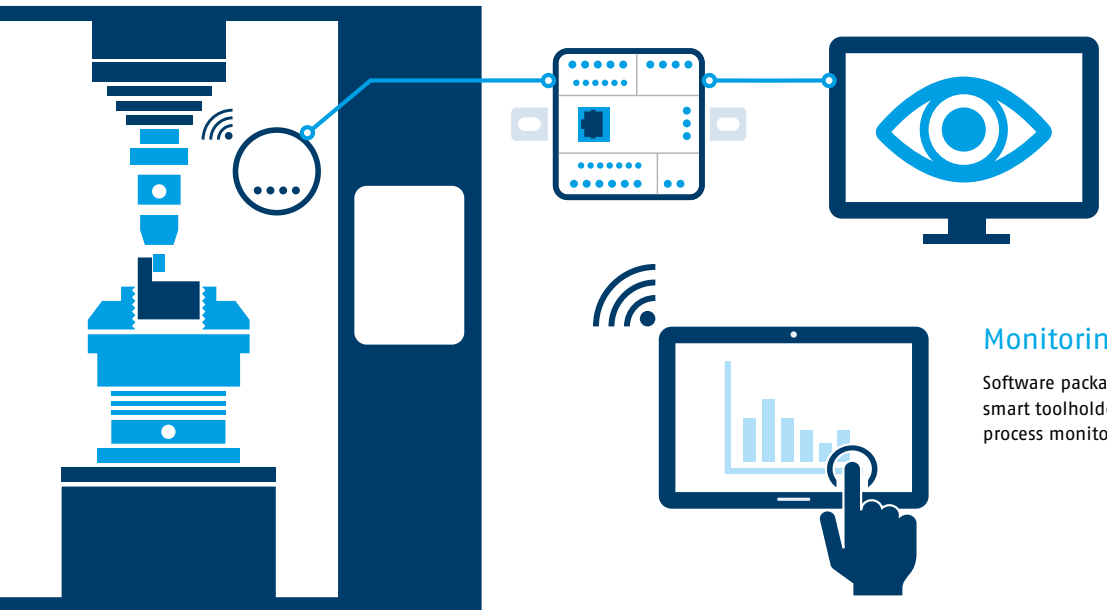
Workpiece and pallet automation

Flexible manufacturing system

Connectivity

Network production already starts on a small scale, with the component. Smart manufacturing components make a significant contribution to efficient, more sustainable and transparent processes.

At SCHUNK you will receive a variety of actuatory and sensory clamping systems, flexible grippers with intelligent connection, and smart automation components. Just contact us. We are happy to help you to make your production fit for the future.



Monitoring of processes

Software packages for connecting smart toolholder technologies to process monitoring systems

Mechatronic gripper

Gripper for flexible and easy connection with robot and machine control units

Sensory toolholder

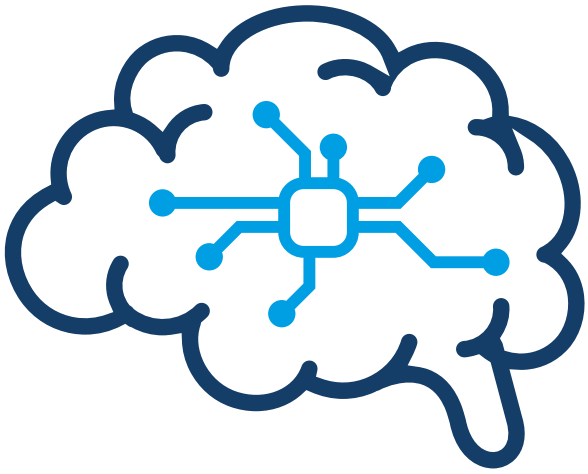
Intelligent real-time sensor system for process monitoring and maximizing tool service life

Clamping force block

with integrated sensor system for process monitoring

Intelligence

AI will change our economy, our working world and our way of life – the transformation has long since begun. This is why SCHUNK is actively involved in networks and digitalization initiatives. An example for this includes the project participation in the Innovation Park Artificial Intelligence (Ipai) in Heilbronn and the pushing forward of the Manufacturing-X initiative of the Industry 4.0 platform. In addition to memberships in national and international associations and industrial networks, SCHUNK also cultivates numerous partnerships with universities and technical and scientific institutes. This means that customers can benefit from knowledge and experience and embark on the way towards automation with the help of gripping technology, robotics and artificial intelligence.

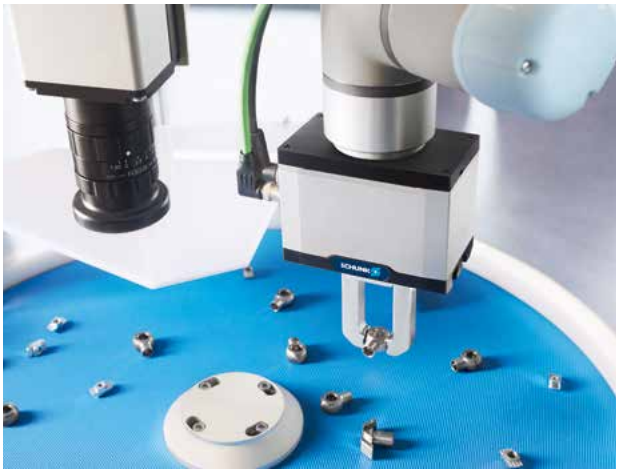


2D Grasping Kit

Intelligent application kit for vision-based gripping

With the 2D Grasping Kit, users from different industries can implement Pick & Place applications of randomly arranged parts on one level – for example from a vibrating table, conveyor belt or load carrier.

The metalworking industry, the automotive sector, companies in production engineering and logistics as well as from the life-science sector gain reliability, process precision and benefit from increasing their output using the kit – manual, error-prone handling thus becomes a thing of the past.



Easy component teaching
Possible without prior knowledge in programming image processing systems

Automated grasp planning
The software determines the gripping points independently

Intuitive user interface
Easy commissioning without prior knowledge thanks to guided software

Content

Discover our top new products:

iTENDO² easy connect & easy monitor
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KONTEC configurator
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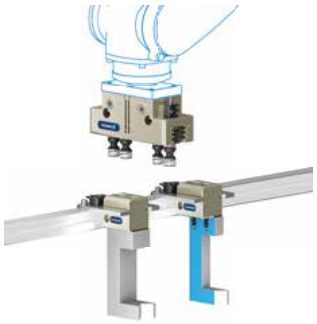

BSWS-R automatic jaw quick-change system
Page 25

RCG round cell gripper
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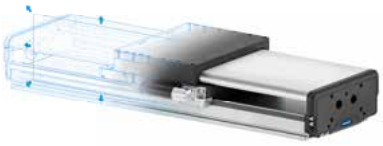

Linear module configurator
Page 33

Inline depaneling machine ILR-Performance
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iTENDO²

Intelligent hydraulic expansion toolholders

The smart way to the optimal process

Intelligent real-time sensor system
easy process monitoring and maximizing service lives

Speeds of rotation up to 30,000 RPM
wide range of uses in many applications

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

New interfaces
HSK-A63 Ø20x90
HSK-A63 Ø32x125
HSK-A63 Slim 4ax
HSK-A100 Ø32x115
BT30 Ø20x90
BT40 Ø20x110
SK40 Ø20x110
SK50 Ø32x103.2
CAT40 Ø3/4x4"
CAPTO C6 Ø32x110
Adapter Ø20

Battery service life
10 h

Acceleration sensor
100 G

Speed of rotation
30000 RPM

Balancing grade
G2.5 at 25000 RPM or U_{max} <1 gmm

External cooling/ internal cooling
up to 80 bar

1 Case
All components can be protected during storage and it offers highly flexible transportation to the machine also in case of temporary process monitoring.

2 iTENDO² pad
Direct connection to the tablet PC without machine connection and simple process optimization.

iTENDO² packages

Packages	Process transparency	Process optimization	Simple data interface	Wireless receiver	Process monitoring	Quality monitoring
iTENDO² pad	●	●				
iTENDO² easy connect	●	●	●	●		
iTENDO² easy monitor	●	●	●	●	●	●

i...TENDO®
easy connect & easy monitor

Packages for machine integration and easy process monitoring

iTENDO² easy monitor

The simple, universally applicable monitoring for your process

iTENDO² pad

Optimization of processes

iTENDO² easy connect

The easy connection of smart toolholder technology to your process monitoring system

- **Easy connection**
  of the smart toolholder iTENDO² to the machine
- **Advanced data collection**
  "closest to the part" for your existing system
- **High data quality**
  by direct recording of process data on the last non-wearable part
- **Intuitive operability**
  through a convenient user interface

schunk.com/itendo2

iTENDO² magnetic holder

with intelligent real-time sensor system

NEW

- **iTENDO² technology**
  easy to use for tests and process optimization
- **High level of flexibility**
  fasten magnetically or with screws to static elements in the workspace
- **100% compatibility**
  with all iTENDO² packages: prerequisite is an iTENDO² pad or easy connect

TENDO® Silver

Hydraulic expansion toolholders

NEW

For a price-attractive entry into hydraulic expansion technology

1. **Clamping screw**
   The clamping screw is used to actuate the clamping piston
2. **Clamping piston**
   The clamping piston compresses the hydraulic medium into the chamber system
3. **Sealing element**
   Special sealing for leakage-free clamping
4. **Expansion sleeve**
   The expansion sleeve evenly expands against the tool shank
5. **Chamber system**
   It has a damping effect on the clamped tool
6. **Base body**
   With machine interface
7. **Tool**
   Maximum run-out and repeat accuracy < 0.003 mm

All commercially available tool shank types can be clamped

Form A: with smooth cylindrical shank, Shank Form A in accordance with DIN 1835 and DIN 6585 HA
Form AB: with flat face and cylindrical shank with pulling face, Shank Form B in accordance with DIN 1835 and DIN 6535 HB
Form B: with lateral pulling faces, Shank Form B in accordance with DIN 1835
Form E: with inclined clamping face, Shank Form E in accordance with DIN 1835 and DIN 6535

Fine-balanced by default

Suitable for high speeds with a balancing grade of G2.5 at 25,000 RPM

Micron-precise tool change in seconds without peripheral equipment

Time saving through reduction of set-up time and no investment and energy costs due to additional clamping devices

Interfaces
CAT 40
CAT 50
HSK-A 63
HSK-A 100
SK 40
SK 50
JIS-BT 30
JIS-BT 40
JIS-BT 50

Run-out accuracy
≤ 3 µ

Min. torque
16 .. 650 Nm

Max. speed of rotation
25000 .. 50000 RPM

Diameter
6 .. 32 mm
1/4 .. 1 1/4 "

schunk.com/tendosilver

Technical data

Series	Clamping diameter [mm/inch]	Run-out accuracy	Min. torque [Nm]	Bore hole for data carriers
TENDO Silver CAT 40	6 .. 20 / 1/4" .. 3/4"	< 0.003 mm at 2.5 x D	16 .. 330	Standard
TENDO Silver CAT 40 L1=4"	6 .. 32 / 1/4" .. 1 1/4"	< 0.003 mm at 2.5 x D	16 .. 650	Standard
TENDO Silver CAT 50	12 .. 32 / 1 1/4"	< 0.003 mm at 2.5 x D	90 .. 650	Standard
TENDO Silver HSK-A 63	6 .. 32	< 0.003 mm at 2.5 x D	16 .. 650	in accordance with DIN 69873
TENDO Silver HSK-A 100	6 .. 32	< 0.003 mm at 2.5 x D	16 .. 650	in accordance with DIN 69873
TENDO Silver SK 40	6 .. 32	< 0.003 mm at 2.5 x D	23 .. 650	Optional
TENDO Silver SK 50	12 .. 32	< 0.003 mm at 2.5 x D	90 .. 650	Optional
TENDO Silver JIS-BT 30	6 .. 20	< 0.003 mm at 2.5 x D	16 .. 330	Optional
TENDO Silver JIS-BT 40	6 .. 32	< 0.003 mm at 2.5 x D	16 .. 650	Optional
TENDO Silver JIS-BT 50	12 .. 32	< 0.003 mm at 2.5 x D	90 .. 650	Optional

TENDO® Slim 4ax
Hydraulic expansion toolholders

The world's first hydraulic expansion toolholder in standardized heat shrinking contour

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

Plug & Work

Can be used in existing processes without reprogramming

Micron-precise tool change within seconds without peripheral equipment

Time saving through set-up time reduction and no investment and energy costs due to additional clamping devices

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

Run-out accuracy
≤ 0.003 mm
at 2.5 x D

Min. torque
16 .. 330 Nm

Max. speed of rotation
30000 .. 50000 RPM

Diameter
6 .. 20 mm

1. **Chamber system**
2. **Expansion sleeve**
3. **Base body**
4. **Length adjustment screw**

schunk.com/tendo-slim-4ax

Technical data

Series	Clamping diameter [mm]	Run-out accuracy	Min. torque [Nm]	Max. speed of rotation [RPM]	Admiss. radial force [N]	MQL (Minimal Quantity Lubrication)	Hole for data carrier
HSK-A 63	Ø 6 - Ø 20	≤ 0.003 mm at 2.5 x D	16 - 330	30000 - 50000	113 - 1490	Yes	Standard
HSK-A 100	Ø 6 - Ø 20	≤ 0.003 mm at 2.5 x D	16 - 330	30000 - 50000	113 - 1490	Yes	Standard
SK 40	Ø 6 - Ø 20	≤ 0.003 mm at 2.5 x D	16 - 330	30000 - 50000	113 - 1490		Optional
SK 50	Ø 6 - Ø 20	≤ 0.003 mm at 2.5 x D	16 - 330	30000 - 50000	113 - 1490		Optional
JIS-BT 30	Ø 6 - Ø 20	≤ 0.003 mm at 2.5 x D	16 - 330	30000 - 50000	113 - 1490		Optional
JIS-BT 40	Ø 6 - Ø 20	≤ 0.003 mm at 2.5 x D	16 - 330	30000 - 50000	113 - 1490		Optional
SCHUNK CAPTO C6	Ø 6 - Ø 20	≤ 0.003 mm at 2.5 x D	16 - 330	30000 - 50000	113 - 1490		Optional
CAT 40*	Ø 6 - Ø 20	≤ 0.003 mm at 2.5 x D	16 - 330	30000 - 50000	113 - 1490		Optional

*CAT 40 version is also available with 1/4" - 3/4" clamping diameters

TRIBOS®-Mini SVL coolant-proof polygonal extension

Optimized interfering contours and super-slim tool extension

Optimized interfering contour

ideal for bores on low-lying areas, such as in fixture construction

Coolant-proof

for use of tools with internal coolant supply with a pressure of up to 120 bar

Compatible with all conventional clamping systems

no matter whether in hydraullic expansion, heat shrinking, power or polygonal toolholders

Coolant-proof

Run-out accuracy
≤ 0.003 mm
at 2.5 x D

Min. torque
1.5 .. 4.5 Nm

Max. speed fof rotation
52000 RPM

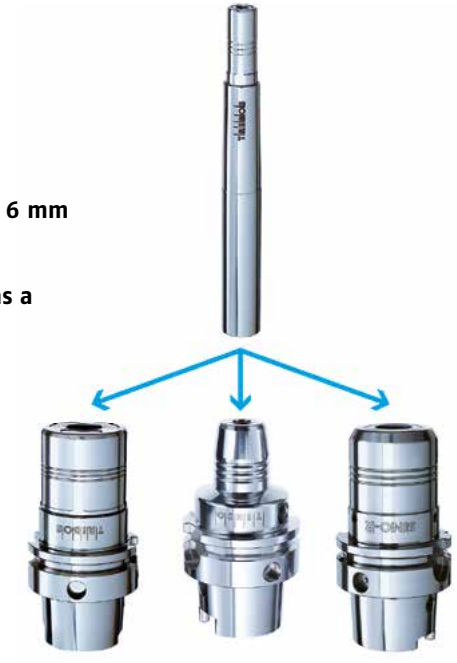
Diameter
3 .. 6 mm
1/8"

schunk.com/tribos-svl

Clamping diameter from 0.5 mm to 6 mm

For peripheral cooling or – new – as a coolant-proof version

Completely rotationally symmetric



Technical data

Series	Clamping diameter [mm or inch]	Run-out accuracy	Min. torque [Nm]	Max. speed of rotation [RPM]
TRIBOS-Mini SVL-12 Ø3x100 KD	3 mm	≤ 0.003 mm at 2.5 x D	1.5	52000
TRIBOS-Mini SVL-12 Ø4x100 KD	4 mm	≤ 0.003 mm at 2.5 x D	2.5	52000
TRIBOS-Mini SVL-12 Ø5x100 KD	5 mm	≤ 0.003 mm at 2.5 x D	3.5	52000
TRIBOS-Mini SVL-12 Ø6x100 KD	6 mm	≤ 0.005 mm at 2.5 x D	4.5	52000
TRIBOS-Mini SVL-12 Ø3.175x100 KD	1/8"	≤ 0.003 mm at 2.5 x D	1.5	52000

easy Toolholder Configurator for toolholders

NEW

Fast, online and customized

Flexible configuration

individual adaption to geometries, selection of the clamping diameter, machine interface, with or without data carrier chip and peripheral cooling

3D data in real time

view and download the configuration in different formats in real time

Simple inquiry and order process 24/7

receive inquiries and orders directly via the configurator. Price and delivery time are calculated directly

Available interfaces
HSK-A 40
HSK-A 50
HSK-A 63
HSK-A 100
HSK-C 40
HSK-C 50
HSK-C 63

Diameter
6 .. 32 mm
1/4 .. 1 1/4 "

Components lengths
HSK 40: L1 max. 120
HSK 50: L1 max. 150
HSK 63: L1 max. 200
HSK 100: L1 max. 250

Delivery time
Depending on configuration as of 30 days

1. **Machine interface**
flexible configuration for most common interfaces
2. **Option Zero**
for optimally adjustable run-out accuracy
3. **Clamping diameter**
individual selection of the clamping diameter for various clamping tasks
4. **Data carrier chip**
for direct clear assignment of tool and process data, available in 4 versions
5. **Peripheral cooling**
for optimized coolant emission
6. **Various lengths**
for interfering contour optimized processes

schunk.com/easytoolholder

Technical data

Series	Clamping diameter [mm/inch]	Maximum projecting length (L1) [mm]	Long slim toolholder Ø [mm] *	Max. clamping depth [mm] *	Bore hole for data carriers	Option Zero (adjustment of the run-out accuracy) possible for	Option Cool-Flow
HSK-A 40	6 .. 20	120	up to 121	up to 115	in accordance with DIN 69873	Clamping Ø 8 - 20	configurable
HSK-A 50	6 .. 20	150	up to 119	up to 115	in accordance with DIN 69873	Clamping Ø 8 - 18	configurable
HSK-A 63	6 .. 32 / 1/4" .. 1 1/4"	200	up to 141	up to 160	in accordance with DIN 69873	Clamping Ø 8 - 32 and Ø 3/8" - 1 1/4"	configurable
HSK-A 100	6 .. 32 / 1 1/4"	250	up to 143	up to 160	in accordance with DIN 69873	Clamping Ø 8 - 32 and Ø 1 1/4"	configurable
HSK-C 40	6 .. 12	120	up to 119	up to 115	Optional	Clamping Ø 8 - 12	configurable
HSK-C 50	6 .. 20	150	up to 117	up to 115	Optional	Clamping Ø 8 - 20	configurable
HSK-C 63	6 .. 32	200	up to 117	up to 160	Optional	Clamping Ø 8 - 32	configurable

*depending on the selected clamping Ø

TANDEM® KSE3 IOL / KRE3 IOL
Electromechanical clamping force blocks

with integrated electronics and IO-Link interface

IO-Link inside

Electric drive is integrated in the vise
signal processing occurs exclusively in the clamping device

Pre-positioning of the jaws
for inserting an extremely wide range of workpieces

Control via IO-Link
for easy integration in commonly used fieldbus systems

Sizes
100 .. 160 mm

Power supply
24 V

Repeat accuracy
< 0.01 mm

Stroke per jaw
2 .. 8 mm

Clamping force
8 .. 45 kN

1. **Bottom-sided connection**
with IO-Link control
2. **Motor gearbox combination**
high reduction ratio for high clamping forces
3. **Integrated electronics**
for transmitting power and control signals
4. **Wedge-hook drive**
offers constantly high clamping forces in operation

Technical data

Series	Actuation method	Number of jaws	Sizes	Interface	Repeat accuracy [mm]
KSE3-IOL	Electromechanical	2	100, 140, 160	IO-Link	< 0.01
KRE3-IOL	Electromechanical	3	100, 160	IO-Link	< 0.01

TANDEM® KSP-S3 IOL / KSH-S3 IOL
Sensory clamping force blocks

IO-Link inside

with integrated sensor system for process monitoring

Monitoring of the jaw position
for optimized automation of processes

Pressure sensor for actuating pressure
for monitoring the open or clamped statuses

Control via IO-Link
for easy integration into conventional fieldbus systems

Sizes
100 .. 315 mm

Clamping force
8 .. 95 kN

Stroke per jaw
2 .. 18 mm

1. **Bottom-sided connection**
with IO-Link control
2. **Integrated pressure sensor**
for measuring the opening and closing pressure
3. **Integrated path measuring**
for detecting the piston or jaw stroke
4. **Modular system TANDEM3**
identical interfering contour over machine table

Technical data

Series	Actuation	Sizes	Pressure sensor for actuating pressure	Monitoring of the jaw position	Interface
KSP-S3 IOL	Pneumatically	100, 140, 160, 200, 250, 315	yes	yes	IO-Link
KSH-S3 IOL	Hydraulically	100, 140, 160, 200, 250, 315	yes	yes	IO-Link

TANDEM® KSP3-BWA / KSH3-BWA
Clamping force blocks with jaw quick-change

For manual oder automated jaw change

NEW

Jaw quick-change system
for faster and easy jaw change both manual and automated

Workpiece system control in the top jaw
enables automated loading of the clamping force block

Patented monitoring of the base jaw position via dynamic pressure
good to know, if the vise is opened or closed

Sizes
100 .. 250 mm

Number of versions
100

Clamping force
8 .. 75 kN

Stroke per jaw
2 .. 15 mm

schunk.com/tandem3-bwa

1. **Teach marking**
   for teaching the robot and positioning of the jaw
2. **Lateral sealing**
   for protection of the interchange interface
3. **Wide stop face**
   for optimal power transmission to the jaw
4. **Centering**
   for the best repeat accuracy during jaw change

Technical data

Series	Actuation	Sizes	Clamping force amplification for O.D. clamping, optional	Workpiece presence control/air purge	Inductive jaw monitoring (optional)
KSP3-BWA	Pneumatically	100, 140, 160, 250	yes	yes	yes
KSH3-BWA	Hydraulically	100, 140, 160, 250	yes	yes	yes
KRP3-BWA	Pneumatically	160, 250	yes	yes	no
KRH3-BWA	Hydraulically	160, 250	yes	yes	no

VERO-S NSE3 176
Quick-change pallet systems

For general milling applications and heavy-duty machining with an even higher rigidity and higher pull-down forces

SCHUNK modular system
innumerable combinations of standard clamping devices suitable for different types of machines

Optional sensor monitoring
for monitoring of the slider positions

Optional cone seal
for protecting the interchange interface from coolant, dust, and chips

Sizes
176 mm

Pull-down force
40 kN

Repeat accuracy
< 0.005 mm

schunk.com/nse3

1. **Patented dual stroke system**
between piston and clamping slide ensures maximum pull-down forces
2. **Completely sealed system**
therefore absolutely maintenance-free
3. **Large flat surface**
for best support and highest rigidity
4. **Turbo function**
to increase the pull-down forces

Technical data

Size	Pull-down force [kN]	Pull-down force with turbo [kN]	Repeat accuracy [mm]
NSE3 176	9	40	< 0.005

VERO-S NSR3 138
Robot module

Very high transferable moments for reliable pallet handling or use as a quick-change unit for your robot

Form-fit self-retained locking
full pull-down force is maintained even in the event of a pressure drop

Sensor monitoring (optional)
monitoring option for the clamping slide position and pallet presence via AFS3-R IOL 138

Maintenance-free
robust and sealed housing made of stainless steel

Size
138 mm

Pull-down force
8 .. 28 kN

Repeat accuracy
< 0.02 mm

schunk.com/nsr3

1. **High strength**
for reliable pallet handling even with high weights

2. **Monitoring of the clamping slide position**
via AFS3-R possible

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

4. **Air purge**
for quickly cleaning the module's clamping pin interface

Technical data

Size	Pull-down force [kN]	Pull-down force with turbo [kN]	Max. moment M_{xy} [Nm]	Max. moment M_z [Nm]	Repeat accuracy [mm]
NSR 138	8	28	1500	1600	< 0.02

VERO-S NSA3
Quick-change pallet systems

NEW GENERATION

Enhancing the tried-and-tested: Optimized for the modern requirements in pallet handling

Integrated monitoring and lifting function
maximum process safety
even with rough machining

Extremely flat design
for maximum utilization of
the machine room

The modules are corrosion-free and completely sealed
long service life and
maximum process safety

Size
120 mm

Pull-down force
10 kN

Repeat accuracy
< 0.005 mm

schunk.com/nsa3

1. **Integrated cleaning function**
for cleaning the cone and contact surfaces of the clamping slide
2. **Contact monitoring**
for monitoring the presence of the pallet and for cleaning the flat work surfaces
3. **Completely sealed system**
therefore absolutely maintenance-free
4. **Turbo function**
to increase the pull-down forces

Technical data

Size	Pull-down force [kN]	Pull-down force with turbo [kN]	Repeat accuracy [mm]
NSA3 120	3	10	< 0.005

VERO-S NSE3-PH 138 IOL
Electromechanical quick-change pallet systems

IO-Link inside

with unbeatable power density, installation-compatible with standard modules

NEW

Electric drive integrated in the module
signal processing takes place exclusively in the quick-change pallet module

Monitoring of the clamping slide position and pallet presence
for reliable automation

Control via IO-Link
for easy integration in commonly used fieldbus systems

Size
138 mm

Pull-down force
8 .. 20 kN

Holding force clamping pin
35 .. 75 kN

Supply voltage
24 V

Repeat accuracy
< 0.005 mm

1. **IO-Link interface**
for simple integration in commonly used field bus systems
2. **Bottom-sided connection**
for easy connection of the clamping module
3. **Integrated electronics**
signal processing occurs in the clamping device
4. **Drive via piezoelectric actuator**
ensures high pull-down forces in a small installation space

Technical data

Sizes	Pull-down force [kN]	Supply voltage [V]	Interface	Repeat accuracy [mm]	Suitable for clamping pins
NSE3-PH 138 IOL	8 .. 20	24	IO-Link (class B)	< 0.005	Size 40
NSE3-PH 138-V1 IOL	8 .. 20	24	IO-Link (class B)	< 0.005	Size 40

VERO-S Quick-change pallet systems
Sensory clamping modules

IO-Link inside

Integrated sensor system for detecting pallet presence and clamping position without additional interfering contour

Sensor system integrated in the quick-change pallet system
no additional interfering contour

For monitoring the clamping slide position and pallet presence
for reliable automation

Signal transmission via IO-Link
for easy integration in commonly used fieldbus systems

Sizes
90 .. 138 mm

Pull-down force
4 .. 28 kN

Supply voltage
24 V

Repeat accuracy
< 0.005 mm

1. **Integrated electronics and bottom-sided connection**
   with IO-Link signal transmission
2. **Monitoring pallet presence**
   for detecting pallet presence
3. **Monitoring of the clamping slide position**
   for detecting the "module clamped" or "module opened" statuses
4. **Pressure sensor**
   to detect whether the turbo function is activated

Technical data

Sizes	Actuation	Pull-down force [kN]	Pull-down force with turbo [kN]	Unlocking pressure [bar]	Integrated monitoring
NSE-E mini 90-25 IOL	Electromechanical	4			Clamping slide position, pallet presence
NSE-S3 138 IOL	Pneumatic	8	28	6	Turbo function, clamping slide position, pallet presence
NSE-S mini 90-25-IOL	Pneumatic	1.5	6	6	Turbo function, clamping slide position, pallet presence

Chuck jaw quickfinder
Find the right jaws with just a few clicks

NEW

Expansion of the chuck jaw quickfinder to include stationary clamping devices from the KONTEC and TANDEM product ranges

Faster to the appropriate chuck jaws

through predefined selection menus and intelligent filters

Simple differentiation between system and top jaws

through separate presentation of the two types of jaws in existing control concepts

Direct shop connection

desired products can be added to the shopping cart immediately

Total number of jaws
1350

schunk.com/backen-quickfinder

The right chuck jaw for any requirement

both for lathe chucks and for clamping force blocks or manual clamping systems

Large selection of products

due to the unique standard chuck jaw program

Uncluttered list of results

with additional product information

Find suitable jaw pairs

easily possible by faceting the jaw interface

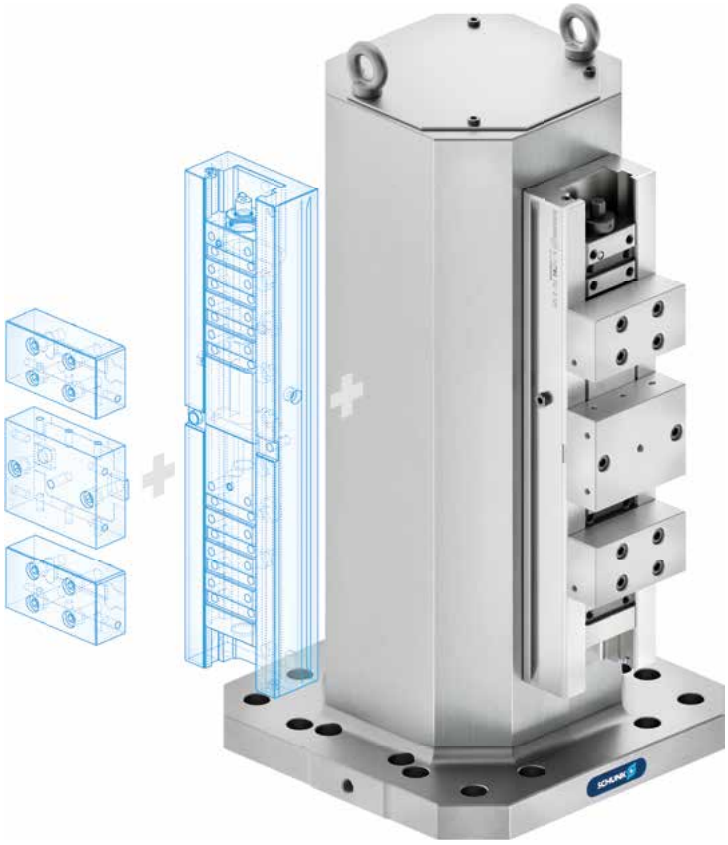
Scope of chuck jaw quickfinder

Quickfinder	Number of clamping devices	Number of chuck jaws
Chuck jaw quickfinder stationary	600	350
Chuck jaw quickfinder lathe chucks	900	1000

KONTEC Configurator
Fast. Online. Customized.

NEW

Combine the complete clamping solution as desired



Limitless possibilities
due to combination of all KONTEC clamping systems and jaws

3D data in real time
visualize desired product and download as .step data and export parts lists

Preconfigured solutions to get you started
extensive collection of customer solutions to find inspiration for your production

Configure it online now:

schunk.com/kontec-konfigurator

Pneumatic gripping

Pneumatic grippers from SCHUNK have stood for high quality and reliability for many years. The focus is always on your workpiece: from small to large, from round to square, for every batch size and every application environment.

The power of our pneumatic grippers

- **Proven technology:** Decades of development and optimization characterize the technology of our pneumatic grippers.
- **Longevity:** The robust design ensures high resistance and a long service life.
- **Versatility:** Suitable for a wide range of tasks, industries and operating environments.
- **High quality:** The high performance of the pneumatic grippers corresponds to the usual SCHUNK quality.

BSWS-R
The automatic jaw quick-change system BSWS-R enables fast and automatic exchange of the top jaws on the gripper.

PPD
The new PPD positioning device enables free positioning and adjustment of the gripping force and gripper jaw speed of the pneumatic gripper.

PGL-plus-P
The PGL-plus-P universal gripper with long jaw stroke offers highlights such as secure certified gripping force maintenance and integrated sensor technology.

PGL-plus-P
Universal gripper

The world's first pneumatic gripper with safe and certified gripping force maintenance

Secure, certified gripping force maintenance GripGuard

holds the gripped workpiece safely and also ensures a permanent gripping force of min. 80% in case of pressure drop. It also ensures that no dangerous, spontaneous jaw movements can occur in the event of a pressure drop

Integrated sensor system

for precise and process-reliable monitoring of the complete gripper stroke via IO-Link

Long jaw stroke

enables flexible handling of a wide range of parts

Sizes
10 .. 25

Weight
0.46 .. 7.9 kg

Gripping force
145 .. 1900 N

Stroke per jaw
10 .. 25 mm

Workpiece weight
0.72 .. 7 kg

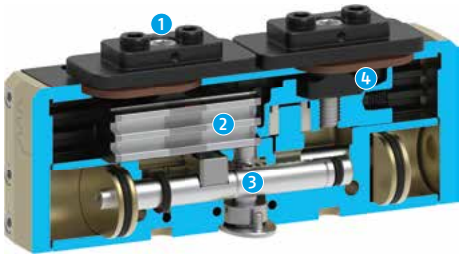
schunk.com/pgl-plus-p

1. **Base jaw**
with standardized screw connection diagram for the adaption of the workpiece-specific gripper fingers. The centering sleeves are attached so that they cannot be lost when exchanging fingers.

2. **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.

3. **Pneumatical drive pistons and kinematics**
maximum power generation through two oval pneumatic pistons. The rack-and-pinion kinematics ensure synchronization of the base jaws and centric clamping.

4. **Dust cover**
The entire circumference of the gripper is encapsulated with metal and additionally sealed with a lip seal at the base jaws so that it is suitable for universal use, even in dirty environments.



Technical data

Sizes	Stroke per jaw [mm]	Closing force [N]	Opening force [N]	Recommended workpiece weight [kg]	Weight [kg]	Max. permissible finger length [mm]
10	10	145 .. 295	145 .. 295	0.72 .. 1.1	0.46 .. 0.75	100
13	13	230 .. 475	230 .. 480	1.2 .. 1.8	0.8 .. 1.3	130
16	16	365 .. 750	365 .. 740	1.8 .. 2.8	1.4 .. 2.2	160
20	20	585 .. 1170	585 .. 1170	2.9 .. 4.4	2.7 .. 4.2	210
25	25	930 .. 1900	930 .. 1900	7	5.1 .. 7.9	260

PPD
Pneumatic positioning device

Positioning device for flexible control of pneumatic grippers

Free positioning of a pneumatic gripper
enables cycle time optimization or collision avoidance by pre-positioning the gripper finger

Gripping force adjustability by adjusting the output pressure
for gripping workpieces of different sensitivity

Adjustability of the gripper jaw speed
for workpiece-friendly gripping due to the reduction of the gripping impulse

schunk.com/ppd

1. **Pneumatic positioning device**
   PPD
2. **Pneumatic gripper**
   PGL-plus-P-IOL
3. **Position sensor**

The pneumatic positioning device is an accessory for pneumatic grippers. Together with a position sensor, any positions of the gripper fingers can be approached in addition to the end positions (gripper open and gripper closed). Four integrated high-speed 2/2 valves together with the integrated electronics ensure a closed control loop. Communication takes place via IO-Link.

BSWS-R
Automatic jaw quick-change system

NEW

Quick and easy changeover, operated solely by the movement of the robot

Maximum flexibility

With the BSWS family, one single gripper can be used universally in various applications.

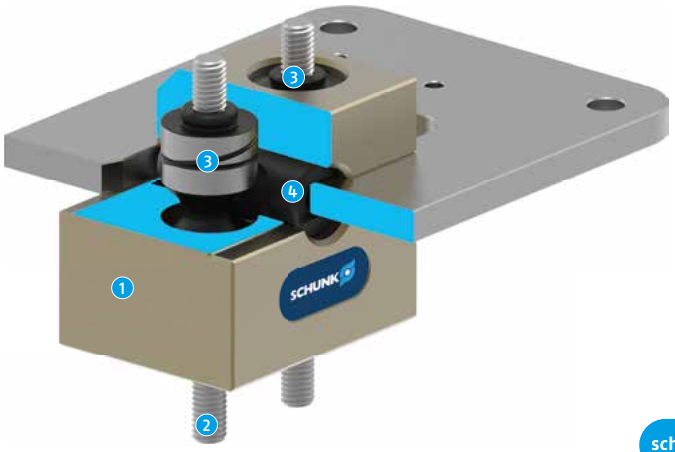
Time savings when converting applications

Different workpieces can be handled by exchanging the gripper fingers.

PGN-plus-P fingerprint

Enables universal use and retrofitting in a wide range of gripper series.

1. **Base of the jaw quick-change BSWS-BR**
2. **Fastening of the workpiece-specific gripper finger**
3. **Adapter pin BSWS-AR for fastening to the gripper base jaw**
4. **Spring preloaded locking pin**



schunk.com/bsws-r

Technical data

Finger screw connection diagram	Jaw quick change Adapter pin	Jaw quick-change Base	Storage system	Attachment kit inductive monitoring
BSWS-BR 50	0.03	BSWS-AR 50	2	BSWS-SR 50
BSWS-BR 64	0.05	BSWS-AR 64	2	BSWS-SR 64
BSWS-BR 80	0.07	BSWS-AR 80	2	BSWS-SR 80
BSWS-BR 100	0.15	BSWS-AR 100	2	BSWS-SR 100
BSWS-BR 125	0.22	BSWS-AR 125	2	BSWS-SR 125
BSWS-BR 160	0.46	BSWS-AR 160	2	BSWS-SR 160
BSWS-BR 200	0.97	BSWS-AR 200	2	BSWS-SR 200
BSWS-BR 240	1.49	BSWS-AR 240	2	BSWS-SR 240
BSWS-BR 300	1.98	BSWS-AR 300	2	BSWS-SR 300

Mechatronic gripping

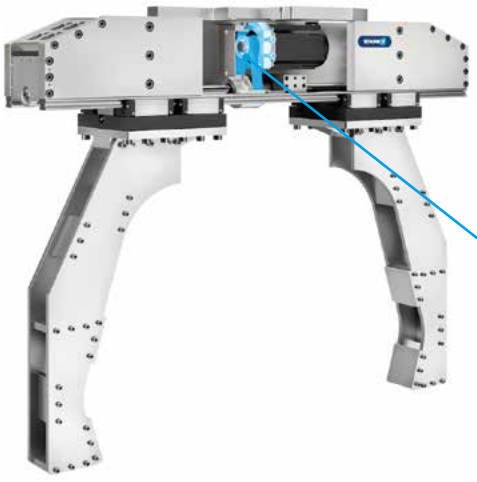
Our range of electric parallel grippers currently comprises four product series that are optimally adapted for use in various application areas in terms of gripping force and stroke. This allows you to find the right gripping solution for your application quickly.

For the requirements of modern process flows, mechatronic grippers offer many advantages

- **Flexible in use:** Variety of parts, adjustment options (positioning, stroke, force, gripping modes), future-proof thanks to new software functions that can be added at a later date.
- **Connectivity:** Added value through standardized interfaces (flexible and simple networking with all relevant robot and controller manufacturers).
- **Process feedback:** For greater process stability and reliability due to integrated monitoring and analysis options.

ELG
Customzied configurable long stroke gripper

The electric gripper for large workpieces with configurable stroke accurate to the millimeter



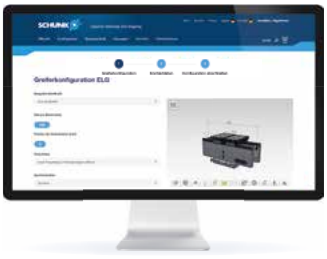
With motor-specific attachment kit:

Bosch Rexroth
Siemens
Allen-Bradley
FANUC
KUKA
SEW-EURODRIVE

Mitsubishi Motors NEW

With motor:

Bosch Rexroth
Siemens



Configure it online now:

schunk.com/elg

EGU and EGK
Universal grippers and grippers for small components

For flexible workpiece handling

Minimal integration effort

through a diverse range of communication interfaces, as well as PLC function blocks and robot plug-ins compatible with leading manufacturers in the market

Versatile and productive

due to the large and freely programmable jaw stroke with continuous gripping force adjustment for flexible workpiece handling

Sizes
50 .. 80

Weight
1.49 .. 7.72 kg

Gripping force
150 .. 4000 N

Stroke per jaw
41 .. 80 mm

schunk.com/egu

EGU universal gripper

StrongGrip up to 200%

Robust and reliable

with sealed design and proven sliding guide particularly suitable for harsh ambient conditions of machine loading

EGK gripper for small components

Reliable and sensitive

particularly suitable for the requirements of laboratory automation and electronics production thanks to the sealed design and smooth-running profiled rail guide

Sizes
25 .. 50

Weight
0.62 .. 1.63 kg

Gripping force
20 .. 300 N

Stroke per jaw
26.5 .. 51.5 mm

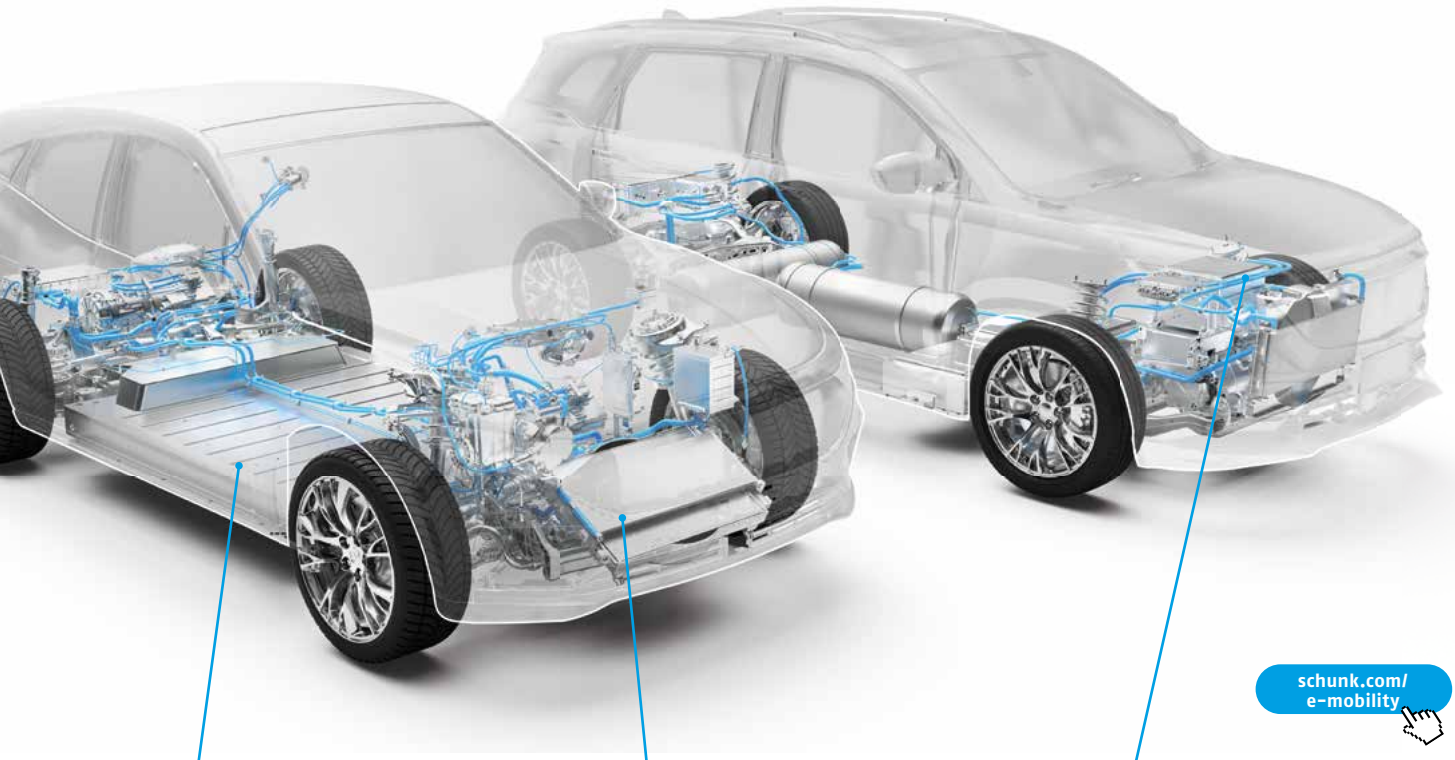
schunk.com/egk

Technical data

Series	Sizes	Stroke per jaw [mm]	Min. gripping force [N]	Max. gripping force [N]	Max. permissible finger length [mm]	Weight [kg]
EGU	50	51	150	600	80	1.49
EGU	60	60	325	1300	125	2.9
EGU	70	70	650	1950	160	4.52
EGU	80	80	1000	4000	200	7.72
EGK	25	26.5	20	50	70	0.62
EGK	40	41.5	55	150	100	1.02
EGK	50	51.5	150	300	130	1.63

E-Mobility

SCHUNK is your reliable partner for production's transition to E-Mobility. We are an automation specialist and competence leader for toolholding and workholding, gripping technology and automation technology and supply you with everything from axis systems to robot accessories from a single source. Thanks to the clever combination of our standard products, we always find an individually suitable solution for you. You will benefit from our many years of engineering know-how in the industry. SCHUNK products are already known by all well-known automotive manufacturers and their suppliers. This accelerates integration into new process chains enormously, and keeps you in the fast lane from the very beginning when switching to E-Mobility.



schunk.com/
e-mobility

Battery systems

The entire automation spectrum is utilized in the manufacture of battery systems. This applies to high-speed handling of individual cells to handling the highest dimensions of battery modules and packs.

E-drive

Electric motors place the highest demands on automation. Whether it concerns the specific setting of the hairpins, handling of the sheet packages, or assembly of the components to the finished e-axis: SCHUNK supports you.

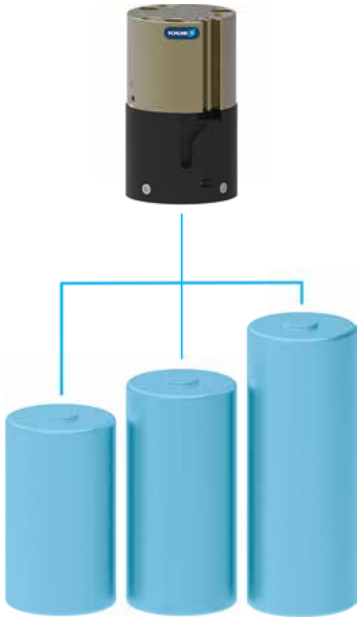
Fuel cells

Fuel cells have a high energy density and a short refueling time. That is why they are increasingly being used in mobile and stationary applications. SCHUNK offers extensive solutions for handling fuel cells and their components.

RCG
Round cell gripper

NEW

Flexible gripping unit with minimal interfering contour for maximum packing density



The RCG gripper can securely handle all common formats of Ø 46 mm round cells.

Compact outside dimensions
the individual gripper enables maximum packing density of battery cells

Maximum process reliability
through sensory workpiece and status detection

Avoidance of workpiece loss
thanks to the integrated gripping force maintenance, even in the event of energy loss

Number of sizes
1

Magnetic holding force
≥ 70 N

Weight
0.25 kg

schunk.com/rcg

1. **Pneumatic drive**
with C-slot for piston stroke monitoring
2. **Electrically decoupled contact surface**
to protect the charged battery cell that is in flat contact
3. **Centerings**
The centerings in versions -2 and -4 are used to compensate for placement tolerances when picking up the battery cells

From the round cell to the battery pack

SCHUNK solutions seamlessly handle the transition from individual battery cells to the finished battery packs from a single source. The combination of the round cell gripper RCG and further SCHUNK components such as sensors, compensation units, cell spacing units and linear direct axes, enables precise and dynamic processes. The RCG is customized for your application and is individually scalable.

CMS
Manual change system

User-friendly manual change system with extensive complementary portfolio

The manual change system CMS impresses with its user-friendliness, diversity in modules, and extensive range of accessories. It can be used on robots as well as in stationary applications, wherever tool changes are important.

Your added value:

- **ISO flange pattern**
  for simple assembly on most types of robots without additional adapter plates
- **Locking and tool presence monitoring as standard**
  for process-reliable monitoring of the locking status, optionally with sensors
- **Integrated air feed-through via sealing pins with cylinder seals**
  for minimum effort when locking
- **Locking lever**
  Proven (push lever) technology for manual actuation without additional tools
- **High module diversity**
  for diverse media transmission options
- **Available as basic variant**
  without integrated air feed-throughs for easy applications

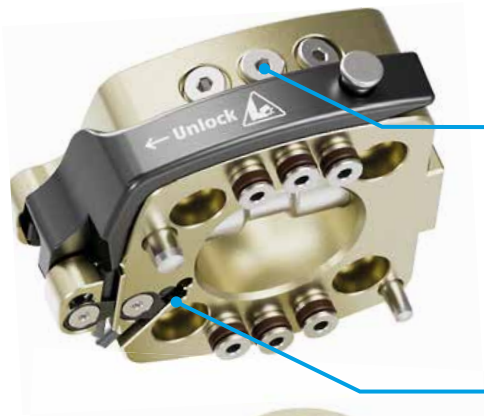
schunk.com/cms

NEW

Precisely interchangable

For existing customers, SCHUNK offers the CMS manual change systems as a 1:1 replacement for the predecessor model. The same overall height as well as identical screw-on patterns on the robot and tool side enable existing systems to be converted quickly and easily.

Even better now



All air feed-throughs can be used radially

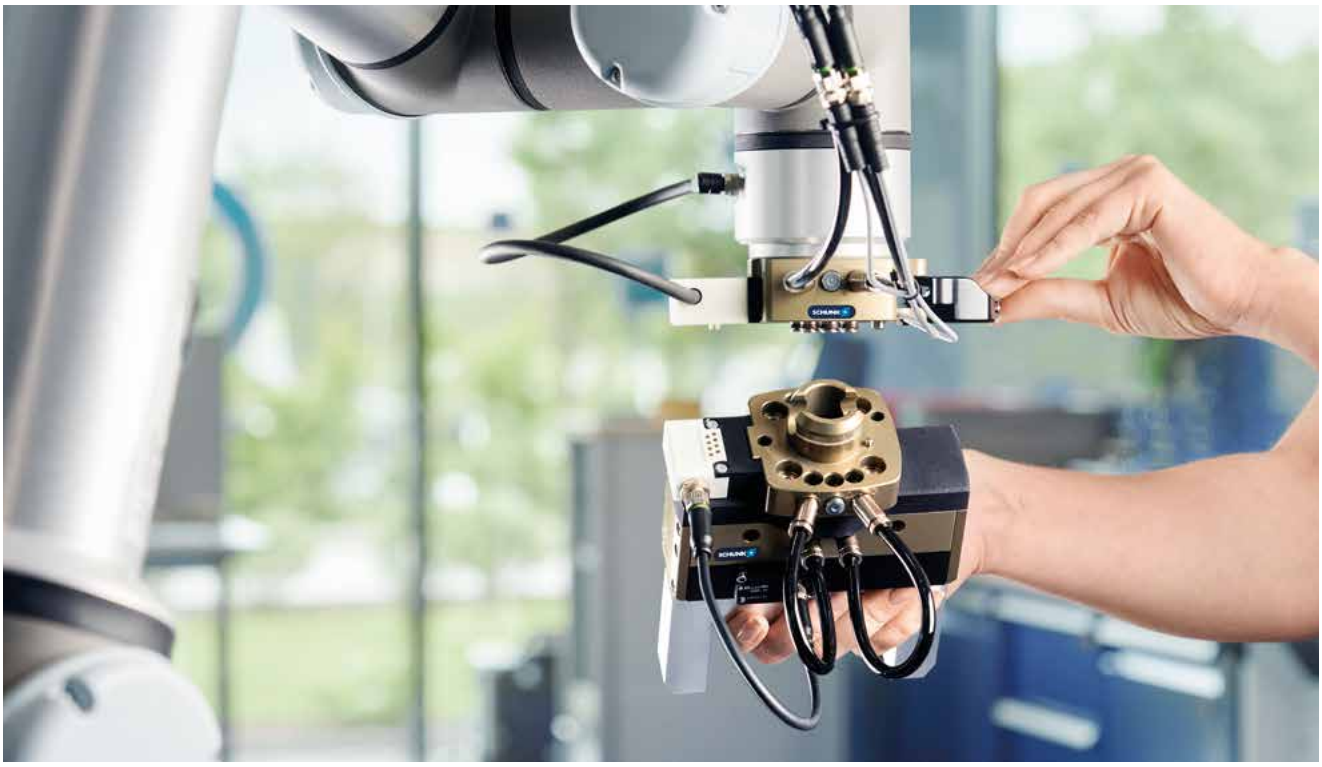
Instead of before: only 50% radially useable over head

Locking and tool presence monitoring can be integrated into any size

Instead of before: integration possible from size 100 onwards

Direct screw connection to electric, pneumatic and fluid modules

Instead of before: adapter plate required



Linear modules & axis systems

For positioning and movement tasks, or for any type of automation of handling processes – SCHUNK offers the diversity of linear technology from a single source. Different types of standard modules can be combined into a complete system. There are many variants to choose from for both the drive and the guide concept.

The advantages of SCHUNK linear modules and axis systems

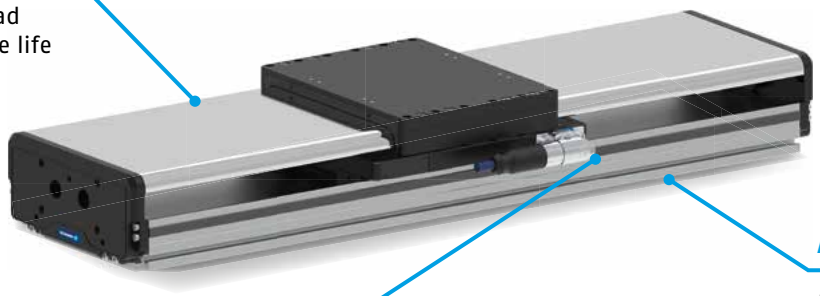
- **Flexible and extensive combinations**
  with different drive concepts
- **Over 25 years of experience in the field of linear technology**
  large axis system portfolio with more than 450 standard components
  pneumatic and electric
- **Comprehensive consulting service**
  from the right axis technology to design
- **Pre-assembled complete solutions for minimal assembly effort**
  and immediate commissioning including commissioning support

SLD
Linear direct axis

The SLD series is a new generation of SCHUNK linear direct axes. The dynamic, heavy-duty axes with electric linear direct drive ensure short cycle times and higher productivity in high-speed assembly and handling processes. Due to the high drive forces up to a maximum of 2.4 kN and the load rating of up to 106 kN as well as the long service life, the axis is ideally suited for any industry – even for demanding cell production in the dry room.

High basic load ratings

for high bearing load capacity and service life



Almost no wear parts

for long service life and reliability of the system

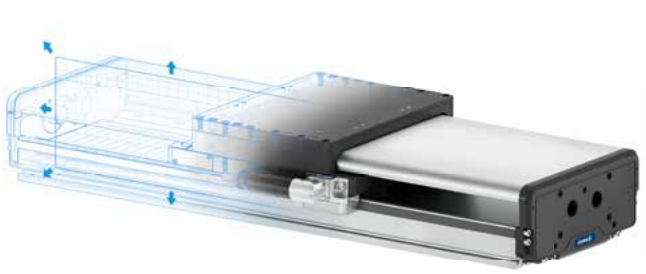
No mechanical play between the drive components

for fast response mode and high positioning accuracy

Linear module configurator

Crafting individual linear modules digitally

NEW



Fast
CAD data and technical data sheets are immediately available

Simple
because no developer knowledge is required

Direct contact
seamless contact directly from the tool

Configurable series:
Alpha
Beta
Delta
Gamma
LDL
LDN
LDM
LDT
LDK
SLD
ELB

Receive your individual linear module in four steps:

1. Linear module selection
2. Linear module configuration
3. Enter contact details
4. Finalize configuration

The complete solution from a single source

Start your next automation project with our individually configurable linear modules. Once configuration is complete, they can be seamlessly integrated into a SCHUNK axis system. The SCHUNK online tool enables application-specific configuration of all accessories and provides technical data sheets and CAD data for seamless integration into your system planning. For positioning and motion tasks or for any other kind of automation for handling processes. SCHUNK axis systems offer the diversity of linear technology from a single source.

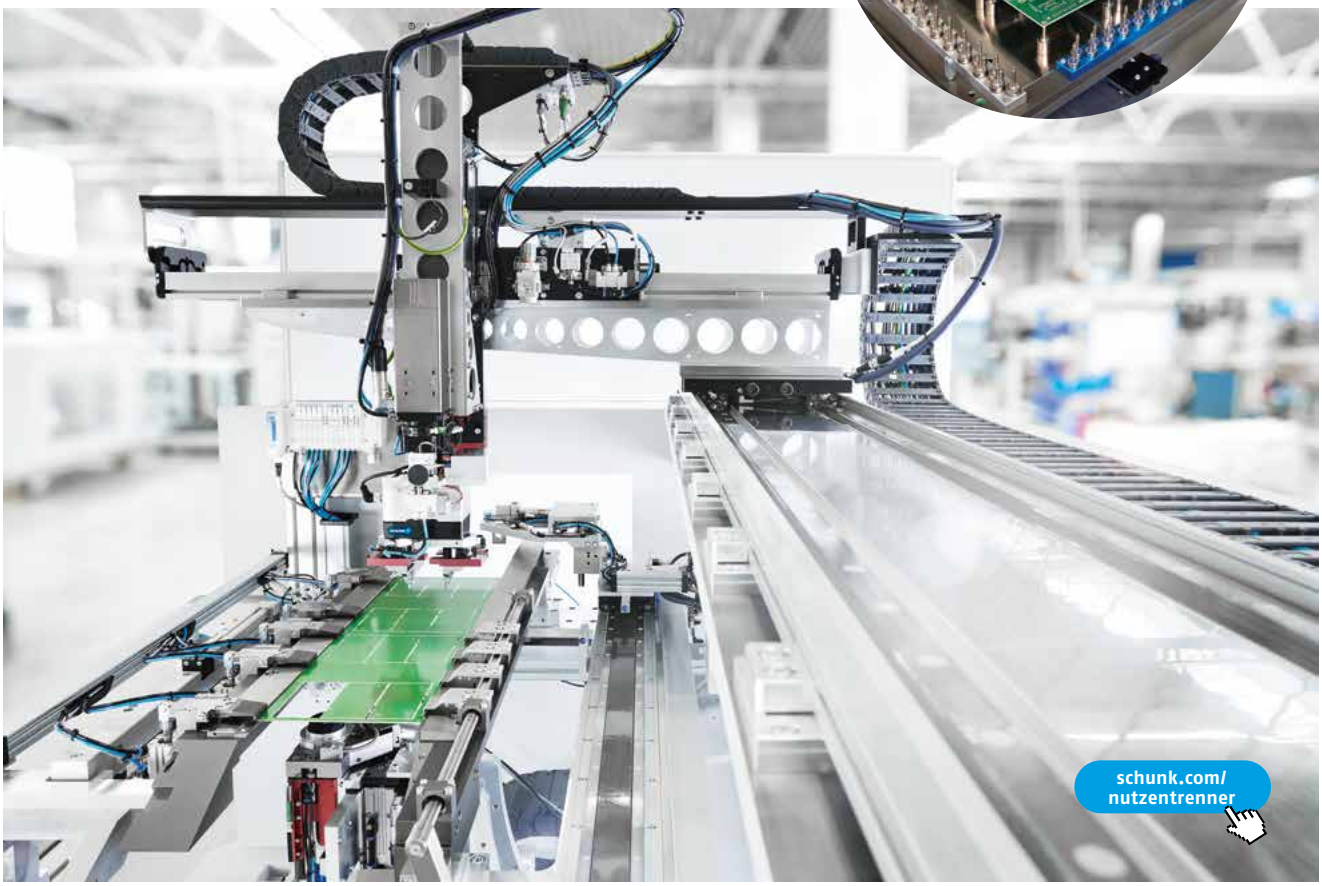
Depaneling technology

SCHUNK offers solutions for the entire depaneling spectrum – from product selection to workpiece carrier solutions and optimization of the milling parameters to commissioning. Our product range focuses on modern processes in electronic module production. Our systems and devices meet the most demanding requirements resulting from increasing miniaturization, the use of highly sensitive components, and the rising quality demands for PCBs.

Benefit from innovative functions:

Dust Reduce Booster
With the patented "Dust Reduce Booster" technology in the SAR and ILR depaneling machines, we reduce fine dust deposits on the PCB by an additional 70% compared to conventional dust extraction systems – or even eliminate them completely.

New HMI operating software
The user interface for optimized operating processes also ensures an increase in energy efficiency and system security. Now with an extended range of functions in user management, energy measurement and data backup.



Inline depaneling machine ILR-Performance

NEW

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 a high milling accuracy and availability

Dust Reduce Booster

Speed of axes up to 2000 mm/s

Milling area 460 x 364 mm

Repeat and positioning accuracy ±0.02 mm

Milling accuracy ±0.1 mm

Stand-alone laser machine SAL-1300

NEW

Optimized process times
up to 80% faster laser cutting processes than conventional applications

Precise cutting results
as the optimal alignment of the laser to the workpiece is ensured

High level of flexibility
thanks to the modular design and the option of combining laser processing and milling technology

Speed of axes up to 1000 mm/s

Milling area 430 x 350 mm

Repeat and positioning accuracy ±0.02 mm

Milling accuracy ±0.2 mm

Technical data

Length/width/height [mm]	Operator height [mm]	X-, Y-linear motor actuators [mm/s]	Z-axis linear motor axis [mm/s]	Repeat accuracy/ positioning accuracy [mm]	Milling accuracy without vision system [mm]	Milling accuracy with vision system [mm]	Max. panel size X- and Y-direction [mm]
1900/2115/2285	950	2000	1000	±0.02/±0.02	±0.13	±0.1	460 x 364
1320/2500/2280	894	1000	1000	±0.02/±0.02	±0.2	±0.15	430 x 350

SCHUNK SE & Co. KG
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Greiftechnik
Automatisierungstechnik

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