

1983

PPG



2000

PGN-plus



2013

5-Finger Hand



Gripping Systems

The Closest Thing to the Part



Superior Clamping and Gripping

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

For more information visit our website:
www.gb.schunk.com/Lehmann

J. Lehmann
 Jens Lehmann





Henrik A. Schunk, Kristina I. Schunk, brand ambassador Jens Lehmann and Heinz-Dieter Schunk

Top Performance in the Team

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

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

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

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

Our customers profit from the expert knowledge, the experience and the team spirit of 2,000 employees in our innovative family-owned company.

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



Heinz-Dieter Schunk



Henrik A. Schunk



Kristina I. Schunk



1983

PPG

First pneumatic SCHUNK standard gripper



1989



KONEX

Gripper with high-performance plastic

1995

MPG

New standard in gripping of small components

2000



PGN-plus

Unique universal gripper with multi-tooth guidance



2001

PG

Electrical standard gripper

2003



PEH

First servo-electric standard gripper



MECHATRONIK³

2006

SDH

3-finger gripping hand with tactile sensors

30 Years of SCHUNK Grippers

The PPG industrial gripper made history in 1983. The first standardized gripper was based on proven kinematics solutions for clamping technology. Due to this synergy concept, SCHUNK revolutionized automated handling and took a crucial step toward becoming a competence leader in clamping technology and gripping systems.

With pioneering spirit and perfection we continue develop the gripping systems of the future. We open up new possibilities for front ends in order to meet the ever-demanding requirements of the industry. The results are superior, top-quality products that have been setting new standards for market-driven innovation for over 30 years.

Today, our benchmark products, efficient components, and solutions represent the largest range of products for industrial automation from a single source.

Gripping modules

The most comprehensive range of products, from small component gripping modules to heavy load grippers. Pneumatic or electric.

Rotary and swivel modules

The most comprehensive range of compact turning units and rotary actuators, swivel heads and rotary fingers.

Linear modules

Mini slides, pneumatic stroke modules, bending resistant gantry axes and axes with servo-electric linear motor drive.

Robot accessories

Modules ensure perfect interaction between the robot arm and the tool.

Modular assembly automation

An extensive range of pneumatic and electrical modules for an unimaginable variety of combinations.

Mobile gripping systems

Handling tasks of the future are everyday reality at SCHUNK.



2008

2010

2011

2012/
2013



PRL

Integration of gripper arm module PRL into Care-0-Bot®

Powerball Lightweight Arm LWA 4P with WSG Greifer
Mobile Gripping Systems

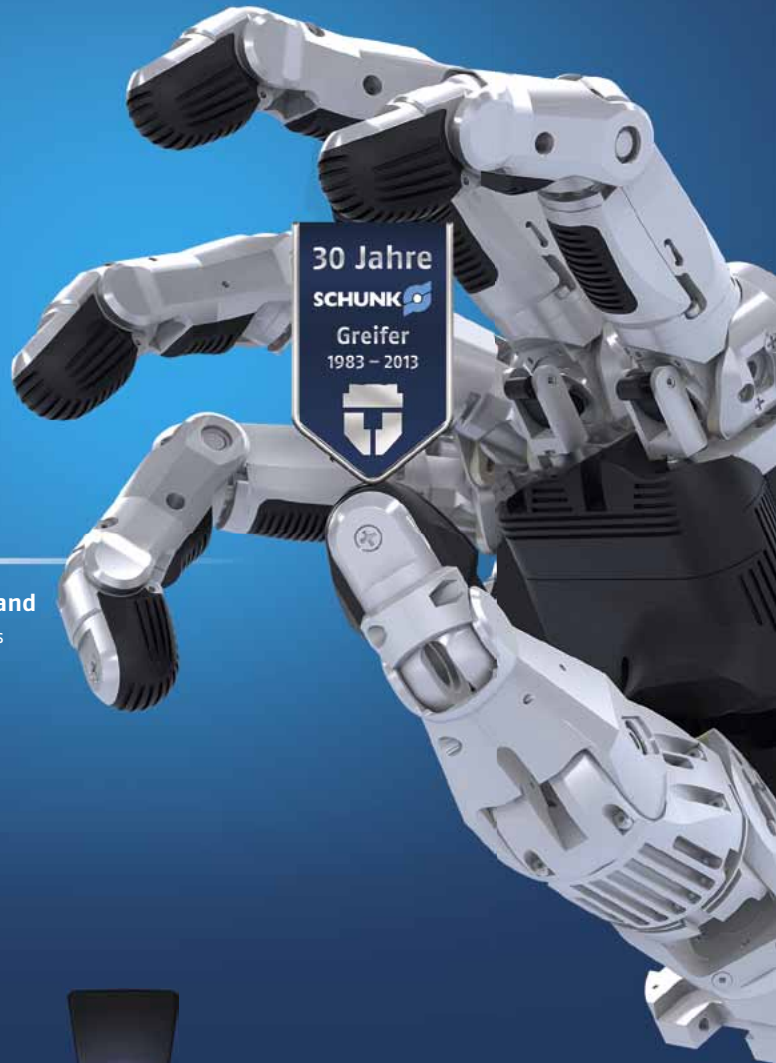


EGP

World's most powerful mechatronic gripper for small components with integrated electronics

5-Finger Hand

Close-to-series product study



30 Jahre
SCHUNK
Greifer
1983 – 2013



INDUSTRIEPREIS

2008 Gripper with spindle interface
2008 SWS-I-011 industrial automation
2010 PPU-E Pick & Place unit

INNOVATION AWARD

Process Innovation Award

2009 UNIPLACE



iF product design award

1999 TRIBOS toolholding system
2004 ROTA THW plus
2004 SRU
2005 TANDEM PZS
2009 ZENTRICO THL plus
2011 PHL
2012 ROTA NCL



MM Award

2008 Dextrous Hand SDH-2
2010 MPG-plus
2012 Powerball Lightweight Arm LWA 4P



reddot design award
winner 2013

reddot design award

2013 Powerball Lightweight Arm LWA 4P



Dr. Rudolf Eberle Preis

1986 Gripper and gripper change system



Enterprise Medal from the State of Baden-Württemberg

2006 Heinz-Dieter Schunk



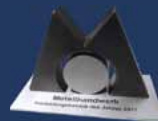
German Mechanical Engineering Prize

2008 Heinz-Dieter Schunk



Engelberger Robotics Award

2010 Heinz-Dieter Schunk



"Training Company of the Year" Federal Association Metal Industries

2011 SCHUNK GmbH & Co. KG

Superior Clamping and Gripping

It's time to make of your machine's

With superior components, we awake reserves where you would never expect to find them. In your machine.

**Make full use of your machine's potential
with the extensive product portfolio from SCHUNK.**

SCHUNK, the competence leader in clamping technology and gripping systems, can now open up the full potential of your processing machines and production processes. Reduce costs by combining accurate, flexible workpiece machining with dynamic production automation.

SCHUNK Synergy – when everything fits together.

With SCHUNK synergy, you benefit from superior components from our innovative family-owned company and the result of a perfectly harmonized interplay of clamping technology and gripping systems. The more SCHUNK, the more efficient it is.



use full potential!

Clamping technology and gripping systems – the perfectly adjusted interplay makes them a champion in terms of productivity. We call it the SCHUNK Synergy.

Let's see where the potentials in your machine are hidden.


Jens Lehmann

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Discover new potential now:
www.gb.schunk.com/synergy

And order the SCHUNK Synergy
poster at phone +49-7133-103-2256



up to **20 tons** load handling
MAGNOS Magnetic Lifting Technology

Automated
handling

Lathe

Lathe

60 seconds jaw
change
Lathe chuck **ROTA-S plus^{2.0}** and
ROTA THW plus



300% better
surface quality
TELEIDLOTURN – Innovative hydraulic expansion
technology, for lathes and turning/milling centers



1,200 standard
chuck jaws
The world's largest chuck jaw program
for every chuck type



Automated handling



No. 1 unique
PGN-plus – the only gripper with
multi-tooth guidance



More **500** standard
combinations
for line and room gantries from the
modular system

100% cycle increase
Universal rotary module SRU-plus 20-S,
the new benchmark in top performance



90% fast gripper
change
SWS quick-change system – fully
automatic gripper change within seconds



Automated machine loading

Automated machine loading



350 kg load bearing
capacity
VERO-S NSR robot coupling
for pallet handling – space-saving and
extremely flexible

100% control
TANDEM KSP plus clamping force
block with jaw monitoring



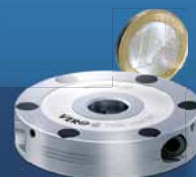
30% more productivity
Automated machine loading with PGN-plus
gripper with GSW spindle interface

Machining center



90% less set-up
costs
with VERO-S, due to set-up during
processing time

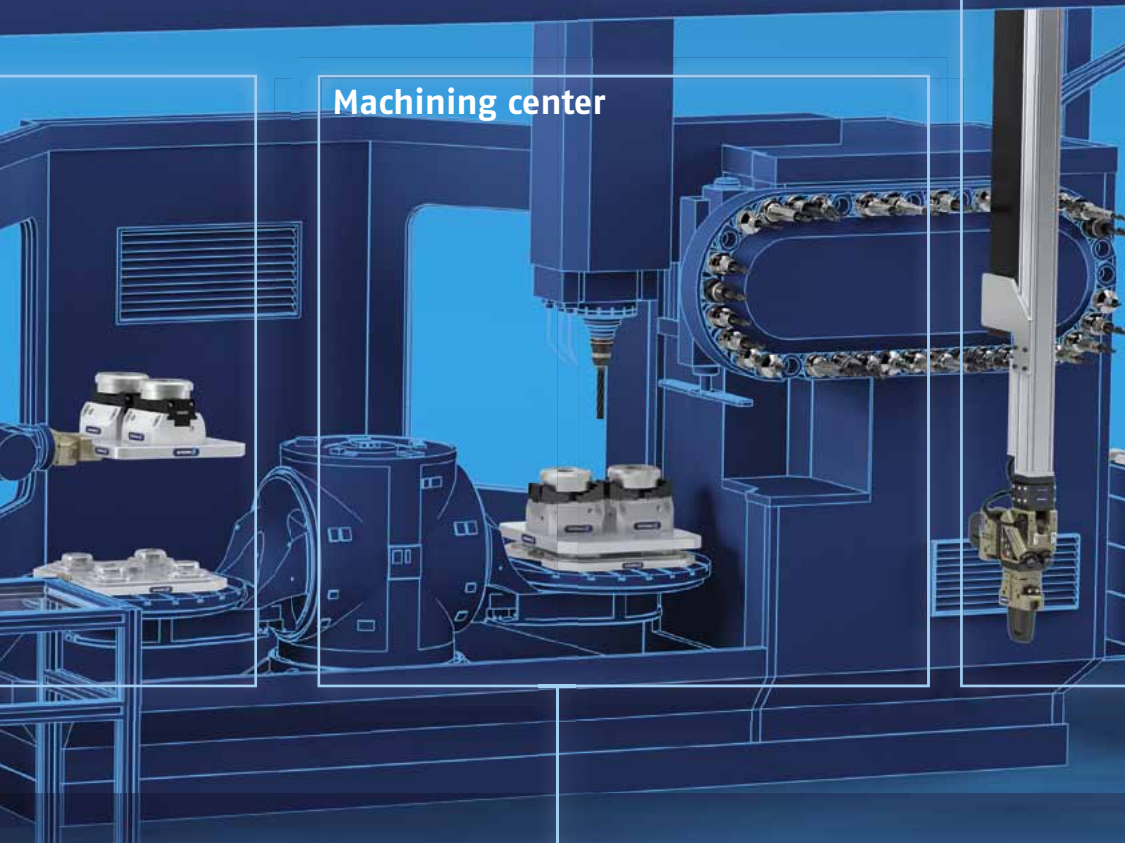
20 mm height
VERO-S NSE mini – the pneumatic
quick-change pallet system in a very flat design



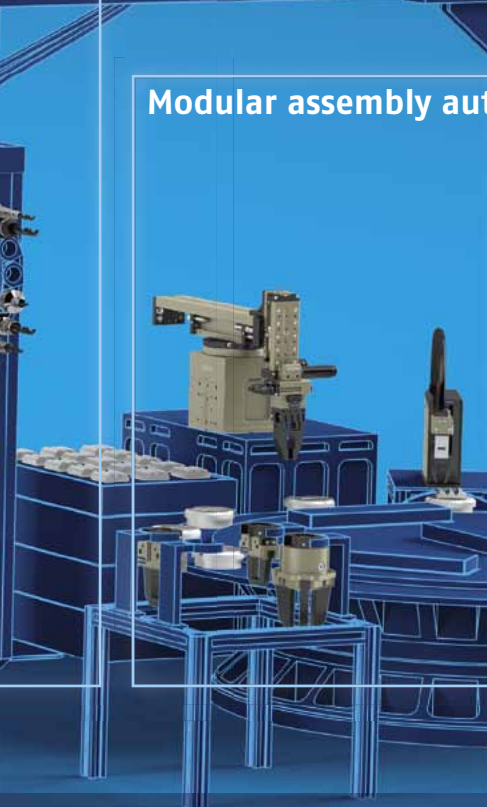
Automated handling



Machining center



Modular assembly aut



50,000 special solutions
Hydraulic expansion technology for tool or workpiece clamping



0.3 mm shank diameter
TIRIBLO'S-Mini sets a benchmark in micro machining

100% encapsulated
KONTEC KSK clamping force block
fully functional in harsh environments



less than **3** μ run-out accuracy
TIRIBLO'S-SVL – super-slim tool extension,
optimized interfering contours



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



up to **85,000** rpm
TIRIBLO'S-S predestined for high-speed
cutting

Modular assembly automation



180% improved gripping force – mass ratio

EGP – The powerful electronic gripper for small components with integrated electronics



combination options
SCHUNK modular assembly system



25% greater gripping force

MPG-plus – the most powerful pneumatic miniature gripper on the market

110

picks per minute

PPU-E – The fastest Pick & Place unit on the market, PPU-P with 90 picks/min



Mobile gripping systems

The handling of the future

6

degrees of freedom

Powerball Lightweight Arm LWA 4P

The lightweight arm with the world's most compact performance. Used on mobile platforms.



less than **3** μ run-out accuracy

TIRIBLOS-R with unique patented polygonal clamping technology



100% suitable to all SCHUNK toolholders

TIEINDLO-SVL Tool Extensions – optimized interfering contours and super-slim



up to **80** bar coolant-proof or peripheral coolant

Versatile clamping range with GZB-S intermediate sleeves



2,000 Nm torque at $\varnothing$ 32 mm

TIEINDLO E compact for large volume cutting, boring, reaming and thread cutting



More **35** years of experience in TENDO

hydraulic expansion technology TIEINDLO the original. With 29 interfaces, versatile, with 3 μ run-out accuracy.



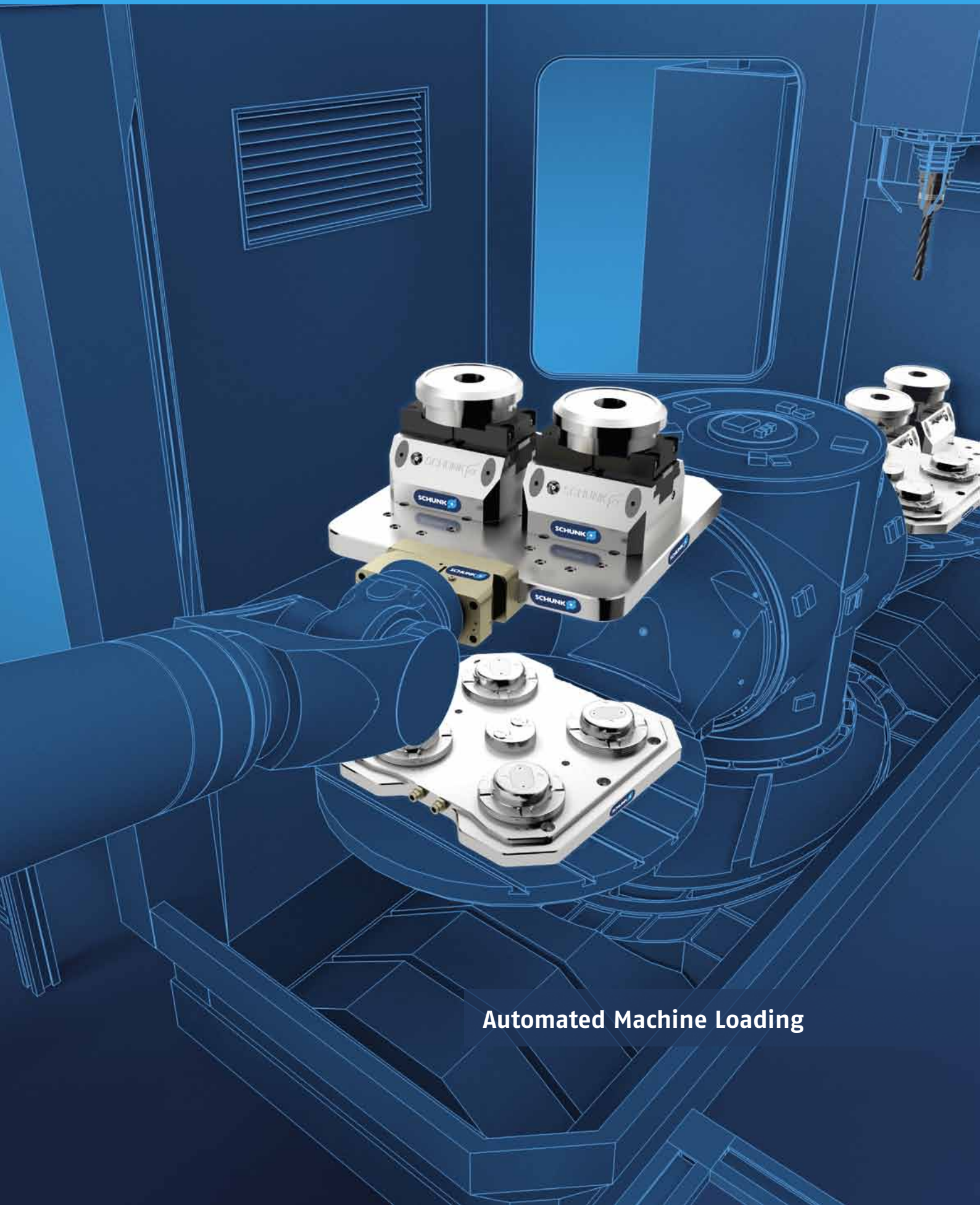
0 μ permanent run-out accuracy

TIEINDLO zero – perfect vibration damping, resulting in up to 50% longer service life





Automated machine loading



Automated Machine Loading

SCHUNK makes Machine Tools more productive

Our modules allow you to maximize the productivity of your systems due to faster loading and changing processes. You can benefit by systematically using individual SCHUNK modules for clamping technology and gripping systems, and gain even greater advantages by combining these individual components.

30% more productivity

100 kN holding force

20 tons of load handling



Automatic loading of a milling machining center with the clamping pallet prepared on the set-up table. After the insertion of the clamping pin, the quick-change pallet module positions and clamps the pallet within seconds.

350 kg load bearing capacity

VERO-S NSR Robot Coupling for Pallet Handling

Process reliable, precise and space-saving

Automated pallet loading redefined. The slim, interference contours minimized VERO-S NSR lightweight coupling works extremely close to the machine table. Low designs consisting of a module for stationary use and clamping pallet are easy to implement. This leaves a lot of space in the machine room for the workpiece and axis movements.

- Highest pull-in forces of up to 1,500 N
- Lightweight with only 1.6 kg
- Transmittable torques of up to 700 Nm
- Integrated slide monitoring and pallet presence monitoring



100 kN holding force

VERO-S NSA plus Automated Palletizing System

Highly efficient automation

Positioned within seconds with a repeat accuracy of < 0.005 mm, NSA plus is the precision module for automated machine loading. Build very low, it leaves ample space in the machine room.



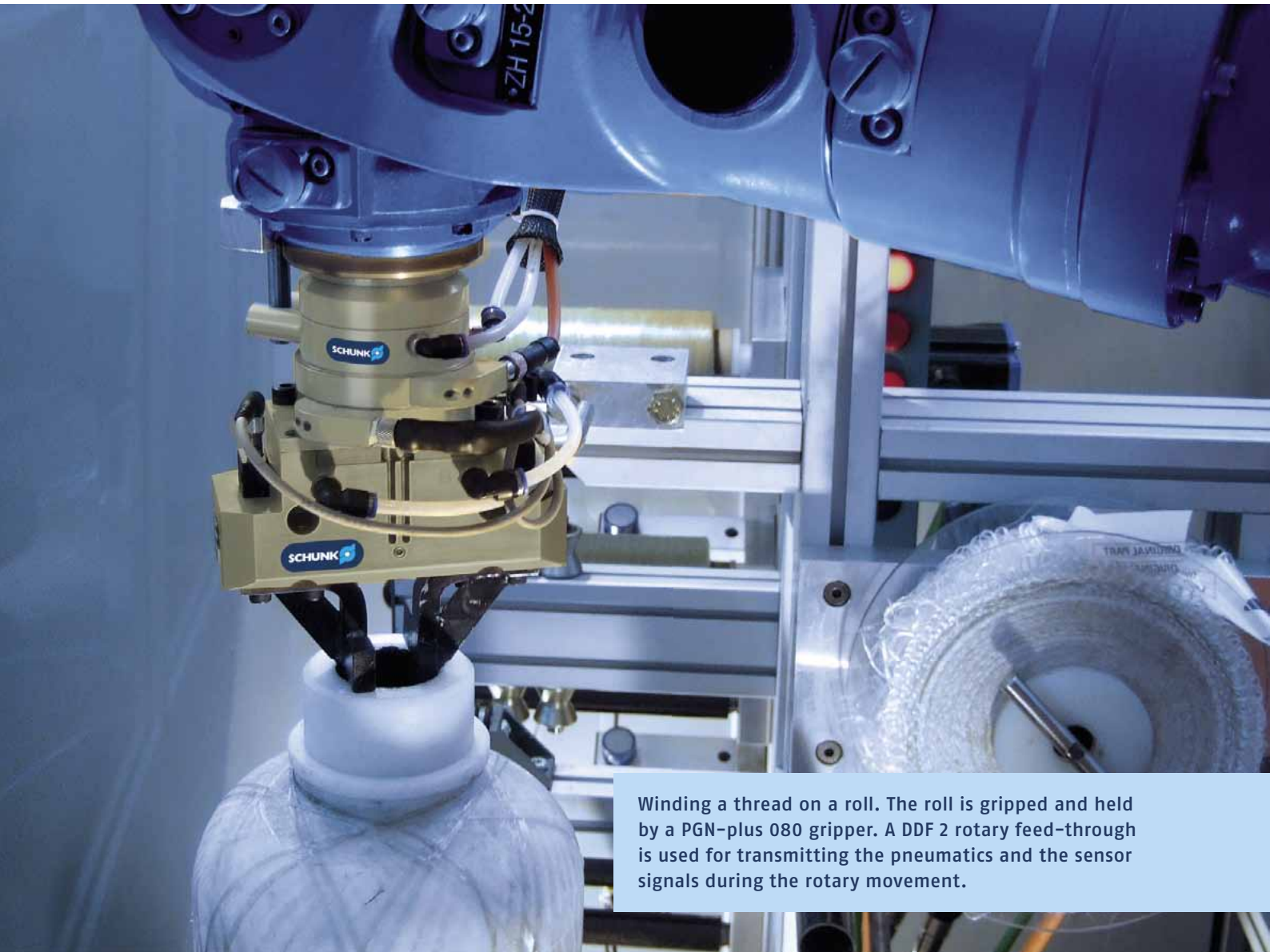
Transferable torque of up to 75 Nm

VERO-S NSR mini 100 Robot Coupling for Pallet Handling

Space-saving and extremely flexible

Its slim design is perfect for handling pallets extremely close to the machine table. The VERO-S NSR mini 100 allows for low designs consisting of a module for stationary use and clamping pallet and ensures maximum utilization of the machine room.





Winding a thread on a roll. The roll is gripped and held by a PGN-plus 080 gripper. A DDF 2 rotary feed-through is used for transmitting the pneumatics and the sensor signals during the rotary movement.

Payloads up to **1,350 kg**

Heavy Load Change System SWS-L

High-performance changing
Gripping systems for heavy loads with flexibility and precision. The SWS-L is the new performance class for meeting the increasingly tough requirements placed on heavy load robots.



54 kg handling weight

Manual Change System HWS

Excellent load bearing capacity
Cost-effective changing system with a compact design and fully manual operation. Despite its low dead weight, it can handle heavy loads between the robot and gripper, ensuring a scope-free and form-fitting connection.



90% faster tool change

Quick-Change System SWS

Fast and fully automatic change of grippers

One system, two components. The standardized quick-change system SWS establishes the connection between the gripping system and robots or gantries. The SWS offers full flexibility due to fast changing processes with a repeat accuracy of 0.015 mm. 22 sizes and payloads from 1 kg to 1,350 kg ensure optimal productivity and reduce costs for an extremely wide variety of handling tasks. Discover the wide range of SCHUNK changing systems for increased efficiency.

- Patented self-retaining locking system
- Integrated drive in housing
- All functional components made of hardened steel
- Integrated air feed-through



50% higher moment load

Rotary Feed-Through DDF 2

Versatile rotation up to 360°

The latest standard for modern robots and assembly applications. With three versions for a wide range of process requirements, the DDF 2 offers full flexibility. You choose: pneumatic feed-through, feed-through of electrical signals, or a combination of both.



3° maximum deflection possible

Tolerance Compensation Unit TCU

Intelligent yielding

Tolerances in the workpiece or process can bring machines to a standstill. The TCU finds the ideal mounting and joining position and compensates if things don't fit properly.



3 directions for overload detection

Collision and Overload Sensor OPR

Protects against collisions

Good and effective protection for robots and handling devices, protecting them from lasting damage. The OPR yields at the right moment so that not every collision automatically means a long downtime.



Measurement in all 3 planes

6-Axis Force Sensor FT

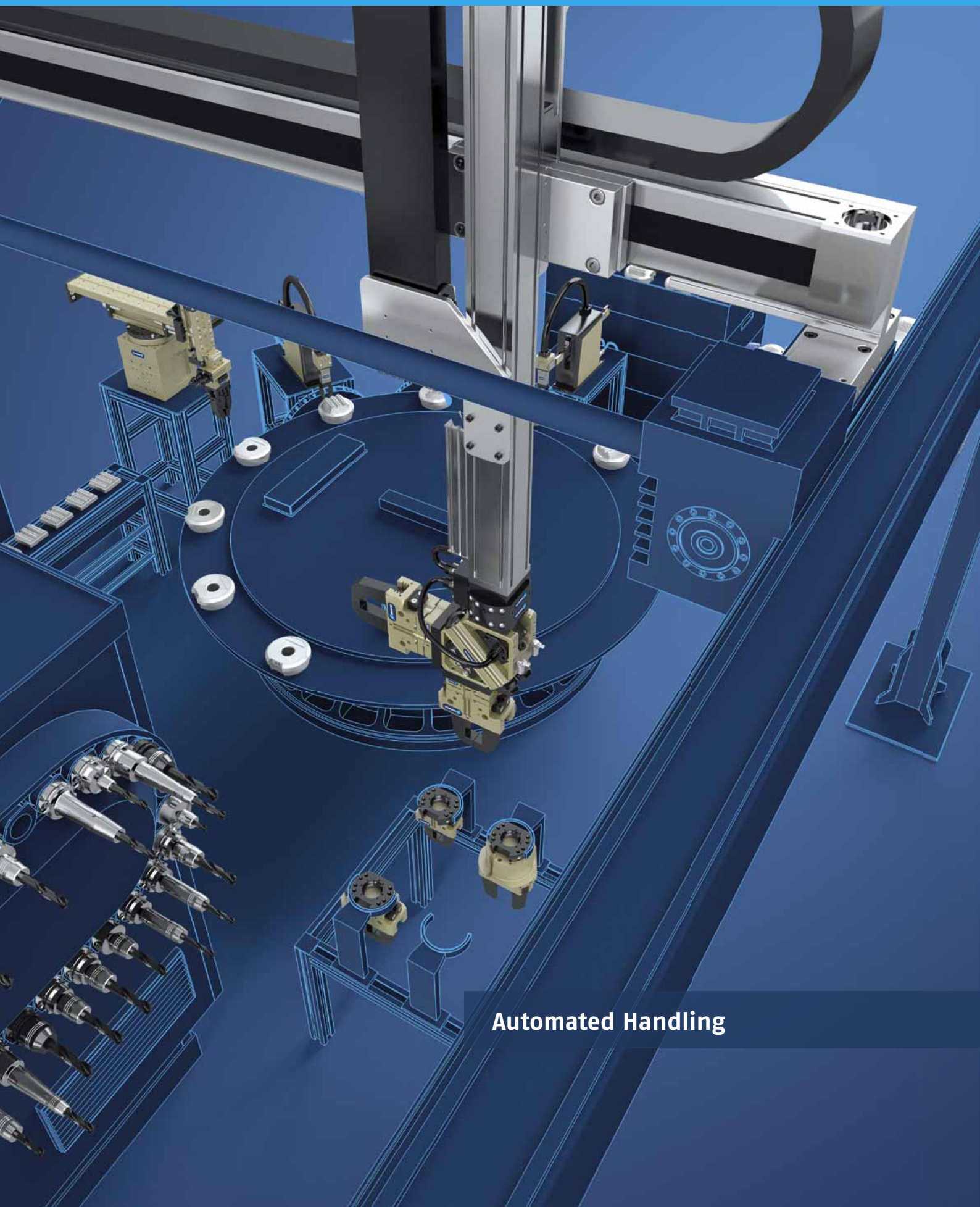
Robust and easy to operate

Precise measurement of forces and moments in all three planes. The FT is the ideal sensor for comparing the target and actual level of force and torque during testing or assembly operations.





Automated handling



Automated Handling

Automatically faster and preciser

SCHUNK offers the world's largest range of gripping modules, swivel units and rotary actuators, linear modules, and robot accessories. Handling and assembly processes in the field of automation require a wide variety of modules, especially in standardized combinations. Discover unimagined possibilities.

More than **500** standard combinations for line and room gantries

90% faster gripper change

100% cycle increase



Removing the parts from their casting molds. Controlling, plunging into cooling tanks, punching, stamping the serial number, and laying to one side. The corrosion-protected version of the PGN-plus grippers used here have been radically modified for hot environments and equipped with thermal resistant cabling and seals as well as a dust and dirt cover.

2 operating modes: synchronous and asynchronous

2-Finger Parallel Gripper LEG

One solution for everything

Intralogistics, packaging, automotive. The LEG is the perfect choice for handling goods with different workpiece sizes.



Gripping and turning **100%** combined

Parallel Swivel Gripping Module GSM-P

Works in the smallest spaces

Unbeatable when it comes to gripping and rotating in narrow spaces. And all this with a jaw stroke of up to 10 mm and a gripping force of up to 170 N.



Workpiece weights up to 190 kg

3-Finger Centric Gripper PZN-plus 380

High precision, even under heavy loads

First centric gripper with multi-tooth guidance for heavy load applications. Precise handling of workpieces up to 190 kg is no problem for the PZN-plus 380. This powerhouse from the PZN-plus series opens up new possibilities for handling heavy loads in the power plant construction, automotive, or foundry industries.

- Combination of patented multi-tooth guidance and wedge-hook design for maximum force transmission
- Significantly higher payload allows for use of longer gripper fingers
- Compact dimensions for minimum interfering contours in handling



100% accurate

2-Finger Parallel Gripper PGN-plus

The only gripper with a multi-tooth guidance

Highly precise handling, higher payload, higher gripping forces. Varied options for special application cases and perfectly graduated sizes make it an ideal solution for all areas of application.



Configured in 2 minutes

2-Finger Parallel Gripper WSG

Sensitive handling

The WSG electrical gripper is the perfect choice for handling especially delicate workpieces. The sensors, which can be integrated into the gripper fingers, precisely measure the forces emitted during the gripping process and allow for easy detection of gripped parts. Due to the integrated web server, the gripper is intuitive to configure and easy to diagnose.



Over 50 million cycles

2-Finger Radial Gripper PRG

Innovative dampening optimizes the cycle time

Rapid angular gripping with integrated, maintenance-free dampening system. 180° opening angle with opening/closing times from 0.1 seconds.



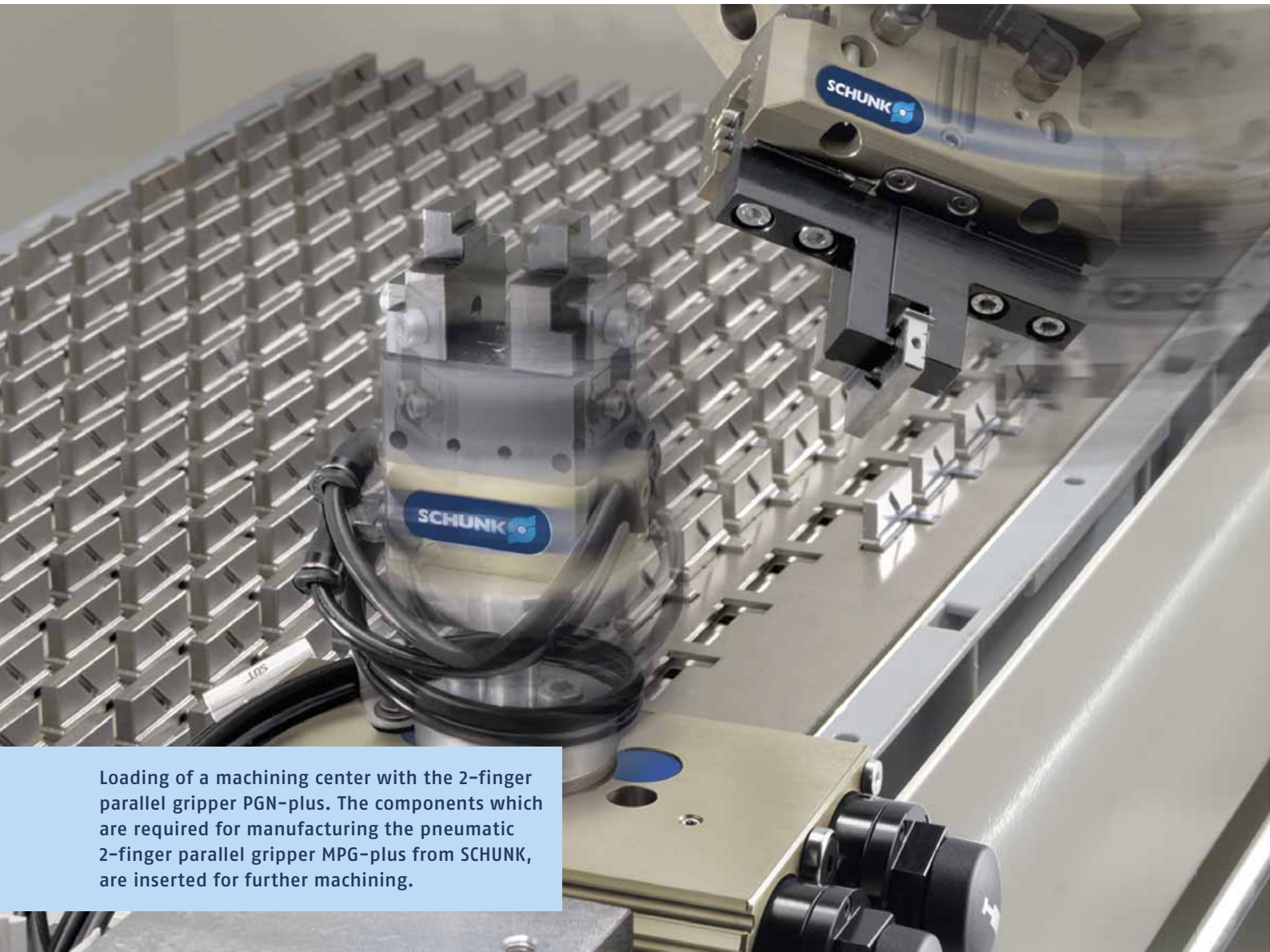
100% "on the fly" detection of positions

Optical Distance and Presence Sensor OAS

Can save on image processing

Differentiate parts, identify positions, can pick or destack "on the fly." The OAS allows your PGN-plus and MPG-plus to "see" cost efficiency with high-resolution.





Loading of a machining center with the 2-finger parallel gripper PGN-plus. The components which are required for manufacturing the pneumatic 2-finger parallel gripper MPG-plus from SCHUNK, are inserted for further machining.

0.01° repeat accuracy

Miniature Rotary Module ERD

High-speed, space-saving and with a powerful torque

Swiveling in a small package. The highly integrated ERD brings power and precision to the smallest of spaces. With any angle of rotation you require and an absolute-value transducer. 0.01° repeat accuracy and 3.6 Nm torque. Reliable, due to integrated air and electrical feed-through. This means that no rotating power lines are necessary.



28 Nm maximum torque

Servo Miniature Rotary Module PRH

Compact and easy to turn

The powerful rotary module. Extremely compact and highly precise. With protection class IP65 and a 13.5 mm central bore, the PRH is ideal for laboratory automation applications or miniaturized assembly machines. The built-in controller with bus connection minimizes the expense for wiring.



100% cycle increase

Universal Rotary Actuator SRU-plus 20-S with Valve Box

High-speed swiveling – the new standard

Increases the number of cycles by up to 100% compared to current rotary actuators of the same size. This high-speed module allows for swiveling times from 0.3 s and cycle numbers of up to 3,700 cycles per hour. Alternatively, the load can be up to three times more than that of current rotary actuators of the same size.

- Proven hydraulic high-performance shock absorbers combined with elastomers
- Greater power density with respect to loading, cycle time, and cycles per hour
- Valve box can be controlled via digital I/Os or via Profibus or CAN bus



With **fourfold** media feed-through option

Rotary Actuator SRU-mini

Powerful and compact

With a weight of 690 g and a torque of 1.15 Nm, this actuator is a powerhouse for swiveling in small spaces.



IP 67 is standard

Swivel Head SRH-plus

Flexible – even in difficult environments

Two grippers are moved in confined spaces. The SRH swivel head increases the machine's productivity due to the faster exchange of raw and machined parts. For achieving higher cycle times, the SRH-plus is available in a speed version, too.



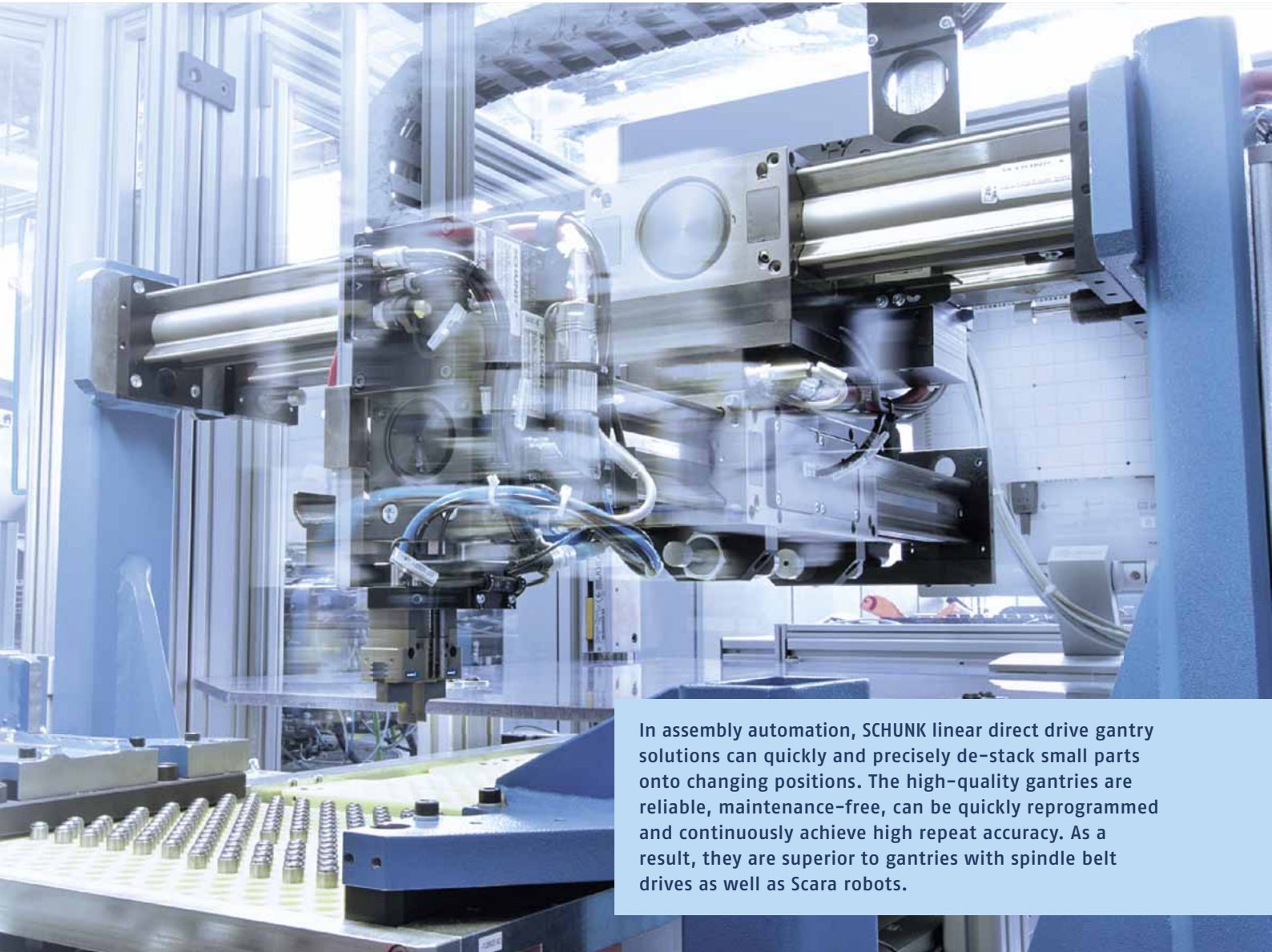
Up to **80%** efficiency

Rotary Module ERS

Compact with high torque

The most compact electrical rotary module on the market. Ideal for constructing compact and uncluttered high-performance systems due to a central bore for feed-through of cables. The ERS turns continuously and has the full flexibility to attain any intermediate positions with a repeat accuracy of 0.01°. At the same time, it reaches impressive torques of up to 27 Nm. The ERS is available with a SCHUNK Motion Controller MCS12 (48 V DC) or Bosch or Siemens standard controller (560 V DC) as well as in protection class IP54 and with a DDF rotary feed-through.





In assembly automation, SCHUNK linear direct drive gantry solutions can quickly and precisely de-stack small parts onto changing positions. The high-quality gantries are reliable, maintenance-free, can be quickly reprogrammed and continuously achieve high repeat accuracy. As a result, they are superior to gantries with spindle belt drives as well as Scara robots.



3,800 mm maximum stroke

Flat Linear Module LDF

Extremely flat pacemaker

Ideal for flat, highly dynamic cross table. With a height of 66 mm, the LDF linear direct drive axis modules take up very little space.



Payloads up to 800 kg

Linear Axis HSB Gamma

Super stable and self-supporting movements

The inherently rigid basic profile can bear many times its own weight. Maximum lengths of 8 m and payloads of up to 800 kg open up brand new handling possibilities.

Over 500 standard combinations

Line and Room Gantry LPP / LPE / RPE

Standard gantries from a modular system

Pre-assembled for immediate commissioning. Pneumatic or electric. The standardized configurations can be combined into customized gantries, saving up to 50% in investment, project planning, assembly and installation.

- 5 kg, 10 kg, and 20 kg payloads
- 300 mm to 1,500 mm X-stroke/Y-stroke
- 25 mm to 500 mm Z-stroke



0.01 mm repeat accuracy

Stroke Module HLM

Dynamic for small spaces

Highly efficient in narrow spaces due to compact design and high power density. Designed for minimal cycle times. The HLM makes every high-performance assembly precise.



10,000 modules used in industry

Linear Module LM

Continuously dependable

The reliable module for high-performance fitting systems. The robust cross roller guidance keeps guiding the axis long after other systems would have failed. Long-lasting functions save costs over the long term.



100% compatible with the SCHUNK modular system

Compact Spindle Cantilever Axis ELS

Ideal as a Z axis for short strokes

Ideal for applications where the module must extend out of the work area. The ELS can be easily combined with many different pneumatically or electrically driven modules. This is standard for SCHUNK.



0.01 mm repeat accuracy per axis

Linear Modules LDx

Compact and cost-effective

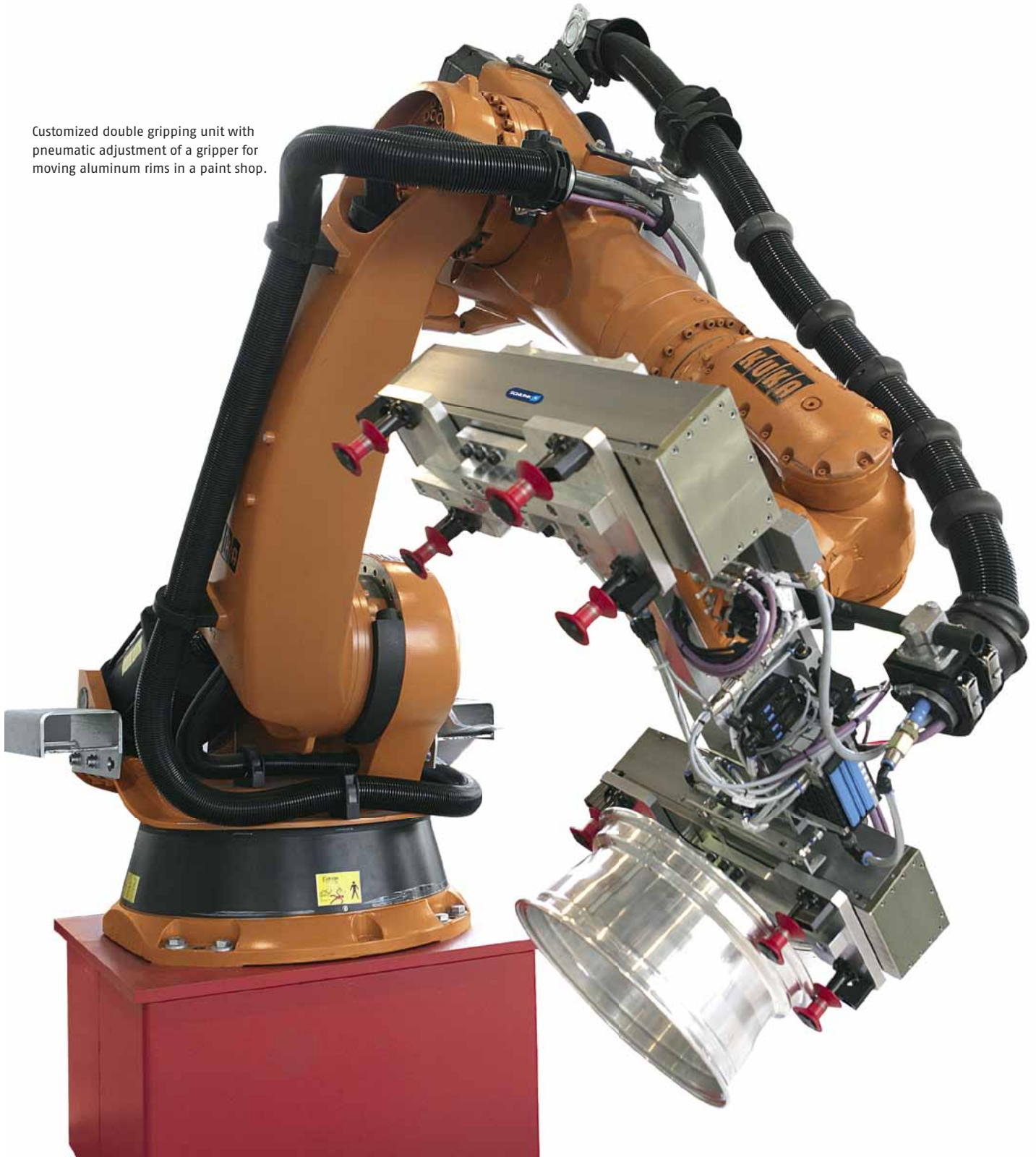
The next generation of modules for high-precision high-speed applications. 15% higher rated force, minimal cycle times due to high dynamics. Not to mention a huge variety of modules and versions for every application.

Ten-thousand customer-specific SCHUNK solutions

SCHUNK offers the largest standardized modular system by which you can implement more than 90% of all automation applications. Moreover, SCHUNK's full range of know-how and experience goes into designing custom solutions.

From standard gantries to customer-specific systems, you can benefit from our customer orientation and development expertise. **Trust in the No. 1.**

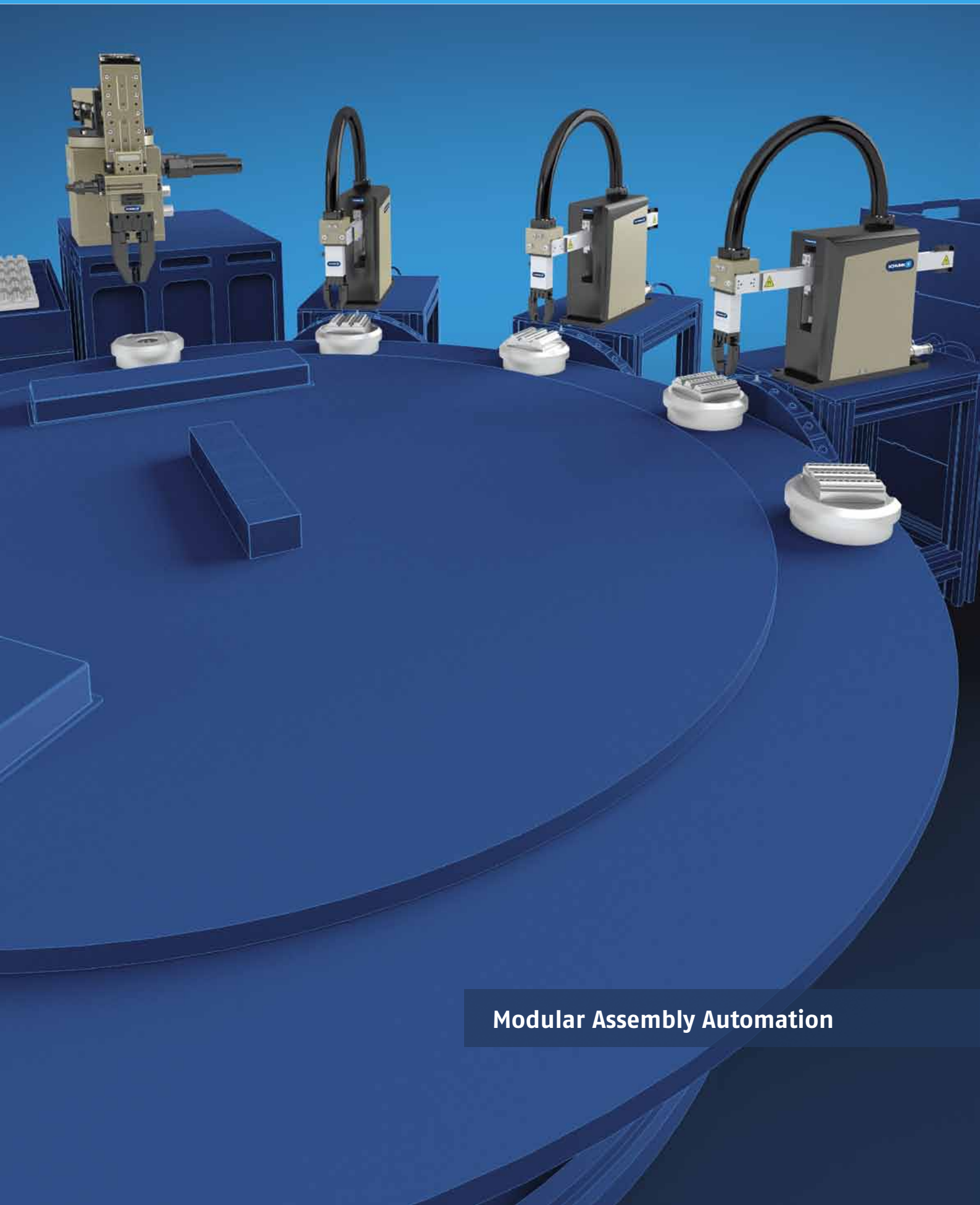
Customized double gripping unit with pneumatic adjustment of a gripper for moving aluminum rims in a paint shop.







Modular assembly automation



Modular Assembly Automation

More Cycles for higher Productivity

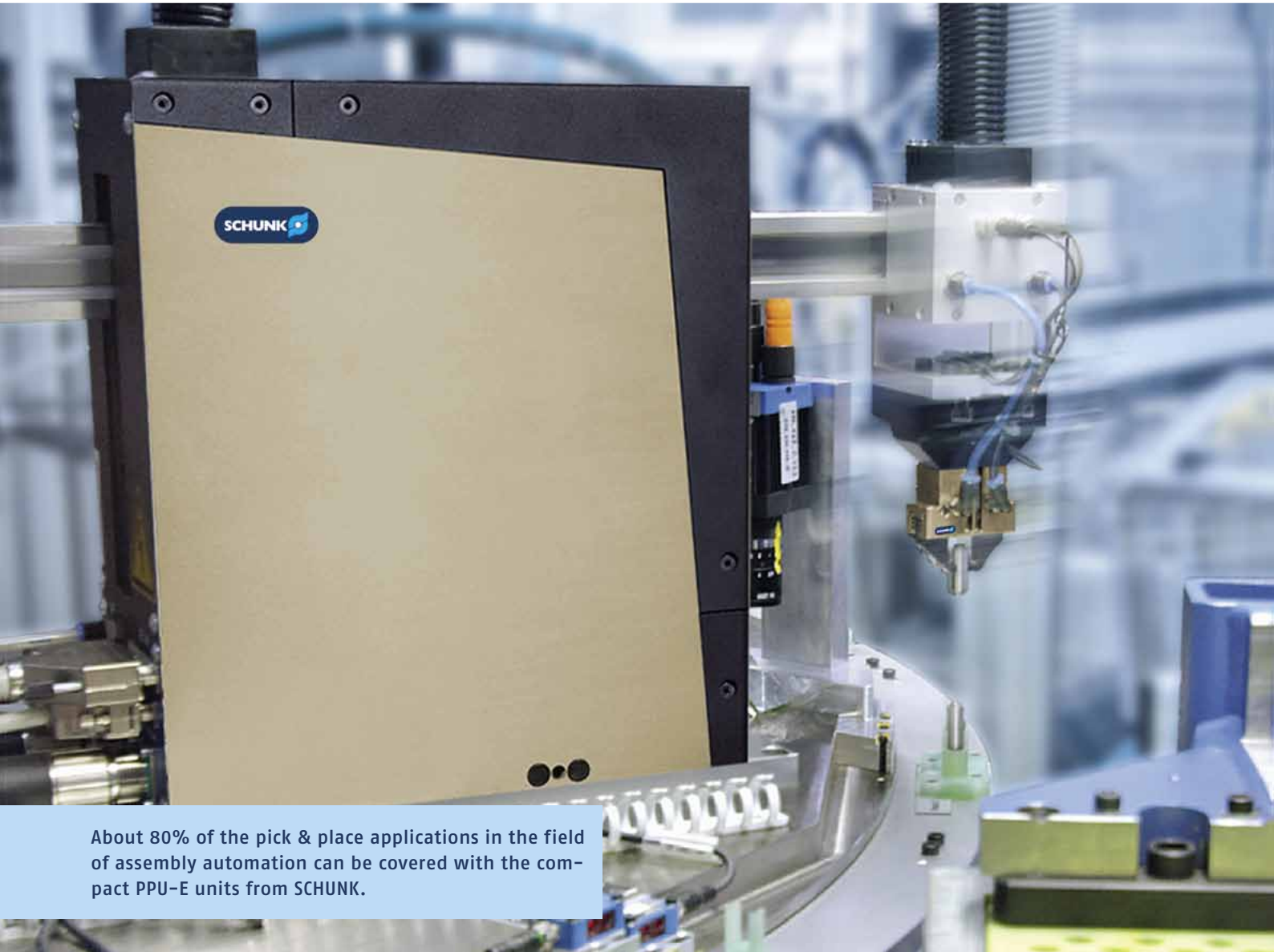
Wherever pick & place and assembly tasks place the highest demands on precision and economy, SCHUNK is the solution provider for perfect implementation.

No matter whether partially or fully automatic. No matter which drive medium. The innovative SCHUNK components always get that little bit of extra power out of your processes.

180% better
gripping force-mass ratio

110 picks per minute

∞ combination options



About 80% of the pick & place applications in the field of assembly automation can be covered with the compact PPU-E units from SCHUNK.

Ready to go in **10** minutes

Valve Control Unit VCU

Ready for action in no time

Making it even easier to save time and air. Connect the VCU, actuate it and simply use the pre-programmed sequences. Plug & Work. Plug-in, select, and start in 10 minutes.



110 picks per minute

Pick & Place Units PPU-P and PPU-E

The fastest in their class

With 110 picks per minute, the servo-electric PPU-E is the fastest pick & place unit on the market. PPU-P keeps up a brisk pace pneumatically with 90 picks per minute. Both are the ultimate in high-speed assembly work.

- 2 kg – 5 kg payload
- 10 μ repeat accuracy
- Plug & Work makes commissioning as easy as can be



∞ combination possibilities

SCHUNK Modular Assembly System

More individuality and economy

Comprehensive, top class modular system for individual solutions. Benefit from the variety with components for automated assembly that have been tried and tested 100,000 times.



Up to 90 cycles per minute

Rotary Pick & Place Unit DRL

High-speed assembly with integrated rotary motion

Highly dynamic yet steady pick & place operations with rotating angles of 90° or 180°. The DRL is a specialized pace-maker for modular high-performance assembly in the SCHUNK program.



25% higher gripping force

Miniature Parallel Gripper MPG-plus

The benchmark

The most powerful pneumatic miniature gripper on the market. Used all over the world when it comes to handling small parts reliably and fast. 25% more power, up to 10% less weight. A concept proved 100,000 times.



180% better gripping force – mass ratio

Electrical Gripper for Small Components EGP

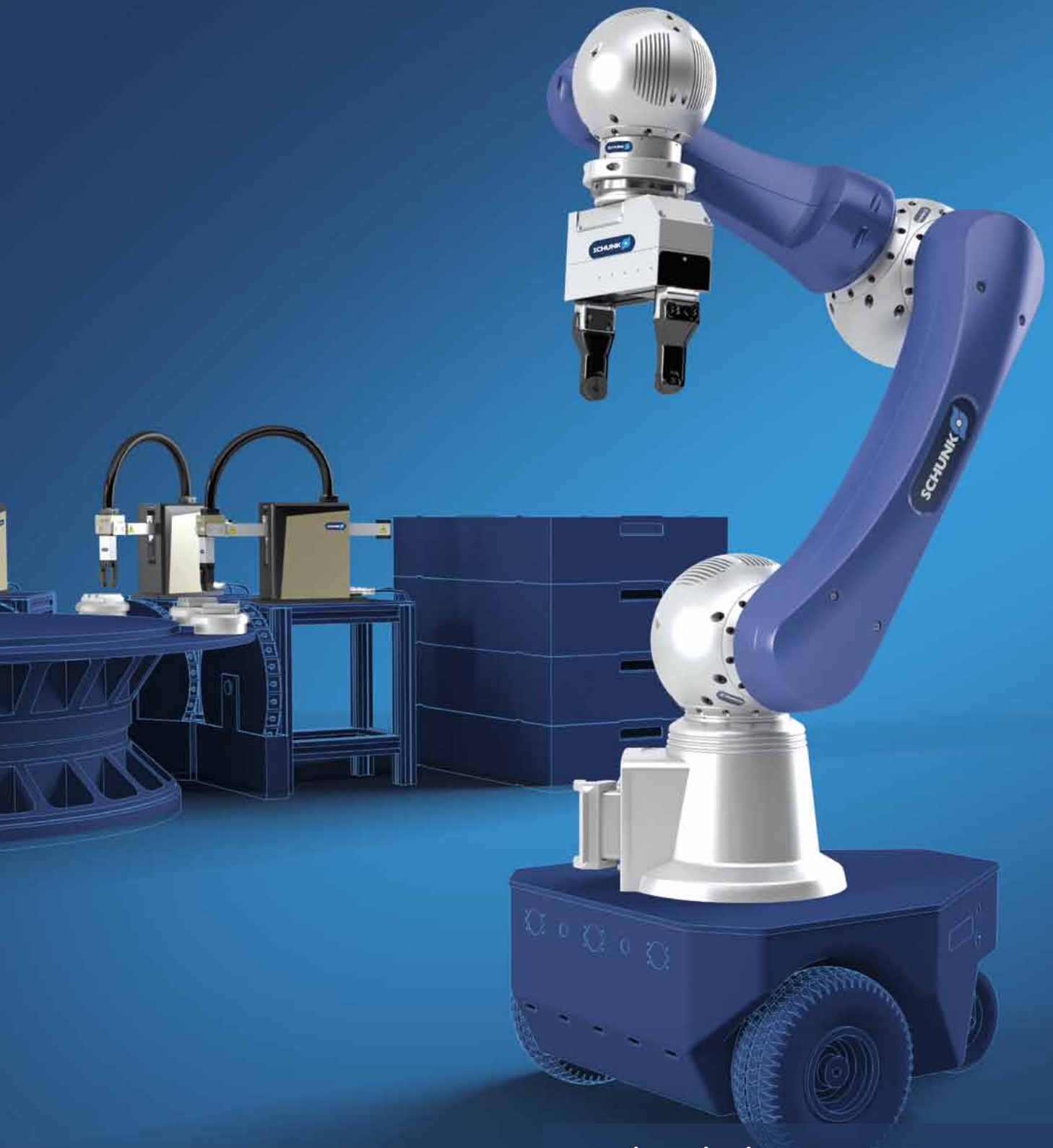
The perfect alternative

The most powerful electronic gripper for small components with integrated electronics. It makes changing from comparable pneumatic to mechatronic gripper modules without loss of gripping force into child's play.





Mobile gripping systems



Mobile Gripping Systems

We develop Mobile Gripping Systems for the Future

Inspection systems, applications on mobile platforms, human/machine and human/human interaction. On the economic side of things, service robotics is becoming increasingly dynamic. Our mechatronic products are setting new standards even today. In both professional and private spheres. SCHUNK is pushing development forward.

> 7 degrees of freedom

100% flexibility

340° rotation range



The Use of Mobile Gripping Systems in Service Robotics

More than 1,500 lightweight arms installed, more than 15,000 swivel and gripping modules, more than 300 customers all over the world, and more than 16 years of mechatronics experience make SCHUNK one of the most important developers and vendors of mobile gripping systems for an extremely wide range of applications.

As a pioneer, we are continuously redefining the feasibility limits of industrial reality. With unique products and developments, we are characterizing the functions of inspection systems, applications on mobile platforms and human/machine interactions in the area of robotics.





Inspection service

SCHUNK component gripping system used in Areva iNDT robots does all the work when inspecting welds and pipe connections, for example in power plants with high temperature ranges or radioactive environments.



Research

A high-performance lightweight arm consisting of PRL modules with light cast connections and a SCHUNK SDH-2 gripping hand with tactile sensors. The flagship project Care-O-Bot®3 of the Fraunhofer Institute of Production Engineering and Automation (IPA).



Domestic care

LWA 4D with 7 degrees of freedom and SDH-2 3-finger industrial hand for a service robot developed for people with disabilities by researchers at the University of Bremen.



Quality assurance

Highly flexible handling device for a fully automated laboratory at ThyssenKrupp AG. A SCHUNK 5-axis lightweight arm with PRL modules and mechatronic PG 70 grippers handles the sensitive cement samples.



Exploration

The remote-controlled EOD robot developed by the Harris company makes it possible to safely remove explosive weapons. As a manipulator, SCHUNK integrated a modular lightweight arm with 6 degrees of freedom based on PRL rotary modules and PG grippers.



Laboratory use

SCHUNK mobile gripping system components are used around the world in highly specialized measuring robots, in laboratory automation and in cleanroom robots.



Logistics

With perfectly coordinated components from the modular system, mobile gripping systems from SCHUNK offer tailor-made and extremely efficient solutions for automated warehouse logistics and goods packaging.

6 degrees of freedom

Powerball Lightweight Arm LWA 4P

A lightweight arm with the world's most compact performance

The arm has three ideally integrated Powerball modules, offering 6 degrees of freedom. Integrated intelligence makes powerful, mobile handling possible as never before. Also in terms of human-robot cooperation.

- Weight/load capacity ratio of 2:1
- Gripping radius of over 700 mm
- Excellent repeat accuracy of 60 µm
- 24 V DC supply for mobile applications



MM Award 2012

Configured in 2 minutes

2-Finger Parallel Gripper WSG

Extremely delicate handling

The WSG electrical gripper is the perfect choice for handling especially delicate workpieces. The sensors, which can be integrated into the gripper fingers, precisely measure the forces emitted during the gripping process and allow for easy detection of gripped parts. Due to the integrated web server, the gripper is intuitive to configure and easy to diagnose.



50 mm tall

Flat Change System FWS 115

Versatile in use due to low height

The changer has a small diameter and a compact height of 15 mm, factors which make it outstandingly suited for exchanging different end effectors rapidly and with just a few actions on the robot.



100% flexibility

Servo-electric 3-Finger Hand SDH

Taking the human hand as its model

The 3-finger industrial hand features maximum flexibility when it comes to the shape, size, and above all, position of the gripped parts. Form-fit and force-fit gripping with integrated tactile sensors make it a sensitive helper.



10 degrees of freedom

Dextrous Light-Weight Arm LWA 4D

Proven in thousands of applications

From mine detectors to the latest in rehabilitation systems. The LWA 4D lightweight arm sets standards and can be found on service robots all over the world – often combined with our sensitive gripping systems.





Lathe



Lathe

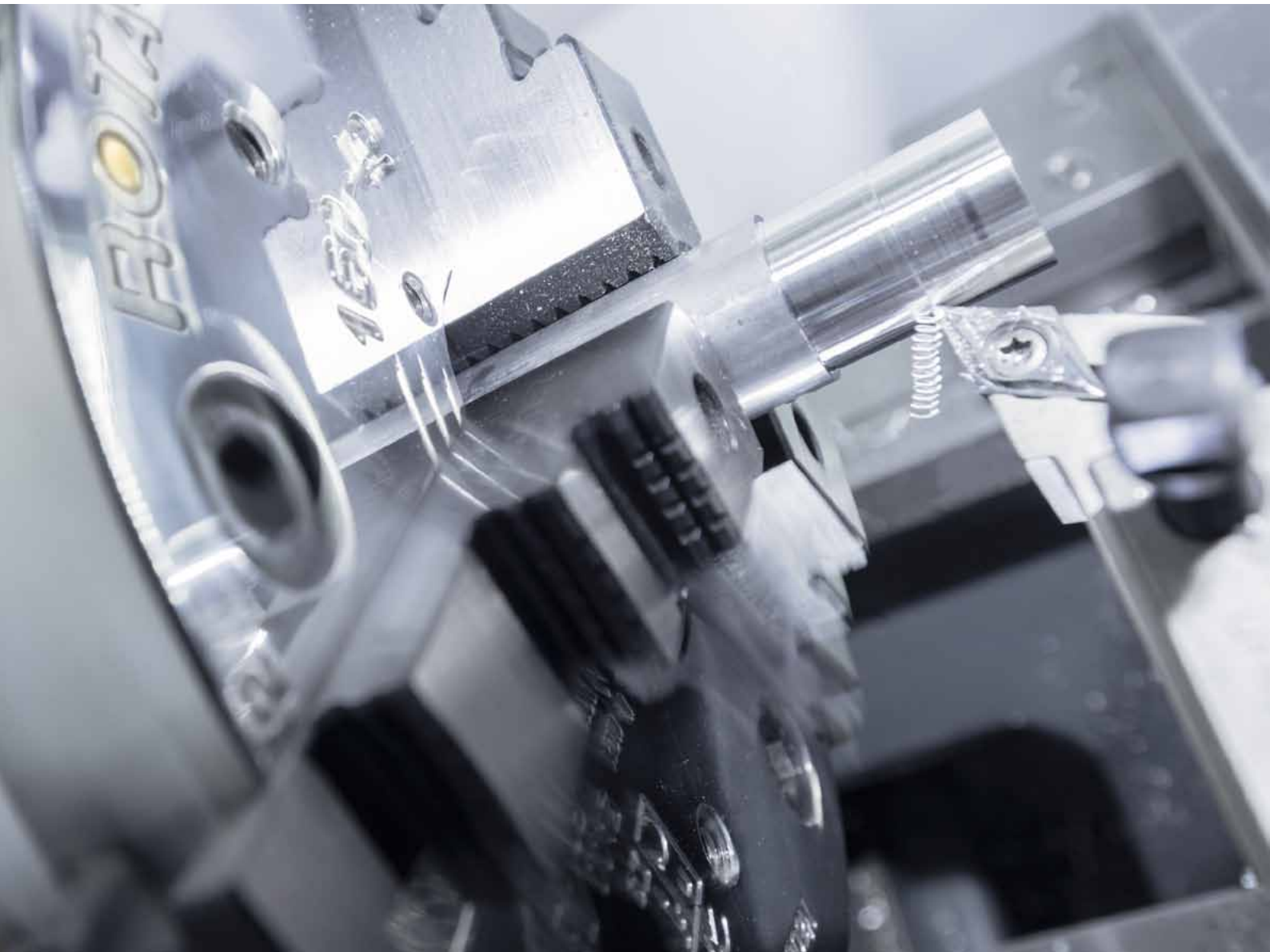
The whole World of Turning

From powerful lathe chucks, precision toolholders, and the world's largest standard chuck jaw program up to special jaw and hydraulic expansion toolholder solutions. Always keeping an eye on your benefit.

< 60 seconds quick jaw change

50% larger clamping range

0.01 mm repeat accuracy



16,000,000 chuck jaws sold world-wide

With more than 1,200 different types, this is the world's largest standard program of chuck jaws for any lathe chuck application. More than 16 million standard chuck jaws have been delivered by SCHUNK since 1966, and are being used all over the world.



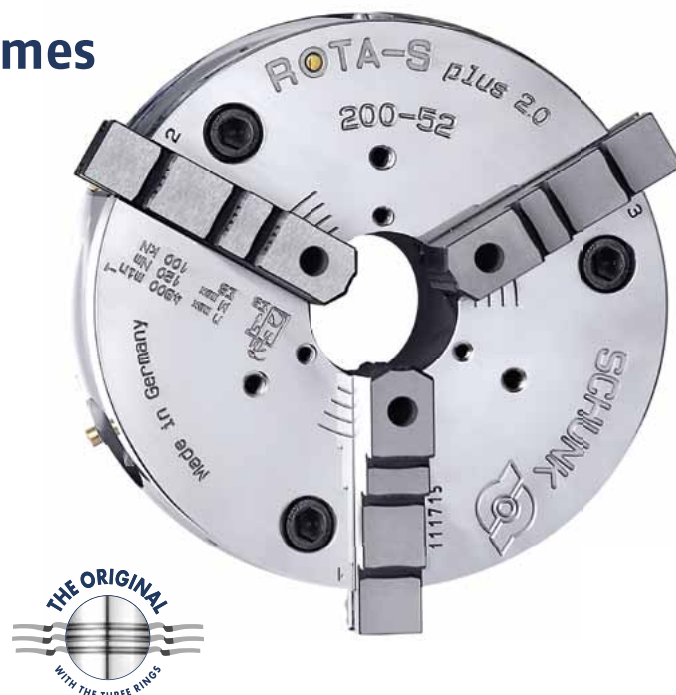
Sold more than 10,000 times

ROTA-S *plus* 2.0 Manual Chuck

The new generation

Its predecessor ROTA-S plus has already been sold by SCHUNK 10,000 times. The new generation scores due to: Higher RPM and cutting speeds due to permanently high clamping forces. Convenient jaw change in less than a minute due to optimized quick-change jaw system. Faster to use due to maximum operator safety. The ten-thousand-fold proven concept has now been perfected. And again it sets standards.

- High jaw change repeat accuracy
- 3-fold base jaw securing
- More convenience through sensible accessories such as expansion arbor and changeable protection sleeves



60 seconds for quick jaw change

ROTA THW *plus* Power Lathe Chuck

Quick to adapt

The set-up time killer as of batch size 1. Quickly adaptable to a whole variety of clamping tasks due to jaw change in less than a minute.



0.01 mm repeat accuracy

VERO-S NSL turn Quick-Change Pallet System

Set-up timer killer for milling/turning centers

Safe clamping even below a speed of 2,000 rpm. Very simple connecting interface with a repeat accuracy of 0.01 mm turns the module for stationary use into a turbo productivity station.



50% larger clamping range

SCHUNK Claw Jaw

Even more bite!

Unbeatable when it comes to transmitting high torques. The sharp serrations quickly dig into the workpiece surface and clamp them safely in one operation. The possible combinations of basic, intermediate and top jaws expand the standard components' range of application by up to 50%.



50,000 customized chuck jaw solutions

SCHUNK Chuck Jaws in special design

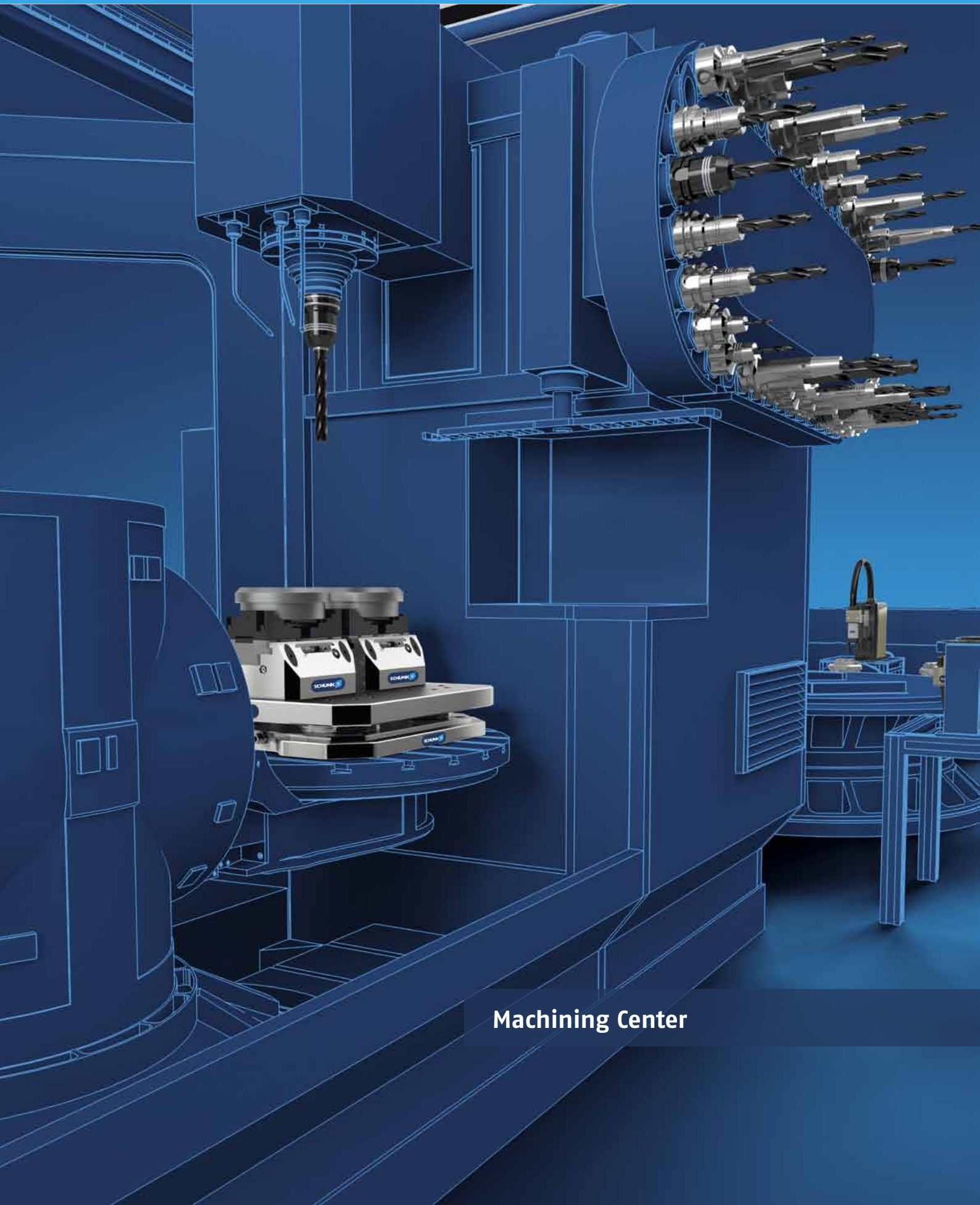
For complex clamping tasks

Modified standard jaw or complex special design. Perfectly customized, ideal solutions. As individual as necessary. As economical as possible.





Machining center



Machining Center

Handles every Machining Task

Innovative and highly precise toolholding systems of the SCHUNK TOTAL TOOLING program featuring the largest modular system of stationary clamping technology cover a unique range of machining requirements.

0 interfering contour

0 μ permanent run-out accuracy

0.3 mm shank diameter



100% suitable

TENDO SVL Tool Extension

Long and super-slim

The innovative, TENDO SVL tool extension with optimized interfering contours from SCHUNK sets new standards in regard to set-up time and costs.

The tool extension is clamped into any SCHUNK toolholder within seconds. The TENDO SVL has been designed for and is suitable for the precise machining of difficult to access areas.



More than 35 years of experience

TENDO Hydraulic Expansion Toolholders

The hydraulic expansion toolholder for all shank types

The original made by SCHUNK. Technological leader, economical and absolutely precise. And universally applicable in high-precision boring, milling, thread milling and reaming. Process reliable clamping without expensive peripheral equipment.



Up to 2,000 Nm torque

T|E|N|D|O® E compact Hydraulic Expansion Toolholder

Full power

The non plus ultra for volume cutting. Convincingly priced, it makes it easy for you to change from mechanical and thermal toolholders to the more precise TENDO quality.

- Highest torques up to 2,000 Nm (with a diameter of 32)
- Run-out and repeat accuracy < 0.003 mm
- Up to 40% raised tool life

0.3 mm shank diameter

T|R|I|B|O|S®-Mini Polygonal Clamping Technology

The smallest, changeable precision toolholder

Used in the medical, dental and electrical engineering industries as well as the watch and jewelry industries. Countersunk electrodes and mold making. TRIBOS-Mini sets the standards where miniaturization needs to be implemented economically. The tiny one for minimal shank diameters of 0.3 mm is the benchmark in micro-machining. This toolholder allows for extremely precise applications.

- Run-out accuracy of < 0.003 at $2.5 \times D$
- Balancing grade G 2.5 at 25,000 rpm or $Rev_{max} < 1 \text{ gmm}$
- Quick and easy tool change

3 μ run-out accuracy

T|R|I|B|O|S®-R Polygonal Clamping Technology

Stable and precise

Ideal for volume machining through selectively optimized radial stiffness and clamping force and a run-out accuracy of < 0.003 mm. A special chamber system dampens vibrations and allows for a better surface and longer tool service lives.



85,000 rpm

T|R|I|B|O|S®-S Polygonal Clamping Technology

Extremely slim design

Designed slimmer than any other known toolholder system found on the market. Predestined for precise machining tasks in difficult to reach workpiece areas due to its run-out accuracy of < 0.003 mm.



3 μ run-out accuracy

T|R|I|B|O|S®-SVL Tool Extension

Better price due to standardization

Super-slim tool extension, made for high-precision machining of difficult to access areas. Flexibly combined with standard toolholders and tools, an SVL saves you from buying expensive special tools.





5-sided workpiece machining in one single set-up

MAGNOS Square Pole Technology

Economy cubed

Due to the level positioning of the workpieces on the MAGNOS magnetic chuck, all of the five workpiece sides are easily accessible.

Increased tool service lives and process reliability

Consistently permanent magnetic holding force across the entire workpiece effectively minimizes vibrations and leads to improved surfaces and a clearly increasing precision.

Minimum set-up times and increased productivity

The workpiece is clamped in seconds. Fine adjustment or re-clamping of the workpiece during machining is no longer required.

90% less set-up costs

VERO-S

Quick-Change Pallet System

The thrifty one of the SCHUNK modular system

The set-up time killer for higher machine running times and a more rational production as of batch size 1. Discover the ideal clamping solution for your machine.

- 90% less set-up costs
- With maximum pull-in forces of up to 40,000 N
- Repeat accuracy of < 0.005 mm



Combination with MAGNOS magnetic clamping technology



Combination with KONTEC system



Combination with lathe chuck



Height 20 mm

VERO-S NSE mini

Quick-Change Pallet System



Super-flat design

A flat design can be also innovative. The world's flattest quick-change pallet system is the specialist in direct workpiece clamping, pallet clamping, and assembly handling. Ideal for smaller machines and easy machining tasks.

2-fold, 4-fold or X-fold

VERO-S NSL mini

Quick-Change Pallet System



Variability due to the modular system

Whether as a 2-fold, 4-fold, or multiple clamping station – VERO-S NSL mini can be adapted to any individual requirement. For any application. On all conventional machine tables.

0.02 mm repeat accuracy

TANDEM® Clamping Force Blocks

Enormous power with highest precision

There is room for power in the smallest machining area. In confined spaces these compact versions with high clamping forces and a maximum repeat accuracy of 0.02 mm ensure precise results.



More than 50,000 implemented special solutions

Special Hydraulic Expansion Solutions

For tool or workpiece clamping.

SCHUNK offers customized hydraulic expansion toolholders when standard solutions have reached their limits. Also for extreme requirements.





2-Finger Parallel Gripper WSG 32

The first compact gripper with covered guidances and integrated control unit.

New Ideas for new Products

Always one benchmark ahead.

Whenever a pioneering spirit meets love for technology, SCHUNK innovations are on the agenda. As a competence leader, we know where to find the potential for efficient solutions, how to develop them and how to standardize them. Each year, the results are convincing: benchmark products, innovations and assembly enhancements that set standards in our customer's added value chains, around the world.

2013 Hanover Show

More than **20** new benchmarks

In more than **60** sizes



Rotary Feed-Through DDF 2

The most powerful rotary feed-through for modern robot and assembly applications.

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2-Finger Small Component Gripper MPG-plus Now available in a high-precision version

Precision redefined

The high-precision version MPG-plus was developed especially for assembly automation of electronic components and small components. With this version, even the most filigree components can be precisely positioned. When the gripper is changed, the high-precision version ensures perfect eccentricity, parallel positioning and evenness in height without time-consuming fine adjustments or reteaching.

Efficiency in a small package

The combination of oval piston drive and low-friction guidance boosts the efficiency of the MPG-plus enormously, making it the most powerful 2-finger small component gripper on the market. The high force and moment load enable longer gripper fingers and higher gripping forces without increasing the gripper size. Compared to the former MPG, the new version supports size 40 instead of size 50.



MM AWARD 2010
zur **FAUTOMATICA**

With maximum precision!

High compact performance – more gripping force in a compact design.

Immediately available



Sizes
16 .. 64



Weight
0.03 kg .. 0.7 kg



Gripping force
25 N .. 350 N



Stroke per finger
1.5 mm .. 10 mm



Workpiece weight
0.13 kg .. 1.25 kg

Product features

- Enormous efficiency – for 25% more gripping force
- 30% higher load rating enables 50% longer gripper fingers
- 10% weight reduction – for a gripper with higher dynamics
- Replacement accuracy of 0.1 mm
- Eccentricity of gripping center is 0.05 mm
- Evenness in height of 0.02 mm when multiple modules are positioned next to each other

Your advantage

- More compact system designs due to higher gripping forces in a smaller space
- More flexible system designs due to longer finger length in a smaller space
- Reliable processes due to dependable magnetic switch monitoring
- Increased system productivity due to reduced wear-related downtimes
- Absolute replacement accuracy when changing grippers
- Maximum accuracy of clamping device to mounting surface

Sectional diagram

- 1 Base jaw
- 2 Wedge hook design
- 3 Cross roller guidance
- 4 Sensor system
- 5 Oval piston drive
- 6 Housing



2-Finger Parallel Gripper JGP Stroke 2 Version More power in the compact class

Now with double the gripping force and half the stroke

The multi-purpose 2-finger parallel gripper JGP is now available in a stroke 2 version, meaning it has double the gripping force and half the stroke. For the same size, it allows for greater gripping forces and longer gripper fingers. Alternatively, even when identical force is required, smaller sizes can be used in order to implement more compact solutions. Like all JGP models, the stroke 2 version features a powerful pneumatic oval piston drive.

Robust with compact dimensions

Relative to its compact dimensions, the gripper features outstanding power density. It offers all the essential functions at a highly attractive price. Robust T-slot guidances ensure precision handling and stable processes. Because the gripping module can be attached by screws on the side or bottom, it allows for a high degree of flexibility in system design.



More force!

High compact performance
and compact dimensions.

Immediately available



Sizes
50 .. 125



Weight
0.17 kg .. 2.6 kg



Gripping force
290 N .. 3,200 N



Stroke per finger
2 mm .. 8 mm



Workpiece weight
1.45 kg .. 16 kg

Product features

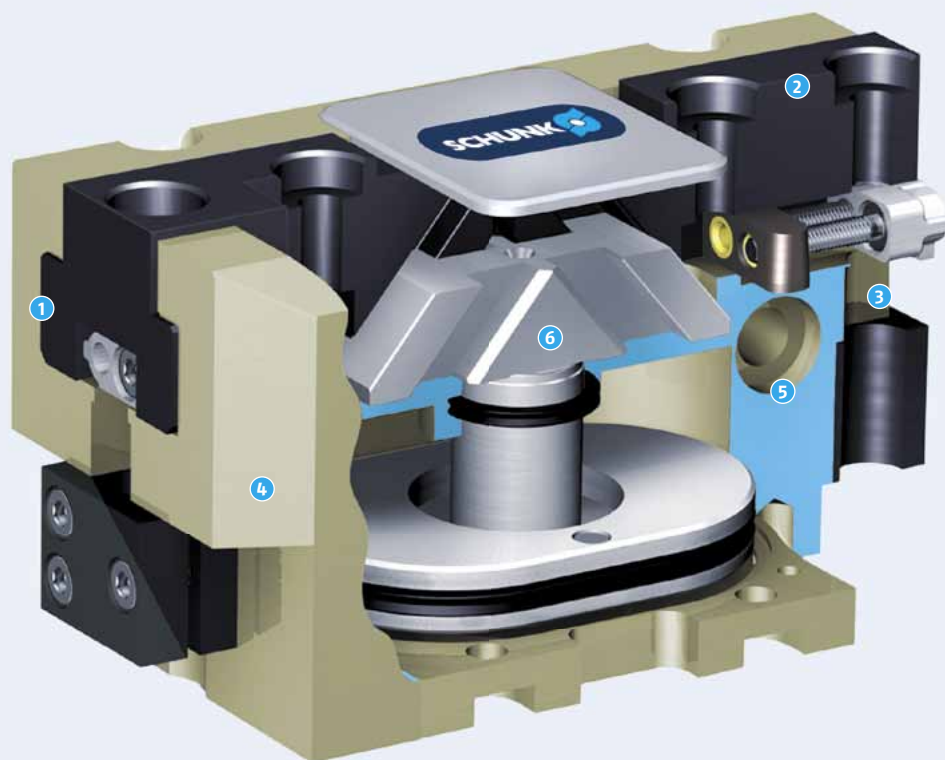
- Smaller installation space
- Robust T-slot guidance
- Hose-free direct connection
- Magnetic switch/inductive proximity switch without additional mounting kits
- Extensive sensor accessories

Your advantage

- Smaller sizes can be selected because smaller size can be used
- More compact systems possible due to greater gripping force in a smaller space
- More versatile system designs due to universal and flexible assembly of the gripper
- Versatile pressure supply in all automated solutions

Sectional diagram

- 1 T-slot guidance
- 2 Base jaw
- 3 Sensor system
- 4 Housing
- 5 Centering and mounting options
- 6 Wedge hook design



2-Finger Long-Stroke Gripper PHL The new gripper generation

Two guidance options available

The PHL is the first long-stroke gripper with the choice between multi-tooth guidance or profiled rail guidance, which significantly increases the efficiency of the module. With powerful sliding multi-tooth guidance, the PHL is especially suitable for harsh environments. Profile rail guidance with roller bearings boosts the efficiency by about 25 percent.

Less air consumption

The new gripper generation significantly exceeds the performance of conventional long-stroke grippers with T-slots or round guidances. In the future, many applications will therefore be able to use smaller, less expensive and – due to the decreased air consumption – more efficient sizes. Alternatively, longer fingers can be used while maintaining approximately the same gripping force.



Diversity of variants!

More freedom in the process design.

Immediately available



Sizes
25 .. 63



Weight
1.5 kg .. 21 kg



Gripping force
390 N .. 3,250 N



Stroke per finger
30 mm .. 160 mm



Workpiece weight
2.0 kg .. 16.6 kg

Product features

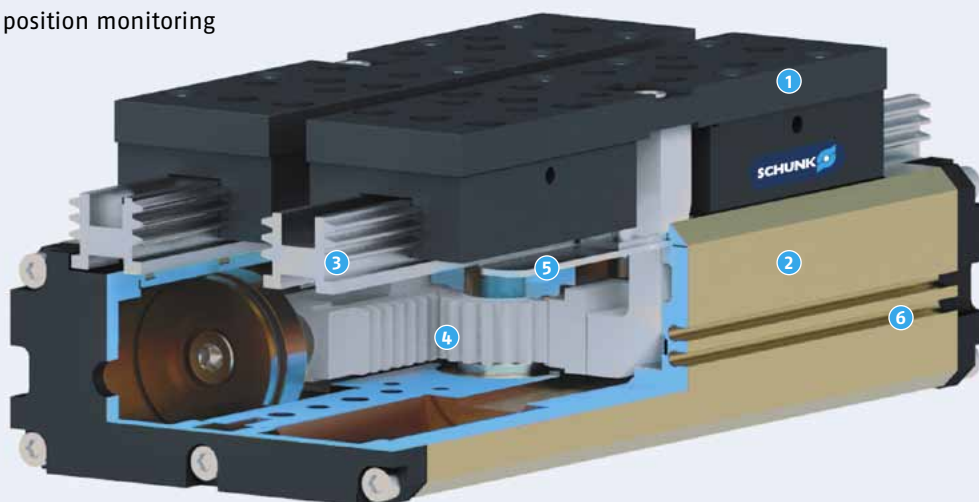
- Modular concept in 90 standardized variations
- Profile rail guidance boosts efficiency by 25%
- Optionally available as a special Viton version and as a high-temperature version for hot environments with temperatures up to 130 °C

Your advantage

- Lower system costs due to higher efficiency
- More compact system designs due to higher gripping forces in a smaller space
- More flexible system designs due to longer finger length in a smaller space

Sectional diagram

- 1 Base jaws for adaptation
- 2 Housing, weight-reduced
- 3 Multi-tooth guidance
- 4 Kinematics, rack-and-pinion principle
- 5 Protection against dirt and dust
- 6 Sensor for position monitoring



Long-Stroke Gripper CGH

First standardized lightweight gripper with RCC housing

40% less weight and all the power you need!

This standardized lightweight gripper with RCC housing is SCHUNK's new benchmark. RCC has an elasticity modulus about four times greater than that of aluminum with twice the tensile strength. At the same time, it weighs about 40% less. SCHUNK takes advantage of these properties in the pneumatic long-stroke gripper CGH. Weighing only 11.65 kg, it has a gripping force of 2,500 N and a variable stroke of up to 160 mm for each gripper finger. It can handle workpieces up to 12.8 kg. This allows for greater dynamics in existing systems or for use of smaller robots.

Higher gripping forces even when long gripper fingers are used

The recirculating ball carriage of the CGH are supported separately for optimal distribution of loads. Approximately 90 percent of the energy used is applied to the finger. The module can be precisely adjusted to the specific load by changing the number and distance of the carriages. For especially large gripping forces or especially long fingers, the distance between the carriages is simply enlarged. In this way, even fingers longer than 1,000 mm can be used. Nearly identical clamping forces are applied to the entire finger length. To increase the efficiency of the gripper even further, the stroke can be scaled freely when in a damped end position.



World premiere!

Increased dynamics for minimum cycle times and maximum productivity.

Immediately available



Sizes
80



Weight
11.65 kg



Gripping force
2,500 N



Stroke per finger
0 mm .. 160 mm



Workpiece weight
12.8 kg

Product features

- Rolling element guidances and toothed belt synchronization
- Greater bending and torsional stiffness
- Stress-resistant fiber orientation due to RTM method
- Combination of low weight and high mechanical load-bearing capacity
- Integrated end position dampening

Your advantage

- Reduction of cycle times and less use of compressed air due to separately adjustable stroke for opening and closing
- Handling of large and small components in rotation due to belt drive and synchronized fingers
- Use of very long fingers with constant gripping force along the finger length
- Low net weight increases dynamics of existing systems or allows for use of small robots

Sectional diagram

- ① RCC housing
- ② Base jaw
- ③ Roller bearing
- ④ Kinematics
- ⑤ Shock absorber
- ⑥ Stroke adjustment



2-Finger Angular Gripper PWG-plus Powerful for every need

Compact powerhouse

The oval piston drive, the one-piece, high-strength aluminum housing and the practically wear-free T-bar drive make the PWG-plus a compact and robust powerhouse. Depending on the application it can be equipped with or without mechanical gripping force maintenance. In addition, extensive accessories are available, including inductive sensors and magnetic switches.

Modular

Both on the finger and bottom side it is equipped with a connecting pattern identical to that of the PGN-plus parallel gripper, which allows direct combination with compensation units, attachment valves, or quick-change jaw systems.



Maximum gripping forces!
Due to double piston version.

Immediately available



Sizes
50 .. 240



Weight
0.25 kg .. 10.4 kg



Gripping torque
3.5 Nm .. 617 Nm



Opening angle per finger
min. 15°



Workpiece weight
0.5 kg .. 16.2 kg

Product features

- Variable top jaws
- One-piece, robust and high-strength aluminum housing
- Front face connecting threads and centering possibilities for creating workpiece support

Your advantage

- Maximum transfer of force and low wear due to robust dog bone drive
- High compact performance due to oval pistons
- Flexible design of workpiece supports due to threaded connection and centering options

Sectional diagram

- 1 Base jaw
- 2 Housing
- 3 Drive
- 4 T-Bar drive
- 5 Centering and mounting options



Electric Small Components Gripper EGP

The perfect alternative to pneumatics

Size 25 is now available!

Today, the EGP from SCHUNK is already the most efficient electric small parts gripper on the market. With the size EGP 25, SCHUNK extends the series downwards. This speedy little powerhouse weighs 110 g, features a stroke of 3 mm per finger, and a gripping force that can be adjusted to two stages up to 40 N. It can handle workpieces up to 200 g. Compared with electrically driven, small parts grippers which are available on the market, it scores with its high speed at a higher gripping force. Its closing time amounts to 0.09 s. It is the smallest electric small parts gripper with integrated electronics of its kind.

Ideal for fast small parts handling

The EGP is the electric counterpart to the time-tested pneumatic MPG-plus gripper for small components. Even the sensor system of the MPG-plus can be transferred to the EGP. Control of the gripper is simply done via digital inputs, the users can easily transfer its existing systems from pneumatics to electronics without any loss of the gripping force. Its powerful cross roller guidance ensures that the EGP achieves a high efficiency, and makes it to a dynamic and energy efficient product for challenging Pick & Place applications.



High efficiency!
For challenging Pick & Place applications.

Immediately available



Sizes
25 .. 40



Weight
0.11 kg .. 0.32 kg



Gripping torque
max. 40 N .. 140 N



Stroke per finger
3 mm .. 6 mm



Workpiece weight
0.2 kg .. 0.7 kg

Size 25 will be available starting July 2013

Product features

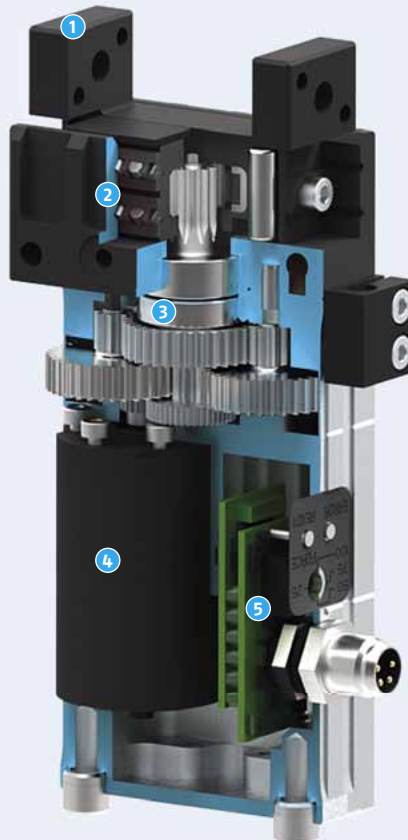
- High compact performance
- Extremely simple digital actuation
- Gripping force is adjustable in four stages for adaptation to the workpiece
- Space-saving integrated electronics
- Wear-free servo motor

Your advantage

- More flexible system designs, due to side and bottom mounting options for bolting through and bolting on
- The sensor system of the MPG-plus can be used in many cases for the EGP, too
- Increased system productivity due to reduced wear-related downtimes

Sectional diagram

- 1 Base jaw
- 2 Cross roller guidance
- 3 Gears
- 4 Drive
- 5 Control electronics



2-Finger Parallel Gripper WSG 32

The sensitive gripper for small components

New: The compact gripper for small components

The highly compact WSG 32 was especially designed for precision handling of small and medium-sized parts with a workpiece weight of up to 0.5 kg. Its fully covered guidances allow for easy cleaning. It can be connected directly to the network via an Ethernet connection. It can also be configured with a CAN bus interface. Due to high jaw speeds that enable short cycle times, even at a long stroke, the WSG 32 reaches gripping speeds of 400 mm/s. Detection of gripped parts is already integrated into the gripper. In this way, gripping commands can be executed with optimized cycle times.

Intuitive, integrated, intelligent

The WSG series of sensitive grippers is the perfect choice for installation or assembly processes that require high flexibility or delicate handling.

The WSG 50 can be controlled via Ethernet TCP/IP, Profibus, CAN bus, RS232 or via eight virtual digital I/Os. At the same time, it has an integrated web server for configuration and diagnosis. In addition to the basic version with a 55 mm stroke per finger, this gripper also comes in a long stroke version with a stroke of 110 mm per finger. Both products are capable of gripping forces between 5 N and 120 N.



Now available as gripper for small components!
Long stroke with a compact design.

Available on request

				
Sizes	Weight	Gripping force	Stroke per finger	Workpiece weight
32	0.55 kg	5 N .. 50 N	34 mm	0.5 kg
50	1.2 kg .. 1.6 kg	5 N .. 120 N	55 mm .. 105 mm	0.8 kg

Size 50 immediately available

Product features

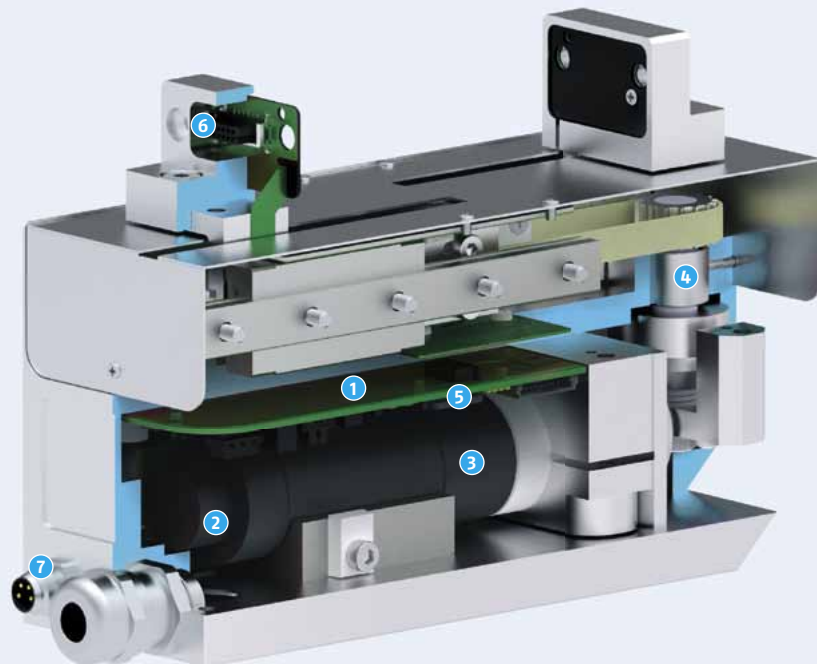
- Integrated gripping control with web server for easy configuration and diagnosis
- Integrated sensor ports in the jaws for optional force-measuring jaws
- Gripped part monitoring across the entire handling cycle
- Dust-proof cover for the drive and guidance system
- Efficient due to integrated energy management

Your advantage

- Integrated high-sensitivity sensor provides greater freedom in process design
- Versatile control through integrated gripping control
- Short cycle times due to high process speed and integrated gripped part detection for safe processes
- Precise handling through high positioning accuracy

Sectional diagram

- 1 Electronic controller
- 2 Encoder
- 3 Drive, DC servo motor
- 4 Toothed belt drive
- 5 Micro SD card
- 6 Electronic sensor
- 7 Electrical connection



2-Finger Long-Stroke Gripper EGA Adaptable, robust, compact

Integration in robots and gantries

With capability of adaptation for all standard servo motors, the electric long-stroke gripper EGA is the most flexible standard long-stroke gripper on the market. Due to the easy integration of the system's control unit, all the features with respect to programs, safety, and field-busses can be transferred from the current system onto the module, and offers the advantage of a direct interpolation of the other application axes. In other words easy control as an additional axis with the identical command set is ensured.

Time-tested technology

The robust EGA long-stroke gripper is based on the proven PHL, which is extremely flat and has a compact design with minimal interfering contours. The guide carriages of its base jaws are bearing mounted, which minimizes friction, and optimally distributes the force. For robot or gantry applications, the motor can be mounted either parallel or at right angles to the direction of motion. In view to dynamics and energy efficiency the whole system profits from the weight-optimized design of the gripper.



Universal!

All standard industrial servo motors can be used.

Available from August 2013



Sizes
25 .. 40



Gripping force
650 N .. 1,750 N



Stroke per finger
30 .. 100 mm



Workpiece weight
3.25 kg .. 8.75 kg

Product features

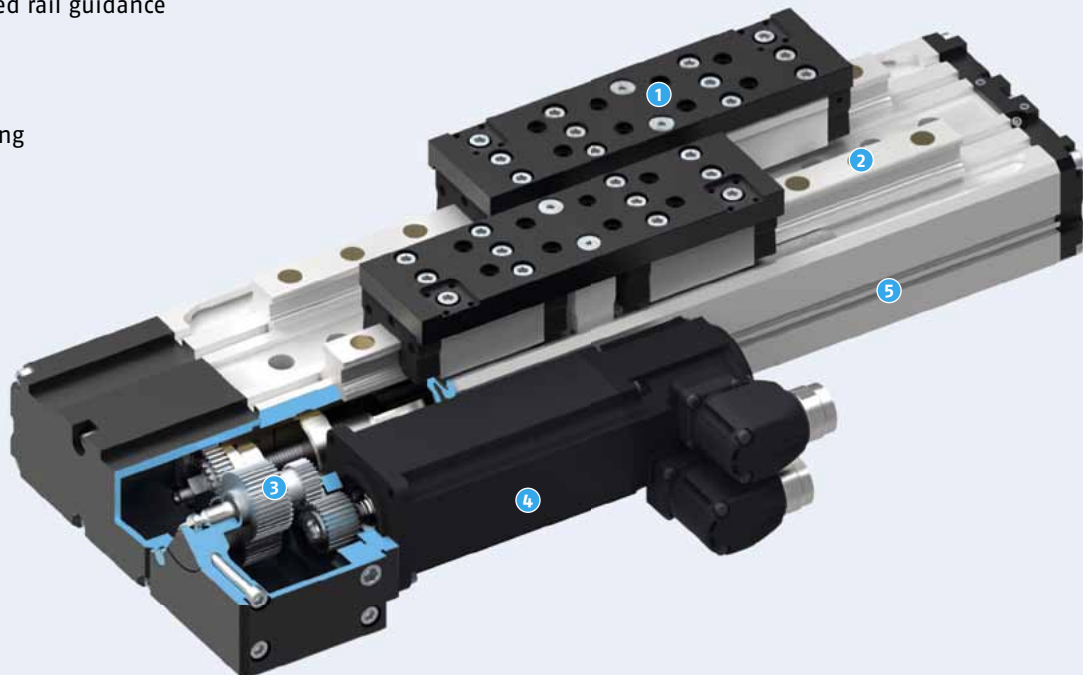
- Easy integration into existing control or feedback control electronics
- Flange-mounted servo motor
- Two versions with different motor positions for robot and gantry applications

Your advantage

- Higher dynamics and energy efficiency due to weight-optimized design
- Use of fieldbus and safety technology, as well as existing control and programming know-how

Sectional diagram

- ① Base jaw
- ② Profiled rail guidance
- ③ Gears
- ④ Drive
- ⑤ Housing



Magnetic Gripper EGM

Maximum holding force in small spaces

Electricity instead of air

The EGM magnetic gripper is the powerhouse for flexible handling of ferro-magnetic workpieces without interfering contours. In contrast to most of the magnetic grippers which are available on the market, the permanent magnets of the EGM are not pneumatically actuated, but with electricity in no time at all. Therefore the EGM is particularly energy-efficient and process reliable. For actuation and deactivation just a short electric pulse is necessary, and the workpiece can be securely held in an emergency stop situation, too.

Flexible workpiece handling

With minimal set-up time and without the interfering contours of gripper fingers, the EGM can handle very different workpieces in alternation. Five sides of the workpiece are available for machining. Due to the variable number of magnet pole pairs, and adaption options to every common robot, optimum adaption to the individual applications is ensured.



Energy-efficient!

Electric actuation via electric pulse in no time at all.

Immediately available



Sizes
32Q, 50Q, 30L



Weight
2 kg .. 18 kg



Max. weight of workpiece
8 kg .. 147 kg



Maximum magnetic surface
110 mm x 260 mm

Product features

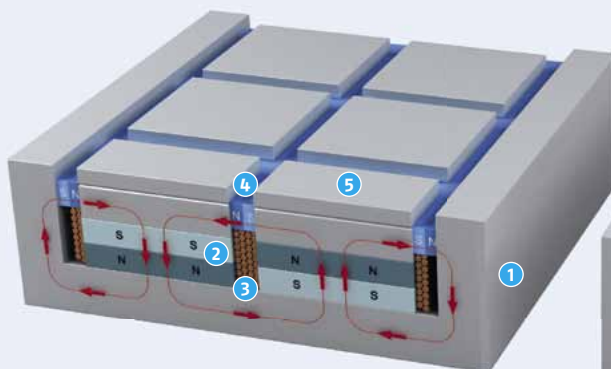
- Electro permanent magnet technology
- Simple digital actuation
- Magnetic pole geometries for flat and round workpieces
- 3 pole sizes – optionally with two to eight poles
- High holding forces in minimum space

Your advantage

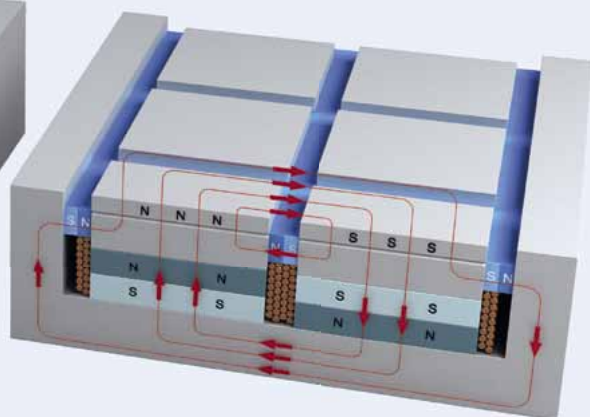
- More flexibility and diversity due to access to workpiece with no interfering contours
- Cost effective due to minimal energy requirements
- Optimal adaptation due to variable number of magnetic poles

Sectional diagram

- 1 Base body
- 2 AlNiCo magnets (pole-reversible)
- 3 Electromagnetic coil
- 4 Neodymium permanent magnets (not pole-reversible)
- 5 Magnetic poles made of steel



In deactivated state



Activated state

Rotary Indexing Table RST-D Powerful for high-performance assembly

Modular high-performance assembly

The RST-D completes the SCHUNK program for modular high-performance assembly by a series of particularly compact and high-performance rotary indexing tables. The RST-D rotary indexing table is rigid in design, and is driven via a double acting piston. Therefore, it offers a lot of power for larger attachments, and for up to six optional pneumatic feed-throughs, which can be retrofitted as required.

Flexible processes

Only the drive ring of the RST-D rotates, and different components and attachments can be attached to the large, fixed middle part. They can be reliably supplied via the large through-hole with compressed air, current, and signals. Right, left, and alternating operation of the RST-D is possible, and the operation type can be changed as required via the pneumatic control unit. Spacers are available for converting the cycle operation into 4, 6, 12, or 16 cycle steps.



Flexible with Power!
Exceptionally high torque.

Immediately available



Sizes
60 .. 134



Pitch
4 .. 16



Torque
max. 29.3 Nm



Mass moment of inertia
max. 0.6 kgm²



Repeat accuracy
0.06°

Product features

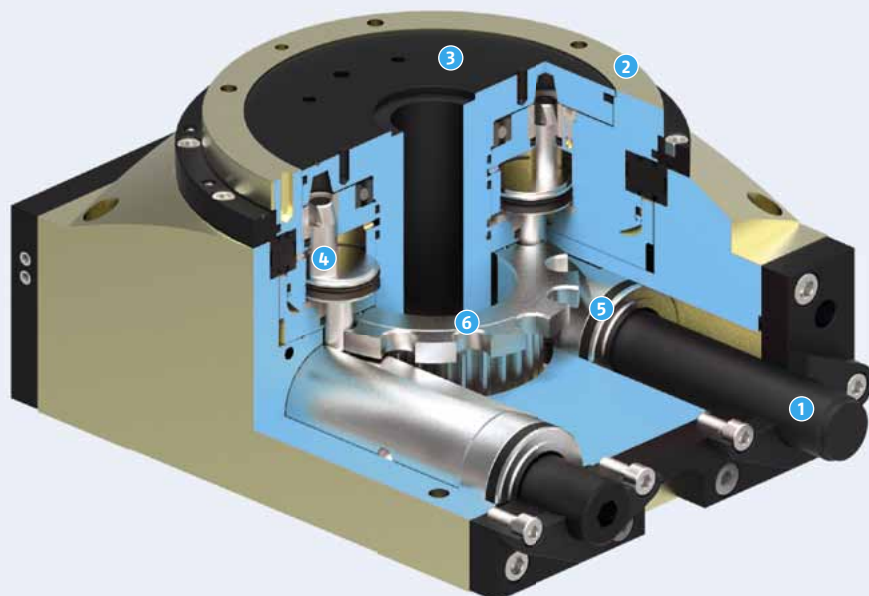
- Right, left and alternating operation is possible with this actuator
- Large through-hole for reliable supply of compressed air, and signals
- Air connection and adjustment of the shock absorbers from one side
- Spacers are available for converting the cycle operation into 4, 6, 12, or 16 cycle steps
- With 6 optional air feed-through available (can be retrofitted)

Your advantage

- Fast adaptation due to conversion with spacers
- Ideal for confined spaces
- Stable and reliable supply of rotating pneumatic modules

Sectional diagram

- ① Damping
- ② Drive ring
- ③ Fixed middle part with through-hole
- ④ Locking mechanism
- ⑤ Drive
- ⑥ Driver



Rotary Module ERS with Rotary Feed-Through DDF Compact, dynamic, and uniquely versatile

New benchmark for rotary modules

The electric ERS rotary module has a new option, a pneumatic and electric rotary feed-through. This unit is driven by a torque motor with a hollow shaft and features a DDF rotary feed-through, making it one of the most compact electric rotary modules with integrated pneumatic and electrical feed-through. The standard DDF version is equipped with 8 signal feed-throughs and one pneumatic air channel. For distributing the air on various actuators, micro valves can be switches via the electric feed-throughs.

Modular design for maximum flexibility

In order to ensure maximum flexibility of the control and regulation strategy, the ERS can be operated either with the SCHUNK Motion Controller MC212 (48 V DC) or a Bosch or Siemens standard controller (560 V DC). Depending on the application, the ERS is available with a pneumatic holding brake, and as an IP54 version.



**Unique! Also available in
IP54 version!**

Combination of pneumatic and
electric feed-throughs.

Immediately available



Sizes
170 .. 210



Nominal torques
5 Nm .. 10 Nm



Repeat accuracy
0.01°



Air feed-through
1 x



Electrical feed-through
8 x

Product features

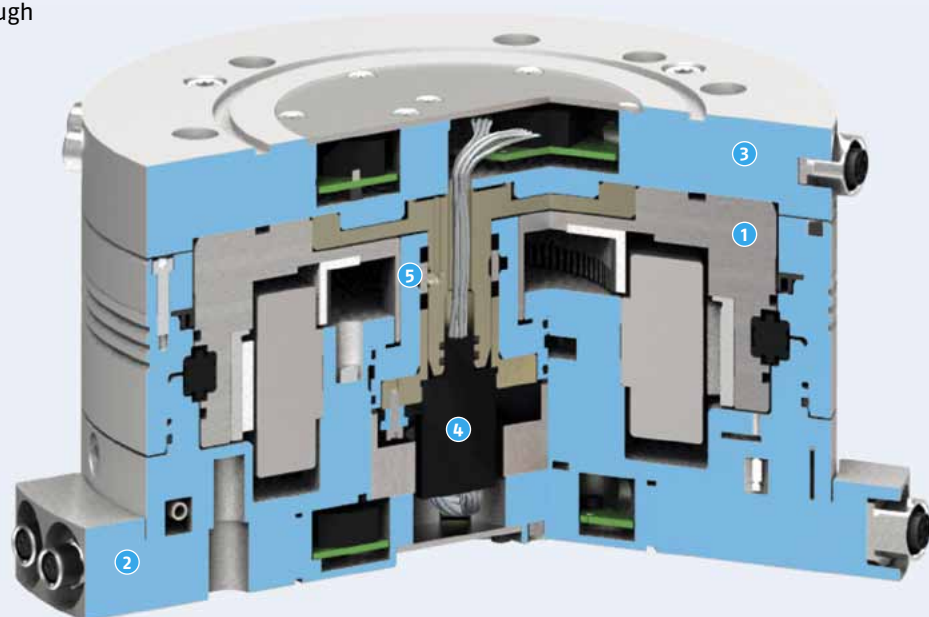
- Extremely flat design
- Dynamic, stable and torsionally rigid
- Pneumatic and electric feed-throughs
- Continuous rotating up to 250 rpm
- Optional holding brake
- Standard encoder interface
- On option in protection class IP54

Your advantage

- Highly flexible processes due to variable intermediate positions
- Compact system designs due to a low overall height
- Easy system integration
- High acceleration and short cycle times due to high torque

Sectional diagram

- ① ERS
- ② Base plate connection side
- ③ Connection flange tool-sided
- ④ Electric feed-through
- ⑤ Pneumatic feed-through



Rotary Module ERM Extremely adaptable

Seamless implementation

The electrically operated rotary module ERM can be equipped with all standard industrial servo motors and therefore offers maximum flexibility with respect to the control and regulation strategy. Since it is easy to customize, adjusting for regional variations in standards between Europe, USA, and Asia is relatively easy. Equipped with the right motor, the characteristics of the system controller with respect to programming, safety, or field buses can be directly transferred to the module.

Precision force

The drive can be freely adjusted in 90° steps. In this way, the interfering contour of the rotary module can be optimally adjusted to the gantries or robots. Also functions perfectly as a rotary table, positioning device for turning, swiveling or realigning workpieces.



High-precision force!
Precise positioning of large loads.

Immediately available



Sizes
160



Weight
15 kg



Torque
60 Nm



Air feed-through
8



Speed
60 rpm

Product features

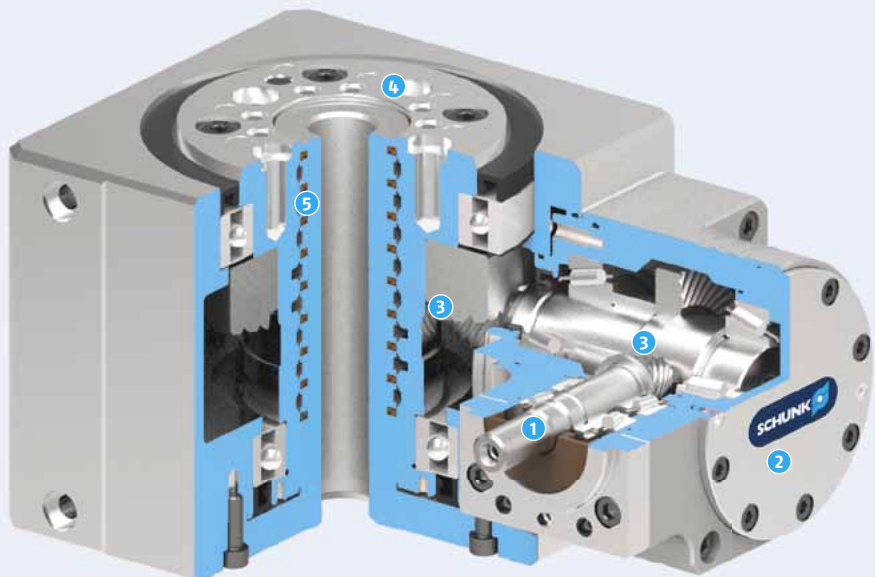
- Swiveling adaptive drive
- Continuous rotation
- Protection type IP65
- Air feed-throughs and center bore for media feed-through
- All standard industrial servo drives can be connected

Your advantage

- Compact system designs due to standard center bore
- Flexible process design due to variable intermediate positions
- Easy to integrate

Sectional diagram

- 1 Motor shaft
- 2 Bevel gear
- 3 Double bevel gear stage
- 4 Drive flange
- 5 Integrated air feed-through with connection bores



Linear Motor Drives LCx made of carbon First standardized RCC axes for high-speed assembly

Excellent dynamics and repeat accuracy

The RCC linear modules in the LCx series from SCHUNK are the world's first standardized linear motor axes made of reinforced carbon composite (RCC) and weigh 58% less than comparable modules made out of aluminum. They can be accelerated and moved in an extremely fast and energy-efficient fashion. The reinforced carbon composite material and a special interior structure and filling make the axis extremely light and durable at the same time. Due to the higher elasticity modulus of RCC, they are also superior to aluminum profiles in terms of bending and torsional stiffness. Its excellent internal damping reduces vibrations and ensures outstanding dynamic stiffness. If the material heats up during operation, it will retain its shape.

Compact system design

Lightweight modules in the LCx series use proven high-speed modules LDx from SCHUNK. Their excellent dynamics and repeat accuracy are due to a servo-electric linear motor drive that give them an edge over competing products, especially for high-speed applications in assembly automation. Since the motor, measuring system, and linear guidance are integrated into the axis profile or slide, they are extremely compact and require very little space. The standardized carbon axes come in two versions: The LCN version with a simple X profile and the LCM with a wide double X profile for medium loads.



High speed and high precision!
Enormous dynamics and shorter cycle times.

Immediately available

				
Sizes LCN LCM	Maximum stroke 1,200 mm 1,200 mm	Driving force max. 500 N max. 1,000 N	Repeat accuracy 0.01 mm 0.01 mm	Maximum speed bis 5 m/s bis 5 m/s

Product features

- Servo-electric linear motor drive
- Precision ground steel guide rails
- Comes with absolute-value transducer as standard feature
- Standard control by Bosch Rexroth IndraDrive controllers, or Siemens SINAMICS S120 converter as optional alternative
- Profile made of reinforced carbon composite (RCC)
- Multiple driven slides can be used on one profile

Your advantage

- Highly dynamic processes due to consistent lightweight construction
- Highly-dynamic positioning due to maximum dynamic rigidity
- Precise positioning due to maximum internal rigidity
- Greater positioning precision due to minimum heat expansion
- More compact system design due to extremely compact axis design

Sectional diagram

- 1 RCC profile
- 2 Steel guidance rails
- 3 Integrated secondary parts
- 4 Compact primary slides
- 5 RCC end plates
- 6 Motor connector



Linear Modules LDx

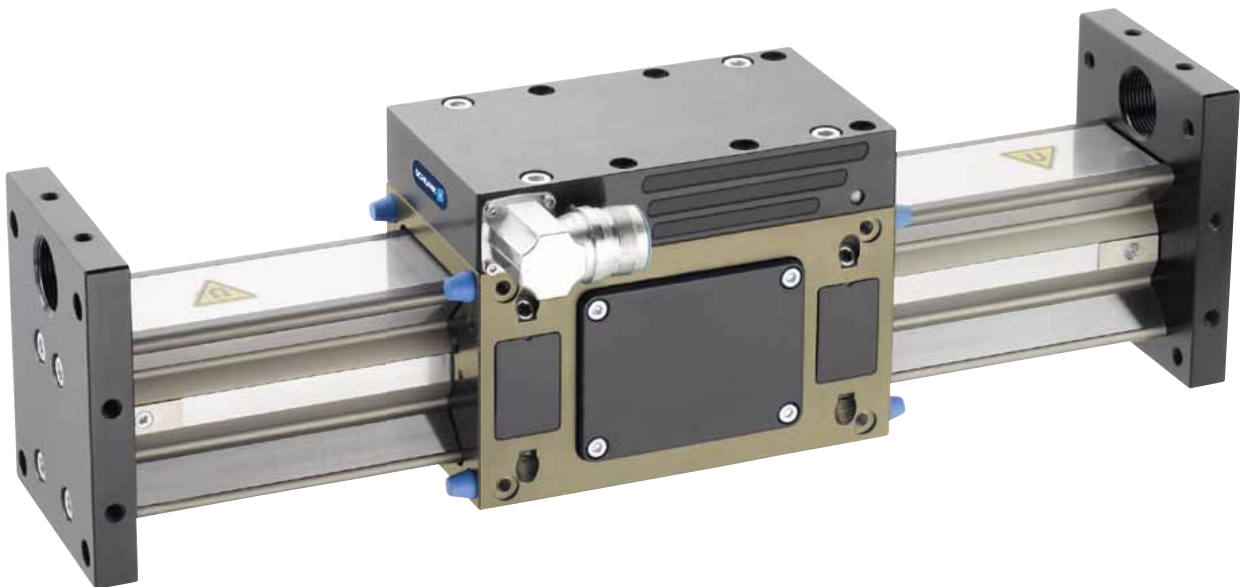
The next generation of high-speed modules

For high-precision, high-speed applications

The new LDx series from SCHUNK sets a new benchmark: Compared with the previous modules, powerful servo motors achieve a 15% higher rated force in a module of the same size. In the future it will therefore be possible to use smaller modules to achieve the same performance. Alternatively, higher masses can be moved in vertical applications.

Compact and cost-effective

The basic modules are the three universal linear modules LDN, LDM and LDT, the short-stroke modules LDK and LDH, and the flat linear module LDF. The absolute encoder eliminates the need for time-consuming programming of reference runs, as well as the reference runs themselves.



Large portfolio!

Unique diversity of modules and variants for every application.

Immediately available



Sizes
50 .. 600



Maximum stroke
3,800 mm



Driving force
750 N



Repeat accuracy
0.01 mm



Maximum speed
4 m/s

Product features

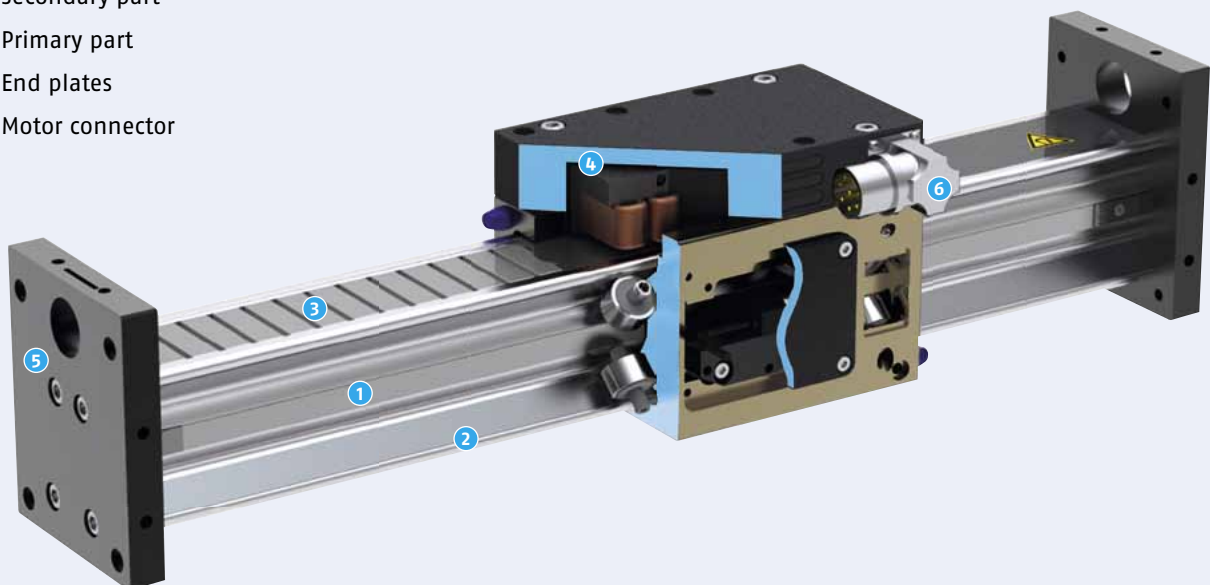
- Optionally with absolute encoders for a repeat accuracy of 0.01 mm per axis
- 15% higher rated force
- Can be used horizontally and vertically
- Choice of static profile and moving slide, or static slide and moving profile
- Multiple driven slides can be used on one profile

Your advantage

- Shortest cycle times due to high dynamics
- Long life, since there are hardly any wear parts
- Reduced costs due to elimination of limit and reference sensors
- Absolute encoder reduces commissioning time and increases process reliability

Sectional diagram

- 1 Aluminum profile
- 2 Steel guide rail
- 3 Secondary part
- 4 Primary part
- 5 End plates
- 6 Motor connector



Line and Room Gantry LPP/LPE/RPE Standard gantries from the modular system

Ready to mount, price-optimized, more quickly available

With the modular system for linear and room gantries, users and system integrators can reduce their configuration, installation and commissioning costs for gantries by up to 50%. Instead of configuring each axis system separately for assembly and handling stations, you can simply choose the suitable gantry solution from the extensive standard product line. All mechanical connecting elements and energy feed-throughs are already pre-mounted in the ready-to-install assemblies.

Pneumatic and electric drive

The modular system includes both pneumatic and electric solutions. The pneumatic 2-axis gantries and electric 2- and 3-axis gantries cover the most frequent requirements.



Ready to install!

More than 500 ready-to-install combinations available.

Immediately available



Sizes
50 .. 200



Horizontal strokes
max. 1,500 mm



Vertical stroke
500 mm



Maximum payload
20 kg

Product features

- Pneumatic and electric drives
- Standard product line with more than 500 possible combinations
- Available with BoschRexroth drives or optionally without drives

Your advantage

- Up to 30% lower configuration and engineering due to ready-to-install standard solutions
- Minimal assembly and immediate commissioning due to pre-mounted units
- Up to 20% lower investment costs due to standardized design



RPE

Rotary Feed-Through DDF 2

More powerful. More versatile. More energy-efficient.

Turn on full performance.

DDF 2 is the newest and most powerful rotary feed-through unit for modern robot and assembly applications. It ensures maximum process reliability with 360° continuous rotation. We offer the DDF 2 in three variants: for the feed-through of pneumatic or electrical signals or for the combined version. More versatile than ever before, and extremely adaptable to process demands. A significantly increased load allows the use of a steel shaft for transmitting dynamic forces and moments. The DDF 2 achieves optimal dynamics and its specially-developed seal ensures long service life and energy efficiency through use of smaller drives.

The next generation

A unique feature is the large number of electrical and pneumatic transmissions. For example, depending on its size, the DDF 2 normally has two to four pneumatic feed-throughs and four to ten electrical feed-throughs. Profibus transmission is also possible. The DDF 2 is based on an advance in SCHUNK'S proven DDF series and is fully 1:1 compatible. This makes replacement easy. It ensures the rotary feed-through unit can be changed quickly and rapidly.



State of the art!

The latest standard for modern robots.

Available from June 2013



Sizes
31 .. 160



Weight
0.5 .. 14 kg



Speed
70 .. 120 rpm



Air feed-through
2 .. 4



Electrical feed-through
4 .. 10

Product features

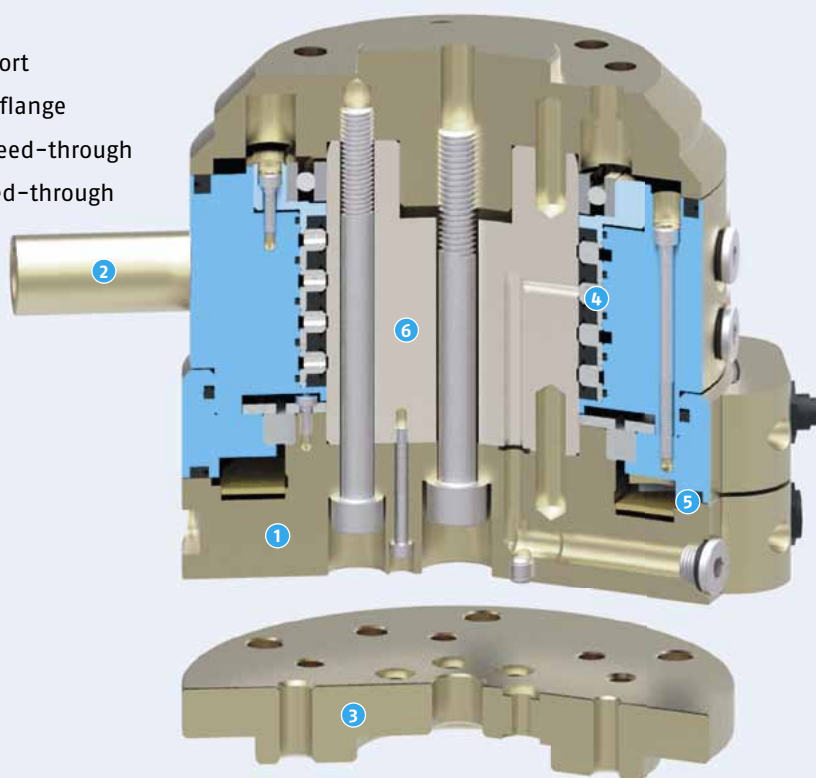
- 40% less torque for the same size
- 85% longer lifespan due to newly developed seals
- 50% greater moment load through transmission of dynamic forces and moments via a steel shaft
- 20% more load capacity possible
- Allows for 360° continuous rotation

Your advantage

- Allows for use of smaller and more efficient drives due to lower starting torque and continuous torque
- More compact system designs due to compact design
- Versatile range of applications due to combined energy transmission
- Electrical connector contacts allow for easy replacement of broken cables on robot arm or gripper

Sectional diagram

- ① Housing
- ② Torque support
- ③ ISO screwed flange
- ④ Pneumatic feed-through
- ⑤ Electrical feed-through
- ⑥ Shaft



Rotary Feed-Through DDF-I

The world's first rotary feed-through with integrated bus technology

Especially process-stable actuation

The pneumatic/electric feed-through DDF-I is the world's first rotary feed-through with integrated bus technology. It can be used for connecting mechatronics gripper modules, valves or sensors located downstream from a rotary axis for especially stable control of processes. Up to 26 electric signals are transmitted simultaneously, 13 of which are for the actuation of valves. Air and vacuum are supplied to the actuators through a fluid feed-through.

For highly sophisticated technological requirements

The center bore of the DDF-I allows the feed-through of cables, liquids, workpieces or the use of a camera. Continuous rotary movements are also possible with the module. Due to the ISO flange pattern it can be connected to many different robots without the use of an adapter.



Unique!

Integrated bus technology for process-reliable applications.

Immediately available



Sizes
040 .. 063



Speed
max. 120 rpm



Air feed-through
2 x



Electrical feed-through
26 x

Product features

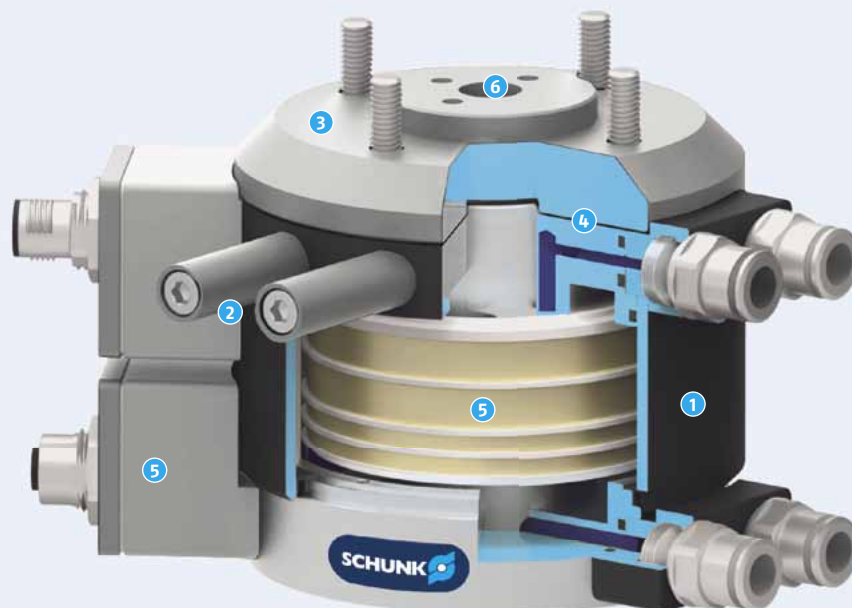
- With integrated air feed-through
- With integrated electric feed-through
- ISO flange pattern
- Sealing air connection

Your advantage

- Modularity to other SCHUNK products with SWK bolt pattern
- For all robot applications with 360° continuous rotary movement
- Allows for use of smaller and more efficient drives due to lower starting torque and continuous torque

Sectional diagram

- ① Housing
- ② Torque support
- ③ ISO bolt pattern
- ④ Pneumatic feed-through
- ⑤ Electric feed-through
- ⑥ Center bore



Quick-Change System SWS-001

The smallest automatic robot-change system

Fast tool change for small robot types

SCHUNK has expanded its standard range of robot accessories to include smaller accessories so that users can fully utilize the potential of small robots. The extremely flat SWS-001 quick-change system, which features a slim interfering contour, is now the smallest automatic robot-change system on the market. With a handling weight of up to 1 kg, it is ideal for small types of robots in which grippers and tools should be automatically changed in seconds.

Reliable power supply

Four integrated air feed-throughs and up to eight integrated electrical feed-throughs ensure a reliable supply of power to the connected modules. A patented, self-retaining locking system ensures that robots and effectors remain connected in the event of a sudden power failure. Due to its ISO flange pattern, it can be quickly and easily connected to various robots without an adapter.



Extremely flat!

Designed with minimal interfering contour.

Immediately available



Sizes
001



Workpiece weight
1 kg



Moment load
 M_{xy} 0.35 Nm



Air feed-through
4



Electrical feed-through
8

Product features

- Patented self-retaining locking system
- Integrated air feed-throughs
- Integrated electrical feed-throughs
- Integrated drive in housing
- ISO flange pattern

Your advantage

- Secure connection between quick-change head and quick-change adapter due to self-locking locking system
- Flexibility for processes with frequent tool changes

Sectional diagram

- ① Drive
- ② Mechanical locking system
- ③ Housing
- ④ Centering and mounting option
- ⑤ Electrical feed-through
- ⑥ Pneumatic feed-through



Quick-Change Module NSR-A

Compact quick-change module

Space-saving at maximum flexibility

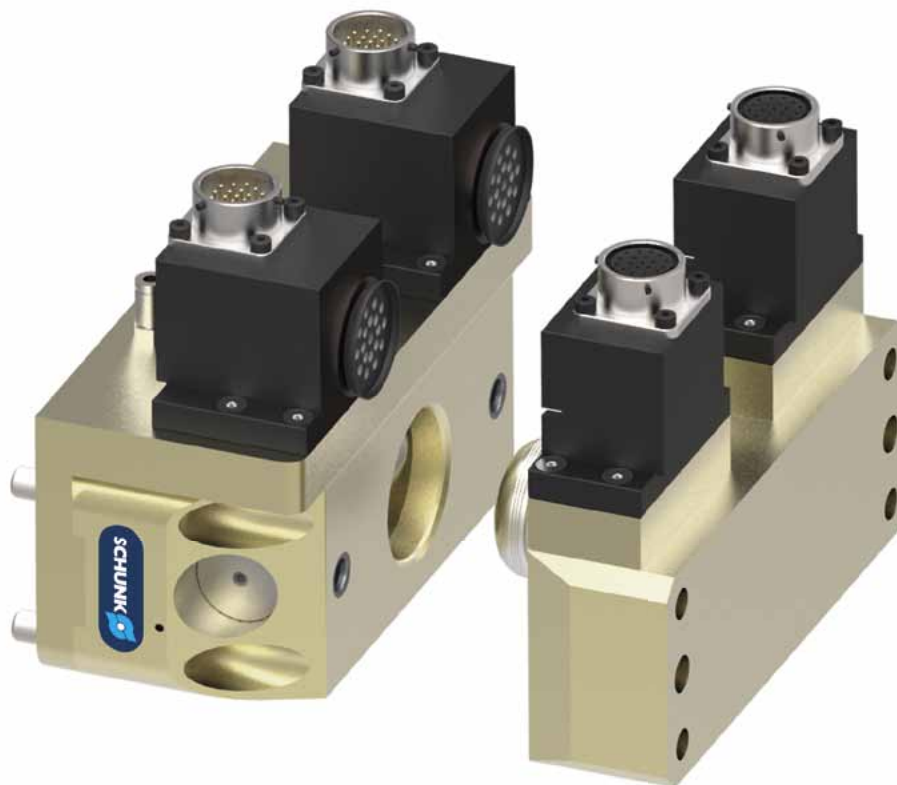
The NSR-A is the new slim quick-change module for pallet loading very close to the assembly or machine table. Very low attachments to the clamping station and pallet are feasible, and there is enough space for the components and the axis motion. For supplying the modules, handling, and assembly tools, the module can be additionally equipped with a SCHUNK standard media transfer for pneumatics, electric, or fluids.

Slim and light, but powerful

At a dead weight of 1.6 kg (size 160), the NSR-A has a locking force of 14 kN, and therefore is an exceptionally rigid system. It is suitable for reliable handling of pallets up to 350 kg (measuring 400 x 400 mm) and for handling of tools. The SCHUNK locking system with the patented fast stroke and clamping stroke makes the handling of such enormous weights possible.

Control for a higher process reliability

The locking and unlocking process is monitored by magnetic switches, the pallet and tool presence by inductive proximity switches.



Stronger!
High 14 kN locking force.

Immediately available



Sizes
160



Weight
1.6 kg



Workpiece weight
max. 350 kg



Pull-down force
14,000 N



Repeat accuracy
< 0.01 mm

Product features

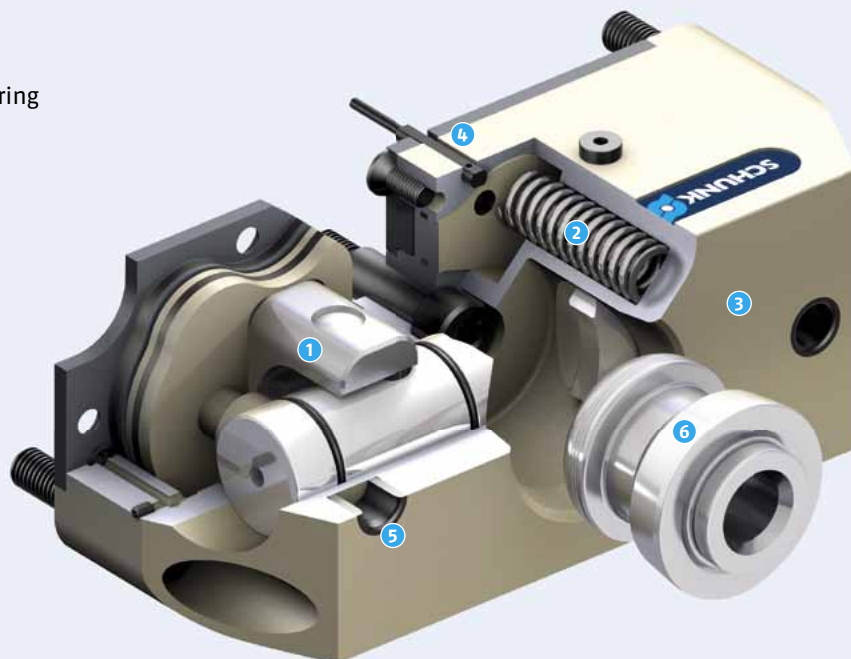
- Patented fast stroke and clamping stroke for a high locking force of 14 kN
- The module is completely sealed
- Form-fit locking with patented self-locking
- Every power transmitting part is made of hardened steel
- No lubricated air is necessary
- Pneumatic system pressure of 3.5 bar is sufficient for unlocking

Your advantage

- Optimum ratio of rigidity, robustness, and weight due to the high-strength, hard-coated aluminum for parts outside the power transmission
- Reliable pallet or tool change in narrow environments
- Secure process due to an excellent repeat accuracy

Sectional diagram

- 1 Locking mechanism
- 2 Pressure spring
- 3 Housing
- 4 Piston stroke monitoring
- 5 Anti-twist protection
- 6 Clamping pin



Force/Moment Sensor FTL

Compact due to integrated electronics

Integrated sensor system

As a new addition to the SCHUNK range of sensors, the FTL is an attractively priced force/moment sensor that can also be used cost-effectively in simpler applications. It is suitable for implementing highly compact solutions because the electronic processor is fully integrated into the module. The extremely flat quick-change sensor, which features a slim interfering contour, has six independent load measurement ranges, allowing for forces up to 150 N and moments up to 3 Nm to be recorded with a measuring accuracy of 3%.

Designed for robotics

The sensor can handle temporary overloads up to three times the normal load. Due to its real-time measurement and data output functions, the FTL also enables highly dynamic control concepts. It can be used for simple assembly applications as well as for hand-operated robots or service robotics applications. Another advantage: Due to its battery-servable 12 – 24 V DC power supply, it is also suitable for mobile applications.



Compact!
With integrated electronics.

Immediately available



Sizes
75



Measuring range F_{xyz}
150 N



Measuring range M_{xyz}
3 Nm

Product features

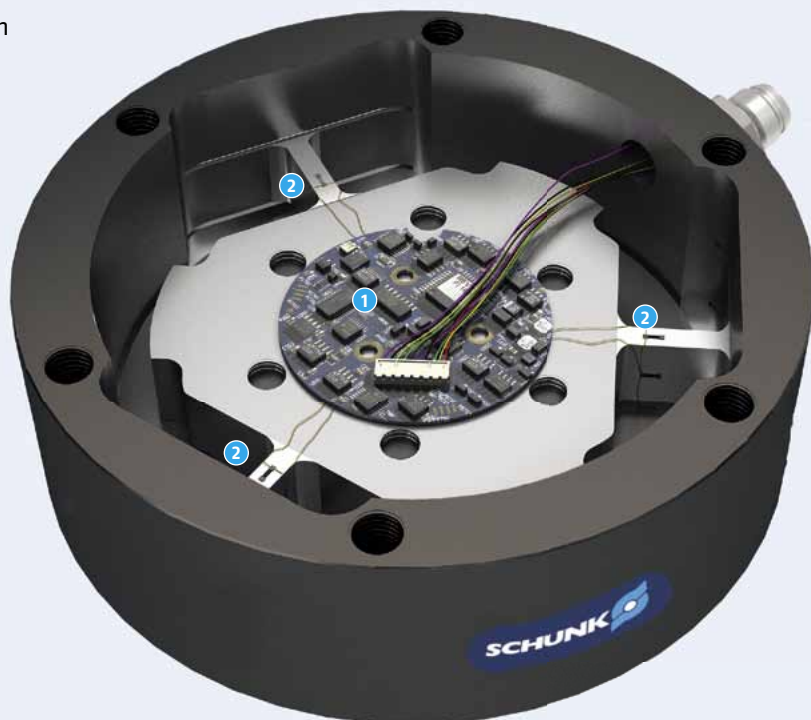
- Electronics integrated into sensor system
- Internal sampling rate of 1.5 kHz with 12 bit analog resolution
- Six independent load measurement ranges
- Configuration and evaluation can be performed via RS232 or CAN bus

Your advantage

- Slim interfering contour due to extremely flat design
- Safe functionality through overload protection
- Reliable measuring results through temperature compensation
- Measurement of multidimensional forces

Sectional diagram

- 1 Amplifier board
- 2 Measurement bar with expansion measurement strips



Rotary Lift Unit DRL

High-speed assembly with integrated rotary motion

Highly dynamic

The pneumatic rotary lift unit DRL 025 is SCHUNK's latest addition to its fast products for modular high-speed assembly. In the assembly of electronics, medical technology and consumer goods, the rotary unit enables highly dynamic, yet smooth Pick & Place operations with 90 and 180 degrees rotation angles.

High system productivity

With a minimal load and a rotation angle of 180 degrees it achieves up to 75 cycles per minute. To boost productivity and process stability even more, the effector can be stopped by means of the flexible controller directly over the respective target position and switched to stand-by position until the feed-through or placing unit is ready.



Fast!

Up to 75 cycles per minute.

Immediately available



Sizes
25



Max. rotation angle
180°



Vertical stroke
40 mm



Lifting force
320 N



Torque
3.7 Nm

Product features

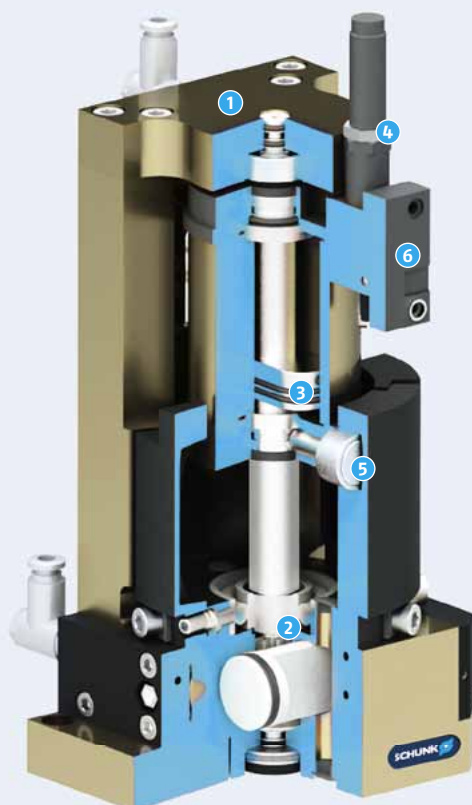
- Transfer and turning in one step
- Rotation angle adjustable by $\pm 2^\circ$ per side
- Vertical end position adjustable by 10 mm per side
- Pick and place heights can be different
- Two stand-by positions can be achieved by actuation

Your advantage

- Significantly higher productivity due to higher cycle rates
- Higher process reliability due to highly flexible actuation
- Fewer shock absorbers than comparable pneumatic solutions

Sectional diagram

- ① Housing
- ② Rotary drive
- ③ Vertical drive
- ④ Shock absorber / end position adjustment
- ⑤ Cam roller / disk
- ⑥ Mounting attachment



Pick & Place Unit PPU-P 30

Efficient energy and cycle times due to the valve box

Minimum cycle times

The PPU-P 30 is designed for payloads of up to 3 kg and is pre-destined to share in the success of the smaller PPU-P 10. In their respective sizes, both are the fastest pneumatic units on the market worldwide. With a full payload, the PPU-P 30 achieves up to 75, and the PPU-P 10 even 95 cycles per minute. That makes them twice as fast as the existing conventional Pick & Place solutions.

Clever solution

The strokes can be adapted horizontally 18 mm per side and vertically 15 mm per side. Moreover, the end positions can be adjusted separately from each other, vertically. This makes compensation of height differences between the pick-up and placing position quickly and easily, with no intermediate stop.

Quick start

The compact and attractively priced VCU valve box was developed for the Pick & Place unit PPU-P. It simplifies start-up, lowers air consumption while increasing cycle times. Simply connect the hose and two cables and the entire system, which consists of an assembly unit and actuators, is ready to go. All standard sequential programs for the pick & place unit and the connected gripping and rotary modules are already stored in the VCU. A single I/O signal from the higher-level control unit is sufficient for a complete cycle. Everything else is handled by the VCU itself.



Now available with valve box!
Significantly reduces cycle times
and costs.

Immediately available



Sizes
10 .. 30



Max. horizontal stroke
210 mm



Max. vertical stroke
60 mm



Repeat accuracy
 ± 0.01 mm



Max. payload
3 kg

Product features

- Positively driven by a cam roller – up to 50% shorter cycles compared with conventional Pick & Place units
- Adaptation of the stroke by up to 18 mm horizontally and 20 mm vertically per side – fast compensation of built-up tolerances
- Compatibility with the SCHUNK modular system
- Proven cam control with a positive transmission of motion
- Valve box available in two sizes based on Pick & Place units
- Valve box can be controlled via digital I/Os or via Profibus or CAN bus

Your advantage

- Higher system productivity due to 30% shorter cycle times
- Extremely easy commissioning due to Plug & Play functionality
- Full compatibility with modules for modular assembly automation
- Consistently reliable system operation
- Reduction of air consumption and cycle times due to short feed lines between the VCU valve box and the actuator

Sectional diagram

- 1 Ring Indexing Table RST-P
- 2 2-Finger Parallel Gripper MPG-plus
- 3 Pick & Place Unit PPU-P
- 4 Valve Box VCU



Pick & Place Unit PPU-E 15

Slim high speed unit for electronics assembly

For particularly compact system designs

With the PPU-E 15, the series of the fastest pick & place unit is enlarged with a freely programmable pace setter, which is custom-tailored for the use in electronic and small parts assembly. With a width of just 60 mm, and a complete media supply via the back panel, it allows a particularly compact sandwich construction of several units. If rotary indexing tables are used, more units can be arranged in a circle, or smaller round table diameters can be chosen.

For shorter cycle times

For carrying out a complete cycle at a horizontal stroke of 145 mm, and a vertical one of 45 mm, this booster in productivity requires 0.6 seconds at an additional weight of 1 kg, and 2 x 50 ms gripping time. At its peak, the PPU-E 15 achieves 100 picks per minute. As all the linear directly driven pick & place units from SCHUNK, the compact PPU-E 15 is also moved via a wear-free direct drive, and not by a guidance transmission, which is susceptible to wear. This minimizes the maintenance effort, increases the continuous repeat accuracy, and simplifies programming.



Sensational!

Up to 100 picks/min without a susceptible kinematics.

Immediately available

				
Sizes	Maximum work level	Repeat accuracy	Speed	Maximum payload
15	150 mm x 60 mm	0.01 mm	4 m/s	1.5 kg
30	270 mm x 100 mm	0.01 mm	4 m/s	3.0 kg
50	280 mm x 150 mm	0.01 mm	4 m/s	5.0 kg

Size 15 will be available starting July 2013

Product features

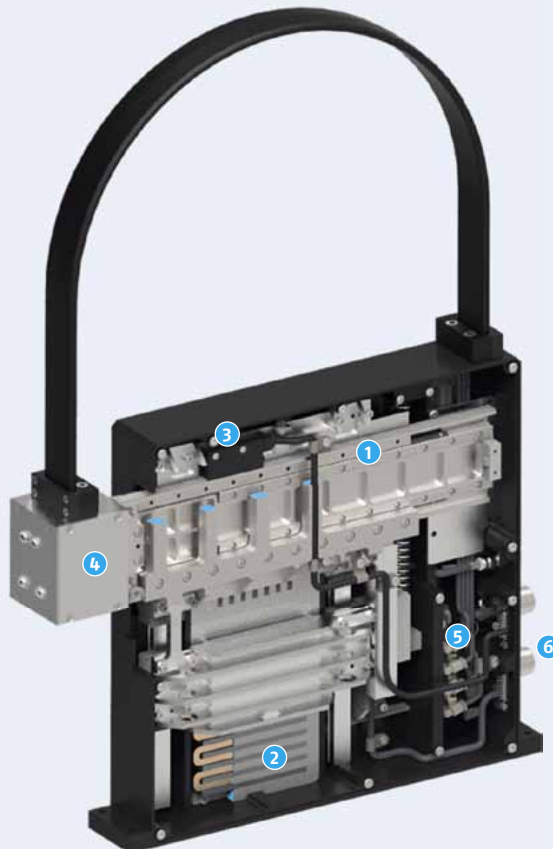
- All in one – Plug & Work
- Every connection is plugged into the backpanel – optimum accessibility
- No moving motor cable, therefore no cable breaks
- Single axis can be individually programmed
- Interpolation of the axes is possible
- Fast commissioning and no tedious reference runs are necessary due to the absolute encoder

Your advantage

- Higher system productivity due to the minimum cycle times
- Secure processes due to an excellent repeat accuracy
- Minimized energy costs due to the lightweight design
- Higher system availability since there is no wear of moving motor cables
- All the advantages of a direct drive – without any susceptible transmission of motion. No wear.

Sectional diagram

- 1 Cross roller guidance
- 2 Fixed primary component
- 3 Absolute encoder
- 4 Valve box
- 5 Micro valve
- 6 Motor connector



Magnetic Switch MMS 22-PI (-HD) One magnetic switch for everything

Fast assembly and adjustment

The MMS 22-PI series lets you program up to two switching points, depending on the sensor variant. As opposed to tedious mechanical setting of the switching points, programming of the sensors is easy.

Set-up times reduced by up to 90%

Compared with conventional magnetic switches, users save up to 90% on set-up time. To increase process stability, it is also possible to program the switch-off points of the sensors. The hysteresis is configurable. In addition to the basic versions the programmable C-slot sensors are also available as HD variants for heavy-duty applications.



Speed!

Programming takes only 15 seconds.

Immediately available



Sizes
22

Product features

- Contactless programming via magnet teaching tool
- Decentral programming via plug teaching tool
- Integrated electronics

Your advantage

- Programming of sensor takes only 15 seconds
- One universal sensor reduces inventory
- Reliable processes and position monitoring due to configurable hysteresis
- More compact system designs due to minimal interfering contour on actuator

Sectional diagram

- 1 Actuator
- 2 C-slot sensor MMS 22-PI
- 3 Teach tool, contactless
- 4 Teach tool, cable connected



Quick-Change Fingers ABR-BSWS / SBR-BSWS Exchange of fingers within seconds

The set-up time killer

SCHUNK now introduces a new type of finger blanks with a quick-change system already integrated as a standard feature. Compared with conventional jaw changing, the new system reduces set-up times by up to 90%.

Available in aluminum and steel

The fingers can be adapted over their entire length to the respective workpiece, without having to worry about jaw changing and the corresponding screw connections. The finger blanks featuring an integrated quick-change system are available in aluminum (ABR-BSWS) or steel (SBR-BSWS).



Fast and individual!

Maximum freedom in the design
of the finger contour.

Immediately available



Sizes
50 .. 200

Product features

- Finger blanks with integrated quick-change jaw system
- Finger changing with high repeat accuracy due to easily accessible, form-fit locking mechanism

Your advantage

- Increased system flexibility due to easy and reliable quick-change jaw system
- Boost in productivity due to fast conversion to a new parts spectrum
- More diversity in options for design of top jaws

Sectional diagram

- 1 Locking mechanism
- 2 Adapter pin BSWS-A
- 3 ABR- / SBR-PGZN-plus
- 4 Spring-loaded thrust piece





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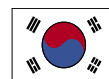
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