



PRODUCT OVERVIEW

AUTOMATION

2010

Partner with Systematic Solutions

Synergie SCHUNK

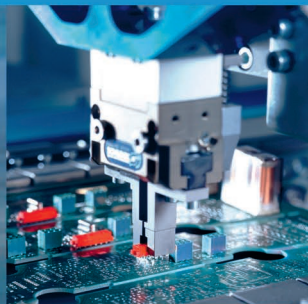
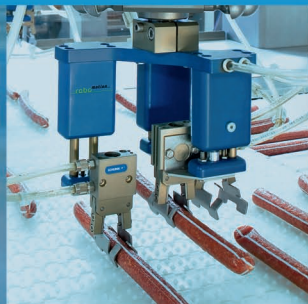
Toolholding, Workholding and Automation

Three core competences from one source. As an experienced supplier of high-quality components, we know the demands and requirements of the complex world of clamping and automation. We know the demands and requirements as well as the difficulties of interfacing all three areas. SCHUNK offers advanced technology world-wide, based on years of experience and knowledge that grows daily, giving us the know-how for automated solutions – from the spindle to robotics.

We call this "SCHUNK SYNERGY". Get to know us as your involved "all-in-one" partner...



Industries. Processes. Solutions.



With a comprehensive program of gripping- and rotary modules, swivel units, linear modules and robot accessories SCHUNK is one of the market-leaders in automation.

Our product range also gives you the guarantee to find the right solution for special tasks. SCHUNK strives to maintain the closest relationships with industry and customers by delivering the needed cutting edge solutions.

Our industry solutions are based on these high-quality standard components and modules. According to the customer's and production requirements, they

guarantee proximity to practice and latest technology in individual design.

From semi-standards to individual solutions, SCHUNK offers the whole range of cost- and benefit optimized automation solutions.

Industry Solutions



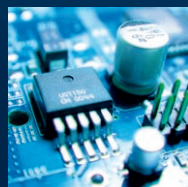
Machine- and Plant Engineering



Assembly and Handling



Automotive



Electronics



Food



Packaging



Pharmaceuticals



Welding Technology



Foundry and Metallurgy



Energy



Aerospace



Clocks, Watches and Jewellery

Automation product range

Gripping Modules

SCHUNK currently has the most comprehensive range of universal grippers and gripper modules for small components. Pneumatic or electric. Offering all features from state-of-the-art materials and coatings employed as standard to internal media feed-through. With our high level of technical expertise, SCHUNK sets the trend for cost-efficient handling in any industry, in any field.



Rotary Modules

Technology and functionality in the most compact form. SCHUNK's range of rotary modules represents the entire spectrum of compact turning and rotary units, swivel heads and rotary fingers. In other words, it's the ideal solution for handling tasks



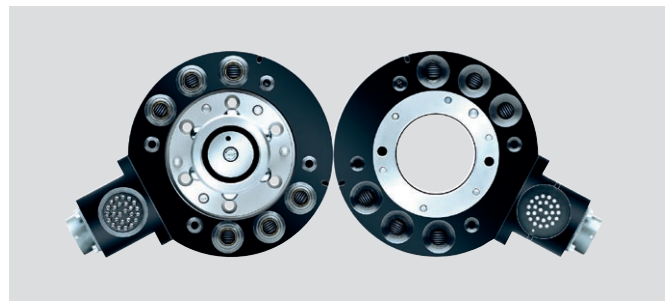
Linear Modules

Precision mini-slides, pneumatic linear modules, rigid gantry axes and axes with servo-electric linear drive – the SCHUNK product range offers linear technology for high-speed automated assembly. Compact and designed as a modular system.



Robot Assessoires

Robot accessories from SCHUNK – the complete range of modules for perfect interplay between the robot arm and the tool. Suitable for all types of robot, it is also an ideal enhancement to flexible robot applications.



Modular Assembly Automation

Flexible – fast – future-secure. This is the system GEMOTEC from SCHUNK. The comprehensive program of pneumatic and electric modules opens an unforeseen variety of combination possibilities. All actuators are compatible with each other. Where other companies still have to conduct design work, the system GEMOTEC is already assembled. Fast and straightforward.



Machine Vision

In automated assembly, image processing modules from SCHUNK represent the flexible solution for manifold sensor applications. All high-quality components are perfectly phased to each other. The necessary software for object and position detection stands for 100% process reliability.



Pneumatic Gripping Modules

2-Finger-Parallel Grippers



Gripper for small components MPG

- Gripping force from 1.6 lbf to 74 lbf
- Stroke per finger 0.04" to 0.55"
- 10 sizes from 10 to 80
- For small and medium-sized components for assembly automation



Gripper for small components KGG

- Gripping force from 29 lbf to 150 lbf
- Stroke per finger from 0.59" to 2.36"
- 5 sizes from 80 to 280
- Thin gripper with robust T-slot guide



Universal Gripper PGN-plus

- Large gripping force from 28 lbf to 4,900 lbf
- Stroke per finger 0.08" to 1.77"
- 11 sizes from 40 to 380
- Robust multiple-tooth guidance with high maximum moments possible for applications with long gripper fingers



Universal Gripper JGP

- Gripping force from 56 lbf to 1360 lbf
- Stroke per finger 0.24" to 0.63"
- 10 sizes from 40 to 300
- Gripper of the compact class with T-slot guidance and best cost-performance ratio



Universal Gripper PGF

- Gripping force from 54 lbf to 443 lbf
- Stroke per finger from 0.29" to 1.24"
- 5 sizes from 50 to 125
- Very good guidance characteristics

IP67



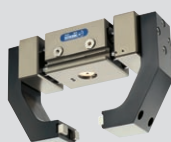
Sealed Gripper DPG-plus

- High gripping forces from 25 lbf to 1,400 lbf
- Stroke per finger from 0.08" to 0.98"
- 10 sizes from 40 to 300
- Robust multiple-tooth guidance with high maximum moments



Long-stroke Gripper PFH

- Gripping forces from 115 lbf to 595 lbf
- Stroke per finger from 1.18" to 11.8"
- 6 sizes from 30 to 300
- For large workpieces (i.e. wheel rims) and a broad range of parts



Long-stroke Gripper PSH

- Gripping force from 72 lbf to 395 lbf
- Stroke per finger from 0.55" to 2.52"
- 4 sizes from 22 to 52
- Sealed round guides for applications in slightly dirty environments

Pneumatic Gripping Modules

3-Finger Centric Grippers



Grippers for small components MPZ

- Gripping force from 12 lbf to 70 lbf
- Stroke per finger from 0.12" to 0.19"
- 5 sizes from 16 to 45
- For small and medium-sized components for automated assembly



Universal Gripper PZN-plus

- Large gripping forces from 56 lbf to 8,540 lbf
- Stroke per finger from 0.08" to 1.37"
- 11 sizes from 40 to 380
- Robust multiple-tooth guidance with high maximum moments for the use of long gripper fingers



Universal Gripper JGZ

- Gripping force from 130 lbf to 1819 lbf
- Stroke per finger from 0.24" to 0.63"
- 10 sizes from 40 to 300
- Gripper of the compact class with T-slot guidance and best cost-performance ratio

IP67



Sealed Gripper DPZ-plus

- Large gripping forces from 52 lbf to 3,780 lbf
- Stroke per finger 0.09" to 0.98"
- 8 sizes from 40 to 200
- Robust multiple-tooth guidance with high maximum moments

Multi-Finger Grippers



Assembly Gripper ORG

- For O-rings from Ø 0.19" to 5.9"
- Adjustable opening strokes
- Size 85
- Process reliable for O.D. and I.D. assembly with just one gripper

Angular Grippers



Gripper for small components SWG

- Gripping moment from 0.01 to 2.1 ft-lbs
- Opening angle per finger 15°
- 8 sizes from 10 to 50
- Thin and compact design



Universal Gripper PWG

- Gripping moment from 4.43 ft-lbs to 689 ft-lbs
- Opening angle per finger 20°
- 4 sizes from 65 to 230
- Robust gripper with spring-loaded gripping force safety device

Pneumatic Gripping Modules

Angular Grippers



Radial Gripper PRG

- Gripping moment from 1.5 to 218 ft-lbs
- Opening angle 30°/ 60°/ 90°
- 8 sizes from 26 to 125
- For applications with extremely short motion sequences

IP67



Sealed Gripper DRG

- Gripping moments from 5.9 ft-lbs to 105 ft-lbs
- Adjustable opening angle from 10° to 180°
- 5 sizes from 44 to 100
- Completely sealed mechanics

Lean Grippers



Gripper LGP/ LGZ/ LGW/LGR

- Parallel and Centric Grippers with strokes per finger from 0.08" - 0.51" and a gripping force from 3 lbf to 99 lbf
- Angular and Radial Grippers with gripping moments from 9.6 ft-lbs to 325 ft-lbs
- 19 sizes that are economical

Grippers with Shank Interface



Vacuum Gripper GSW-V

- for automatic loading and unloading of machine centers

Cleaning Unit RGG

- protection against dirt and chips

Gripper with Shank Interface GSW

- Stroke per finger 0.12" to 0.4"

Gripper Swivel Modules



Swivel Module with Parallel Gripper GSM-P

- Gripping force from 14.6 lbf to 60 lbf
- Stroke per finger 0.15" to 0.39"
- 4 sizes from 32 to 64
- Compact module for automated assembly



Swivel Module with Centric Gripper GSM-Z

- Gripping force from 12 lbf to 70 lbf
- Stroke per finger from 0.11" to 0.19"
- 3 sizes from 30 to 45
- Flexible adjustment of the swivel angle via steel balls



Swivel Module with Angular Gripper GSM-W

- Gripping moment 0.33 to 4.13 ft-lbs
- Opening angle per finger 20°
- 5 sizes from 16 to 40
- Compact module for assembly automation

Pneumatic Gripping Modules

Gripper Swivel Modules



Swivel Module with Radial Gripper GSM-R

- Gripping moment 0.33 to 5.53 ft-lbs
- Opening angle per finger 90°
- 5 sizes from 16 to 40
- Flexible adjustment of the angle of rotation via steel balls

Electric Gripping Modules

2-Finger Parallel Grippers



Gripper for small components MEG

- Gripping force from 13.5 lbf to 39.3 lbf
- Stroke per finger from 0.24" to 0.39"
- 3 sizes from 40 to 64
- Drive design of step motor maximum flexible force, stroke or speed



Universal Gripper EGN

- Gripping force from 38 lbf to 225 lbf
- Stroke per finger from 0.31" to 0.63"
- 3 sizes from 80 to 160
- Gripper with servo-motor
- Pre-positioning capability to reduce cycle times



Universal Gripper EVG

- Very sensitive gripper up to min. 0.7 lbf to 13 lbf gripping force
- Stroke per finger 0.79" to 1.97"
- Size 55-40/100
- The stroke can be adjusted easily
- Compact and light

POWER CUBE



Universal Gripper PG

- With highly precise gripping force control from 6.7 lbf to 45 lbf
- Stroke per finger from 1.3"
- Size 70
- Fully integrated control and power electronics incl. different interfaces



Long-stroke gripper PEH

- Gripping force control from 34lbf to 58 lbf
- Stroke per finger 2.36"
- 3 sizes from 30 to 50
- Fully integrated control and power electronics incl. different interfaces

3-Finger Centric Grippers



Universal Gripper EZN

- Gripping force from 800 lbf to 180 lbf
- Stroke per finger from 0.24" to 0.39"
- 2 sizes from 64 to 100
- Gripper with servo-motor
- Pre-positioning capability to reduce cycle times

Pneumatic Rotary Modules

Swivel Units



Swivel Module SFL

- Axial force from 2.25 lbf to 11.25 lbf
- High torque from 1.06 in-lbs to 34.5 in-lb
- 3 sizes from 25 to 64
- Compact module for easy swiveling tasks up to 180°



Universal Swivel Unit SRU-plus

- Axial force from 57 lbf to 2470 lbf
- High torque from 0.8 ft-lbs to 85 ft-lbs
- 7 sizes from 20 to 63
- Swivel angle 90° or 180° on option

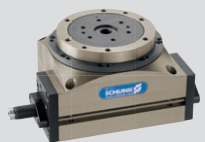
Swivel Heads



Swivel Head SRH

- Torque from 2.2 ft-lbs to 52 ft-lbs
- Integrated media supply and transmission from BUS and digital signals
- 6 sizes from 20 to 60 with swivel angle 180°
- Modular design with many options

Ring Indexing Tables



Ring Indexing Table RST-P

- Angle adjustment 4, 6, 8, 12
- 2 sizes 60 to 87
- max. mass moment of inertia 273 lb/in²
- Cycles to the right, to the left or oscillates. Cycle change via control unit.

Swivel Fingers



Swivel Finger GFS

- Axial force from 74 lbf to 742 lbf
- Torque from 0.5 ft-lbs to 7.4 ft-lbs
- 4 sizes from 16 to 40
- For turning of workpieces

Electro-pneumatic Rotary Modules

Swivel Units



Masterdrive SRU-MD

- Peak drive torque of 10 ft-lbs
- Responding behaviour below 20 ms until start
- Size 40
- Up to 3 intermediate positions can be approached
- Control via digital inputs

Electric Rotary Modules

Rotary Actuator



Miniature Rotary Module PRH

- Torque 1 to 5 ft-lbs
- Infinitely rotating
- 6 sizes
- Integrated electronics with SMP



Universal Swivel Unit PR

- Axial force from 78 lbf to 201 lbf
- High torque from 5.5 ft-lbs to 105 ft-lbs
- 3 sizes from 70 to 110
- Fully integrated control and power electronics incl. different interfaces



Swivel Tilting Unit PW

- Axial force from 18 lbf to 45 lbf
- Torque up to 17 ft-lbs
- 2 independent axes in one module
- 2 sizes from 70 to 90
- Fully integrated control and power electronics incl. different interfaces



Torque Motor STM

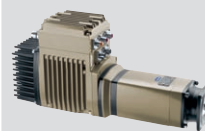
- High torques from 2 to 7.5 ft-lbs
- High axial forces from 560 to 2250 lbf
- 3 sizes from 135 to 210 with hollow shaft
- 2 control versions – SCHUNK MCS 12 controller (48 V) or standard control systems (560 V, Bosch or Siemens)

Actuation



Servo Motor PSM / PDU

- Nominal torque from 0.14 ft-lbs to 105 ft-lbs
- 3 sizes from 70 to 110
- PDU with integrated precision gear
- Fully integrated control and power electronics incl. different interfaces



Milan SCHUNK Motor MSM

- Nominal torque from 1 to 3 ft-lbs
- 3 sizes from 35 to 63
- 230 V power supply
- Complete integration of the control and power electronics

Linear Modules

Stroke Modules

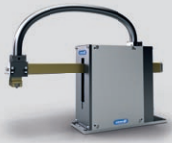


Stroke Module PHE

- Stroke from 0.78" to 4.72"
- Actuation force from 29 lbf to 97 lbf
- 3 sizes from 64 to 100
- Double bearing guidance

Linear Modules

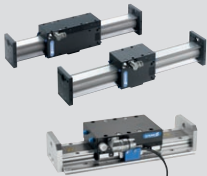
Pick & Place Units



Pick & Place Unit with PPU-E direct drive

- Payload of up to 3 kg
- Horizontal stroke maximum 10.6"
- Vertical stroke maximum 3.9"
- No moving motor cable
- For highly dynamic Pick & Place applications at high repeat accuracies

Linear Axes



Linear Axes with direct linear motor drive MLD

- Modular system with a stroke capacity up to 102"
- Actuation force up to 135 lbf
- Moment capacity up to 664 ft-lbs
- For high dynamic applications with a high repeat accuracy



Linear Axes System HSB

- Stroke capacity up to 305"
- Actuation force up to 4,046 lbf
- Moment capacity of up to 8,850 ft-lbs
- Modular system with manifold guidance and actuation versions

POWER CUBE



Linear Axes with servo drive PLS

- Stroke from 2.36" to 47"
- Actuation force from 40 lbf to 897 lbf
- Moment capacities up to 1,681 ft-lbs
- 3 sizes from 70 to 110
- High dynamic servo drive with different interfaces

Robot Accessories

Exchanging



Tool Quick-Changing System SWS

- Handling weight of up to 2,205 lbs
- 14 sizes from 005 to 602
- Manifold electric energy and liquid transmission options
- Easy assembly via ISO-flange



Manual Gripper-Changing-System HWS

- Handling weight of up to 120 lbs
- 6 sizes from 040 to 125
- Manifold electrical and pneumatic options
- Easy assembly via ISO-flange

Feed through



Rotary Distributor DDF

- 14 sizes from 031 to 160
- From 2 to 4 feed-throughs
- Up to 10 electric feed-throughs
- Easy assembly via ISO flange

Robot Accessories

Machining



Flexible Deburring Spindle FDB

- 4 sizes from 150 to 660
- Speed 65000 RPM
- Power consumption 150 to 660 W
- Flexible and robot-controlled deburring of workpieces

Protection



Anti-Collision and Overload Protection Device OPS

- 6 sizes from 063 to 201
- With manual reset
- Tripping energy and moment via operating pressure adjustable
- Anti-collision control via integrated sensors



Anti-Collision and Overload Protection Device OPR

- 6 sizes from 061 to 221
- With automatic reset
- Very high tripping forces and moments adjustable
- Anti-collision control via integrated sensors

Compensation



Compensation Unit AGE

- Variety in sizes for compensation in Z-, XY- or XYZ direction
- Compensation distance XY up to +/- 0.55"
- Compensation distance Z up to +/- 0.47"
- With centric locking and position storage
- Easy assembly via ISO flange



Tolerance Compensation Unit TCU

- 7 sizes 050 to 200
- Direct mounting to a PGN-plus and PZN-plus
- Rotary compensation and laterally around all axes
- With centric locking and monitoring

Measuring



Rigid Force-Moment-Sensor FT

- 11 sizes
- Measuring range: Moments up to +/- 4425 ft-lbs
- Measuring range: Forces up to +/- 8990 lbf
- Communication: Ethernet, Ethernet/IP, Can, DAQ or RS 232
- For measuring forces and moments in production, quality management, product design or research

Machine Vision

Vision-Sensors



Image-processing Sensor SVS-VC

- Resolution 720 x 480 pixels
- Scan rate 60 fps
- Working distance 5.9, 11.8, 17.7"
- Easy installation and operation, no additional peripheral equipment
- Sensor 1/3" Wide VGA, CMOS; S/W; global shutter

Automation



☐ Gripping Modules



☐ Rotary Modules



☐ Linear Modules



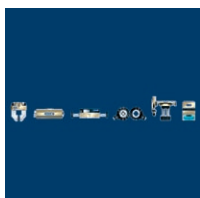
☐ Robot Accessories



☐ Modular Assembly Technology



☐ Machine Vision



☐ Automation Product Overview



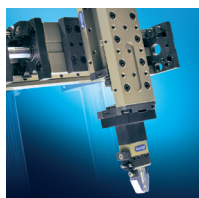
☐ Modular Assembly Technology Product Overview



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☐ Highlights New Products



☐ Universal Rotary Actuator SRU-plus

☐ Complete program Automation

Toolholding and Workholding



☐ Toolholding Systems



☐ Stationary Workholding



☐ Lathe Chucks



☐ Chuck Jaws



☐ Product Overview



☐ Hydraulic Expansion Technology Special Solutions



☐ Magnetic Clamping Technology



☐ Highlights New Products

☐ Complete program Toolholding and Workholding

Company _____

Name _____

Department _____

Street _____

ZIP _____ City _____

Tel. _____ Fax _____



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



Reg. No. DE-003496 QM