

**MODULAR ASSEMBLY AUTOMATION**

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**A U T O M A T I O N**

# Modular Assembly Automation

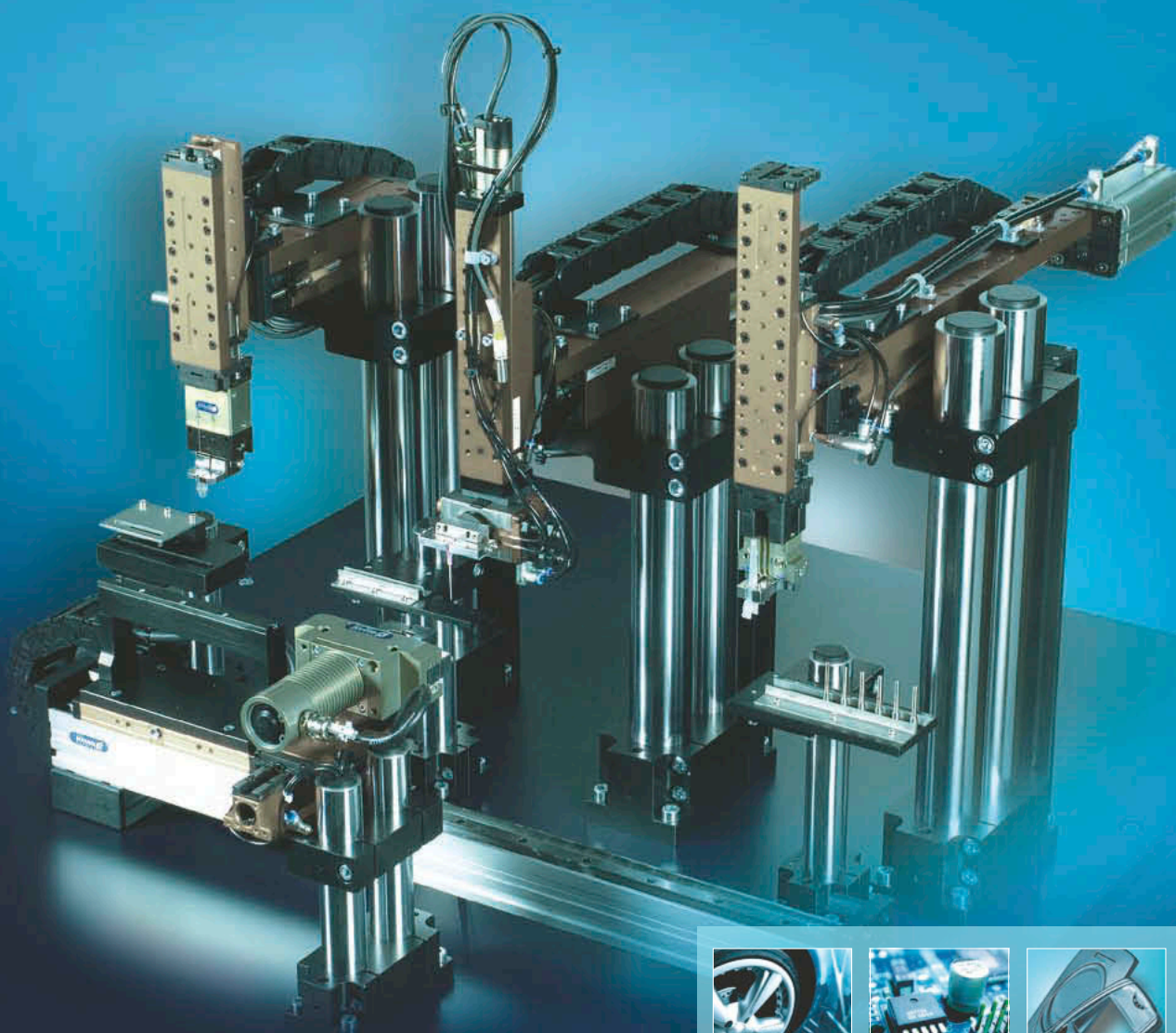
## Modular Automation System

### The world of high precision, modular assembly automation

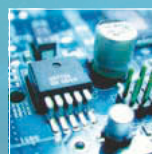
From individual, multi-axis assembly solutions to complete function units – the GEMOTEC system from SCHUNK offers a technologically advanced and comprehensive modular handling system for small parts handling and assembly automation. Modular and highly dynamic.

The ability to combine the most common SCHUNK grippers opens up new possibilities: for customer- and industry-specific precision manufacturing, for complex gripping tasks and for the configuration of flexible and simultaneously high precision handling and assembly solutions.

Benefit from the synergy of a modular system and SCHUNK gripper quality. Also in your industry.



Automotive



Electronics



Plastic



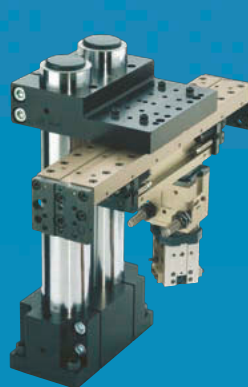
Medical Technology

## Modular Automation System

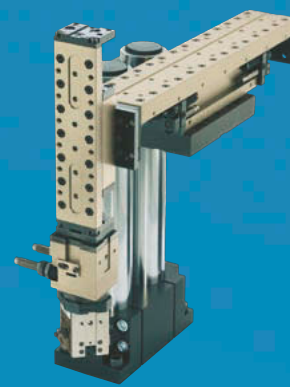
With pneumatically and electrically actuated linear, rotary and gripping modules, the GEMOTEC system offers individual handling solutions in various designs and sizes. With only a few standard modules it is possible to implement extremely diverse modular automation solutions – quickly, easily and professionally.

### System and customer advantages:

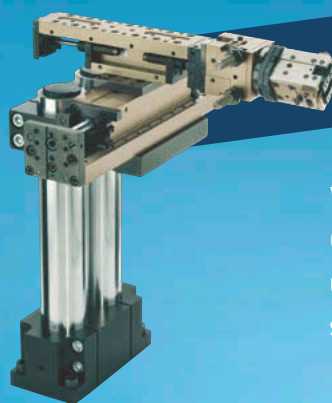
- A broad and complete product line
- Pneumatic and electric drive systems
- High precision of all individual components
- Full compatibility of all actuators
- Reproducible connecting technology
- Extensive add-on/adaptation system
- Planning reliability with software tools



## Linear rotary gripper unit as transfer station



### Pick & place unit with rotary gripper combination as conversion station



**Multiple versions – an example:**  
Already equipped with 4 modules  
for 3 different applications!

### Cross gantry with rotary gripper unit and loading and unloading station

## GEMOTEC Toolbox Translation / Rotation / Multiaxis

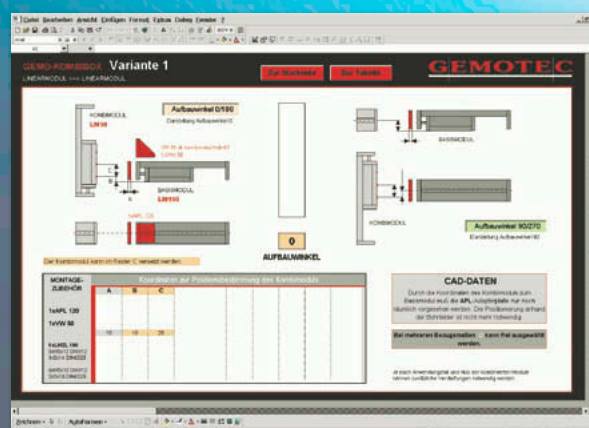
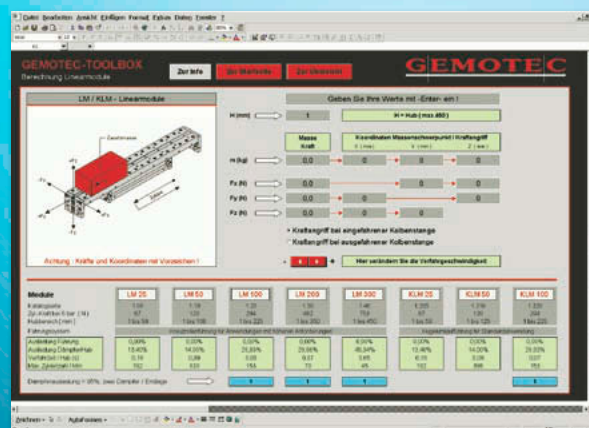
The special bonus: the toolbox provides a complete parts list of the calculated system for multi-axis systems.

Free download at: [www.schunk.com](http://www.schunk.com).

To ensure the possibility of several thousand variants without mechanical processing, the individual modules can be freely combined with adapter plates and centering elements for an exact fit.

The GEMOTEC kombibox determines the required assembly accessories for your individual combination, including all standard parts. The position coordinates of the modules are also calculated.

Free download at: [www.schunk.com](http://www.schunk.com).





# GEMOTEC System

## Linear Modules



### Compact Linear Module CLM

- Piston force 67 N to 482 N
- Useful stroke up to 150 mm
- 6 sizes from 8 to 200
- Overall length is optimized, ideal for applications in crowded installation areas



### Linear Module KLM

- Piston force 67 N to 294 N
- Useful stroke up to 225 mm
- 3 sizes from 25 to 100
- Quad bearing, without play



### Linear Axis LM

- Piston force 67 N to 753 N
- Useful stroke up to 450 mm
- 5 sizes from 25 to 300
- Cross roller guidance for high dynamic load rating and rigidity



### Linear Axis ELM

- Actuating force from 60 N to 160 N
- Useful stroke up to 260 mm
- 2 sizes: 23 and 37
- Integrated direct measuring system and precision ball bearing guidance

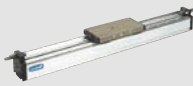


## Gantry Modules



### Gantry Axis PMP

- Piston force 100 N to 250 N
- Useful stroke up to 5,000 mm
- 2 sizes: 16 and 25
- Several intermediate positions, continuously adjustable stroke over the entire length



### Gantry Axis EPM

- Drive force from 160 N to 580 N
- Useful stroke up to 1,380 mm
- 2 sizes: 37 and 48
- Easy integration in standard controller concepts



## Rotary Modules



### Miniature Rotary Unit RM 08 - 21

- Drive torque from 0.107 Nm to 1.9 Nm
- Angle of rotation from 0 to 190°
- 5 sizes from 8 to 21
- End positions and intermediate positions are continuously adjustable



### Vane Rotary RM 50 - 410

- Drive torque from 0.70 Nm to 44.0 Nm
- Angle of rotation from 0 to 180°
- 5 sizes from 50 to 410
- End position  $\pm 5^\circ$  fine adjustable



Pneumatically operated



Electrically operated

## Gripping Modules

### 2-Finger Parallel Grippers



#### Small Component Gripper GMP

- Gripping force from 50 N to 280 N
- Useful stroke per jaw 2.5 mm to 8.0 mm
- 4 sizes from 12 to 28
- Gripper head for drive unit, flexible adjustment



#### Short-Stroke Small Component Gripper GM 80 - 201

- Gripping force from 120 N to 600 N
- Useful stroke per jaw 2.5 mm to 10.0 mm
- 3 sizes from 80 to 201
- Continuously adjustable stroke, optional with gripping force safety device



#### Long-Stroke Small Component Gripper GM 85 - 205

- Gripping force from 120 N to 460 N
- Useful stroke per jaw 16 mm to 30 mm
- 3 sizes from 85 to 205
- Ideal for use of long gripping fingers



### 3-Finger Centric Gripper



#### Small Component Gripper GMC

- Gripping force from 50 N to 280 N
- Useful stroke per jaw 2.5 mm to 8.0 mm
- 4 sizes from 12 to 28
- Constant gripping force over the stroke area opening and closing



### Angular Gripper



#### Small Component Gripper GMW

- Gripping torque from 0.6 Nm to 4.0 Nm
- Opening angle per jaw 19° to 32°
- 4 sizes from 12 to 28
- Optionally with I.D. or O.D. gripping



### Angular Parallel Gripper



#### Small Component Gripper GM

- Gripping force from 90 N to 330 N
- Max. opening angle per jaw 90°
- Max. parallel stroke per jaw 2 mm
- 3 sizes from 280 to 400
- Force guided angular and parallel stroke in one functional unit



## Rotary Gripping Modules



#### Rotary Module with Parallel Gripper RP

- Gripping force from 50 N to 280 N
- Useful stroke per jaw 2.5 mm to 8 mm
- Drive torque from 0.38 Nm to 1.9 Nm
- 5 sizes
- No external moving air lines or sensor lines



#### Rotary Module with Centric Gripper RC

- Gripping force from 50 N to 280 N
- Useful stroke per jaw 2.5 mm to 8 mm
- Drive torque from 0.38 Nm to 1.9 Nm
- 5 sizes
- Optional intermediate position for rotary movement



#### Rotary Module with Angular Gripper RW

- Gripping force from 0.6 Nm to 4.0 Nm
- Opening angle per jaw 19° to 32°
- Drive torque from 0.38 Nm to 1.9 Nm
- 5 sizes
- Optional with gripping force safety device



### Simply modular

The GEMOTEC System is an outstanding product due to its simple modular design. All modules can be freely combined with adapter plates, assembly elements and centering elements with high system accuracies.

These matching accessories enable the configuration of complete modular multi-axis handling units.



#### SCHUNK Gripping Modules

SCHUNK gripping modules are mounted directly on the linear units by means of standard adapter plates. Locating returns ensure exact fit when assembled.

#### GEMOTEC Gripping Modules

GEMOTEC system gripping modules are designed as self-contained modules. Six functional principles can be combined to configure a total of 123 gripping modules with different benchmark data.

### Assembly System 35 / 55

**Two standard assembly systems are available:**  
With a diameter of 55 mm – and for more compact installations, an assembly system with a diameter of 35 mm.

**NEW**

# SCHUNK Gripping Modules

Systematic Precision

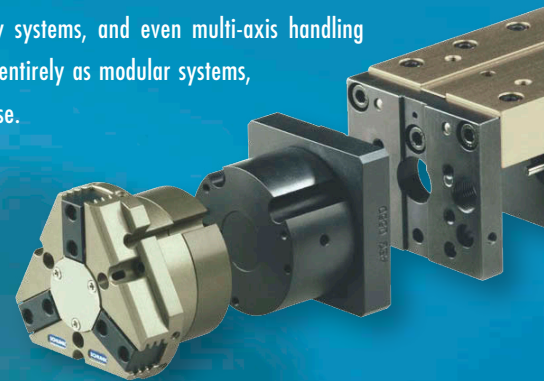
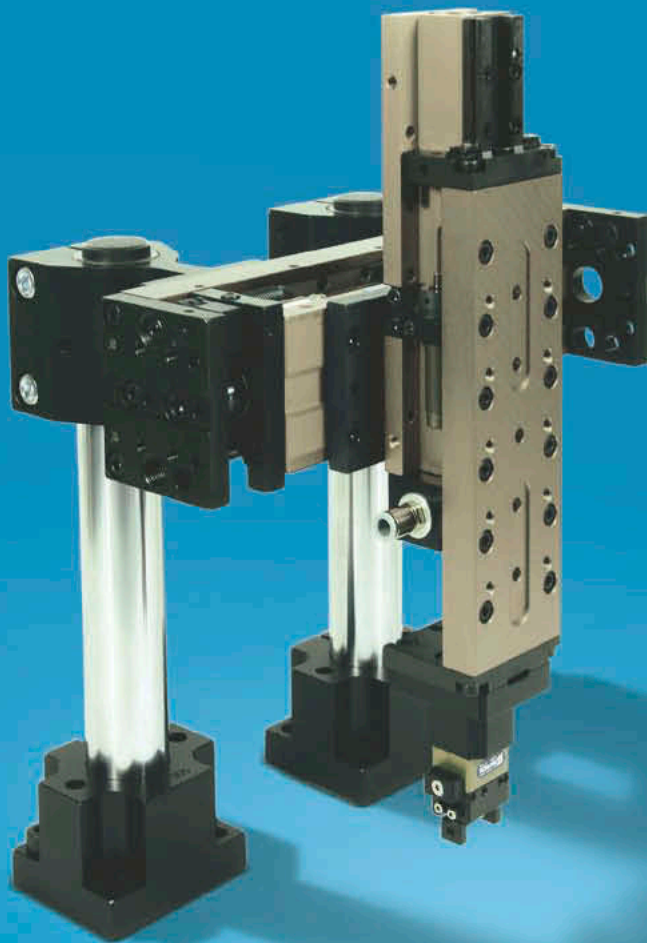
**NOW EVEN MORE FLEXIBLE**  
All standard SCHUNK grippers can be combined via the ASG adapter plates of the GEMOTEC system.

## Maximum precision in handling of small components

Gripping modules from SCHUNK have defined the state-of-the-art in the market for the past 25 years. With extremely high product quality and precision, they stand for maximum process reliability and economical automation — now also with the GEMOTEC modular system. The configuration of SCHUNK grippers and linear units of the GEMOTEC system could not be easier. About 80 adapters enable over 400 combinations of the most common SCHUNK universal and small component grippers with the linear modules of the CLM, KLM, LM and ELM series.

Pick & place units, gantry systems, and even multi-axis handling gantries can be combined entirely as modular systems, with no engineering expense.

Modularity and SCHUNK grippers — the effective combination.



## SCHUNK Gripping Modules

### 2-Finger Parallel Grippers



#### Small Component Gripper MPG

- Gripping force from 24 N to 270 N
- Useful stroke per finger 2 mm to 10 mm
- 6 sizes from 20 to 64
- Base jaws with bearing guidance for precise gripping



#### Long-Stroke Small Component Gripper KGG

- Gripping force from 130 N to 300 N
- Useful stroke per finger 15 mm to 30 mm
- 3 sizes from 80 to 140
- Small gripper with a long stroke



#### Universal Gripper PGN-plus

- Gripping force from 123 N to 3,220 N
- Useful stroke per finger 2 mm to 13 mm
- 6 sizes from 40 to 125
- Robust multi-tooth guidance with large moment loads response for use of long gripper fingers



### Angular Gripper



#### Small Component Gripper SWG

- Gripping torque from 0.058 Nm to 2.8 Nm
- Opening angle per finger 15°
- 6 sizes from 16 to 50
- Small and compact design



## SCHUNK Gripping Modules

### 3-Finger Centric Grippers



#### Small Component Gripper MPZ

- Gripping force from 55 N to 340 N
- Useful stroke per finger 3 mm to 5 mm
- 3 sizes from 30 to 45
- Base jaws with bearing guidance for precise gripping



#### Universal Gripper PZN-plus

- Gripping force from 325 N to 5,900 N
- Useful stroke per finger 2 mm to 10 mm
- 4 sizes from 50 to 100
- Robust multi-tooth guidance with large moment loads response for use of long gripper fingers



### Accessories



- Standardized finger blanks
- Centering sleeves
- Dust covers
- Complete sensor accessories

### Adapters



Approximately 80 adapters are available for various possibilities of combination

# Modular Assembly Automation

## Modular Automation System

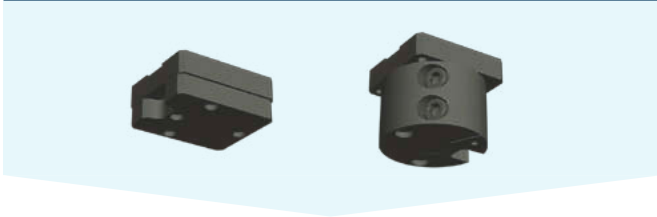
### SCHUNK Gripping Modules

When maximum precision is required — then perfect gripping technology is everything. With over 400 combinations, the use of the most common SCHUNK grippers in the GEMOTEC system offers a broad spectrum of individual solutions.

#### SCHUNK Pneumatic Gripping Modules



#### SCHUNK Adapter Plates



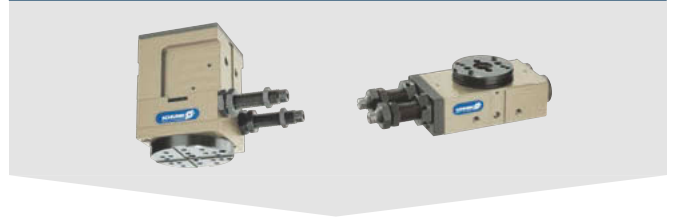
### GEMOTEC System

Modular diversity: with pneumatically and electrically actuated standard modules, the self-contained modular system enables several thousand variant solutions.

#### GEMOTEC Pneumatic Gripping Modules

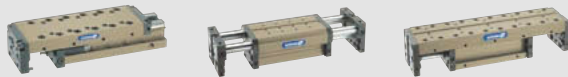


#### GEMOTEC Pneumatic Rotation Modules



### GEMOTEC Linear Modules + Gantry Modules

#### Pneumatic Linear Modules



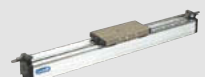
#### Pneumatic Gantry Modules



#### Electric Linear Modules



#### Electric Gantry Modules



### Assembly on Systems



### Combination Examples





# Catalog Order

Copy, complete, fax to

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## Automation



☐ Gripping Modules



☐ Rotary Modules



☐ Linear Modules



Complete program Automation



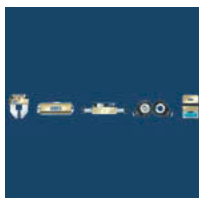
☐ Robot Accessories



☐ Modular Assembly Technology



☐ Machine Vision



☐ Product Overview



☐ System GEMOTEC  
Product Overview



☐ Modular Robotics



☐ Industry Solutions



☐ Highlights  
New Products

## Toolholding and Workholding



☐ Toolholding Systems



☐ Stationary Workholding



☐ Lathe Chucks



Complete program Toolholding and Workholding



☐ Chuck Jaws



☐ Product Overview



☐ Hydraulic Expansion Technology  
Special Solutions



☐ Highlights  
New Products

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Name

Department

Street

ZIP

City

Tel.

Fax



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