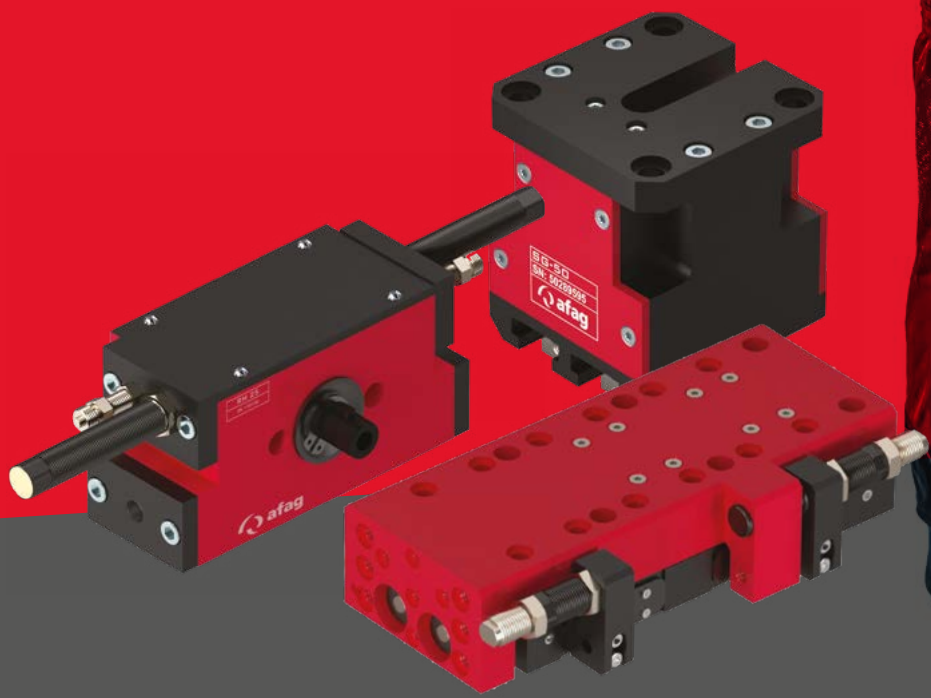




Handling  
The flexible  
program  
**Fascinating  
Movement.**

Yesterday. Today. Tomorrow.



# Modular system

The Afag Group's modular system allows you to easily combine differently sized modules. As a result, you can even combine pneumatic modules with electric axes and grippers. Since nearly all of our pneumatic modules are equipped with shock absorbers and stop screws as standard, they have a very long service life. The wide variety of gripper designs and the solid construction of the gripper mechanism guarantee outstanding flexibility, precision and durability. If connecting plates are needed, then you will find that the suitable screws and centring rings are also part of the scope of delivery.

## Your Advantages:

- › Wide range of linear, rotary and gripper modules
- › You can quickly access CAD data for all of our modules free of charge on our Part Server. You can also configure your systems there
- › Operating manuals with detailed descriptions can be downloaded on our website
- › The high availability of components and systems, as well as the optimal setup performed by our project engineers, guarantee a long service life
- › A guaranteed service life of 24 months reduces downtimes, which significantly lowers replacement costs
- › All documentations are available on mobile devices with the Afag App
- › Spare parts packages and a possible repair of the modules lead to additional saving potentials
- › Repair service for all components
- › Compatibility of the modules on the basis of the centring system
- › High precision of all individual components
- › Reproducible connection technology
- › Repeat accuracy of up to 0.01 mm
- › P&P movements < 1 sec are possible

## Handling

### Gripping



#### GM

Drive combinable with different grippers



#### EU

Simple style  
Energy-efficient



#### SG

Programmable stroke range



#### UG

Parts detection sensor



#### EG

Fast  
Powerfull



#### PG

High-precision gripper jaws



## Handling

### Turning

#### RE

High torque



#### DG

Shortest rotary-gripper in its engine-power class



#### EG/RE

Endless turnable  
Electrical grippers



#### CR

Compact style



#### RM

Optional intermediate positions



#### GM/RM

Modular combination



#### GMQ/RE

Endless turnable  
Pneumatic grippers



## Handling

### Linear

#### OZ

Highly dynamic cantilever axis



#### PS

For heavy weights



#### CS

Compact style



#### HM

Torsional rigidity  
Short style



#### LM

Extremely robust



#### ES

Freely programmable



#### SA

Flexible engine mounting



#### PDL

High torsional rigidity by double brackets



#### LE

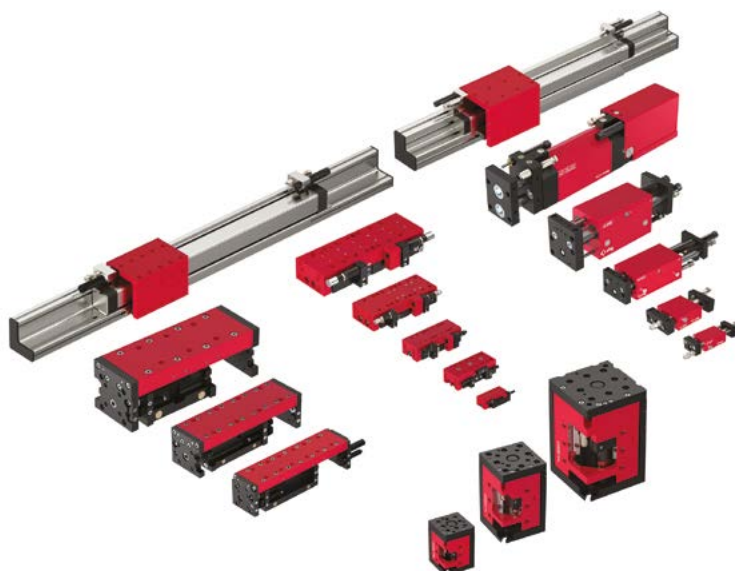
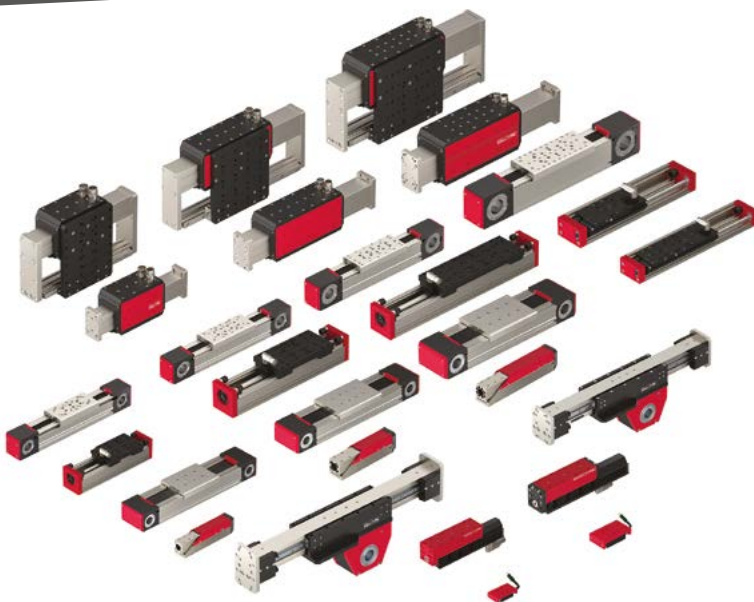
High-dynamic and precise



# Modules

## Linear modules

Linear modules are the basis for our wide range of components. Pneumatic and electric linear modules are available in various sizes.



## Electric

Technical details	
<b>Stroke</b>	0 – 5500 mm
<b>Force</b>	0 – 4000 N
<b>Payload</b>	0 – 300 kg
<b>Load</b>	0 – 930 Nm

### Customer benefit:

- › Freely programmable
- › No air needed
- › Flexibility if products are changed, less wear and maintenance
- › Smooth, quiet, interpolating processes
- › Pneumatic units can be combined easily
- › Smooth surfaces allow for the use in clean rooms

## Pneumatic

Technical details	
<b>Stroke</b>	0 – 3000 mm
<b>Force</b>	0 – 483 N
<b>Payload</b>	0 – 20 kg
<b>Accuracy</b>	+/- 0.01 mm
<b>Load</b>	0 – 650 Nm

### Customer benefit:

- › The simplest combination for repeated handling is possible
- › Patented intermediate stop allows multiple positions
- › The perfect alignment of the guides permits high loads
- › A product that is well known, easy to understand and used often

## Rotation modules

Afag provides a wide range of different rotation modules that are compatible with all linear and gripper modules.



## Electric

Technical details	
<b>Max. speed</b>	200 U/min
<b>Torque</b>	0 – 9 Nm
<b>Torque of inertia</b>	0 – 1.7 kgm <sup>2</sup>
<b>Accuracy</b>	± br (r;6")
<b>Payload radial</b>	0 – 1200 N

### Customer benefit:

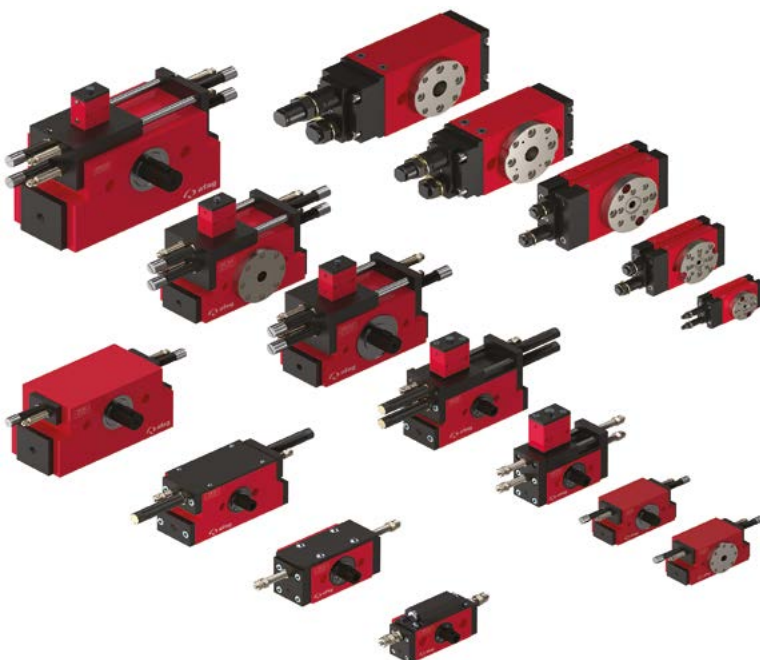
- › Compact size with high torque
- › Freely programmable and continuous rotation possible
- › Suitable for third party controller
- › Hollow shaft can be used for additional functions
- › All bus protocols available
- › Extremely high positioning accuracy
- › Free of play

## Pneumatic

Technical details	
<b>Angle of rotation</b>	0 – 180°
<b>Torque</b>	0 – 27.5 Nm
<b>Torque of inertia</b>	0 – 2.4 kgm <sup>2</sup>
<b>Accuracy</b>	< 6'

### Customer benefit:

- › Complete range
- › Up to 4 angle positions possible
- › Variant diversity compared to the tool kit
- › Variable intermediate position is possible



## Gripper modules

A wide range of gripper modules is available to you for gripping objects of different shapes and sizes.



## Electric

### Technical details

<b>Grip strength</b>	0 – 57 N
<b>Opening path</b>	0 – 20 mm
<b>Accuracy</b>	+/- 0.05 mm

### Customer benefit:

- › Low energy costs
- › Compact design
- › Self-locking in a currentless state
- › In a multiple gripper setup tremendous wiring savings

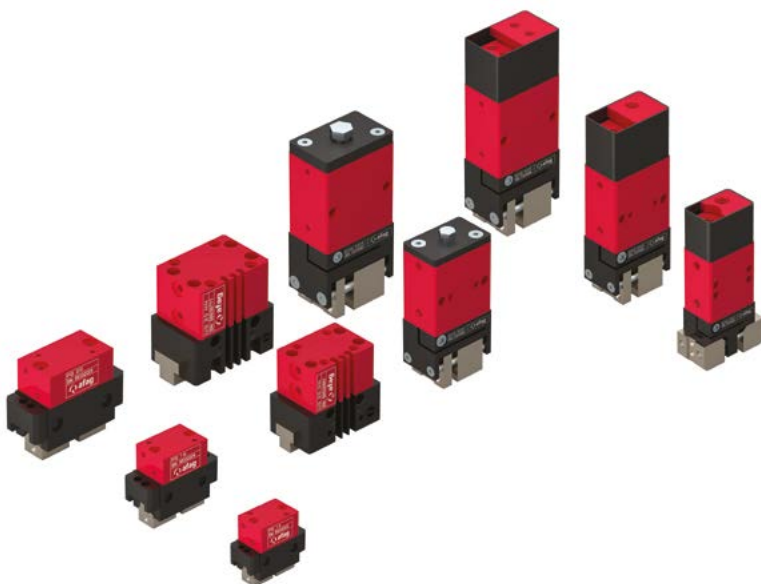
## Pneumatic

### Technical details

<b>Grip strength</b>	0 – 235 N
<b>Opening angle</b>	0 – 176 °
<b>Opening path</b>	0 – 16 mm
<b>Accuracy</b>	+/- 0.025 mm

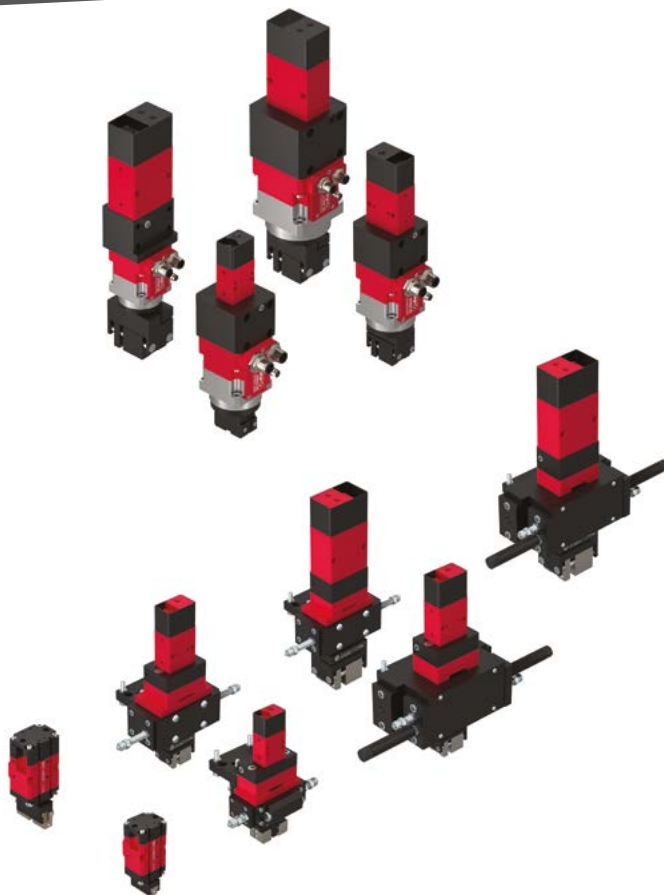
### Customer benefit:

- › Same size but quicker and with greater clamping forces
- › Modular design allows extreme flexibility and minimal stock levels
- › Unique functions, such as adjustable opening position, length of stroke, tongs assembly angle
- › Maximum rigidity of the gripper fingers through L-design
- › High precision and repeat accuracy



## Gripping rotary modules

With Afag's linear, rotary and gripper modules with pneumatic or electric drives, individual handling tasks can be accomplished with a manageable number of standard modules. The large selection of combined gripping rotary modules is put together with components from Afag's standard range.



## Electric

Technical details	
Max. speed	200 U/min
Torque	0 – 9 Nm
Torque of inertia	0 – 1.7 kgm <sup>2</sup>
Accuracy	± br (r;6")
Payload radial	0 – 1 N

### Customer benefit:

- › Compact design
- › Endlessly turning
- › Exact positioning possible
- › Different tongs can be selected
- › High torques and speeds

## Pneumatic

Technical details	
Angle of rotation	0 – 180°
Torque	0 – 2.5 Nm
Torque of inertia	0 – 0.4 kgm <sup>2</sup>
Accuracy	< 5'

### Customer benefit:

- › Individual handling tasks can be accomplished with a manageable number of standard modules
- › The compact design does not require a lot of space
- › The gripper function can be requested
- › A maximum of 4 positions can be selected
- › Different tongs can be selected



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