



Superior Clamping and Gripping



## Product Information

Compensation unit XY AGE-XY 080

# AGE-XY

Compensation unit XY

## Compact. Smooth. Robust.

## Compensation unit AGE-XY

Compensation unit with X-Y lateral compliance

### Field of application

Palletizing, joining, and assembly of workpieces

### Advantages – Your benefits

**ISO mounting pattern** for easy assembly to most types of robots without needing additional adapter plates

**Robust sliding guide** for high moment load at minimum space

**Central locking** for centering the unit in a defined position

**Pneumatic position storage** for eccentric locking in a deflected position



Sizes  
Quantity: 3



Handling weight  
6 .. 15 kg



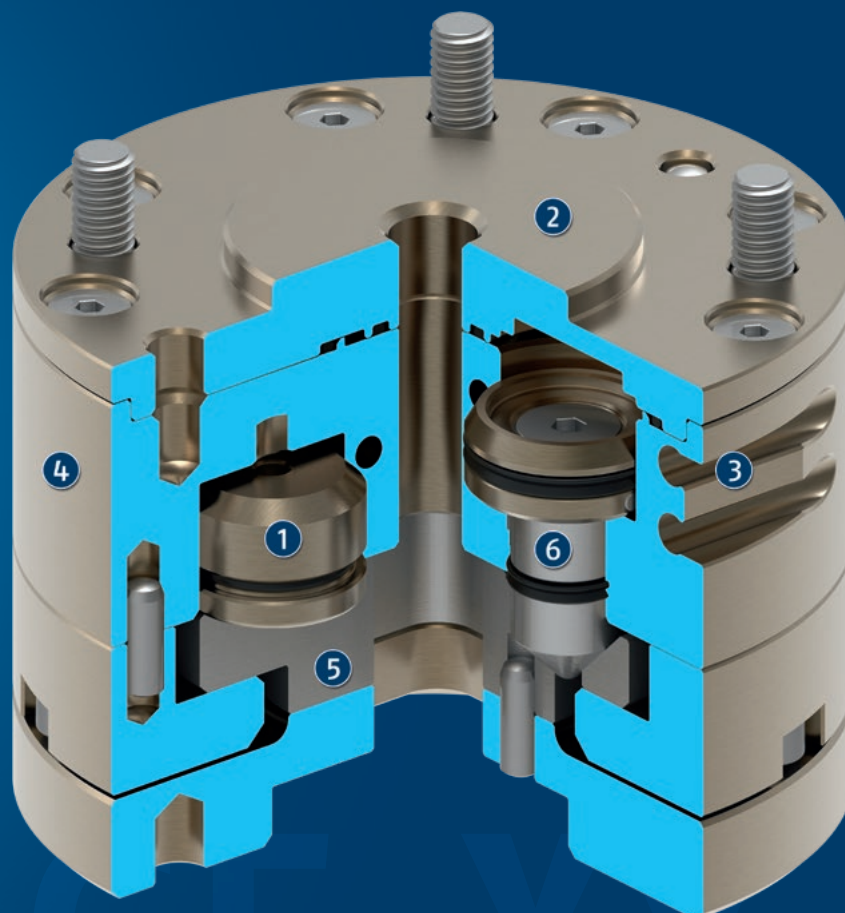
Compensation XY  
 $\pm 2.5 \dots 4$  mm



Rotary compensation  
angle  
 $\pm 12 \dots 16^\circ$

## Functional description

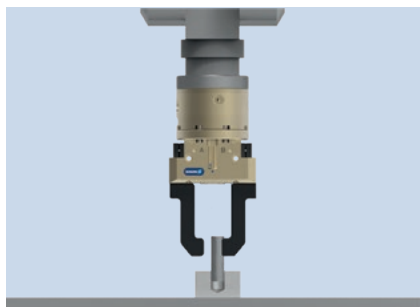
The compensation unit AGE-XY allows the release of the linear movement in the X- and Y-axis by robots or handling units. After the compensation process, the workpiece can be centrally aligned again.



- ① **Position memory**  
pneumatically actuated locking in any eccentric position via frictional connection
- ② **Direct assembly**  
by using a standardized ISO 9409 interface for robots
- ③ **Monitoring**  
Stroke monitoring of the locking piston with magnetic switches
- ④ **Housing**  
is weight-optimized due to the use of high-strength aluminum alloy
- ⑤ **Compensation body**  
for compensation of rotational deviations and position errors on the XY plane
- ⑥ **Central locking**  
pneumatically actuated locking in centric position via form-fit locking

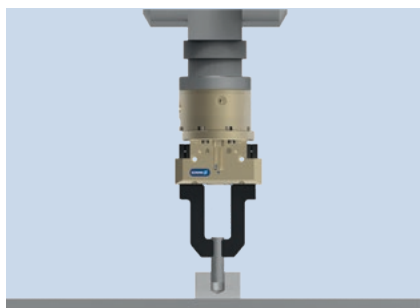
## Detailed functional description

### Workpiece removal: AGE unlocked – gripper opened



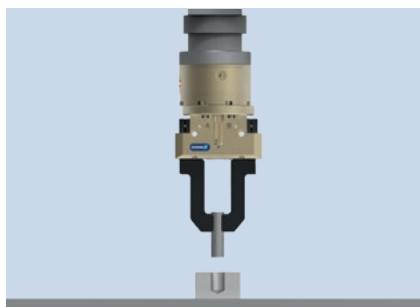
The robot travels towards the workpiece with a gripping unit consisting of an AGE (compensation unit) and gripper. There is an offset due to tolerances/inaccuracies.

### Workpiece removal: AGE unlocked – gripper closed



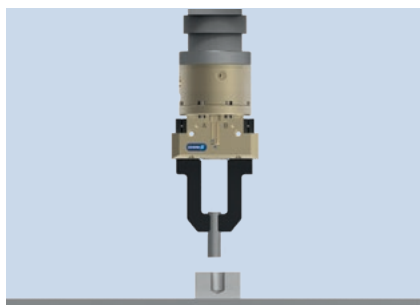
An unlocked AGE can be used to compensate the existing axial offset between the gripper and workpiece axes.

### Workpiece removal: AGE locked (position memory) – gripper closed



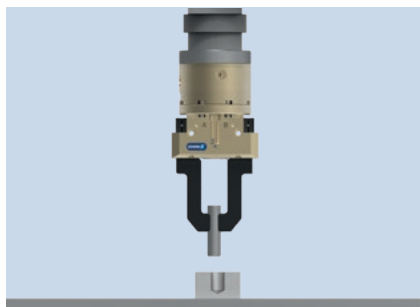
The robot removes the workpiece. The deflected position of the AGE can be locked via the integrated position memory.

### Workpiece removal: AGE centrally locked – gripper closed



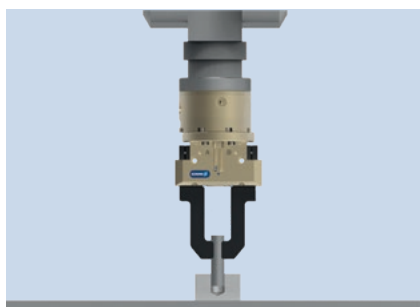
The position memory of the AGE is unlocked and the centered AGE lock is activated. That renders the original axis offset, as the gripper and robot axis are now centered relative to one another.

### Workpiece mounting: AGE centrally locked – gripper closed



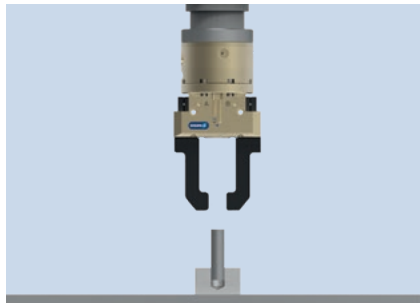
The robot travels towards the workpiece with a gripping unit consisting of an AGE (compensation unit) and gripper. There is an offset due to tolerances/inaccuracies.

### Workpiece mounting: AGE unlocked – gripper closed



An unlocked AGE can be used to compensate the existing axial offset between the gripper and workpiece axes and the workpiece can be joined.

### Workpiece mounting: AGE unlocked – gripper opened



The robot moves away from the center of compliance with the gripper unit, the unit is then centrally locked, and the gripper is closed.

## General notes about the series

**Guidance system:** Robust sliding guide

**Monitoring:** by magnetic switch

**Actuation:** pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4].

**Housing:** hard anodized aluminum alloy, functional parts made of hardened steel

**Scope of delivery:** Robot-side mounting screws

**Warranty:** 24 months

**Harsh environmental conditions:** Please note that use under harsh environmental conditions (e.g. in the coolant area, cast and grinding dust) can considerably reduce the service life of the units, and we will not take over any warranty. However, in many cases we can find a solution. Please contact us for assistance.

**Handling weight:** is the weight of the total load attached to the flange. When designing, the permissible forces and moments have to be paid attention to. Please note that exceeding the recommended handling weight will shorten the lifespan.

## Application example

Compensation unit for mounting a pin in a bore with a roughly tolerated position. The compensation unit compensates for the planar offset without turning or tilting the workpiece.

- 1 2-finger parallel gripper PGF with top finger and workpiece
- 2 Compensation unit AGE-XY



## SCHUNK offers more ...

The following components make the product even more productive – the suitable addition for the highest functionality, flexibility, reliability, and controlled production.



Quick change system



Manual change system



Anti-collision and overload protection sensor



Universal gripper



Magnetic switches



Universal gripper

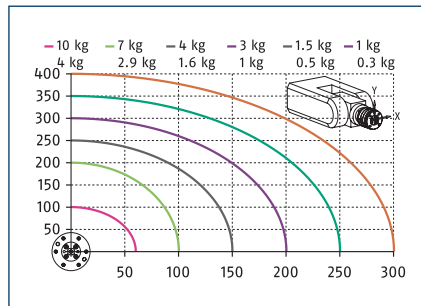
① For more information on these products can be found on the following product pages or at [schunk.com](http://schunk.com).

# AGE-XY 080

Compensation unit XY

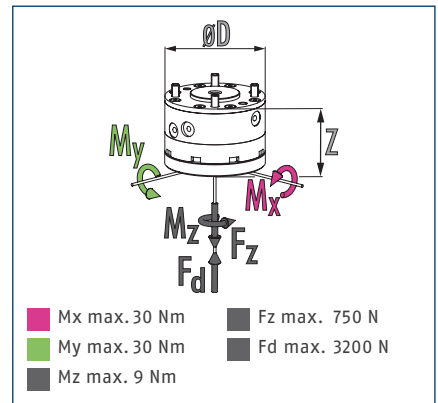


## Load chart



① Position of the allowable center of mass as a function of the payload for horizontal applications. A higher value of mass is valid for central locking, and a lower value of mass for position storage.

## Dimensions and maximum loads



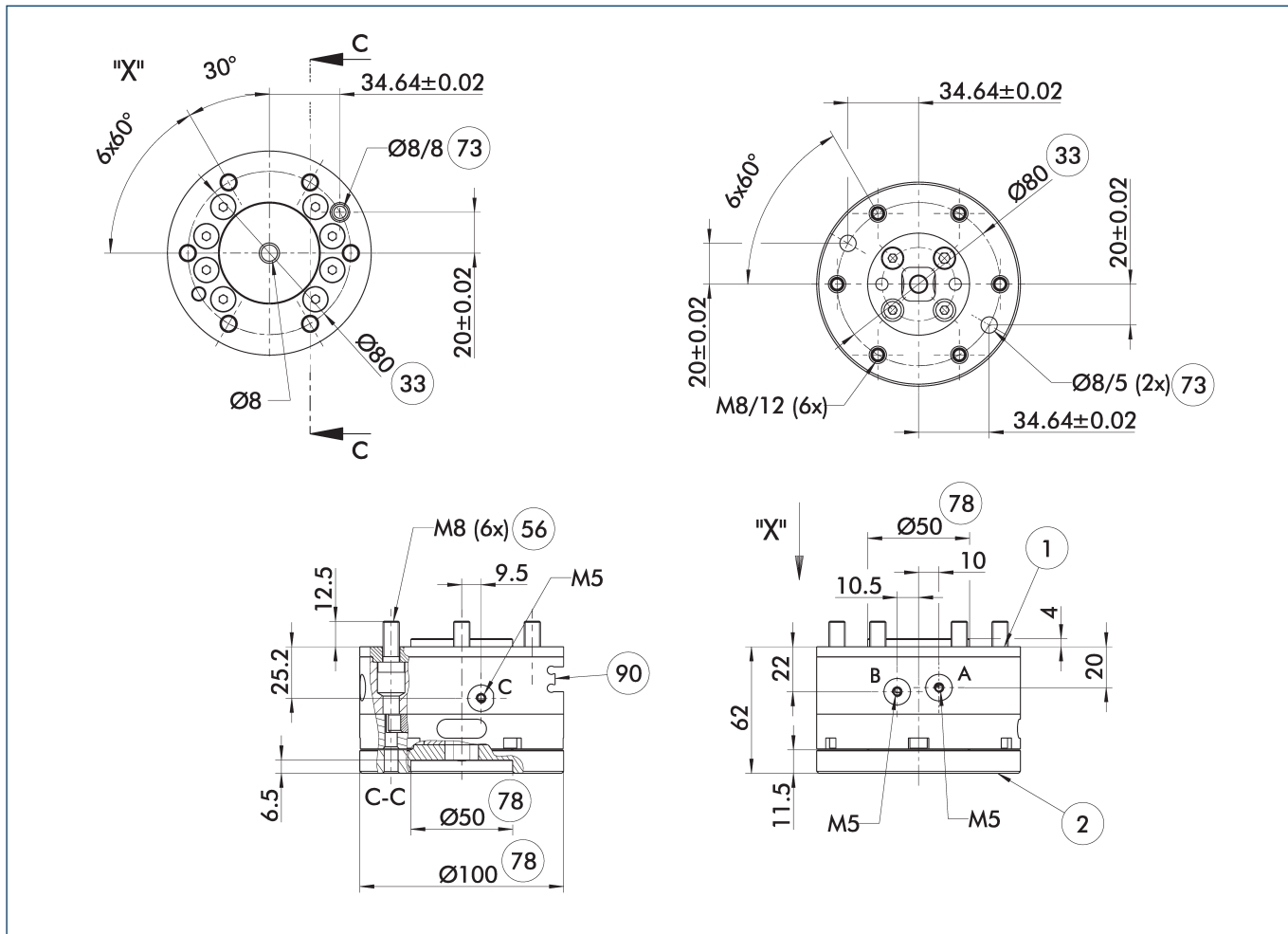
① This is the max. total of all moments and loads (acceleration forces and torques, process forces etc.), which can affect a compensation unit, in order to ensure error-free function.

## Technical data

Description		AGE-XY-080	AGE-XY-080-P
ID		0324480	0324481
Compensation XY	[mm]	±4	±4
Deflection rotatory	[°]	±16	±16
Recommended handling weight, vertical	[kg]	15	15
Recommended handling weight, horizontal	[kg]	10	10
Recommended handling weight position storage	[kg]		4
Locking force	[N]	580	580
Max. load force locked	[N]	310	310
Position memory piston force	[N]		580
Max. radial force, position storage	[N]		145
Rotation moment position storage	[Nm]		4
Max. distance shifting force Z	[mm]	200	200
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8
Repeat accuracy	[mm]	0.1	0.1
Robot-side connection		ISO 9409-1-80-6-M8	ISO 9409-1-80-6-M8
Weight	[kg]	1.49	1.5
Min./max. ambient temperature	[°C]	5/60	5/60
Dimensions Ø D x Z	[mm]	100 x 62	100 x 62



## Main view



The main view shows the unit in its basic version.

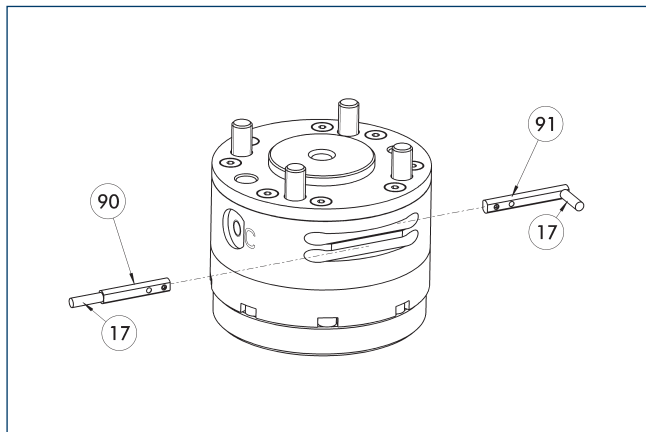
- A, a Air connection unlocked
- B, b Air connection locked
- C, c Air connection position memory XY
- ① Robot-side connection
- ② Tool-side connection

- ③③ DIN ISO-9409 bolt circle
- ⑤⑤ Included in the scope of delivery
- ⑦⑦ Fit for centering pins
- ⑦⑧ Fit for centering
- ⑨⑨ Slot for magnetic switch

# AGE-XY 080

Compensation unit XY

## Sensor system



- 17 Cable outlet                      91 Sensor MMS 22...-SA  
90 Sensor MMS 22..

End position monitoring for mounting in the C-slot.

Description	ID	Often combined
<b>Electronic magnetic switch</b>		
MMS 22-S-M8-PNP	0301032	●
MMSK 22-S-PNP	0301034	
<b>Electronic magnetic switches with lateral cable outlet</b>		
MMS 22-S-M8-PNP-SA	0301042	
<b>Connection cables</b>		
KA BG08-L 3P-0300-PNP	0301622	●
KA BG08-L 3P-0500-PNP	0301623	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
<b>clip for plug/socket</b>		
CLI-M8	0301463	
<b>Cable extension</b>		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
<b>Sensor distributor</b>		
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

- i Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.





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