



Hand in hand for tomorrow



Product data sheet

Compensation unit XY AGE-XY

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



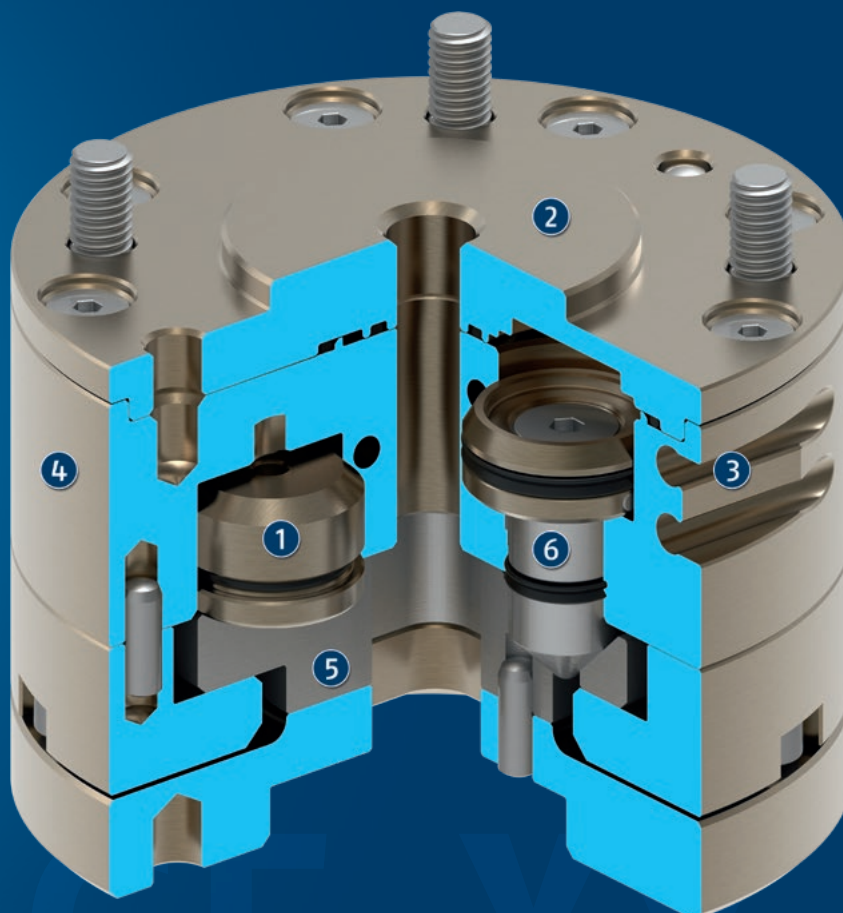
Compensation XY
 $\pm 2.5 \dots 4 \text{ mm}$



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

Functional description

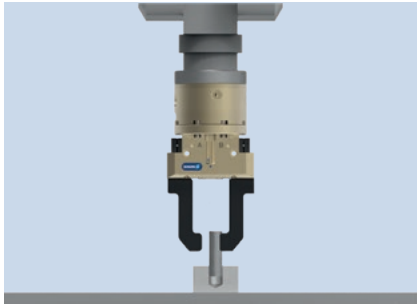
The compensation unit AGE-XY allows the release of the linear movement in the X- and Y-axis by robots or handling units. After the compensation process, the workpiece can be centrically aligned again.



- 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

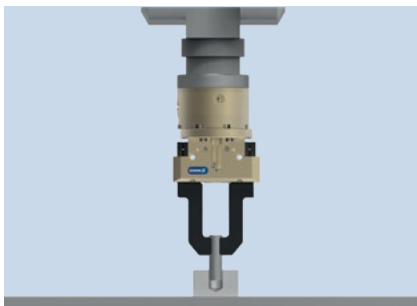
Detailed functional description

Workpiece removal: AGE unlocked – gripper opened



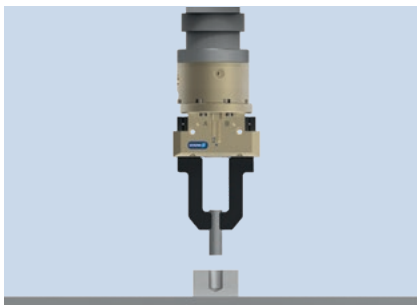
The robot travels towards the workpiece with a gripping unit consisting of an AGE (compensation unit) and gripper. There is an offset due to tolerances/inaccuracies.

Workpiece removal: AGE unlocked – gripper closed



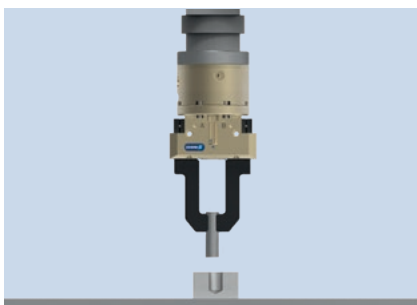
An unlocked AGE can be used to compensate the existing axial offset between the gripper and workpiece axes.

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



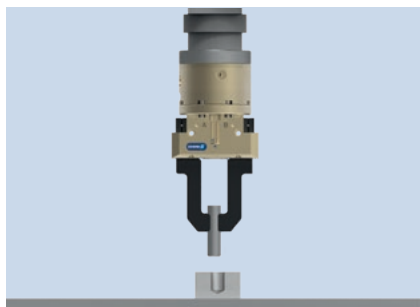
The robot removes the workpiece. The deflected position of the AGE can be locked via the integrated position memory.

Workpiece removal: AGE centrally locked – gripper closed



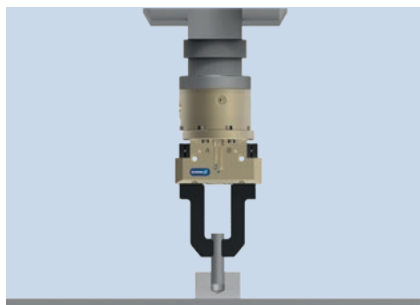
The position memory of the AGE is unlocked and the centered AGE lock is activated. That renders the original axis offset, as the gripper and robot axis are now centered relative to one another.

Workpiece mounting: AGE centrically locked – gripper closed



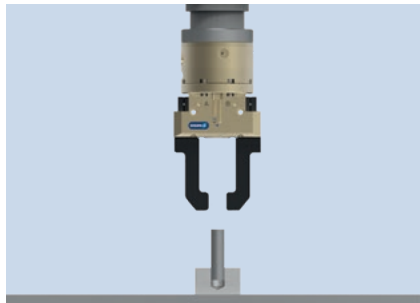
The robot travels towards the workpiece with a gripping unit consisting of an AGE (compensation unit) and gripper. There is an offset due to tolerances/inaccuracies.

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 centrically 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: Compensation unit in the ordered variant, elements for mechanical connection and safety information. Product-specific instructions can be downloaded at schunk.com/downloads-manuals.

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.

- ❶ 2-finger parallel gripper PGF with top finger and workpiece
- ❷ 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.



Tool changer



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](https://www.schunk.com).

Options and special information

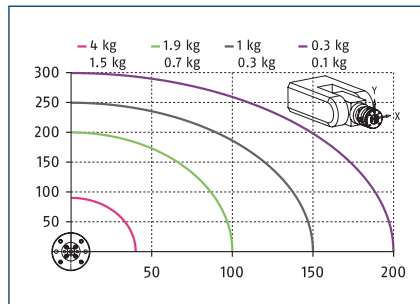
Food-grade lubrication: The product contains food-compliant lubricants as standard. The requirements of EN 1672-2:2020 are not fully met. The relevant NSF certificates are available at <https://info.nsf.org/USDA/Listings.asp> using the lubricant information in the operating manual.

AGE-XY 050

Compensation unit XY

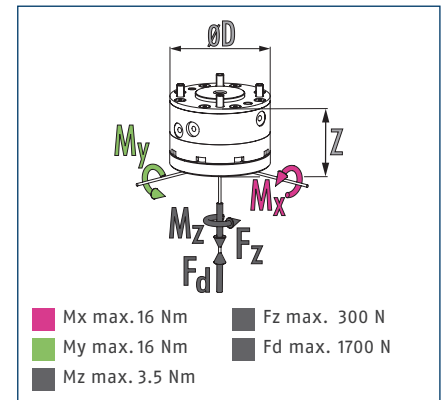


Load chart



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

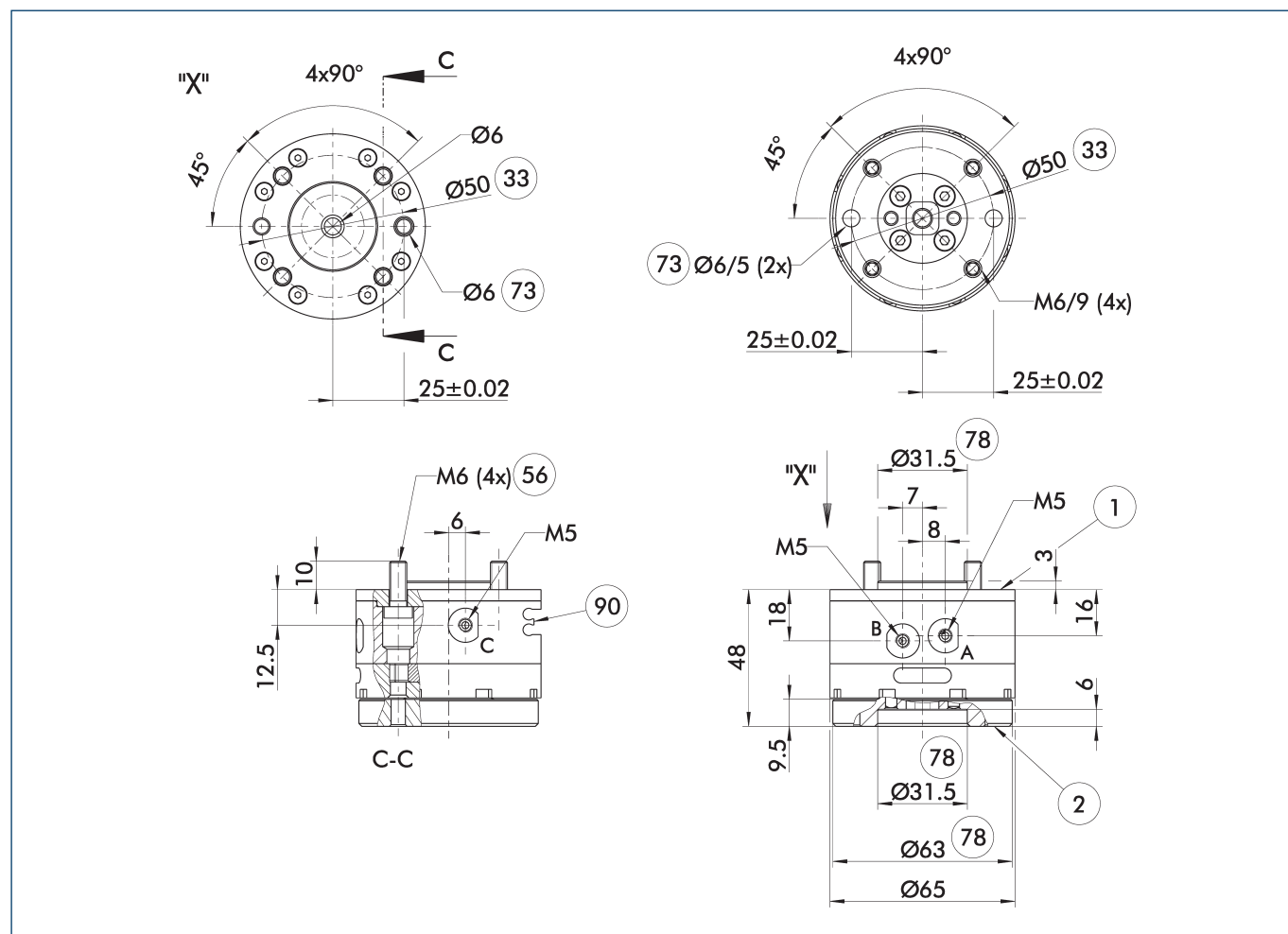


① This is the max. total of all moments and loads (acceleration forces and torques, process forces etc.), which can affect a compensation unit, in order to ensure error-free function.

Technical data

Description		AGE-XY-050	AGE-XY-050-P
ID		0324450	0324451
Compensation XY	[mm]	±2.5	±2.5
Deflection rotatory	[°]	±12	±12
Recommended handling weight, vertical	[kg]	6	6
Recommended handling weight, horizontal	[kg]	4	4
Recommended handling weight position storage	[kg]		1.5
Locking force	[N]	235	235
Max. load force locked	[N]	130	130
Position memory piston force	[N]		180
Max. radial force, position storage	[N]		45
Rotation moment position storage	[Nm]		1.2
Max. distance shifting force Z	[mm]	120	120
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 9409-1-50-4-M6	ISO 9409-1-50-4-M6
Weight	[kg]	0.46	0.47
Min./max. ambient temperature	[°C]	5/60	5/60
Dimensions Ø D x Z	[mm]	65 x 48	65 x 48

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

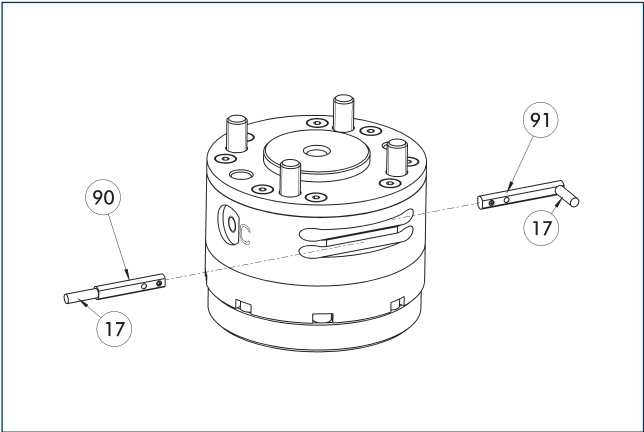
⑤⑤ Included in the scope of delivery

⑦⑦ Fit for centering pins

⑦⑦ Fit for centering

⑨⑨ Slot for magnetic switch

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
Electronic magnetic switch		
MMS 22-S-M8-PNP	0301032	●
MMSK 22-S-PNP	0301034	
Electronic magnetic switches with lateral cable outlet		
MMS 22-S-M8-PNP-SA	0301042	
Connection cables		
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	
Clip for connector/socket		
CLI-M8	0301463	
Cable extension		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
Sensor distributor		
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

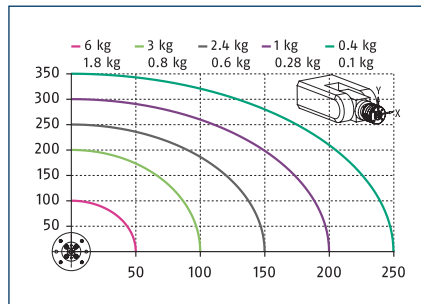
- Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.

AGE-XY 063

Compensation unit XY

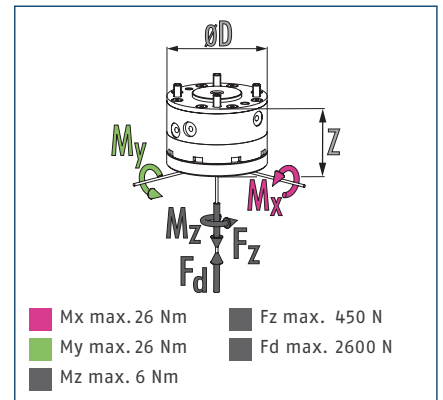


Load chart



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

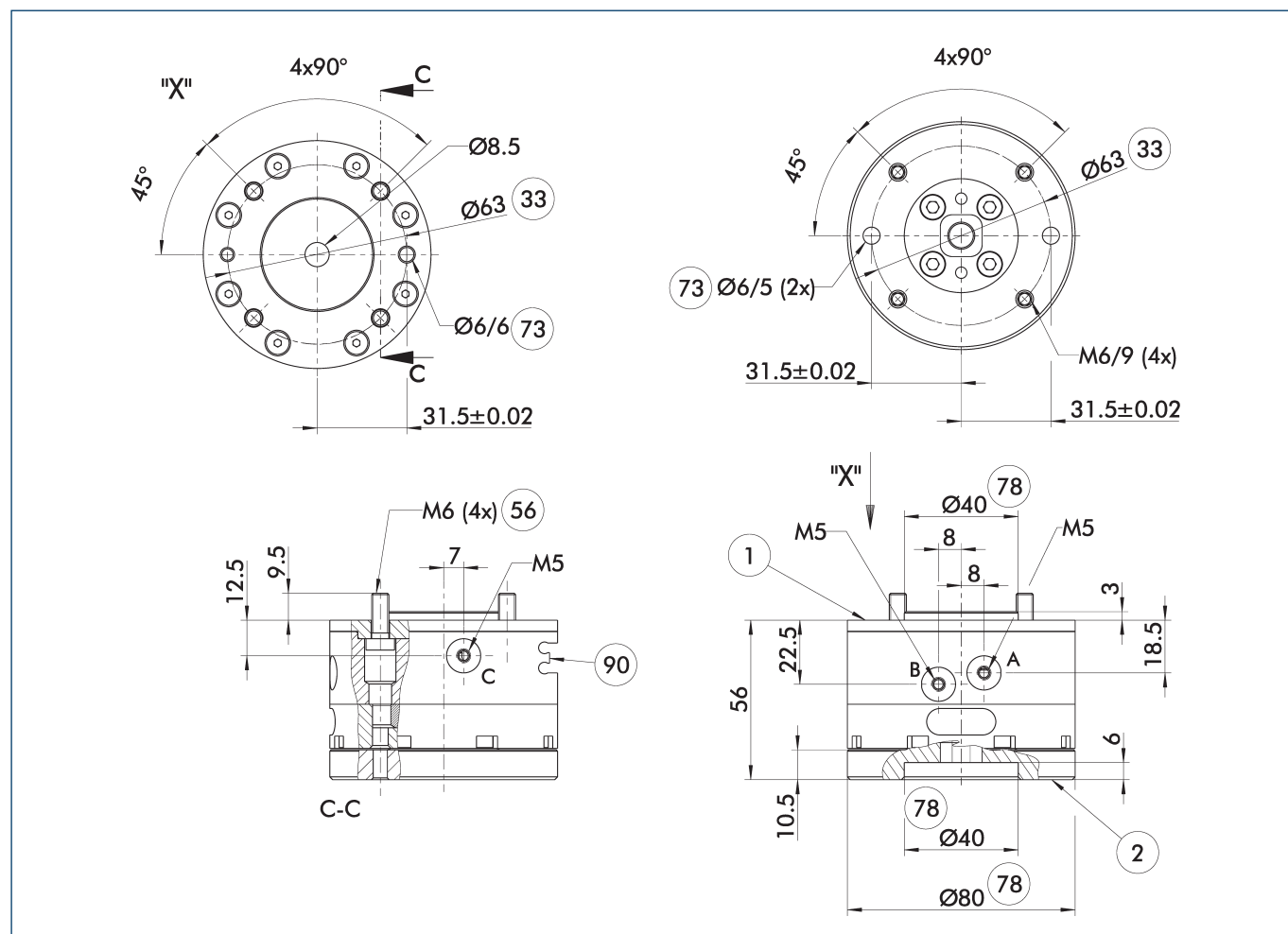


① This is the max. total of all moments and loads (acceleration forces and torques, process forces etc.), which can affect a compensation unit, in order to ensure error-free function.

Technical data

Description		AGE-XY-063	AGE-XY-063-P
ID		0324463	0324464
Compensation XY	[mm]	±3	±3
Deflection rotatory	[°]	±12	±12
Recommended handling weight, vertical	[kg]	9	9
Recommended handling weight, horizontal	[kg]	6	6
Recommended handling weight position storage	[kg]		1.8
Locking force	[N]	370	370
Max. load force locked	[N]	200	200
Position memory piston force	[N]		235
Max. radial force, position storage	[N]		50
Rotation moment position storage	[Nm]		1.7
Max. distance shifting force Z	[mm]	160	160
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 9409-1-63-4-M6	ISO 9409-1-63-4-M6
Weight	[kg]	0.83	0.85
Min./max. ambient temperature	[°C]	5/60	5/60
Dimensions Ø D x Z	[mm]	80 x 56	80 x 56

Main view

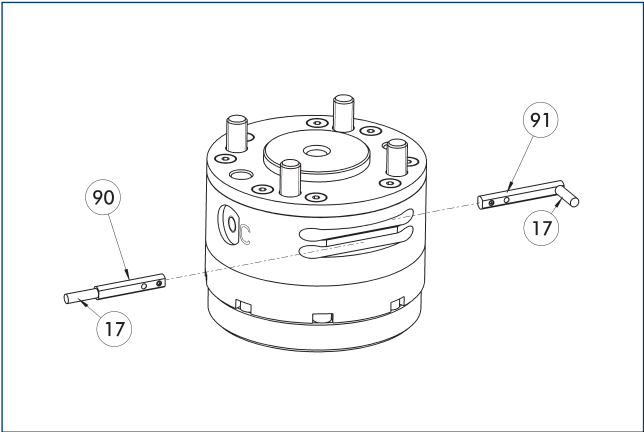


The main view shows the unit in its basic version.

- 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
- ⑤⑥ Included in the scope of delivery
- ⑦③ Fit for centering pins
- ⑦⑧ Fit for centering
- ⑨⑩ Slot for magnetic switch

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
Electronic magnetic switch		
MMS 22-S-M8-PNP	0301032	●
MMSK 22-S-PNP	0301034	
Electronic magnetic switches with lateral cable outlet		
MMS 22-S-M8-PNP-SA	0301042	
Connection cables		
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	
Clip for connector/socket		
CLI-M8	0301463	
Cable extension		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
Sensor distributor		
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

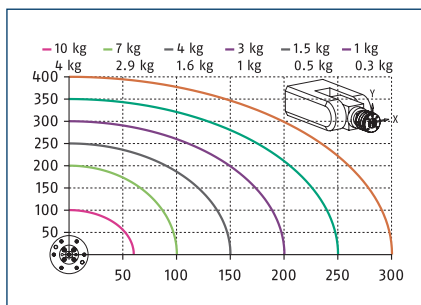
- ① Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.

AGE-XY 080

Compensation unit XY

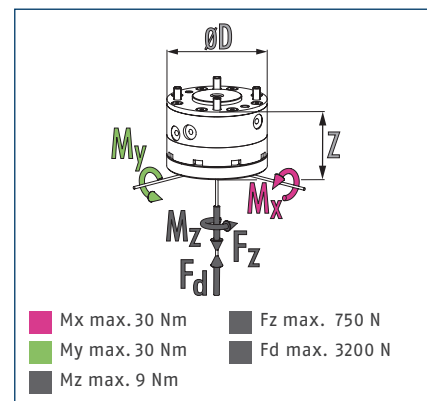


Load chart



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

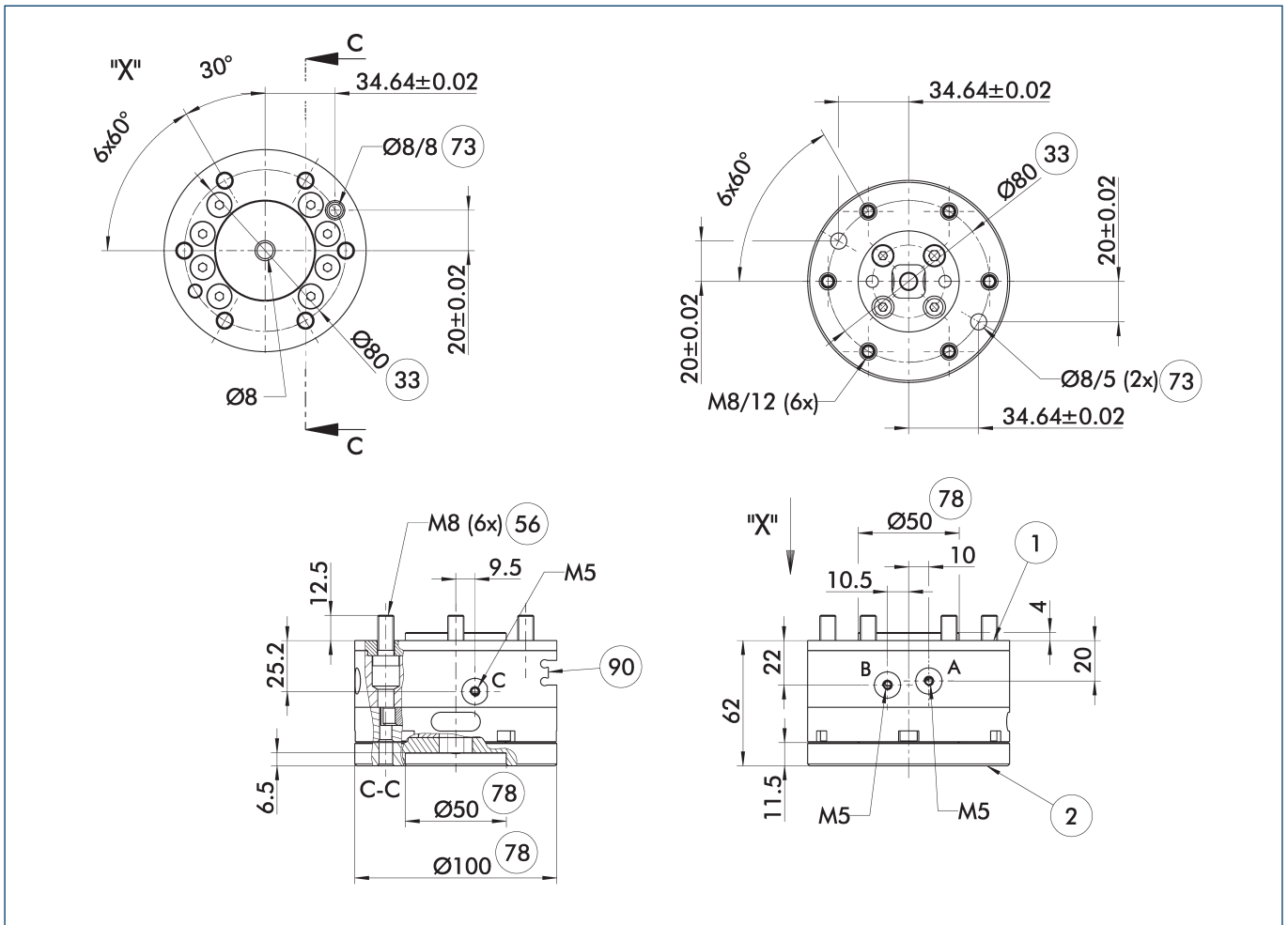


① This is the max. total of all moments and loads (acceleration forces and torques, process forces etc.), which can affect a compensation unit, in order to ensure error-free function.

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

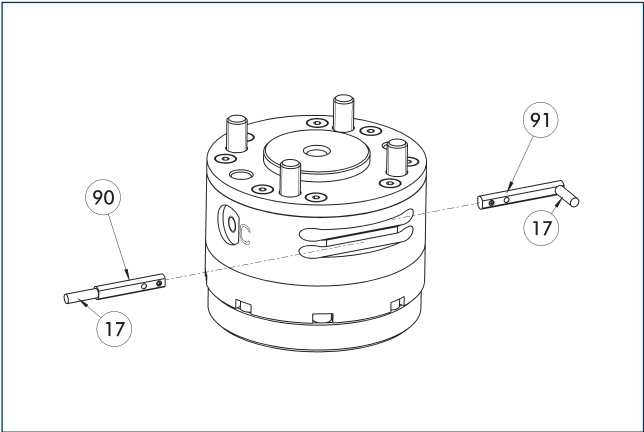


The main view shows the unit in its basic version.

- 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
- ⑤⑥ Included in the scope of delivery
- ⑦③ Fit for centering pins
- ⑦⑧ Fit for centering
- ⑨⑩ Slot for magnetic switch

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
Electronic magnetic switch		
MMS 22-S-M8-PNP	0301032	●
MMSK 22-S-PNP	0301034	
Electronic magnetic switches with lateral cable outlet		
MMS 22-S-M8-PNP-SA	0301042	
Connection cables		
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	
Clip for connector/socket		
CLI-M8	0301463	
Cable extension		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
Sensor distributor		
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

- ① 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.



SCHUNK SE & Co. KG

Spanntechnik

Greiftechnik

Automatisierungstechnik

Bahnhofstr. 106 - 134

D-74348 Lauffen/Neckar

Tel. +49-7133-103-0

Fax +49-7133-103-2399

info@de.schunk.com

schunk.com

Folgen Sie uns | *Follow us*

