



Superior Clamping and Gripping



Product Information

Compensation unit AGE-U

AGE-U

Compensation unit

Flexible. Compact. Robust.

Compensation Unit AGE-U

Compensation unit with rotation and angle compensation for adaptation of end effector to the position of the component

Field of application

Best suited for use in assembly, loading and unloading or bin picking applications

Advantages – Your benefits

Deflection both while in rotation and at an angle compensate for inaccuracies in the position of the workpiece and saves time, cost and effort by simplifying robot programming

Centric reset allows components to be placed in a defined position

Spring-supported reset of the unit can be adjusted via compressed air for optimum deflection

ISO mounting pattern equipped with ISO standard both robot-side and tool-side A direct screw connection to conventional robot types is possible without an additional adapter plate

Monitoring of locking increases the process reliability and simplifies commissioning



Sizes
Quantity: 1



Handling weight
5 kg



Deflection
 $\pm 3^\circ$

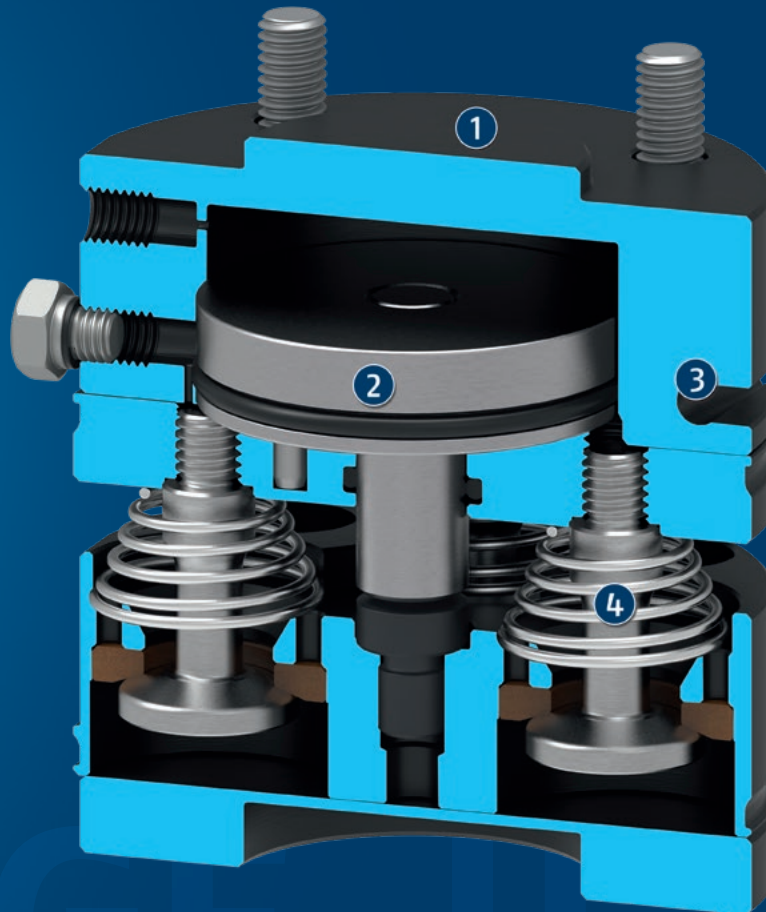


Rotary compensation
angle
 $\pm 8^\circ$

Functional description

The compensation unit enables compensation of angle and rotation. Workpieces can be gripped despite positional offset and locational uncertainty. The flexibility of the unit can be pressurized with compressed air and

adjusted via the air connection. The unit can be locked centrally and rigidly at maximum pressure.



- ① **Housing**
made of anodized aluminum for weight optimization
- ② **Locking piston**
pneumatically actuated locking in centric position
- ③ **Integrated piston stroke monitoring**
Stroke monitoring of the locking piston with magnetic switches
- ④ **Spring for pre-clamping**

AGE-U

Compensation unit

General notes about the series

Actuation: Spring return with spring forces and compressed air

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

Scope of delivery: including robot-sided mounting screws

Warranty: 24 months

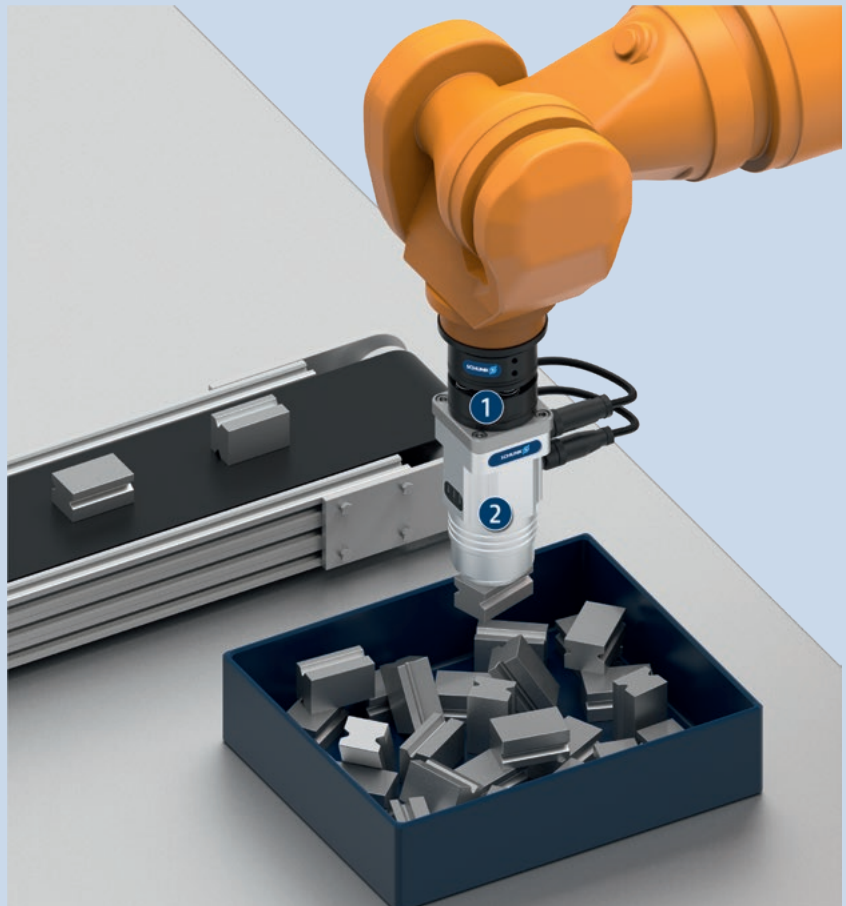
Harsh environmental conditions: Please note that use under harsh environmental conditions (e.g. in the coolant area, cast and grinding dust) can considerably reduce the service life of the units, and we will not take over any warranty. However, in many cases we can find a solution. Please contact us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

Handling unit for gripping ferromagnetic workpieces without a defined position from a bin

- 1 Compensation Unit AGE-U
- 2 Magnetic gripper EMH



SCHUNK offers more ...

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



Magnetic switches



Parallel gripper



Centric Grippers



Electric magnetic gripper

① For more information on these products can be found on the following product pages or at schunk.com.

Options and special information

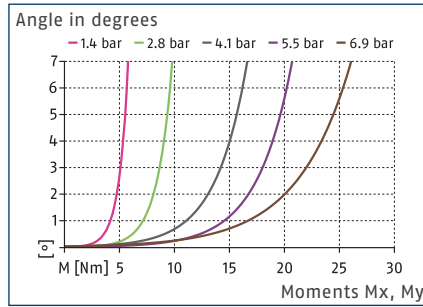
Optional protective boot: A protective cover is available for the compensation unit. The protective cover can be ordered and retrofitted.

AGE-U 050

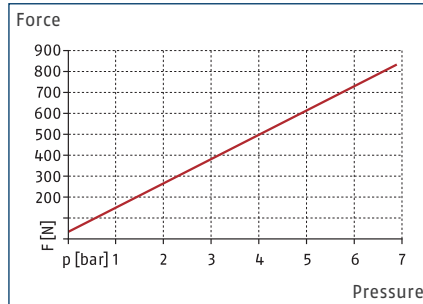
Compensation unit



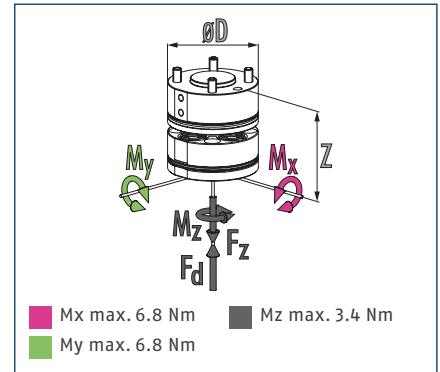
Load chart



Compensation force F_d



Dimensions and maximum loads



ⓘ 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

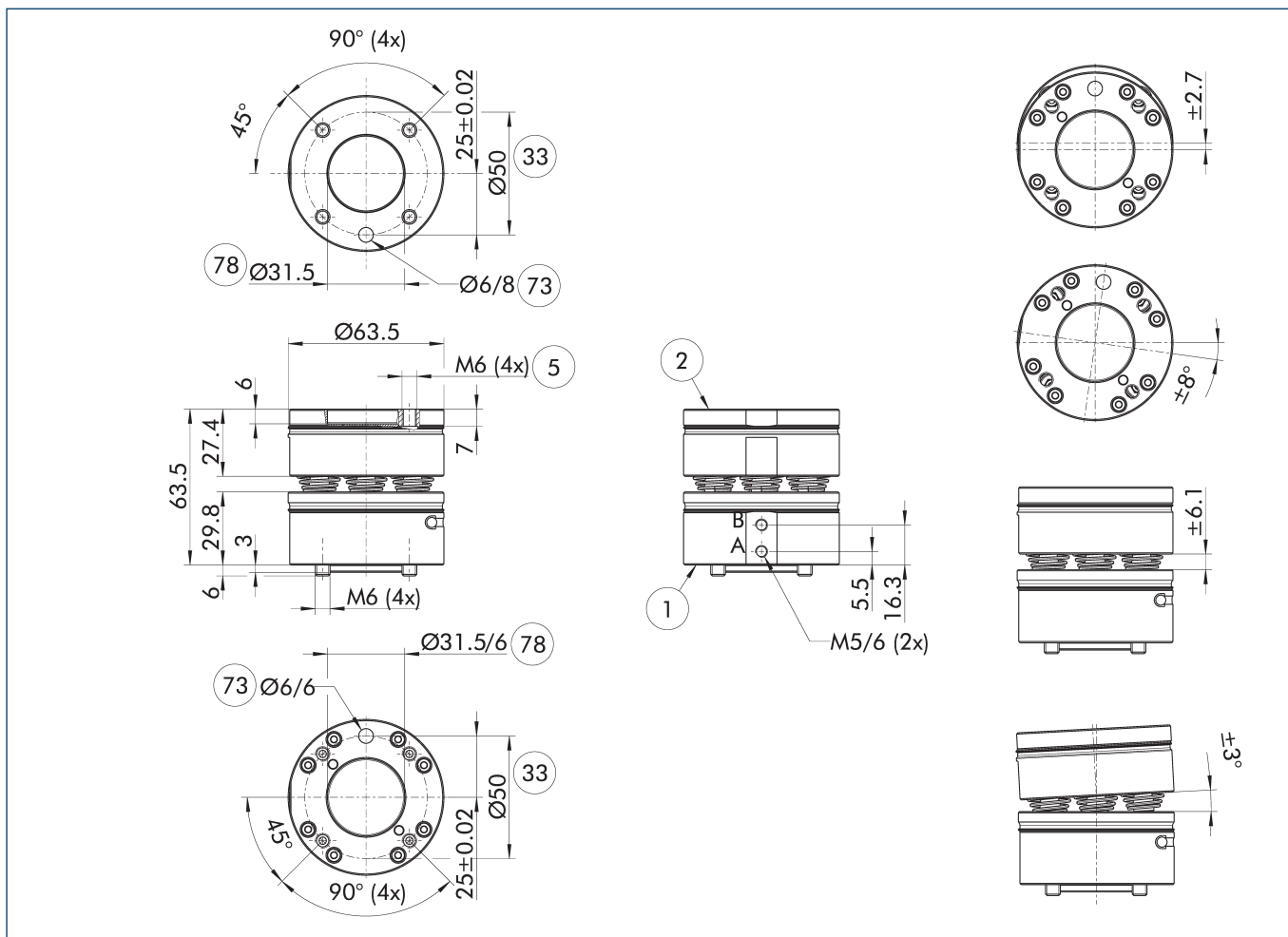
Description		AGE-U 050
ID		1312860
Compensation XY*	[mm]	±2.7
Compensation Z	[mm]	6.1
Angular deflection	[°]	±3
Deflection rotatory	[°]	±8
Recommended handling weight	[kg]	5
Min./max. spring force	[N]	36/92
min./max. operating pressure range adjustment	[bar]	0.3/2.1
min./max. locking operating pressure	[bar]	4.1/6.9
Robot-side connection		ISO 9409-1-50-4-M6
Tool-side connection		ISO 9409-1-50-4-M6
Weight	[kg]	0.6

* During compensation in the X-Y direction, the product contracts minimally due to the cone on the overload pin along the Z axis. For further information on the product, see the operating manual.

ⓘ The indicated angular deflections are maximum values and depend on the operating pressure. In the locked state, the moment load caused by the mass of the customer-side tool and the acceleration must not lead to any deflection, otherwise the maximum number of load cycles is reduced, and the compensation unit can be damaged.

ⓘ Compensating outside the operating pressure range for adjusting the stiffness reduces the maximum number of load cycles and may result in damage to the compensation unit.

Main view



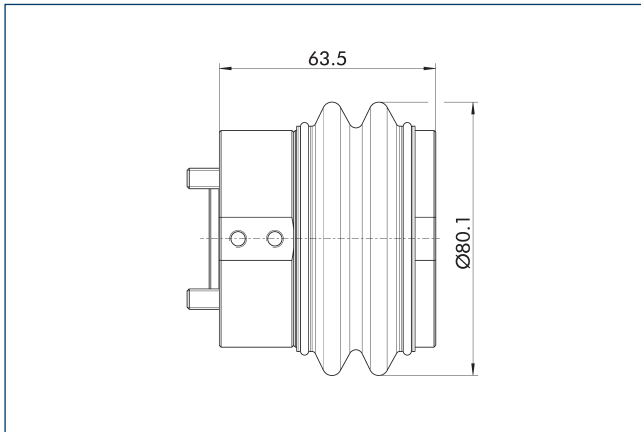
The drawing shows the unit in standard design, without considering any dimensions of the options described below.

- A, a Air connection locked
- ① Robot-side connection
- ② Tool-side connection
- ⑤ Through hole for connection with screws
- ③③ DIN ISO-9409 bolt circle
- ⑦③ Fit for centering pins
- ⑦⑧ Fit for centering

AGE-U 050

Compensation unit

Protective cover AGE-U 50

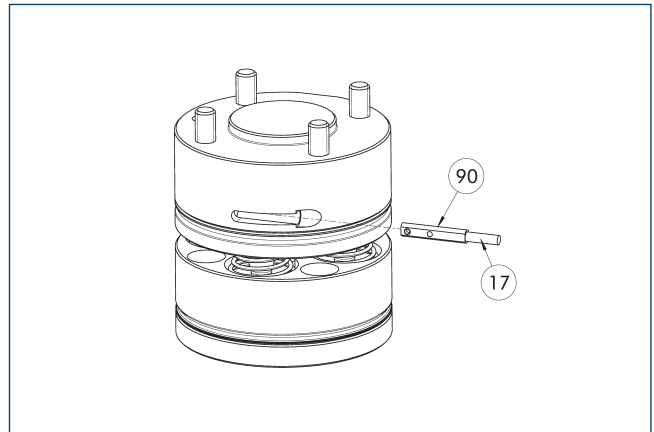


The protective cover protects the AGE-U against coolant for applications up to IP65.

Description	ID
Protection cover	
AGE-U-050-S	1349416

- ① The protective cover can be ordered as an accessory and retrofitted to the AGE-U.

Electronic magnetic switch MMS



①⑦ Cable outlet

⑨⑩ 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	
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 plug/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 One sensor is required per unit for monitoring two positions. Extension cables and sensor distributors are optionally available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor systems.



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