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
±3°
Rotary compensation angle
±8°
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
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

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.
Technical data

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

* 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.

1. 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.

2. 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.
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
The protective cover protects the AGE-U against coolant for applications up to IP65.

**Description** | **ID**
---|---
Protection cover | AGE-U-050-3 1149416

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

**Electronic magnetic switch MMS**

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 |  
Connecting cables |  
KV BW08-SGOB 3P-0030-PNP 0301495 |  
KV BW08-SGOB 3P-0100-PNP 0301496 |  
KV BW08-SGOB 3P-0200-PNP 0301497 |  
Sensor distributor | V2-M8 0301775 |  
V4-M8 0301766 |  
V8-M8 0301751 |  

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.