



Superior Clamping and Gripping



## Product Information

XY compensation unit with spring return AGE-F

# AGE-F

XY compensation unit with spring return

## Flat. Flexible. Compact.

### XY compensation unit with spring return

Compensation unit for applications in assembly, loading, and unloading of machines and workpiece carriers. The use of AGE-F makes it possible to safely grip and transfer workpieces despite position offsets.

#### Field of application

Palletizing, joining, and assembly of workpieces



#### Advantages – Your benefits

**Spring reset in three different spring strengths.** for a defined, centric position at a repeat accuracy of 0.02 mm

**Direct assembly of grippers** of the PGN-plus and PZN-plus series without additional adapter plates.

**Cross roller guides** for smooth compensation at low compensation forces

**Adjustable compensation stroke** for minimizing interfering contours



Sizes  
Quantity: 4



Handling weight  
1.5 .. 32 kg

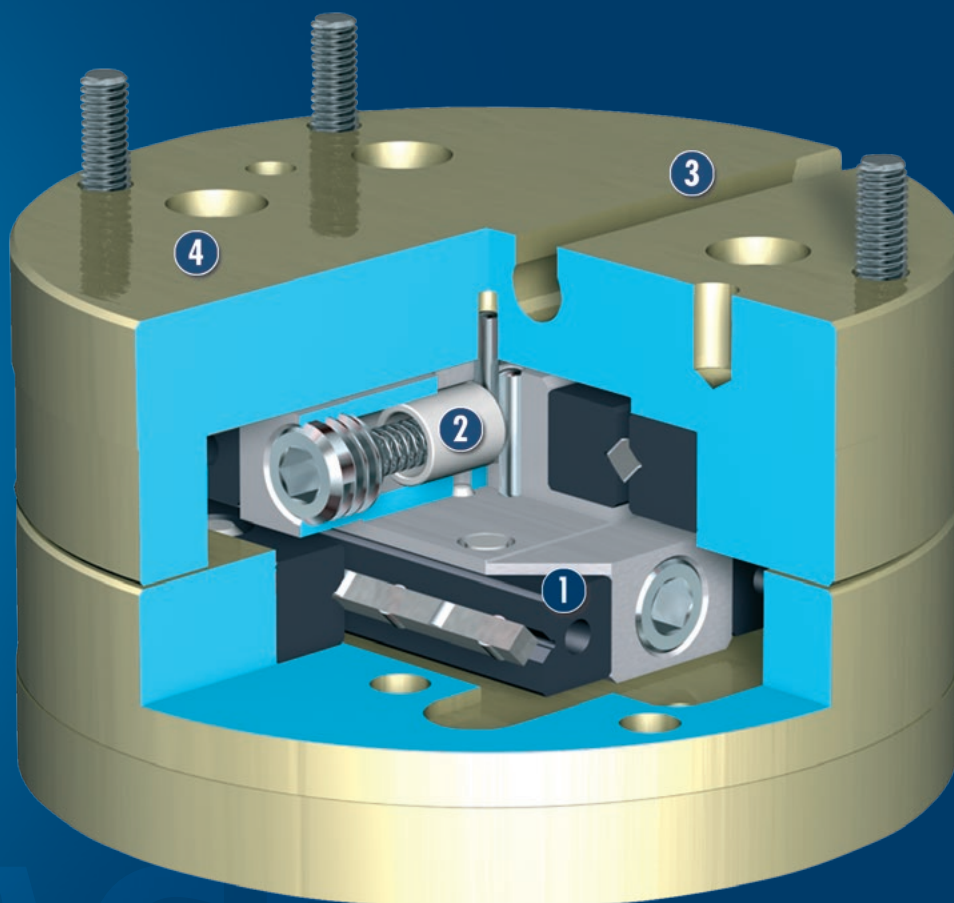


Compensation XY  
 $\pm 1.5 .. 5$  mm

## Functional description

The AGE-F compensation unit enables the activation of the linear movement in the X and Y axis of the robots or handling units. For example, this allows axis offset of

workpieces to be compensated and centrally aligned again.



- ① **Linear guide**  
smooth-running cross roller guidance
- ② **Spring-actuated reset**  
Different spring forces for safe centering without pneumatic system
- ③ **Slot for magnetic switch**  
for monitoring the compensating stroke in X and Y direction
- ④ **Housing**  
Weight-optimized due to the use of high-strength aluminum alloy

CAD data, operating manuals and other current product documents can be found online.

# AGE-F

XY compensation unit with spring return

## General notes about the series

**Guidance system:** smoothly running cross roller guides

**Monitoring:** by magnetic switch

**Actuation:** spring return with spring forces from 0.5 N to 190 N

**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 the use under harsh environmental conditions (e.g. with coolant or cast and grinding dust) can considerably reduce the service life of the units and is not covered in the warrant. In many cases, however, we can find a solution. Please contact us for assistance.

**Handling weight:** the weight of the total load attached to the flange. The design must take into account the permissible forces and moments. Please note that the life time will be reduced if the maximum handling weight is exceeded.

## Application example

Assembly unit for mounting a pin in a bore with rough tolerances for the position. The compensation unit compensates for the planar offset without turning or tilting the workpiece.

- ① AGE-F compensation unit
- ② PGN-plus 2-finger parallel gripper



## SCHUNK offers more ...

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



Magnetic switches



Parallel gripper



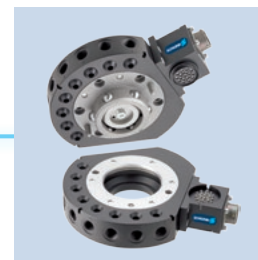
Centric gripper



Angular gripper



manual gripper change systems



Quick-change Systems

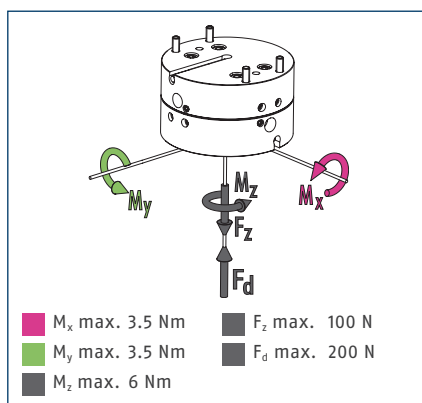
① Additional information regarding the products can be found on the following product pages or at [www.schunk.com](http://www.schunk.com). Please contact us for further information: SCHUNK technical hotline +49-7133-103-2696

# AGE-F 031

XY compensation unit with spring return



## Forces and moments

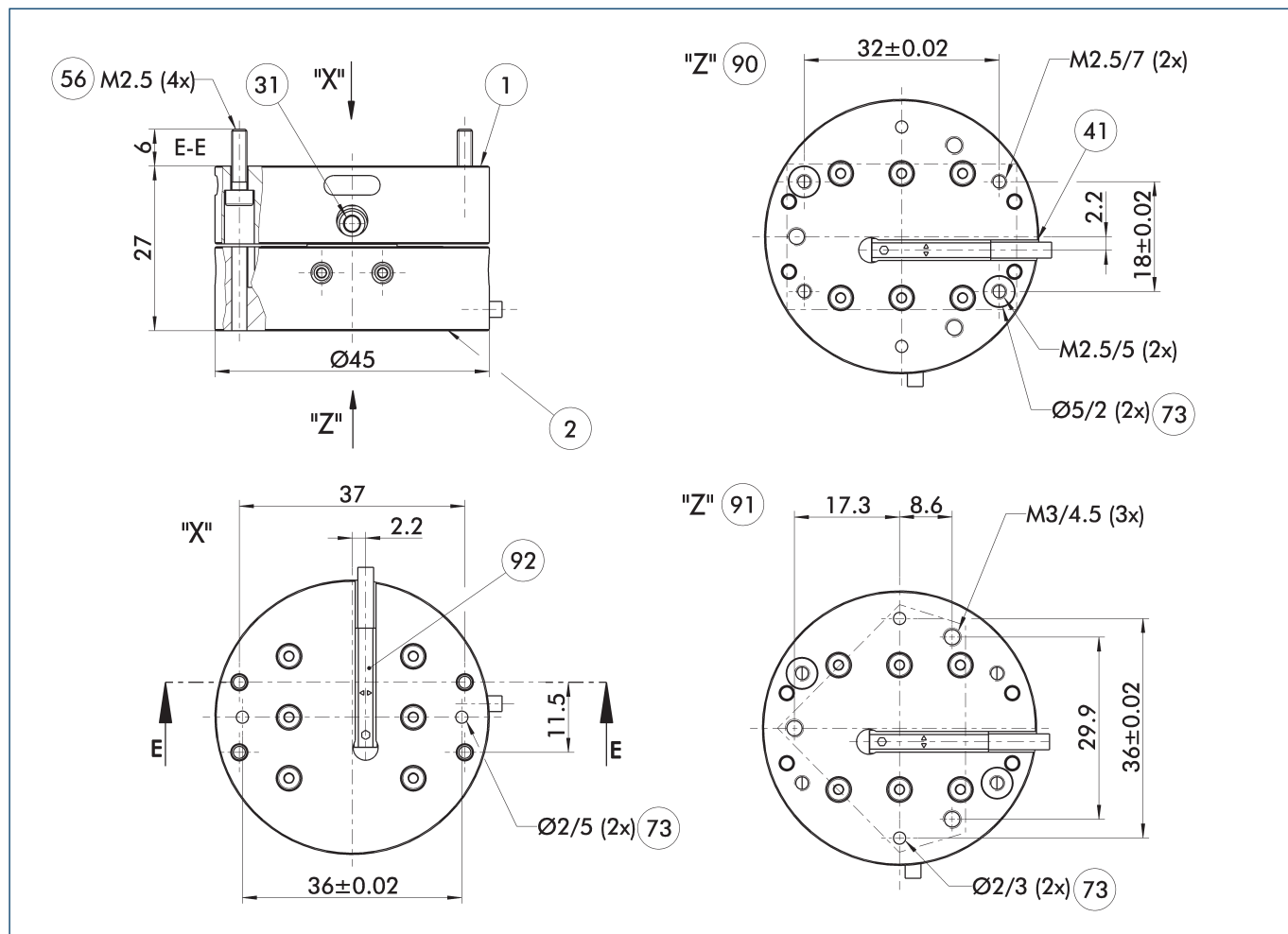


ⓘ This is the max. total of all moments and loads (acceleration forces and torques, process forces etc.), which can affect a compensation unit, in order to ensure error-free function.

## Technical data

Description		AGE-F-XY-031-1	AGE-F-XY-031-2	AGE-F-XY-031-3
ID		0324900	0324901	0324902
Compensation XY	[mm]	± 1.5	± 1.5	± 1.5
max. handling weight	[kg]	1.5	1.5	1.5
min. reset force	[N]	0.5	2	5
max. reset force	[N]	2	3.5	7
Spring rate	[N/mm]	1	1	1.3
Repeat accuracy	[mm]	± 0.01	± 0.01	± 0.01
Weight	[kg]	0.123	0.123	0.123
min./max. ambient temperature	[°C]	5/80	5/80	5/80

## Main view



The main view shows the product with proximity switch. It is optional. If a gripper is screwed onto the unit, the gripper cannot be monitored due to the interfering contour.

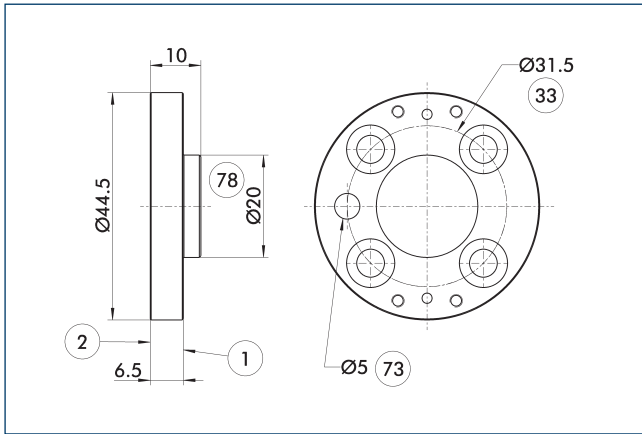
① Screws for robot-sided mounting are already fitted

- |                                      |                                   |
|--------------------------------------|-----------------------------------|
| ① Robot-side connection              | ⑦③ Fit for centering pins         |
| ② Tool-side connection               | ⑨⑩ Connection diagram PGN-plus 40 |
| ③① Stop for stroke limitation        | ⑨① Connection diagram PZN-plus 40 |
| ④① Optional proximity switch         | ⑨② Magnetic switches              |
| ⑤⑥ Included in the scope of delivery |                                   |

# AGE-F 031

XY compensation unit with spring return

## Adapter plate ISO 9409-31.5-4-M5

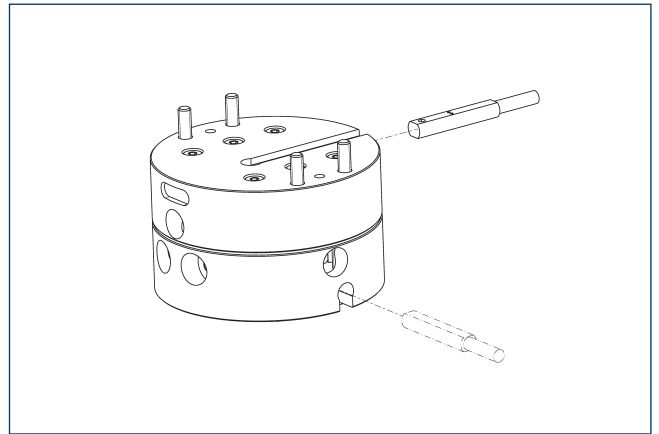


- ① Robot-side connection
- ② Tool-side connection
- ③③ DIN ISO-9409 bolt circle
- ⑦③ Fit for centering pins
- ⑦⑧ Fit for centering

Robot-side adapter plate to mount the OPR to a mounting pattern according to ISO 9409-31.5-4-M5.

Description	ID	Height
		[mm]
Robot side		
A-AGE-F-XY-031	0324903	10

## Sensor system



End position monitoring for mounting in the C-slot.

Description	ID	Often combined
Programmable magnetic switches MMS-P		
MMSK-P 22-S-PNP	0301371	
MMS-P 22-S-M8-PNP	0301370	●
clip for plug/socket		
CLI-M8	0301463	
Connection cables		
KA BG08-L 4P-0500	0307767	●
KA BG08-L 4P-1000	0307768	
KA BW08-L 4P-0500	0307765	
KA BW08-L 4P-1000	0307766	
Sensor distributor		
V2-M8-4P-2XM8-3P	0301380	

- ① Per unit one sensor (closer/S) is required, optionally a cable extension. For sensor cables, note the minimum permissible bending radii. These are generally 35 mm.



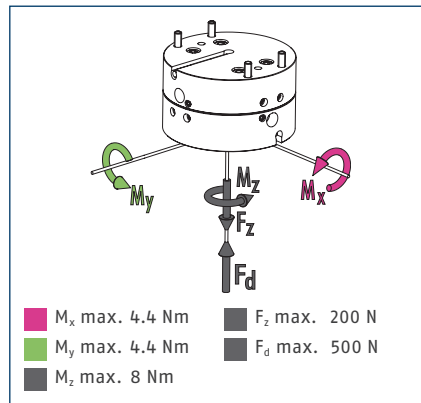


# AGE-F 040

XY compensation unit with spring return



## Forces and moments

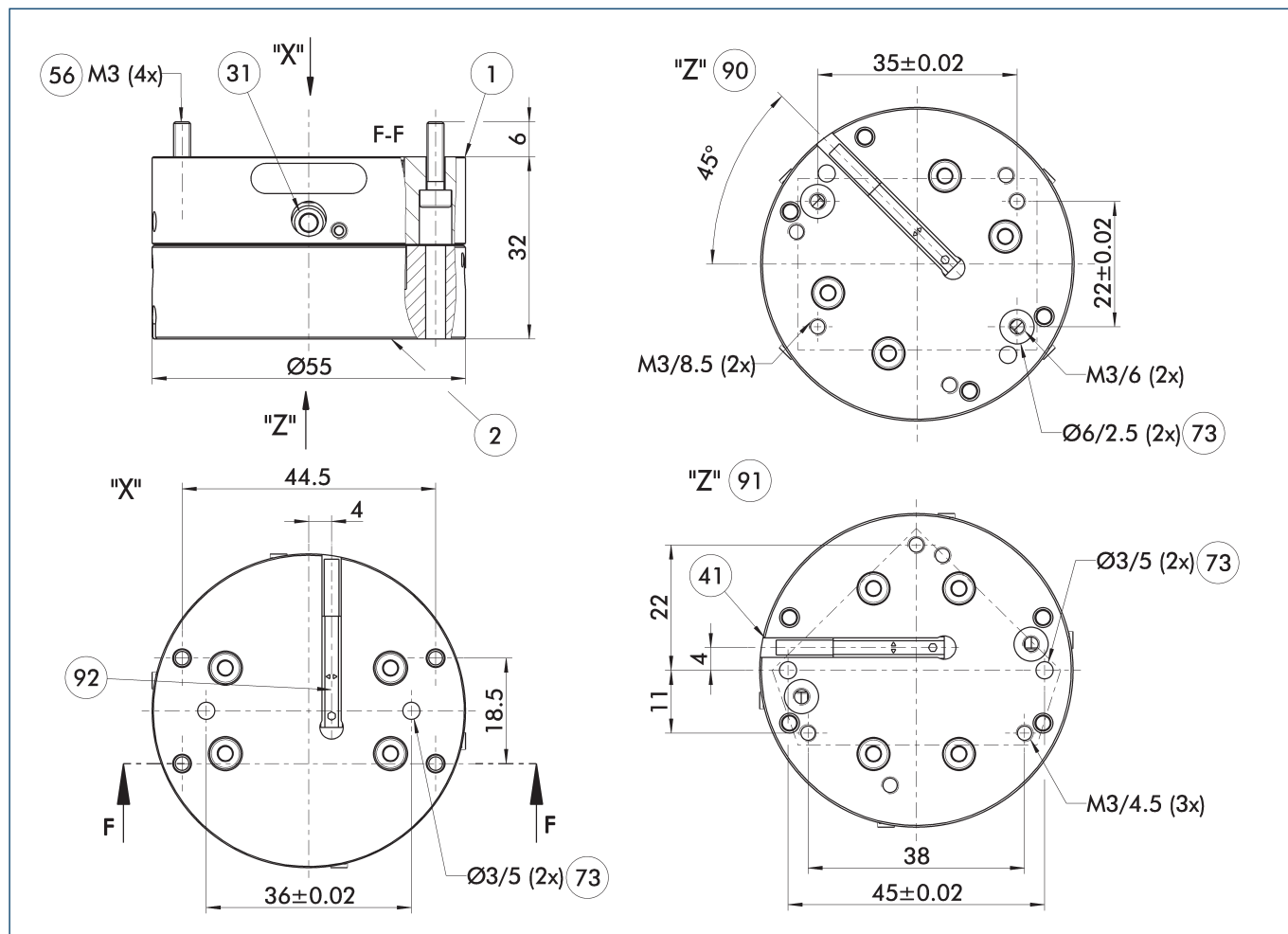


ⓘ This is the max. total of all moments and loads (acceleration forces and torques, process forces etc.), which can affect a compensation unit, in order to ensure error-free function.

## Technical data

Description		AGE-F-XY-040-1	AGE-F-XY-040-2	AGE-F-XY-040-3
ID		0324920	0324921	0324922
Compensation XY	[mm]	± 2	± 2	± 2
max. handling weight	[kg]	4	4	4
min. reset force	[N]	2	2.5	3
max. reset force	[N]	3	5	7
Spring rate	[N/mm]	0.5	1.3	2
Repeat accuracy	[mm]	± 0.01	± 0.01	± 0.01
Weight	[kg]	0.23	0.23	0.23
min./max. ambient temperature	[°C]	5/80	5/80	5/80

## Main view



The main view shows the product with proximity switch. It is optional. If a gripper is screwed onto the unit, the gripper cannot be monitored due to the interfering contour.

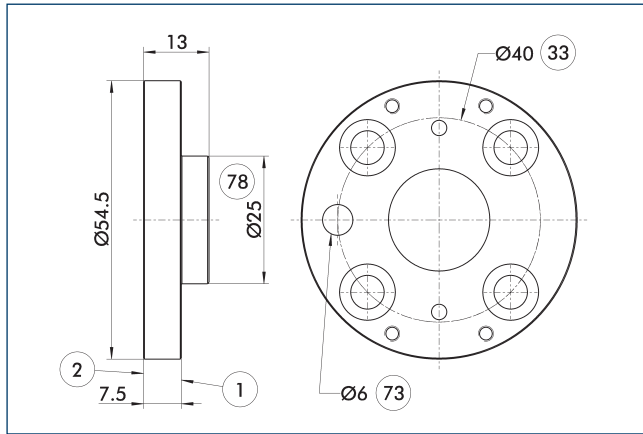
① Screws for robot-sided mounting are already fitted

- |                                      |                                   |
|--------------------------------------|-----------------------------------|
| ① Robot-side connection              | ⑦③ Fit for centering pins         |
| ② Tool-side connection               | ⑨⑩ Connection diagram PGN-plus 50 |
| ③① Stop for stroke limitation        | ⑨① Connection diagram PZN-plus 50 |
| ④① Optional proximity switch         | ⑨② Magnetic switches              |
| ⑤⑥ Included in the scope of delivery |                                   |

# AGE-F 040

XY compensation unit with spring return

## Adapter plate ISO 9409-40-4-M6

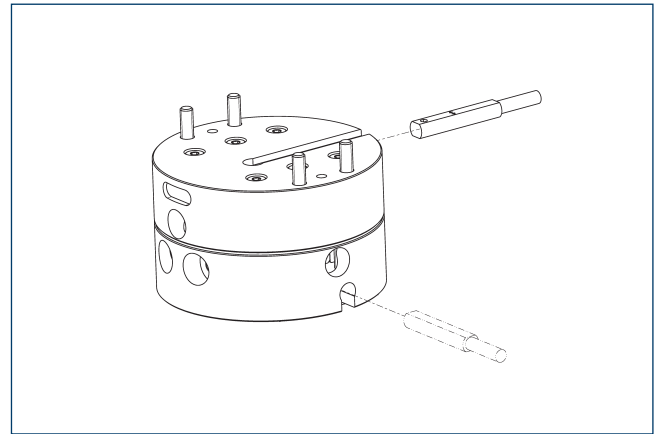


- ① Robot-side connection
- ② Tool-side connection
- ③③ DIN ISO-9409 bolt circle
- ⑦③ Fit for centering pins
- ⑦⑧ Fit for centering

Tool-side adapter plate with ISO 9409 screw connection pattern.

Description	ID	Height [mm]
Robot side		
A-AGE-F-XY-040	0324923	13

## Sensor system



End position monitoring for mounting in the C-slot.

Description	ID	Often combined
Programmable magnetic switches MMS-P		
MMSK-P 22-S-PNP	0301371	
MMS-P 22-S-M8-PNP	0301370	●
clip for plug/socket		
CLI-M8	0301463	
Connection cables		
KA BG08-L 4P-0500	0307767	●
KA BG08-L 4P-1000	0307768	
KA BW08-L 4P-0500	0307765	
KA BW08-L 4P-1000	0307766	
Sensor distributor		
V2-M8-4P-2XM8-3P	0301380	

- ① Per unit one sensor (closer/S) is required, optionally a cable extension. For sensor cables, note the minimum permissible bending radii. These are generally 35 mm.

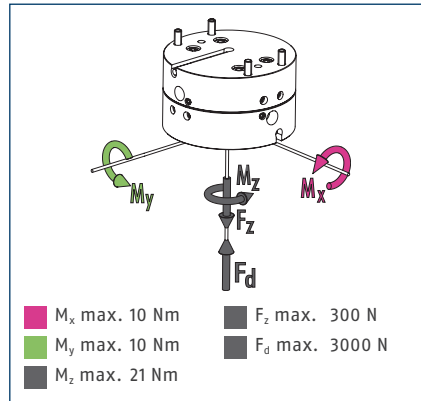


# AGE-F 063

XY compensation unit with spring return



## Forces and moments

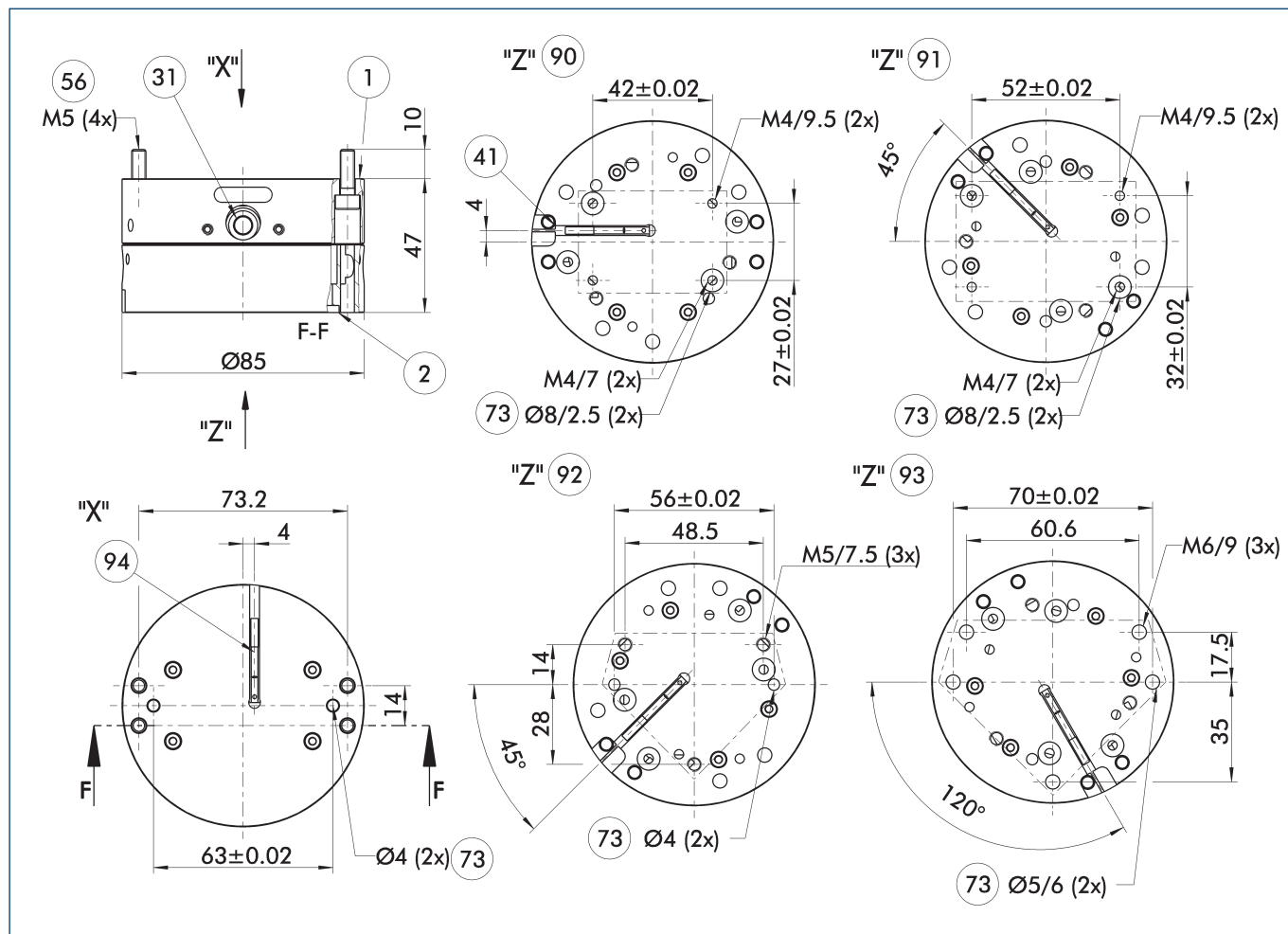


ⓘ This is the max. total of all moments and loads (acceleration forces and torques, process forces etc.), which can affect a compensation unit, in order to ensure error-free function.

## Technical data

Description		AGE-F-XY-063-1	AGE-F-XY-063-2	AGE-F-XY-063-3
ID		0324940	0324941	0324942
Compensation XY	[mm]	± 4	± 4	± 4
max. handling weight	[kg]	12.5	12.5	12.5
min. reset force	[N]	12	13	18
max. reset force	[N]	20	32	45
Spring rate	[N/mm]	2	4.8	6.8
Repeat accuracy	[mm]	± 0.01	± 0.01	± 0.01
Weight	[kg]	0.78	0.78	0.78
min./max. ambient temperature	[°C]	5/80	5/80	5/80

## Main view



The main view shows the product with proximity switch. It is optional. If a gripper is screwed onto the unit, the gripper cannot be monitored due to the interfering contour.

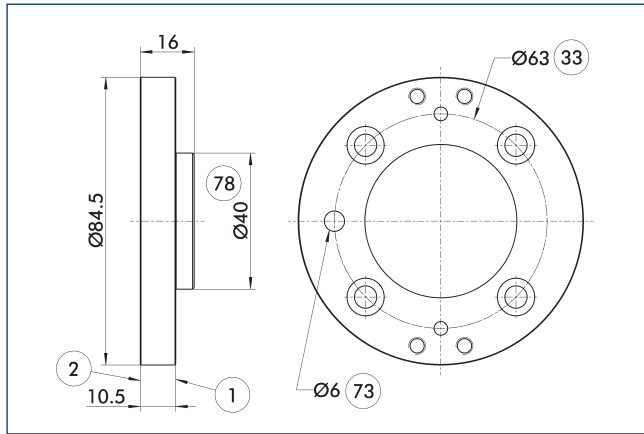
① Screws for robot-sided mounting are already fitted

- |                                      |                                   |
|--------------------------------------|-----------------------------------|
| ① Robot-side connection              | ⑨⑩ Connection diagram PGN-plus 64 |
| ② Tool-side connection               | ⑨① Connection diagram PGN-plus 80 |
| ③① Stop for stroke limitation        | ⑨② Connection diagram PZN-plus 64 |
| ④① Optional proximity switch         | ⑨③ Connection diagram PZN-plus 80 |
| ⑤⑥ Included in the scope of delivery | ⑨④ Magnetic switches              |
| ⑦③ Fit for centering pins            |                                   |

# AGE-F 063

XY compensation unit with spring return

## Adapter plate ISO 9409-63-4-M6

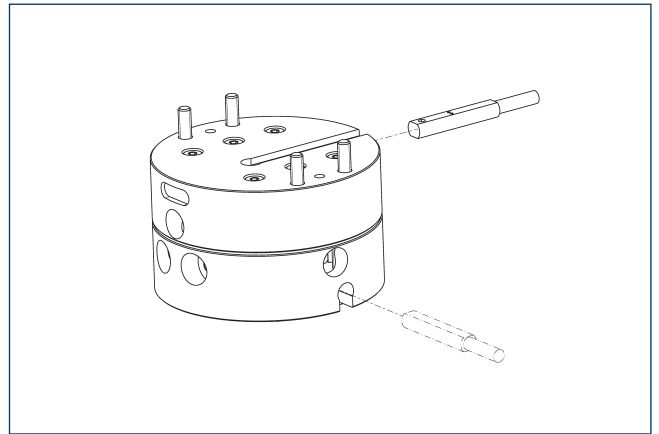


- ① Robot-side connection
- ② Tool-side connection
- ③ DIN ISO-9409 bolt circle
- ⑦③ Fit for centering pins
- ⑦⑧ Fit for centering

Tool-side adapter plate with ISO 9409 screw connection pattern.

Description	ID	Height [mm]
Robot side		
A-AGE-F-XY-063	0324943	16

## Sensor system



End position monitoring for mounting in the C-slot.

Description	ID	Often combined
Programmable magnetic switches MMS-P		
MMSK-P 22-S-PNP	0301371	
MMS-P 22-S-M8-PNP	0301370	●
clip for plug/socket		
CLI-M8	0301463	
Connection cables		
KA BG08-L 4P-0500	0307767	●
KA BG08-L 4P-1000	0307768	
KA BW08-L 4P-0500	0307765	
KA BW08-L 4P-1000	0307766	
Sensor distributor		
V2-M8-4P-2XM8-3P	0301380	

- ① Per unit one sensor (closer/S) is required, optionally a cable extension. For sensor cables, note the minimum permissible bending radii. These are generally 35 mm.



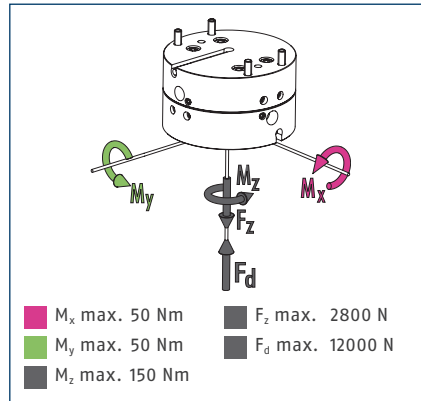


# AGE-F 080

XY compensation unit with spring return



## Forces and moments

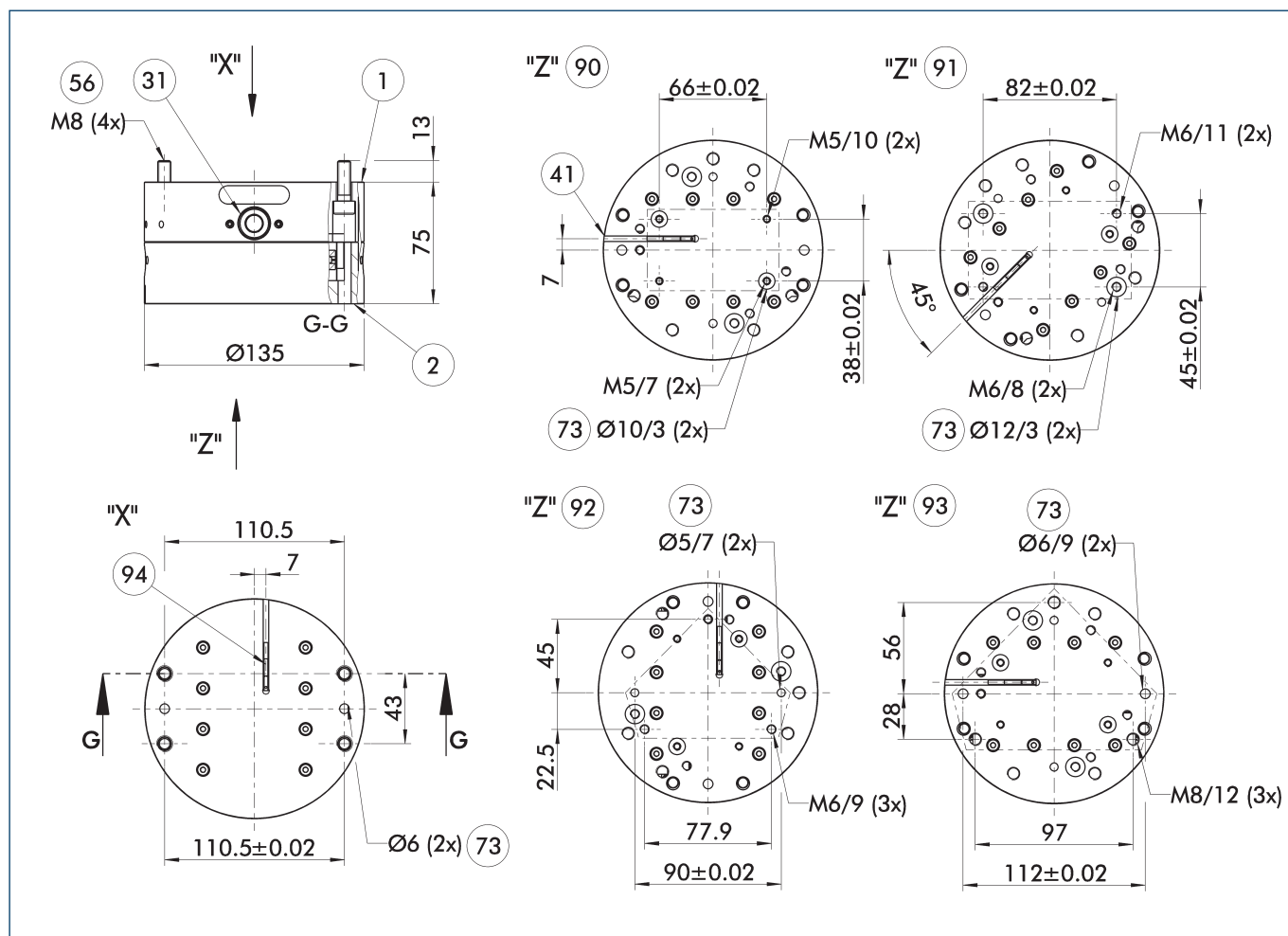


ⓘ This is the max. total of all moments and loads (acceleration forces and torques, process forces etc.), which can affect a compensation unit, in order to ensure error-free function.

## Technical data

Description		AGE-F-XY-080-1	AGE-F-XY-080-2	AGE-F-XY-080-3
ID		0324960	0324961	0324962
Compensation XY	[mm]	± 5	± 5	± 5
max. handling weight	[kg]	32	32	32
min. reset force	[N]	36	55	65
max. reset force	[N]	70	130	190
Spring rate	[N/mm]	6.8	15	25
Repeat accuracy	[mm]	± 0.01	± 0.01	± 0.01
Weight	[kg]	3.13	3.13	3.13
min./max. ambient temperature	[°C]	5/80	5/80	5/80

## Main view



The main view shows the product with proximity switch. It is optional. If a gripper is screwed onto the unit, the gripper cannot be monitored due to the interfering contour.

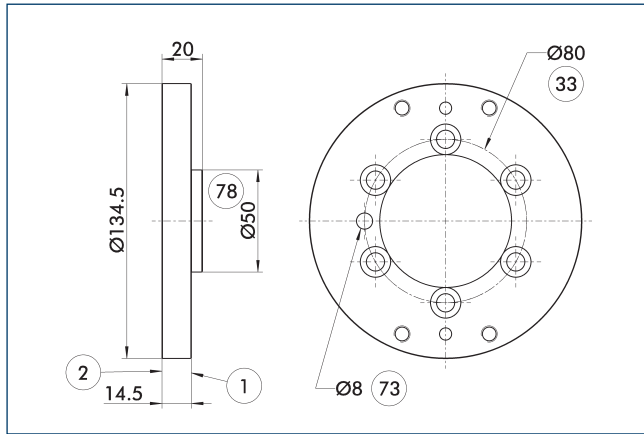
① Screws for robot-sided mounting are already fitted

- |                                      |                                    |
|--------------------------------------|------------------------------------|
| ① Robot-side connection              | ⑨⑩ Connection diagram PGN-plus 100 |
| ② Tool-side connection               | ⑨① Connection diagram PGN-plus 125 |
| ③① Stop for stroke limitation        | ⑨② Connection diagram PZN-plus 100 |
| ④① Optional proximity switch         | ⑨③ Connection diagram PZN-plus 125 |
| ⑤⑥ Included in the scope of delivery | ⑨④ Magnetic switches               |
| ⑦③ Fit for centering pins            |                                    |

# AGE-F 080

XY compensation unit with spring return

## Adapter plate ISO 9409-80-6-M8

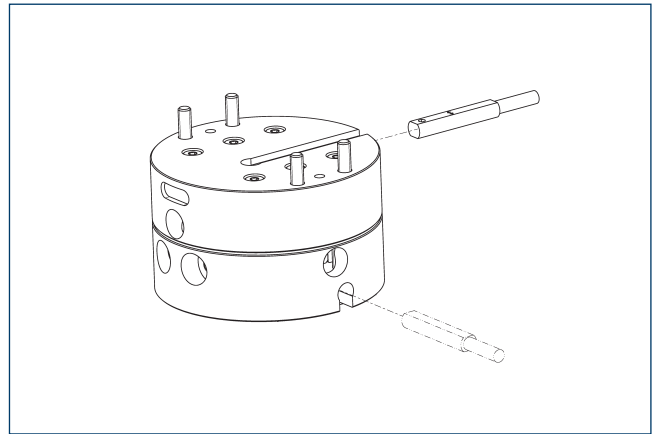


- ① Robot-side connection
- ② Tool-side connection
- ③③ DIN ISO-9409 bolt circle
- ⑦③ Fit for centering pins
- ⑦⑧ Fit for centering

Tool-side adapter plate with ISO 9409 screw connection pattern.

Description	ID	Height [mm]
Robot side		
A-AGE-F-XY-080	0324963	20

## Sensor system



End position monitoring for mounting in the C-slot.

Description	ID	Often combined
Programmable magnetic switches MMS-P		
MMSK-P 22-S-PNP	0301371	
MMS-P 22-S-M8-PNP	0301370	●
clip for plug/socket		
CLI-M8	0301463	
Connection cables		
KA BG08-L 4P-0500	0307767	●
KA BG08-L 4P-1000	0307768	
KA BW08-L 4P-0500	0307765	
KA BW08-L 4P-1000	0307766	
Sensor distributor		
V2-M8-4P-2XM8-3P	0301380	

- ① Per unit one sensor (closer/S) is required, optionally a cable extension. For sensor cables, note the minimum permissible bending radii. These are generally 35 mm.



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*J. Lehmann*

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