



Hand in hand for tomorrow



Product data sheet

Compensation unit AGM-XY

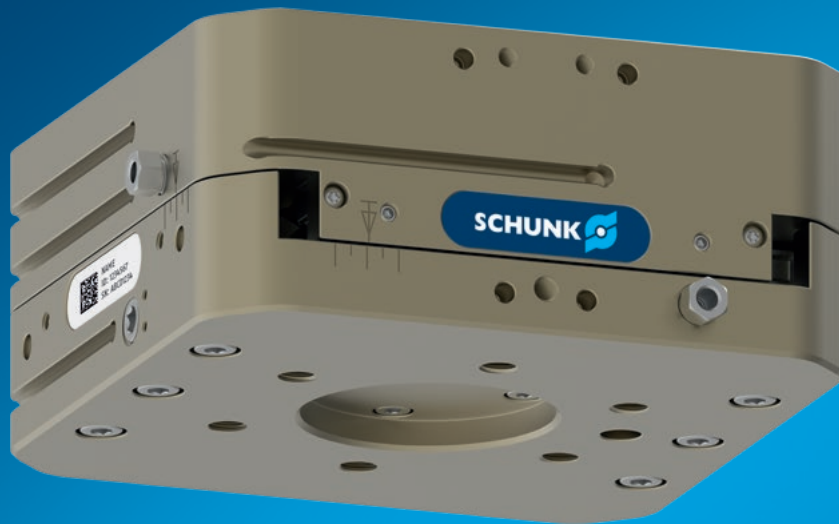
Precise. Reliable. Modular.

Compensation unit AGM-XY

Modular compensation unit with XY-compensation for the compensation of inaccuracies and tolerances. As part of the AGM product family, the AGM-XY can be flexibly combined with the AGM-Z and therefore always offers the right compensation behavior for a wide range of applications.

Field of application

For assembly processes such as joining or screwing components together, as well as handling tasks such as automated machine loading. Designed for use with pneumatic, electric, or magnetic grippers, where reliable compensation is required. Compensation units can be used both on robots and in stationary applications.



Advantages – Your benefits

Maximum force absorption with minimum overall height thanks to the patented uniplanar guide arrangement with high-load linear roller guides.

Highest flexibility due to the modularity of the AGM product family, combinations with Z are possible.

Effective compensation in horizontal and inclined positions due to the optional, patented spring and air cartridges for weight compensation in the x- and y directions – ideal for demanding applications.

Individually adjustable equalizing stroke for infinitely variable adaptation of the compensation travel or blocking of individual compensation directions.

Centrical locking for centering the unit in a defined position

Pneumatic position storage for eccentric locking in a deflected position

Increased process stability thanks to various query options via magnetic switches.



Sizes
Quantity: 8



Handling weight
2 .. 250 kg

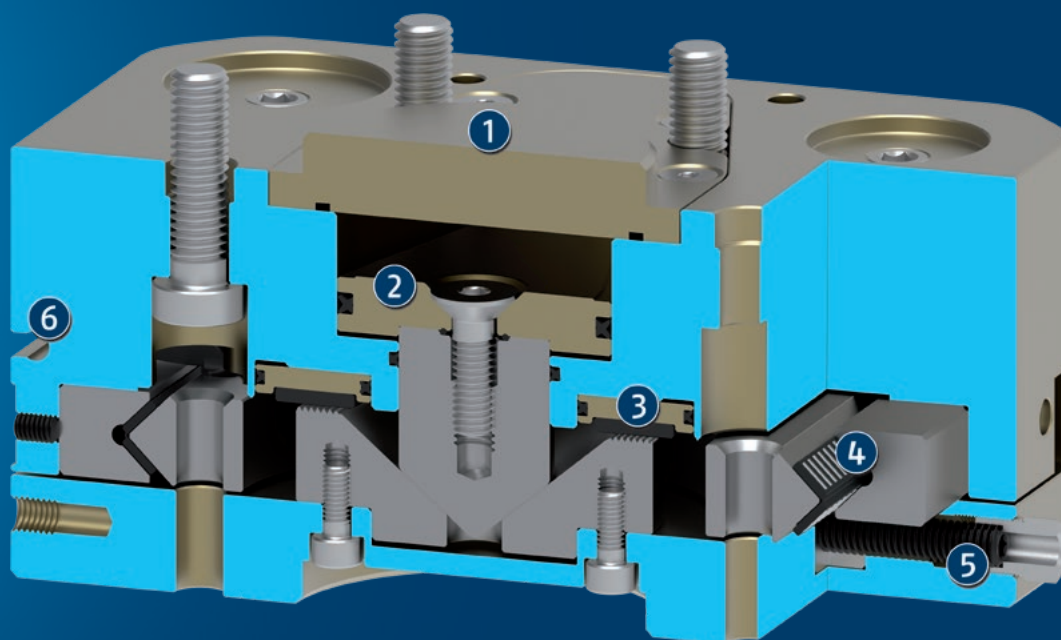


Compensation XY
 $\pm 2 \dots 15$ mm

Functional description

The AGM-XY compensation unit offers compensation in the x- and y-axis. The patented uniplanar guide arrangement with heavy-duty and smooth-running linear roller guides enables the handling of high loads and torques with minimum overall height. For example, the unit can be locked both centrically and eccentrically for the targeted

alignment of components using the integrated pneumatic locking mechanism and position memory. With the integrated stroke adjustment, the compensation travel in the x- and y-axis can be individually adjusted and, if necessary, completely locked.

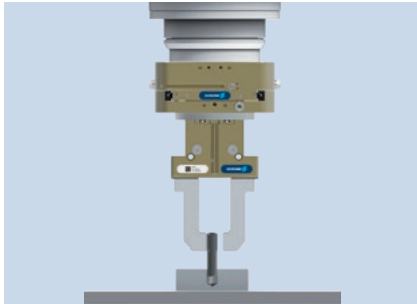


- ① **ISO mounting pattern**
on the robot and tool side, for easy mounting on most types of robots without needing an additional adapter plate
- ② **Locking piston**
made of hardened steel for pneumatically actuated locking in centric position
- ③ **Position memory**
Optional, for pneumatically actuated locking in any eccentric position

- ④ **Linear roller guides**
enable maximum load capacity and smooth operation with minimal installation height
- ⑤ **Stroke adjustment**
for mechanical, continuous adjustment or locking of the compensating stroke
- ⑥ **Monitoring groove**
Monitoring of the locked and unlocked status with magnetic switches

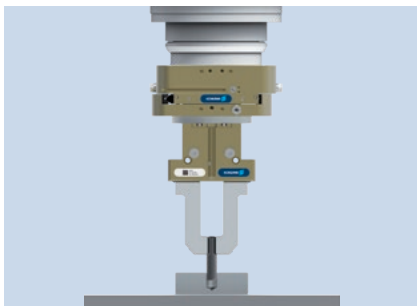
Detailed functional description

Workpiece pick up (vertical, hanging): AGM unlocked – gripper opened



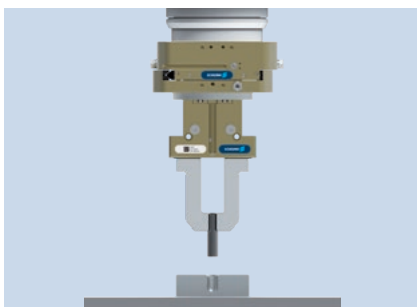
The robot approaches the workpiece with an open gripper and the AGM (compensation unit) unlocked; the workpiece is positioned with an axis offset due to the tolerances or inaccuracies.

AGM deflected – gripper closed



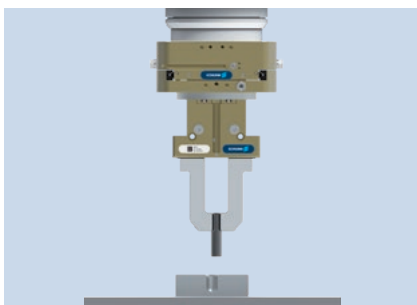
The unlocked AGM can compensate for the existing axis offset between the gripper axis and the workpiece axis, ensuring that the workpiece can be gripped safely. The resulting eccentric position of the AGM can be locked/clamped by means of the integrated position memory.

AGM eccentrically locked via position memory – gripper closed



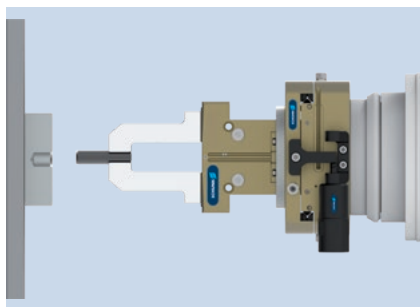
The robot picks up the workpiece and moves up.

AGM centrally locked – gripper closed



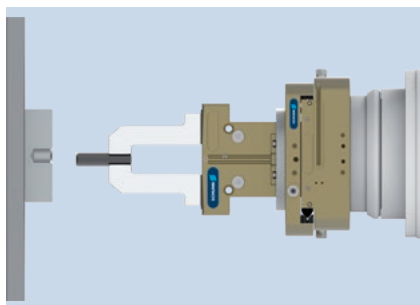
The position memory of the AGM is unlocked and the centric locking of the AGM is activated. This eliminates the previously existing axis offset, as the gripper and robot axis are now centered relative to each other.

AGM unlocked with spring or air cartridge – gripper closed



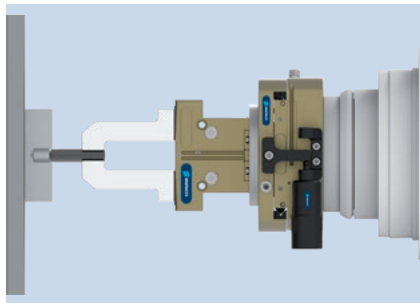
The robot moves to the drop-off position with the gripped workpiece and the AGM (compensation unit) is locked. There is an axis offset due to tolerances or inaccuracies. The AGM is unlocked for joining the workpiece. The unlocked AGM is held stable against gravity by the spring or air cartridges.

For comparison: AGM unlocked, without spring & air cartridge – gripper closed



Without a spring or air cartridge, the AGM is not stabilized against gravity and cannot compensate from the neutral middle position. It sags down due to its weight and gravity. Select the cartridge suitable for your application to keep the AGM in the neutral center position during horizontal and inclined compensating processes, and to enable reliable compensating. Talk to us, we will be happy to advise you.

AGM deflected with spring or air cartridge – gripper closed



Thanks to the weight compensation, the AGM can compensate for the existing axis offset between the gripper axis and the workpiece axis from the neutral center position in the x- and y-directions.

Note: The spring cartridge works exclusively via the spring force and can be adjusted manually. Depending on the size, different force ranges are available to optimally adapt the weight compensation to the specific requirements of the application. The air cartridge combines spring force with the option of supplying additional compressed air. This allows the forces to be adjusted during the process via the compressed air and flexibly adapted to the respective requirements.

General notes about the series

Guidance system: Linear roller guides

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.

Fluid consumption: refers to the air consumption per one locking and unlocking cycle



Application example

During automated loading and unloading of machine tools, compensation units can effectively compensate for tolerances.

- ① Combined compensation unit XYZ with optional spring cartridges
- ② Universal gripper EGU

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 pneumatic



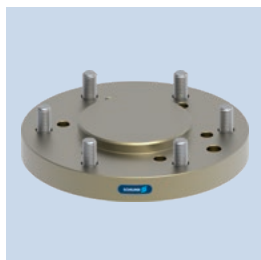
Manual tool changer



AGM-Z



Universal gripper



Adapter plates as per DIN ISO 9409



Magnetic switches



Spring and air cartridges



Centric Grippers

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

AGM-XY

Compensation unit

Ordering example AGM-XY

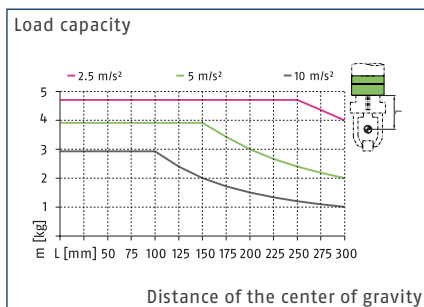
	AGM	-	XY	-	031	-	P
Description							
AGM							
Compensation direction							
XY = Compensation in x- and y-axis							
XYZ = Compensation in x-, y- and z-axes (combined)							
Size							
031							
040							
050							
063							
080							
100							
125							
160							
160L							
200							
Variant							
P = Position memory							

AGM-XY 031

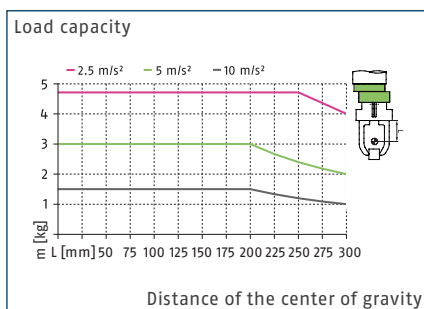
Compensation unit



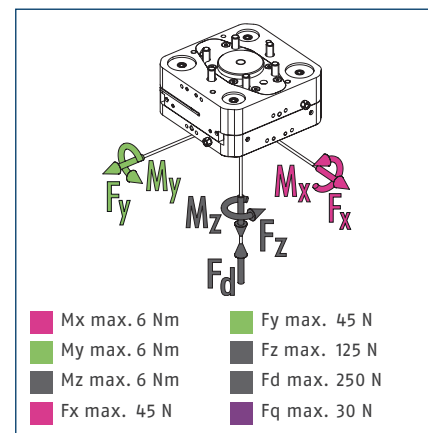
Load diagram – vertical design, centered



Load diagram – vertical setup, uncentered (position memory)



Max. loads



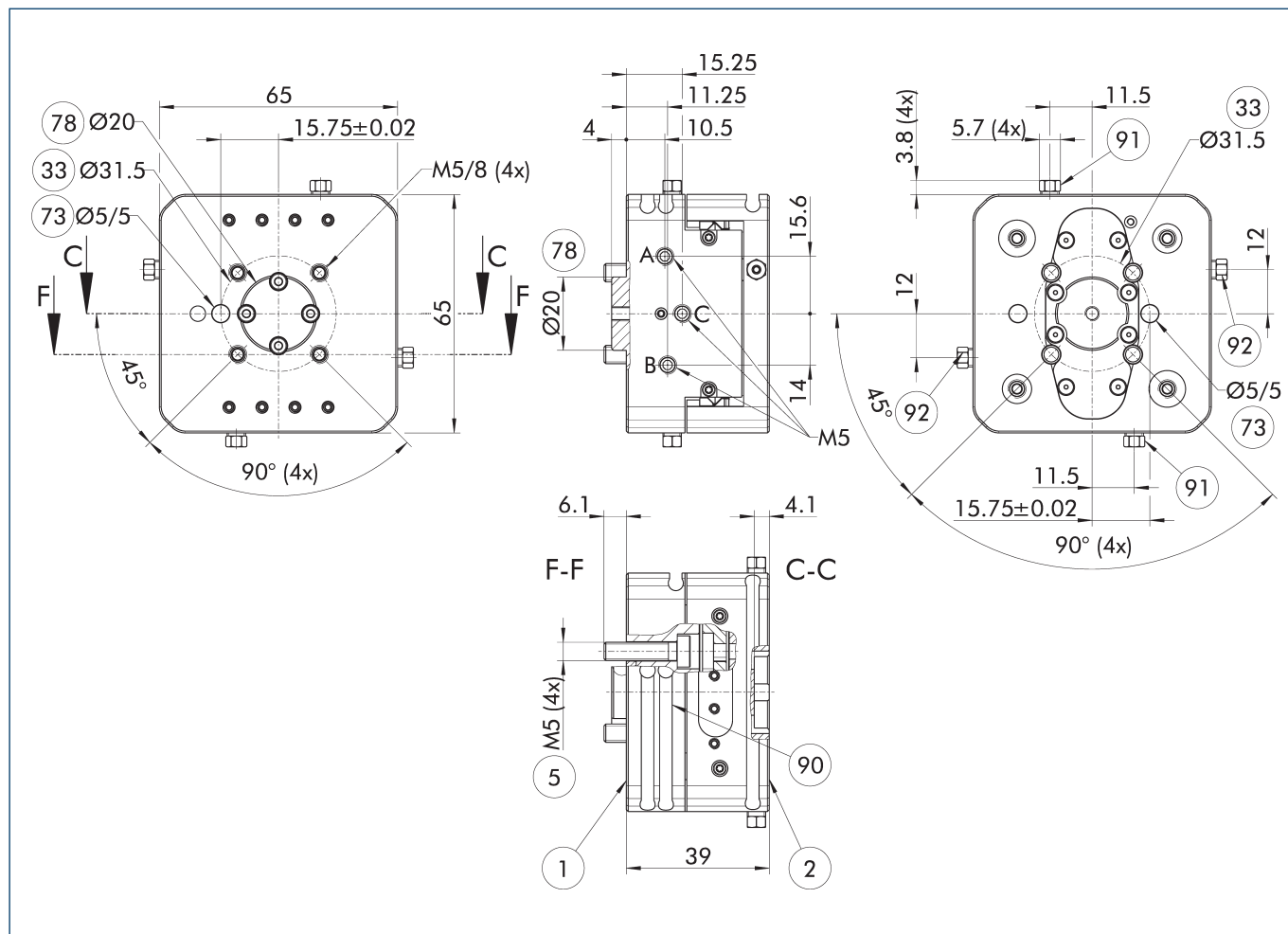
① This is the sum of all static loads that are permitted to act on the compensation unit.

Technical data

Description		AGM-XY 031	AGM-XY 031-P
ID		1577130	1582575
Compensation XY	[mm]	±2	±2
Max. holding force locked (Fx, Fy)	[N]	427	427
Radial holding force position memory	[N]		15
Breakaway force	[N]	3	3
Min./nom./max. operating pressure	[bar]	4/6/6.5	4/6/6.5
Repeat accuracy	[mm]	0.03	0.03
Robot-side connection		ISO 9409-1-31.5-4-M5	ISO 9409-1-31.5-4-M5
Tool-side connection		ISO 9409-1-31.5-4-M5	ISO 9409-1-31.5-4-M5
Weight	[kg]	0.5	0.5
Min./max. ambient temperature	[°C]	5/60	5/60
Locking time	[s]	0.2	0.2
IP protection class		20	20
Max. dynamic moment Mx/My	[Nm]	3	3
Max. dynamic moment Mz	[Nm]	3	3
Force Fx max. dynamic	[N]	30	30
Force Fy max. dynamic	[N]	30	30
Force Fz max. dynamic	[N]	58	58

① Further technical data can be found at schunk.com.

Main view AGM-XY 031



The drawing shows the basic version of the compensation unit in the centric position, without considering any dimensions of the options described below.

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

⑤ Through hole for connection with screws

③③ DIN ISO-9409 bolt circle

⑦③ Fit for centering pins

⑦⑧ Fit for centering

⑨⑩ Slot for magnetic switch

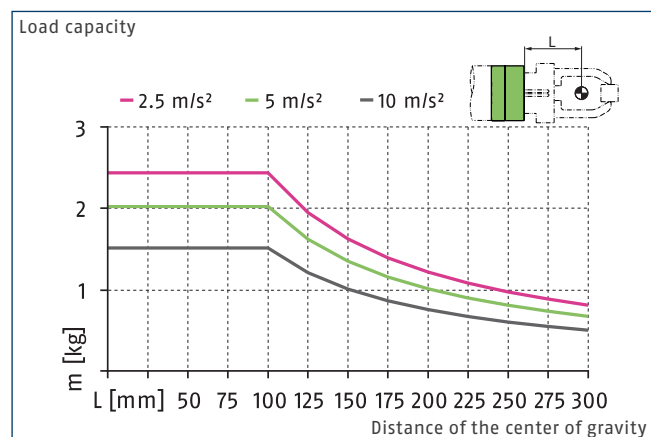
⑨① Stroke adjustment in X

⑨② Stroke adjustment in Y

AGM-XY 031

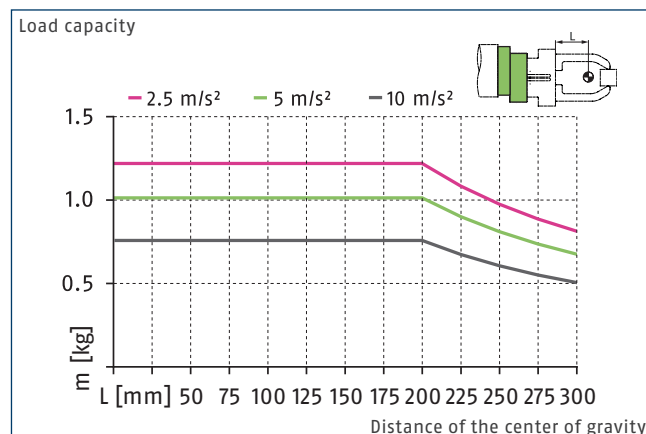
Compensation unit

Load diagram – horizontal design, centered



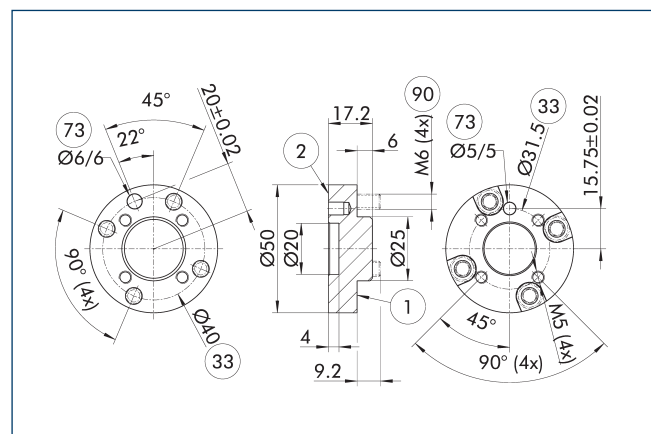
- ① The maximum recommended horizontal handling weight refers to applications without spring or air cartridges. We recommend their use for horizontal compensation processes.

Load diagram – horizontal setup, uncentered (position memory)



- ① The maximum recommended horizontal handling weight refers to applications without spring or air cartridges. We recommend their use for horizontal compensation processes.

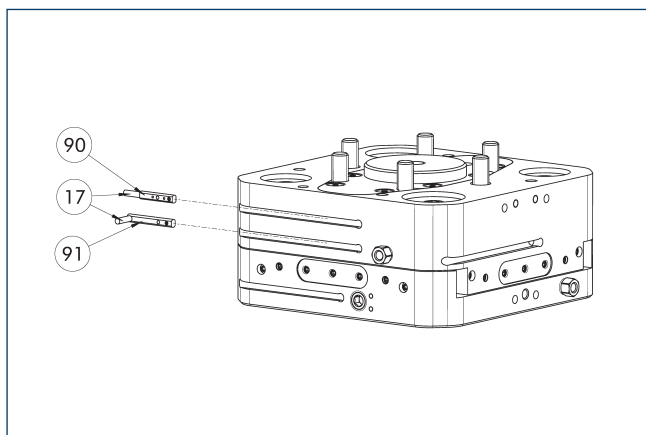
Adapter plate A-IS0031/IS0040



- ① Robot-side connection
 ② Tool-side connection
 ③ DIN ISO-9409 bolt circle
 ⑦ Fit for centering pins
 ⑨ Fastening screw for the screw connection on robot side

Description	ID
Adapter plate	
A-IS0031/IS0040	1600680

Electronic magnetic switch MMS



① Cable outlet

② Sensor MMS 22...-SA

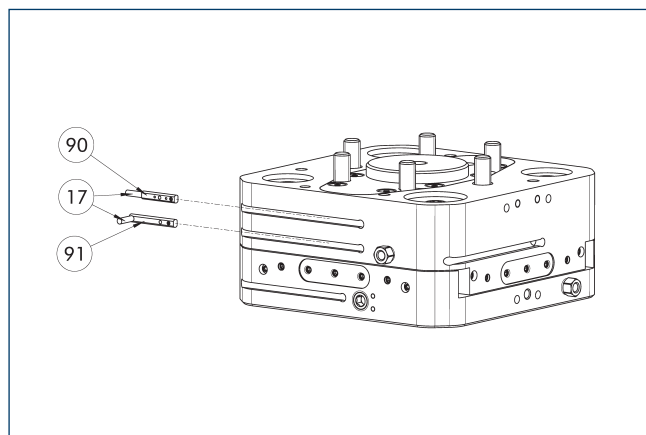
③ Sensor MMS 22..

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	●
MMSK 22-S-PNP-SA	0301044	
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.

Programmable magnetic switch MMS 22-PI1



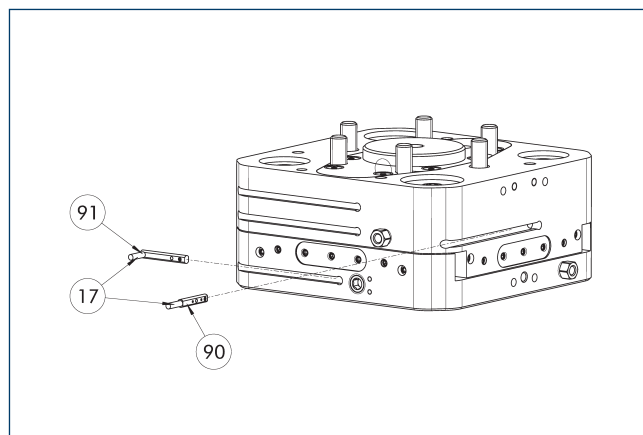
- ①⑦ Cable outlet ①⑨ Sensor MMS 22 ..-PI1-...-SA
①⑩ Sensor MMS 22 PI1-...

Position monitoring with one programmable position per sensor and integrated electronic system in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI1-S-M8-PNP-HD	0301110	●
MMSK 22-PI1-S-PNP-HD	0301112	

- 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.

Programmable magnetic switch MMS 22-PI2



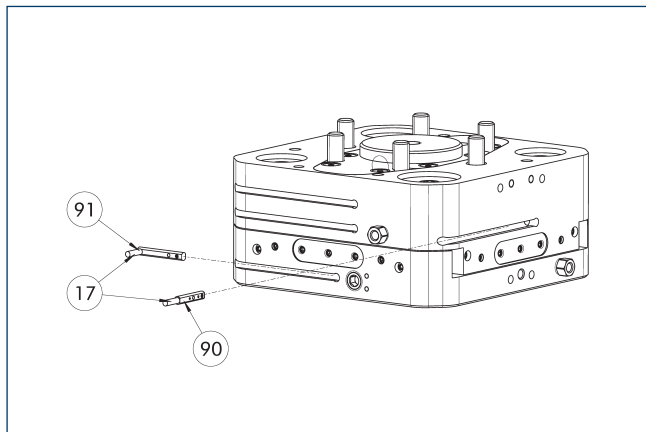
- ①⑦ Cable outlet ①⑨ Sensor MMS 22...-PI2-...-SA
①⑩ MMS 22...-PI2-... sensor

Position monitoring with two programmable positions per sensor and electronics integrated in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI2-S-M8-PNP	0301180	●
MMSK 22-PI2-S-PNP	0301182	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI2-S-M8-PNP-SA	0301186	●
MMSK 22-PI2-S-PNP-SA	0301188	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI2-S-M8-PNP-HD	0301130	●
MMSK 22-PI2-S-PNP-HD	0301132	

- 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.

Analog position sensor MMS-A



74 Limit stop for sensor

91 Sensor MMS 22...-SA

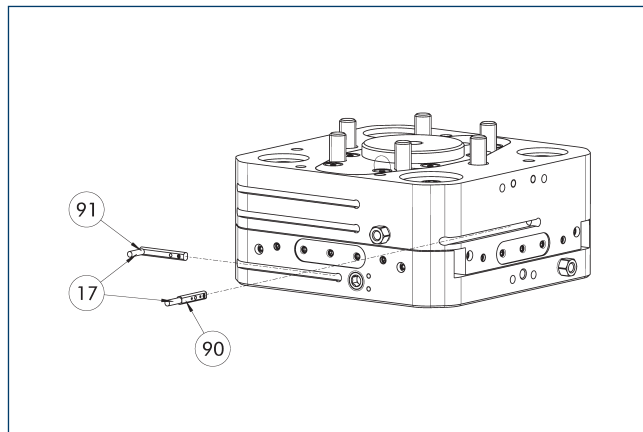
90 MMS 22-A-... sensor

Non-contact measuring, analog multi-position monitoring for any number of positions, easy to assemble in the C-slot. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the chart provided, teaching is only possible with the ST teaching tools.

Description	ID	
Analog position sensor		
MMS 22-A-10V-M08	0315825	
MMS 22-A-10V-M12	0315828	

① One sensor is required per compensation unit. Further information and technical data can be found in the catalog chapter sensor systems.

Magnetic switch MMS 22-I0-Link



17 Cable outlet

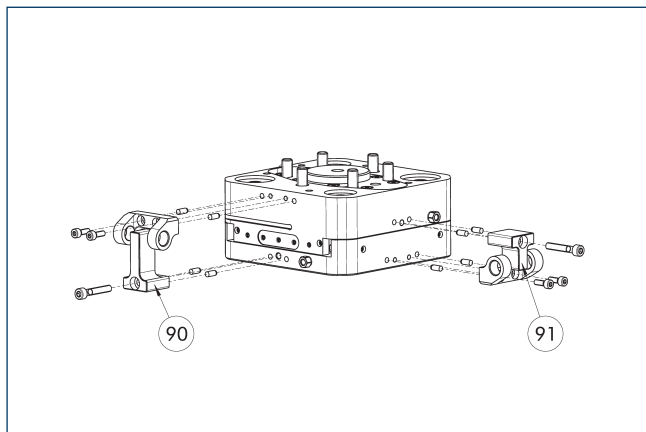
90 Sensor MMS 22-I0L-...

Sensor for multi-position monitoring through detection of the complete compensation stroke. The sensor is mounted directly in the C-slot of the compensation unit. The sensor is programmed for the compensation unit via the IO-Link interface, magnet teaching tool MT (included in scope of delivery; ID 0301030) or the ST plug teaching tool (not included in scope of delivery; ID 0301026). An IO-Link master is required for operation.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-I0L-M08	0315830	●
MMS 22-I0L-M12	0315835	

① One sensor is required per compensation unit. Further information and technical data can be found in the catalog chapter sensor systems.

Attachment kit for spring and air cartridges



90 Attachment kit, long

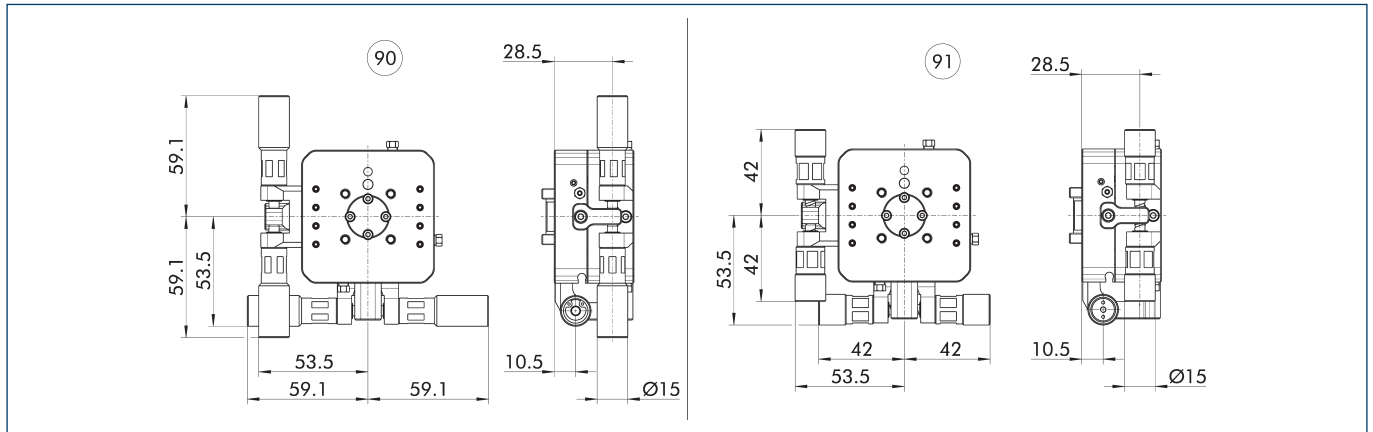
91 Attachment kit, short

Description	ID	
Attachment kit for spring/air cartridge		
AS-AGM-031/040-FP/LP-K	1602229	
AS-AGM-031/040-FP/LP-L	1602230	

AGM-XY 031

Compensation unit

Attachment kit for spring/air cartridge



⑨0 Spring cartridge (FP)

⑨1 Air cartridge (LP)

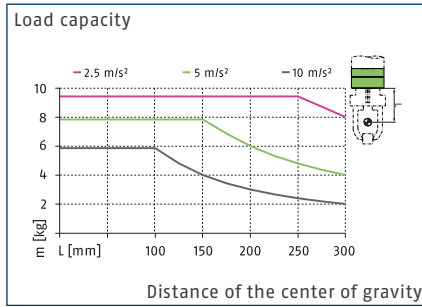
Description	ID	Min. force without plunger deflection	Max. force without plunger deflection	Increase in spring force per mm of plunger deflection	Weight
		[N]	[N]	[N]	[kg]
Attachment kit for spring/air cartridge					
AS-AGM-031/040-FP/LP-K	1602229				
AS-AGM-031/040-FP/LP-L	1602230				
Spring cartridge					
FP1-AGM-031/040	1601825	5	45	2.5	0.04
Air cartridge					
LP1-AGM-031/040	1601827	5	45	0.2	0.03

AGM-XY 040

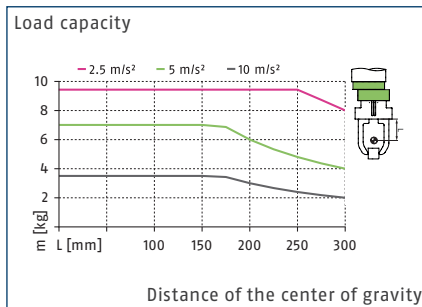
Compensation unit



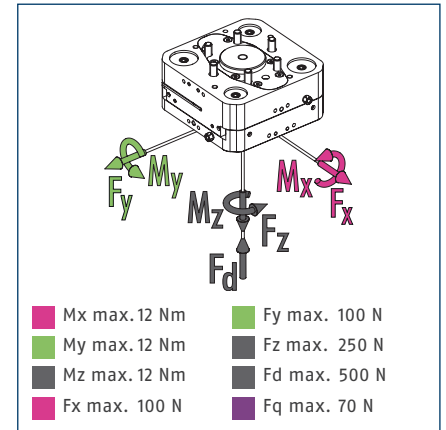
Load diagram – vertical design, centered



Load diagram – vertical setup, uncentered (position memory)



Max. loads



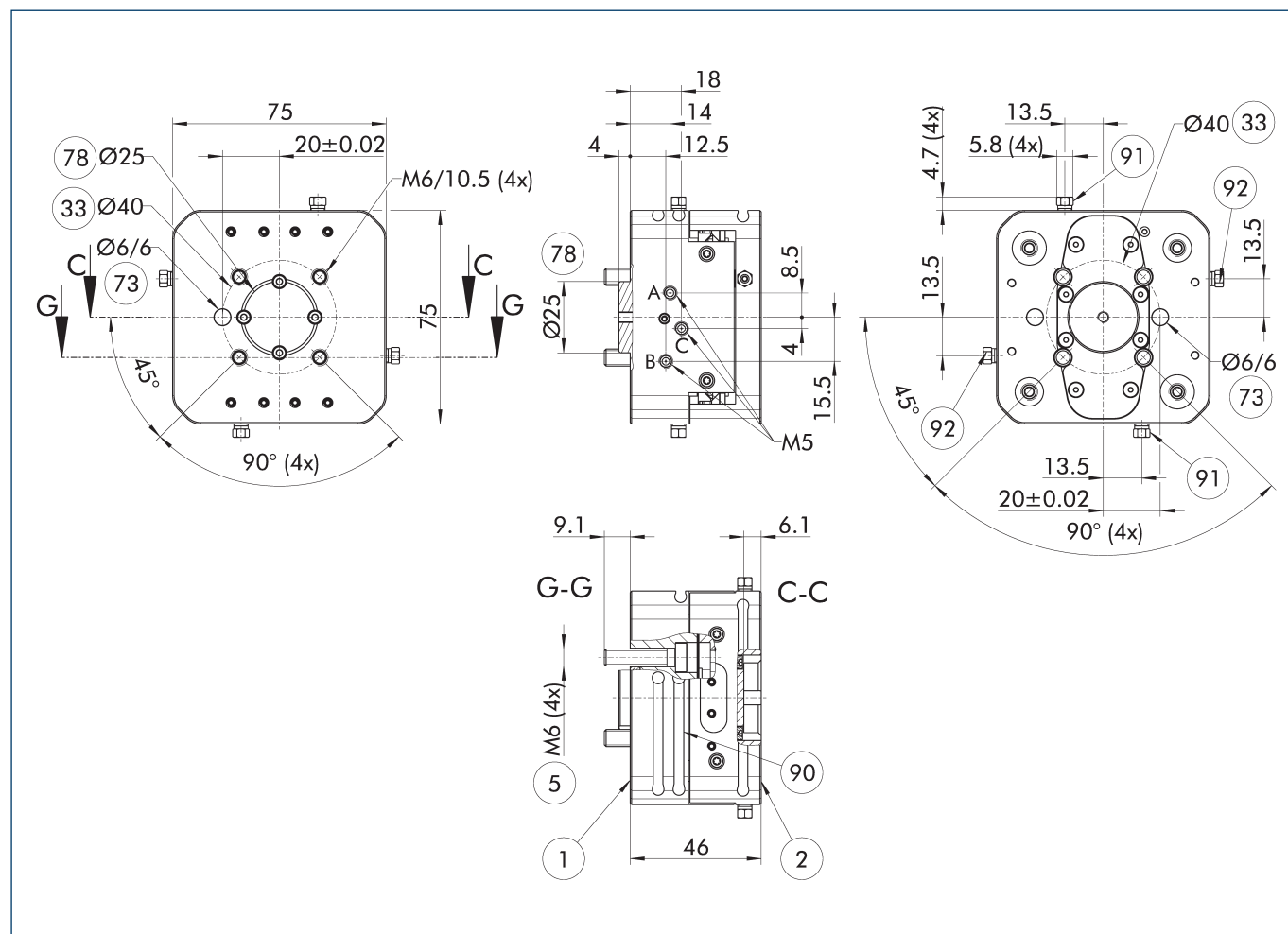
① This is the sum of all static loads that are permitted to act on the compensation unit.

Technical data

Description		AGM-XY 040	AGM-XY 040-P
ID		1577137	1582588
Compensation XY	[mm]	±3	±3
Max. holding force locked (Fx, Fy)	[N]	735	735
Radial holding force position memory	[N]		35
Breakaway force	[N]	2	2
Min./nom./max. operating pressure	[bar]	4/6/6.5	4/6/6.5
Repeat accuracy	[mm]	0.03	0.03
Robot-side connection		ISO 9409-1-40-4-M6	ISO 9409-1-40-4-M6
Tool-side connection		ISO 9409-1-40-4-M6	ISO 9409-1-40-4-M6
Weight	[kg]	0.8	0.8
Min./max. ambient temperature	[°C]	5/60	5/60
Locking time	[s]	0.2	0.2
IP protection class		20	20
Max. dynamic moment Mx/My	[Nm]	6	6
Max. dynamic moment Mz	[Nm]	6	6
Force Fx max. dynamic	[N]	70	70
Force Fy max. dynamic	[N]	70	70
Force Fz max. dynamic	[N]	116	116

① Further technical data can be found at schunk.com.

Main view AGM-XY 040



The drawing shows the basic version of the compensation unit in the centric position, without considering any dimensions of the options described below.

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

⑤ Through hole for connection with screws

③③ DIN ISO-9409 bolt circle

⑦③ Fit for centering pins

⑦⑧ Fit for centering

⑨⑩ Slot for magnetic switch

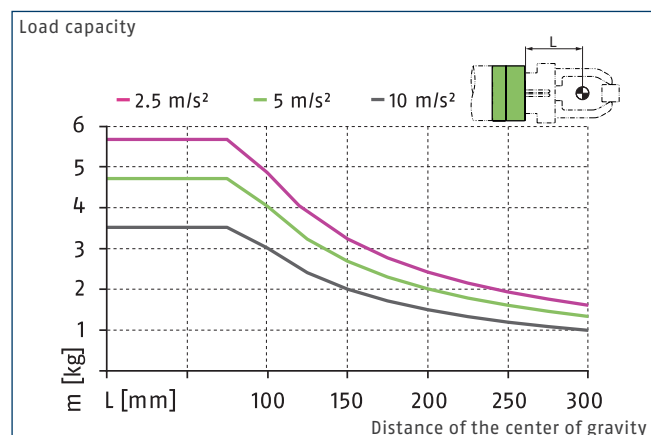
⑨① Stroke adjustment in X

⑨② Stroke adjustment in Y

AGM-XY 040

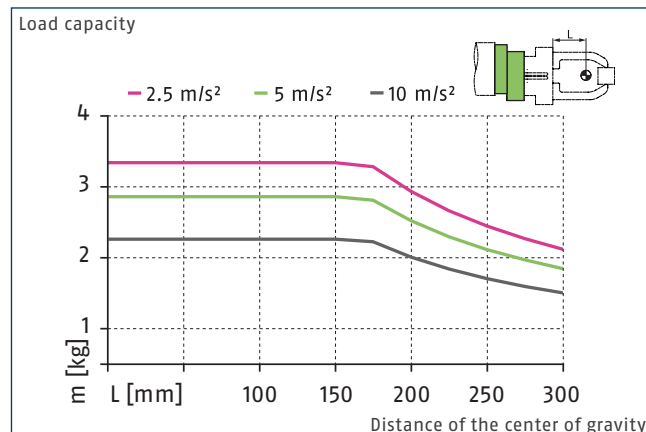
Compensation unit

Load diagram – horizontal design, centered



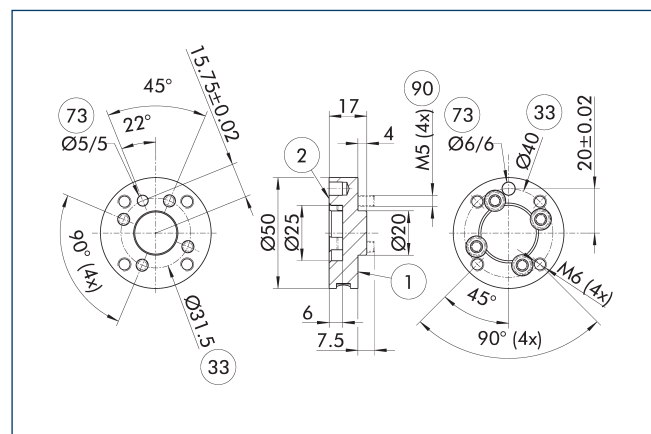
① The maximum recommended horizontal handling weight refers to applications without spring or air cartridges. We recommend their use for horizontal compensation processes.

Load diagram – horizontal setup, uncentered (position memory)



① The maximum recommended horizontal handling weight refers to applications without spring or air cartridges. We recommend their use for horizontal compensation processes.

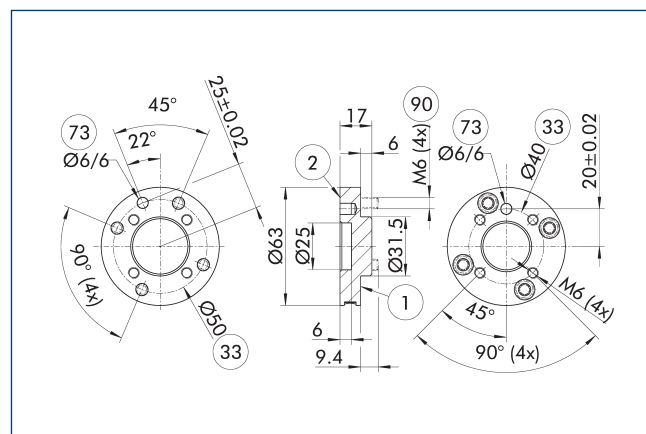
Adapter plate A-IS0040/IS0031



- ① Robot-side connection
- ② Tool-side connection
- ③③ DIN ISO-9409 bolt circle
- ⑦③ Fit for centering pins
- ⑨⑨ Fastening screw for the screw connection on robot side

Description	ID	
Adapter plate		
A-IS0040/IS0031	1601226	

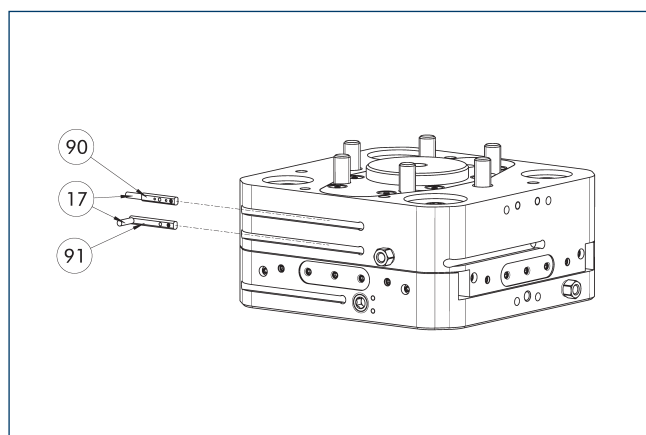
Adapter plate A-IS0040/IS0050



- ① Robot-side connection
- ② Tool-side connection
- ③③ DIN ISO-9409 bolt circle
- ⑦③ Fit for centering pins
- ⑨⑨ Fastening screw for the screw connection on robot side

Description	ID	
Adapter plate		
A-IS0040/IS0050	1601228	

Electronic magnetic switch MMS



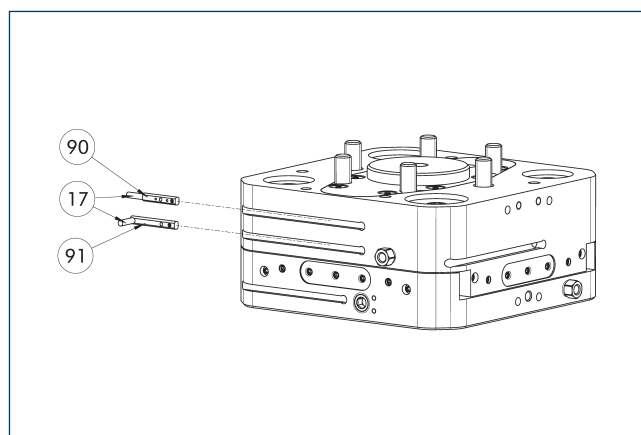
- ①⑦ Cable outlet
 ⑨① Sensor MMS 22...-SA

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	●
MMSK 22-S-PNP-SA	0301044	
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.

Programmable magnetic switch MMS 22-PI1



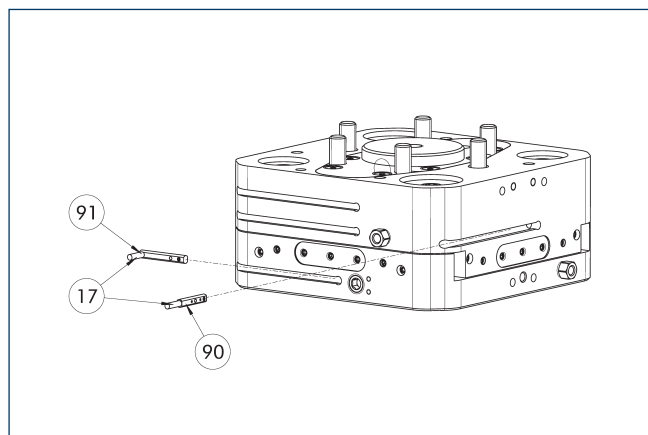
- ①⑦ Cable outlet
 ⑨① Sensor MMS 22...-PI1-...-SA

Position monitoring with one programmable position per sensor and integrated electronic system in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI1-S-M8-PNP-HD	0301110	●
MMSK 22-PI1-S-PNP-HD	0301112	

- 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.

Programmable magnetic switch MMS 22-PI2



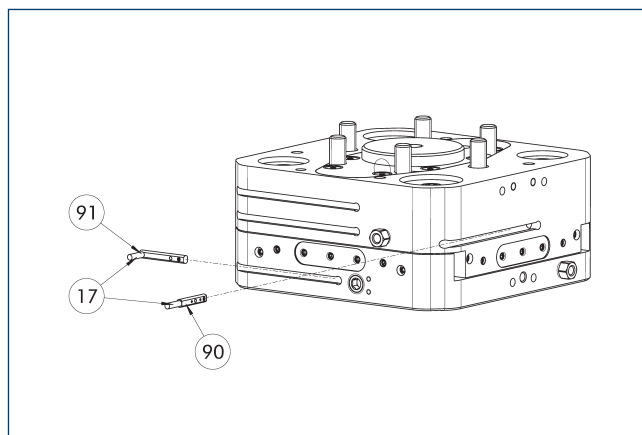
- 17 Cable outlet
 90 MMS 22...-PI2-... sensor
 91 Sensor MMS 22...-PI2-...-SA

Position monitoring with two programmable positions per sensor and electronics integrated in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI2-S-M8-PNP	0301180	●
MMSK 22-PI2-S-PNP	0301182	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI2-S-M8-PNP-SA	0301186	●
MMSK 22-PI2-S-PNP-SA	0301188	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI2-S-M8-PNP-HD	0301130	●
MMSK 22-PI2-S-PNP-HD	0301132	

- ⓘ 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.

Analog position sensor MMS-A



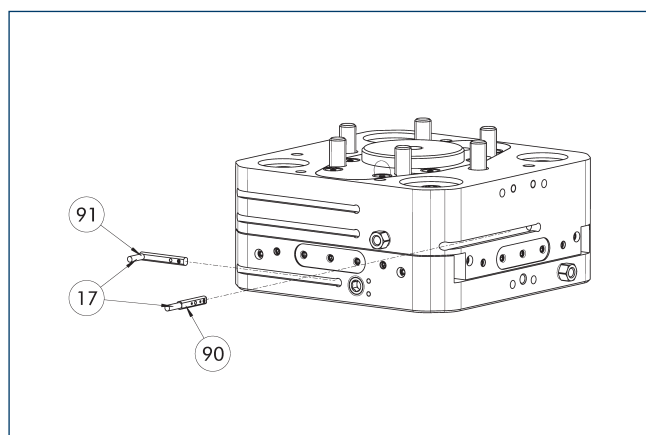
- 74 Limit stop for sensor
 90 MMS 22-A-... sensor
 91 Sensor MMS 22...-SA

Non-contact measuring, analog multi-position monitoring for any number of positions, easy to assemble in the C-slot. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the chart provided, teaching is only possible with the ST teaching tools.

Description	ID	
Analog position sensor		
MMS 22-A-10V-M08	0315825	
MMS 22-A-10V-M12	0315828	

- ⓘ One sensor is required per compensation unit. Further information and technical data can be found in the catalog chapter sensor systems.

Magnetic switch MMS 22-IO-Link



17 Cable outlet

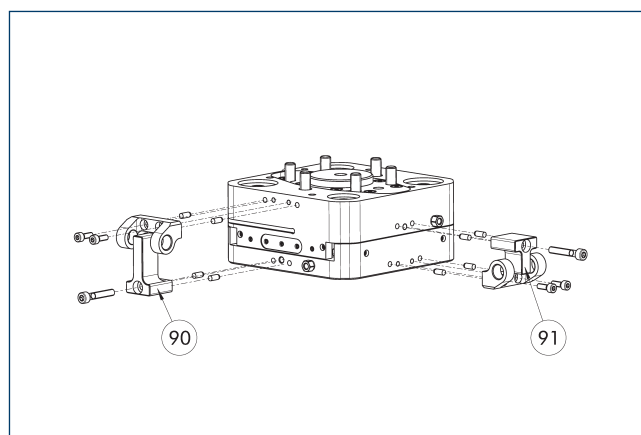
90 Sensor MMS 22-IO-Link

Sensor for multi-position monitoring through detection of the complete compensation stroke. The sensor is mounted directly in the C-slot of the compensation unit. The sensor is programmed for the compensation unit via the IO-Link interface, magnet teaching tool MT (included in scope of delivery; ID 0301030) or the ST plug teaching tool (not included in scope of delivery; ID 0301026). An IO-Link master is required for operation.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-IO-Link-M08	0315830	●
MMS 22-IO-Link-M12	0315835	

- ① One sensor is required per compensation unit. Further information and technical data can be found in the catalog chapter sensor systems.

Attachment kit for spring and air cartridges

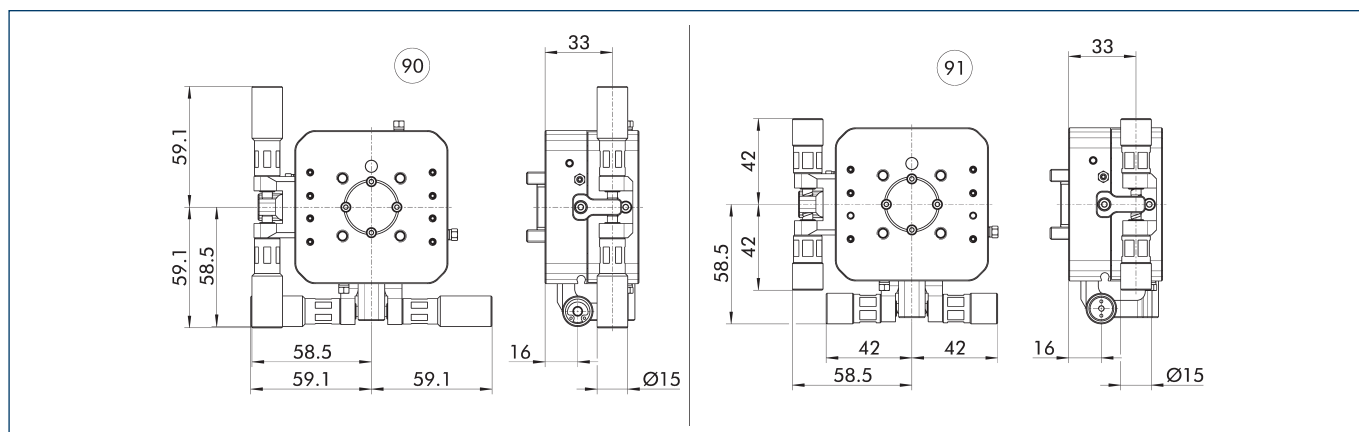


90 Attachment kit, long

91 Attachment kit, short

Description	ID
Attachment kit for spring/air cartridge	
AS-AGM-031/040-FP/LP-K	1602229
AS-AGM-031/040-FP/LP-L	1602230

Attachment kit for spring/air cartridge



90 Spring cartridge (FP)

91 Air cartridge (LP)

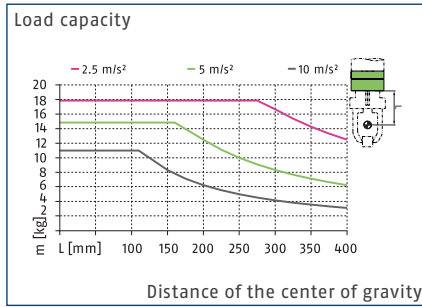
Description	ID	Min. force without plunger deflection	Max. force without plunger deflection	Increase in spring force per mm of plunger deflection	Weight
		[N]	[N]	[N]	[kg]
Attachment kit for spring/air cartridge					
AS-AGM-031/040-FP/LP-K	1602229				
AS-AGM-031/040-FP/LP-L	1602230				
Spring cartridge					
FP1-AGM-031/040	1601825	5	45	2.5	0.04
Air cartridge					
LP1-AGM-031/040	1601827	5	45	0.2	0.03

AGM-XY 050

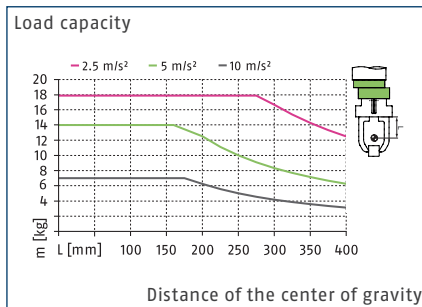
Compensation unit



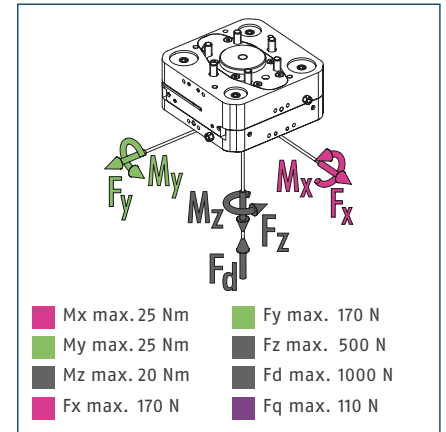
Load diagram – vertical design, centered



Load diagram – vertical setup, uncentered (position memory)



Max. loads



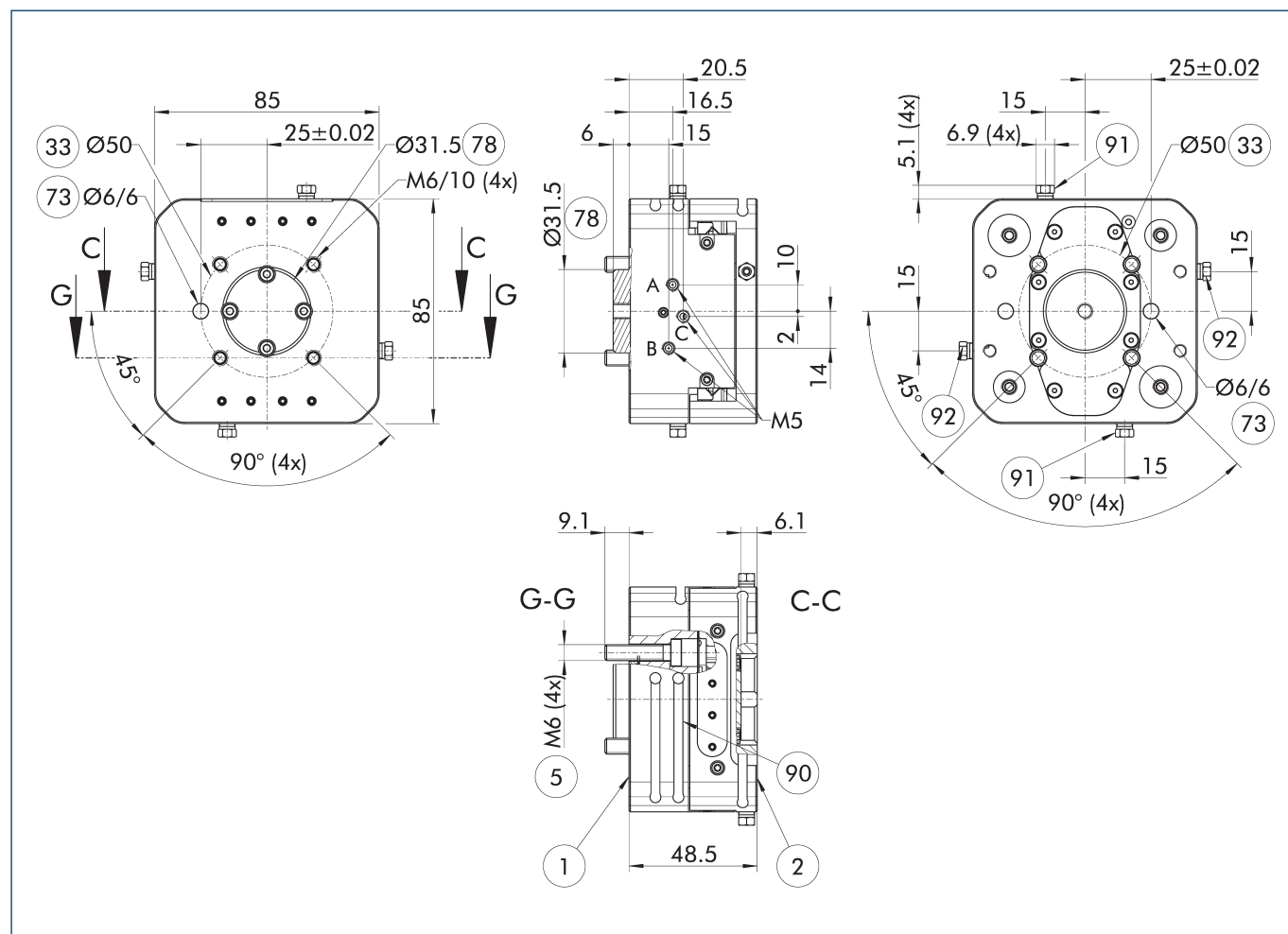
① This is the sum of all static loads that are permitted to act on the compensation unit.

Technical data

Description		AGM-XY 050	AGM-XY 050-P
ID		1577153	1582589
Compensation XY	[mm]	±4	±4
Max. holding force locked (Fx, Fy)	[N]	1246	1246
Radial holding force position memory	[N]		70
Breakaway force	[N]	2	2
Min./nom./max. operating pressure	[bar]	4/6/6.5	4/6/6.5
Repeat accuracy	[mm]	0.03	0.03
Robot-side connection		ISO 9409-1-50-4-M6	ISO 9409-1-50-4-M6
Tool-side connection		ISO 9409-1-50-4-M6	ISO 9409-1-50-4-M6
Weight	[kg]	1	1
Min./max. ambient temperature	[°C]	5/60	5/60
Locking time	[s]	0.2	0.2
IP protection class		20	20
Max. dynamic moment Mx/My	[Nm]	12.5	12.5
Max. dynamic moment Mz	[Nm]	10	10
Force Fx max. dynamic	[N]	110	110
Force Fy max. dynamic	[N]	110	110
Force Fz max. dynamic	[N]	220	220

① Further technical data can be found at schunk.com.

Main view AGM-XY 050



The drawing shows the basic version of the compensation unit in the centric position, without considering any dimensions of the options described below.

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

⑤ Through hole for connection with screws

③③ DIN ISO-9409 bolt circle

⑦③ Fit for centering pins

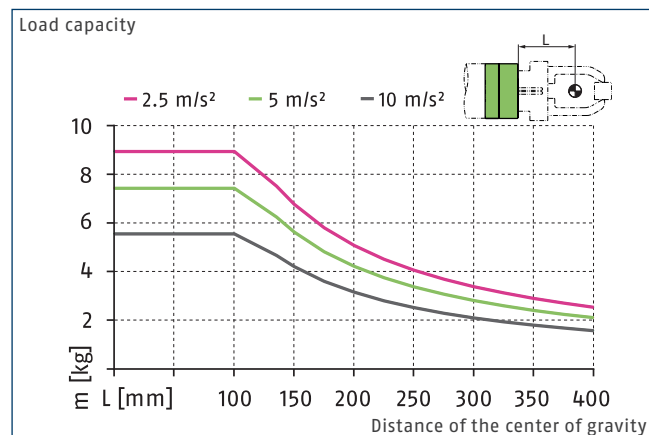
⑦⑧ Fit for centering

⑨⑩ Slot for magnetic switch

⑨① Stroke adjustment in X

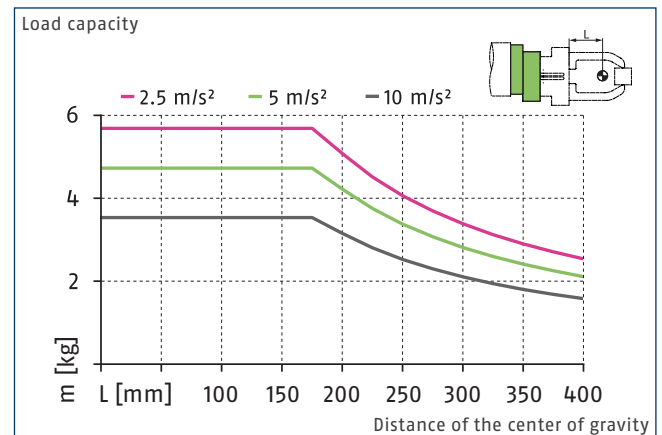
⑨② Stroke adjustment in Y

Load diagram – horizontal design, centered



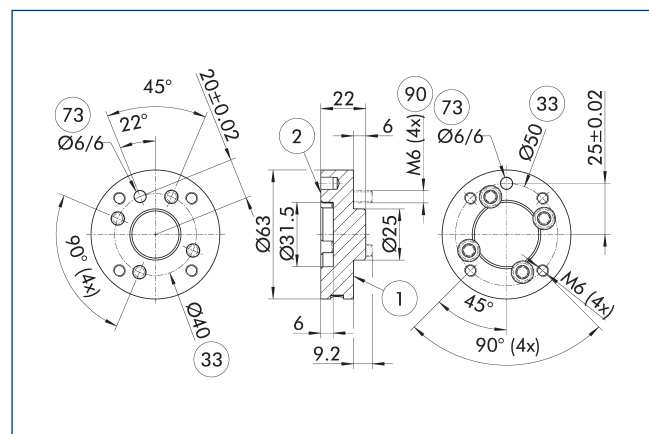
① The maximum recommended horizontal handling weight refers to applications without spring or air cartridges. We recommend their use for horizontal compensation processes.

Load diagram – horizontal setup, uncentered (position memory)



① The maximum recommended horizontal handling weight refers to applications without spring or air cartridges. We recommend their use for horizontal compensation processes.

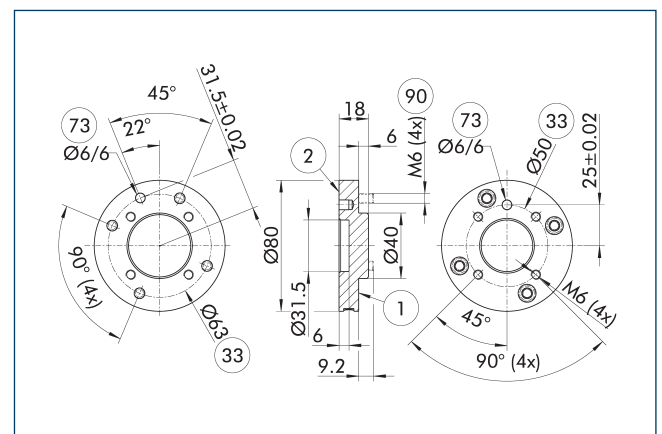
Adapter plate A-IS0050/IS0040



- ① Robot-side connection
- ② Tool-side connection
- ③ DIN ISO-9409 bolt circle
- ⑦③ Fit for centering pins
- ⑨⑨ Fastening screw for the screw connection on robot side

Description	ID	
Adapter plate		
A-IS0050/IS0040	1601229	

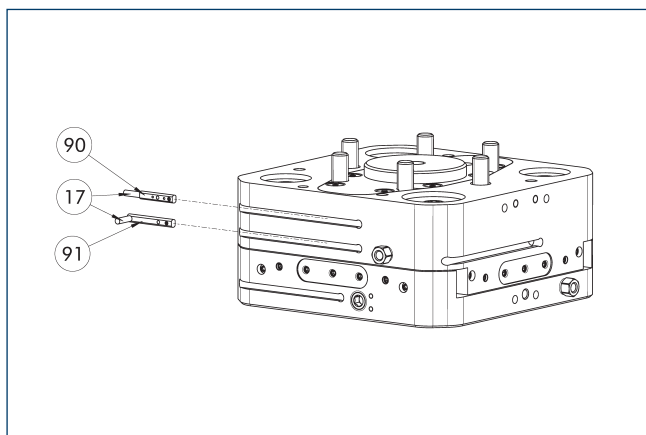
Adapter plate A-IS0050/IS0063



- ① Robot-side connection
- ② Tool-side connection
- ③ DIN ISO-9409 bolt circle
- ⑦③ Fit for centering pins
- ⑨⑨ Fastening screw for the screw connection on robot side

Description	ID	
Adapter plate		
A-IS0050/IS0063	1601240	

Electronic magnetic switch MMS



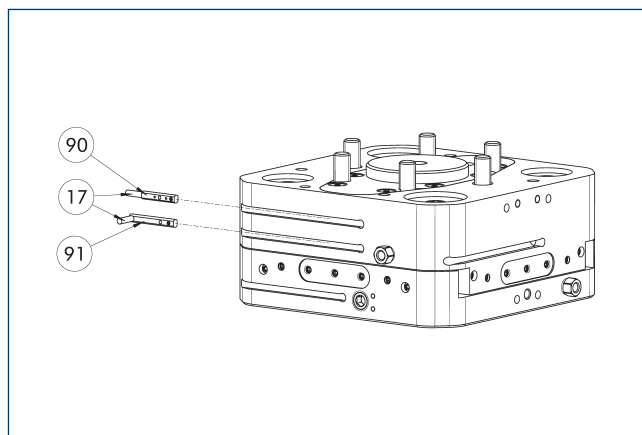
- ①⑦ Cable outlet
 ⑨① Sensor MMS 22...-SA
 ⑨① Sensor MMS 22..

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	●
MMSK 22-S-PNP-SA	0301044	
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.

Programmable magnetic switch MMS 22-PI1



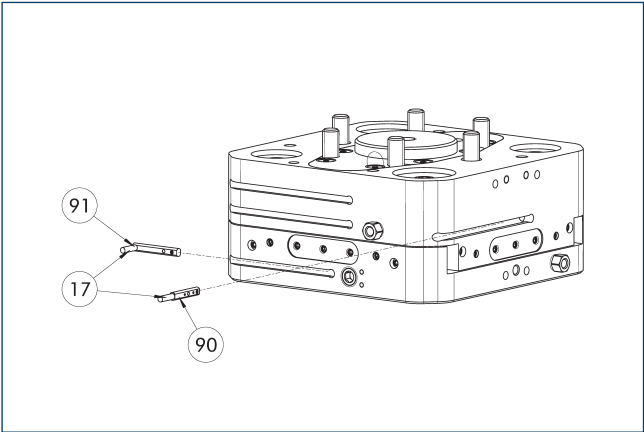
- ①⑦ Cable outlet
 ⑨① Sensor MMS 22...-PI1-...-SA
 ⑨① Sensor MMS 22 PI1-...

Position monitoring with one programmable position per sensor and integrated electronic system in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI1-S-M8-PNP-HD	0301110	●
MMSK 22-PI1-S-PNP-HD	0301112	

- 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.

Programmable magnetic switch MMS 22-PI2



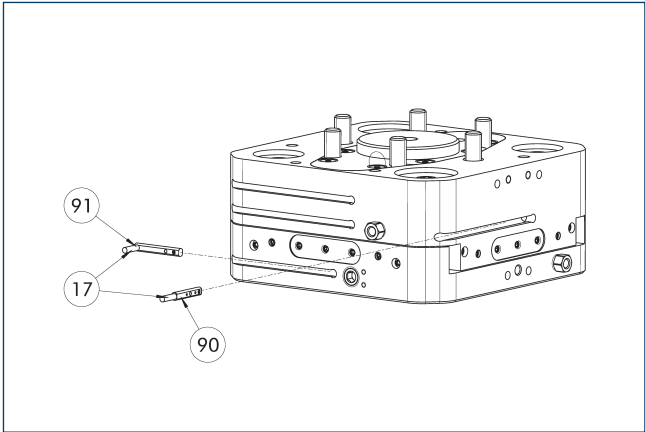
- 17 Cable outlet
- 91 Sensor MMS 22...-PI2-...-SA
- 90 MMS 22...-PI2-... sensor

Position monitoring with two programmable positions per sensor and electronics integrated in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI2-S-M8-PNP	0301180	●
MMSK 22-PI2-S-PNP	0301182	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI2-S-M8-PNP-SA	0301186	●
MMSK 22-PI2-S-PNP-SA	0301188	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI2-S-M8-PNP-HD	0301130	●
MMSK 22-PI2-S-PNP-HD	0301132	

- 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.

Analog position sensor MMS-A



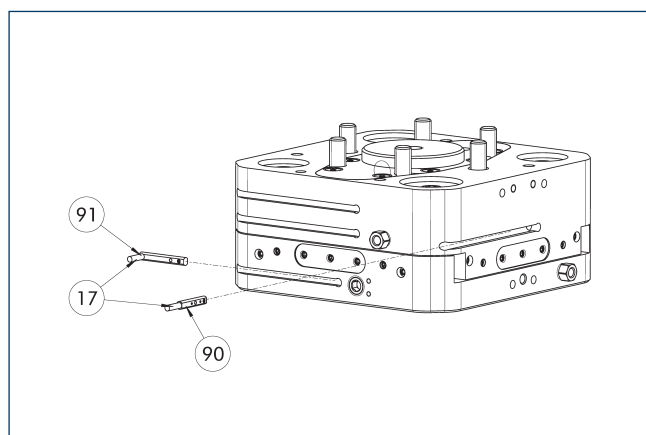
- 74 Limit stop for sensor
- 91 Sensor MMS 22...-SA
- 90 MMS 22-A-... sensor

Non-contact measuring, analog multi-position monitoring for any number of positions, easy to assemble in the C-slot. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the chart provided, teaching is only possible with the ST teaching tools.

Description	ID	
Analog position sensor		
MMS 22-A-10V-M08	0315825	
MMS 22-A-10V-M12	0315828	

- ① One sensor is required per compensation unit. Further information and technical data can be found in the catalog chapter sensor systems.

Magnetic switch MMS 22-IO-Link



17 Cable outlet

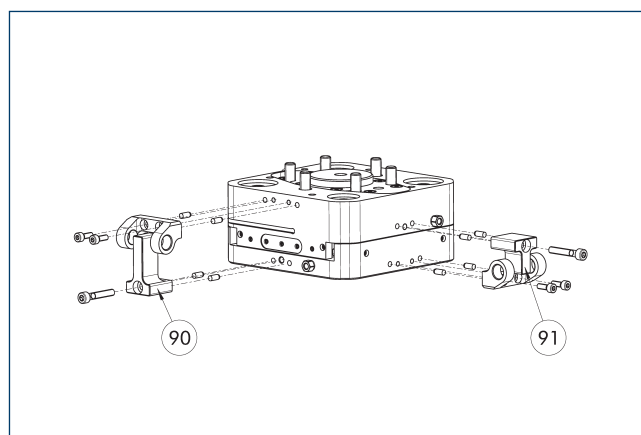
90 Sensor MMS 22-IO-Link

Sensor for multi-position monitoring through detection of the complete compensation stroke. The sensor is mounted directly in the C-slot of the compensation unit. The sensor is programmed for the compensation unit via the IO-Link interface, magnet teaching tool MT (included in scope of delivery; ID 0301030) or the ST plug teaching tool (not included in scope of delivery; ID 0301026). An IO-Link master is required for operation.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-IO-Link-M08	0315830	●
MMS 22-IO-Link-M12	0315835	

① One sensor is required per compensation unit. Further information and technical data can be found in the catalog chapter sensor systems.

Attachment kit for spring and air cartridges

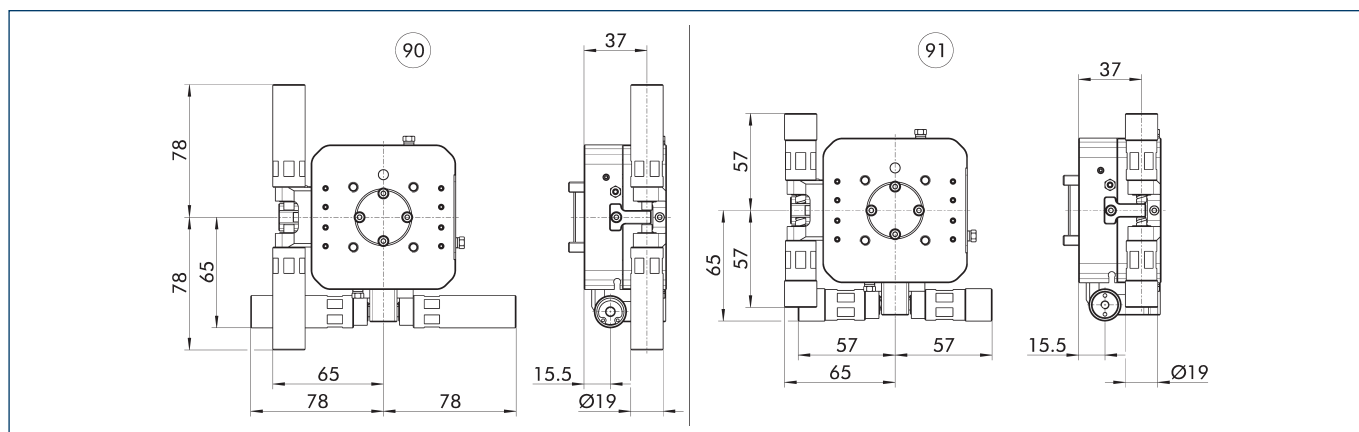


90 Attachment kit, long

91 Attachment kit, short

Description	ID
Attachment kit for spring/air cartridge	
AS-AGM-050-FP/LP-K	1602231
AS-AGM-050-FP/LP-L	1602232

Attachment kit for spring/air cartridge



90 Spring cartridge (FP)

91 Air cartridge (LP)

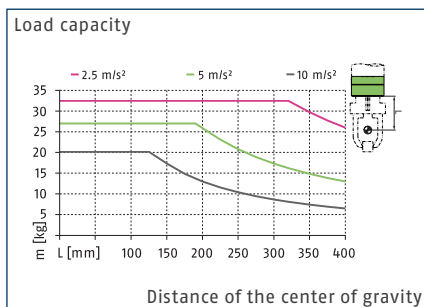
Description	ID	Min. force without plunger deflection	Max. force without plunger deflection	Increase in spring force per mm of plunger deflection	Weight
		[N]	[N]	[N]	[kg]
Attachment kit for spring/air cartridge					
AS-AGM-050-FP/LP-K	1602231				
AS-AGM-050-FP/LP-L	1602232				
Spring cartridge					
FP1-AGM-050	1601828	22	90	3.5	0.1
Air cartridge					
LP1-AGM-050	1601840	25	100	0.7	0.06

AGM-XY 063

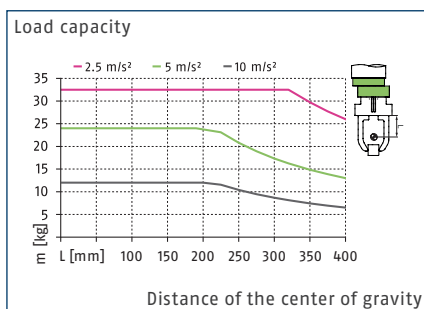
Compensation unit



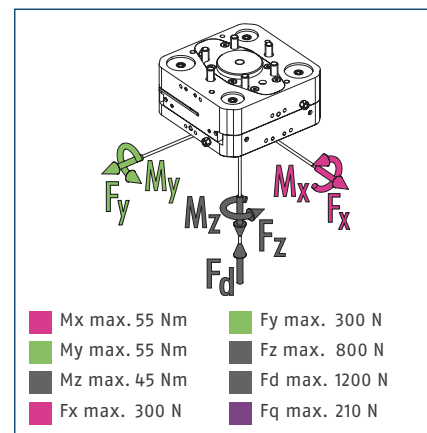
Load diagram – vertical design, centered



Load diagram – vertical setup, uncentered (position memory)



Max. loads



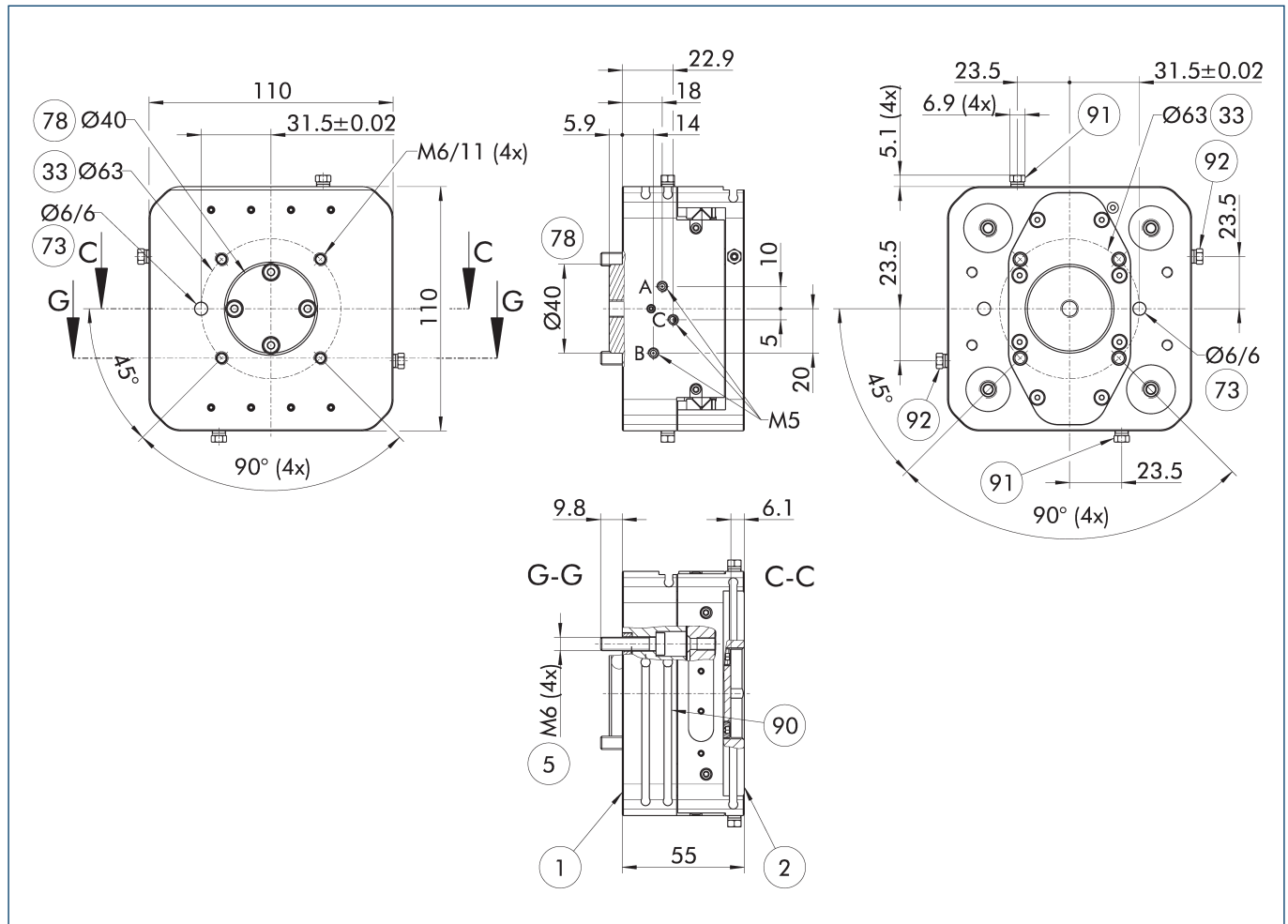
① This is the sum of all static loads that are permitted to act on the compensation unit.

Technical data

Description	AGM-XY 063	AGM-XY 063-P
ID	1577159	1582600
Compensation XY	[mm] ±5	±5
Max. holding force locked (Fx, Fy)	[N] 2010	2010
Radial holding force position memory	[N]	120
Breakaway force	[N] 4	4
Min./nom./max. operating pressure	[bar] 4/6/6.5	4/6/6.5
Repeat accuracy	[mm] 0.03	0.03
Robot-side connection	ISO 9409-1-63-4-M6	ISO 9409-1-63-4-M6
Tool-side connection	ISO 9409-1-63-4-M6	ISO 9409-1-63-4-M6
Weight	[kg] 2	2
Min./max. ambient temperature	[°C] 5/60	5/60
Locking time	[s] 0.2	0.2
IP protection class	20	20
Max. dynamic moment Mx/My	[Nm] 26	26
Max. dynamic moment Mz	[Nm] 23	23
Force Fx max. dynamic	[N] 210	210
Force Fy max. dynamic	[N] 210	210
Force Fz max. dynamic	[N] 400	400

① Further technical data can be found at schunk.com.

Main view AGM-XY 063



The drawing shows the basic version of the compensation unit in the centric position, without considering any dimensions of the options described below.

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

⑤ Through hole for connection with screws

③③ DIN ISO-9409 bolt circle

⑦③ Fit for centering pins

⑦⑧ Fit for centering

⑨⑩ Slot for magnetic switch

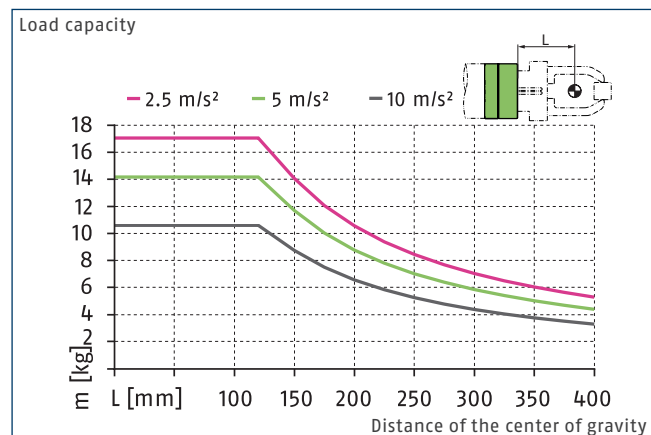
⑨① Stroke adjustment in X

⑨② Stroke adjustment in Y

AGM-XY 063

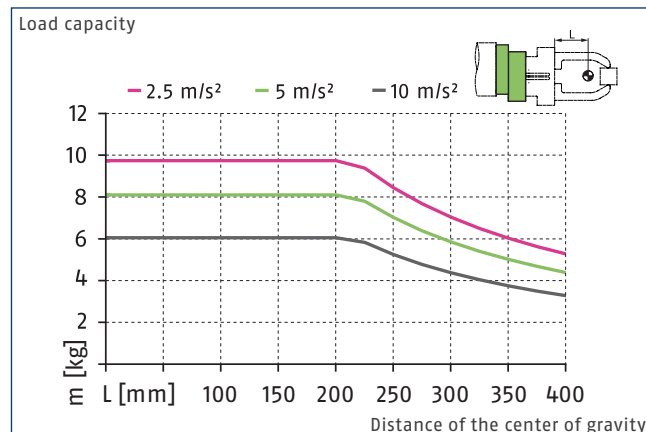
Compensation unit

Load diagram – horizontal design, centered



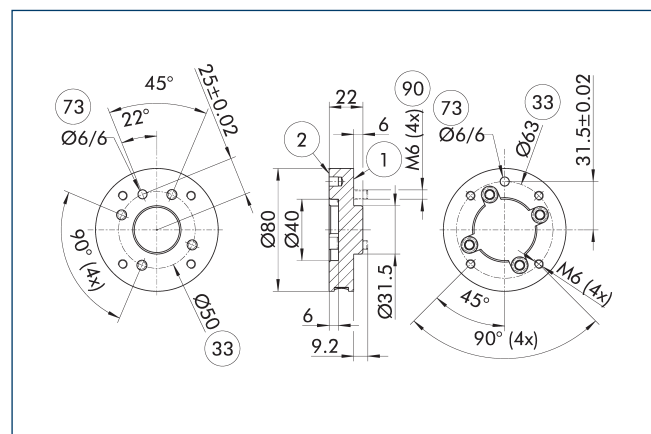
① The maximum recommended horizontal handling weight refers to applications without spring or air cartridges. We recommend their use for horizontal compensation processes.

Load diagram – horizontal setup, uncentered (position memory)



① The maximum recommended horizontal handling weight refers to applications without spring or air cartridges. We recommend their use for horizontal compensation processes.

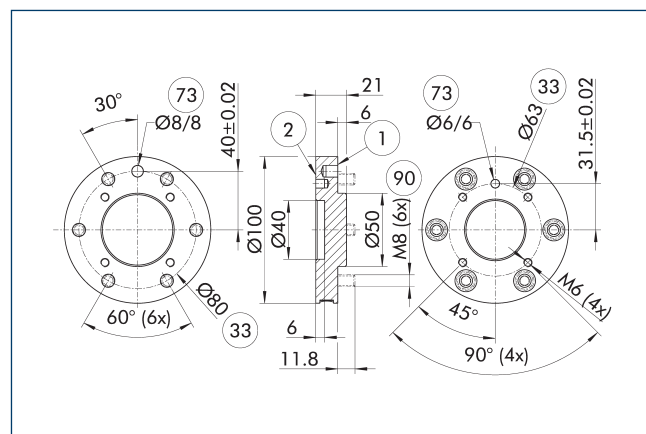
Adapter plate A-IS0063/IS0050



- ① Robot-side connection
- ② Tool-side connection
- ③③ DIN ISO-9409 bolt circle
- ⑦③ Fit for centering pins
- ⑨⑨ Fastening screw for the screw connection on robot side

Description	ID	
Adapter plate		
A-IS0063/IS0050	1601241	

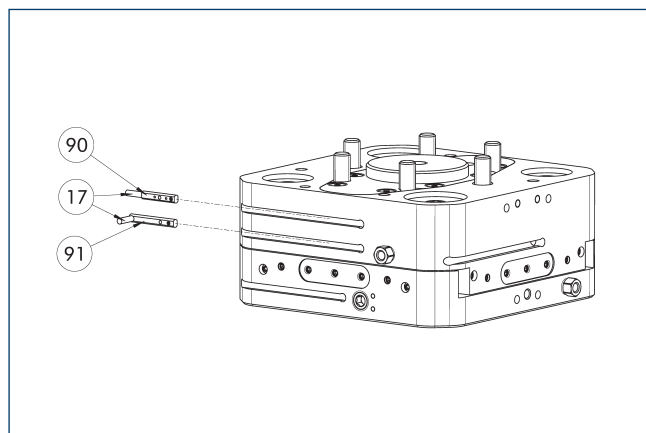
Adapter plate A-IS0063/IS0080



- ① Robot-side connection
- ② Tool-side connection
- ③③ DIN ISO-9409 bolt circle
- ⑦③ Fit for centering pins
- ⑨⑨ Fastening screw for the screw connection on robot side

Description	ID	
Adapter plate		
A-IS0063/IS0080	1601243	

Electronic magnetic switch MMS



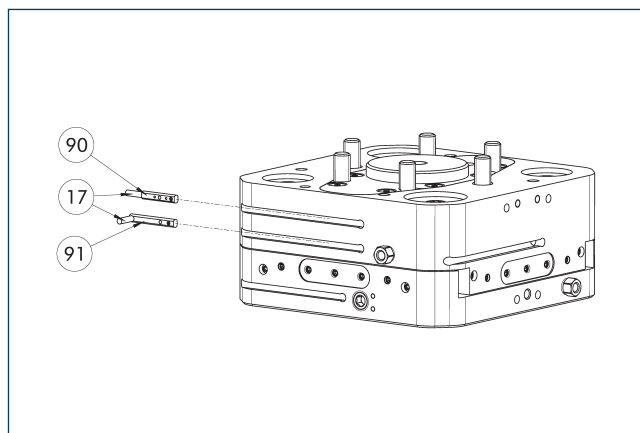
- 17 Cable outlet
90 Sensor MMS 22..
91 Sensor MMS 22...-SA

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	●
MMSK 22-S-PNP-SA	0301044	
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.

Programmable magnetic switch MMS 22-PI1



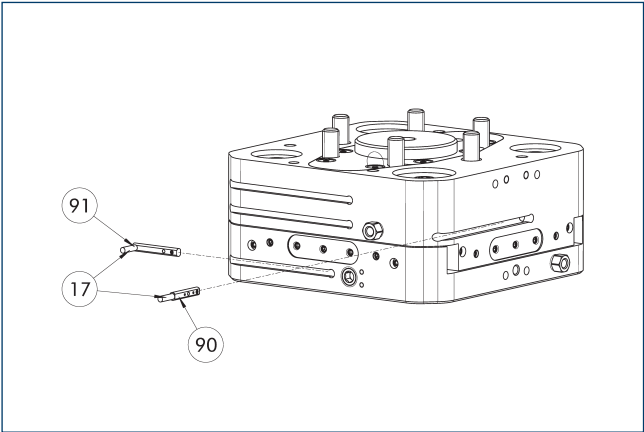
- 17 Cable outlet
90 Sensor MMS 22 PI1-...
91 Sensor MMS 22 ...-PI1-...-SA

Position monitoring with one programmable position per sensor and integrated electronic system in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI1-S-M8-PNP-HD	0301110	●
MMSK 22-PI1-S-PNP-HD	0301112	

- 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.

Programmable magnetic switch MMS 22-PI2



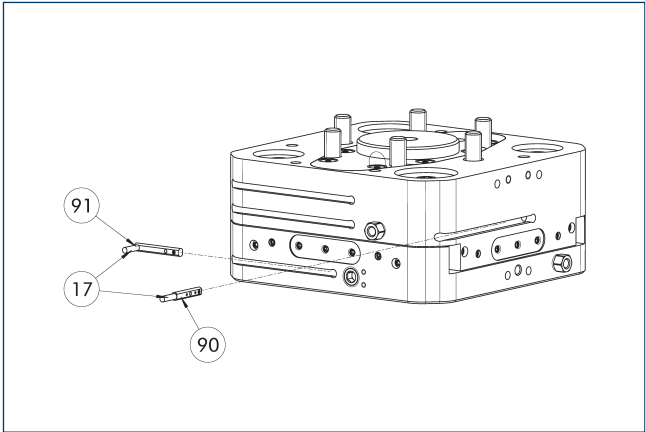
- 17 Cable outlet
- 91 Sensor MMS 22...-PI2-...-SA
- 90 MMS 22...-PI2-... sensor

Position monitoring with two programmable positions per sensor and electronics integrated in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI2-S-M8-PNP	0301180	●
MMSK 22-PI2-S-PNP	0301182	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI2-S-M8-PNP-SA	0301186	●
MMSK 22-PI2-S-PNP-SA	0301188	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI2-S-M8-PNP-HD	0301130	●
MMSK 22-PI2-S-PNP-HD	0301132	

- 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.

Analog position sensor MMS-A



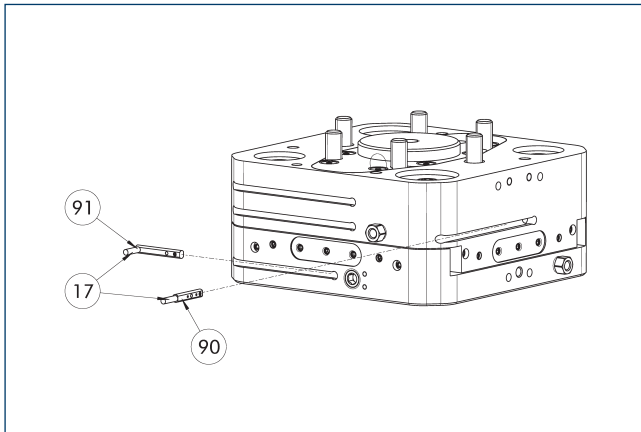
- 74 Limit stop for sensor
- 91 Sensor MMS 22...-SA
- 90 MMS 22-A-... sensor

Non-contact measuring, analog multi-position monitoring for any number of positions, easy to assemble in the C-slot. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the chart provided, teaching is only possible with the ST teaching tools.

Description	ID	
Analog position sensor		
MMS 22-A-10V-M08	0315825	
MMS 22-A-10V-M12	0315828	

- One sensor is required per compensation unit. Further information and technical data can be found in the catalog chapter sensor systems.

Magnetic switch MMS 22-IO-Link



17 Cable outlet

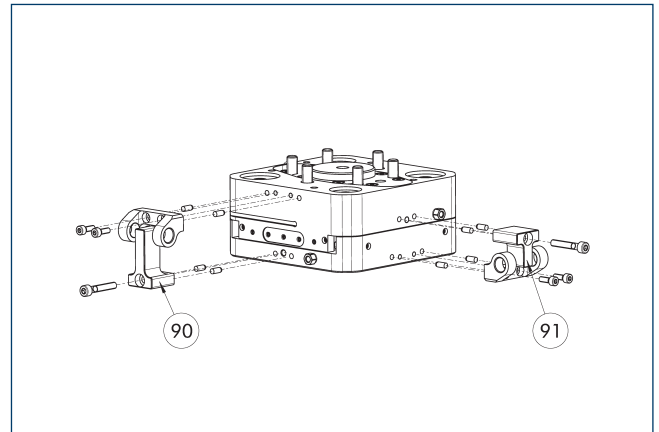
90 Sensor MMS 22-IO-Link

Sensor for multi-position monitoring through detection of the complete compensation stroke. The sensor is mounted directly in the C-slot of the compensation unit. The sensor is programmed for the compensation unit via the IO-Link interface, magnet teaching tool MT (included in scope of delivery; ID 0301030) or the ST plug teaching tool (not included in scope of delivery; ID 0301026). An IO-Link master is required for operation.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-IO-L-M08	0315830	●
MMS 22-IO-L-M12	0315835	

① One sensor is required per compensation unit. Further information and technical data can be found in the catalog chapter sensor systems.

Attachment kit for spring and air cartridges

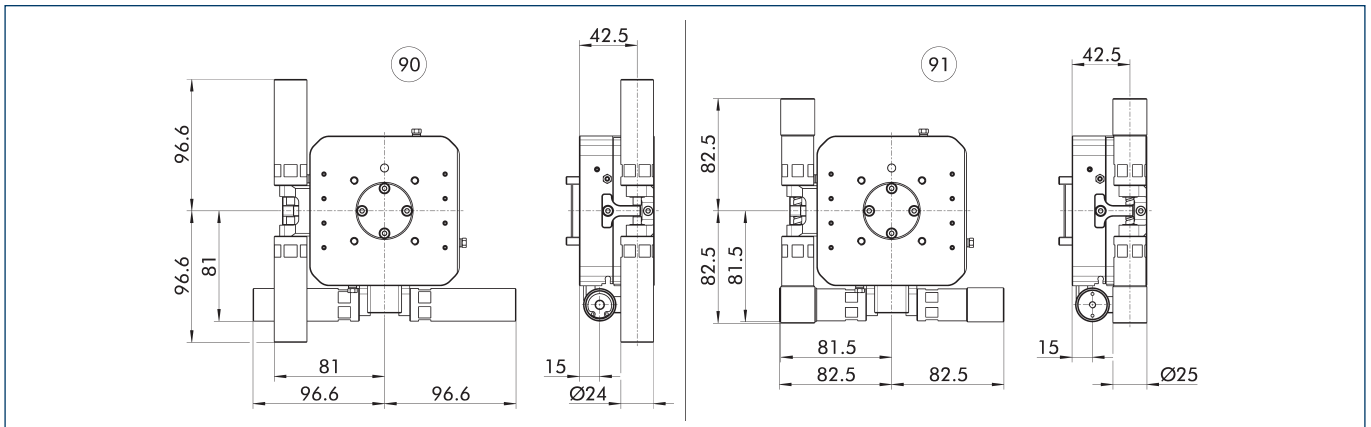


90 Attachment kit, long

91 Attachment kit, short

Description	ID
Attachment kit for spring/air cartridge	
AS-AGM-063-FP/LP-K	1602233
AS-AGM-063-FP/LP-L	1602234

Attachment kit for spring/air cartridge



90 Spring cartridge (FP)

91 Air cartridge (LP)

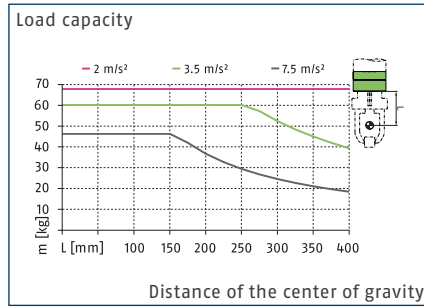
Description	ID	Min. force without plunger deflection	Max. force without plunger deflection	Increase in spring force per mm of plunger deflection	Weight
		[N]	[N]	[N]	[kg]
Attachment kit for spring/air cartridge					
AS-AGM-063-FP/LP-K	1602233				
AS-AGM-063-FP/LP-L	1602234				
Spring cartridge					
FP1-AGM-063	1601841	50	190	5.5	0.17
Air cartridge					
LP1-AGM-063	1601842	50	200	1.7	0.13

AGM-XY 080

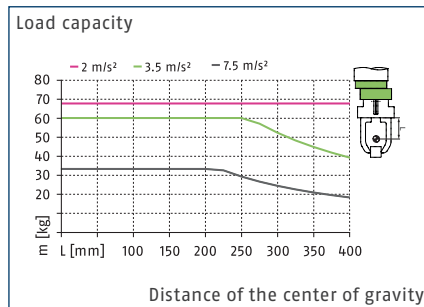
Compensation unit



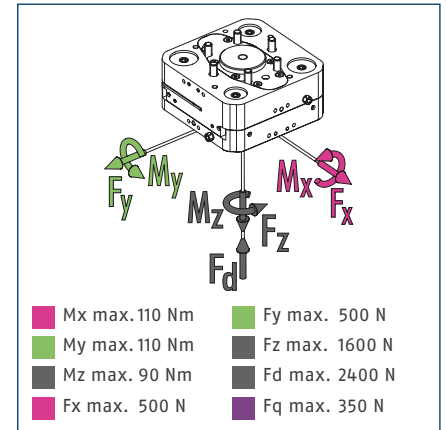
Load diagram – vertical design, centered



Load diagram – vertical setup, uncentered (position memory)



Max. loads



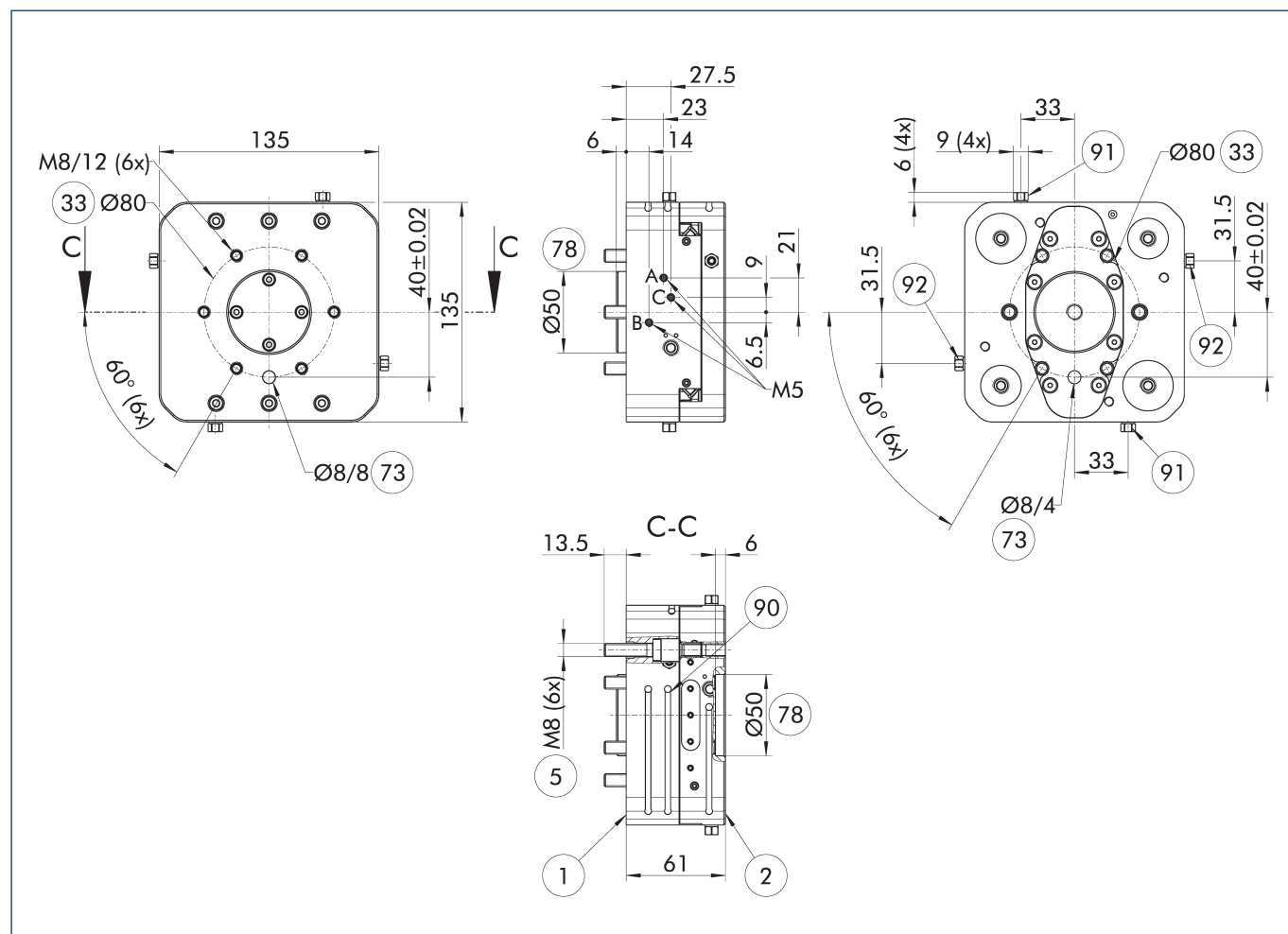
① This is the sum of all static loads that are permitted to act on the compensation unit.

Technical data

Description		AGM-XY 080	AGM-XY 080-P
ID		1577181	1582603
Compensation XY	[mm]	±7	±7
Max. holding force locked (Fx, Fy)	[N]	2310	2310
Radial holding force position memory	[N]		250
Breakaway force	[N]	8	8
Min./nom./max. operating pressure	[bar]	4/6/6.5	4/6/6.5
Repeat accuracy	[mm]	0.03	0.03
Robot-side connection		ISO 9409-1-80-6-M8	ISO 9409-1-80-6-M8
Tool-side connection		ISO 9409-1-80-6-M8	ISO 9409-1-80-6-M8
Weight	[kg]	3.6	3.6
Min./max. ambient temperature	[°C]	5/60	5/60
Locking time	[s]	0.3	0.3
IP protection class		20	20
Max. dynamic moment Mx/My	[Nm]	55	55
Max. dynamic moment Mz	[Nm]	45	45
Force Fx max. dynamic	[N]	350	350
Force Fy max. dynamic	[N]	350	350
Force Fz max. dynamic	[N]	800	800

① Further technical data can be found at schunk.com.

Main view AGM-XY 080



The drawing shows the basic version of the compensation unit in the centric position, without considering any dimensions of the options described below.

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

⑤ Through hole for connection with screws

③③ DIN ISO-9409 bolt circle

⑦③ Fit for centering pins

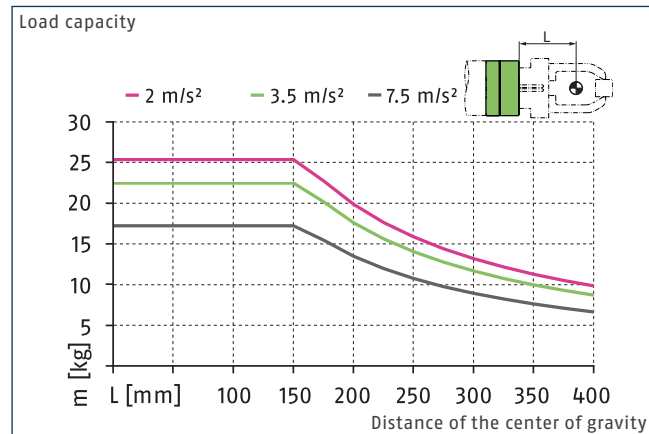
⑦⑧ Fit for centering

⑨⑦ Slot for magnetic switch

⑨① Stroke adjustment in X

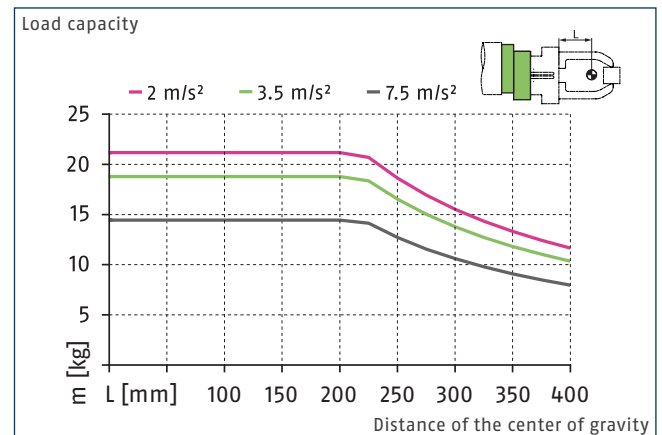
⑨② Stroke adjustment in Y

Load diagram – horizontal design, centered



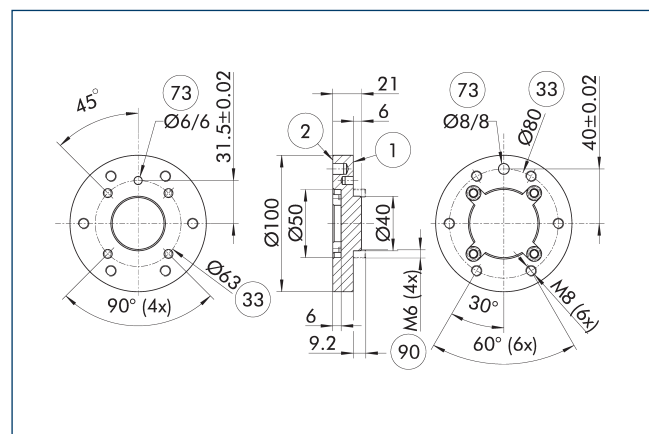
① The maximum recommended horizontal handling weight refers to applications without spring or air cartridges. We recommend their use for horizontal compensation processes.

Load diagram – horizontal setup, uncentered (position memory)



① The maximum recommended horizontal handling weight refers to applications without spring or air cartridges. We recommend their use for horizontal compensation processes.

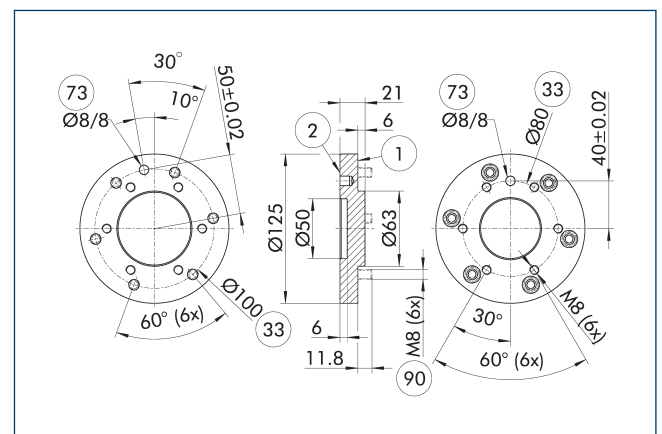
Adapter plate A-IS0080/IS0063



- ① Robot-side connection
- ② Tool-side connection
- ③③ DIN ISO-9409 bolt circle
- ⑦③ Fit for centering pins
- ⑨⑨ Fastening screw for the screw connection on robot side

Description	ID	
Adapter plate		
A-IS0080/IS0063	1601244	

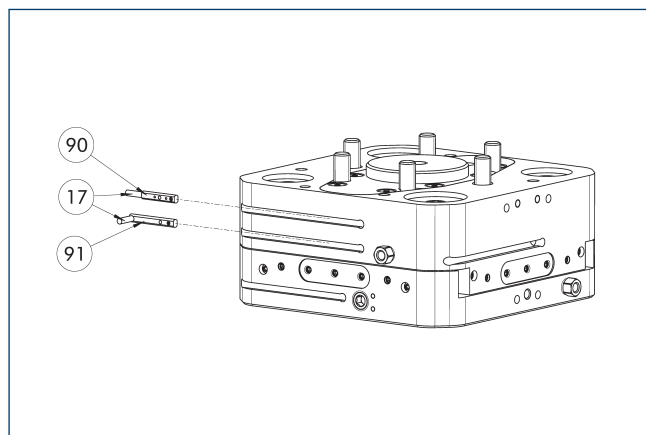
Adapter plate A-IS0080/IS0100



- ① Robot-side connection
- ② Tool-side connection
- ③③ DIN ISO-9409 bolt circle
- ⑦③ Fit for centering pins
- ⑨⑨ Fastening screw for the screw connection on robot side

Description	ID	
Adapter plate		
A-IS0080/IS0100	1601245	

Electronic magnetic switch MMS



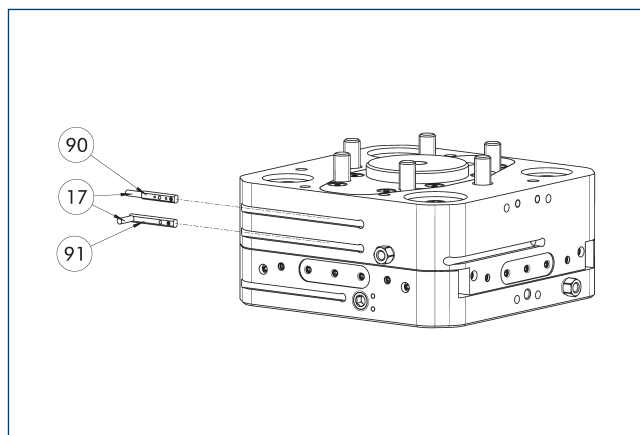
- ①⑦ Cable outlet
 ⑨① Sensor MMS 22...-SA

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	●
MMSK 22-S-PNP-SA	0301044	
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.

Programmable magnetic switch MMS 22-PI1



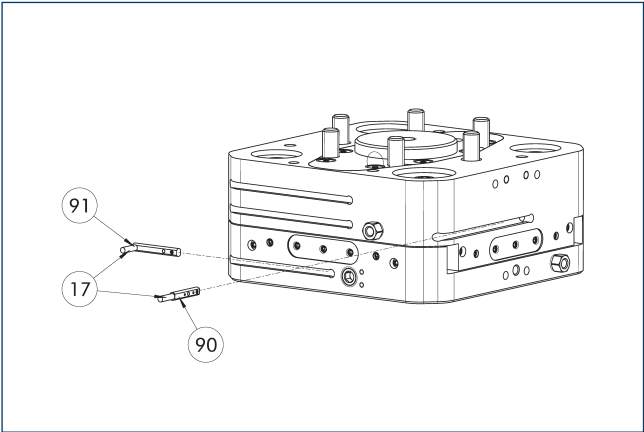
- ①⑦ Cable outlet
 ⑨① Sensor MMS 22...-PI1...-SA

Position monitoring with one programmable position per sensor and integrated electronic system in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI1-S-M8-PNP-HD	0301110	●
MMSK 22-PI1-S-PNP-HD	0301112	

- 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.

Programmable magnetic switch MMS 22-PI2



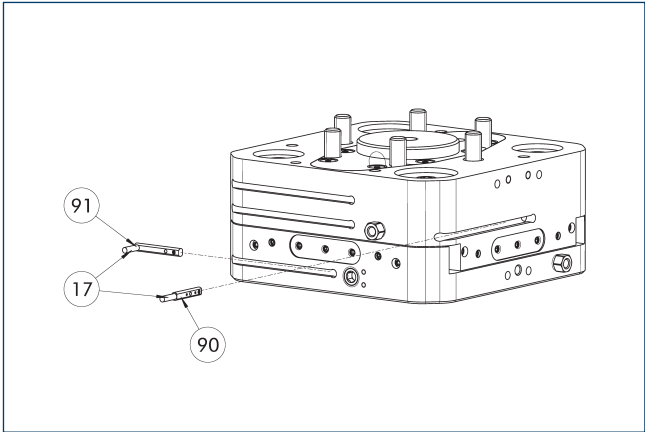
- 17 Cable outlet
- 91 Sensor MMS 22...-PI2-...-SA
- 90 MMS 22...-PI2-... sensor

Position monitoring with two programmable positions per sensor and electronics integrated in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI2-S-M8-PNP	0301180	●
MMSK 22-PI2-S-PNP	0301182	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI2-S-M8-PNP-SA	0301186	●
MMSK 22-PI2-S-PNP-SA	0301188	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI2-S-M8-PNP-HD	0301130	●
MMSK 22-PI2-S-PNP-HD	0301132	

- 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.

Analog position sensor MMS-A



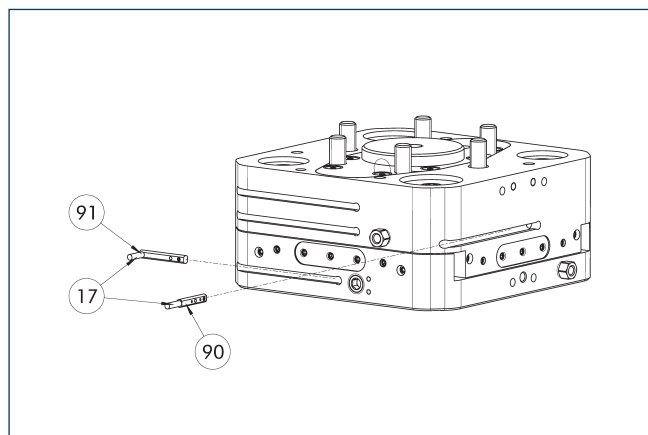
- 74 Limit stop for sensor
- 91 Sensor MMS 22...-SA
- 90 MMS 22-A-... sensor

Non-contact measuring, analog multi-position monitoring for any number of positions, easy to assemble in the C-slot. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the chart provided, teaching is only possible with the ST teaching tools.

Description	ID	
Analog position sensor		
MMS 22-A-10V-M08	0315825	
MMS 22-A-10V-M12	0315828	

- One sensor is required per compensation unit. Further information and technical data can be found in the catalog chapter sensor systems.

Magnetic switch MMS 22-IO-Link



17 Cable outlet

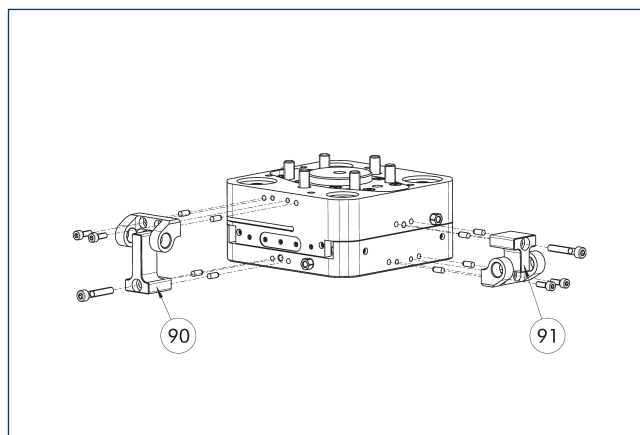
90 Sensor MMS 22-IO-Link

Sensor for multi-position monitoring through detection of the complete compensation stroke. The sensor is mounted directly in the C-slot of the compensation unit. The sensor is programmed for the compensation unit via the IO-Link interface, magnet teaching tool MT (included in scope of delivery; ID 0301030) or the ST plug teaching tool (not included in scope of delivery; ID 0301026). An IO-Link master is required for operation.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-IO-Link-M08	0315830	●
MMS 22-IO-Link-M12	0315835	

① One sensor is required per compensation unit. Further information and technical data can be found in the catalog chapter sensor systems.

Attachment kit for spring and air cartridges

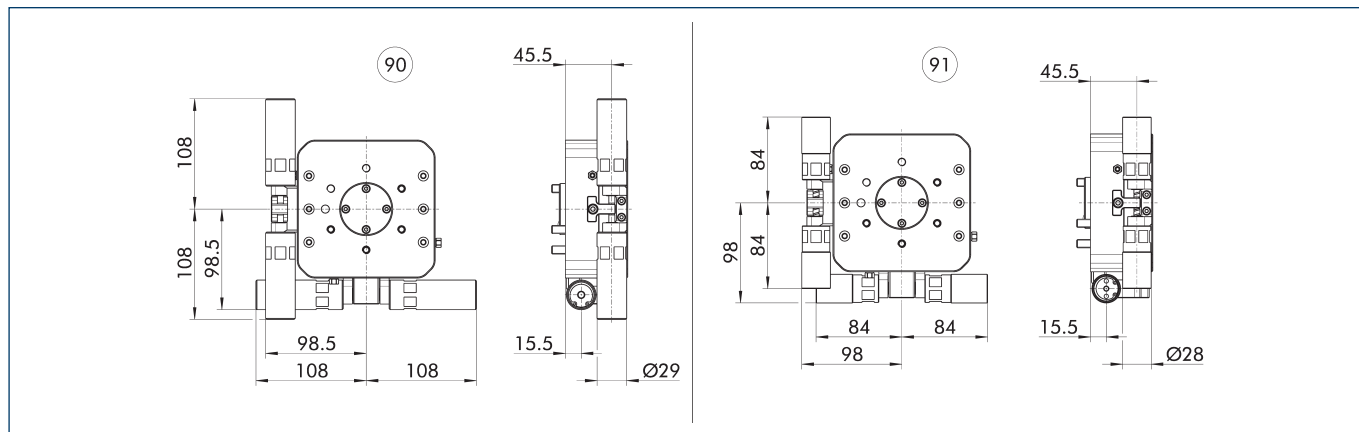


90 Attachment kit, long

91 Attachment kit, short

Description	ID
Attachment kit for spring/air cartridge	
AS-AGM-080-FP/LP-K	1610659
AS-AGM-080-FP/LP-L	1610681

Attachment kit for spring/air cartridge



90 Spring cartridge (FP)

91 Air cartridge (LP)

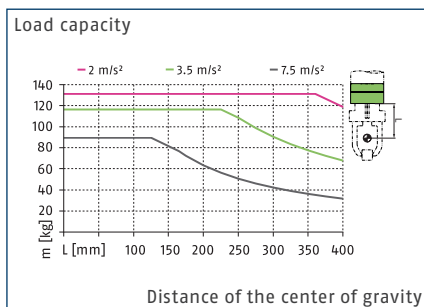
Description	ID	Min. force without plunger deflection	Max. force without plunger deflection	Increase in spring force per mm of plunger deflection	Weight
		[N]	[N]	[N]	[kg]
Attachment kit for spring/air cartridge					
AS-AGM-080-FP/LP-K	1610659				
AS-AGM-080-FP/LP-L	1610681				
Spring cartridge					
FP1-AGM-080	1610655	100	370	12.4	0.24
Air cartridge					
LP1-AGM-080	1610658	110	330	4	0.15

AGM-XY 100

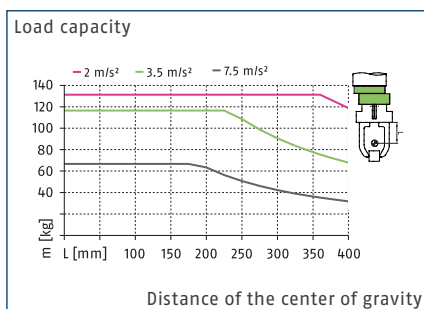
Compensation unit



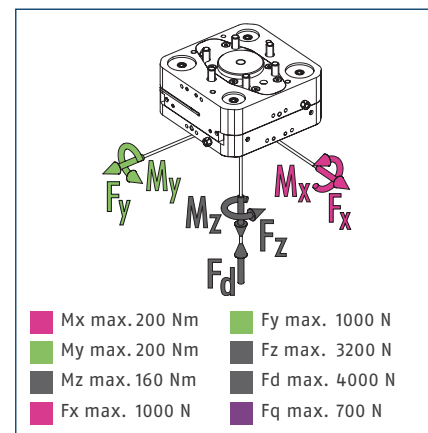
Load diagram – vertical design, centered



Load diagram – vertical setup, uncentered (position memory)



Max. loads



① This is the sum of all static loads that are permitted to act on the compensation unit.

Technical data

Description		AGM-XY 100	AGM-XY 100-P
ID		1577185	1582605
Compensation XY	[mm]	±9	±9
Max. holding force locked (Fx, Fy)	[N]	4001	4001
Radial holding force position memory	[N]		500
Breakaway force	[N]	15	15
Min./nom./max. operating pressure	[bar]	4/6/6.5	4/6/6.5
Repeat accuracy	[mm]	0.03	0.03
Robot-side connection		ISO 9409-1-100-6-M8	ISO 9409-1-100-6-M8
Tool-side connection		ISO 9409-1-100-6-M8	ISO 9409-1-100-6-M8
Weight	[kg]	5.8	5.8
Min./max. ambient temperature	[°C]	5/60	5/60
Locking time	[s]	0.3	0.3
IP protection class		20	20
Max. dynamic moment Mx/My	[Nm]	95	95
Max. dynamic moment Mz	[Nm]	80	80
Force Fx max. dynamic	[N]	700	700
Force Fy max. dynamic	[N]	700	700
Force Fz max. dynamic	[N]	1550	1550

① Further technical data can be found at schunk.com.

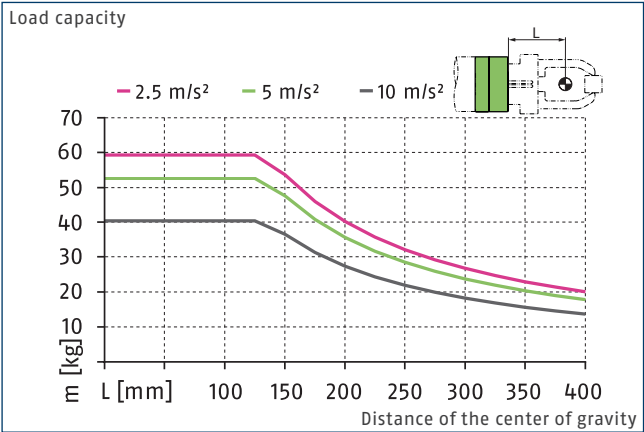
[illegible]

(92) stroke adjustment in 1

AGM-XY 100

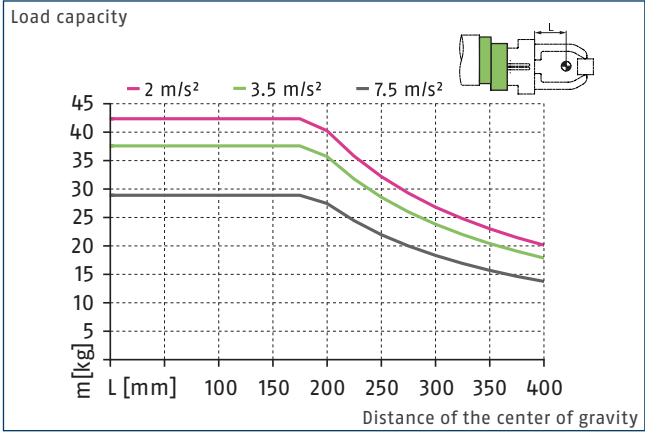
Compensation unit

Load diagram – horizontal design, centered



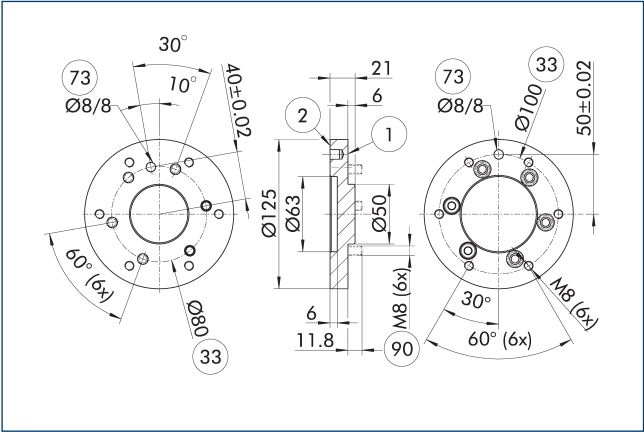
① The maximum recommended horizontal handling weight refers to applications without spring or air cartridges. We recommend their use for horizontal compensation processes.

Load diagram – horizontal setup, uncentered (position memory)



① The maximum recommended horizontal handling weight refers to applications without spring or air cartridges. We recommend their use for horizontal compensation processes.

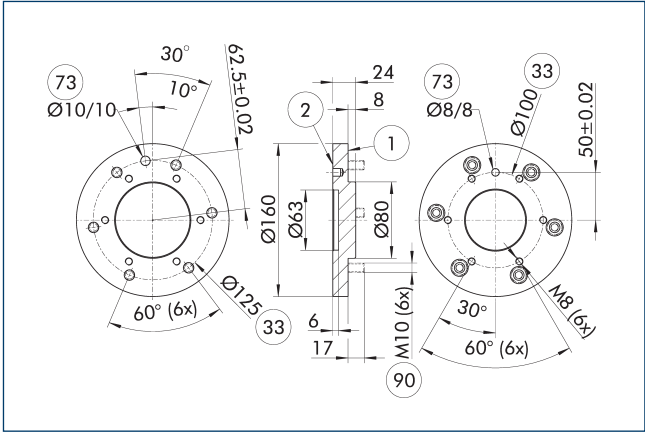
Adapter plate A-IS0100/IS0080



- ① Robot-side connection
- ② Tool-side connection
- ③ DIN ISO-9409 bolt circle
- ⑦③ Fit for centering pins
- ⑨⑩ Fastening screw for the screw connection on robot side

Description	ID
Adapter plate	
A-IS0100/IS0080	1601246

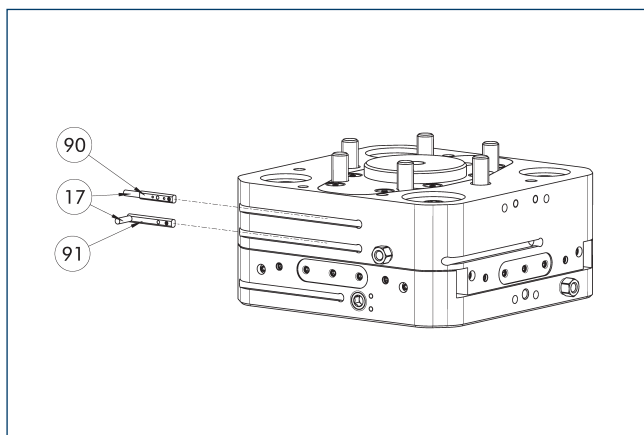
Adapter plate A-IS0100/IS0125



- ① Robot-side connection
- ② Tool-side connection
- ③ DIN ISO-9409 bolt circle
- ⑦③ Fit for centering pins
- ⑨⑩ Fastening screw for the screw connection on robot side

Description	ID
Adapter plate	
A-IS0100/IS0125	1601248

Electronic magnetic switch MMS



⑪ Cable outlet

⑨① Sensor MMS 22...-SA

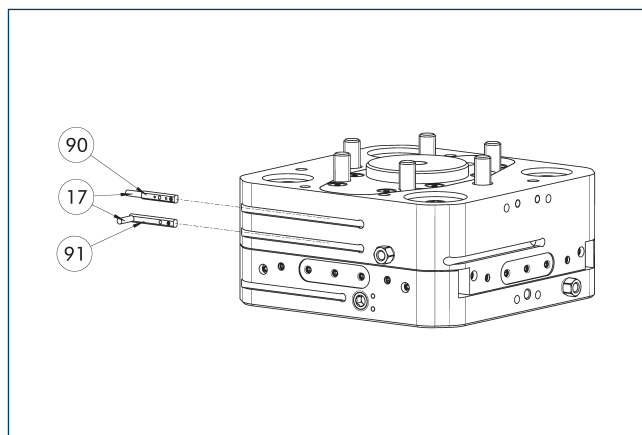
⑨① Sensor MMS 22..

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	●
MMSK 22-S-PNP-SA	0301044	
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	

- ⑪ 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.

Programmable magnetic switch MMS 22-PI1



⑪ Cable outlet

⑨① Sensor MMS 22...-PI1...-SA

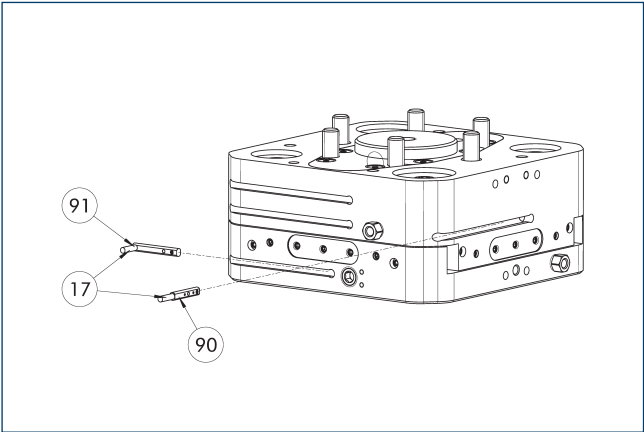
⑨① Sensor MMS 22 PI1...

Position monitoring with one programmable position per sensor and integrated electronic system in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI1-S-M8-PNP-HD	0301110	●
MMSK 22-PI1-S-PNP-HD	0301112	

- ⑪ 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.

Programmable magnetic switch MMS 22-PI2



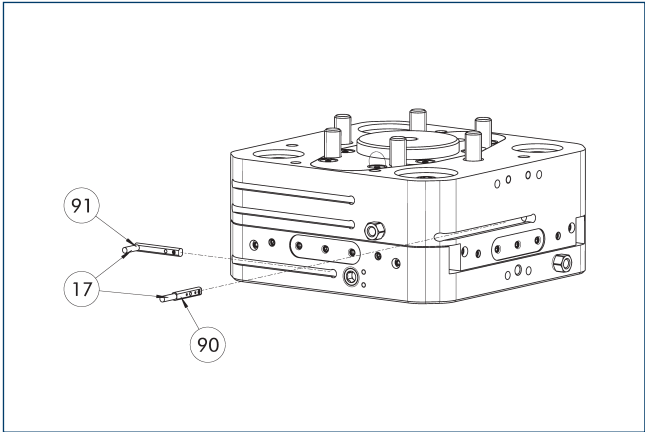
- 17 Cable outlet
- 91 Sensor MMS 22...-PI2-...-SA
- 90 MMS 22...-PI2-... sensor

Position monitoring with two programmable positions per sensor and electronics integrated in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI2-S-M8-PNP	0301180	●
MMSK 22-PI2-S-PNP	0301182	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI2-S-M8-PNP-SA	0301186	●
MMSK 22-PI2-S-PNP-SA	0301188	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI2-S-M8-PNP-HD	0301130	●
MMSK 22-PI2-S-PNP-HD	0301132	

- 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.

Analog position sensor MMS-A



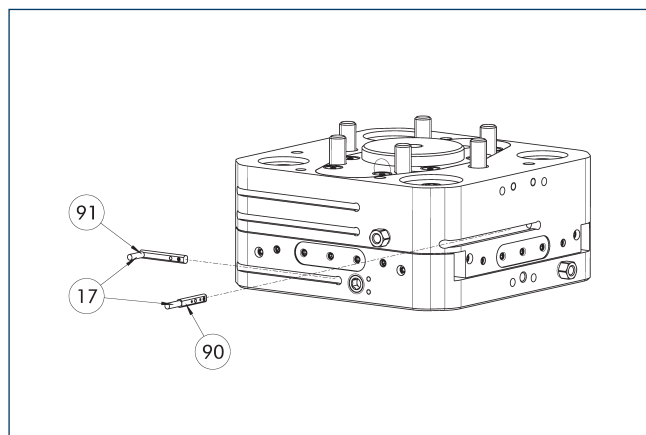
- 74 Limit stop for sensor
- 91 Sensor MMS 22...-SA
- 90 MMS 22-A-... sensor

Non-contact measuring, analog multi-position monitoring for any number of positions, easy to assemble in the C-slot. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the chart provided, teaching is only possible with the ST teaching tools.

Description	ID	
Analog position sensor		
MMS 22-A-10V-M08	0315825	
MMS 22-A-10V-M12	0315828	

- ① One sensor is required per compensation unit. Further information and technical data can be found in the catalog chapter sensor systems.

Magnetic switch MMS 22-IO-Link



17 Cable outlet

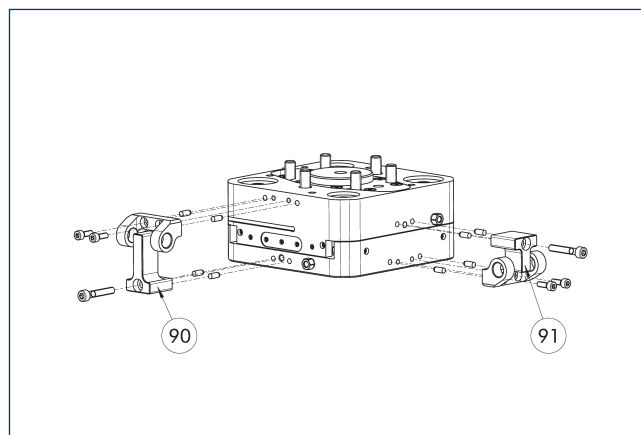
90 Sensor MMS 22-IO-Link

Sensor for multi-position monitoring through detection of the complete compensation stroke. The sensor is mounted directly in the C-slot of the compensation unit. The sensor is programmed for the compensation unit via the IO-Link interface, magnet teaching tool MT (included in scope of delivery; ID 0301030) or the ST plug teaching tool (not included in scope of delivery; ID 0301026). An IO-Link master is required for operation.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-IO-Link-M08	0315830	●
MMS 22-IO-Link-M12	0315835	

① One sensor is required per compensation unit. Further information and technical data can be found in the catalog chapter sensor systems.

Attachment kit for spring and air cartridges

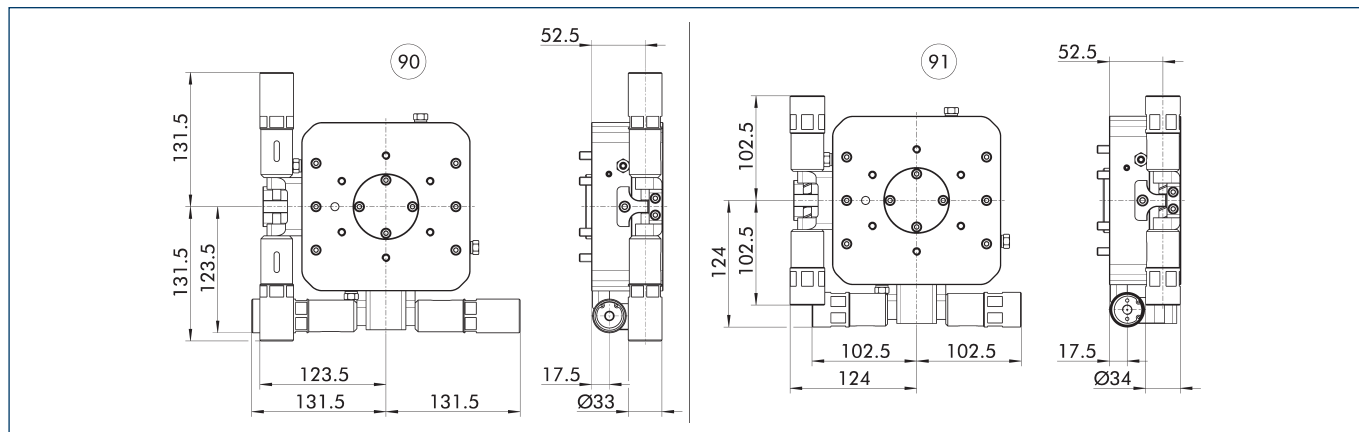


90 Attachment kit, long

91 Attachment kit, short

Description	ID
Attachment kit for spring/air cartridge	
AS-AGM-100-FP/LP-K	1602235
AS-AGM-100-FP/LP-L	1602237

Attachment kit for spring/air cartridge



90 Spring cartridge (FP)

91 Air cartridge (LP)

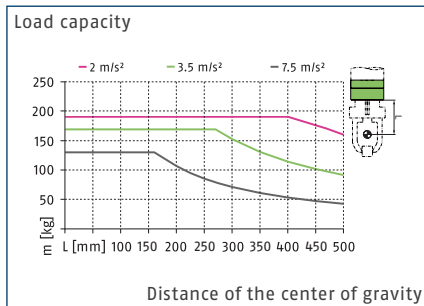
Description	ID	Min. force without plunger deflection	Max. force without plunger deflection	Increase in spring force per mm of plunger deflection	Weight
		[N]	[N]	[N]	[kg]
Attachment kit for spring/air cartridge					
AS-AGM-100-FP/LP-K	1602235				
AS-AGM-100-FP/LP-L	1602237				
Spring cartridge					
FP1-AGM-100	1601843	200	420	7.9	0.36
FP2-AGM-100	1601844	320	700	13.8	0.37
Air cartridge					
LP1-AGM-100	1601846	150	490	5.2	0.24
LP2-AGM-100	1601847	300	640	10.8	0.24

AGM-XY 125

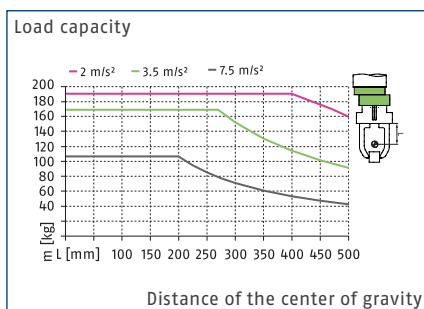
Compensation unit



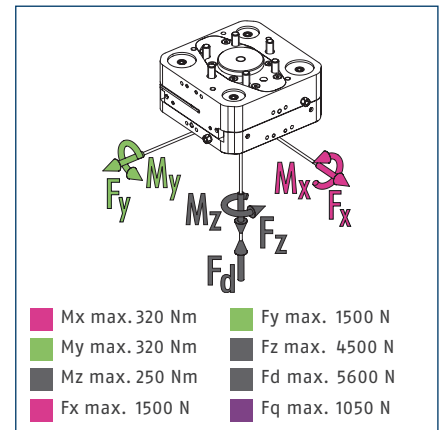
Load diagram – vertical design, centered



Load diagram – vertical setup, uncentered (position memory)



Max. loads



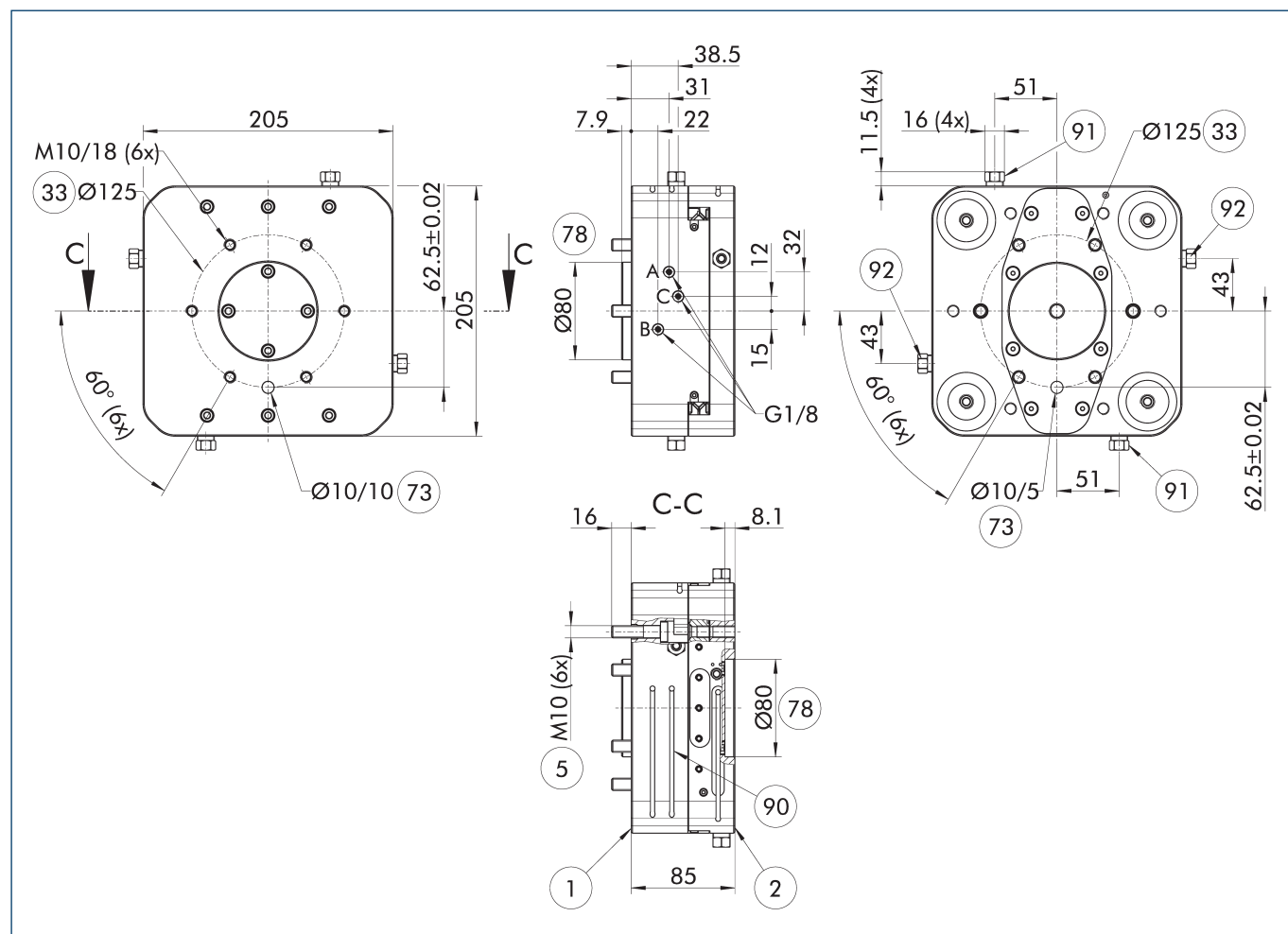
① This is the sum of all static loads that are permitted to act on the compensation unit.

Technical data

Description		AGM-XY 125	AGM-XY 125-P
ID		1577187	1582607
Compensation XY	[mm]	±10	±10
Max. holding force locked (Fx, Fy)	[N]	6378	6378
Radial holding force position memory	[N]		800
Breakaway force	[N]	20	20
Min./nom./max. operating pressure	[bar]	4/6/6.5	4/6/6.5
Repeat accuracy	[mm]	0.05	0.05
Robot-side connection		ISO 9409-1-125-6-M10	ISO 9409-1-125-6-M10
Tool-side connection		ISO 9409-1-125-6-M10	ISO 9409-1-125-6-M10
Weight	[kg]	10.9	10.9
Min./max. ambient temperature	[°C]	5/60	5/60
Locking time	[s]	0.5	0.5
IP protection class		10	10
Max. dynamic moment Mx/My	[Nm]	160	160
Max. dynamic moment Mz	[Nm]	125	125
Force Fx max. dynamic	[N]	1050	1050
Force Fy max. dynamic	[N]	1050	1050
Force Fz max. dynamic	[N]	2250	2250

① Further technical data can be found at schunk.com.

Main view AGM-XY 125



The drawing shows the basic version of the compensation unit in the centric position, without considering any dimensions of the options described below.

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

⑤ Through hole for connection with screws

③③ DIN ISO-9409 bolt circle

⑦③ Fit for centering pins

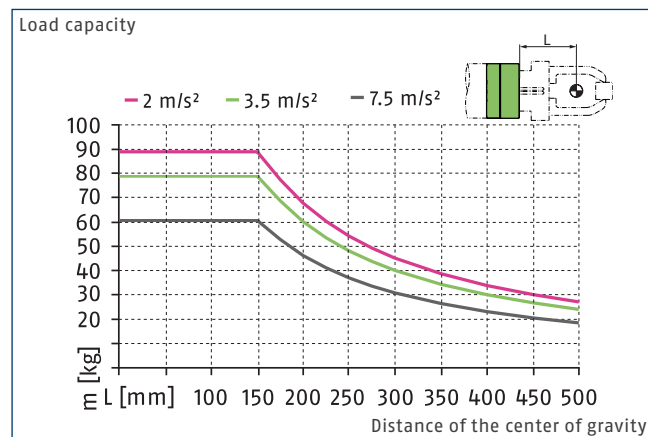
⑦⑧ Fit for centering

⑨⑩ Slot for magnetic switch

⑨① Stroke adjustment in X

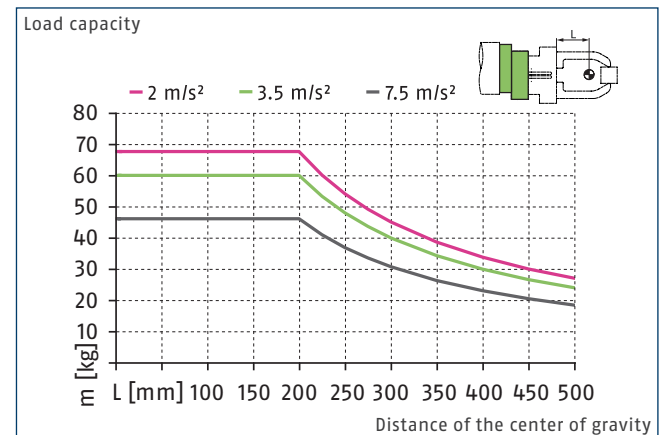
⑨② Stroke adjustment in Y

Load diagram – horizontal design, centered



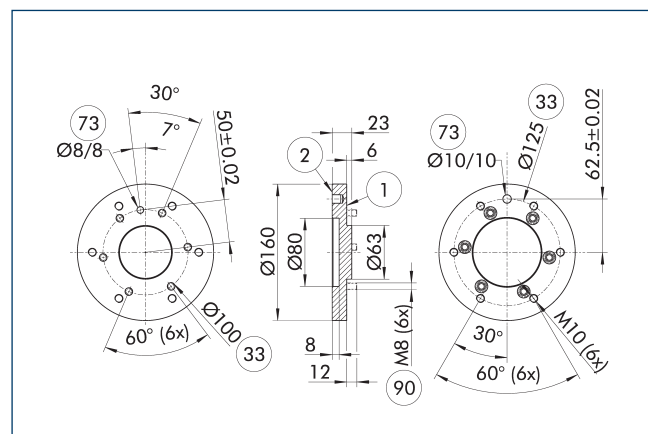
① The maximum recommended horizontal handling weight refers to applications without spring or air cartridges. We recommend their use for horizontal compensation processes.

Load diagram – horizontal setup, uncentered (position memory)



① The maximum recommended horizontal handling weight refers to applications without spring or air cartridges. We recommend their use for horizontal compensation processes.

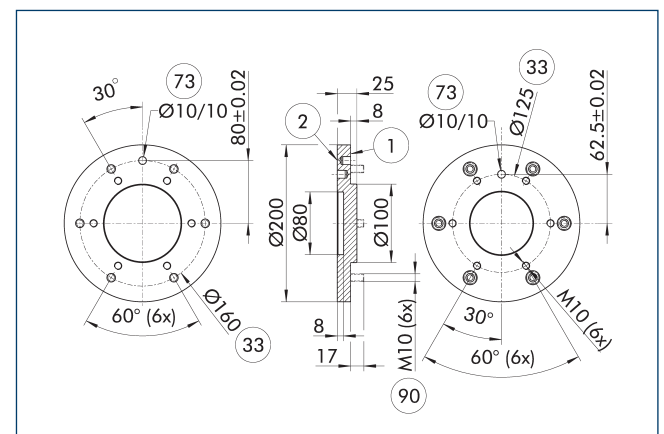
Adapter plate A-IS0125/IS0100



- ① Robot-side connection
- ② Tool-side connection
- ③③ DIN ISO-9409 bolt circle
- ⑦③ Fit for centering pins
- ⑨⑨ Fastening screw for the screw connection on robot side

Description	ID	
Adapter plate		
A-IS0125/IS0100	1601249	

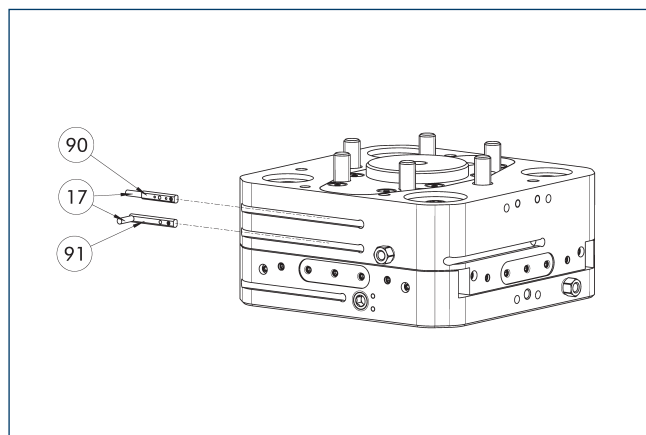
Adapter plate A-IS0125/IS0160



- ① Robot-side connection
- ② Tool-side connection
- ③③ DIN ISO-9409 bolt circle
- ⑦③ Fit for centering pins
- ⑨⑨ Fastening screw for the screw connection on robot side

Description	ID	
Adapter plate		
A-IS0125/IS0160	1601250	

Electronic magnetic switch MMS



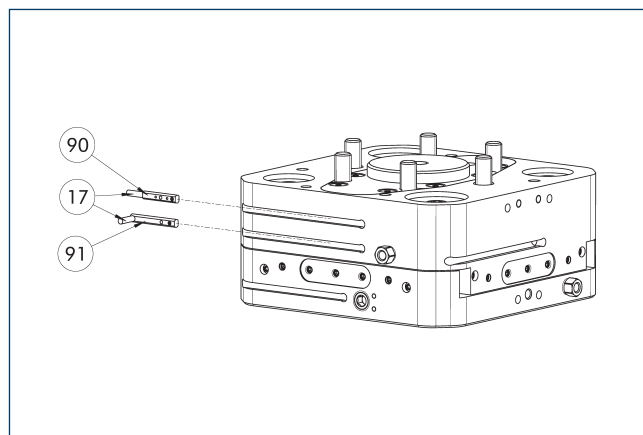
- 17 Cable outlet
91 Sensor MMS 22...-SA

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	●
MMSK 22-S-PNP-SA	0301044	
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.

Programmable magnetic switch MMS 22-PI1



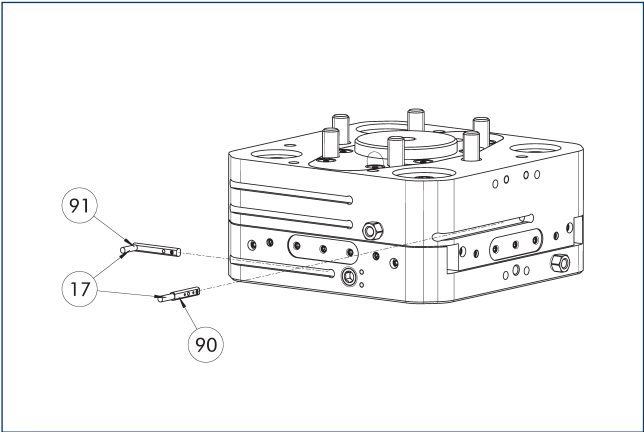
- 17 Cable outlet
91 Sensor MMS 22...-PI1-...-SA

Position monitoring with one programmable position per sensor and integrated electronic system in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI1-S-M8-PNP-HD	0301110	●
MMSK 22-PI1-S-PNP-HD	0301112	

- 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.

Programmable magnetic switch MMS 22-PI2



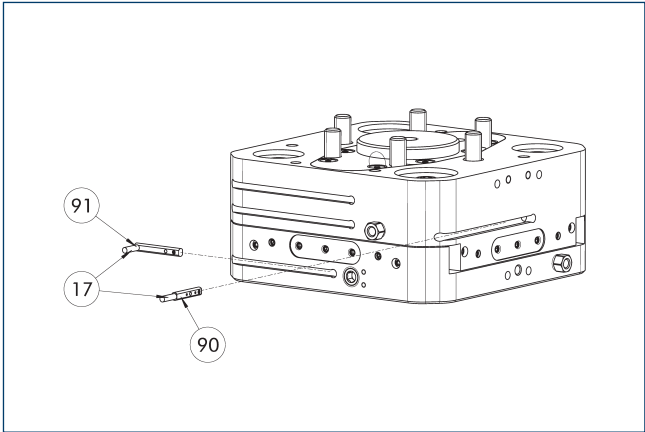
- 17 Cable outlet
- 91 Sensor MMS 22...-PI2-...-SA
- 90 MMS 22...-PI2-... sensor

Position monitoring with two programmable positions per sensor and electronics integrated in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI2-S-M8-PNP	0301180	●
MMSK 22-PI2-S-PNP	0301182	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI2-S-M8-PNP-SA	0301186	●
MMSK 22-PI2-S-PNP-SA	0301188	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI2-S-M8-PNP-HD	0301130	●
MMSK 22-PI2-S-PNP-HD	0301132	

- 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.

Analog position sensor MMS-A



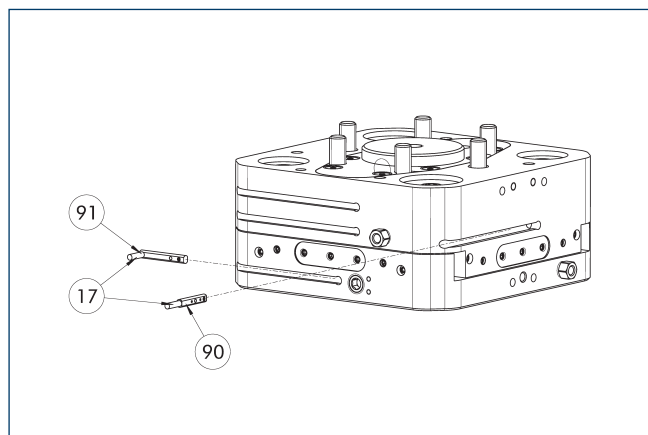
- 74 Limit stop for sensor
- 91 Sensor MMS 22...-SA
- 90 MMS 22-A-... sensor

Non-contact measuring, analog multi-position monitoring for any number of positions, easy to assemble in the C-slot. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the chart provided, teaching is only possible with the ST teaching tools.

Description	ID	
Analog position sensor		
MMS 22-A-10V-M08	0315825	
MMS 22-A-10V-M12	0315828	

- ① One sensor is required per compensation unit. Further information and technical data can be found in the catalog chapter sensor systems.

Magnetic switch MMS 22-IO-Link



17 Cable outlet

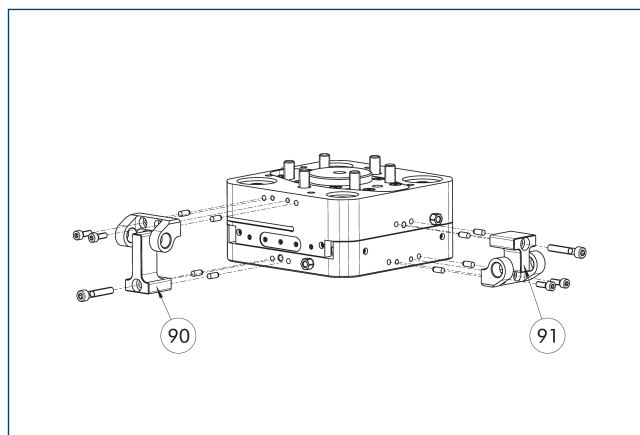
90 Sensor MMS 22-IO-Link...

Sensor for multi-position monitoring through detection of the complete compensation stroke. The sensor is mounted directly in the C-slot of the compensation unit. The sensor is programmed for the compensation unit via the IO-Link interface, magnet teaching tool MT (included in scope of delivery; ID 0301030) or the ST plug teaching tool (not included in scope of delivery; ID 0301026). An IO-Link master is required for operation.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-IO-Link-M08	0315830	●
MMS 22-IO-Link-M12	0315835	

① One sensor is required per compensation unit. Further information and technical data can be found in the catalog chapter sensor systems.

Attachment kit for spring and air cartridges

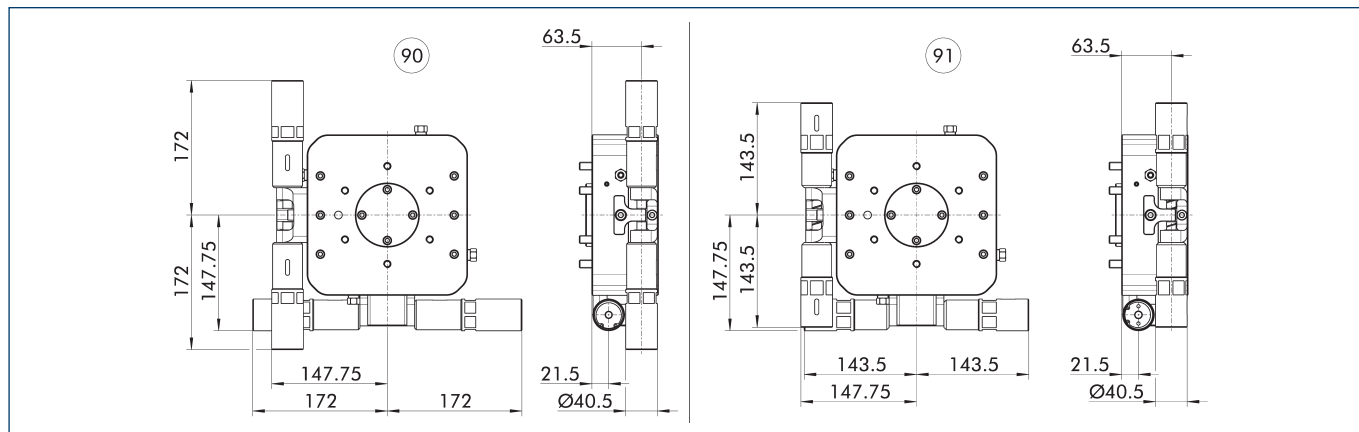


90 Attachment kit, long

91 Attachment kit, short

Description	ID
Attachment kit for spring/air cartridge	
AS-AGM-125-FP/LP-K	1610687
AS-AGM-125-FP/LP-L	1610689

Attachment kit for spring/air cartridge



90 Spring cartridge (FP)

91 Air cartridge (LP)

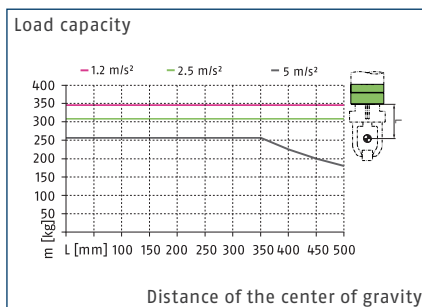
Description	ID	Min. force without plunger deflection [N]	Max. force without plunger deflection [N]	Increase in spring force per mm of plunger deflection [N]	Weight [kg]
Attachment kit for spring/air cartridge					
AS-AGM-125-FP/LP-K	1610687				
AS-AGM-125-FP/LP-L	1610689				
Spring cartridge					
FP1-AGM-125	1610682	375	700	7.6	0.67
FP2-AGM-125	1610683	600	1150	12.9	0.72
Air cartridge					
LP1-AGM-125	1610684	400	920	16	0.53
LP2-AGM-125	1610685	620	1130	9.7	0.51

AGM-XY 160L

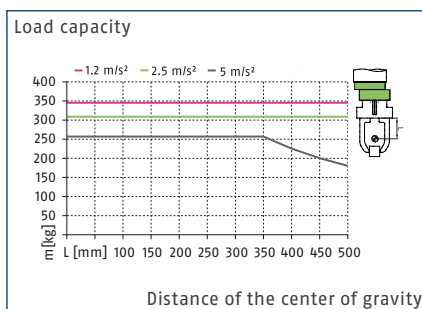
Compensation unit



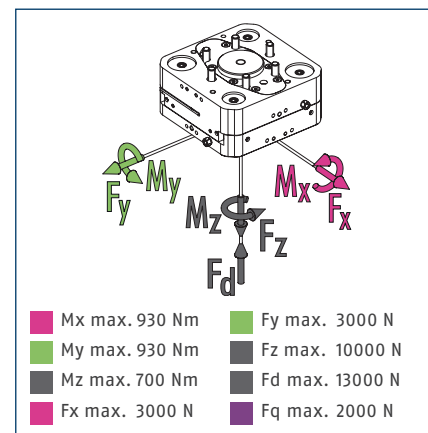
Load diagram – vertical design, centered



Load diagram – vertical setup, uncentered (position memory)



Max. loads



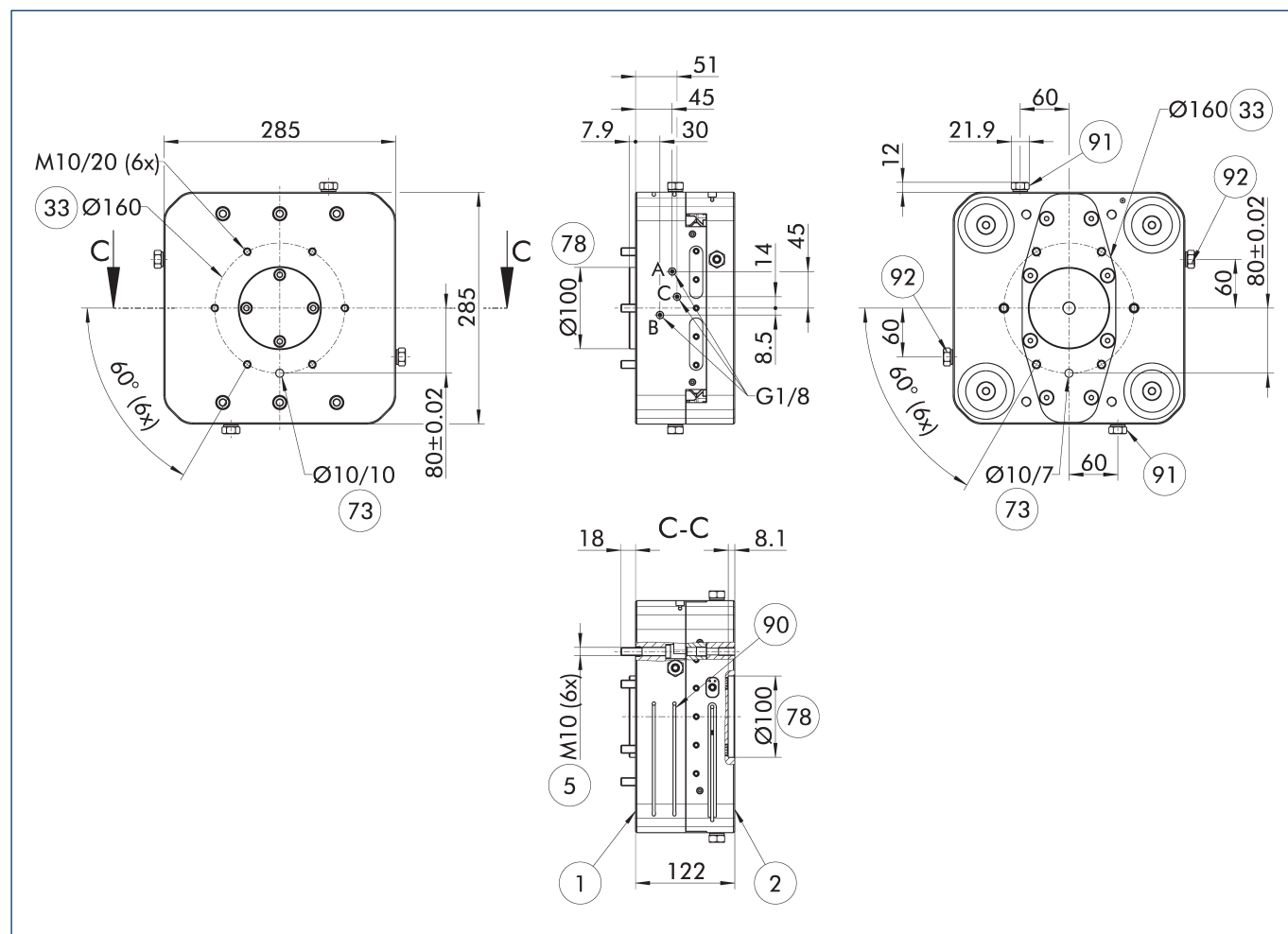
① This is the sum of all static loads that are permitted to act on the compensation unit.

Technical data

Description		AGM-XY 160L	AGM-XY 160L-P
ID		1577193	1582611
Compensation XY	[mm]	±15	±15
Max. holding force locked (Fx, Fy)	[N]	13757	13757
Radial holding force position memory	[N]		1500
Breakaway force	[N]	20	20
Min./nom./max. operating pressure	[bar]	4/6/6.5	4/6/6.5
Repeat accuracy	[mm]	0.05	0.05
Robot-side connection		ISO 9409-1-160-6-M10	ISO 9409-1-160-6-M10
Tool-side connection		ISO 9409-1-160-6-M10	ISO 9409-1-160-6-M10
Weight	[kg]	31.7	31.7
Min./max. ambient temperature	[°C]	5/60	5/60
Locking time	[s]	0.6	0.6
IP protection class		10	10
Max. dynamic moment Mx/My	[Nm]	450	450
Max. dynamic moment Mz	[Nm]	350	350
Force Fx max. dynamic	[N]	2000	2000
Force Fy max. dynamic	[N]	2000	2000
Force Fz max. dynamic	[N]	3800	3800

① Further technical data can be found at schunk.com.

Main view AGM-XY 160L



The drawing shows the basic version of the compensation unit in the centric position, without considering any dimensions of the options described below.

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

⑤ Through hole for connection with screws

③③ DIN ISO-9409 bolt circle

⑦③ Fit for centering pins

⑦⑧ Fit for centering

⑨⑩ Slot for magnetic switch

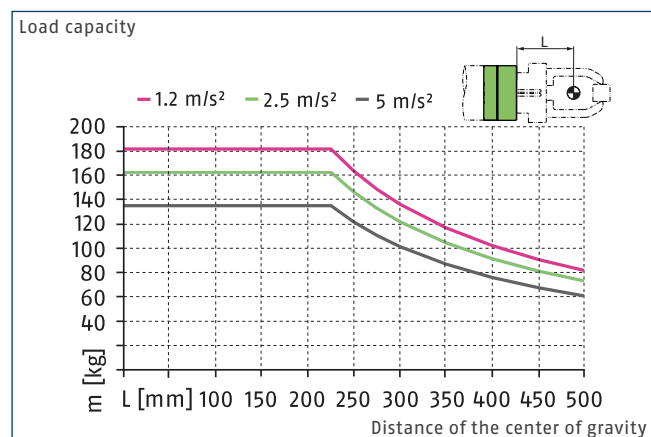
⑨① Stroke adjustment in X

⑨② Stroke adjustment in Y

AGM-XY 160L

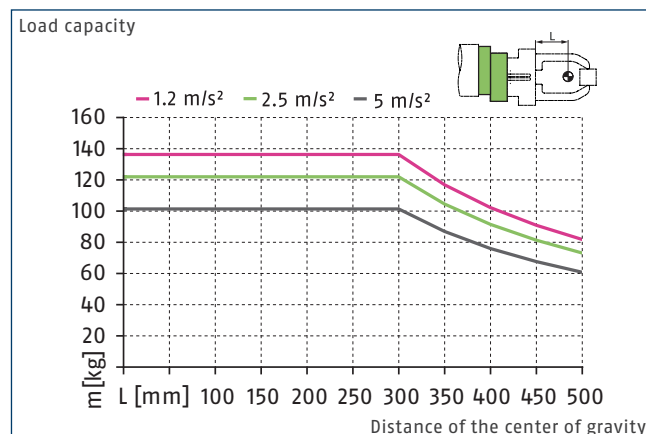
Compensation unit

Load diagram – horizontal design, centered



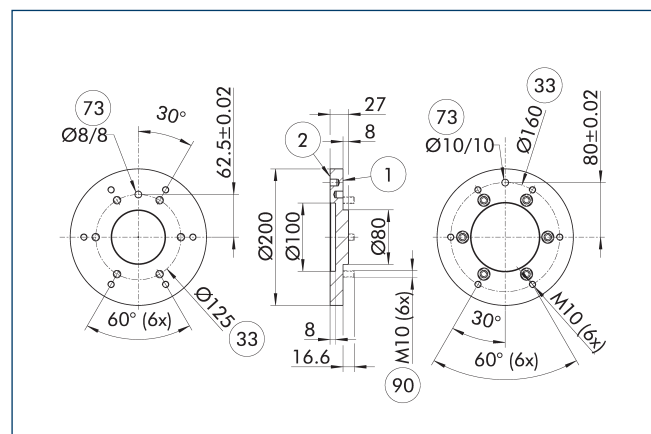
① The maximum recommended horizontal handling weight refers to applications without spring or air cartridges. We recommend their use for horizontal compensation processes.

Load diagram – horizontal setup, uncentered (position memory)



① The maximum recommended horizontal handling weight refers to applications without spring or air cartridges. We recommend their use for horizontal compensation processes.

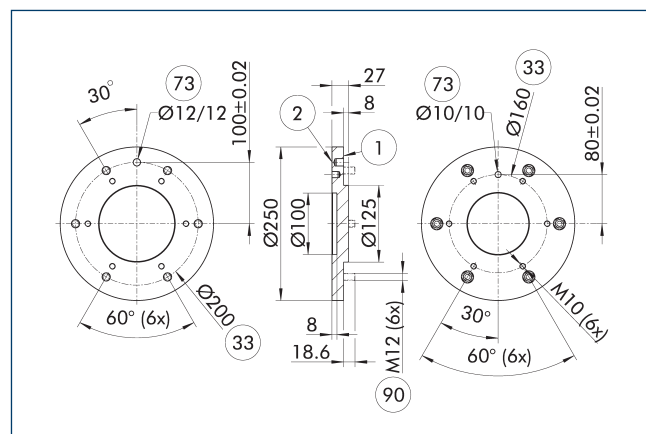
Adapter plate A-IS0160/IS0125



- ① Robot-side connection
- ② Tool-side connection
- ③ DIN ISO-9409 bolt circle
- ⑦ Fit for centering pins
- ⑨ Fastening screw for the screw connection on robot side

Description	ID	
Adapter plate		
A-IS0160/IS0125	1601252	

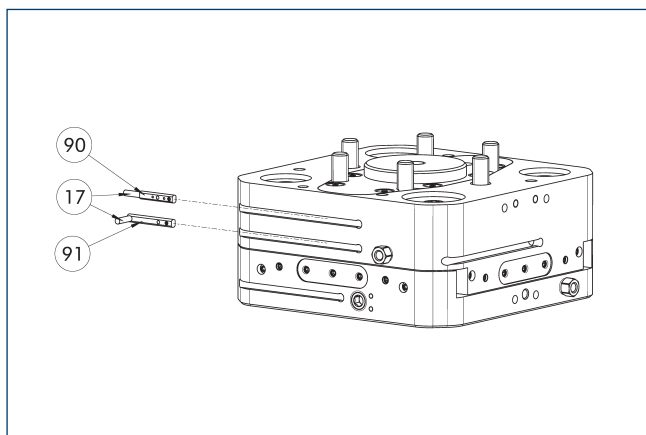
Adapter plate A-IS0160/IS0200



- ① Robot-side connection
- ② Tool-side connection
- ③ DIN ISO-9409 bolt circle
- ⑦ Fit for centering pins
- ⑨ Fastening screw for the screw connection on robot side

Description	ID	
Adapter plate		
A-IS0160/IS0200	1601254	

Electronic magnetic switch MMS



①⑦ Cable outlet

①⑨ Sensor MMS 22...-SA

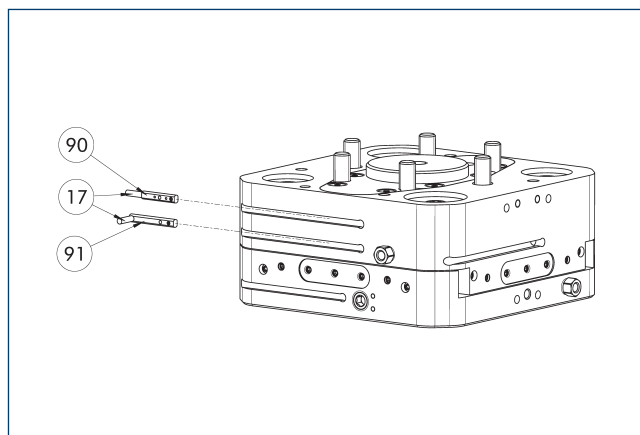
①⑩ Sensor MMS 22..

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	●
MMSK 22-S-PNP-SA	0301044	
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.

Programmable magnetic switch MMS 22-PI1



①⑦ Cable outlet

①⑨ Sensor MMS 22...-PI1...-SA

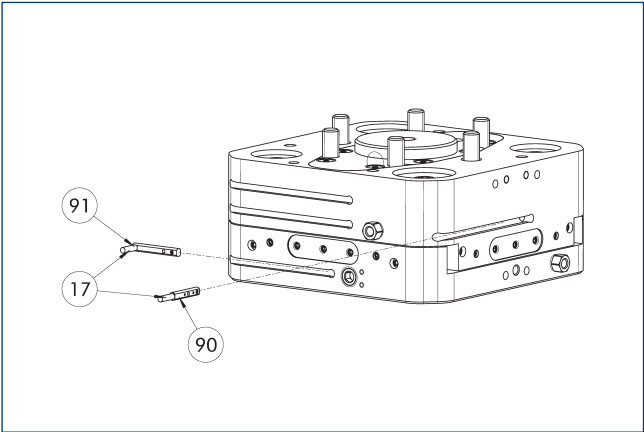
①⑩ Sensor MMS 22 PI1...

Position monitoring with one programmable position per sensor and integrated electronic system in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI1-S-M8-PNP-HD	0301110	●
MMSK 22-PI1-S-PNP-HD	0301112	

- 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.

Programmable magnetic switch MMS 22-PI2



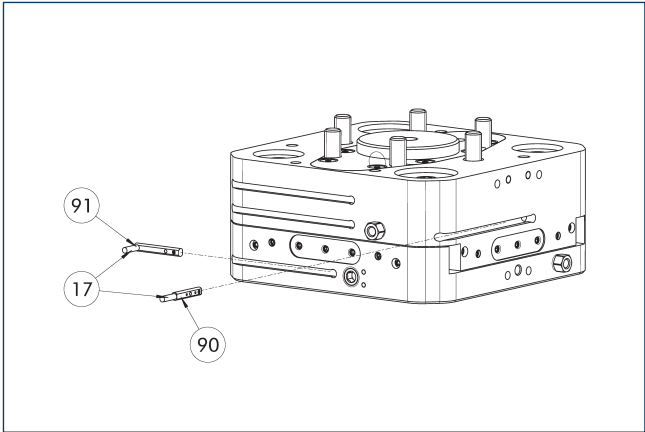
- 17 Cable outlet
- 91 Sensor MMS 22...-PI2-...-SA
- 90 MMS 22...-PI2-... sensor

Position monitoring with two programmable positions per sensor and electronics integrated in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI2-S-M8-PNP	0301180	●
MMSK 22-PI2-S-PNP	0301182	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI2-S-M8-PNP-SA	0301186	●
MMSK 22-PI2-S-PNP-SA	0301188	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI2-S-M8-PNP-HD	0301130	●
MMSK 22-PI2-S-PNP-HD	0301132	

- 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.

Analog position sensor MMS-A



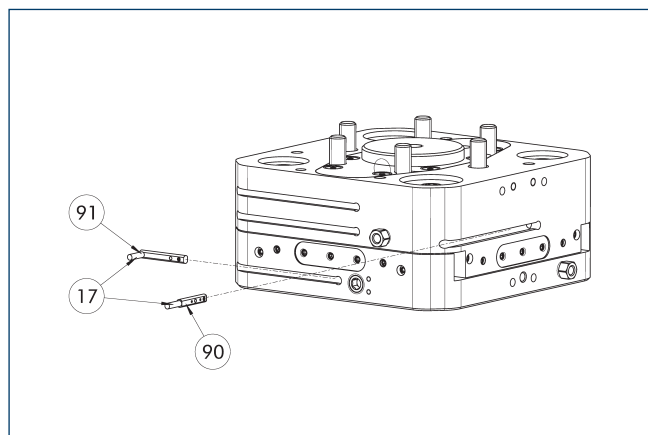
- 74 Limit stop for sensor
- 91 Sensor MMS 22...-SA
- 90 MMS 22-A-... sensor

Non-contact measuring, analog multi-position monitoring for any number of positions, easy to assemble in the C-slot. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the chart provided, teaching is only possible with the ST teaching tools.

Description	ID	
Analog position sensor		
MMS 22-A-10V-M08	0315825	
MMS 22-A-10V-M12	0315828	

- ① One sensor is required per compensation unit. Further information and technical data can be found in the catalog chapter sensor systems.

Attachment kit for spring and air cartridges

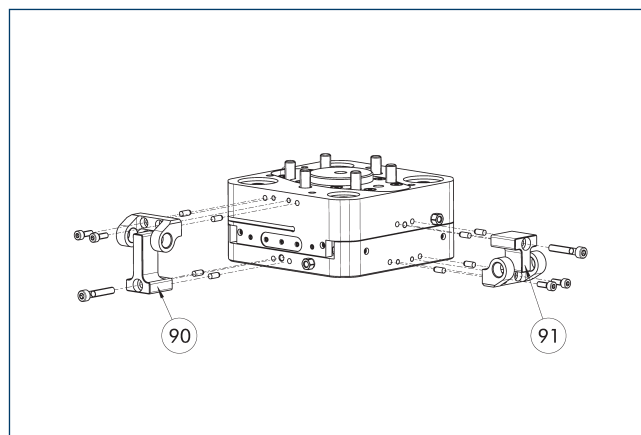


⑨0 Sensor MMS 22-10L-...

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-IO-L-M08	0315830	●
MMS 22-IO-L-M12	0315835	

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-IO-L-M08	0315830	●
MMS 22-IO-L-M12	0315835	

- ① One sensor is required per compensation unit. Further information and technical data can be found in the catalog chapter sensor systems.



⑨1 Attachment kit, short

Description	ID	
Attachment kit for spring/air cartridge		
AS-AGM-160L/200-FP/LP-K	1602238	
AS-AGM-160L/200-FP/LP-L	1602239	

⑨① Air cartridge (LP)

Description	ID	Min. force without plunger deflection	Max. force without plunger deflection	Increase in spring force per mm of plunger deflection	Weight
		[N]	[N]	[N]	[kg]
Attachment kit for spring/air cartridge					
AS-AGM-160L/200-FP/LP-K	1602238				
AS-AGM-160L/200-FP/LP-L	1602239				
Spring cartridge					
FP1-AGM-160L/200	1601849	900	1630	16.6	1.51
FP2-AGM-160L/200	1601850	1500	2750	28.3	1.61
Air cartridge					
LP1-AGM-160L/200	1601852	790	1789	8	1.28
LP2-AGM-160L/200	1601853	1460	2460	18.3	1.25



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