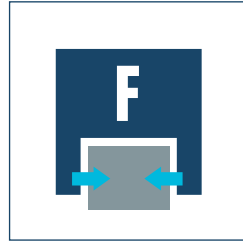




Sizes
40 ... 160



Weight
0.12 kg ... 8 kg



Gripping force
255 N ... 8480 N



Stroke per finger
2.5 mm ... 16 mm



Workpiece weight
1.25 kg ... 30 kg

Application example



Tactile assembly of insertion aids in cylinder heads

1 3-Finger Centric Gripper JGZ with workpiece-specific gripper fingers

2 6-Axis Force/Torque Sensor FTC-050-80

Universal Gripper

universal 3-Finger Concentric Gripper of the compact class with T-slot guidance and best cost-performance ratio

Field of application

Optimum standard solution for many fields of application. Universal application in clean and slightly dirty surroundings in machine building and plant building industry, assembly and handling as well as automotive industry.

Your advantages and benefits

A firm focus on the essentials

for maximum profitability

Sturdy T-slot guidance

for the precise handling of all kinds of workpieces

Compact dimensions and low weight

for minimal interfering contours in handling

High maximum moments possible

suitable for using long gripper fingers

Wedge-hook design

for high power transmission and synchronized gripping

Comprehensive sensor accessories

for interrogation and control of the stroke position

Fastening at one gripper side in two screw directions

for universal and flexible gripper assembly

Air supply via hose-free direct connection or screw connections

for the flexible supply of compressed air in all automation systems



General note to the series

Principle of function

Wedge-hook kinematics

Housing material

Aluminum alloy, hard-anodized

Base jaw material

Steel

Actuation

pneumatic, with filtered compressed air (10 microns): dry, lubricated or non-lubricated
 Pressure medium: Required quality class of compressed air according to DIN ISO 8573-1: 6 4 4

Warranty

24 months (details, general terms and conditions and operation manuals can be downloaded under www.schunk.com)

Scope of delivery

Brackets for proximity switches, centering sleeves, O-rings for direct connection, assembly and operating manual with manufacturer's declaration

Gripping force maintenance device

with either mechanical gripping force maintenance or SDV-P pressure maintenance valve

Sectional diagram



- 1 Housing**
weight-optimized through application of hard-anodized, high-strength aluminum alloy
- 2 T-slot guidance**
loadable, robust base jaw guidance for extremely long gripper fingers
- 3 Wedge-hook design**
for high power transmission and centric gripping
- 4 Base jaw**
for the connection of workpiece-specific gripper fingers
- 5 Sensor system**
Proximity switch can be assembled without mounting kit

Functional description

The piston is moved up and down by compressed air. Through its angled active surfaces, the wedge hook transforms this movement into the lateral, synchronous gripping movement of both base jaws.

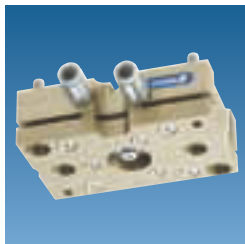
Options and special information

The JGZ series is especially suitable for economic handling solutions and distinguishes by its high cost-benefit ratio.

Accessories

Accessories from SCHUNK – the suitable supplement for maximum functionality, reliability and performance of all automation modules.

Tolerance compensation unit



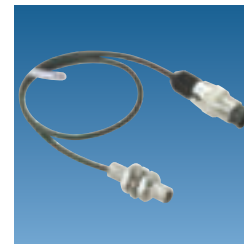
Compensation unit



Magnetic Switches



Inductive proximity switches



Universal intermediate jaw



Sensor Distributor



Quick-change Jaw System



Flexible Position Sensor



Pressure maintenance valve



Finger blanks



Force measuring jaws



Analog position sensor



① For the exact size of the required accessories, availability of this size and the designation and ID, please refer to the additional views at the end of the size in question. You will find more detailed information on our accessory range in the “Accessories” catalog section.

General note to the series

Gripping force

is the arithmetic total of the gripping force applied to each finger at distance P (see illustration) measured from the upper edge of the gripper.

Finger length

The finger length is measured from the upper edge of the gripper housing in the direction of the main axis.

Repeat accuracy

is defined as the spread of the limit position after 100 consecutive strokes.

Workpiece weight

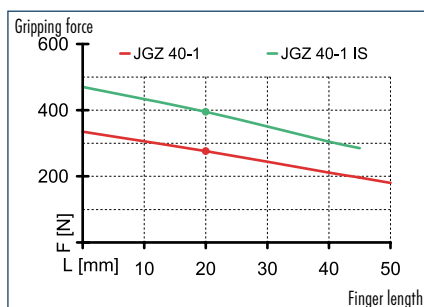
The recommended workpiece weight is calculated for a force-type connection with a coefficient of friction of 0.1 and a safety factor of 2 against slippage of the workpiece on acceleration due to gravity g. Considerably heavier workpiece weights are permitted with form-fit gripping.

Closing and opening times

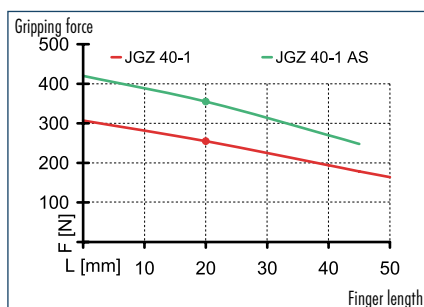
Closing and opening times are purely the times that the base jaws or fingers are in motion. Valve switching times, hose filling times or PLC reaction times are not included in the above times and must be taken into consideration when determining cycle times.



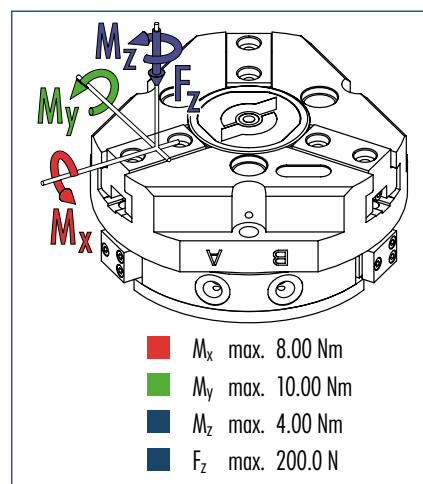
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

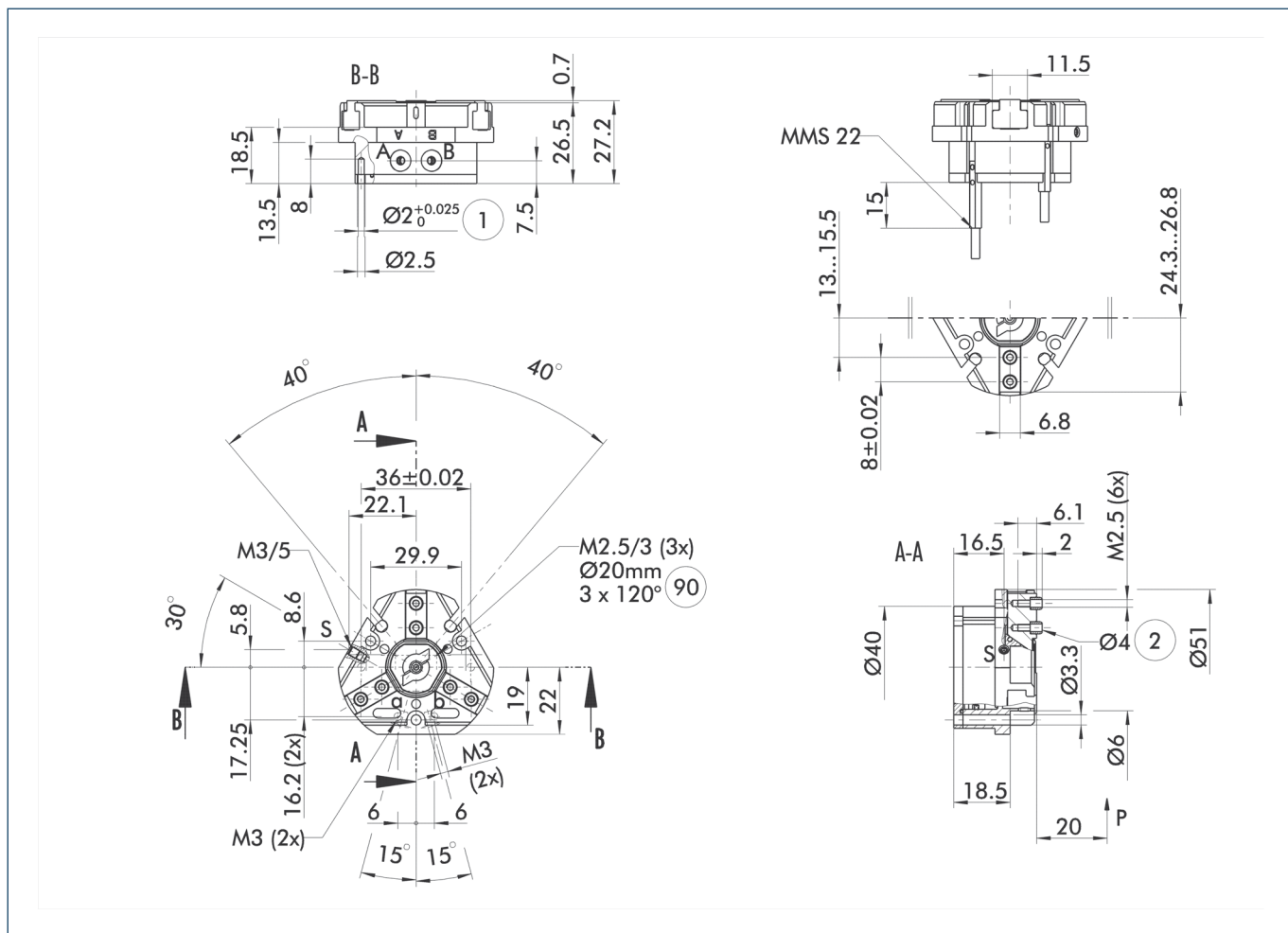


① The indicated moments and forces are static values, apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description	JGZ 40-1	JGZ 40-1 AS	JGZ 40-1 IS
ID	0308900	0308901	0308902
Stroke per finger [mm]	2.5	2.5	2.5
Closing force [N]	255	355	
Opening force [N]	270		370
Min. spring force [N]		100	100
Weight [kg]	0.12	0.15	0.15
Recommended workpiece weight [kg]	1.25	1.25	1.25
Air consumption per double stroke [cm ³]	5	9	9
Min./max. operating pressure [bar]	2/8	4/6.5	4/6.5
Nominal operating pressure [bar]	6	6	6
Closing/opening time [s]	0.02/0.03	0.02/0.04	0.02/0.02
Max. permitted finger length [mm]	50	45	45
Max. permitted weight per finger [kg]	0.1	0.1	0.1
IP class	40	40	40
Min./max. ambient temperature [°C]	-10/90	-10/90	-10/90
Repeat accuracy [mm]	0.01	0.01	0.01
Cleanroom class			
ISO-classification 14644-1	5	5	5

Main view



The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

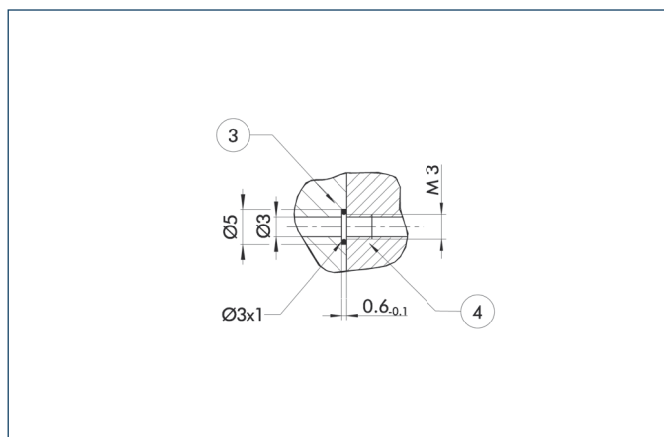
① The SDV-P pressure maintenance valve can also be used for I.D. or O.D. gripping alternatively or in addition to the spring-loaded, mechanical gripping force maintenance device (see "Accessories" catalog section).

A, a Main/direct connection, gripper opening
 B, b Main/direct connection, gripper closing

① Gripper connection
 ② Finger connection

⊙ Thread below the cover for fastening external attachments

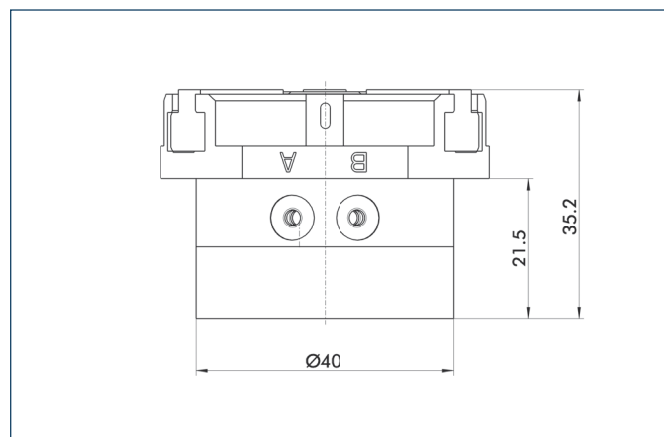
Hose-free direct connection



③ Adapter
 ④ Gripper

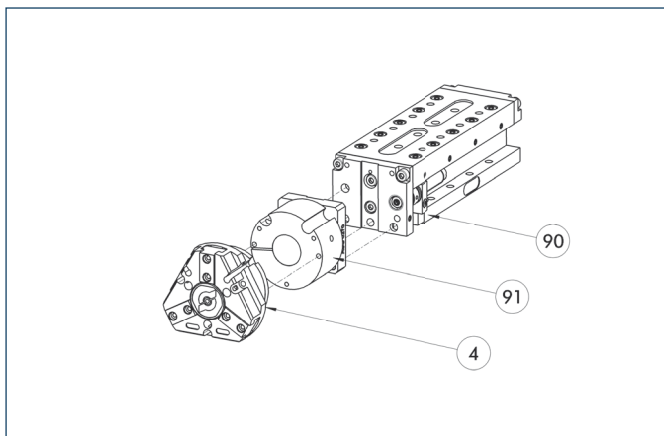
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

AS/IS gripping force maintenance device



The mechanical gripping force maintenance device ensures a minimum gripping force even in case of pressure drop. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force maintenance device can also be used for increasing the gripping force or for single-acting gripping.

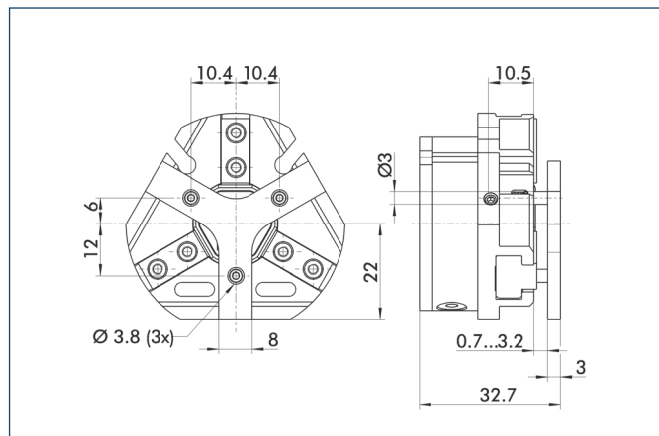
Modular Assembly Automation



- ④ Gripper
- ⑨① ASG
- ⑨① CLM

This gripper can be combined with the standard linear modules LM, KLM, CLM and ELM of the GEMOTEC modular system. For more information see our main catalog "Modular Assembly Automation".

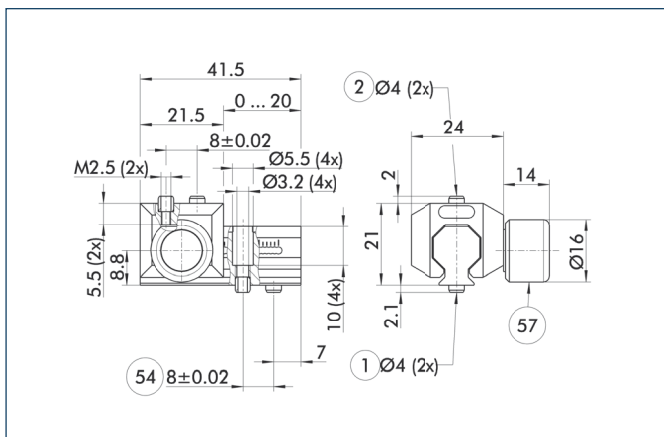
Spring-loaded pressure piece



For spring-supported positioning of the workpiece against a stop after the gripper has opened. Especially developed for loading machines.

Description	ID	Stroke	Min. force
Spring-loaded pressure piece			
A-PZN-plus 40	0303718	2.5 mm	5 N

Universal intermediate jaw

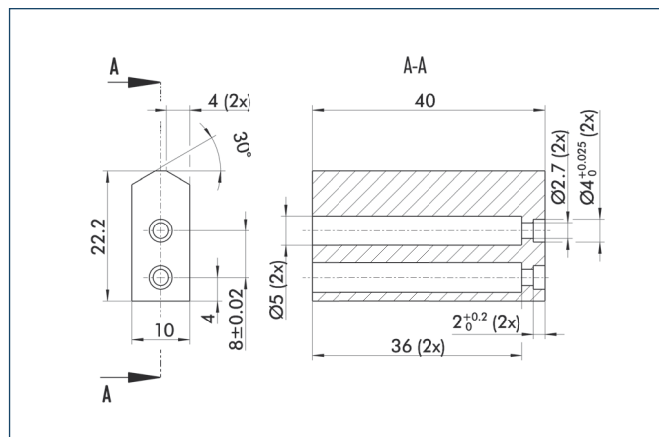


- ① Gripper connection
- ② Finger connection
- ⑤④ Optional right or left connection
- ⑤⑦ Locking

The universal intermediate jaw allows fast tool-free and reliable plugging and shifting of top jaws at the gripper.

Description	ID	Grid dimension
Universal intermediate jaw		
UZB 40	0300040	1 mm

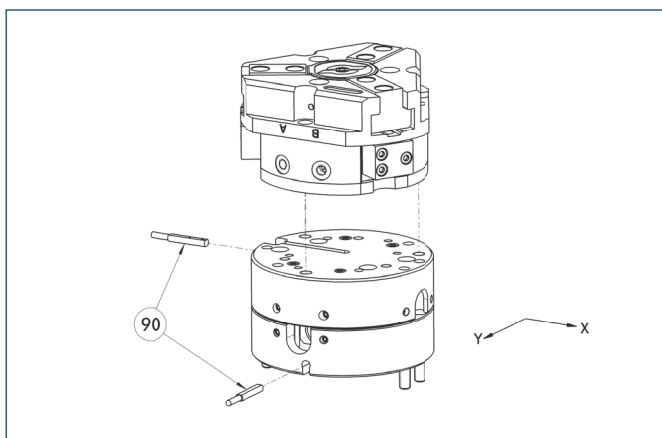
Finger blanks



Finger blanks for customized subsequent machining

Description	ID	Material	Scope of delivery
Finger blanks			
ABR-plus 40	0300008	Aluminum	1
SBR-plus 40	0300018	16 MnCr 5	1

Compensation unit with spring reset

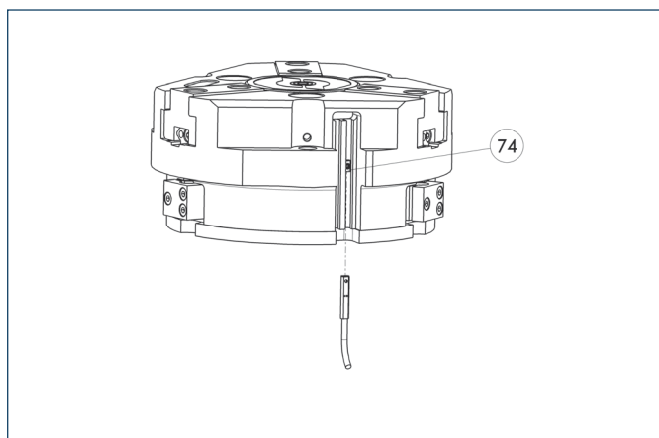


90 Monitoring

Grippers can be directly mounted without using an adapter plate. For details see our catalog "Robot Accessories".

Description	ID	Compensation travel	Reset force
Compensation unit			
AGE-F-XY-031-1	0324900	±1.5 mm	1 N
AGE-F-XY-031-2	0324901	±1.5 mm	2.5 N
AGE-F-XY-031-3	0324902	±1.5 mm	3.3 kN

Programmable magnetic switch



74 Stop for MMS-P

Position monitoring with two programmable positions per sensor. The end position monitoring is mounted in the C-slot.

Description	ID	Recommended product
Programmable magnetic switch		
MMS-P 22-S-M8-PNP	0301370	•
MMSK-P 22-S-PNP	0301371	
Connection cables		
KA BG08-L 4P-0500	0307767	
KA BG08-L 4P-1000	0307768	
KA BW08-L 4P-0500	0307765	
KA BW08-L 4P-1000	0307766	
Sensor Distributor		
V2-M8-4P-2XM8-3P	0301380	

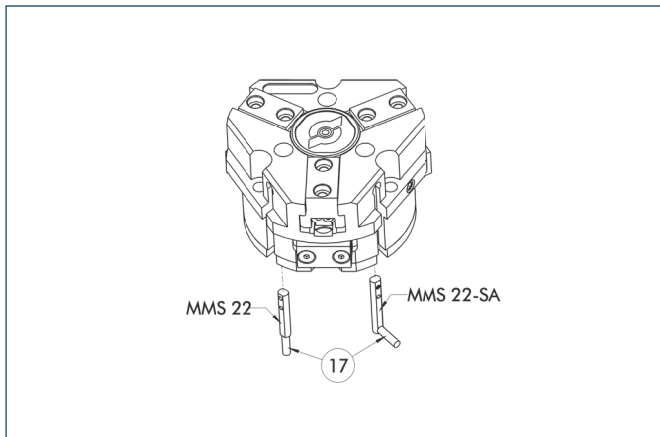
① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

① Per gripper one sensor (closer/NO) is required, optionally a cable extension.



You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

Electronic magnetic switches



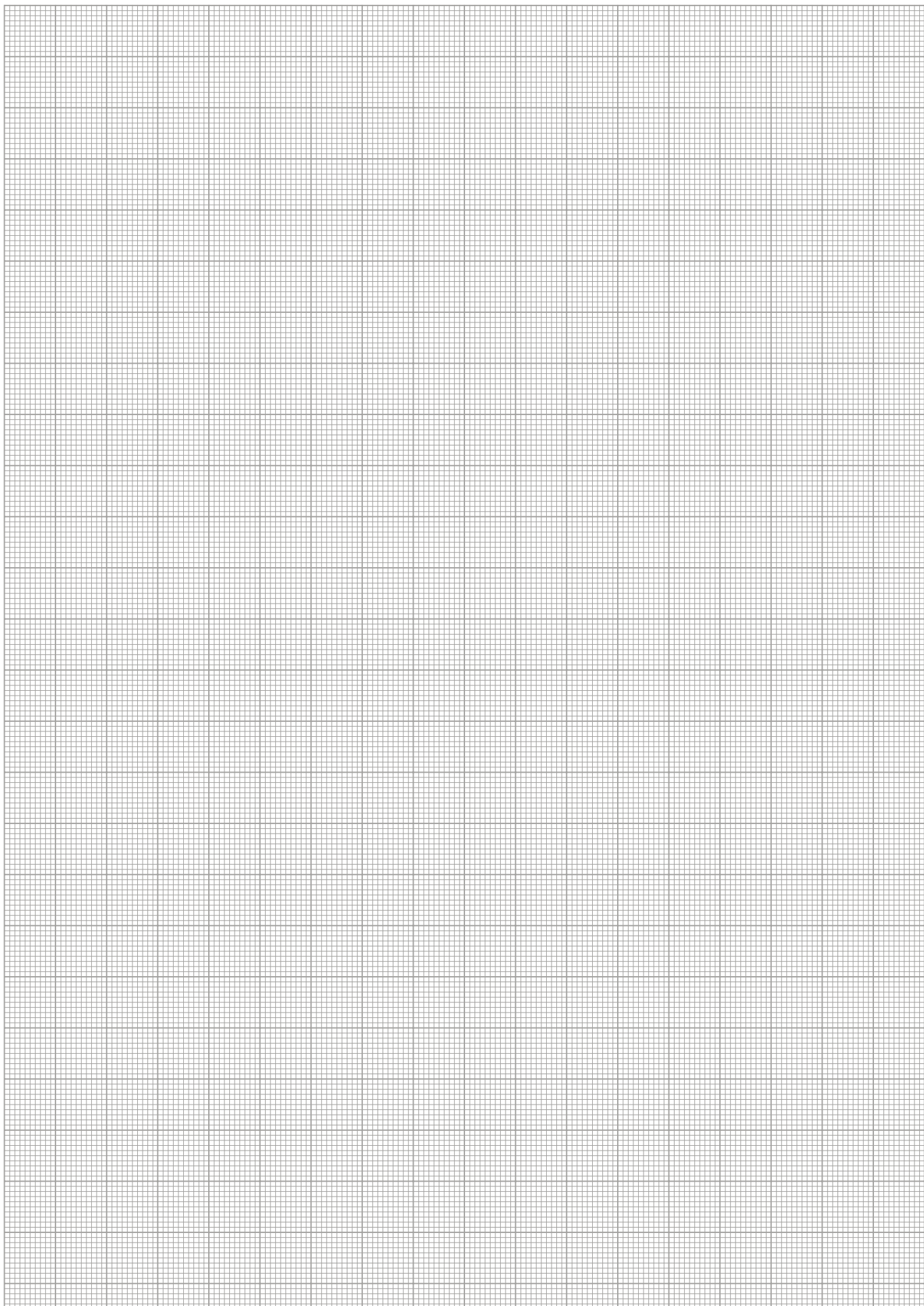
17 Cable outlet

End position monitoring for mounting in the C-slot

Description	ID	Recommended product
Electronic magnetic switches		
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-NPN	0301433	
MMSK 22-S-PNP	0301434	
MMSK 22-S-NPN	0301435	
Electronic magnetic switches with lateral cable outlet		
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M8-PNP-SA	0301442	•
MMS 22-S-M8-NPN-SA	0301443	
MMSK 22-S-PNP-SA	0301444	
MMSK 22-S-NPN-SA	0301445	
Connection cables		
KA BG05-L 3P-0300	0301652	
KA BG08-L 3P-0300-PNP	0301622	
KA BG08-L 3P-0500-PNP	0301623	
KA BW05-L 3P-0300	0301650	
KA BW08-L 3P-0300-NPN	0301602	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-NPN	9641116	
KA BW08-L 3P-0500-PNP	0301502	
Cable extensions		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	

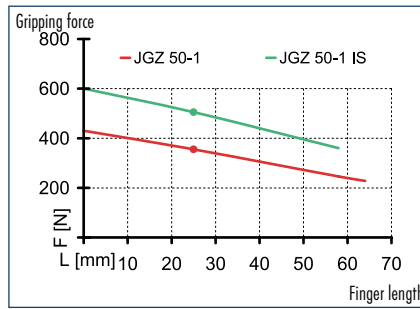
- ① Two sensors (closer/NO) are required for each gripper, plus extension cables as an option.
- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

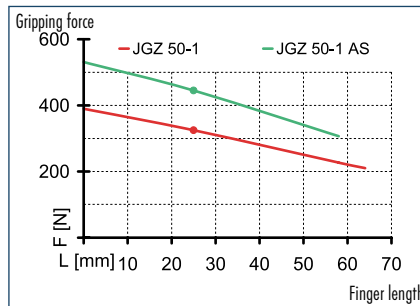




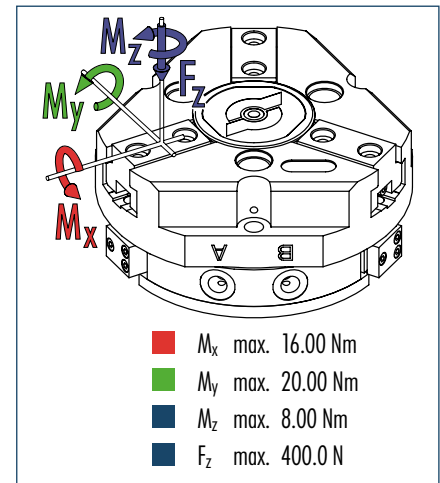
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

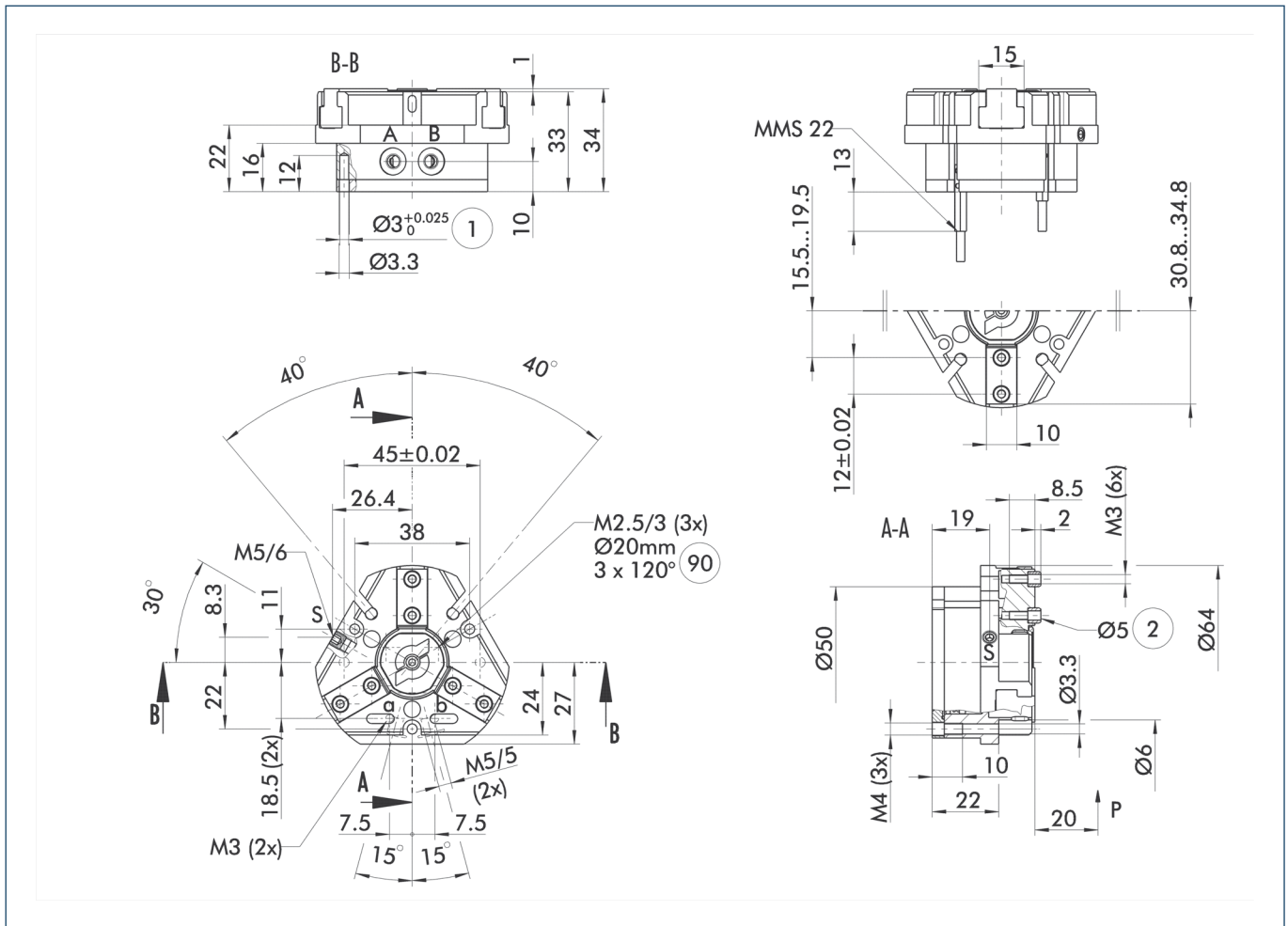


① The indicated moments and forces are static values, apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description	JGZ 50-1	JGZ 50-1 AS	JGZ 50-1 IS
ID	0308910	0308911	0308912
Stroke per finger [mm]	4	4	4
Closing force [N]	325	445	
Opening force [N]	355		505
Min. spring force [N]		120	150
Weight [kg]	0.25	0.3	0.3
Recommended workpiece weight [kg]	1.6	1.6	1.6
Air consumption per double stroke [cm ³]	9	18	18
Min./max. operating pressure [bar]	2/8	4/6.5	4/6.5
Nominal operating pressure [bar]	6	6	6
Closing/opening time [s]	0.03/0.03	0.02/0.04	0.04/0.02
Max. permitted finger length [mm]	64	58	58
Max. permitted weight per finger [kg]	0.18	0.18	0.18
IP class	40	40	40
Min./max. ambient temperature [°C]	-10/90	-10/90	-10/90
Repeat accuracy [mm]	0.01	0.01	0.01
Cleanroom class			
ISO-classification 14644-1	5	5	5

Main view



The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can also be used for I.D. or O.D. gripping alternatively or in addition to the spring-loaded, mechanical gripping force maintenance device (see "Accessories" catalog section).

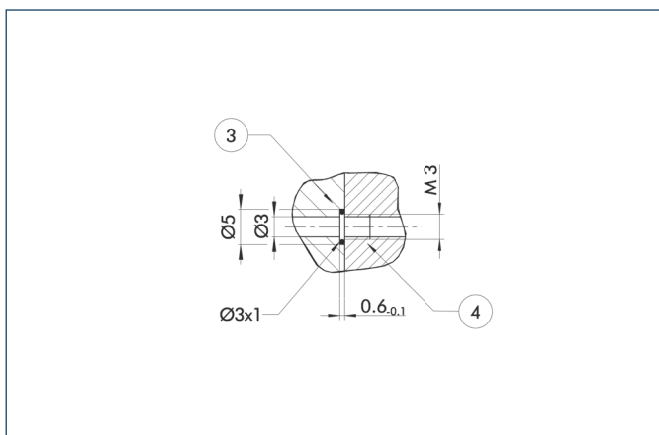
A, a Main/direct connection, gripper opening
B, b Main/direct connection, gripper closing

① Gripper connection

② Finger connection

⊙ Thread below the cover for fastening external attachments

Hose-free direct connection

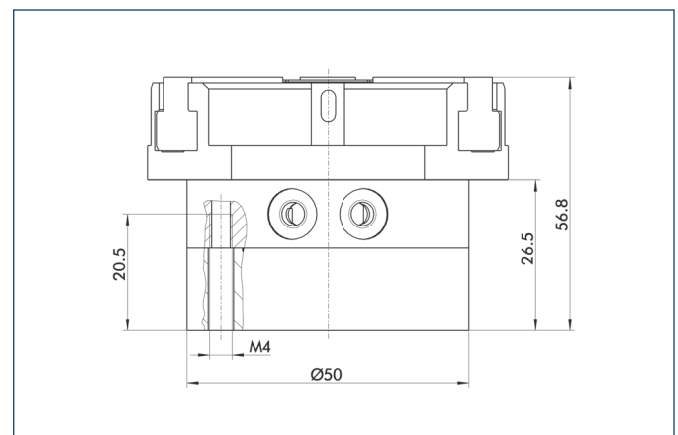


③ Adapter

④ Gripper

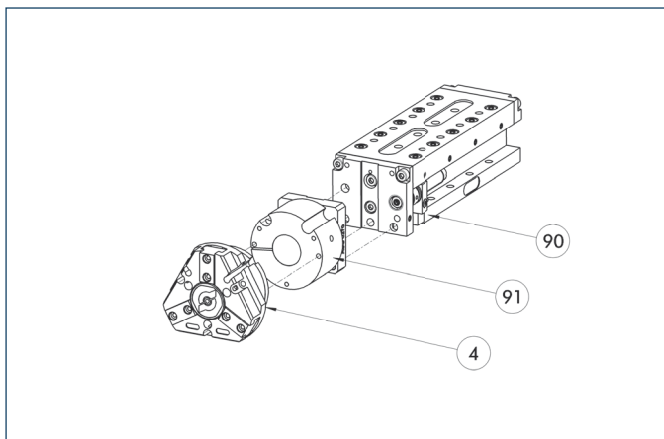
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

AS/IS gripping force maintenance device



The mechanical gripping force maintenance device ensures a minimum gripping force even in case of pressure drop. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force maintenance device can also be used for increasing the gripping force or for single-acting gripping.

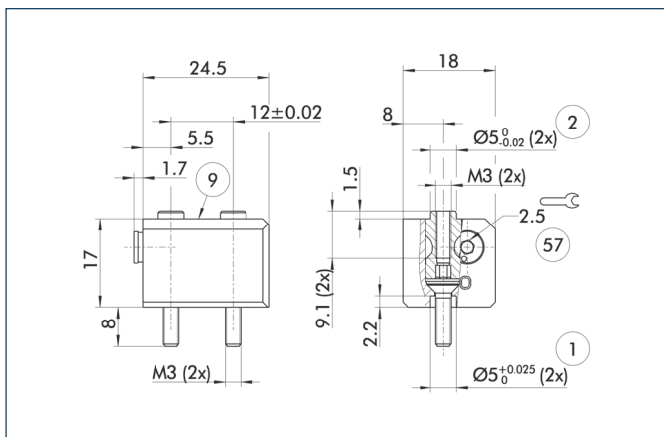
Modular Assembly Automation



- ④ Gripper
- ⑨⑩ CLM
- ⑨① ASG

This gripper can be combined with the standard linear modules LM, KLM, CLM and ELM of the GEMOTEC modular system. For more information see our main catalog "Modular Assembly Automation".

Quick-change Jaw System



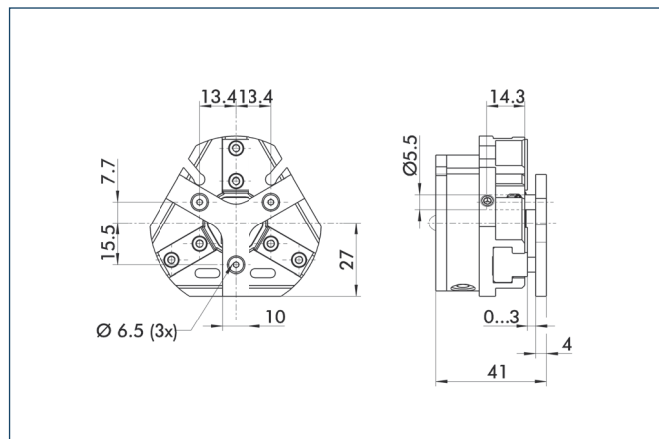
- ① Gripper connection
- ② Finger connection
- ⑨ For mounting screw connection diagram, see basic version
- ⑤⑦ Locking

The BSWS quick-change jaw system enables top jaws to be changed on the gripper manually and rapidly. An adapter (BSWS-A) and a base (BSWS-B) are required for each gripper jaw.

For a reverse assembly without height set-up, one adapter (BSWS-A) and a kit (BSWS-U) per gripper jaw are required. Another effect of the BSWS-U is, that there are no disturbing fastening bores in the finger contour.

Description	ID
Quick-change Jaw System adapter	
BSWS-A 50	0303020
Quick-change Jaw System base	
BSWS-B 50	0303021
Quick-change Jaw System reversed	
BSWS-U 50	0303040

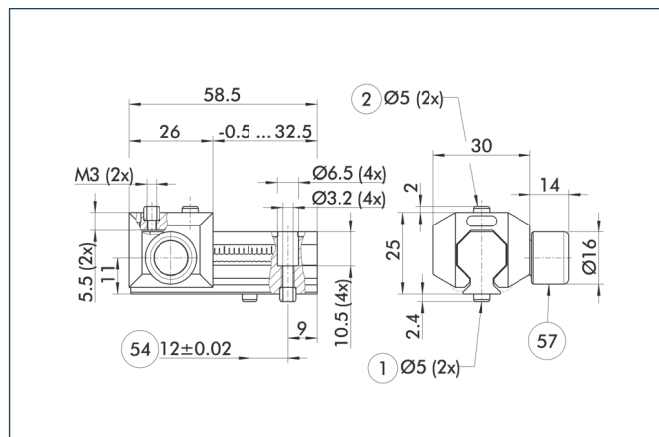
Spring-loaded pressure piece



For spring-supported positioning of the workpiece against a stop after the gripper has opened. Especially developed for loading machines.

Description	ID	Stroke	Min. force
Spring-loaded pressure piece			
A-PZN-plus 50	0303719	3 mm	12 N

Universal intermediate jaw

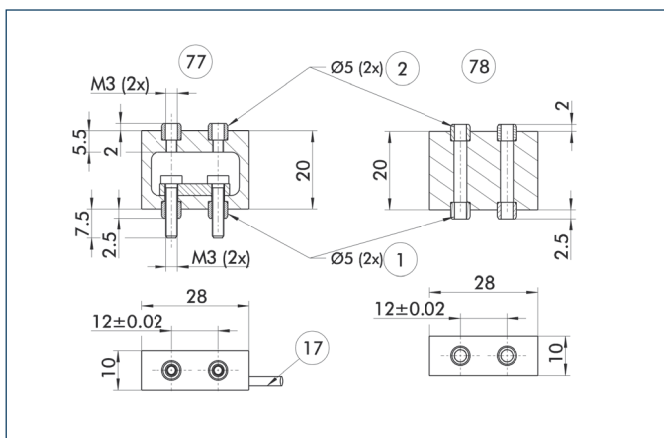


- ① Gripper connection
- ② Finger connection
- ⑤④ Optional right or left connection
- ⑤⑦ Locking

The universal intermediate jaw allows fast tool-free and reliable plugging and shifting of top jaws at the gripper.

Description	ID	Grid dimension
Universal intermediate jaw		
UZB 50	0300041	1.5 mm

Force measuring jaws

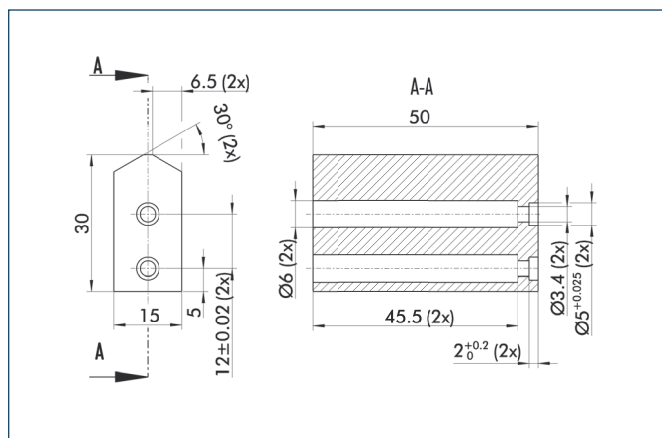


- ① Gripper connection
- ② Finger connection
- ①⑦ Active intermediate jaws
- ②⑦⑧ Passive intermediate jaws
- ①⑦ Cable outlet

Force measuring jaws measure gripping forces, but can also determine workpiece weights or dimensional deviations. There are active and passive intermediate jaws (FMS-ZBA or FMS-ZBP). At least one active force measuring jaw is required per gripper, the rest can be passive. For each active jaw, a FMS-A1 control unit and a FMS-A connection cable are required.

Description	ID
Active intermediate jaws	
FMS-ZBA 50	0301830
Passive intermediate jaws	
FMS-ZBP 50	0301831
Electronic Processor	
FMS-A1	0301810
Connection cables	
FMS-AK0200	0301820
FMS-AK0500	0301821
FMS-AK1000	0301822
FMS-AK2000	0301823

Finger blanks



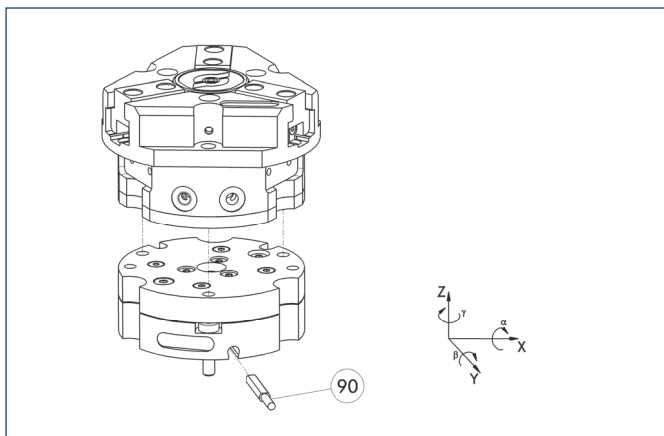
Finger blanks for customized subsequent machining

Description	ID	Material	Scope of delivery
Finger blanks			
ABR-plus 50	0300009	Aluminum	1
SBR-plus 50	0300019	16 MnCr 5	1



You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

Tolerance compensation unit

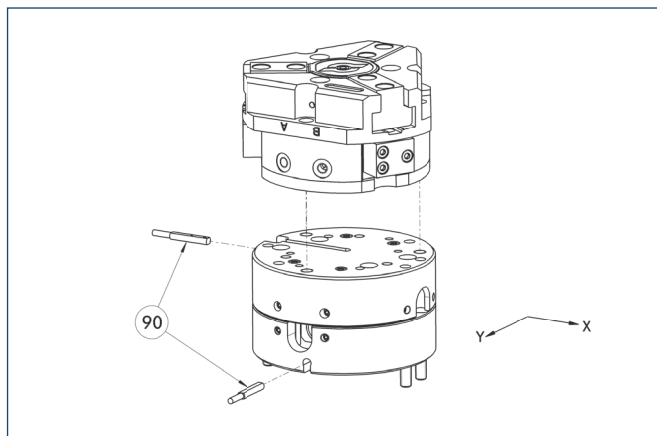


90 Monitoring of locking

Grippers can be directly mounted without an adapter plate. Tolerance compensation unit and gripper have an identical screw connection diagram. Therefore the tolerance compensation units can be assembled later. Please consider the additional assembly height of the tolerance compensation unit. For details see catalog "Robot Accessories".

Description	ID	Locking	Deflection
Compensation unit			
TCU-050-3-OV-Z	0324749	No	

Compensation unit with spring reset

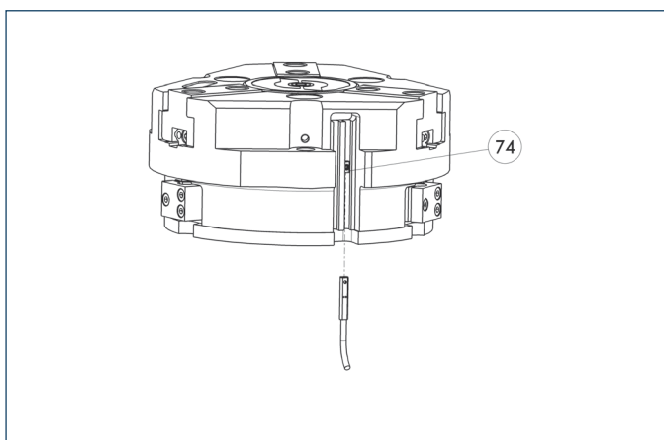


90 Monitoring

Grippers can be directly mounted without using an adapter plate. For details see our catalog "Robot Accessories".

Description	ID	Compensation travel	Reset force
Compensation unit			
AGE-F-XY-040-1	0324920	±2 mm	1 N
AGE-F-XY-040-2	0324921	±2 mm	2.5 N
AGE-F-XY-040-3	0324922	±2 mm	3.3 N

Programmable magnetic switch



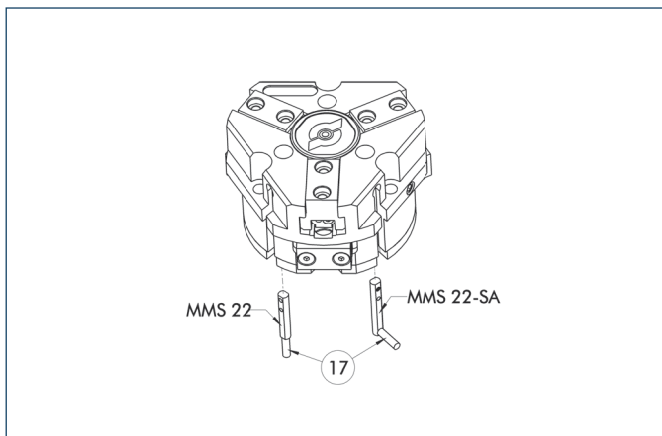
74 Stop for MMS-P

Position monitoring with two programmable positions per sensor. The end position monitoring is mounted in the C-slot.

Description	ID	Recommended product
Programmable magnetic switch		
MMS-P 22-S-M8-PNP	0301370	•
MMSK-P 22-S-PNP	0301371	
Connection cables		
KA BG08-L 4P-0500	0307767	
KA BG08-L 4P-1000	0307768	
KA BW08-L 4P-0500	0307765	
KA BW08-L 4P-1000	0307766	
Sensor Distributor		
V2-M8-4P-2XM8-3P	0301380	

- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.
- ① Per gripper one sensor (closer/NO) is required, optionally a cable extension.

Electronic magnetic switches



17 Cable outlet

End position monitoring for mounting in the C-slot

Description	ID	Recommended product
Electronic magnetic switches		
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-NPN	0301433	
MMSK 22-S-PNP	0301434	
MMSK 22-S-NPN	0301435	
Electronic magnetic switches with lateral cable outlet		
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M8-PNP-SA	0301442	•
MMS 22-S-M8-NPN-SA	0301443	
MMSK 22-S-PNP-SA	0301444	
MMSK 22-S-NPN-SA	0301445	
Connection cables		
KA BG05-L 3P-0300	0301652	
KA BG08-L 3P-0300-PNP	0301622	
KA BG08-L 3P-0500-PNP	0301623	
KA BW05-L 3P-0300	0301650	
KA BW08-L 3P-0300-NPN	0301602	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-NPN	9641116	
KA BW08-L 3P-0500-PNP	0301502	
Cable extensions		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	

① Two sensors (closer/NO) are required for each gripper, plus extension cables as an option.

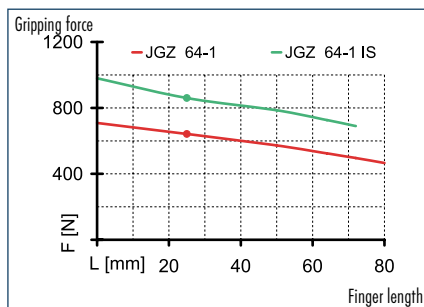
① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



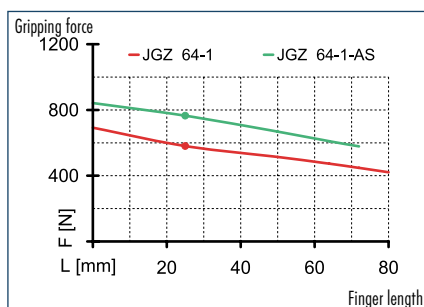
You can find more detailed information and individual parts of the above-mentioned accessories in the “Accessories” catalog section.



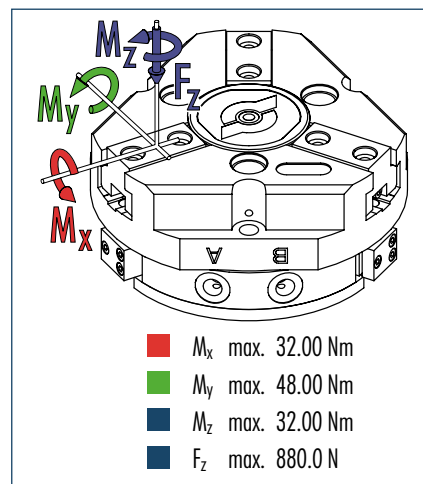
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

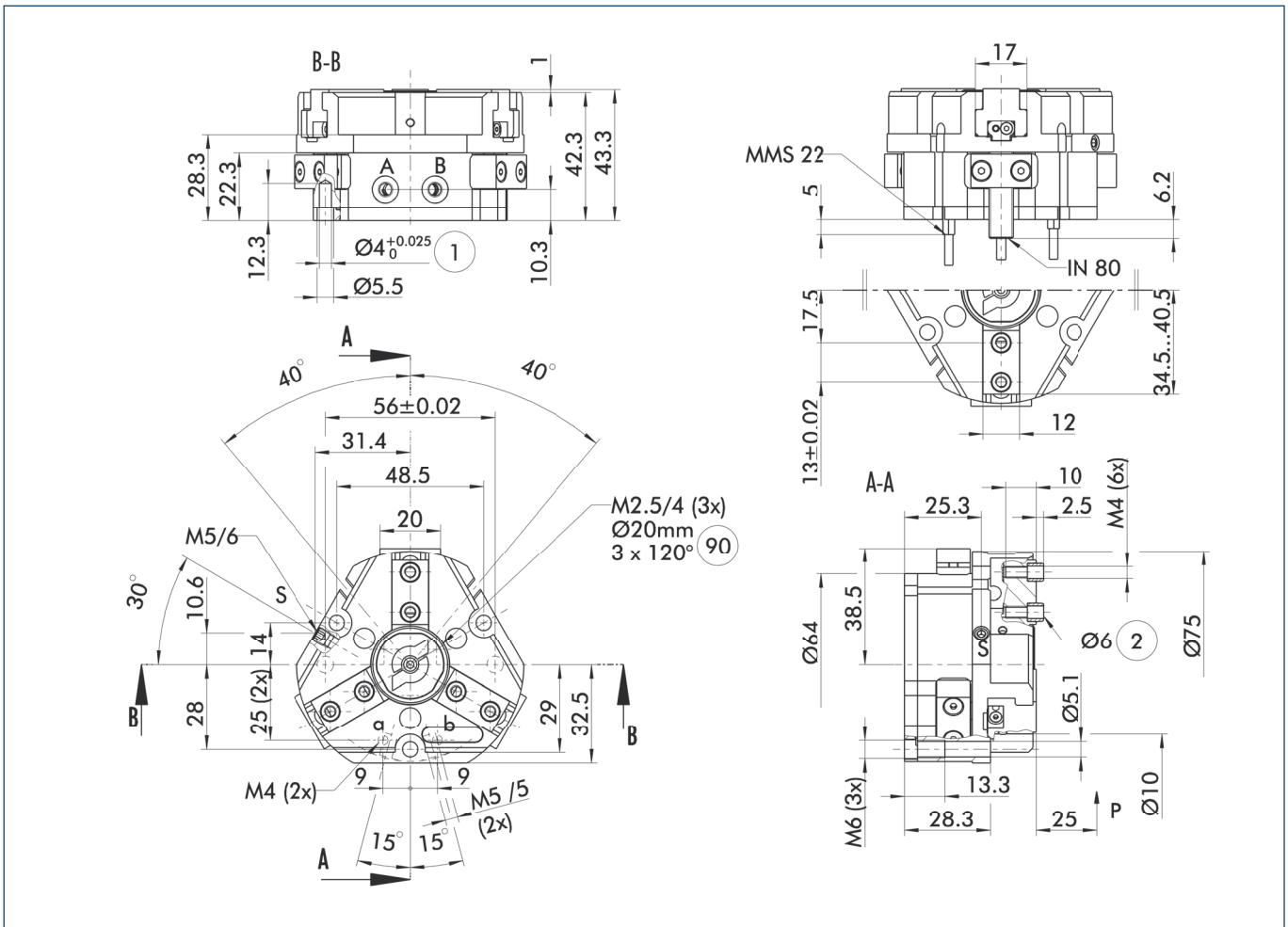


① The indicated moments and forces are static values, apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description	JGZ 64-1	JGZ 64-1-AS	JGZ 64-1-IS
ID	0308920	0308921	0308922
Stroke per finger [mm]	6	6	6
Closing force [N]	580	765	
Opening force [N]	640		860
Min. spring force [N]		185	220
Weight [kg]	0.43	0.54	0.54
Recommended workpiece weight [kg]	2.9	2.9	2.9
Air consumption per double stroke [cm ³]	25	25	25
Min./max. operating pressure [bar]	2/8	4/6.5	4/6.5
Nominal operating pressure [bar]	6	6	6
Closing/opening time [s]	0.03/0.03	0.02/0.04	0.04/0.02
Max. permitted finger length [mm]	80	72	72
Max. permitted weight per finger [kg]	0.35	0.35	0.35
IP class	40	40	40
Min./max. ambient temperature [°C]	-10/90	-10/90	-10/90
Repeat accuracy [mm]	0.01	0.01	0.01
Cleanroom class			
ISO-classification 14644-1	5	5	5

Main view

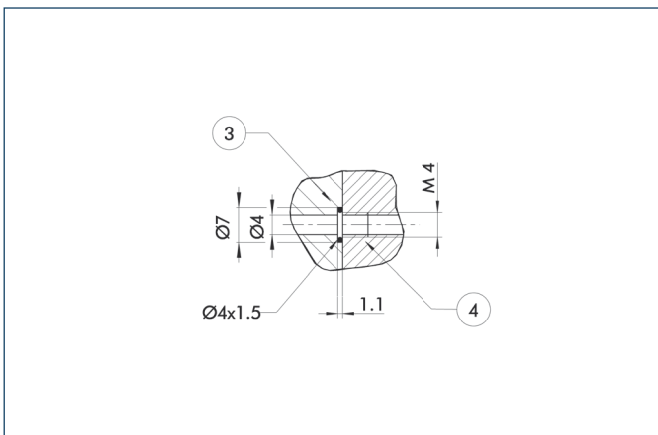


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can also be used for I.D. or O.D. gripping alternatively or in addition to the spring-loaded, mechanical gripping force maintenance device (see "Accessories" catalog section).

- A, a Main/direct connection, gripper opening
- B, b Main/direct connection, gripper closing
- S Air purge connection
- ① Gripper connection
- ② Finger connection
- 90 Thread below the cover for fastening external attachments

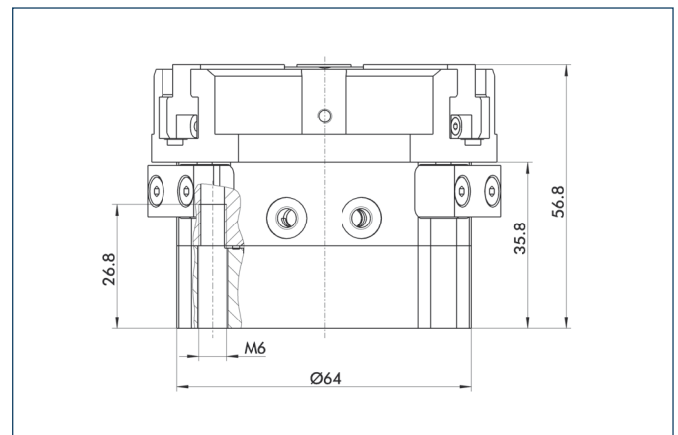
Hose-free direct connection



- ③ Adapter
- ④ Gripper

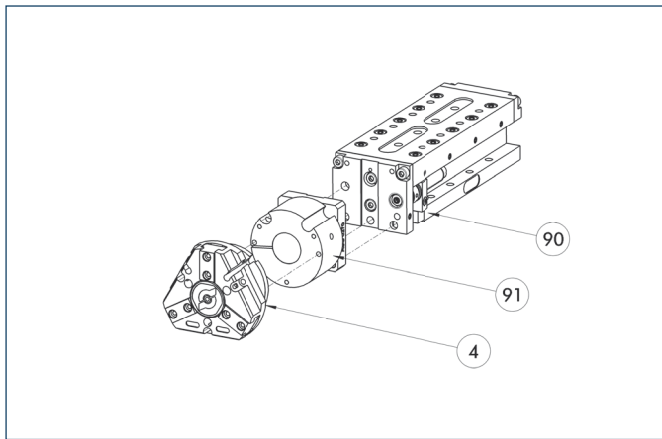
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

AS/IS gripping force maintenance device



The mechanical gripping force maintenance device ensures a minimum gripping force even in case of pressure drop. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force maintenance device can also be used for increasing the gripping force or for single-acting gripping.

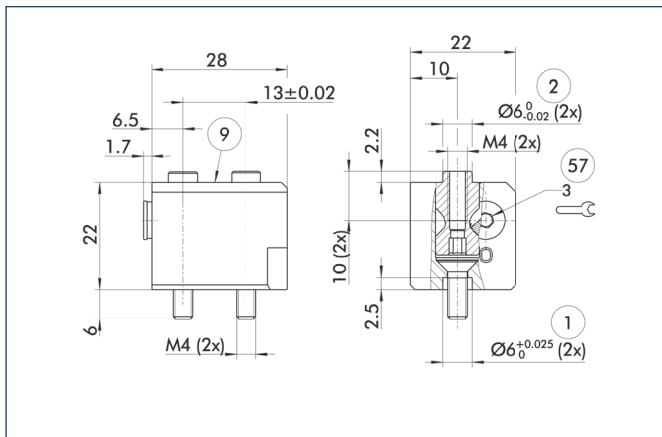
Modular Assembly Automation



- ④ Gripper
- ⑨⑩ CLM
- ⑨① ASG

This gripper can be combined with the standard linear modules LM, KLM, CLM and ELM of the GEMOTEC modular system. For more information see our main catalog "Modular Assembly Automation".

Quick-change Jaw System



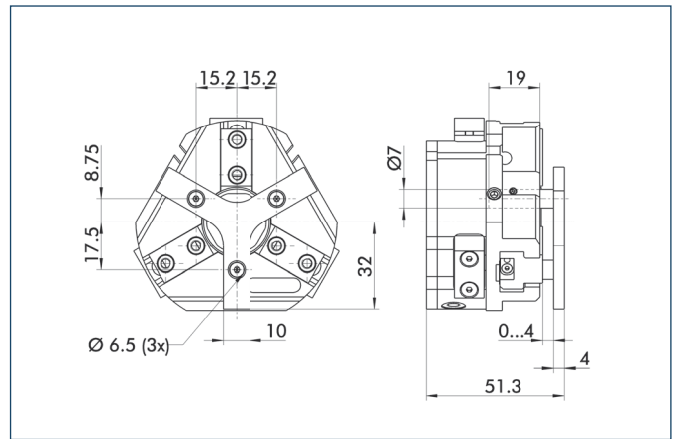
- ① Gripper connection
- ② Finger connection
- ⑨ For mounting screw connection diagram, see basic version
- ⑤⑦ Locking

The BSWS quick-change jaw system enables top jaws to be changed on the gripper manually and rapidly. An adapter (BSWS-A) and a base (BSWS-B) are required for each gripper jaw.

For a reverse assembly without height set-up, one adapter (BSWS-A) and a kit (BSWS-U) per gripper jaw are required. Another effect of the BSWS-U is, that there are no disturbing fastening bores in the finger contour.

Description	ID
Quick-change Jaw System adapter	
BSWS-A 64	0303022
Quick-change Jaw System base	
BSWS-B 64	0303023
Quick-change Jaw System reversed	
BSWS-U 64	0303041

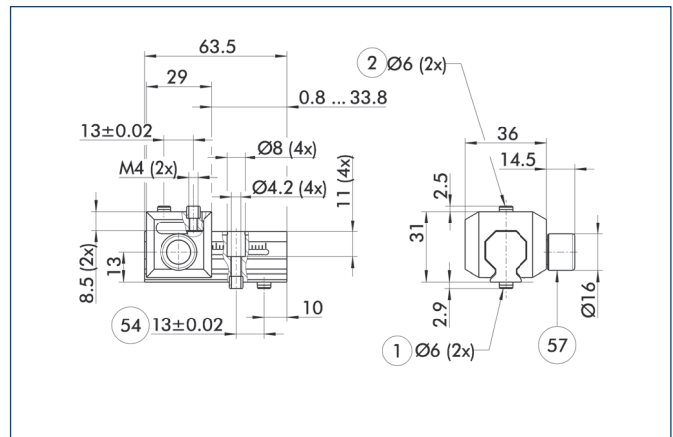
Spring-loaded pressure piece



For spring-supported positioning of the workpiece against a stop after the gripper has opened. Especially developed for loading machines.

Description	ID	Stroke	Min. force
Spring-loaded pressure piece			
A-PZN-plus/DPZ-plus 64	0303720	4 mm	11 N

Universal intermediate jaw



- ① Gripper connection
- ② Finger connection
- ⑤④ Optional right or left connection
- ⑤⑦ Locking

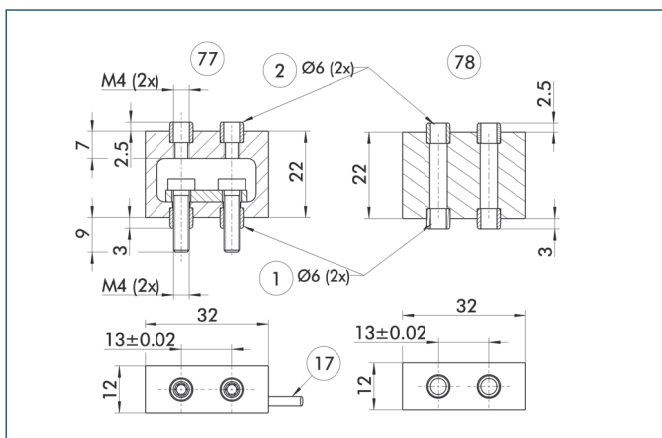
The universal intermediate jaw allows fast tool-free and reliable plugging and shifting of top jaws at the gripper.

Description	ID	Grid dimension
Universal intermediate jaw		
UZH 64	0300042	1.5 mm



You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

Force measuring jaws

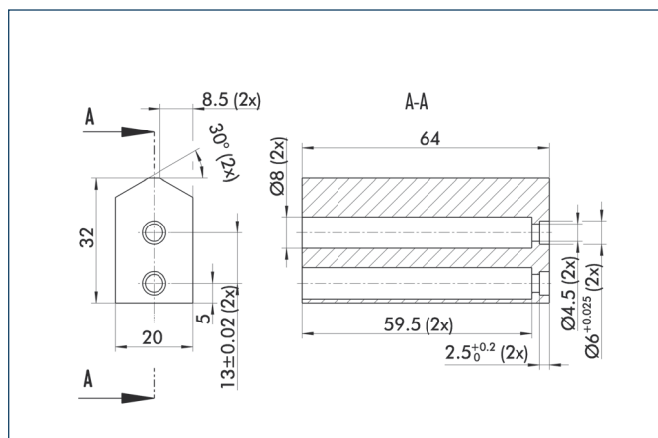


- ① Gripper connection
- ② Finger connection
- ⑦ Active intermediate jaws
- ⑧ Passive intermediate jaws
- ⑰ Cable outlet

Force measuring jaws measure gripping forces, but can also determine workpiece weights or dimensional deviations. There are active and passive intermediate jaws (FMS-ZBA or FMS-ZBP). At least one active force measuring jaw is required per gripper, the rest can be passive. For each active jaw, a FMS-A1 control unit and a FMS-A connection cable are required.

Description	ID
Active intermediate jaws	
FMS-ZBA 64	0301832
Passive intermediate jaws	
FMS-ZBP 64	0301833
Electronic Processor	
FMS-A1	0301810
Connection cables	
FMS-AK0200	0301820
FMS-AK0500	0301821
FMS-AK1000	0301822
FMS-AK2000	0301823

Finger blanks



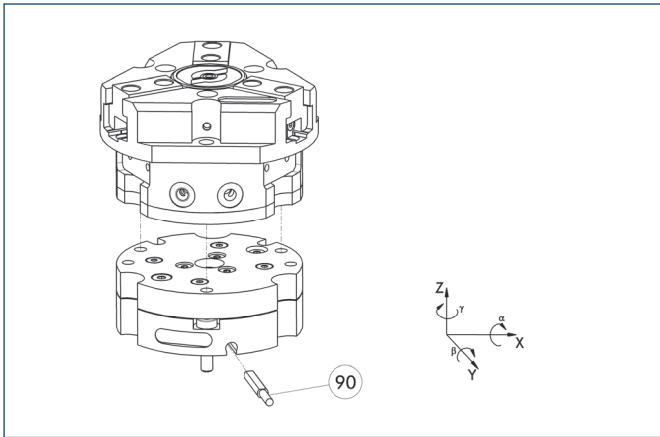
Finger blanks for customized subsequent machining

Description	ID	Material	Scope of delivery
Finger blanks			
ABR-plus 64	0300010	Aluminum	1
SBR-plus 64	0300020	16 MnCr 5	1



You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

Tolerance compensation unit

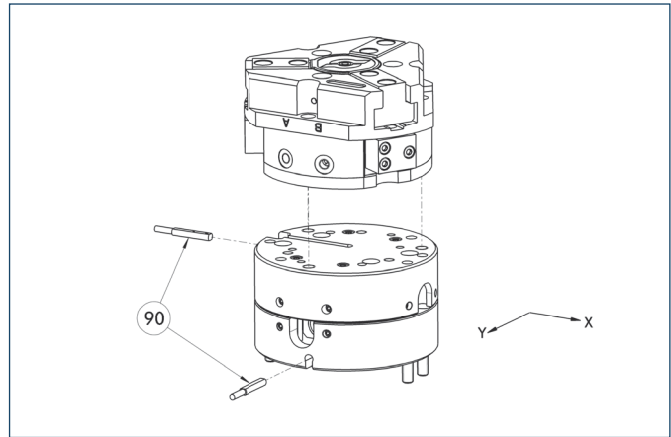


90 Monitoring of locking

Grippers can be directly mounted without an adapter plate. Tolerance compensation unit and gripper have an identical screw connection diagram. Therefore the tolerance compensation units can be assembled later. Please consider the additional assembly height of the tolerance compensation unit. For details see catalog "Robot Accessories".

Description	ID	Locking	Deflection
Compensation unit			
TCU-064-3-MV-Z	0324766	Yes	
TCU-064-3-OV-Z	0324767	No	

Compensation unit with spring reset

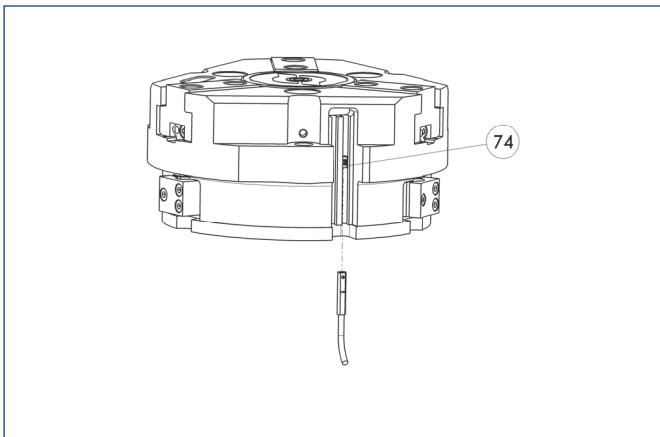


90 Monitoring

Grippers can be directly mounted without using an adapter plate. For details see our catalog "Robot Accessories".

Description	ID	Compensation travel	Reset force
Compensation unit			
AGE-F-XY-063-1	0324940	±4 mm	9 N
AGE-F-XY-063-2	0324941	±4 mm	10 N
AGE-F-XY-063-3	0324942	±4 mm	19.3 N

Programmable magnetic switch



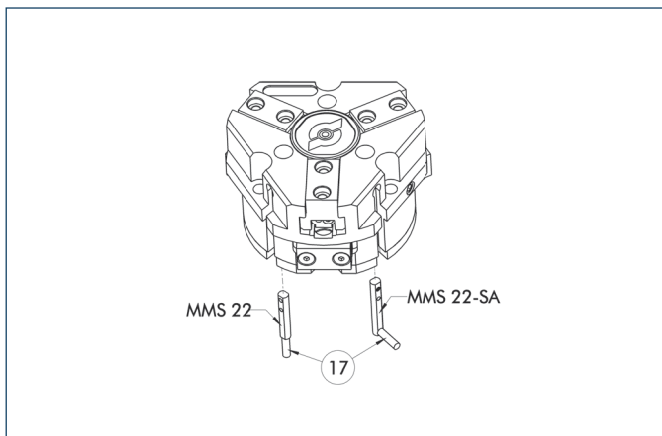
74 Stop for MMS-P

Position monitoring with two programmable positions per sensor. The end position monitoring is mounted in the C-slot.

Description	ID	Recommended product
Programmable magnetic switch		
MMS-P 22-S-M8-PNP	0301370	•
MMSK-P 22-S-PNP	0301371	
Connection cables		
KA BG08-L 4P-0500	0307767	
KA BG08-L 4P-1000	0307768	
KA BW08-L 4P-0500	0307765	
KA BW08-L 4P-1000	0307766	
Sensor Distributor		
V2-M8-4P-2XM8-3P	0301380	

- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.
- ① Per gripper one sensor (closer/NO) is required, optionally a cable extension.

Electronic magnetic switches



⑰ Cable outlet

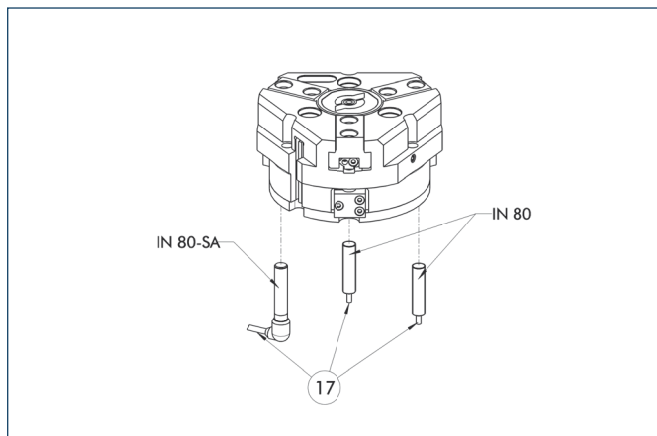
End position monitoring for mounting in the C-slot

Description	ID	Recommended product
Electronic magnetic switches		
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-NPN	0301433	
MMSK 22-S-PNP	0301434	
MMSK 22-S-NPN	0301435	
Electronic magnetic switches with lateral cable outlet		
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M8-PNP-SA	0301442	•
MMS 22-S-M8-NPN-SA	0301443	
MMSK 22-S-PNP-SA	0301444	
MMSK 22-S-NPN-SA	0301445	
Connection cables		
KA BG05-L 3P-0300	0301652	
KA BG08-L 3P-0300-PNP	0301622	
KA BG08-L 3P-0500-PNP	0301623	
KA BW05-L 3P-0300	0301650	
KA BW08-L 3P-0300-NPN	0301602	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-NPN	9641116	
KA BW08-L 3P-0500-PNP	0301502	
Cable extensions		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	

① Two sensors (closer/NO) are required for each gripper, plus extension cables as an option.

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

Inductive proximity switches



⑰ Cable outlet

End position monitoring for direct mounting

Description	ID	Recommended product
Inductive proximity switches		
IN 80-S-M8	0301478	•
IN 80-S-M12	0301578	
INK 80-S	0301550	
Inductive proximity switch with lateral outlet		
IN 80-S-M12-SA	0301587	
IN 80-S-M8-SA	0301483	•
INK 80-S-SA	0301566	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	
KA BG08-L 3P-0500-PNP	0301623	
KA BG12-L 3P-0500-PNP	30016369	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
KA BW12-L 3P-0300-PNP	0301503	
KA BW12-L 3P-0500-PNP	0301507	
Cable extensions		
KV BG12-SG12 3P-0030-PNP	0301999	
KV BG12-SG12 3P-0060-PNP	0301998	
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	
KV BW12-SG12 3P-0030-PNP	0301595	
KV BW12-SG12 3P-0100-PNP	0301596	
KV BW12-SG12 3P-0200-PNP	0301597	

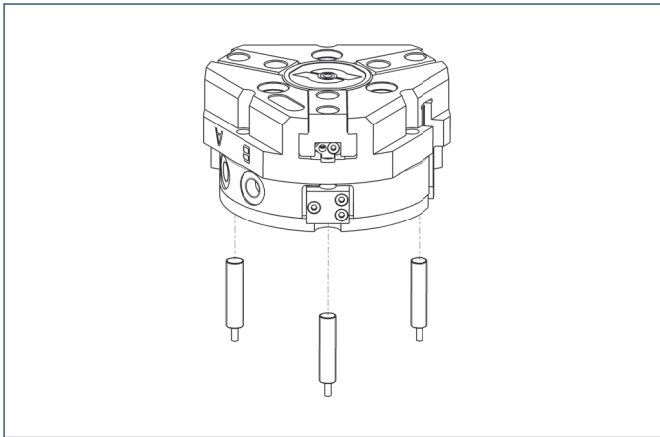
① Two sensors (closer/NO) are required for each gripper, plus extension cables as an option.

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



You can find more detailed information and individual parts of the above-mentioned accessories in the “Accessories” catalog section.

Cylindrical Reed Switches

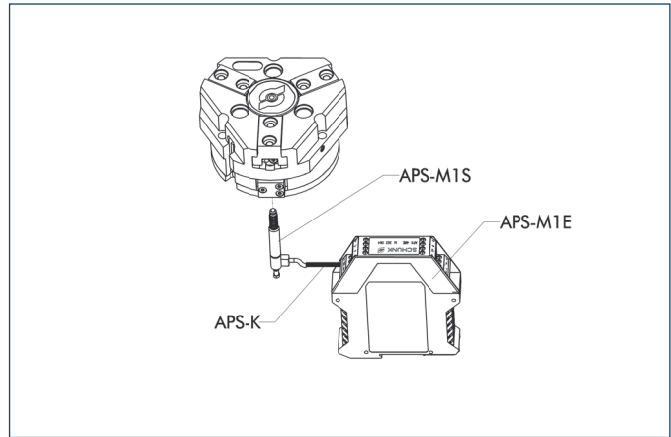


End position monitoring mounted with mounting kit

Description	ID
Mounting kit for proximity switch	
AS-RMS 80 PGN/PZN-plus 64/80	0377725
Reed Switches	
RMS 80-S-M8	0377721

- ① Two sensors (closer/NO) are required for each gripper, plus extension cables as an option.
- ① This mounting kit needs to be ordered optionally as an accessory.
- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

Analog position sensor

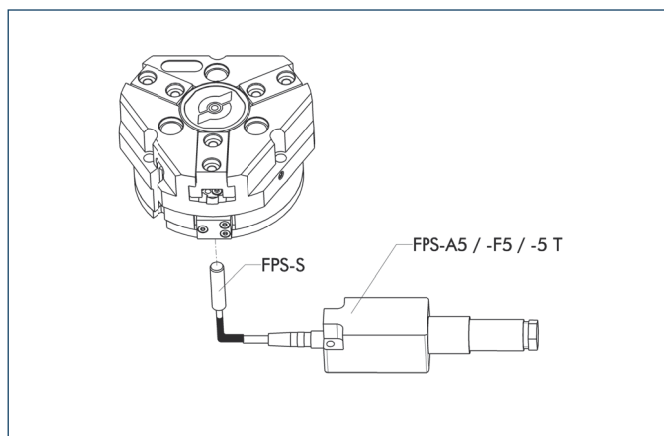


Analog multi position monitoring for any desired positions

Description	ID
Mounting kit	
AS-APS-M1-64/1	0302075
Connection cables	
APS-K0200	0302066
APS-K0700	0302068
Electronic Processor	
APS-M1E	0302064
Sensor	
APS-M1S	0302062

- ① When using an APS system, for each gripper a mounting kit (AS-APS), an APS sensor (APS-M 1S, incl. 3 m cable) as well as an electronics (APS-M1e) are required.
- ① An extension cable (APS-K) can be connected between the sensor and the electronics as an option. The max. cable length between the sensor and the electronics is 10 m, between the electronics and their control unit (PLC) it is max. 1 m.

Flexible Position Sensor



Flexible position monitoring of up to five positions

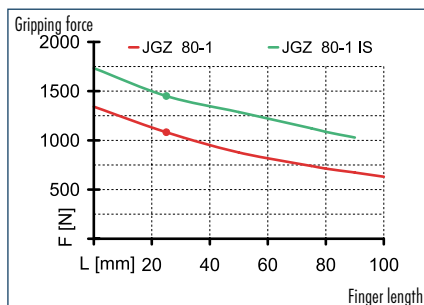
Description	ID
Mounting kit for FPS	
AS-PGN/PZN-plus 64/1, PGN/PZN-plus 80/2	0301630
Electronic Processor	
FPS-F5	0301805
FPS-F5 T	0301807
Sensor	
FPS-S M8	0301704

- ① When using a FPS system, a FPS sensor (FPS-S) and a control unit (FPS-F5 / F5 T or A5) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are available as options in the "Accessories" catalog section.

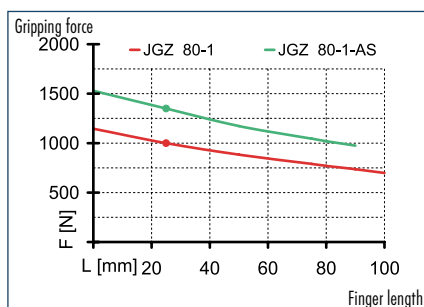




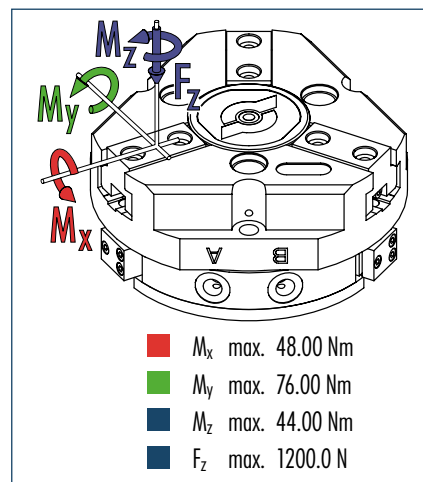
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

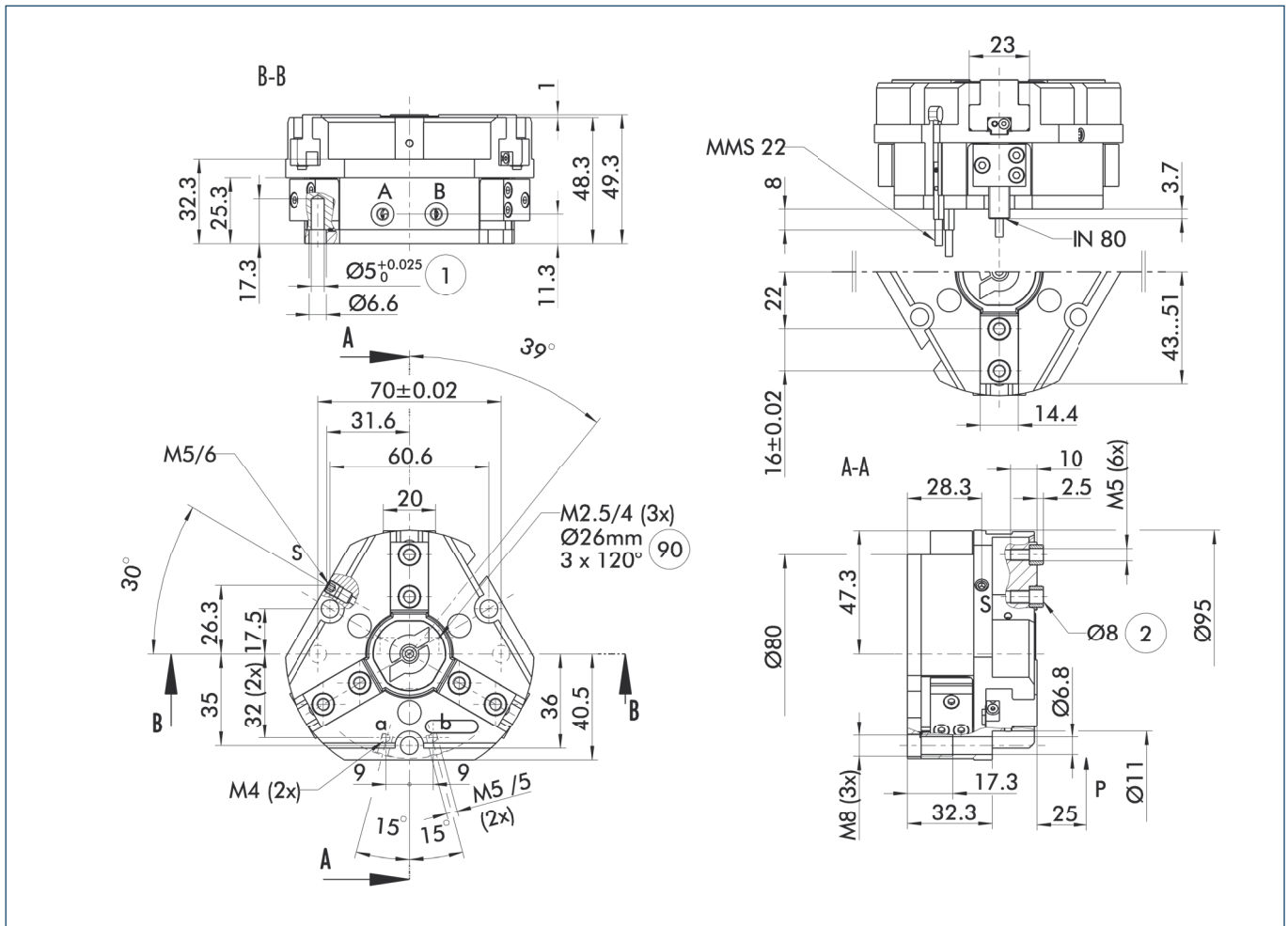


① The indicated moments and forces are static values, apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description	JGZ 80-1	JGZ 80-1-AS	JGZ 80-1-IS
ID	0308930	0308931	0308932
Stroke per finger [mm]	8	8	8
Closing force [N]	1000	1350	
Opening force [N]	1080		1450
Min. spring force [N]		350	370
Weight [kg]	0.79	0.96	0.96
Recommended workpiece weight [kg]	5	5	5
Air consumption per double stroke [cm ³]	60	60	60
Min./max. operating pressure [bar]	2/8	4/6.5	4/6.5
Nominal operating pressure [bar]	6	6	6
Closing/opening time [s]	0.05/0.05	0.03/0.05	0.06/0.04
Max. permitted finger length [mm]	100	90	90
Max. permitted weight per finger [kg]	0.6	0.6	0.6
IP class	40	40	40
Min./max. ambient temperature [°C]	-10/90	-10/90	-10/90
Repeat accuracy [mm]	0.01	0.01	0.01
Cleanroom class			
ISO-classification 14644-1	5	5	5

Main view



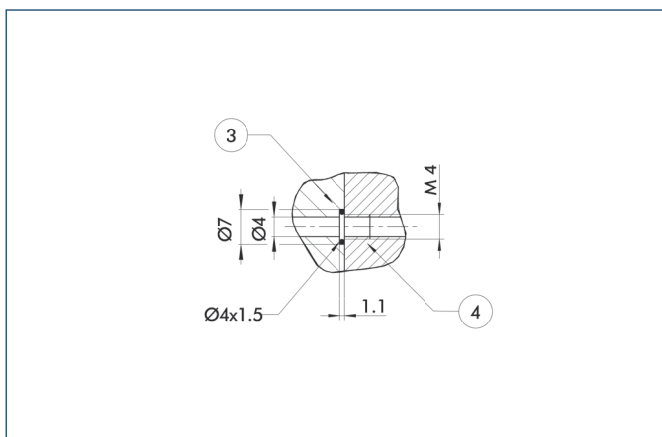
The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can also be used for I.D. or O.D. gripping alternatively or in addition to the spring-loaded, mechanical gripping force maintenance device (see "Accessories" catalog section).

A, a Main/direct connection, gripper opening
 B, b Main/direct connection, gripper closing
 S Air purge connection
 ① Gripper connection

② Finger connection
 ⑨ Thread below the cover for fastening external attachments

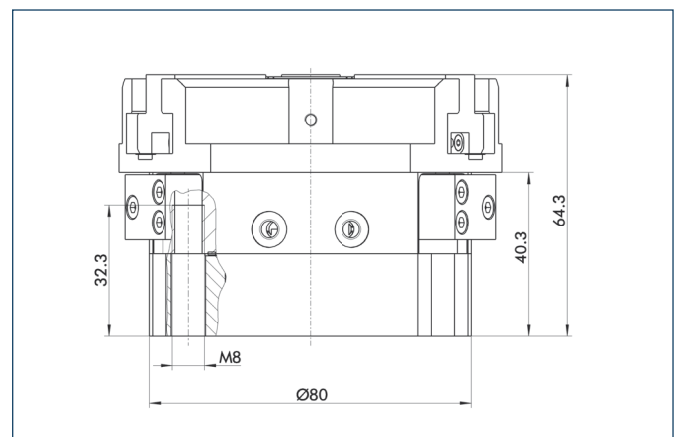
Hose-free direct connection



③ Adapter
 ④ Gripper

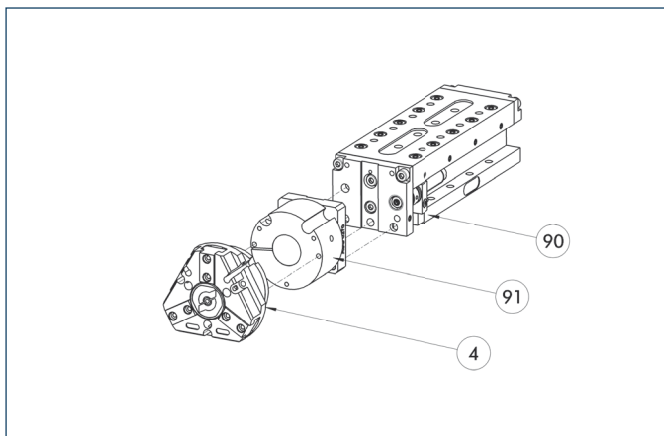
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

AS/IS gripping force maintenance device



The mechanical gripping force maintenance device ensures a minimum gripping force even in case of pressure drop. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force maintenance device can also be used for increasing the gripping force or for single-acting gripping.

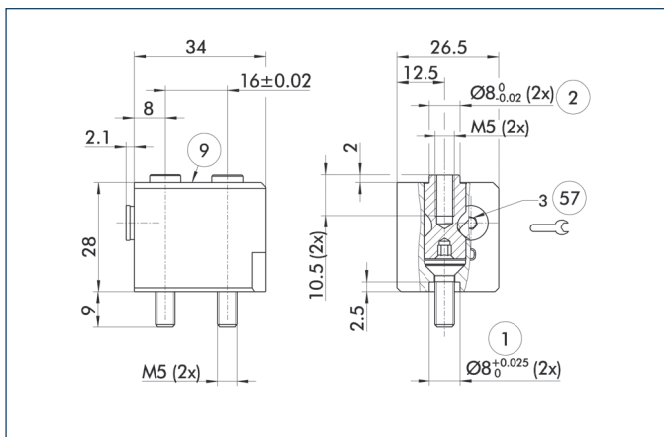
Modular Assembly Automation



- ④ Gripper
- ⑨⑩ CLM
- ⑨① ASG

This gripper can be combined with the standard linear modules LM, KLM, CLM and ELM of the GEMOTEC modular system. For more information see our main catalog "Modular Assembly Automation".

Quick-change Jaw System



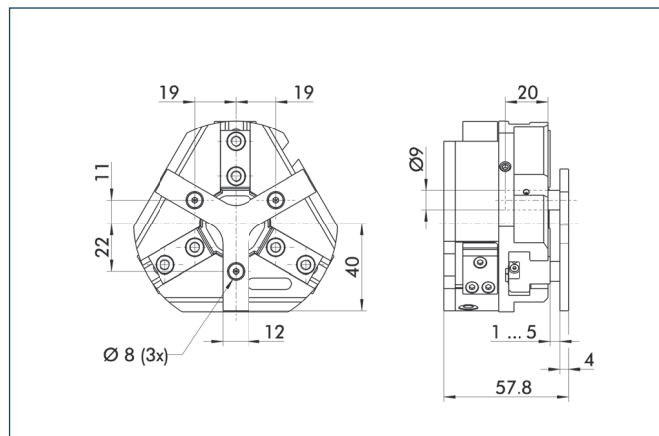
- ① Gripper connection
- ② Finger connection
- ⑨ For mounting screw connection diagram, see basic version
- ⑤⑦ Locking

The BSWS quick-change jaw system enables top jaws to be changed on the gripper manually and rapidly. An adapter (BSWS-A) and a base (BSWS-B) are required for each gripper jaw.

For a reverse assembly without height set-up, one adapter (BSWS-A) and a kit (BSWS-U) per gripper jaw are required. Another effect of the BSWS-U is, that there are no disturbing fastening bores in the finger contour.

Description	ID
Quick-change Jaw System adapter	
BSWS-A 80	0303024
Quick-change Jaw System base	
BSWS-B 80	0303025
Quick-change Jaw System reversed	
BSWS-U 80	0303042

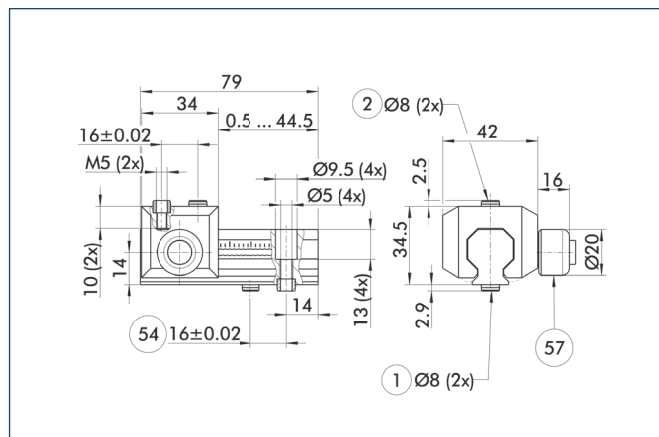
Spring-loaded pressure piece



For spring-supported positioning of the workpiece against a stop after the gripper has opened. Especially developed for loading machines.

Description	ID	Stroke	Min. force
Spring-loaded pressure piece			
A-PZN-plus/DPZ-plus 80	0303721	4 mm	18 N

Universal intermediate jaw



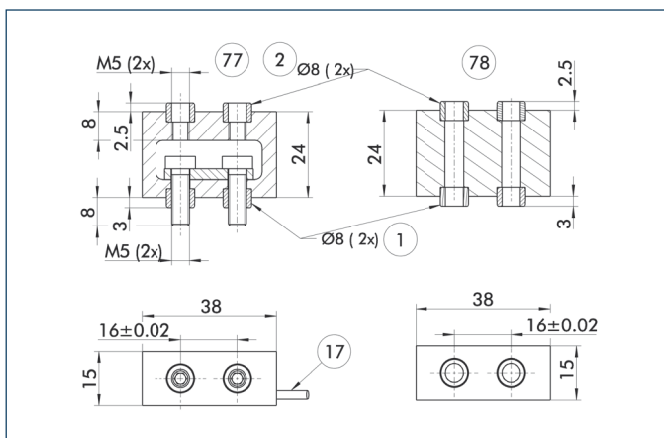
- ① Gripper connection
- ② Finger connection
- ⑤④ Optional right or left connection
- ⑤⑦ Locking

The universal intermediate jaw allows fast tool-free and reliable plugging and shifting of top jaws at the gripper.

Description	ID	Grid dimension
Universal intermediate jaw		
UZB 80	0300043	2 mm
UZB-S 80	5518271	2 mm

- ① The slide UZB-S can be removed completely and has to be ordered separately. Moreover, it allows a fast jaw change.

Force measuring jaws

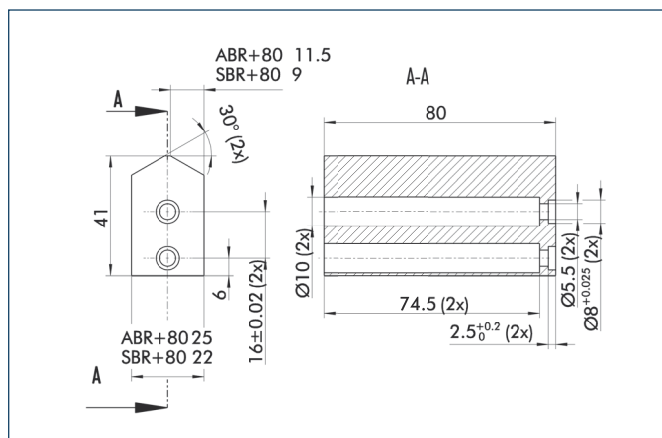


- ① Gripper connection
- ② Finger connection
- ⑦ Active intermediate jaws
- ⑧ Passive intermediate jaws
- ⑰ Cable outlet

Force measuring jaws measure gripping forces, but can also determine workpiece weights or dimensional deviations. There are active and passive intermediate jaws (FMS-ZBA or FMS-ZBP). At least one active force measuring jaw is required per gripper, the rest can be passive. For each active jaw, a FMS-A1 control unit and a FMS-A connection cable are required.

Description	ID
Active intermediate jaws	
FMS-ZBA 80	0301834
Passive intermediate jaws	
FMS-ZBP 80	0301835
Electronic Processor	
FMS-A1	0301810
Connection cables	
FMS-AK0200	0301820
FMS-AK0500	0301821
FMS-AK1000	0301822
FMS-AK2000	0301823

Finger blanks



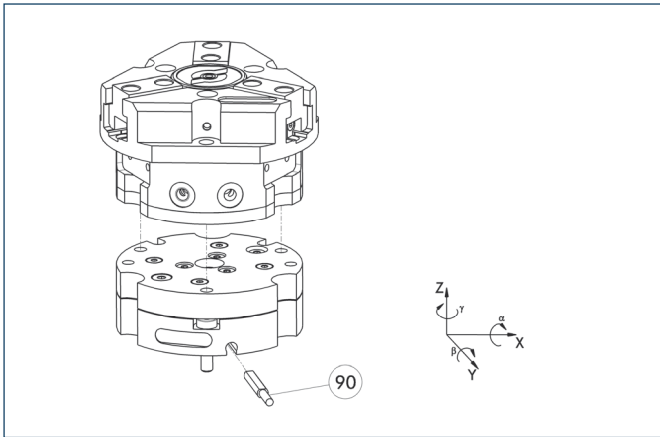
Finger blanks for customized subsequent machining

Description	ID	Material	Scope of delivery
Finger blanks			
ABR-plus 80	0300011	Aluminum	1
SBR-plus 80	0300021	16 MnCr 5	1



You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

Tolerance compensation unit

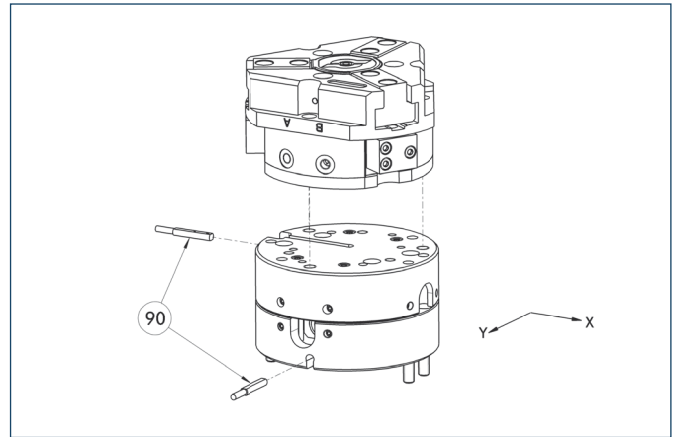


90 Monitoring of locking

Grippers can be directly mounted without an adapter plate. Tolerance compensation unit and gripper have an identical screw connection diagram. Therefore the tolerance compensation units can be assembled later. Please consider the additional assembly height of the tolerance compensation unit. For details see catalog "Robot Accessories".

Description	ID	Locking	Deflection
Compensation unit			
TCU-080-3-MV-Z	0324784	Yes	
TCU-080-3-OV-Z	0324785	No	

Compensation unit with spring reset

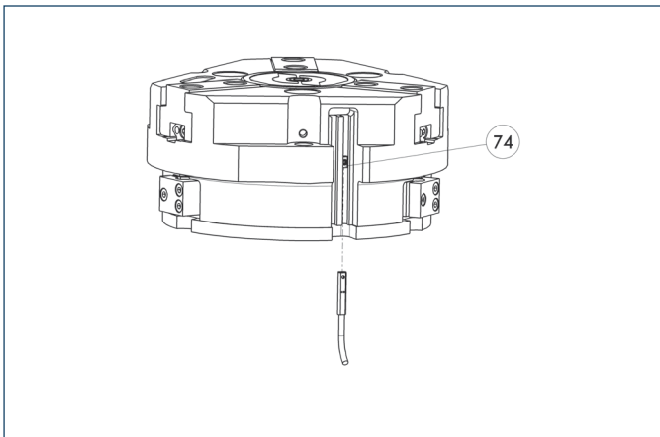


90 Monitoring

Grippers can be directly mounted without using an adapter plate. For details see our catalog "Robot Accessories".

Description	ID	Compensation travel	Reset force
Compensation unit			
AGE-F-XY-063-1	0324940	±4 mm	9 N
AGE-F-XY-063-2	0324941	±4 mm	10 N
AGE-F-XY-063-3	0324942	±4 mm	19.3 N

Programmable magnetic switch



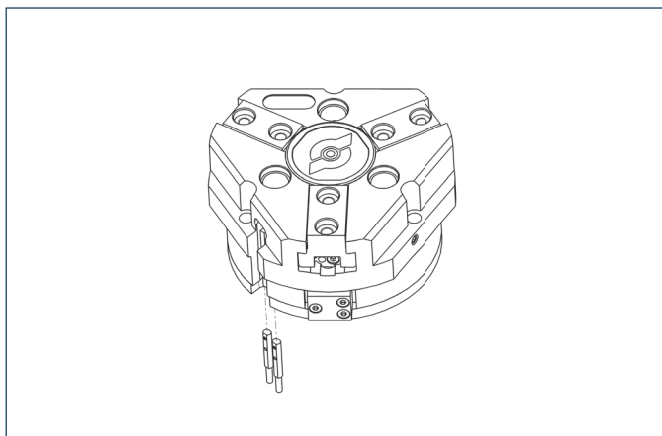
74 Stop for MMS-P

Position monitoring with two programmable positions per sensor. The end position monitoring is mounted in the C-slot.

Description	ID	Recommended product
Programmable magnetic switch		
MMS-P 22-S-M8-PNP	0301370	•
MMSK-P 22-S-PNP	0301371	
Connection cables		
KA BG08-L 4P-0500	0307767	
KA BG08-L 4P-1000	0307768	
KA BW08-L 4P-0500	0307765	
KA BW08-L 4P-1000	0307766	
Sensor Distributor		
V2-M8-4P-2XM8-3P	0301380	

- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.
- ① Per gripper one sensor (closer/NO) is required, optionally a cable extension.

Electronic magnetic switches

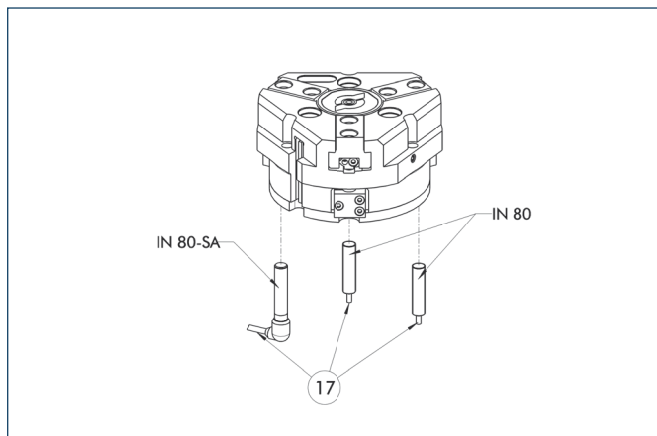


End position monitoring for mounting in the C-slot

Description	ID	Recommended product
Electronic magnetic switches		
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-NPN	0301433	
MMSK 22-S-PNP	0301434	
MMSK 22-S-NPN	0301435	
Electronic magnetic switches with lateral cable outlet		
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M8-PNP-SA	0301442	•
MMS 22-S-M8-NPN-SA	0301443	
MMSK 22-S-PNP-SA	0301444	
MMSK 22-S-NPN-SA	0301445	
Reed Switches		
RMS 22-S-M8	0377720	•
Connection cables		
KA BG05-L 3P-0300	0301652	
KA BG08-L 3P-0300-PNP	0301622	
KA BG08-L 3P-0500-PNP	0301623	
KA BW05-L 3P-0300	0301650	
KA BW08-L 3P-0300-NPN	0301602	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-NPN	9641116	
KA BW08-L 3P-0500-PNP	0301502	
Cable extensions		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	

- ① Two sensors (closer/NO) are required for each gripper, plus extension cables as an option.
- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

Inductive proximity switches



⑰ Cable outlet

End position monitoring for direct mounting

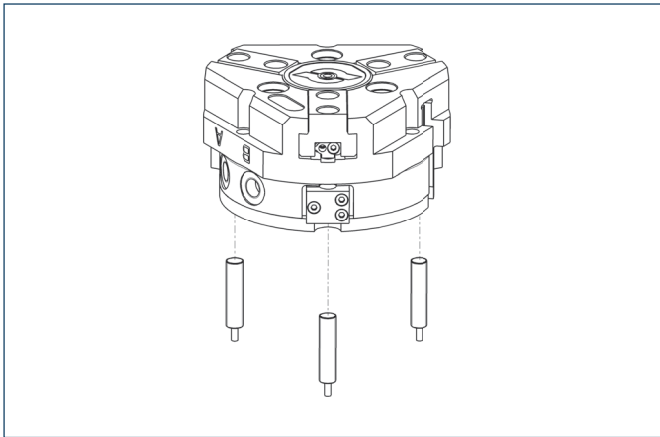
Description	ID	Recommended product
Inductive proximity switches		
IN 80-S-M8	0301478	•
IN 80-S-M12	0301578	
INK 80-S	0301550	
Inductive proximity switch with lateral outlet		
IN 80-S-M12-SA	0301587	
IN 80-S-M8-SA	0301483	•
INK 80-S-SA	0301566	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	
KA BG08-L 3P-0500-PNP	0301623	
KA BG12-L 3P-0500-PNP	30016369	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
KA BW12-L 3P-0300-PNP	0301503	
KA BW12-L 3P-0500-PNP	0301507	
Cable extensions		
KV BG12-SG12 3P-0030-PNP	0301999	
KV BG12-SG12 3P-0060-PNP	0301998	
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	
KV BW12-SG12 3P-0030-PNP	0301595	
KV BW12-SG12 3P-0100-PNP	0301596	
KV BW12-SG12 3P-0200-PNP	0301597	

- ① Two sensors (closer/NO) are required for each gripper, plus extension cables as an option.
- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

Cylindrical Reed Switches

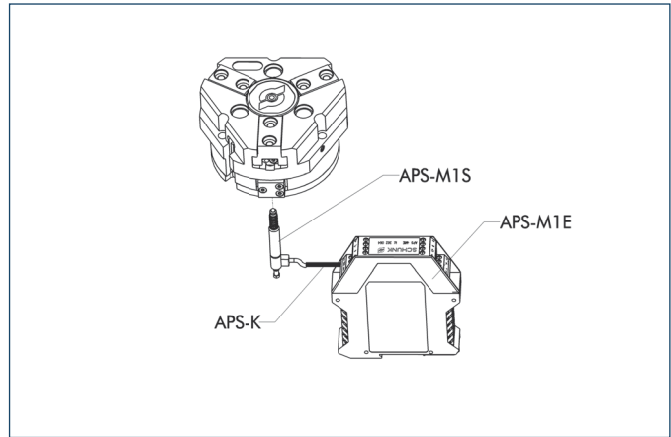


End position monitoring mounted with mounting kit

Description	ID
Mounting kit for proximity switch	
AS-RMS 80 PGN/PZN-plus 64/80	0377725
Reed Switches	
RMS 80-S-M8	0377721

- ① Two sensors (closer/NO) are required for each gripper, plus extension cables as an option.
- ① This mounting kit needs to be ordered optionally as an accessory.
- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

Analog position sensor

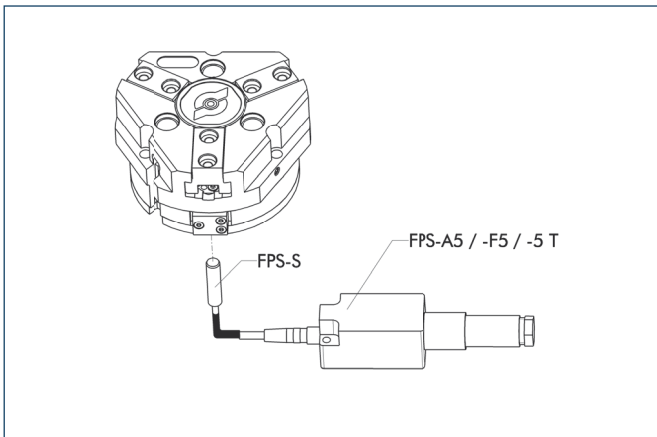


Analog multi position monitoring for any desired positions

Description	ID
Mounting kit	
AS-APS-M1-80/1	0302077
Connection cables	
APS-K0200	0302066
APS-K0700	0302068
Electronic Processor	
APS-M1E	0302064
Sensor	
APS-M1S	0302062

- ① When using an APS system, for each gripper a mounting kit (AS-APS), an APS sensor (APS-M 1S, incl. 3 m cable) as well as an electronics (APS-M1e) are required.
- ① An extension cable (APS-K) can be connected between the sensor and the electronics as an option. The max. cable length between the sensor and the electronics is 10 m, between the electronics and their control unit (PLC) it is max. 1 m.

Flexible Position Sensor



Flexible position monitoring of up to five positions

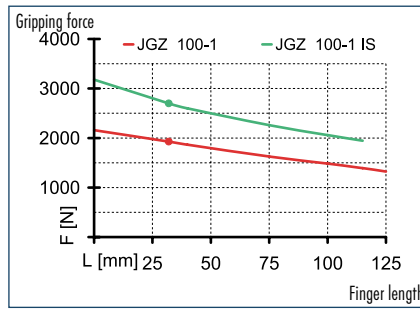
Description	ID
Mounting kit for FPS	
AS-PGN-plus/PZN-plus 80/1, PZB 80/100	0301632
Electronic Processor	
FPS-F5	0301805
FPS-F5 T	0301807
Sensor	
FPS-S M8	0301704

① When using a FPS system, a FPS sensor (FPS-S) and a control unit (FPS-F5 / F5 T or A5) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are available as options in the "Accessories" catalog section.

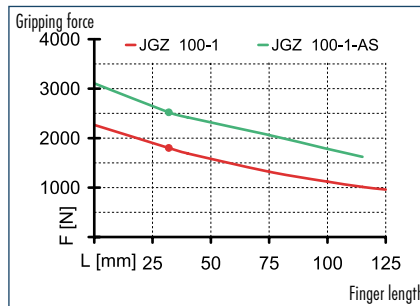




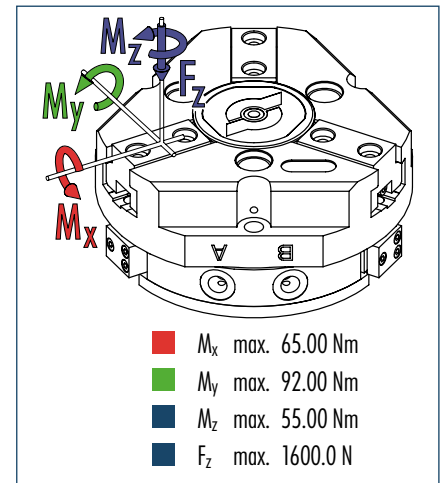
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

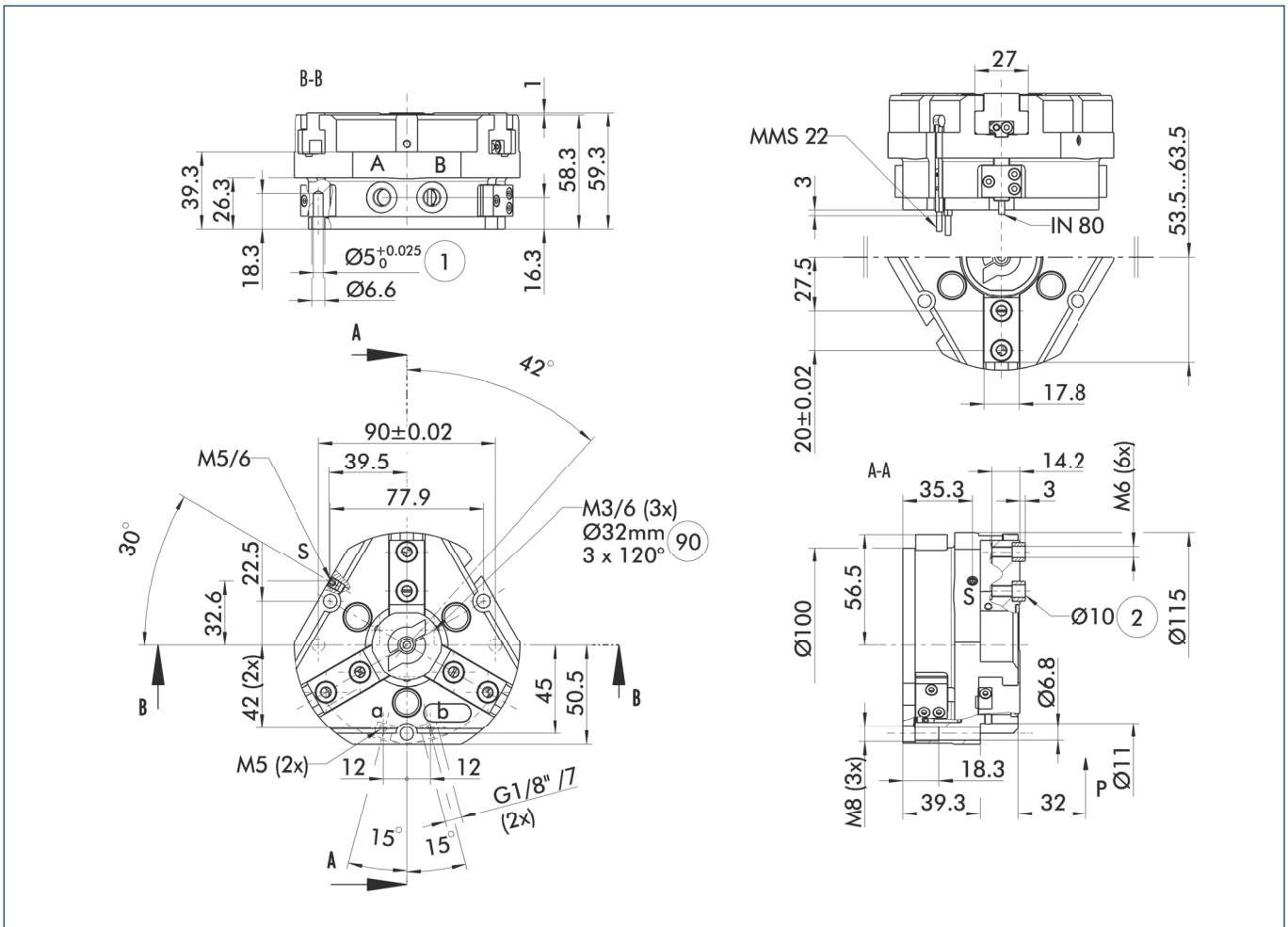


① The indicated moments and forces are static values, apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description	JGZ 100-1	JGZ 100-1-AS	JGZ 100-1-IS
ID	0308940	0308941	0308942
Stroke per finger [mm]	10	10	10
Closing force [N]	1800	2520	
Opening force [N]	1920		2700
Min. spring force [N]		720	780
Weight [kg]	1.41	1.95	1.95
Recommended workpiece weight [kg]	9	9	9
Air consumption per double stroke [cm ³]	120	120	120
Min./max. operating pressure [bar]	2/8	4/6.5	4/6.5
Nominal operating pressure [bar]	6	6	6
Closing/opening time [s]	0.1/0.1	0.1/0.2	0.2/0.1
Max. permitted finger length [mm]	125	115	115
Max. permitted weight per finger [kg]	1.1	1.1	1.1
IP class	40	40	40
Min./max. ambient temperature [°C]	-10/90	-10/90	-10/90
Repeat accuracy [mm]	0.01	0.01	0.01
Cleanroom class			
ISO-classification 14644-1	5	5	5

Main view



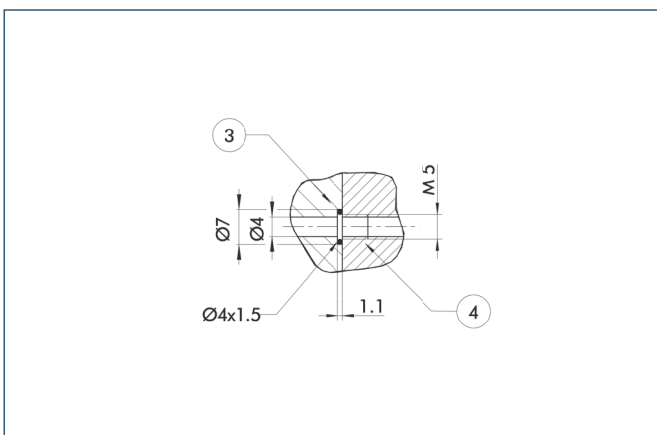
The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can also be used for I.D. or O.D. gripping alternatively or in addition to the spring-loaded, mechanical gripping force maintenance device (see "Accessories" catalog section).

A, a Main/direct connection, gripper opening
 B, b Main/direct connection, gripper closing
 S Air purge connection
 ① Gripper connection

② Finger connection
 90 Thread below the cover for fastening external attachments

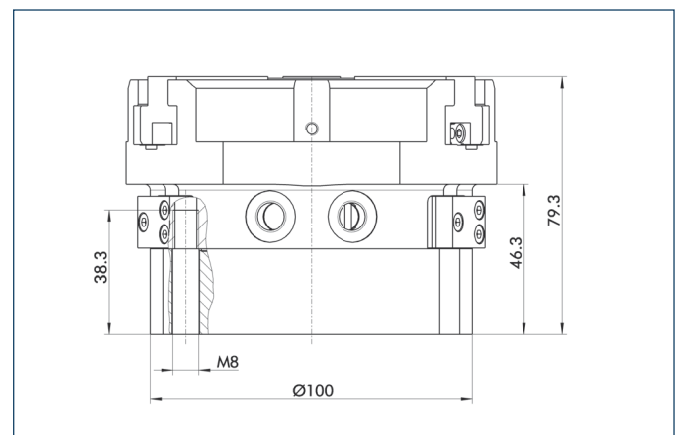
Hose-free direct connection



③ Adapter
 ④ Gripper

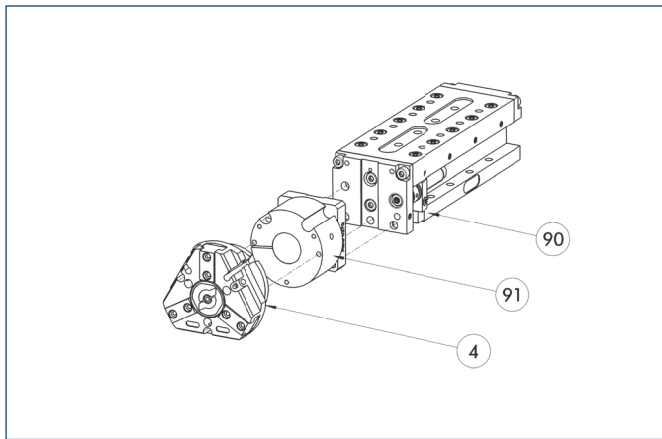
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

AS/IS gripping force maintenance device



The mechanical gripping force maintenance device ensures a minimum gripping force even in case of pressure drop. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force maintenance device can also be used for increasing the gripping force or for single-acting gripping.

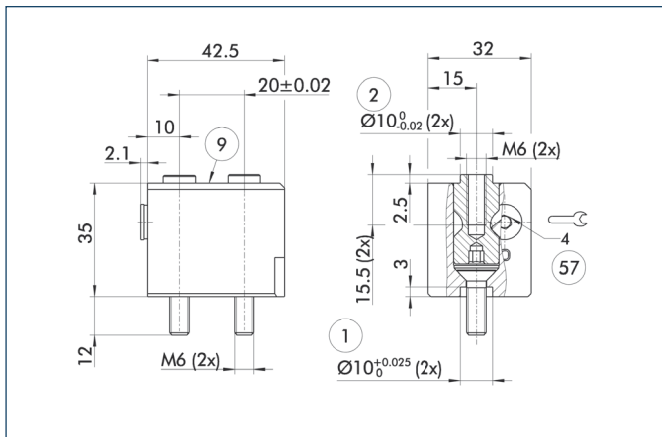
Modular Assembly Automation



- ④ Gripper
- ⑨⑩ CLM
- ⑨① ASG

This gripper can be combined with the standard linear modules LM, KLM, CLM and ELM of the GEMOTEC modular system. For more information see our main catalog "Modular Assembly Automation".

Quick-change Jaw System



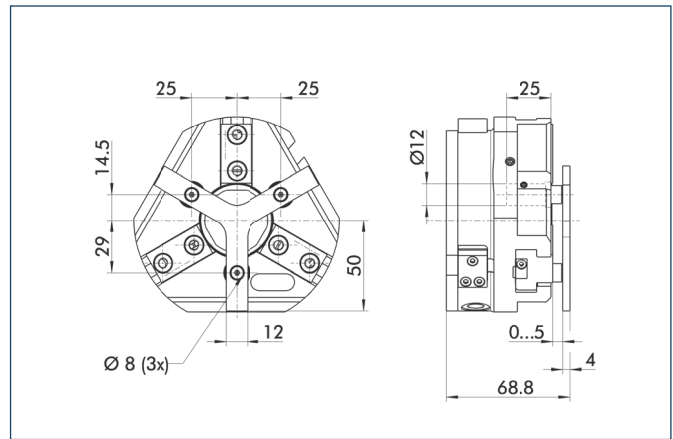
- ① Gripper connection
- ② Finger connection
- ⑨ For mounting screw connection diagram, see basic version
- ⑤⑦ Locking

The BSWS quick-change jaw system enables top jaws to be changed on the gripper manually and rapidly. An adapter (BSWS-A) and a base (BSWS-B) are required for each gripper jaw.

For a reverse assembly without height set-up, one adapter (BSWS-A) and a kit (BSWS-U) per gripper jaw are required. Another effect of the BSWS-U is, that there are no disturbing fastening bores in the finger contour.

Description	ID
Quick-change Jaw System adapter	
BSWS-A 100	0303026
Quick-change Jaw System base	
BSWS-B 100	0303027
Quick-change Jaw System reversed	
BSWS-U 100	0303043

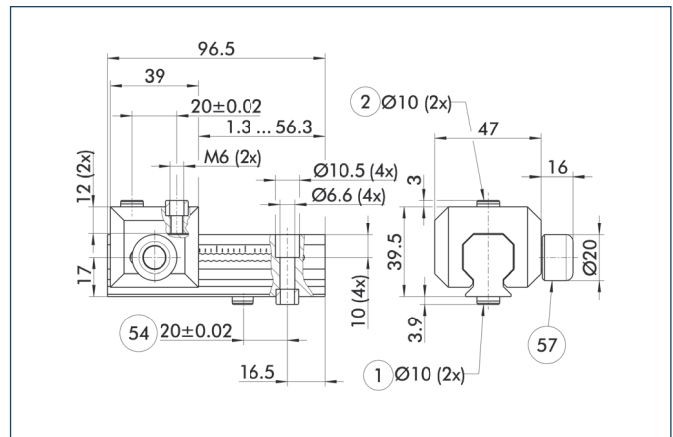
Spring-loaded pressure piece



For spring-supported positioning of the workpiece against a stop after the gripper has opened. Especially developed for loading machines.

Description	ID	Stroke	Min. force
Spring-loaded pressure piece			
A-PZN-plus/DPZ-plus 100	0303722	5 mm	35 N

Universal intermediate jaw



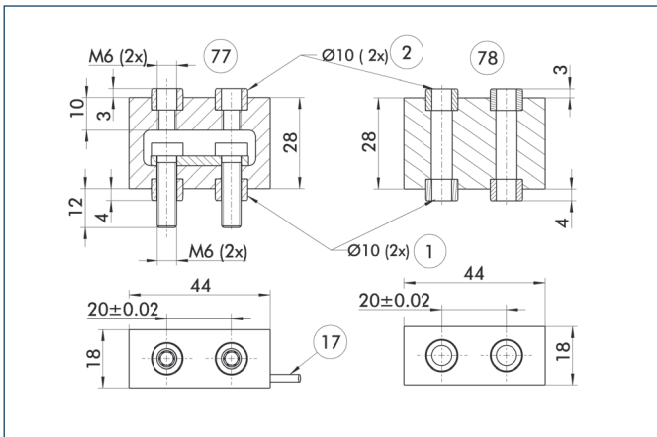
- ① Gripper connection
- ② Finger connection
- ⑤④ Optional right or left connection
- ⑤⑦ Locking

The universal intermediate jaw allows fast tool-free and reliable plugging and shifting of top jaws at the gripper.

Description	ID	Grid dimension
Universal intermediate jaw		
UZB 100	0300044	2.5 mm
UZB-S 100	5518272	2.5 mm

- ① The slide UZB-S can be removed completely and has to be ordered separately. Moreover, it allows a fast jaw change.

Force measuring jaws

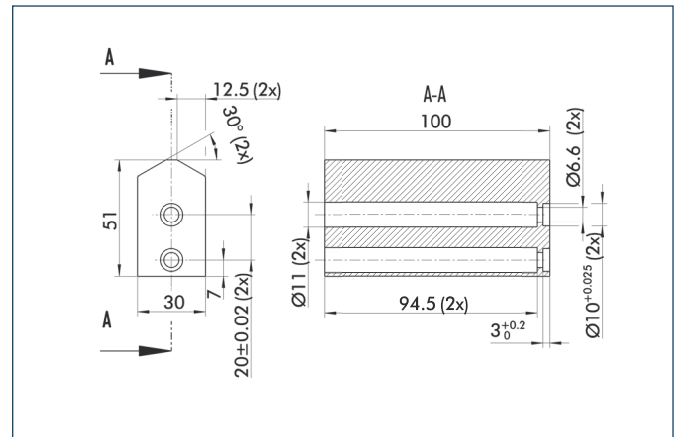


- ① Gripper connection
- ② Finger connection
- ①⑦ Active intermediate jaws
- ⑦⑧ Passive intermediate jaws
- ⑰ Cable outlet

Force measuring jaws measure gripping forces, but can also determine workpiece weights or dimensional deviations. There are active and passive intermediate jaws (FMS-ZBA or FMS-ZBP). At least one active force measuring jaw is required per gripper, the rest can be passive. For each active jaw, a FMS-A1 control unit and a FMS-A connection cable are required.

Description	ID
Active intermediate jaws	
FMS-ZBA 100	0301836
Passive intermediate jaws	
FMS-ZBP 100	0301837
Electronic Processor	
FMS-A1	0301810
Connection cables	
FMS-AK0200	0301820
FMS-AK0500	0301821
FMS-AK1000	0301822
FMS-AK2000	0301823

Finger blanks



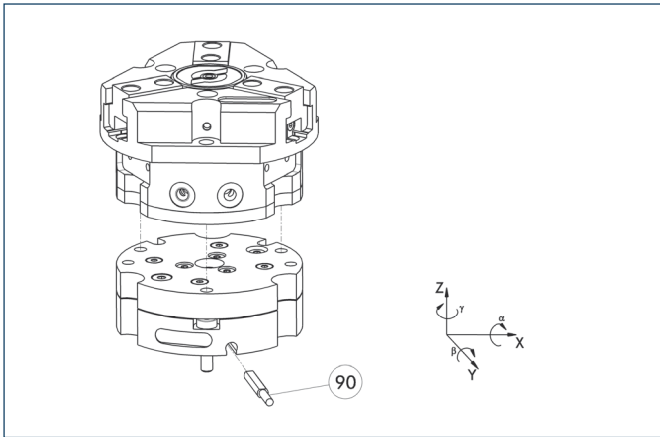
Finger blanks for customized subsequent machining

Description	ID	Material	Scope of delivery
Finger blanks			
ABR-plus 100	0300012	Aluminum	1
SBR-plus 100	0300022	16 MnCr 5	1



You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

Tolerance compensation unit

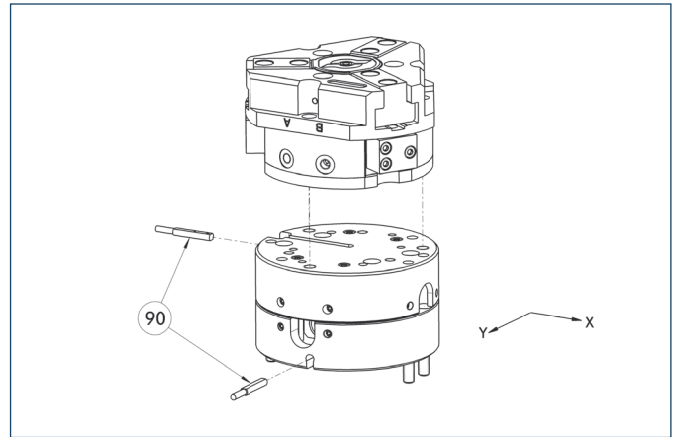


90 Monitoring of locking

Grippers can be directly mounted without an adapter plate. Tolerance compensation unit and gripper have an identical screw connection diagram. Therefore the tolerance compensation units can be assembled later. Please consider the additional assembly height of the tolerance compensation unit. For details see catalog "Robot Accessories".

Description	ID	Locking	Deflection
Compensation unit			
TCU-100-2-MV-Z	0324794	Yes	
TCU-100-2-OV-Z	0324799	No	

Compensation unit with spring reset

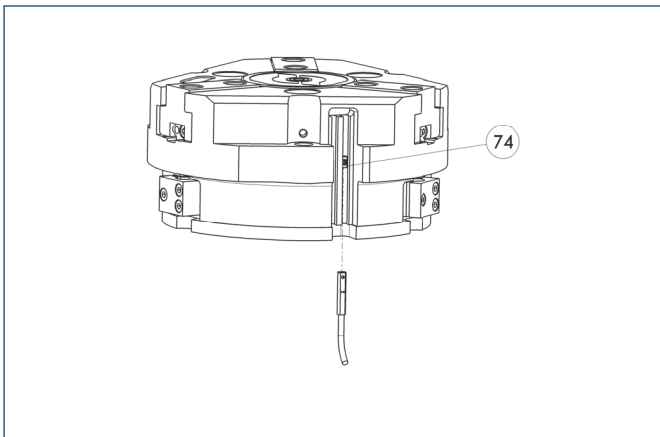


90 Monitoring

Grippers can be directly mounted without using an adapter plate. For details see our catalog "Robot Accessories".

Description	ID	Compensation travel	Reset force
Compensation unit			
AGE-F-XY-080-1	0324960	±5 mm	28.3 N
AGE-F-XY-080-2	0324961	±5 mm	42.5 N
AGE-F-XY-080-3	0324962	±5 mm	47.6 N

Programmable magnetic switch



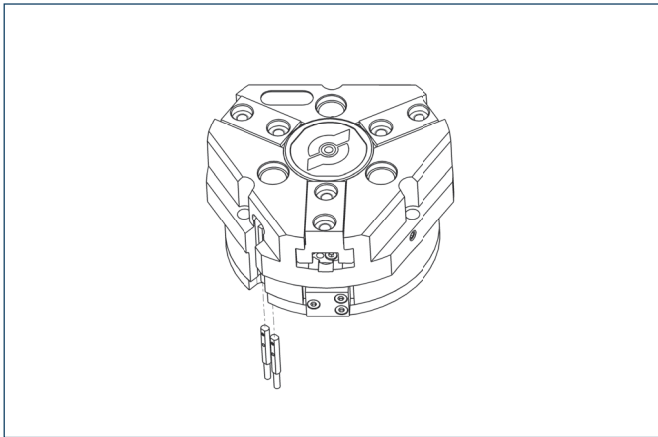
74 Stop for MMS-P

Position monitoring with two programmable positions per sensor. The end position monitoring is mounted in the C-slot.

Description	ID	Recommended product
Programmable magnetic switch		
MMS-P 22-S-M8-PNP	0301370	•
MMSK-P 22-S-PNP	0301371	
Connection cables		
KA BG08-L 4P-0500	0307767	
KA BG08-L 4P-1000	0307768	
KA BW08-L 4P-0500	0307765	
KA BW08-L 4P-1000	0307766	
Sensor Distributor		
V2-M8-4P-2XM8-3P	0301380	

- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.
- ① Per gripper one sensor (closer/NO) is required, optionally a cable extension.

Electronic magnetic switches

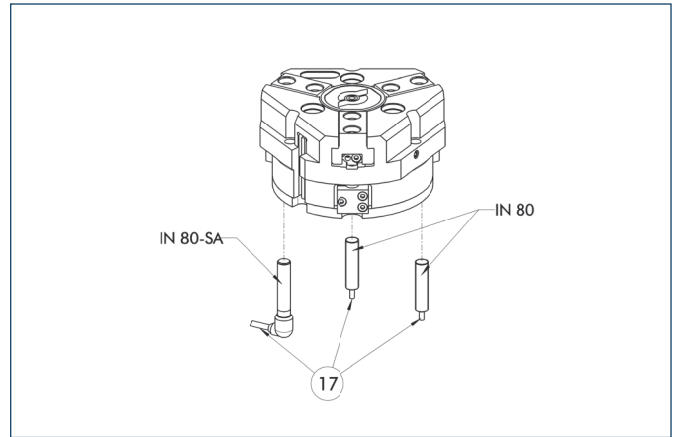


End position monitoring for mounting in the C-slot

Description	ID	Recommended product
Electronic magnetic switches		
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-NPN	0301433	
MMSK 22-S-PNP	0301434	
MMSK 22-S-NPN	0301435	
Electronic magnetic switches with lateral cable outlet		
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M8-PNP-SA	0301442	•
MMS 22-S-M8-NPN-SA	0301443	
MMSK 22-S-PNP-SA	0301444	
MMSK 22-S-NPN-SA	0301445	
Reed Switches		
RMS 22-S-M8	0377720	•
Connection cables		
KA BG05-L 3P-0300	0301652	
KA BG08-L 3P-0300-PNP	0301622	
KA BG08-L 3P-0500-PNP	0301623	
KA BW05-L 3P-0300	0301650	
KA BW08-L 3P-0300-NPN	0301602	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-NPN	9641116	
KA BW08-L 3P-0500-PNP	0301502	
Cable extensions		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	

- ① Two sensors (closer/NO) are required for each gripper, plus extension cables as an option.
- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

Inductive proximity switches



⑰ Cable outlet

End position monitoring for direct mounting

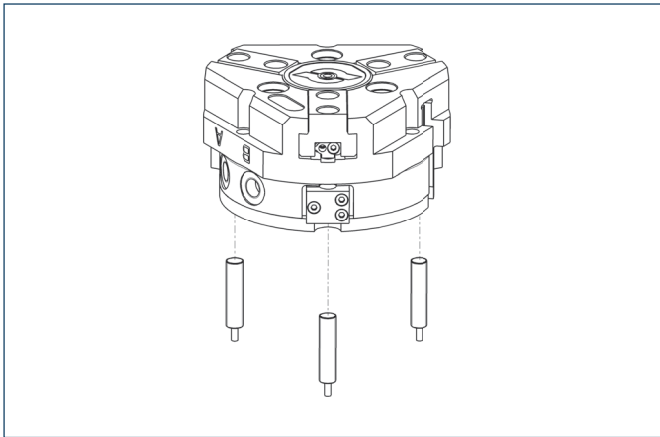
Description	ID	Recommended product
Inductive proximity switches		
IN 80-S-M8	0301478	•
IN 80-S-M12	0301578	
INK 80-S	0301550	
Inductive proximity switch with lateral outlet		
IN 80-S-M12-SA	0301587	
IN 80-S-M8-SA	0301483	•
INK 80-S-SA	0301566	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	
KA BG08-L 3P-0500-PNP	0301623	
KA BG12-L 3P-0500-PNP	30016369	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
KA BW12-L 3P-0300-PNP	0301503	
KA BW12-L 3P-0500-PNP	0301507	
Cable extensions		
KV BG12-SG12 3P-0030-PNP	0301999	
KV BG12-SG12 3P-0060-PNP	0301998	
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	
KV BW12-SG12 3P-0030-PNP	0301595	
KV BW12-SG12 3P-0100-PNP	0301596	
KV BW12-SG12 3P-0200-PNP	0301597	

- ① Two sensors (closer/NO) are required for each gripper, plus extension cables as an option.
- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

Cylindrical Reed Switches

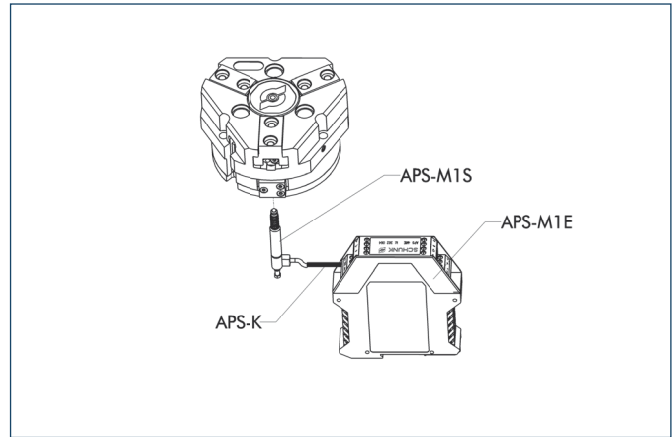


End position monitoring mounted with mounting kit

Description	ID
Mounting kit for proximity switch	
AS-RMS 80 PGN/ PZN-plus 100/125	0377726
Reed Switches	
RMS 80-S-M8	0377721

- ① Two sensors (closer/NO) are required for each gripper, plus extension cables as an option.
- ① This mounting kit needs to be ordered optionally as an accessory.
- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

Analog position sensor

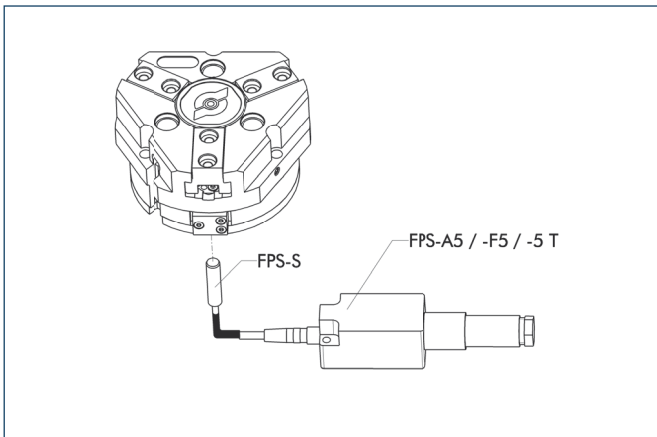


Analog multi position monitoring for any desired positions

Description	ID
Mounting kit	
AS-APS-M1-100/1	0302079
Connection cables	
APS-K0200	0302066
APS-K0700	0302068
Electronic Processor	
APS-M1E	0302064
Sensor	
APS-M1S	0302062

- ① When using an APS system, for each gripper a mounting kit (AS-APS), an APS sensor (APS-M 1S, incl. 3 m cable) as well as an electronics (APS-M1e) are required.
- ① An extension cable (APS-K) can be connected between the sensor and the electronics as an option. The max. cable length between the sensor and the electronics is 10 m, between the electronics and their control unit (PLC) it is max. 1 m.

Flexible Position Sensor



Flexible position monitoring of up to five positions

Description	ID
Mounting kit for FPS	
AS-PGN/PZN-plus 100/1	0301634
Electronic Processor	
FPS-F5	0301805
FPS-F5 T	0301807
Sensor	
FPS-S M8	0301704

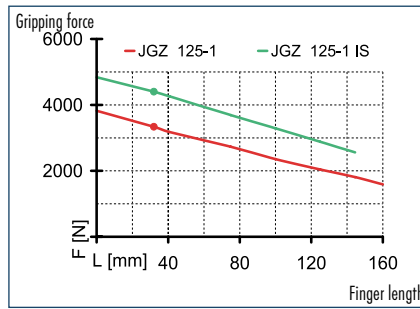
- ① When using a FPS system, a FPS sensor (FPS-S) and a control unit (FPS-F5 / F5 T or A5) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are available as options in the “Accessories” catalog section.



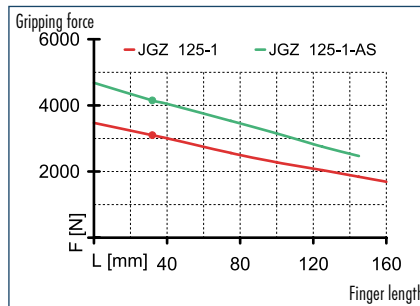
You can find more detailed information and individual parts of the above-mentioned accessories in the “Accessories” catalog section.



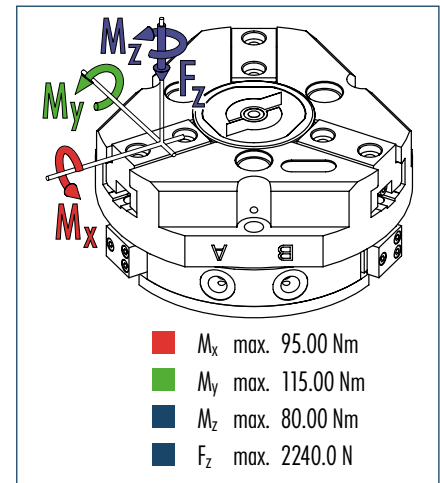
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

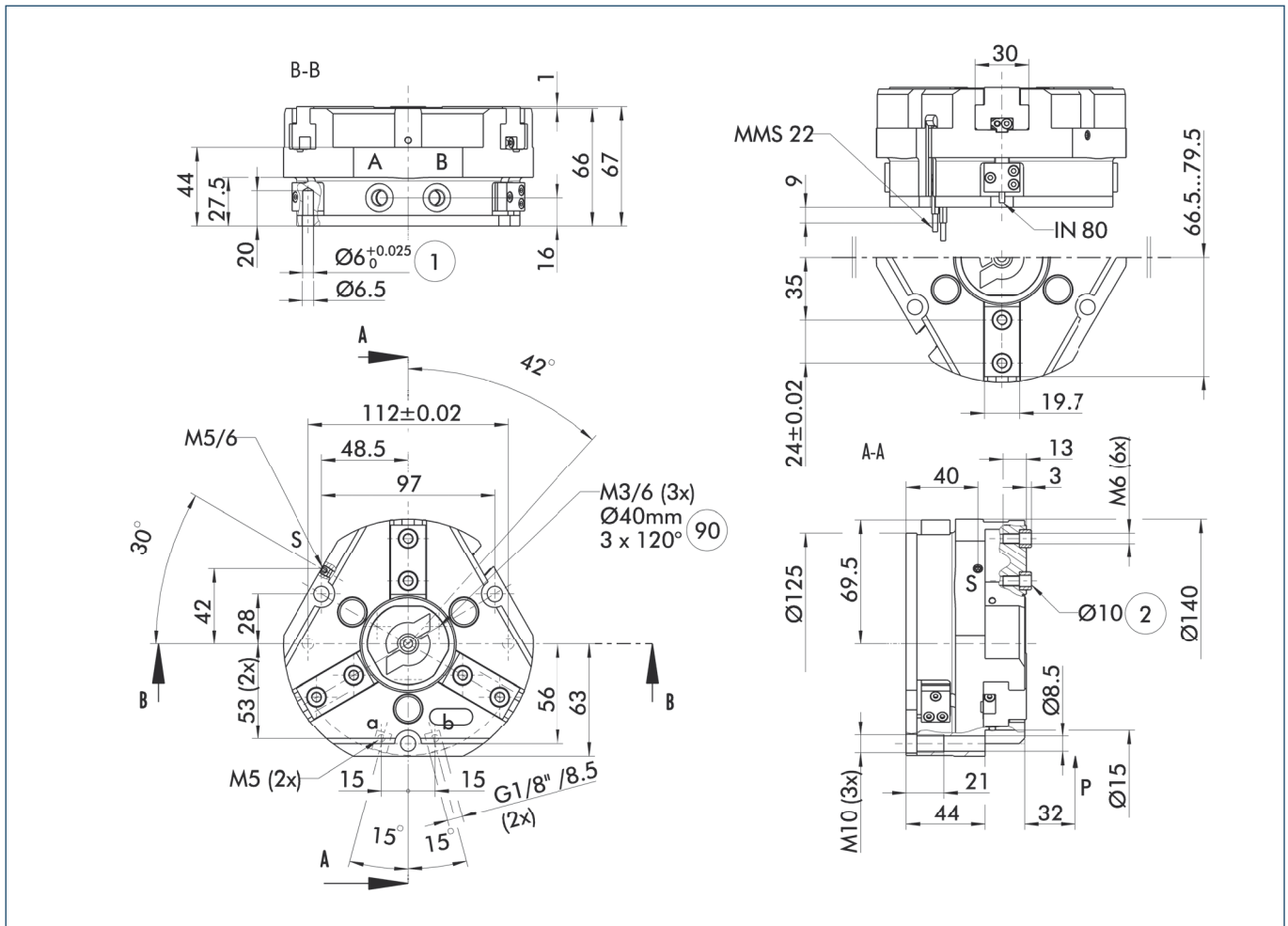


① The indicated moments and forces are static values, apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description	JGZ 125-1	JGZ 125-1-AS	JGZ 125-1-IS
ID	0308950	0308951	0308952
Stroke per finger [mm]	13	13	13
Closing force [N]	3100	4150	
Opening force [N]	3330		4400
Min. spring force [N]		1050	1070
Weight [kg]	2.8	3.6	3.6
Recommended workpiece weight [kg]	15.5	15.5	15.5
Air consumption per double stroke [cm ³]	230	230	230
Min./max. operating pressure [bar]	2/8	4/6.5	4/6.5
Nominal operating pressure [bar]	6	6	6
Closing/opening time [s]	0.2/0.2	0.17/0.35	0.35/0.17
Max. permitted finger length [mm]	160	145	145
Max. permitted weight per finger [kg]	2.1	2.1	2.1
IP class	40	40	40
Min./max. ambient temperature [°C]	-10/90	-10/90	-10/90
Repeat accuracy [mm]	0.01	0.01	0.01
Cleanroom class			
ISO-classification 14644-1	5	5	5

Main view



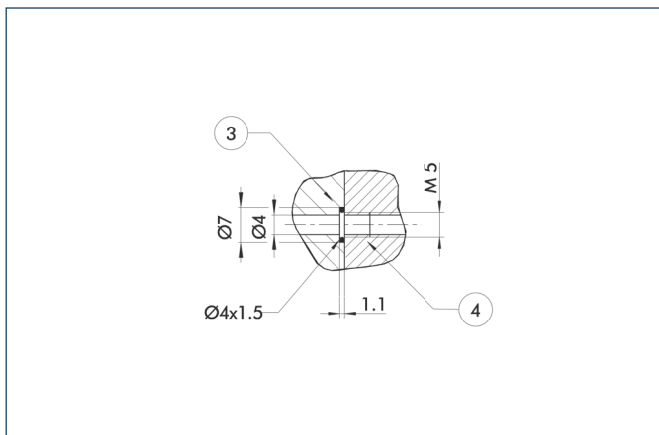
The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can also be used for I.D. or O.D. gripping alternatively or in addition to the spring-loaded, mechanical gripping force maintenance device (see "Accessories" catalog section).

A, a Main/direct connection, gripper opening
 B, b Main/direct connection, gripper closing
 S Air purge connection
 ① Gripper connection

② Finger connection
 90 Thread below the cover for fastening external attachments

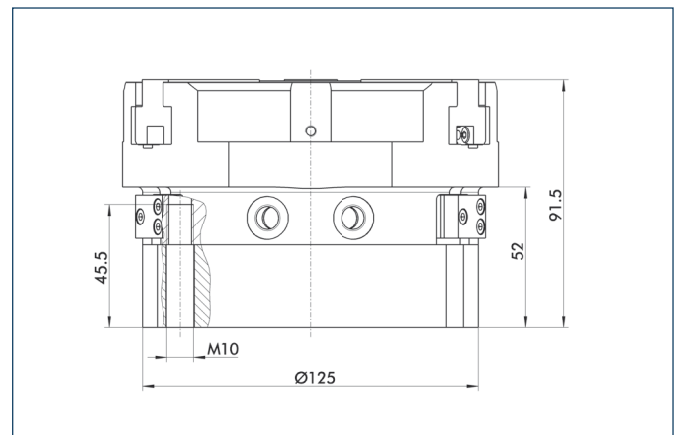
Hose-free direct connection



③ Adapter
 ④ Gripper

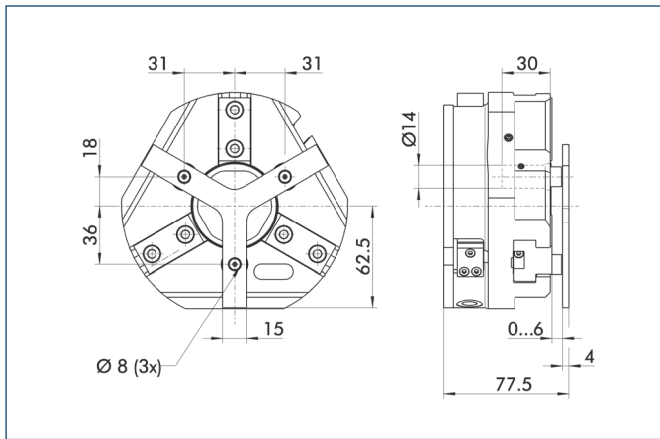
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

AS/IS gripping force maintenance device



The mechanical gripping force maintenance device ensures a minimum gripping force even in case of pressure drop. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force maintenance device can also be used for increasing the gripping force or for single-acting gripping.

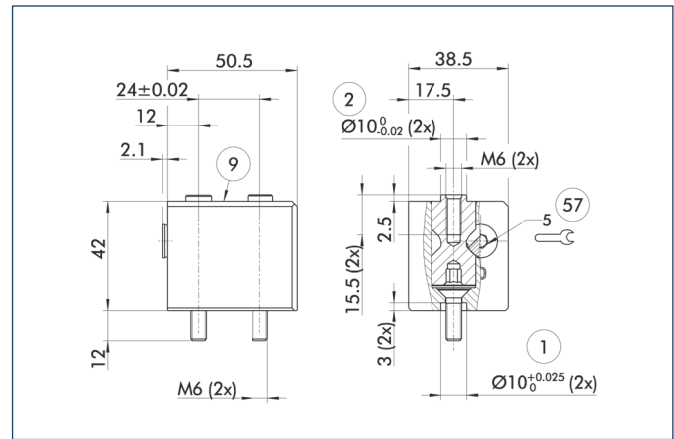
Spring-loaded pressure piece



For spring-supported positioning of the workpiece against a stop after the gripper has opened. Especially developed for loading machines.

Description	ID	Stroke	Min. force
Spring-loaded pressure piece			
A-PZN-plus/DPZ-plus 125	0303723	6 mm	105 N

Quick-change Jaw System



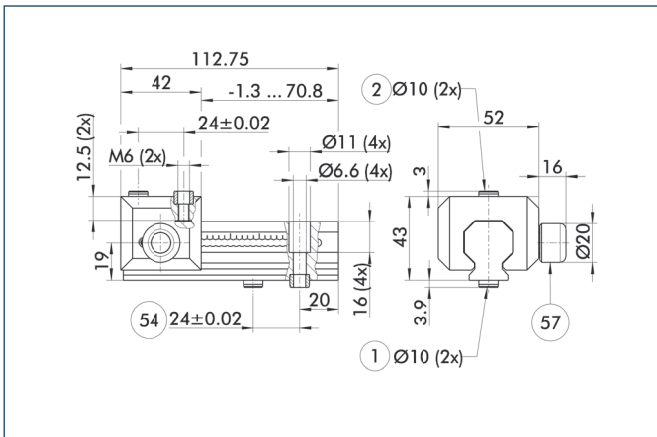
- ① Gripper connection
- ② Finger connection
- ⑨ For mounting screw connection diagram, see basic version
- ⑤⑦ Locking

The BSWS quick-change jaw system enables top jaws to be changed on the gripper manually and rapidly. An adapter (BSWS-A) and a base (BSWS-B) are required for each gripper jaw.

For a reverse assembly without height set-up, one adapter (BSWS-A) and a kit (BSWS-U) per gripper jaw are required. Another effect of the BSWS-U is, that there are no disturbing fastening bores in the finger contour.

Description	ID
Quick-change Jaw System adapter	
BSWS-A 125	0303028
Quick-change Jaw System base	
BSWS-B 125	0303029
Quick-change Jaw System reversed	
BSWS-U 125	0303044

Universal intermediate jaw



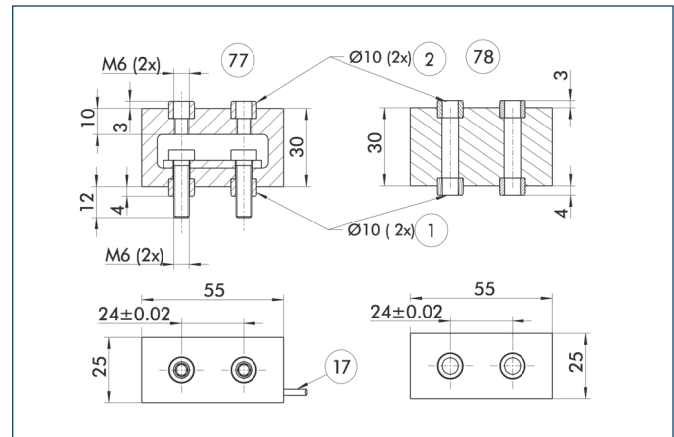
- ① Gripper connection
- ② Finger connection
- ⑤④ Optional right or left connection
- ⑤⑦ Locking

The universal intermediate jaw allows fast tool-free and reliable plugging and shifting of top jaws at the gripper.

Description	ID	Grid dimension
Universal intermediate jaw		
UZB 125	0300045	3 mm
UZB-S 125	5518273	3 mm

- ① The slide UZB-S can be removed completely and has to be ordered separately. Moreover, it allows a fast jaw change.

Force measuring jaws

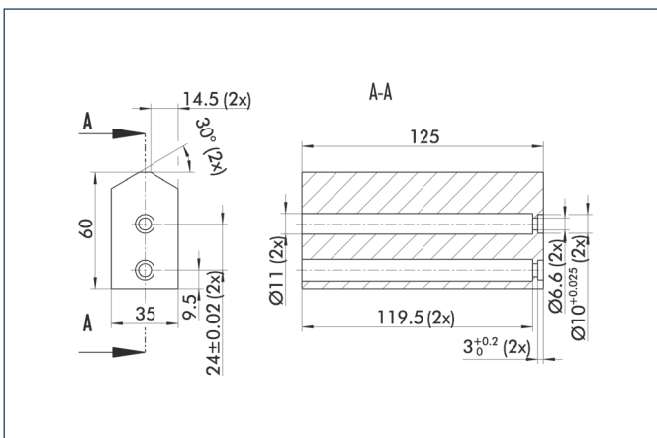


- ① Gripper connection
- ② Finger connection
- ①⑦ Cable outlet
- ⑦⑦ Active intermediate jaws
- ⑦⑧ Passive intermediate jaws

Force measuring jaws measure gripping forces, but can also determine workpiece weights or dimensional deviations. There are active and passive intermediate jaws (FMS-ZBA or FMS-ZBP). At least one active force measuring jaw is required per gripper, the rest can be passive. For each active jaw, a FMS-A1 control unit and a FMS-A connection cable are required.

Description	ID
Active intermediate jaws	
FMS-ZBA 125	0301838
Passive intermediate jaws	
FMS-ZBP 125	0301839
Electronic Processor	
FMS-A1	0301810
Connection cables	
FMS-AK0200	0301820
FMS-AK0500	0301821
FMS-AK1000	0301822
FMS-AK2000	0301823

Finger blanks

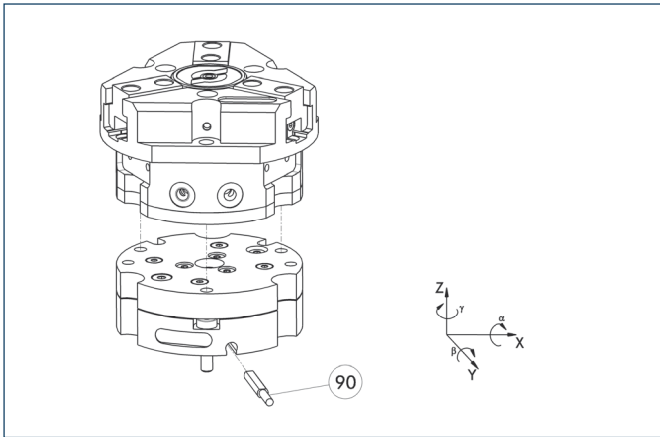


Finger blanks for customized subsequent machining

Description	ID	Material	Scope of delivery
Finger blanks			
ABR-plus 125	0300013	Aluminum	1
SBR-plus 125	0300023	16 MnCr 5	1

You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

Tolerance compensation unit

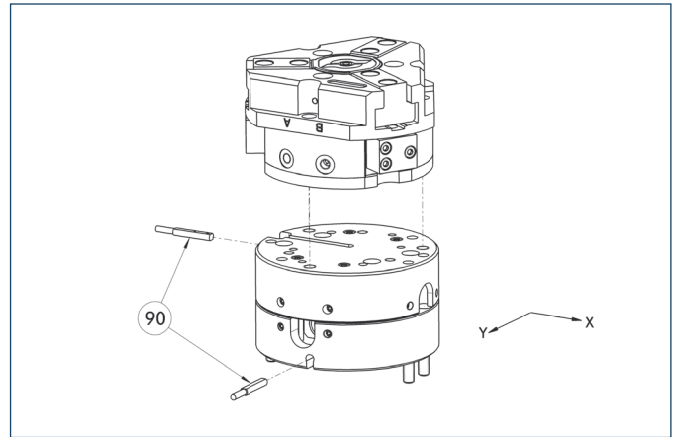


90 Monitoring of locking

Grippers can be directly mounted without an adapter plate. Tolerance compensation unit and gripper have an identical screw connection diagram. Therefore the tolerance compensation units can be assembled later. Please consider the additional assembly height of the tolerance compensation unit. For details see catalog "Robot Accessories".

Description	ID	Locking	Deflection
Compensation unit			
TCU-125-3-MV-Z	0324820	Yes	
TCU-125-3-OV-Z	0324821	No	

Compensation unit with spring reset

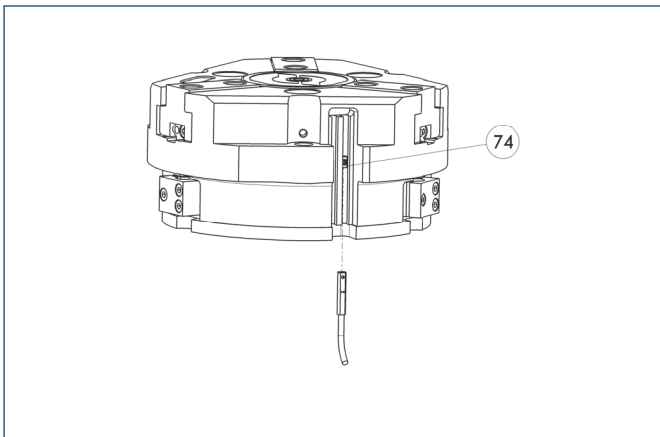


90 Monitoring

Grippers can be directly mounted without using an adapter plate. For details see our catalog "Robot Accessories".

Description	ID	Compensation travel	Reset force
Compensation unit			
AGE-F-XY-080-1	0324960	±5 mm	28.3 N
AGE-F-XY-080-2	0324961	±5 mm	42.5 N
AGE-F-XY-080-3	0324962	±5 mm	47.6 N

Programmable magnetic switch



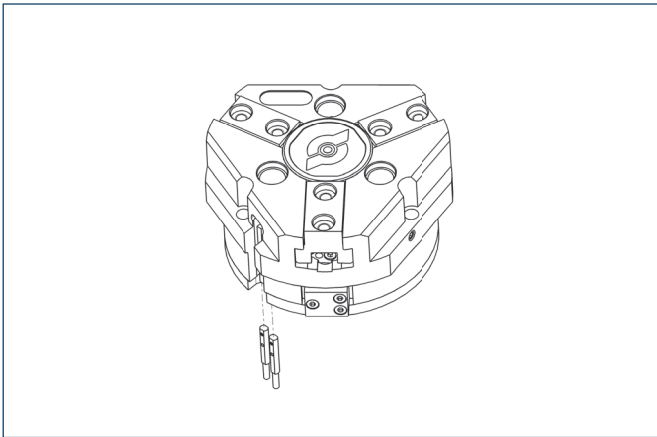
74 Stop for MMS-P

Position monitoring with two programmable positions per sensor. The end position monitoring is mounted in the C-slot.

Description	ID	Recommended product
Programmable magnetic switch		
MMS-P 22-S-M8-PNP	0301370	•
MMSK-P 22-S-PNP	0301371	
Connection cables		
KA BG08-L 4P-0500	0307767	
KA BG08-L 4P-1000	0307768	
KA BW08-L 4P-0500	0307765	
KA BW08-L 4P-1000	0307766	
Sensor Distributor		
V2-M8-4P-2XM8-3P	0301380	

- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.
- ① Per gripper one sensor (closer/NO) is required, optionally a cable extension.

Electronic magnetic switches

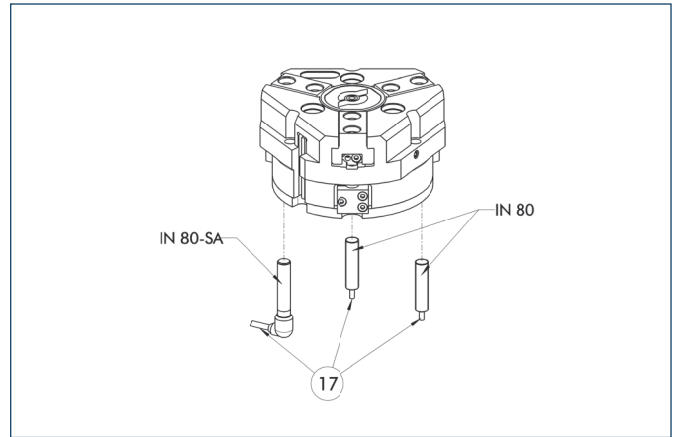


End position monitoring for mounting in the C-slot

Description	ID	Recommended product
Electronic magnetic switches		
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-NPN	0301433	
MMSK 22-S-PNP	0301434	
MMSK 22-S-NPN	0301435	
Electronic magnetic switches with lateral cable outlet		
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M8-PNP-SA	0301442	•
MMS 22-S-M8-NPN-SA	0301443	
MMSK 22-S-PNP-SA	0301444	
MMSK 22-S-NPN-SA	0301445	
Reed Switches		
RMS 22-S-M8	0377720	•
Connection cables		
KA BG05-L 3P-0300	0301652	
KA BG08-L 3P-0300-PNP	0301622	
KA BG08-L 3P-0500-PNP	0301623	
KA BW05-L 3P-0300	0301650	
KA BW08-L 3P-0300-NPN	0301602	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-NPN	9641116	
KA BW08-L 3P-0500-PNP	0301502	
Cable extensions		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	

- ① Two sensors (closer/NO) are required for each gripper, plus extension cables as an option.
- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

Inductive proximity switches



⑰ Cable outlet

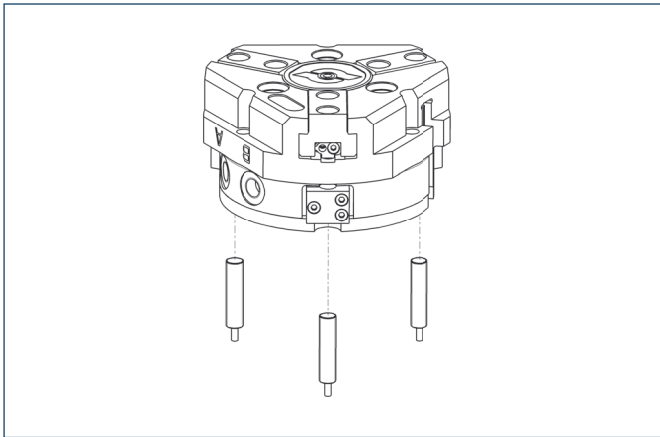
End position monitoring for direct mounting

Description	ID	Recommended product
Inductive proximity switches		
IN 80-S-M8	0301478	•
IN 80-S-M12	0301578	
INK 80-S	0301550	
Inductive proximity switch with lateral outlet		
IN 80-S-M12-SA	0301587	
IN 80-S-M8-SA	0301483	•
INK 80-S-SA	0301566	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	
KA BG08-L 3P-0500-PNP	0301623	
KA BG12-L 3P-0500-PNP	30016369	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
KA BW12-L 3P-0300-PNP	0301503	
KA BW12-L 3P-0500-PNP	0301507	
Cable extensions		
KV BG12-SG12 3P-0030-PNP	0301999	
KV BG12-SG12 3P-0060-PNP	0301998	
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	
KV BW12-SG12 3P-0030-PNP	0301595	
KV BW12-SG12 3P-0100-PNP	0301596	
KV BW12-SG12 3P-0200-PNP	0301597	

- ① Two sensors (closer/NO) are required for each gripper, plus extension cables as an option.
- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

Cylindrical Reed Switches

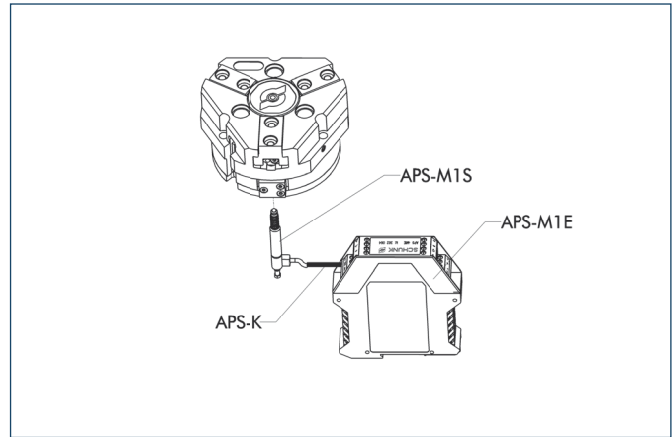


End position monitoring mounted with mounting kit

Description	ID
Mounting kit for proximity switch	
AS-RMS 80	
PGN/PZN-plus 100/125	0377726
Reed Switches	
RMS 80-S-M8	0377721

- ① Two sensors (closer/NO) are required for each gripper, plus extension cables as an option.
- ① This mounting kit needs to be ordered optionally as an accessory.
- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

Analog position sensor

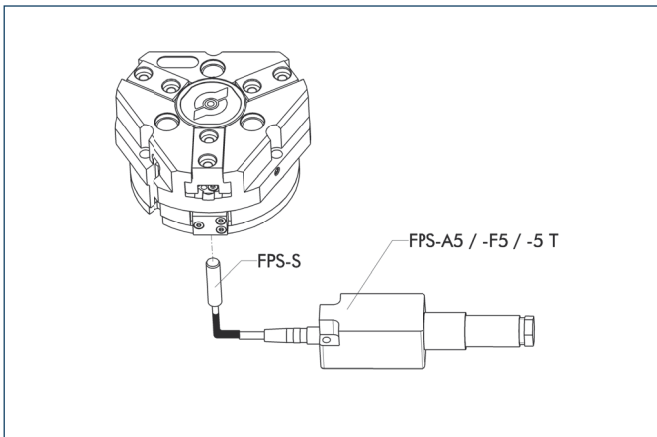


Analog multi position monitoring for any desired positions

Description	ID
Mounting kit	
AS-APS-M1-125/1	0302081
Connection cables	
APS-K0200	0302066
APS-K0700	0302068
Electronic Processor	
APS-M1E	0302064
Sensor	
APS-M1S	0302062

- ① When using an APS system, for each gripper a mounting kit (AS-APS), an APS sensor (APS-M 1S, incl. 3 m cable) as well as an electronics (APS-M1e) are required.
- ① An extension cable (APS-K) can be connected between the sensor and the electronics as an option. The max. cable length between the sensor and the electronics is 10 m, between the electronics and their control unit (PLC) it is max. 1 m.

Flexible Position Sensor



Flexible position monitoring of up to five positions

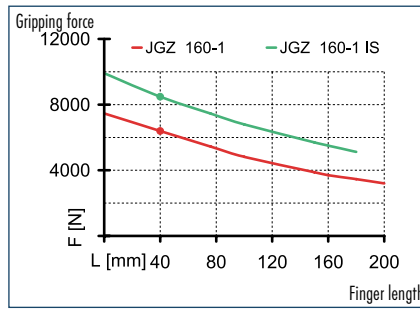
Description	ID
Mounting kit for FPS	
AS-PGN/PZN-plus 125/1, PZB 160	0301636
Electronic Processor	
FPS-F5	0301805
FPS-F5 T	0301807
Sensor	
FPS-S M8	0301704

① When using a FPS system, a FPS sensor (FPS-S) and a control unit (FPS-F5 / F5 T or A5) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are available as options in the "Accessories" catalog section.

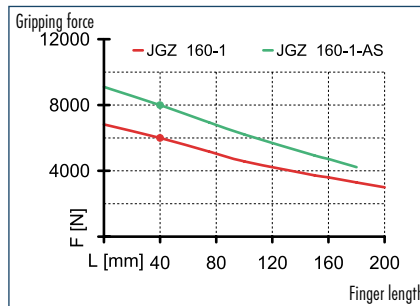
You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.



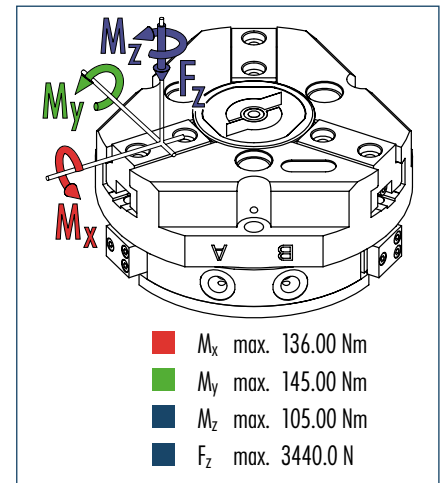
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

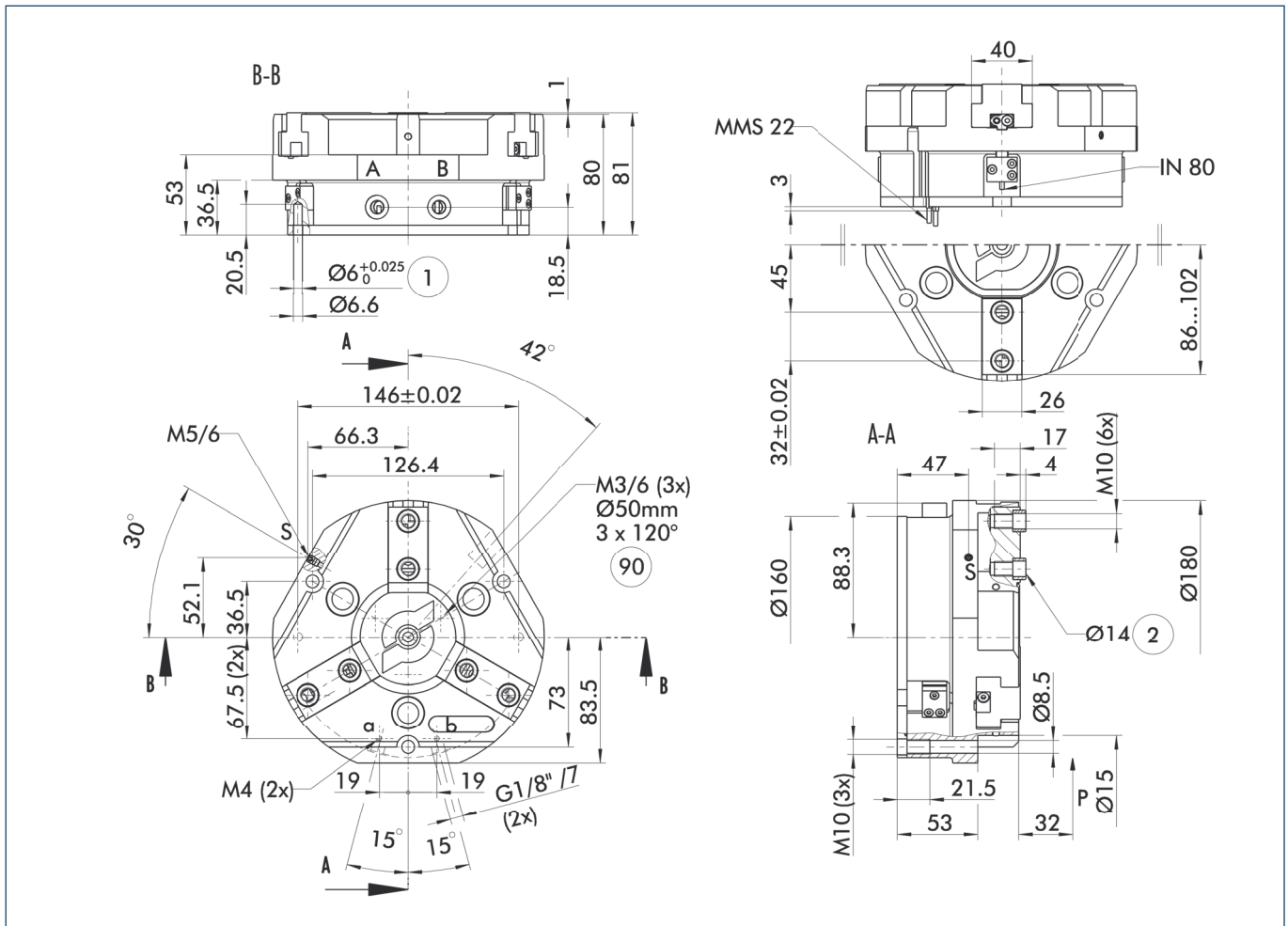


① The indicated moments and forces are static values, apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description	JGZ 160-1	JGZ 160-1-AS	JGZ 160-1-IS
ID	0308960	0308961	0308962
Stroke per finger [mm]	16	16	16
Closing force [N]	6000	7990	
Opening force [N]	6390		8480
Min. spring force [N]		1990	2090
Weight [kg]	5.6	8	8
Recommended workpiece weight [kg]	30	30	30
Air consumption per double stroke [cm ³]	520	520	520
Min./max. operating pressure [bar]	2/8	4/6.5	4/6.5
Nominal operating pressure [bar]	6	6	6
Closing/opening time [s]	0.5/0.5	0.4/0.8	0.8/0.4
Max. permitted finger length [mm]	200	180	180
Max. permitted weight per finger [kg]	3.5	3.5	3.5
IP class	40	40	40
Min./max. ambient temperature [°C]	-10/90	-10/90	-10/90
Repeat accuracy [mm]	0.02	0.02	0.02
Cleanroom class			
ISO-classification 14644-1	5	5	5

Main view

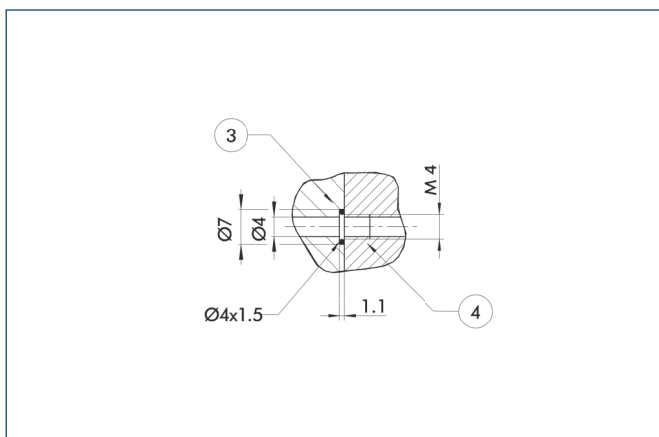


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can also be used for I.D. or O.D. gripping alternatively or in addition to the spring-loaded, mechanical gripping force maintenance device (see "Accessories" catalog section).

- A, a Main/direct connection, gripper opening
- B, b Main/direct connection, gripper closing
- S Air purge connection
- ① Gripper connection
- ② Finger connection
- 90 Thread below the cover for fastening external attachments

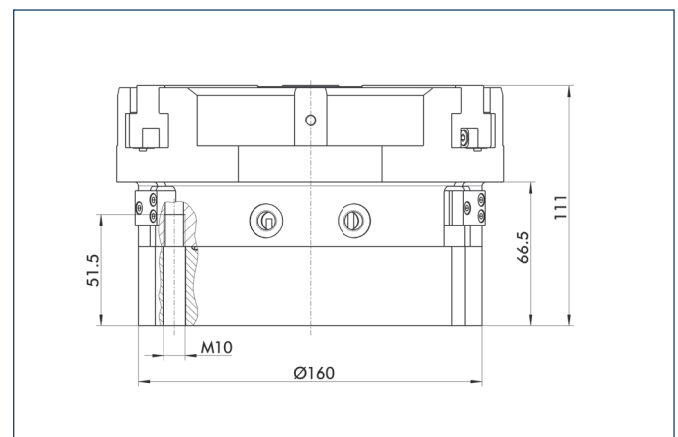
Hose-free direct connection



- ③ Adapter
- ④ Gripper

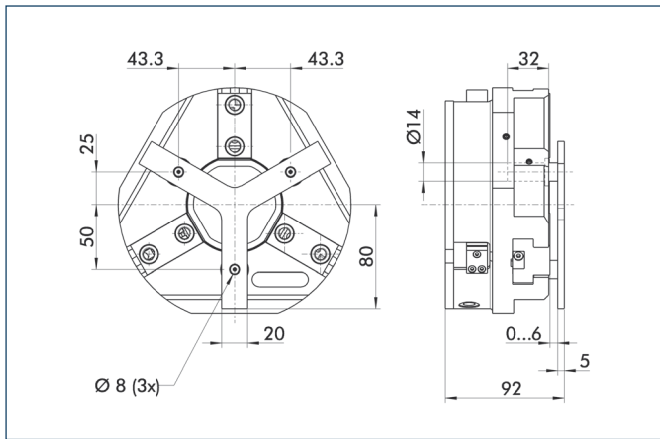
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

AS/IS gripping force maintenance device



The mechanical gripping force maintenance device ensures a minimum gripping force even in case of pressure drop. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force maintenance device can also be used for increasing the gripping force or for single-acting gripping.

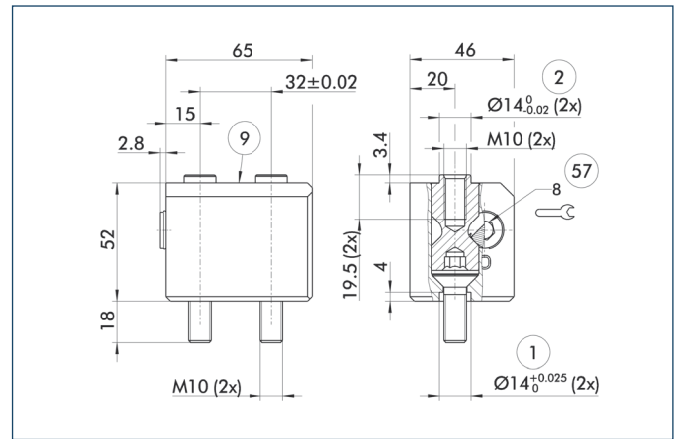
Spring-loaded pressure piece



For spring-supported positioning of the workpiece against a stop after the gripper has opened. Especially developed for loading machines.

Description	ID	Stroke	Min. force
Spring-loaded pressure piece			
A-PZN-plus/DPZ-plus 160	0303724	6 mm	205 N

Quick-change Jaw System



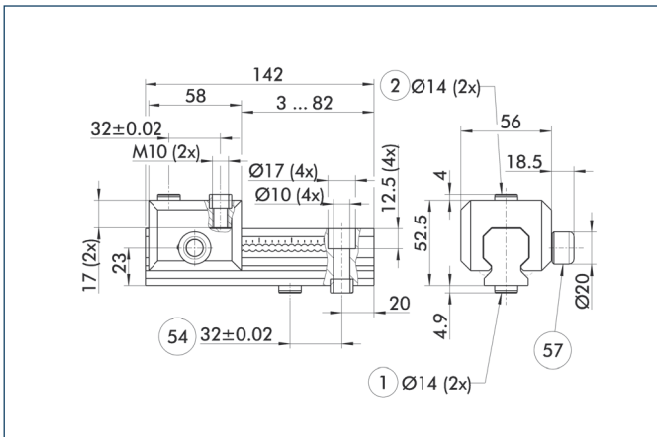
- ① Gripper connection
- ② Finger connection
- ⑨ For mounting screw connection diagram, see basic version
- 57 Locking

The BSWS quick-change jaw system enables top jaws to be changed on the gripper manually and rapidly. An adapter (BSWS-A) and a base (BSWS-B) are required for each gripper jaw.

For a reverse assembly without height set-up, one adapter (BSWS-A) and a kit (BSWS-U) per gripper jaw are required. Another effect of the BSWS-U is, that there are no disturbing fastening bores in the finger contour.

Description	ID
Quick-change Jaw System adapter	
BSWS-A 160	0303030
Quick-change Jaw System base	
BSWS-B 160	0303031
Quick-change Jaw System reversed	
BSWS-U 160	0303045

Universal intermediate jaw



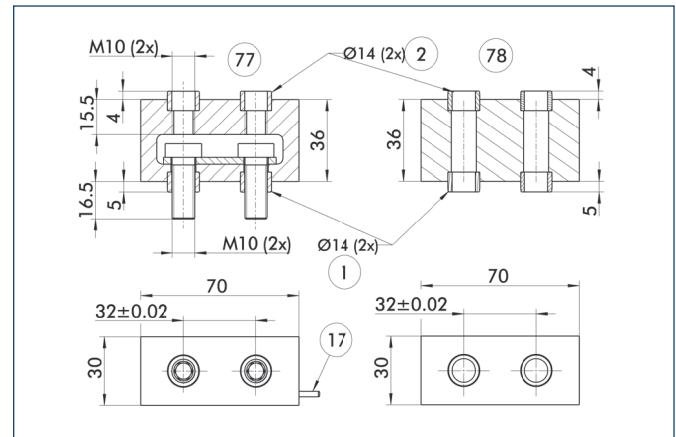
- ① Gripper connection
- ② Finger connection
- ⑤④ Optional right or left connection
- ⑤⑦ Locking

The universal intermediate jaw allows fast tool-free and reliable plugging and shifting of top jaws at the gripper.

Description	ID	Grid dimension
Universal intermediate jaw		
UZB 160	0300046	4 mm
UZB-S 160	5518274	4 mm

- ① The slide UZB-S can be removed completely and has to be ordered separately. Moreover, it allows a fast jaw change.

Force measuring jaws

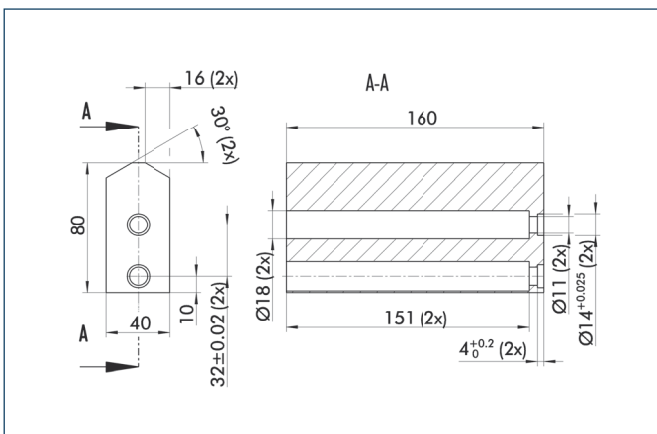


- ① Gripper connection
- ② Finger connection
- ①⑦ Cable outlet
- ⑦⑦ Active intermediate jaws
- ⑦⑧ Passive intermediate jaws

Force measuring jaws measure gripping forces, but can also determine workpiece weights or dimensional deviations. There are active and passive intermediate jaws (FMS-ZBA or FMS-ZBP). At least one active force measuring jaw is required per gripper, the rest can be passive. For each active jaw, a FMS-A1 control unit and a FMS-A connection cable are required.

Description	ID
Active intermediate jaws	
FMS-ZBA 160	0301840
Passive intermediate jaws	
FMS-ZBP 160	0301841
Electronic Processor	
FMS-A2	0301811
Connection cables	
FMS-AK0200	0301820
FMS-AK0500	0301821
FMS-AK1000	0301822
FMS-AK2000	0301823

Finger blanks

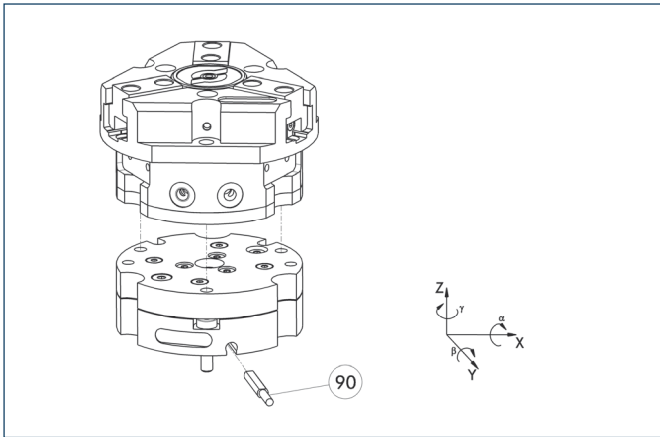


Finger blanks for customized subsequent machining

Description	ID	Material	Scope of delivery
Finger blanks			
ABR-plus 160	0300014	Aluminum	1
SBR-plus 160	0300024	16 MnCr 5	1

You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

Tolerance compensation unit

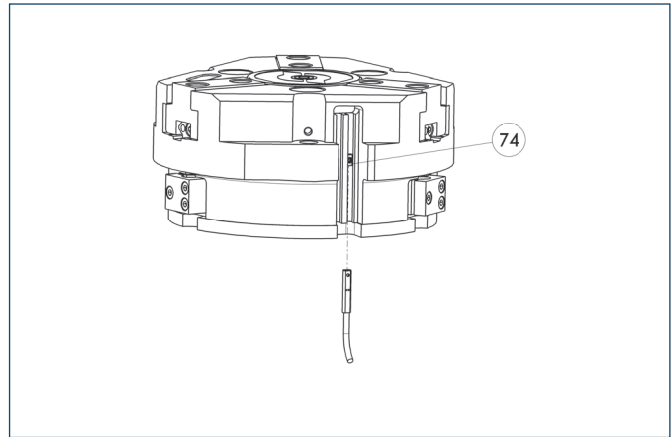


90 Monitoring of locking

Grippers can be directly mounted without an adapter plate. Tolerance compensation unit and gripper have an identical screw connection diagram. Therefore the tolerance compensation units can be assembled later. Please consider the additional assembly height of the tolerance compensation unit. For details see catalog "Robot Accessories".

Description	ID	Locking	Deflection
Compensation unit			
TCU-160-3-MV-Z	0324838	Yes	
TCU-160-3-OV-Z	0324839	No	

Programmable magnetic switch



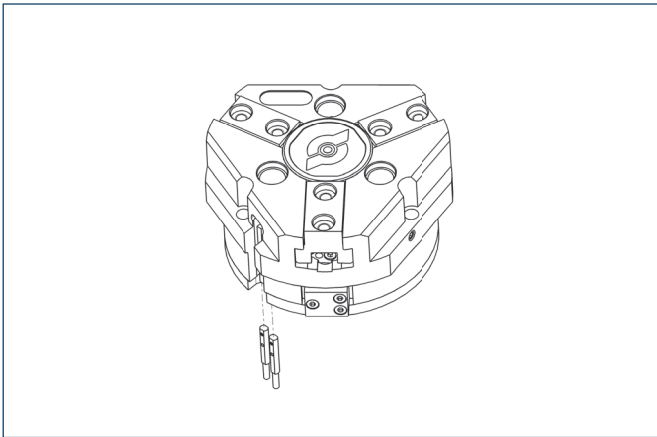
74 Stop for MMS-P

Position monitoring with two programmable positions per sensor. The end position monitoring is mounted in the C-slot.

Description	ID	Recommended product
Programmable magnetic switch		
MMS-P 22-S-M8-PNP	0301370	•
MMSK-P 22-S-PNP	0301371	
Connection cables		
KA BG08-L 4P-0500	0307767	
KA BG08-L 4P-1000	0307768	
KA BW08-L 4P-0500	0307765	
KA BW08-L 4P-1000	0307766	
Sensor Distributor		
V2-M8-4P-2XM8-3P	0301380	

- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.
- ① Per gripper one sensor (closer/NO) is required, optionally a cable extension.

Electronic magnetic switches

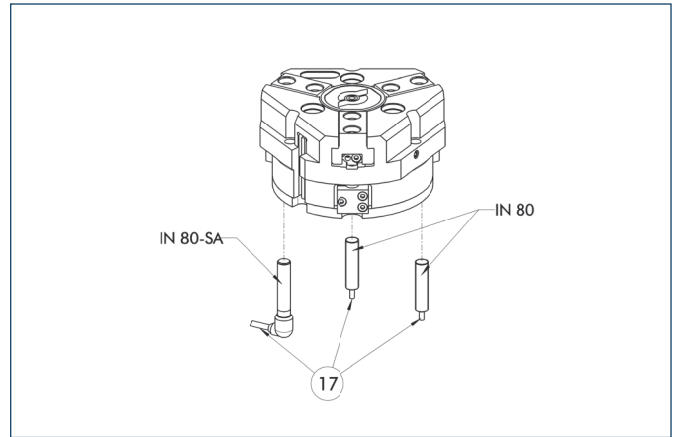


End position monitoring for mounting in the C-slot

Description	ID	Recommended product
Electronic magnetic switches		
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-NPN	0301433	
MMSK 22-S-PNP	0301434	
MMSK 22-S-NPN	0301435	
Electronic magnetic switches with lateral cable outlet		
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M8-PNP-SA	0301442	•
MMS 22-S-M8-NPN-SA	0301443	
MMSK 22-S-PNP-SA	0301444	
MMSK 22-S-NPN-SA	0301445	
Reed Switches		
RMS 22-S-M8	0377720	•
Connection cables		
KA BG05-L 3P-0300	0301652	
KA BG08-L 3P-0300-PNP	0301622	
KA BG08-L 3P-0500-PNP	0301623	
KA BW05-L 3P-0300	0301650	
KA BW08-L 3P-0300-NPN	0301602	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-NPN	9641116	
KA BW08-L 3P-0500-PNP	0301502	
Cable extensions		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	

- ① Two sensors (closer/NO) are required for each gripper, plus extension cables as an option.
- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

Inductive proximity switches



⑰ Cable outlet

End position monitoring for direct mounting

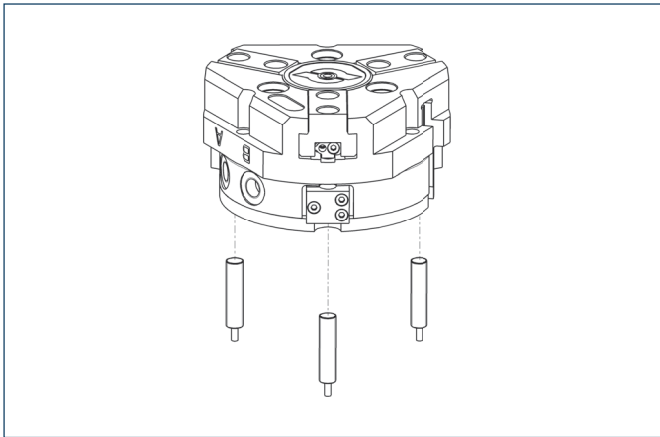
Description	ID	Recommended product
Inductive proximity switches		
IN 80-S-M8	0301478	•
IN 80-S-M12	0301578	
INK 80-S	0301550	
Inductive proximity switch with lateral outlet		
IN 80-S-M12-SA	0301587	
INK 80-S-SA	0301566	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	
KA BG08-L 3P-0500-PNP	0301623	
KA BG12-L 3P-0500-PNP	30016369	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
KA BW12-L 3P-0300-PNP	0301503	
KA BW12-L 3P-0500-PNP	0301507	
Cable extensions		
KV BG12-SG12 3P-0030-PNP	0301999	
KV BG12-SG12 3P-0060-PNP	0301998	
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	
KV BW12-SG12 3P-0030-PNP	0301595	
KV BW12-SG12 3P-0100-PNP	0301596	
KV BW12-SG12 3P-0200-PNP	0301597	

- ① Two sensors (closer/NO) are required for each gripper, plus extension cables as an option.
- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

Cylindrical Reed Switches

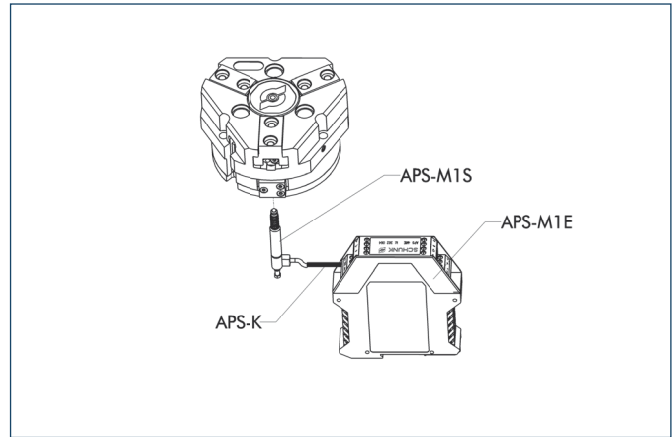


End position monitoring mounted with mounting kit

Description	ID
Mounting kit for proximity switch	
AS-RMS 80	
PGN/PZN-plus 160-380	0377727
Reed Switches	
RMS 80-S-M8	0377721

- ① Two sensors (closer/NO) are required for each gripper, plus extension cables as an option.
- ① This mounting kit needs to be ordered optionally as an accessory.
- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

Analog position sensor

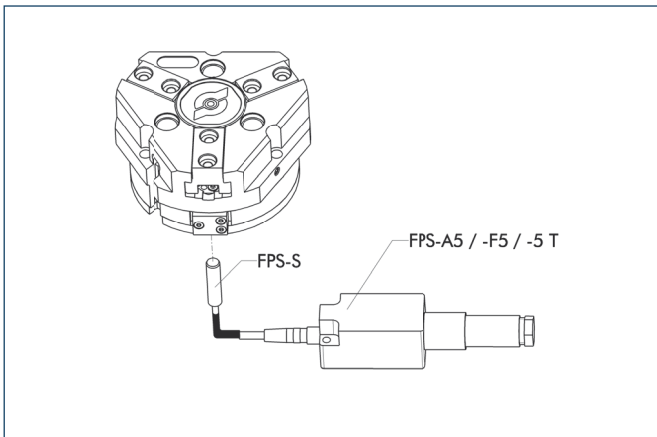


Analog multi position monitoring for any desired positions

Description	ID
Mounting kit	
AS-APS-M1-160/1 and 240/2	0302083
Connection cables	
APS-K0200	0302066
APS-K0700	0302068
Electronic Processor	
APS-M1E	0302064
Sensor	
APS-M1S	0302062

- ① When using an APS system, for each gripper a mounting kit (AS-APS), an APS sensor (APS-M 1S, incl. 3 m cable) as well as an electronics (APS-M1e) are required.
- ① An extension cable (APS-K) can be connected between the sensor and the electronics as an option. The max. cable length between the sensor and the electronics is 10 m, between the electronics and their control unit (PLC) it is max. 1 m.

Flexible Position Sensor



Flexible position monitoring of up to five positions

Description	ID
Mounting kit for FPS	
AS-PGN/PZN-plus 160/1	0301638
Electronic Processor	
FPS-F5	0301805
FPS-F5 T	0301807
Sensor	
FPS-S M8	0301704

- ① When using a FPS system, a FPS sensor (FPS-S) and a control unit (FPS-F5 / F5 T or A5) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are available as options in the "Accessories" catalog section.

