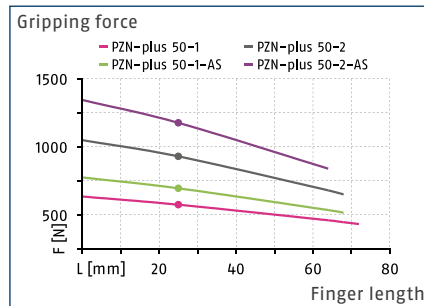


PZN-plus 50

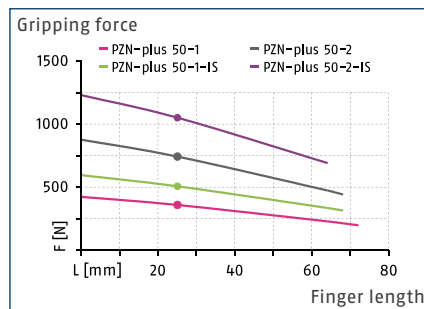
SCHUNK Grippers pneumatic | 3-Finger Centric Grippers | Universal Gripper



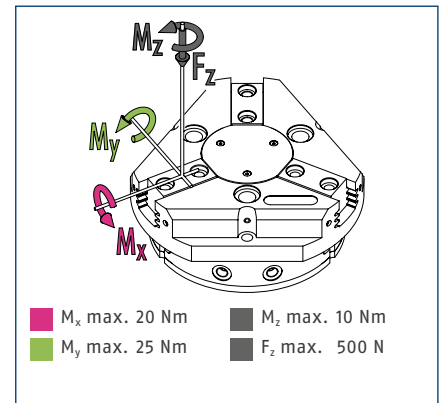
Gripping force, O.D. gripping



Gripping force, I.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 impreative to throttle the air supply so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

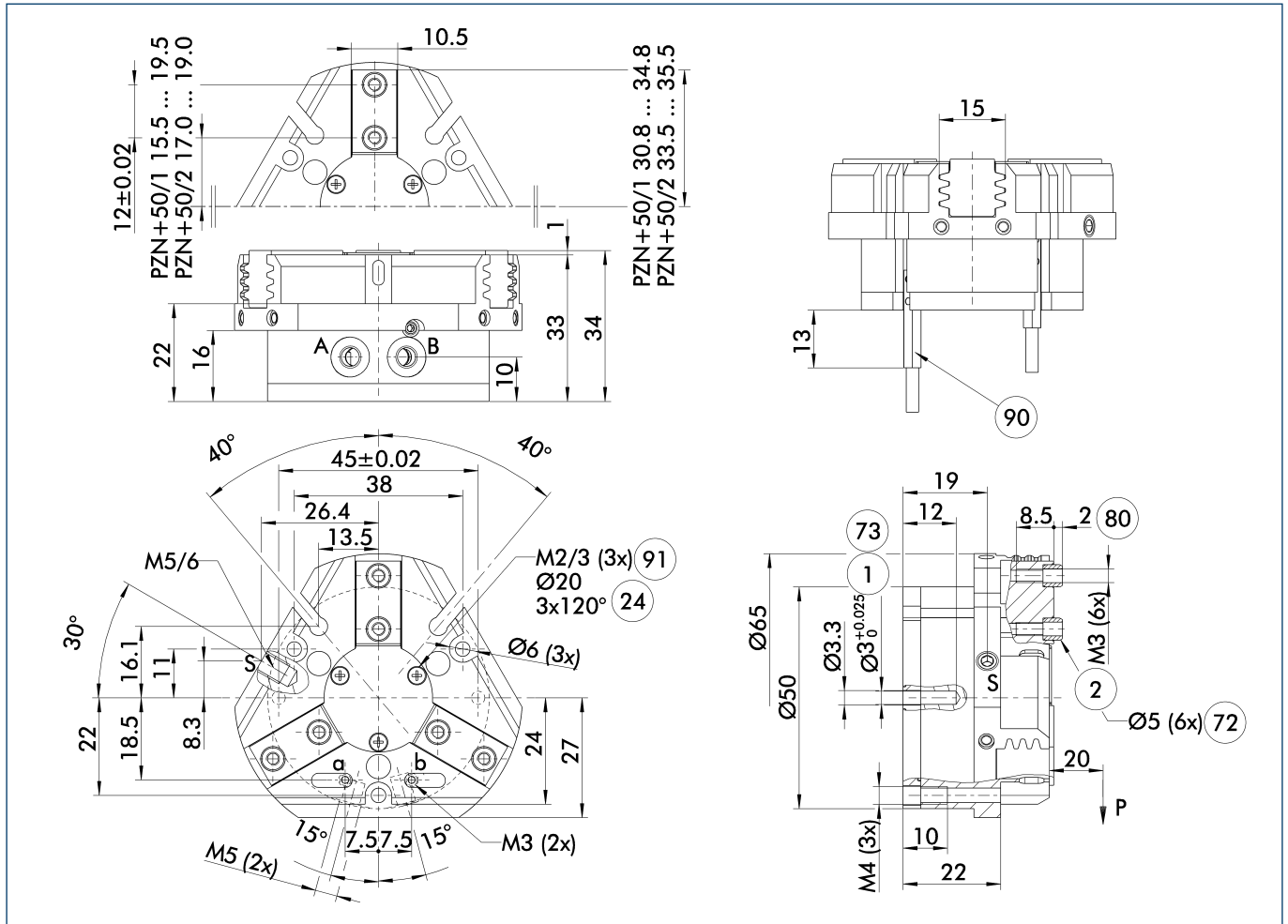
Description		PZN-plus 50-1	PZN-plus 50-2	PZN-plus 50-1-AS	PZN-plus 50-2-AS	PZN-plus 50-1-IS	PZN-plus 50-2-IS
ID		0303309	0303409	0303509	0303609	0303539	0303639
Stroke per jaw	[mm]	4	2	4	2	4	2
Closing- / opening force	[N]	325/355	680/740	445/-	925/-	-/505	-/1050
min. spring force	[N]			120	245	150	310
Weight	[kg]	0.27	0.27	0.35	0.35	0.35	0.35
Recommended workpiece weight	[kg]	1.65	3.4	1.65	3.4	1.65	3.4
Fluid consumption per double stroke	[cm ³]	9	9	18	18	18	18
min. / max. operating pressure	[bar]	2/8	2/8	4/6.5	4/6.5	4/6.5	4/6.5
Nominal operating pressure	[bar]	6	6	6	6	6	6
Closing- / opening time	[s]	0.03/0.03	0.03/0.03	0.02/0.04	0.02/0.04	0.04/0.02	0.04/0.02
Closing- / opening time only with spring	[s]			0.08	0.08	0.08	0.08
max. permitted finger length	[mm]	72	68	68	64	68	64
max. permitted weight per finger	[kg]	0.18	0.18	0.18	0.18	0.18	0.18
IP class		40	40	40	40	40	40
min. / max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5	5	5	5

Options and their characteristics

Dust-tight version		37303309	37303409	37303509	37303609	37303539	37303639
IP class		64	64	64	64	64	64
Weight	[kg]	0.33	0.33	0.41	0.41	0.41	0.41
Anti-corrosion version		38303309	38303409	38303509	38303609	38303539	38303639
High-temperature version		39303309	39303409	39303509	39303609	39303539	39303639
min. / max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Force intensified version		0372200	0372210	0372220		0372240	
Closing- / opening force	[N]	520/570	1090/1185	640/-		-/720	
Weight	[kg]	0.38	0.38	0.46		0.46	
Maximum pressure	[bar]	6	6	6		6	
max. permitted finger length	[mm]	64	50	50		50	
Precision version		0303339	0303439	0303489	0303589		

① The full gripping force according to the data table is only realised after around 100 gripping cycles.

Main view



The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

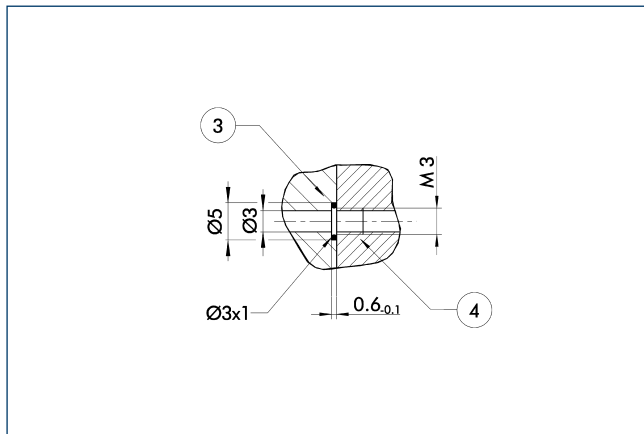
① The SDV-P pressure maintenance valve can also be used for I.D. or O.D. gripping alternatively or in addition to the spring-loaded, mechanical gripping force maintenance device (see catalog section on "Accessories").

- A, a Main / direct connection, gripper opening
- B, b Main / direct connection, gripper closing
- S Air purge connection (0.5 ... 1 bar)
- ① Gripper connection
- ② Finger connection
- ②④ Bolt circle
- ⑦② Fit for centering sleeves
- ⑦③ Fit for centering pins
- ⑧① Depth of the centering sleeve hole in the mating part
- ⑨① MMS 22... sensor
- ⑨① Thread below the cover for fastening external attachments

PZN-plus 50

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Hose-free direct connection M3

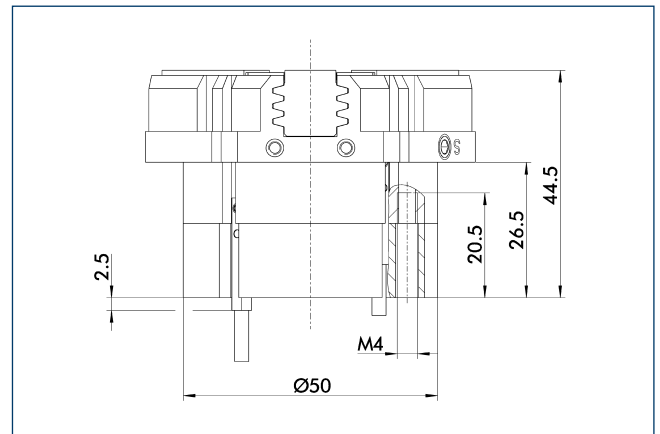


③ Adapter

④ Gripper

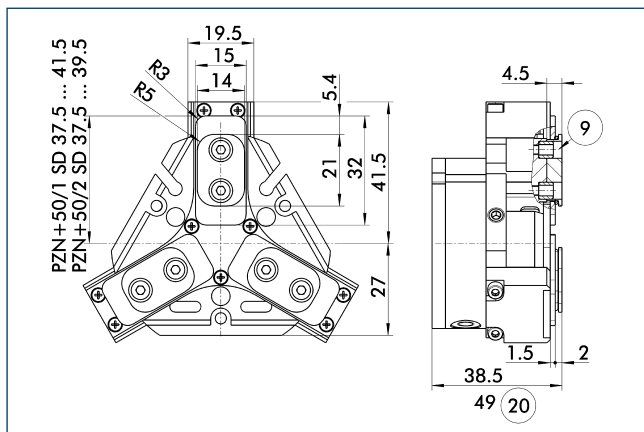
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Gripping force maintenance device AS / IS



The mechanical maintenance of gripping force also assures a minimum gripping force in the case of a loss of pressure. With the AS / S variant, this acts as a closing force, and as an opening force for the IS variant. The maintenance of gripping force element can also be used as a means for increasing gripping force or for single actuated gripping.

Dust-tight version



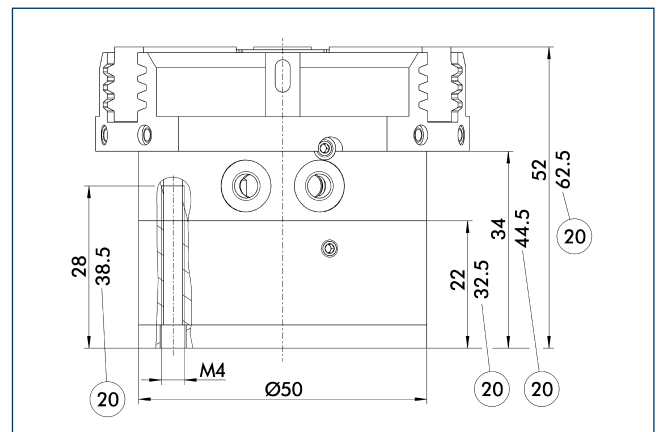
⑨ For mounting screw connection

⑳ For AS / IS version

diagram, see basic version

The "dust-protection" option increases the degree of protection against penetrating substances. The screw connection diagram shifts by the height of the intermediate jaw. The finger length is still measured from the upper edge of the gripper housing.

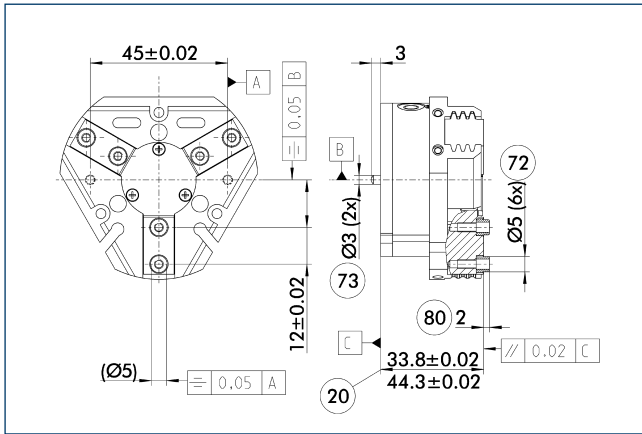
Force intensified version



⑳ For AS / IS version

The KVZ power booster cylinder increases gripping forces for opening and closing. A second piston connected in a series increases the force on the diagonal pull for this purpose. If applicable, observe the additional installation height for combination with an element for maintenance of gripping force. The force-intensifying version of the gripper can only be attached with screws from below via the provided mounting holes.

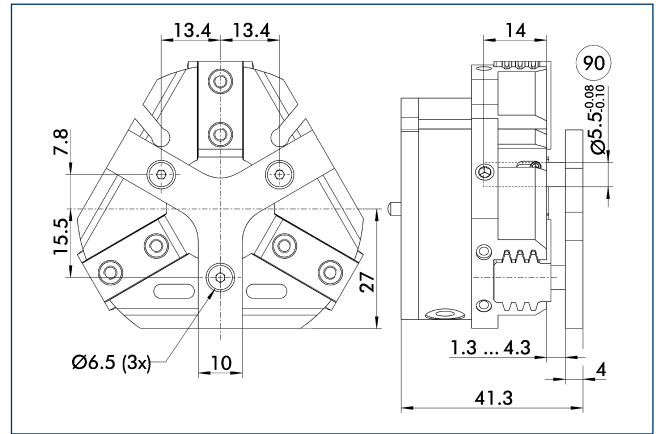
Precision version



- 20 For AS / IS version
- 72 Fit for centering sleeves
- 73 Fit for centering pins
- 80 Depth of the centering sleeve hole in the mating part

The indicated tolerances just refer to the types of precision versions shown in the chart of technical specifications. All other types of precision versions are available on request.

Spring-loaded pressure piece



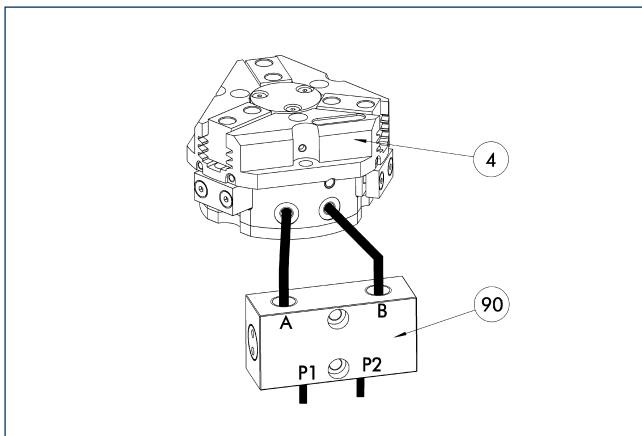
- 90 Guide pin

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

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

- ① The pressure piece cannot be combined with the dust-tight option. Please ask for details about a special pressure piece.

SDV-P pressure maintenance valve

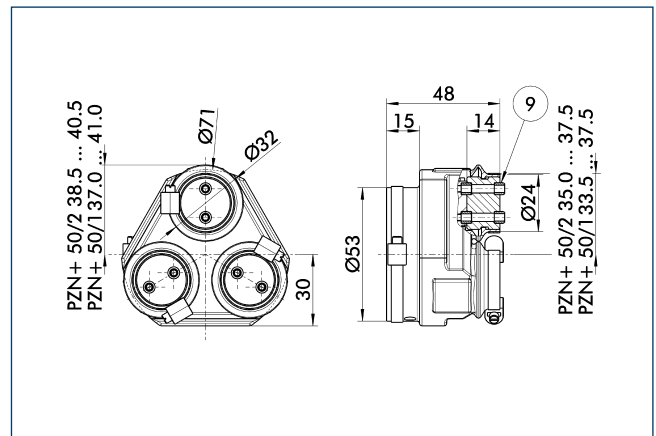


- 4 Gripper
- 90 SDV-P pressure maintenance valve

The SDV-P pressure maintenance valves ensure that the pressure in the piston chamber of pneumatic gripping, rotary, linear, and quick-change modules is maintained temporarily during an emergency stop.

Description	ID
Pressure maintenance valve	
SDV-P 04	0403130

Protective cover HUE PZN-plus 50



- 9 For mounting screw connection diagram, see basic version

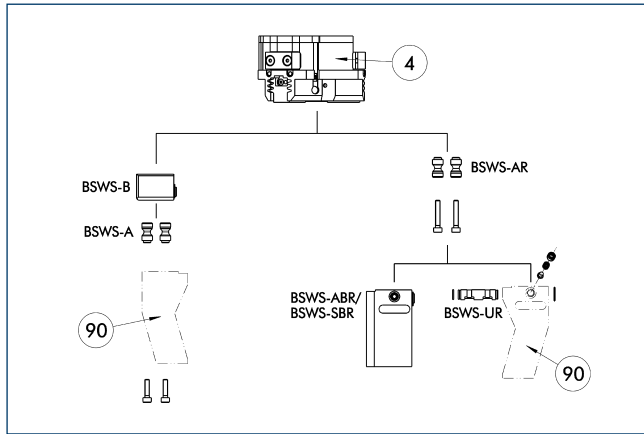
The HUE protective cover completely protects the gripper against external influences up to IP65 if an additional sealing of the cover bottom is provided as part of the application. The mounting diagram shifts by the height of the intermediate jaw.

Description	ID	Cleanroom class ISO 14644-1	IP class
Protection cover			
HUE PZN-plus 50	0303479	2	65

PZN-plus 50

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BSWS jaw quick-change systems



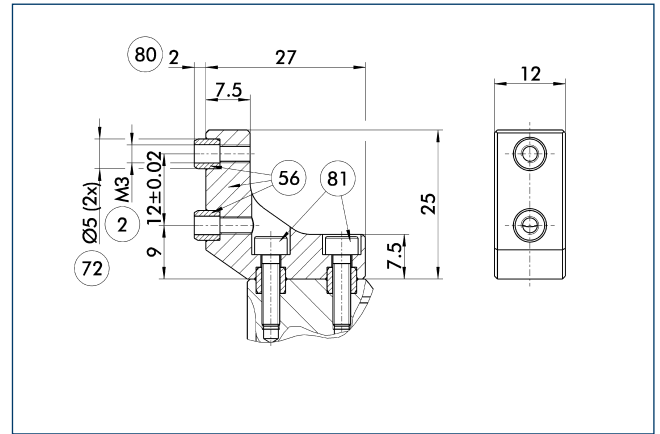
- ④ Gripper
- ⑨⑩ Customized gripper fingers

There are various jaw quick-change systems available for the grippers. For detailed information, refer to the appropriate product.

Description	ID
Jaw quick-change system adapter	
BSWS-AR 50	0300091
BSWS-A 50	0303020
Jaw quick-change system base	
BSWS-B 50	0303021
Finger blanks with jaw quick-change system	
BSWS-ABR-PGZN-plus 50	0300071
BSWS-SBR-PGZN-plus 50	0300081
Jaw quick-change system reversed	
BSWS-UR 50	0302990

① Only the systems listed in the table can be used.

ZBA L-plus 50 intermediate jaws

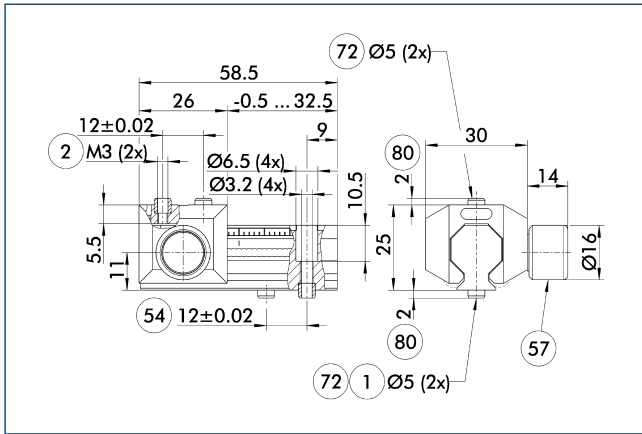


- ② Finger connection
- ⑤⑥ Included in delivery
- ⑦② Fit for centering sleeves
- ⑧⑩ Depth of the centering sleeve hole in the mating part
- ⑧① Not included in the scope of delivery

Optionally intermediate jaws can be used, enabling direct connection and alignment of top jaws and various standard accessories in Z-direction.

Description	ID	Material	Scope of delivery
Intermediate jaws			
ZBA-L-plus 50	0311712	Aluminum	1

UZH 50 universal intermediate jaw

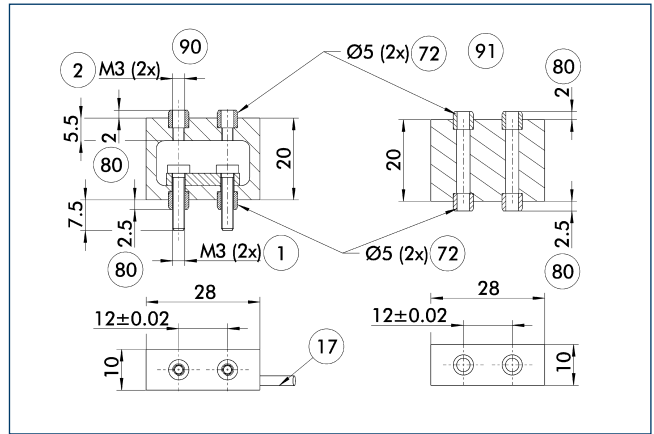


- ① Gripper connection
- ② Finger connection
- ⑤4 Optional right or left connection
- ⑤7 Locking
- ⑦2 Fit for centering sleeves
- ⑧0 Depth of the centering sleeve hole in the mating part

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

Description	ID	Grid dimension [mm]
Universal intermediate jaw		
UZH 50	0300041	1.5
Finger blanks		
ABR-PGZN-plus 50	0300009	
SBR-PGZN-plus 50	0300019	

FMS-ZBA / ZBP 50 force-measuring jaws

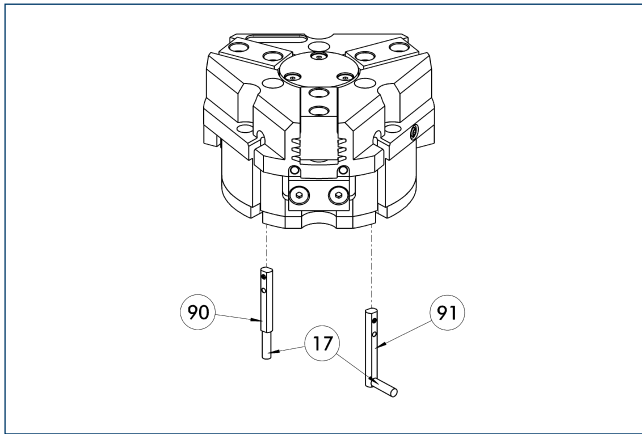


- ① Gripper connection
- ② Finger connection
- ①7 Cable outlet
- ⑦2 Fit for centering sleeves
- ⑧0 Depth of the centering sleeve hole in the mating part
- ⑨0 Active intermediate jaws
- ⑨1 Passive intermediate jaws

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-A control unit and a FMS-AK connection cable are required.

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

MMS electronic magnetic switches



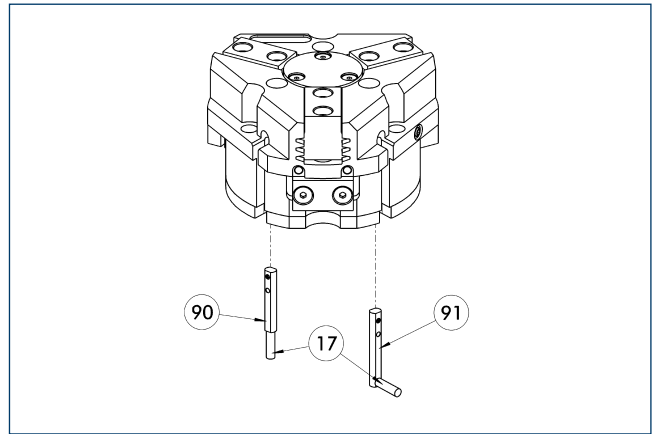
17 Cable outlet
90 MMS 22... sensor
91 MMS 22...-SA sensor

End position monitoring for mounting in the C-slot.

Description	ID	Often combined
MMS electronic magnetic switches		
MMS 22-S-M8-PNP	0301032	●
MMSK 22-S-PNP	0301034	
MMS electronic magnetic switches with lateral cable outlet		
MMS 22-S-M8-PNP-SA	0301042	●
MMSK 22-S-PNP-SA	0301044	
Cable extensions		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
Clip for plug / socket		
CLI-M8	0301463	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	●
KA BG08-L 3P-0500-PNP	0301623	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
Sensor distributor		
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

① Two sensors (closer/S) are required for each unit, plus extension cables as an option. Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

MMS PI1 programmable magnetic switches



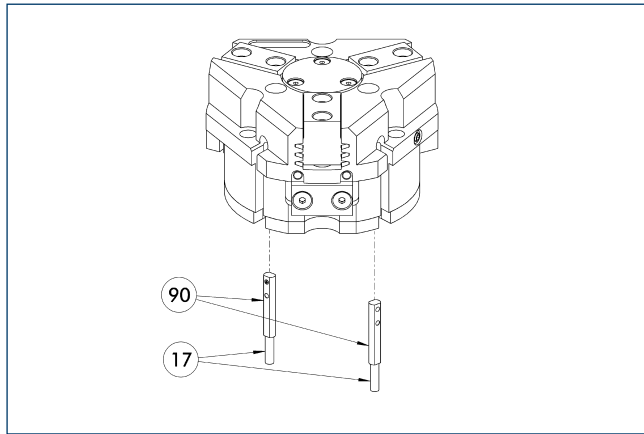
17 Cable outlet
90 MMS 22...-PI1-... sensor
91 MMS 22...-PI1-...-SA sensor

Position query with one programmable position per sensor and electronics integrated in sensor. Programmable via MT magnet teaching tool (included in the scope of delivery) or ST plug teaching tool (optional). Limit position query mounted in C-groove. If the ST plug teaching tools are listed in the table, teaching can only take place with the ST plug teaching tools.

Description	ID	Often combined
Plug teaching tool		
ST-MMS 22-PI1-PNP	0301025	
MMS PI1 programmable magnetic switches		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
MMS PI1-HD programmable magnetic switches with stainless steel housing		
MMS 22-PI1-S-M8-PNP-HD	0301110	●
MMSK 22-PI1-S-PNP-HD	0301112	
MMS PI1 programmable magnetic switches with lateral cable outlet		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	

① Two sensors (closer/S) are required for each unit, plus extension cables as an option. Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm. Connection cable, cable extensions, and sensor distributors can be found in the table for the MMS 22.

MMS PI2 programmable magnetic switches



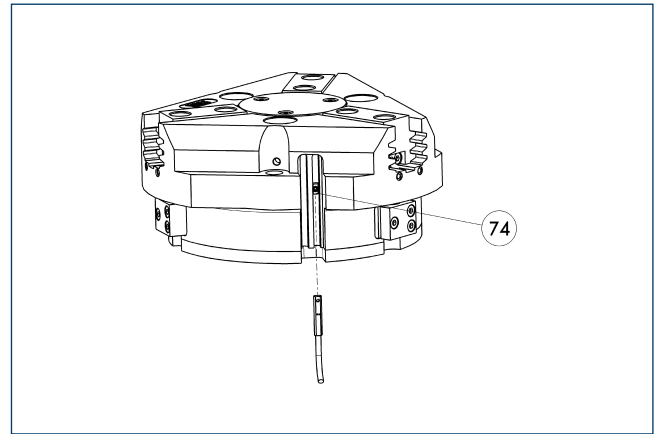
①⑦ Cable outlet ①⑨ MMS 22...-PI2... sensor

Position query with two programmable positions per sensor and electronics integrated in sensor. Programmable via MT magnet teaching tool (included in the scope of delivery) or ST plug teaching tool (optional). Limit position query mounted in C-groove. If the ST plug teaching tools are listed in the table, teaching can only take place with the ST plug teaching tools.

Description	ID	Often combined
Plug teaching tool		
ST-MMS 22-PI2-PNP	0301026	
MMS PI2 programmable magnetic switches		
MMS 22-PI2-S-M8-PNP	0301180	●
MMSK 22-PI2-S-PNP	0301182	
MMS PI2-HD programmable magnetic switches with stainless steel housing		
MMS 22-PI2-S-M8-PNP-HD	0301130	●
MMSK 22-PI2-S-PNP-HD	0301132	

① Per unit one sensor (closer/S) is required, optionally a cable extension. Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm. Connection cable, cable extensions, and sensor distributors can be found in the table for the MMS-P 22.

MMS-P programmable magnetic switches



①④ Stop for MMS-P

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

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

① Per unit one sensor (closer/S) is required, optionally a cable extension. Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.