

DPZ-plus

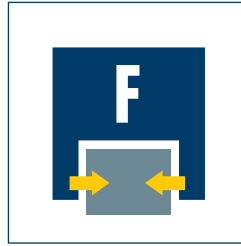
Pneumatic · 3-Finger Centric Gripper · Sealed Grippers



Sizes
40 .. 200



Weight
0.62 kg .. 20.1 kg



Gripping force
230 N .. 17150 N



Stroke per finger
2.5 mm .. 25 mm



Workpiece weight
2.6 kg .. 60.0 kg

Application example



Insertion tool for assembling small to medium-sized workpieces. The tool can be used in both clean and dirty environments. Thanks to its quick-change system, other tools can alternately be fixed to the robot flange.

1 DPZ-plus 100 3-Finger Centric Gripper

2 FUS 213C Insertion Unit

3 SWS 041 Quick-change System

Sealed Grippers

Despite the high moment-bearing capacity of the base jaws, this sealed 3-finger centric gripper satisfies the requirements of IP67 and does not permit any substances from the working environment to penetrate the interior of the component.

Area of application

The DPZ-plus is ideally suited for the handling of rough or dirty workpieces. Its area of application extends from the loading and unloading of machines, such as in the case of sanitary blocks, grinding machines, lathes or milling machines, to handling tasks in painting plants, in powder-processing and underwater.

Your advantages and benefits

Robust interior multiple-tooth guidance

for the precise handling of all kinds of workpieces

Wiper seal on the outer circular guide

for permanent, secure gripper sealing

High maximum load capabilities

suitable for the use of long gripper fingers

Sealed 3-finger centric gripper

complies to IP67 requirements despite a high moment-bearing capacity

Mounting from two sides in three screw directions

for universal and flexible gripper assembly

Maximum gripping forces despite a compact design

for a varied range of applications

Air supply via hose-free direct connection or screw connections

for the flexible supply of compressed air in all automation systems

Compact dimensions

for minimal interfering contours in handling



General information on the series

Working principle

Wedge-hook kinematics

Housing material

Aluminum alloy, hard-anodized

Base jaw material

Steel

Actuation

Pneumatic, with filtered compressed air (10 µm): Dry, lubricated or non-lubricated
Pressure medium: Requirements on quality of the compressed air according to DIN ISO 8573-1: 6 4 4.

Warranty

24 months

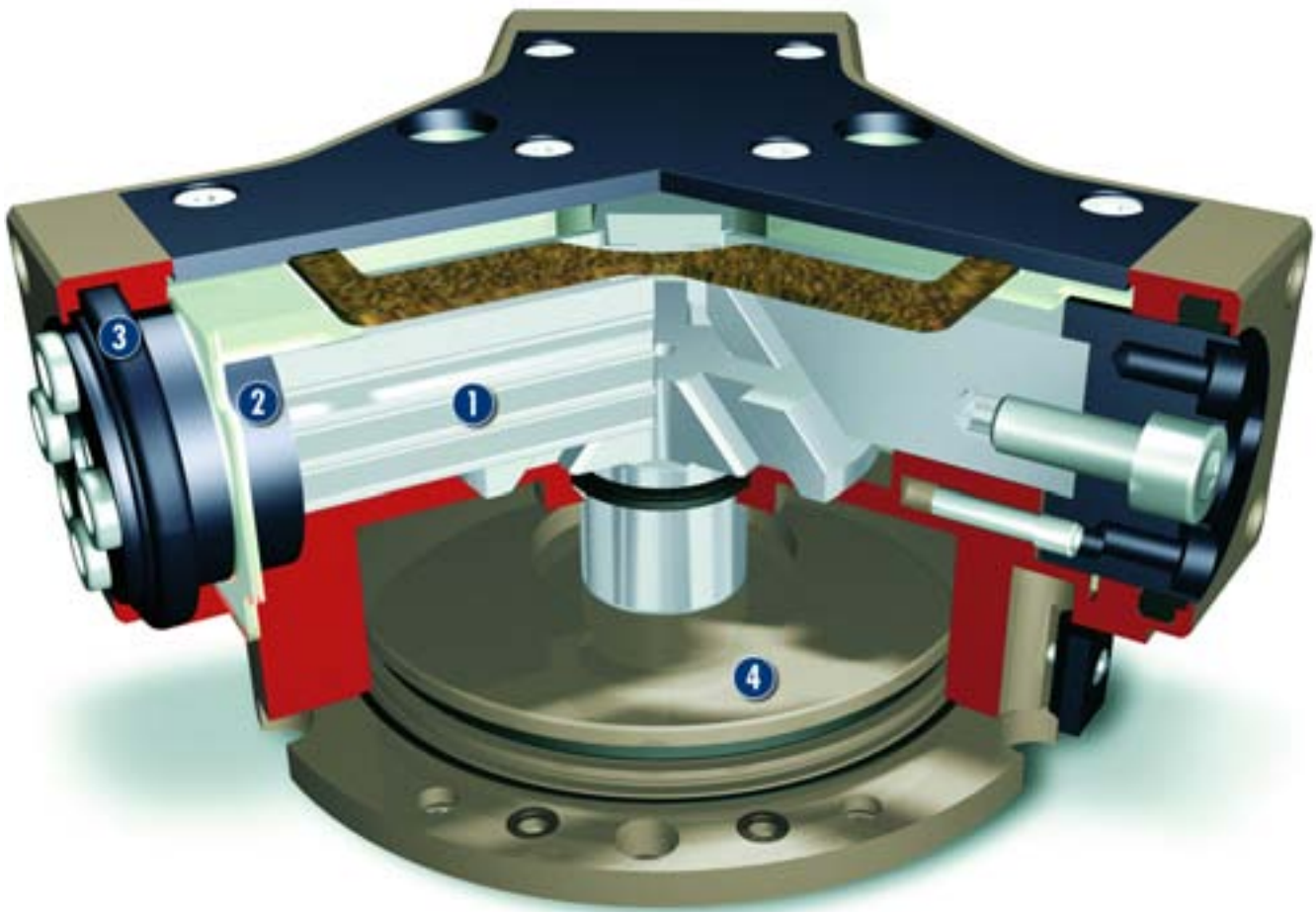
Scope of delivery

Centering pins, centering sleeves, O-rings for direct connection, assembly and operating manual with manufacturer's declaration

Gripping force safety device

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

Sectional diagram



1 Inner base jaw
(multiple-tooth guidance)
for high load capabilities

2 Outer base jaw (round)
providing a sealable, round surface

3 Wiper seal
for permanent, secure gripper sealing

4 Round piston with rod and wedge
hook
for power generation

Function description

The piston is moved up or down by means of compressed air. Through its angled active surfaces, the wedge hook transforms this motion into the centric, synchronous gripping movement of the three base jaws.

Options and special information

Please note that an additional hose for ventilation or purging the air is essential for the gripper, i.e. it requires three hoses in total. See the assembly and operating manual for more detailed information.

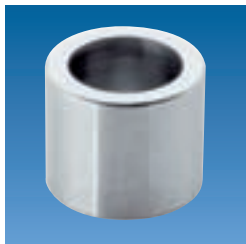
Increased grip force version

When higher gripping forces are required

Accessories

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

Centering sleeves



Fittings



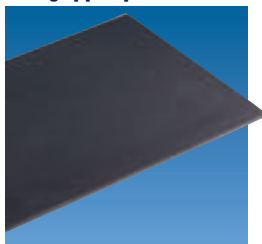
MMS magnetic switches



Quentes plastic inserts



HKI gripper pads



SDV-P pressure maintenance valves



KV/KA sensor cables



V sensor distributors



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 information on the series

Gripping force

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

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

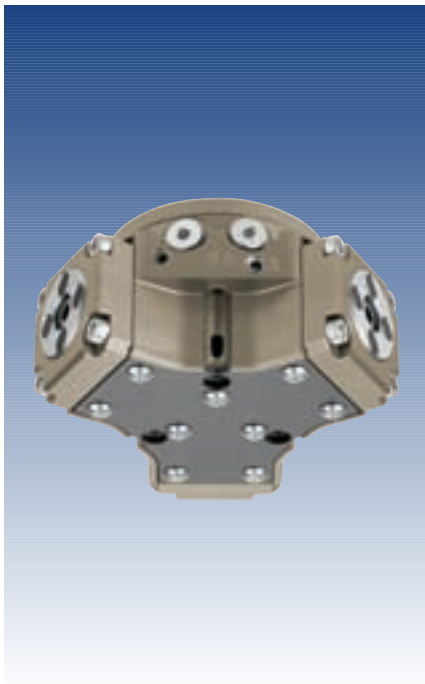
The recommended workpiece weight is calculated for a force-type connection with a coefficient of friction of 0.1 and a safety factor of 2 against slippage of the workpiece on acceleration due to gravity g. Considerably heavier workpiece weights are permitted with form-fit gripping.

Closing and opening times

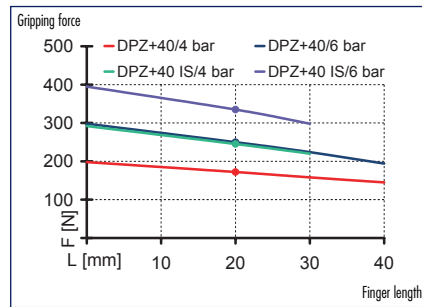
Closing and opening times are purely the times that the base jaws or fingers are in motion. Valve switching times, hose filling times or PLC reaction times are not included in the above times and must be taken into consideration when determining cycle times.

DPZ-plus 40

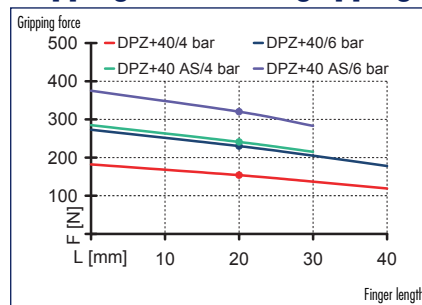
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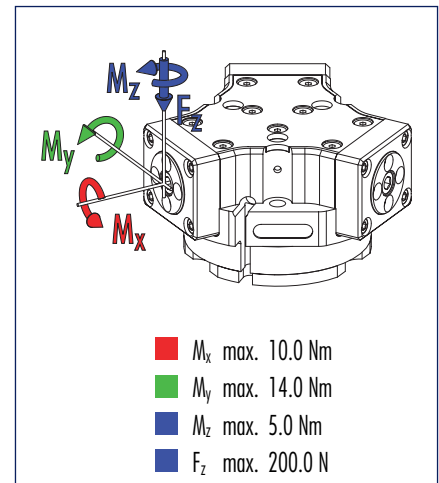
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

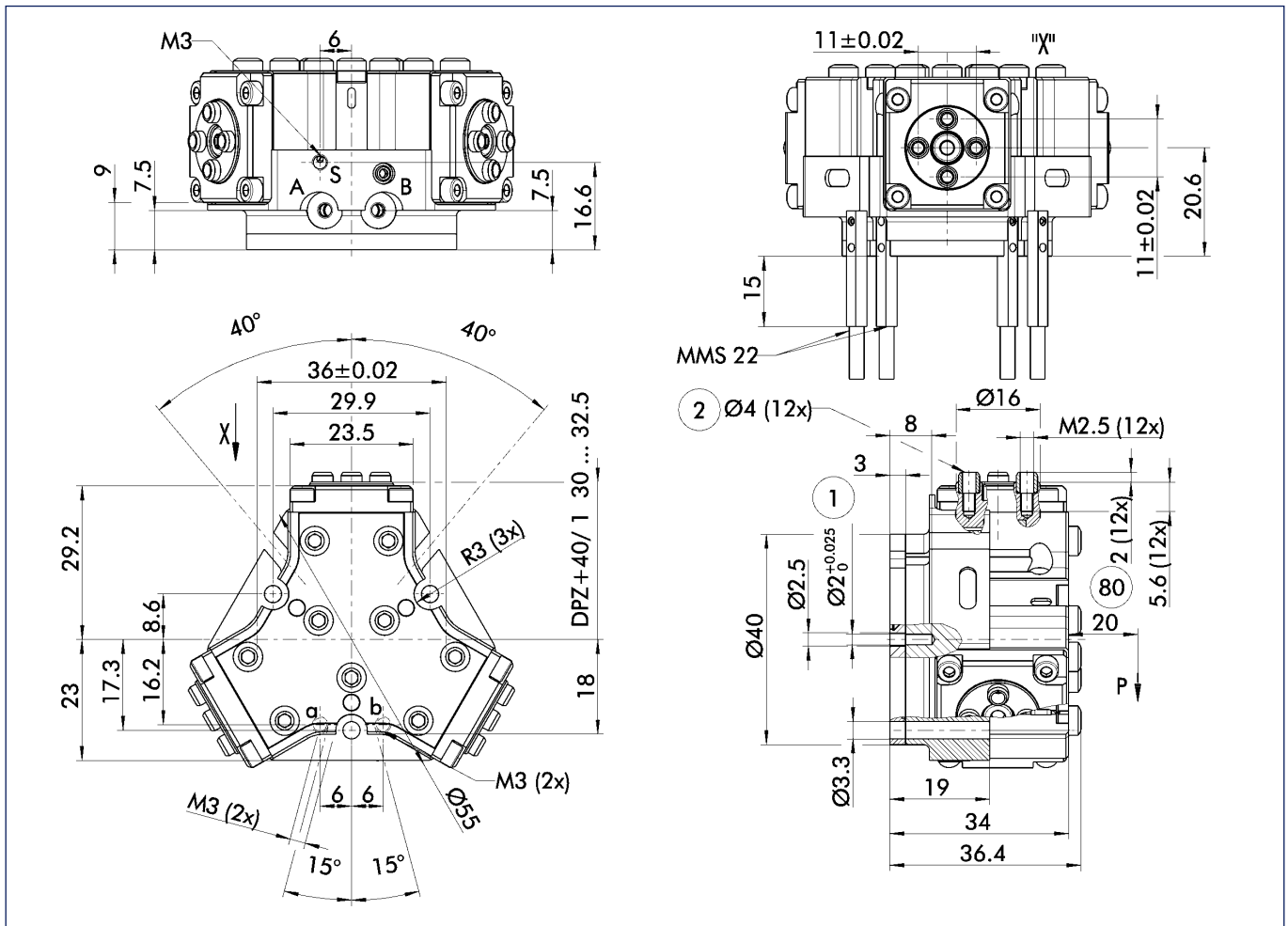


ⓘ Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may reduce.

Technical data

Description	ID	DPZ-plus 40 0304501	DPZ-plus 40-AS 0304503	DPZ-plus 40-IS 0304505
Stroke per jaw	[mm]	2.5	2.5	2.5
Closing force	[N]	230.0	320.0	
Opening force	[N]	250.0		355.0
Min. spring force	[N]		90.0	105.0
Weight	[kg]	0.2	0.25	0.25
Recommended workpiece weight	[kg]	1.15	1.15	1.15
Air consumption per double stroke	[cm ³]	5.0	9.0	9.0
Minimum pressure	[bar]	2.5	4.0	4.0
Maximum pressure	[bar]	8.0	6.5	6.5
Nominal operating pressure	[bar]	6.0	6.0	6.0
Closing time	[s]	0.03	0.03	0.03
Opening time	[s]	0.03	0.05	0.05
Max. permitted finger length	[mm]	40.0	30.0	30.0
Max. permitted weight per finger	[kg]	0.1	0.1	0.1
IP class		67	67	67
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0
Repeat accuracy	[mm]	0.01	0.01	0.01

Main views

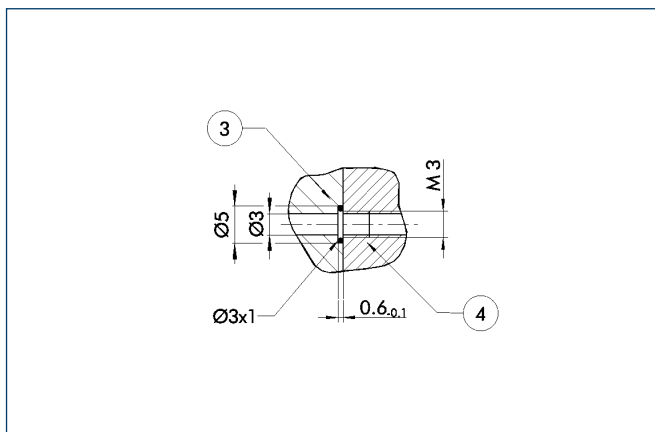


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

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

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- S,s Air purge or ventilation hole
- ① Gripper connection
- ② Finger connection
- ⊘ depth of the centering sleeve hole in the matching part

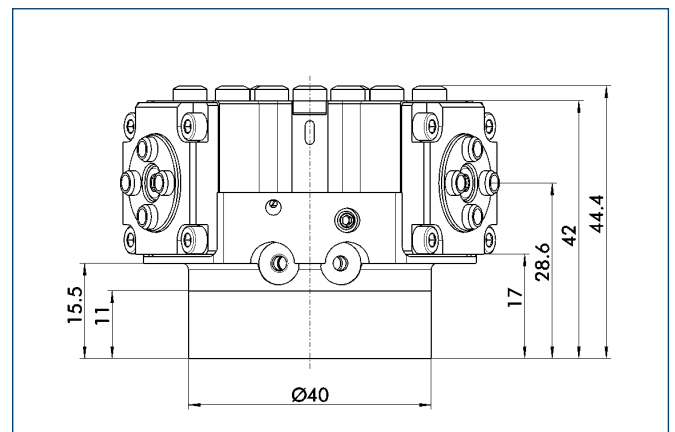
Hose-free direct connection



- ③ Adapter
- ④ Gripper

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

AS/IS gripping force safety device

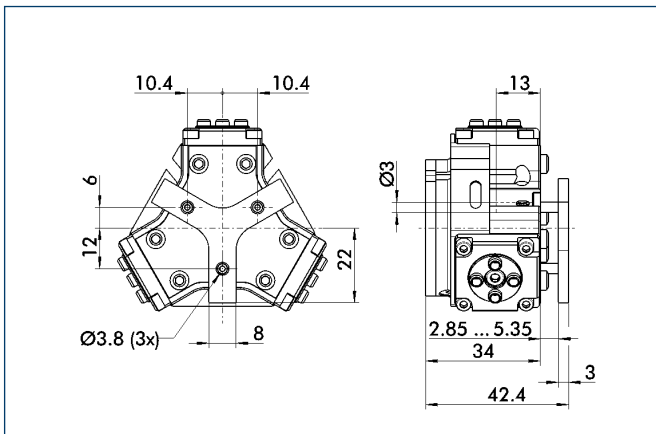


The mechanical gripping force safety device ensures a minimum gripping force even if there is a drop in pressure. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force safety device can also be employed as a gripping force booster or for single-acting gripping.

DPZ-plus 40

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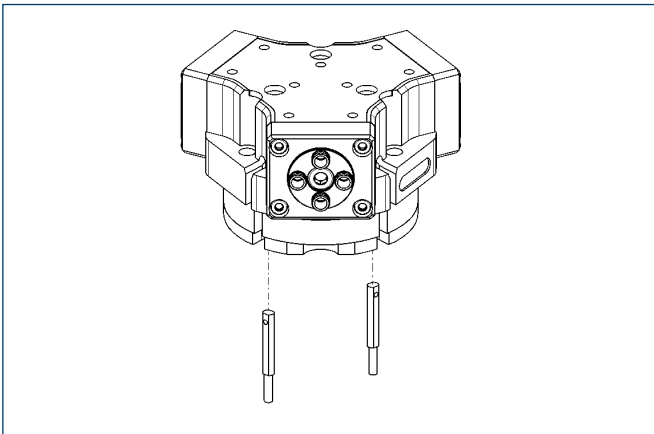
Spring-loaded pressure piece



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

Description	Stroke	Min. total force	ID
A-DPZ-plus 40	2.5 mm	11 N	0303730

Sensor system



End position monitoring:

Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

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

Extension cables for proximity switches/magnetic switches

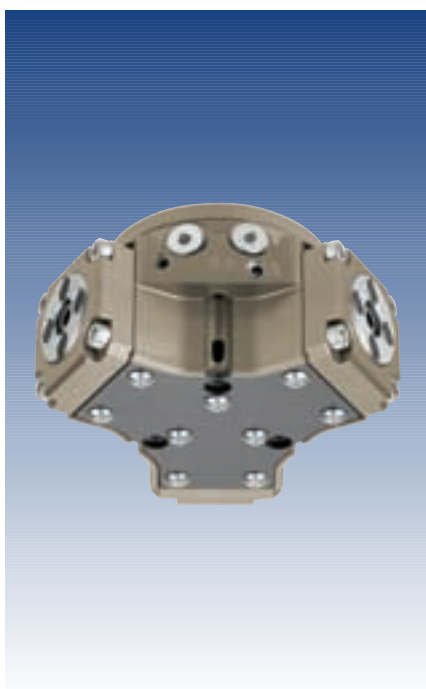
Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

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

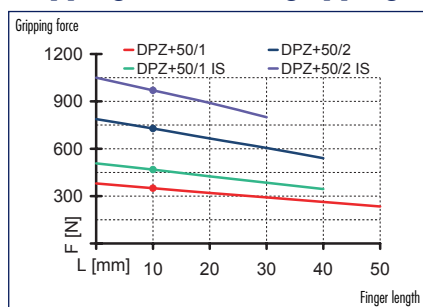


DPZ-plus 50

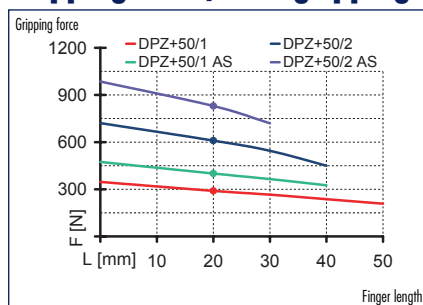
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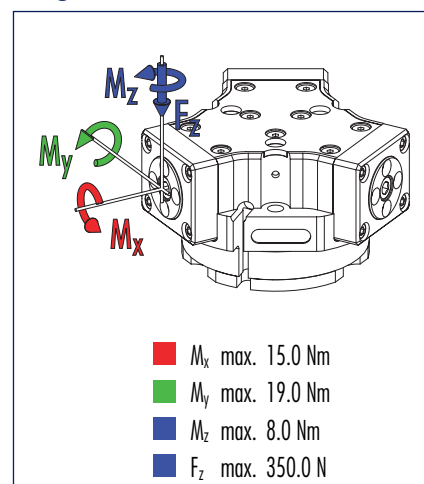
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load



ⓘ Moments and forces 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 reduce.

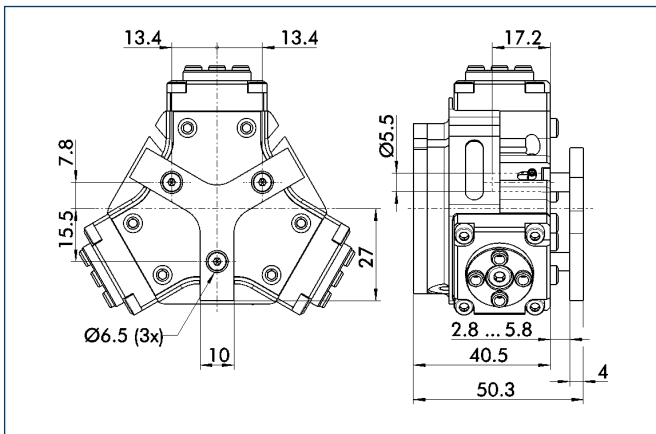
Technical data

Description		DPZ-plus 50-1	DPZ-plus 50-2	DPZ-plus 50-1-AS	DPZ-plus 50-2-AS	DPZ-plus 50-1-IS	DPZ-plus 50-2-IS
	ID	0304401	0304402	0304403	0304404	0304405	0304406
Stroke per jaw	[mm]	4.0	2.0	4.0	2.0	4.0	2.0
Closing force	[N]	290.0	610.0	400.0	830.0		
Opening force	[N]	320.0	665.0			455.0	945.0
Min. spring force	[N]			110.0	220.0	135.0	280.0
Weight	[kg]	0.37	0.37	0.45	0.45	0.45	0.45
Recommended workpiece weight	[kg]	1.45	3.06	1.45	3.06	1.45	3.06
Air consumption per double stroke	[cm ³]	9.0	9.0	18.0	18.0	18.0	18.0
Minimum pressure	[bar]	2.5	2.5	4.0	4.0	4.0	4.0
Maximum pressure	[bar]	8.0	8.0	6.5	6.5	6.5	6.5
Nominal operating pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Closing time	[s]	0.03	0.03	0.03	0.03	0.05	0.05
Opening time	[s]	0.03	0.03	0.05	0.05	0.03	0.03
Max. permitted finger length	[mm]	50.0	40.0	40.0	30.0	40.0	30.0
Max. permitted weight per finger	[kg]	0.15	0.15	0.15	0.15	0.15	0.15
IP class		67	67	67	67	67	67
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0	90.0	90.0	90.0
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01

DPZ-plus 50

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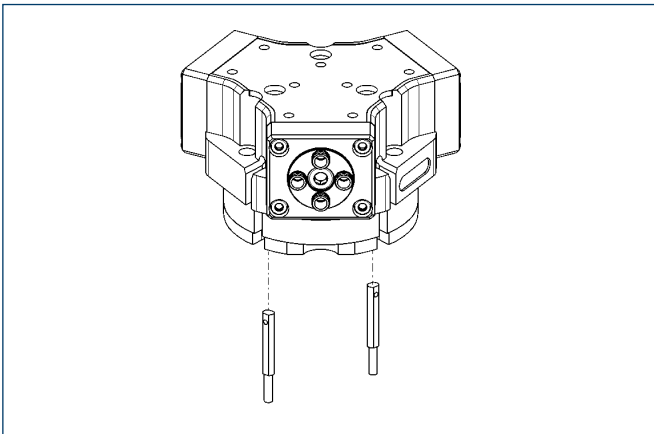
Spring-loaded pressure piece



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

Description	Stroke	Min. total force	ID
A-DPZ-plus 50	3 mm	18 N	0303731

Sensor assembly



End position monitoring:

Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

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

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
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
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

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

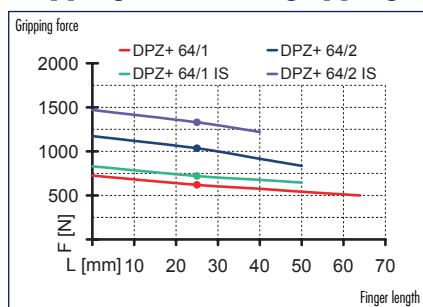


DPZ-plus 64

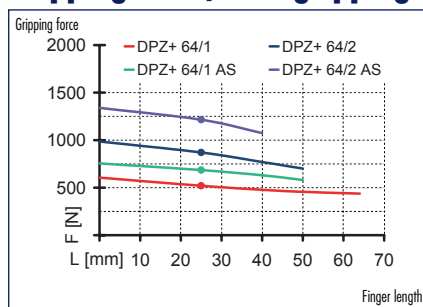
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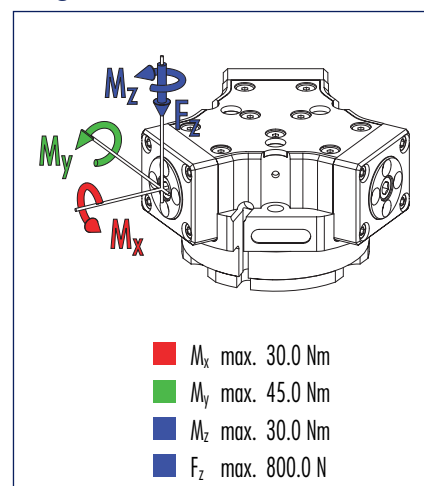
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load



ⓘ Moments and forces 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 reduce.

Technical data

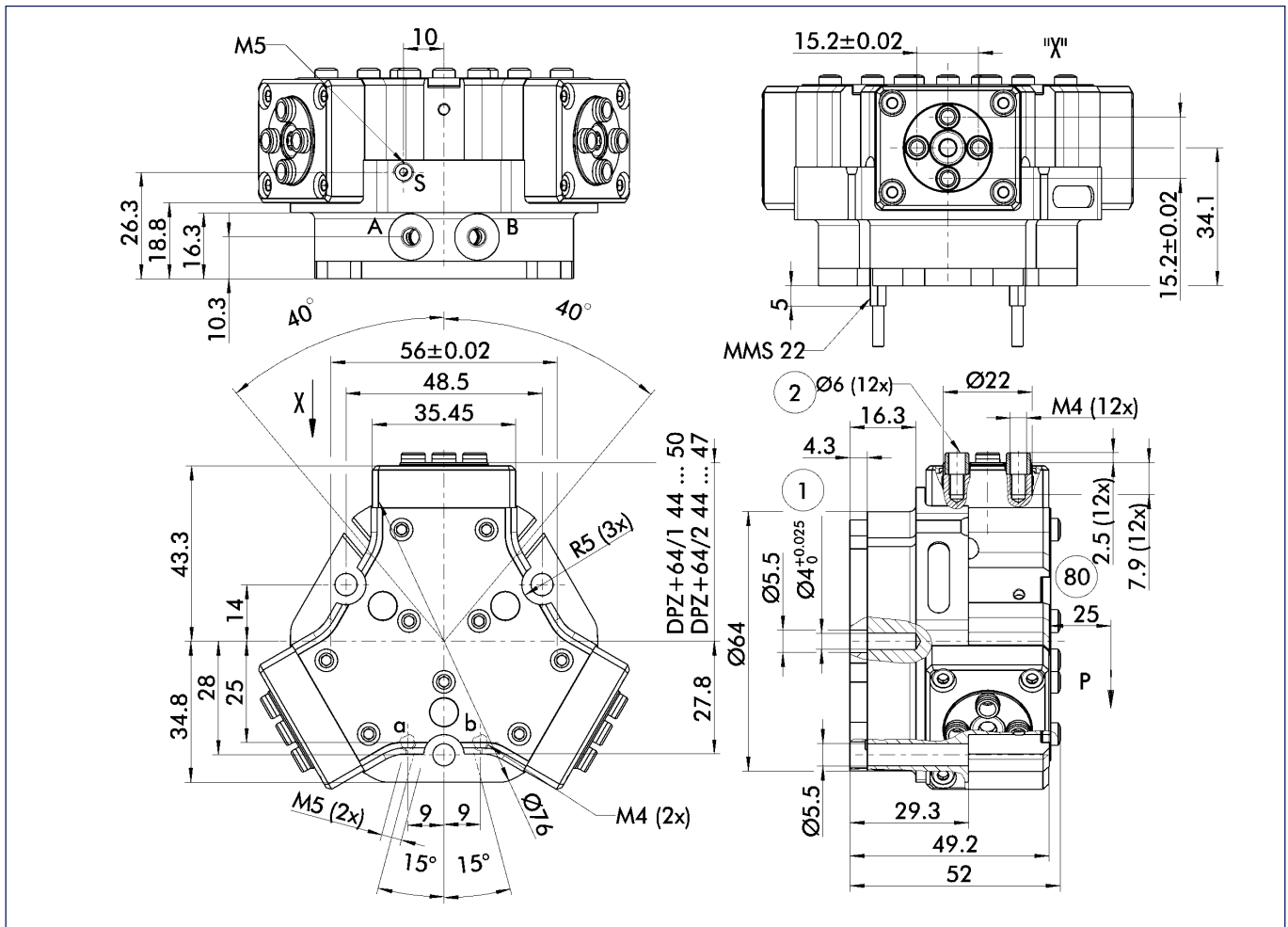
Description		DPZ-plus 64-1	DPZ-plus 64-2	DPZ-plus 64-1-AS	DPZ-plus 64-2-AS	DPZ-plus 64-1-IS	DPZ-plus 64-2-IS
	ID	0304411	0304412	0304413	0304414	0304415	0304416
Stroke per jaw	[mm]	6.0	3.0	6.0	3.0	6.0	3.0
Closing force	[N]	520.0	870.0	685.0	1215.0		
Opening force	[N]	620.0	1030.0			820.0	1490.0
Min. spring force	[N]			165.0	345.0	200.0	460.0
Weight	[kg]	0.62	0.62	0.75	0.75	0.75	0.75
Recommended workpiece weight	[kg]	2.6	4.35	2.6	4.35	2.6	4.35
Air consumption per double stroke	[cm ³]	25.0	25.0	48.0	48.0	48.0	48.0
Minimum pressure	[bar]	2.5	2.5	4.0	4.0	4.0	4.0
Maximum pressure	[bar]	8.0	8.0	6.5	6.5	6.5	6.5
Nominal operating pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Closing time	[s]	0.04	0.04	0.03	0.03	0.05	0.05
Opening time	[s]	0.04	0.04	0.05	0.05	0.03	0.03
Max. permitted finger length	[mm]	64.0	50.0	50.0	40.0	50.0	40.0
Max. permitted weight per finger	[kg]	0.3	0.3	0.3	0.3	0.3	0.3
IP class		67	67	67	67	67	67
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0	90.0	90.0	90.0
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01

OPTIONS and their characteristics

KVZ for increased grip force	ID	0304417
Description		DPZ-plus 64-1-KVZ
Closing force	[N]	935.0
Opening force	[N]	1040.0
Weight	[kg]	0.92
Maximum pressure	[bar]	6.0
Air consumption per double stroke	[cm ³]	50.0
Max. permitted finger length	[mm]	40.0

ⓘ Please note that an additional hose for bleeding ventilation or purging the air is essential for the gripper, i.e. it requires three hoses in total. See the assembly and operating manual for more detailed information.

Main views

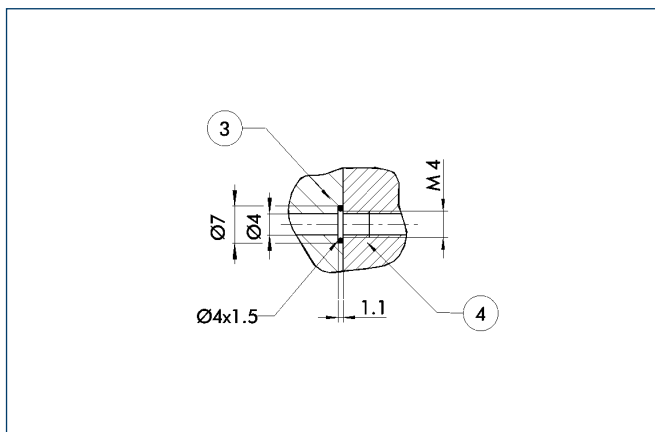


For finger connection, we recommend only using two of the four centering bores for each finger. The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

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

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- S,s Air purge or ventilation hole
- ① Gripper connection
- ② Finger connection
- 80 depth of the centering sleeve hole in the matching part

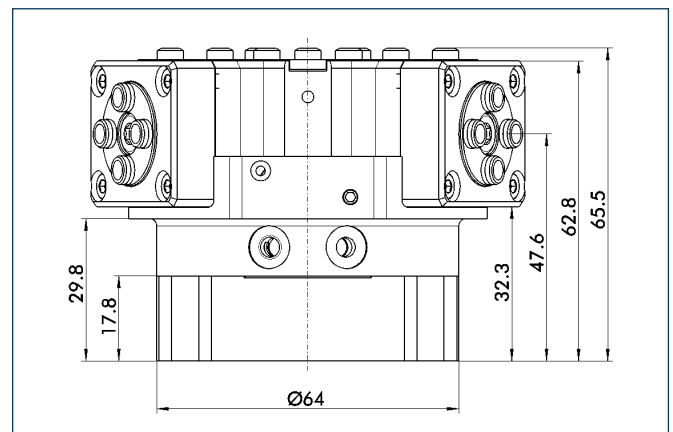
Hose-free direct connection



- ③ Adapter
- ④ Gripper

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

AS/IS gripping force safety device

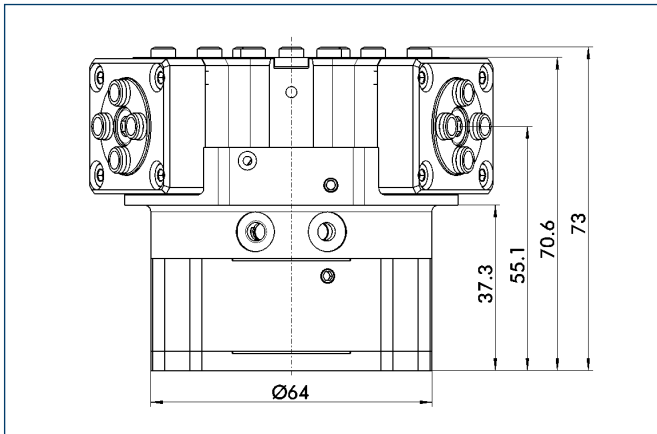


The mechanical gripping force safety device ensures a minimum gripping force even if there is a drop in pressure. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force safety device can also be employed as a gripping force booster or for single-acting gripping.

DPZ-plus 64

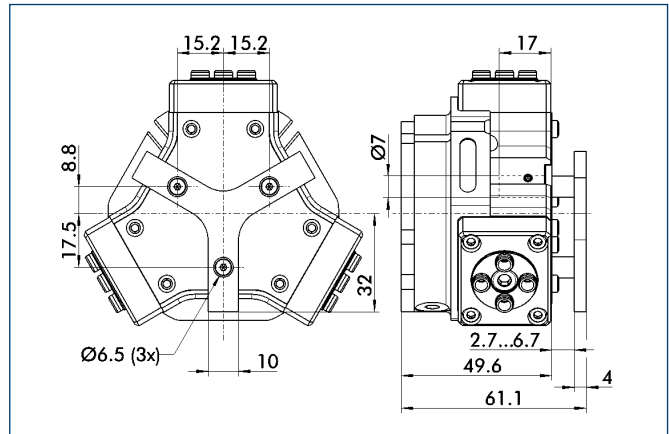
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KVZ for increased grip force



The KVZ grip force cylinder increases the gripping forces on opening and closing. A second series-connected piston also increases the force on the wedge hook. The full gripping force shown in the data table is sometimes only reached after a few hundred gripping cycles.

Spring-loaded pressure piece



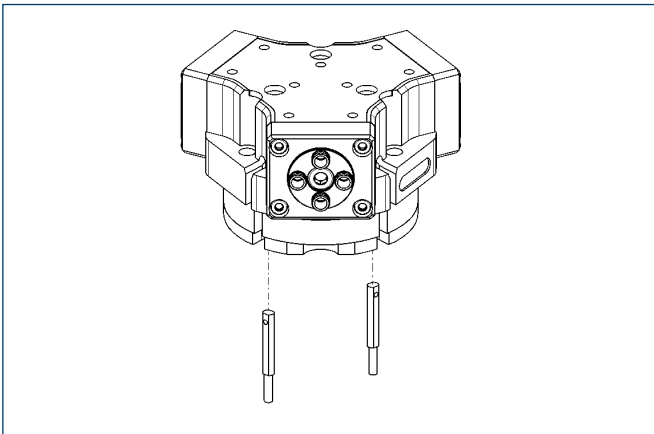
For spring-assisted positioning of the workpiece against a stop after the gripper has opened. Especially developed for loading machines.

Description	Stroke	Min. total force	ID
A-PZN-plus/DPZ-plus 64	4 mm	11 N	0303720



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

Sensor system



End position monitoring:

Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

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

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
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
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

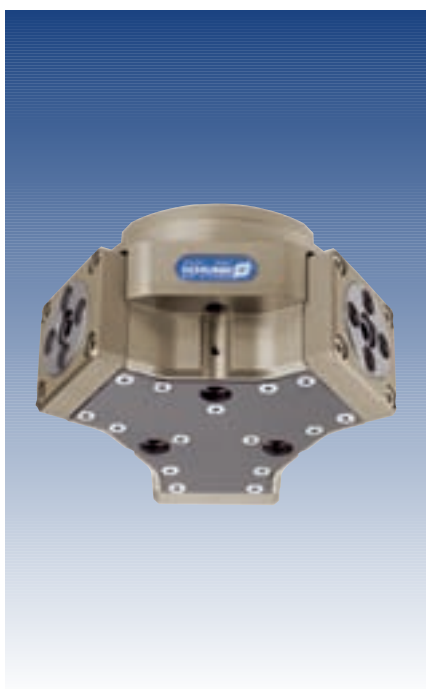
① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



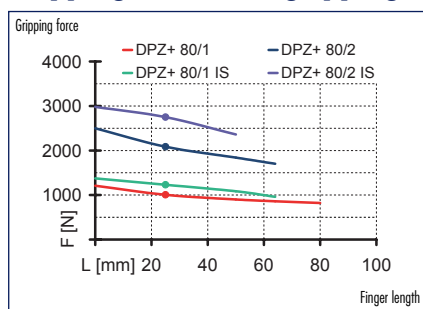
You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

DPZ-plus 80

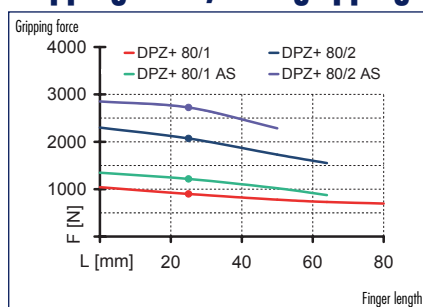
Pneumatic · 3-Finger Centric Gripper · Sealed Grippers



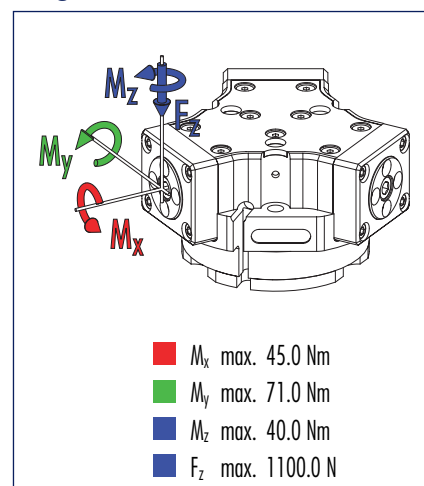
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load



ⓘ Moments and forces 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 reduce.

Technical data

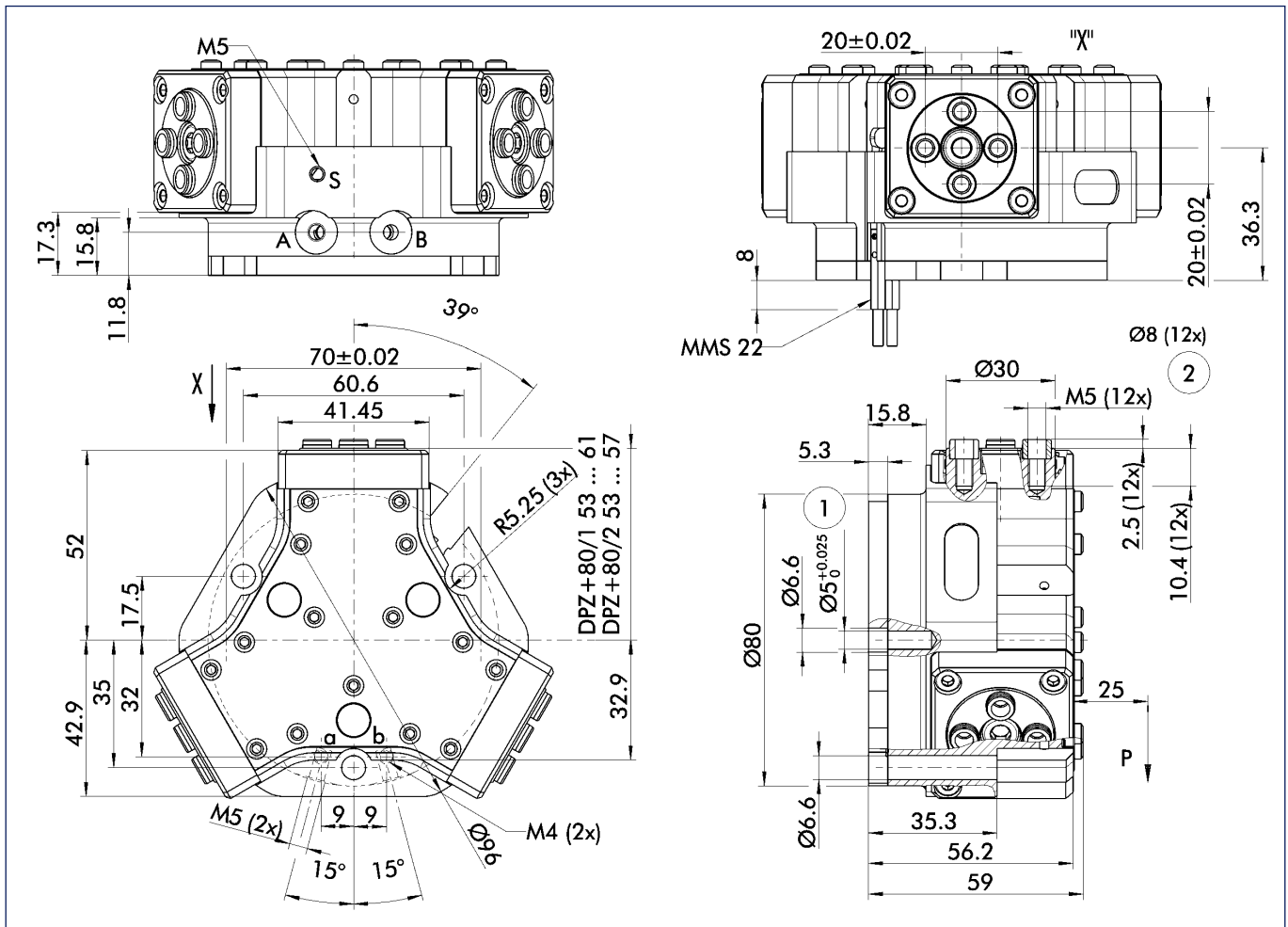
Description		DPZ-plus 80-1	DPZ-plus 80-2	DPZ-plus 80-1-AS	DPZ-plus 80-2-AS	DPZ-plus 80-1-IS	DPZ-plus 80-2-IS
ID		0304421	0304422	0304423	0304424	0304425	0304426
Stroke per jaw	[mm]	8.0	4.0	8.0	4.0	8.0	4.0
Closing force	[N]	900.0	2070.0	1215.0	2725.0		
Opening force	[N]	1000.0	2085.0			1330.0	2765.0
Min. spring force	[N]			315.0	655.0	330.0	680.0
Weight	[kg]	1.3	1.3	1.45	1.45	1.45	1.45
Recommended workpiece weight	[kg]	4.5	10.35	4.5	10.35	4.5	10.35
Air consumption per double stroke	[cm ³]	60.0	60.0	108.0	108.0	108.0	108.0
Minimum pressure	[bar]	2.5	2.5	4.0	4.0	4.0	4.0
Maximum pressure	[bar]	8.0	8.0	6.5	6.5	6.5	6.5
Nominal operating pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Closing time	[s]	0.07	0.07	0.05	0.05	0.08	0.08
Opening time	[s]	0.07	0.07	0.08	0.08	0.05	0.05
Max. permitted finger length	[mm]	80.0	64.0	64.0	50.0	64.0	50.0
Max. permitted weight per finger	[kg]	0.5	0.5	0.5	0.5	0.5	0.5
IP class		67	67	67	67	67	67
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0	90.0	90.0	90.0
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01

OPTIONS and their characteristics

KVZ for increased grip force	ID	0304427
Description		DPZ-plus 80-1-KVZ
Closing force	[N]	1620.0
Opening force	[N]	1750.0
Weight	[kg]	1.6
Maximum pressure	[bar]	6.0
Air consumption per double stroke	[cm ³]	120.0
Max. permitted finger length	[mm]	50.0

ⓘ Please note that an additional hose for bleeding ventilation or purging the air is essential for the gripper, i.e. it requires three hoses in total. See the assembly and operating manual for more detailed information.

Main views

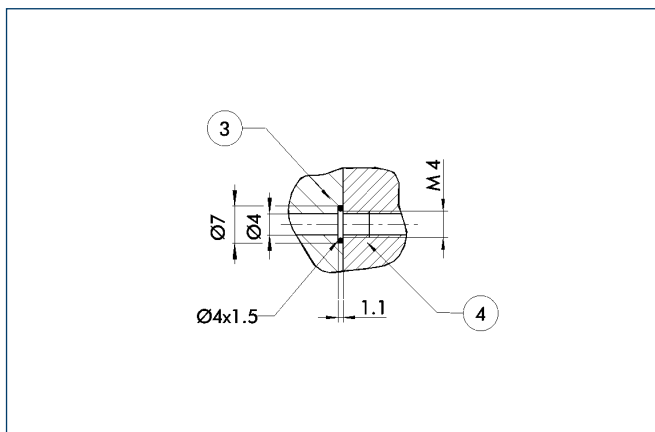


For finger connection, we recommend only using two of the four centering bores for each finger. The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

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

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- S,s Air purge or ventilation hole
- ① Gripper connection
- ② Finger connection
- ⊘ depth of the centering sleeve hole in the matching part

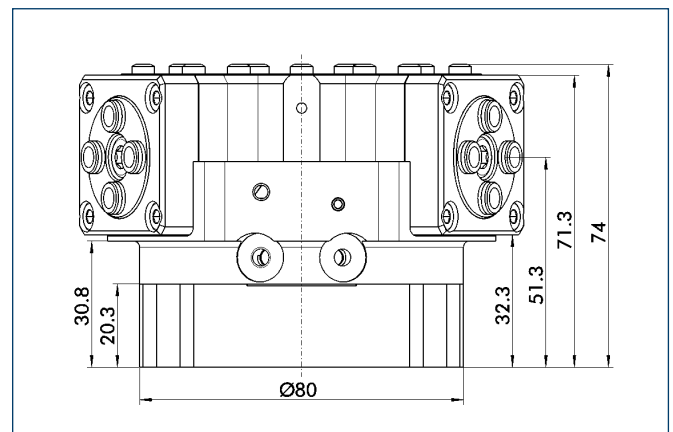
Hose-free direct connection



- ③ Adapter
- ④ Gripper

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

AS/IS gripping force safety device

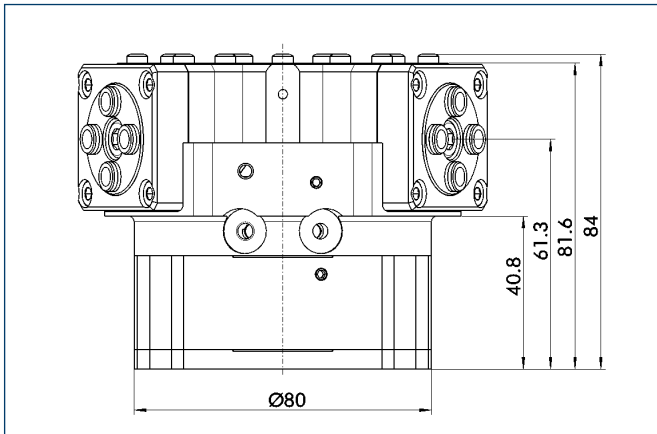


The mechanical gripping force safety device ensures a minimum gripping force even if there is a drop in pressure. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force safety device can also be employed as a gripping force booster or for single-acting gripping.

DPZ-plus 80

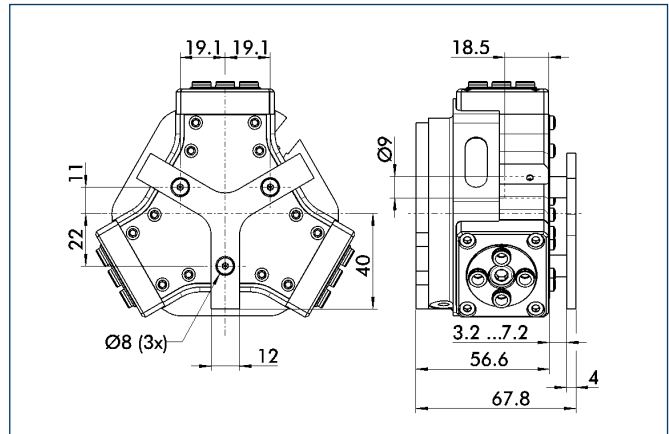
Pneumatic · 3-Finger Centric Gripper · Sealed Grippers

KVZ for increased grip force



The KVZ grip force cylinder increases the gripping forces on opening and closing. A second series-connected piston also increases the force on the wedge hook. The full gripping force shown in the data table is sometimes only reached after a few hundred gripping cycles.

Spring-loaded pressure piece



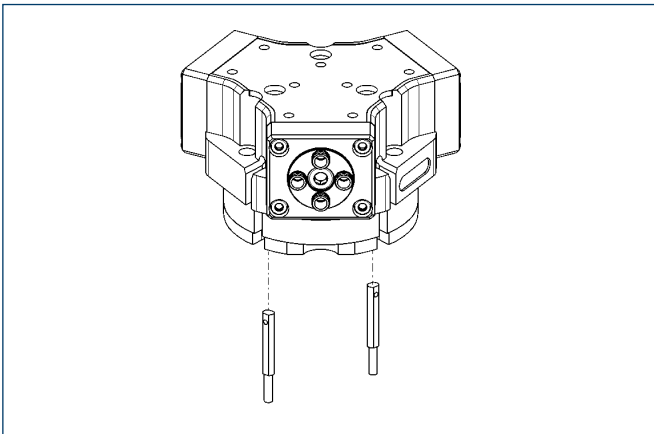
For spring-assisted positioning of the workpiece against a stop after the gripper has opened. Especially developed for loading machines.

Description	Stroke	Min. total force	ID
A-PZN-plus/DPZ-plus 80	4 mm	18 N	0303721



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

Sensor system



End position monitoring:

Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

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

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
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
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

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



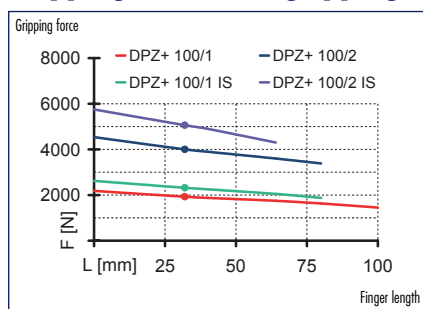
You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

DPZ-plus 100

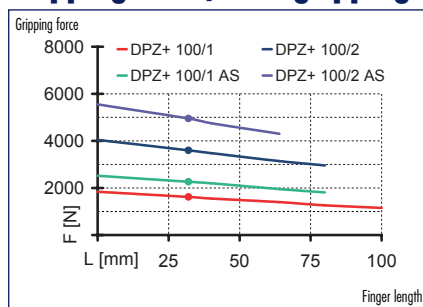
Pneumatic · 3-Finger Centric Gripper · Sealed Grippers



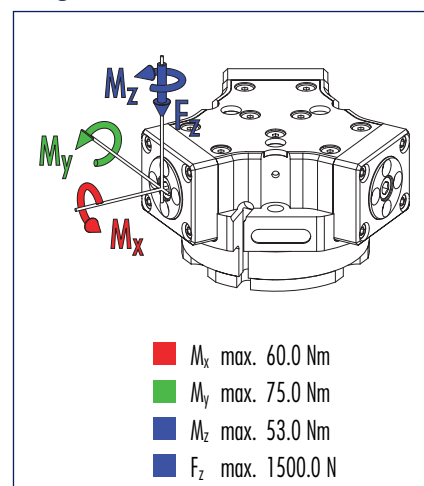
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load



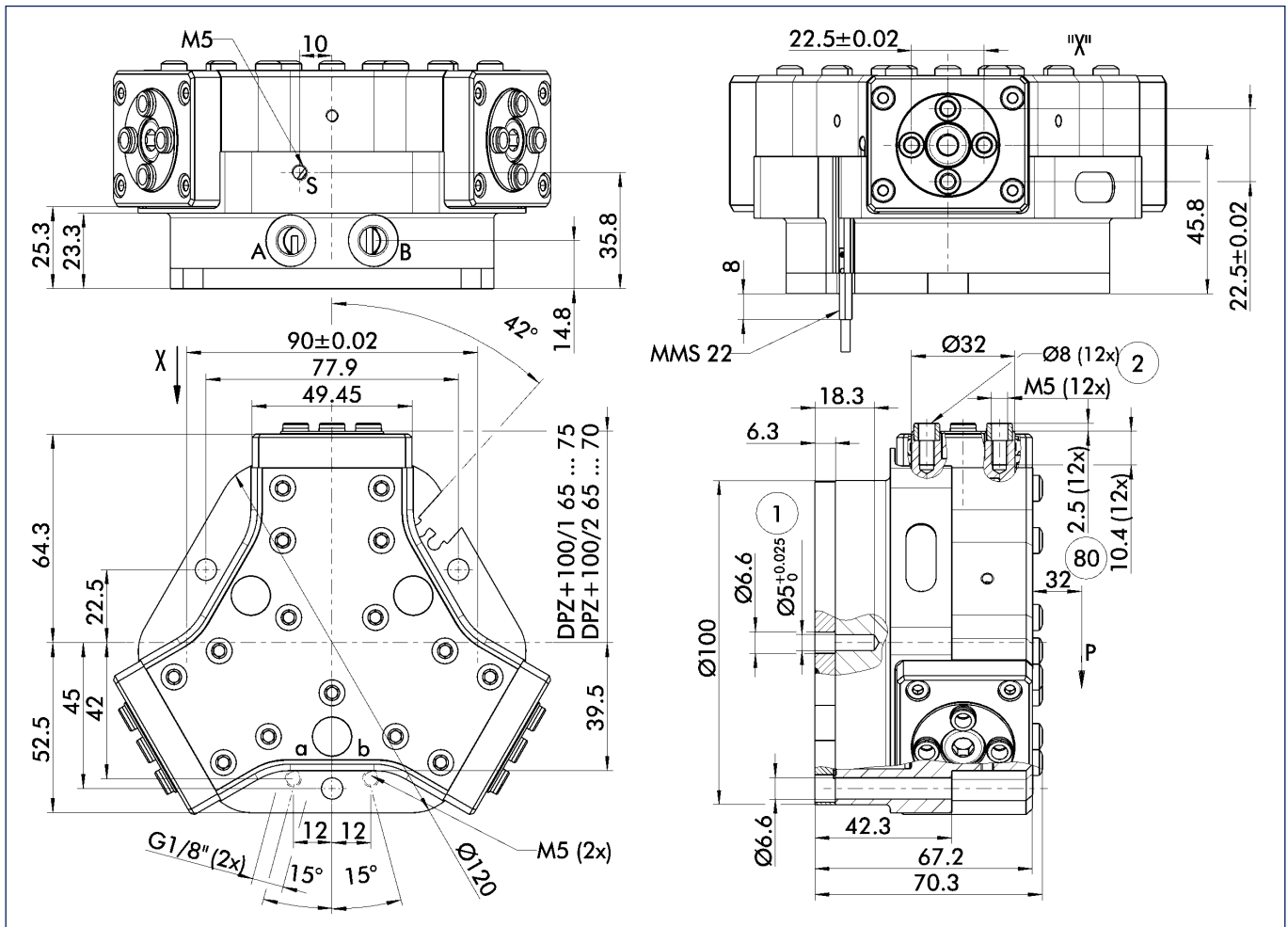
ⓘ Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may reduce.

Technical data

Description		DPZ-plus 100-1	DPZ-plus 100-2	DPZ-plus 100-1-AS	DPZ-plus 100-2-AS	DPZ-plus 100-1-IS	DPZ-plus 100-2-IS
ID		0304431	0304432	0304433	0304434	0304435	0304436
Stroke per jaw	[mm]	10.0	5.0	10.0	5.0	10.0	5.0
Closing force	[N]	1620.0	3600.0	2265.0	4950.0		
Opening force	[N]	1920.0	4000.0			2620.0	5460.0
Min. spring force	[N]			645.0	1350.0	700.0	1460.0
Weight	[kg]	1.9	1.9	2.3	2.3	2.3	2.3
Recommended workpiece weight	[kg]	8.1	18.0	8.1	18.0	8.1	18.0
Air consumption per double stroke	[cm ³]	120.0	120.0	210.0	210.0	210.0	210.0
Minimum pressure	[bar]	2.5	2.5	4.0	4.0	4.0	4.0
Maximum pressure	[bar]	8.0	8.0	6.5	6.5	6.5	6.5
Nominal operating pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Closing time	[s]	0.13	0.13	0.13	0.13	0.25	0.25
Opening time	[s]	0.13	0.13	0.25	0.25	0.13	0.13
Max. permitted finger length	[mm]	100.0	80.0	80.0	64.0	80.0	64.0
Masse admissible maxi. par doigt	[kg]	0.95	0.95	0.95	0.95	0.95	0.95
IP class		67	67	67	67	67	67
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0	90.0	90.0	90.0
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01

ⓘ Please note that an additional hose for bleeding ventilation or purging the air is essential for the gripper, i.e. it requires three hoses in total. See the assembly and operating manual for more detailed information.

Main views

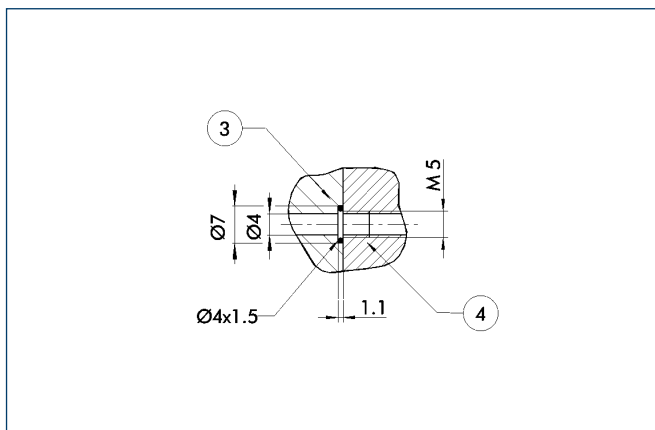


For finger connection, we recommend only using two of the four centering bores for each finger. The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

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

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- S,s Air purge or ventilation hole
- ① Gripper connection
- ② Attachment connection
- ⊘ depth of the centering sleeve hole in the matching part

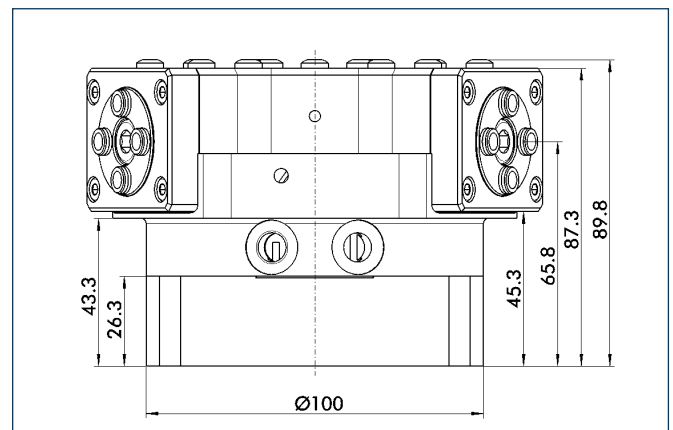
Hose-free direct connection



- ③ Adapter
- ④ Gripper

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

AS/IS gripping force safety device

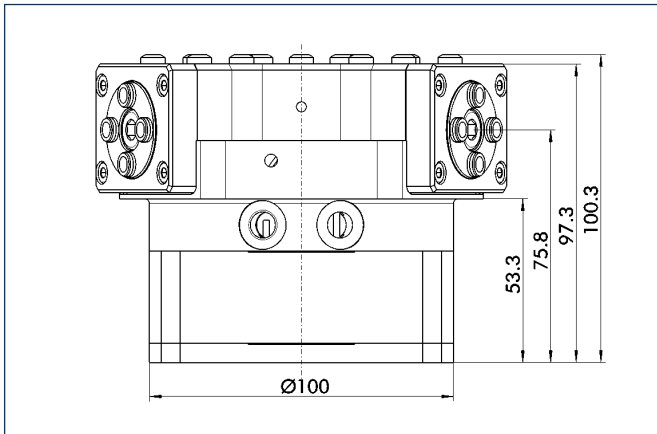


The mechanical gripping force safety device ensures a minimum gripping force even if there is a drop in pressure. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force safety device can also be employed as a gripping force booster or for single-acting gripping.

DPZ-plus 100

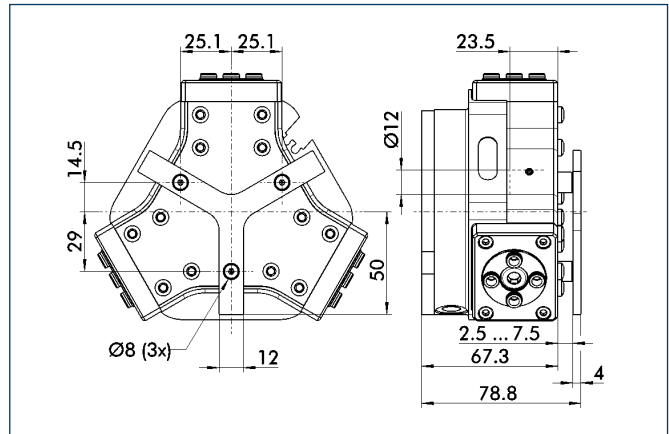
Pneumatic · 3-Finger Centric Gripper · Sealed Grippers

KVZ for increased grip force



The KVZ grip force cylinder increases the gripping forces on opening and closing. A second series-connected piston also increases the force on the wedge hook. The full gripping force shown in the data table is sometimes only reached after a few hundred gripping cycles.

Spring-loaded pressure piece



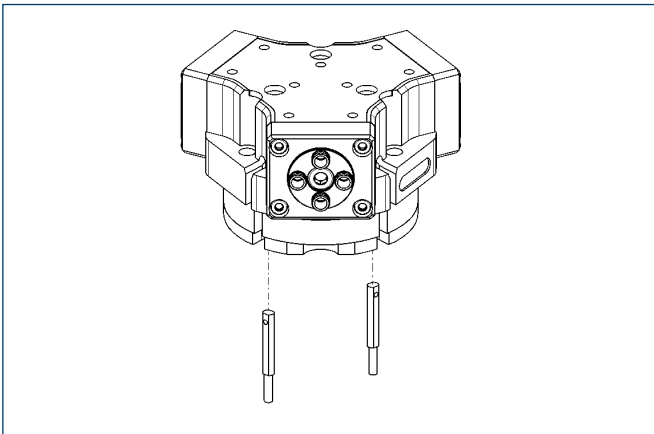
For spring-assisted positioning of the workpiece against a stop after the gripper has opened. Especially developed for loading machines.

Description	Stroke	Min. total force	ID
A-PZN-plus/DPZ-plus 100	5 mm	35 N	0303722



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

Sensor system



End position monitoring:

Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

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

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
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
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

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



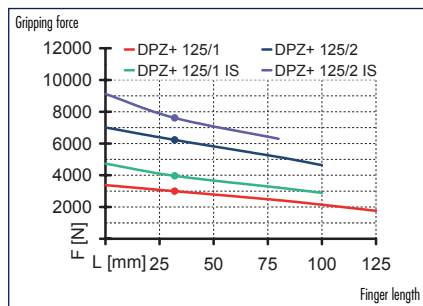
You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

DPZ-plus 125

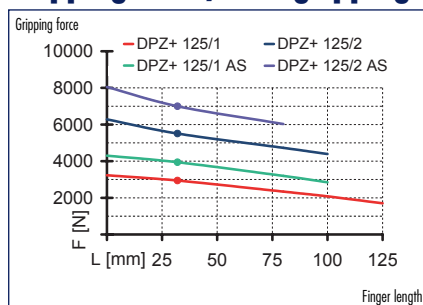
Pneumatic · 3-Finger Centric Gripper · Sealed Grippers



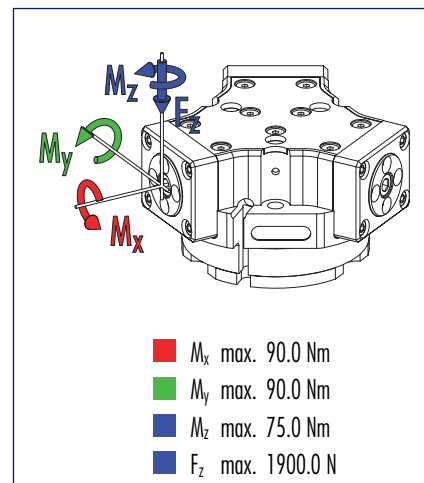
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load



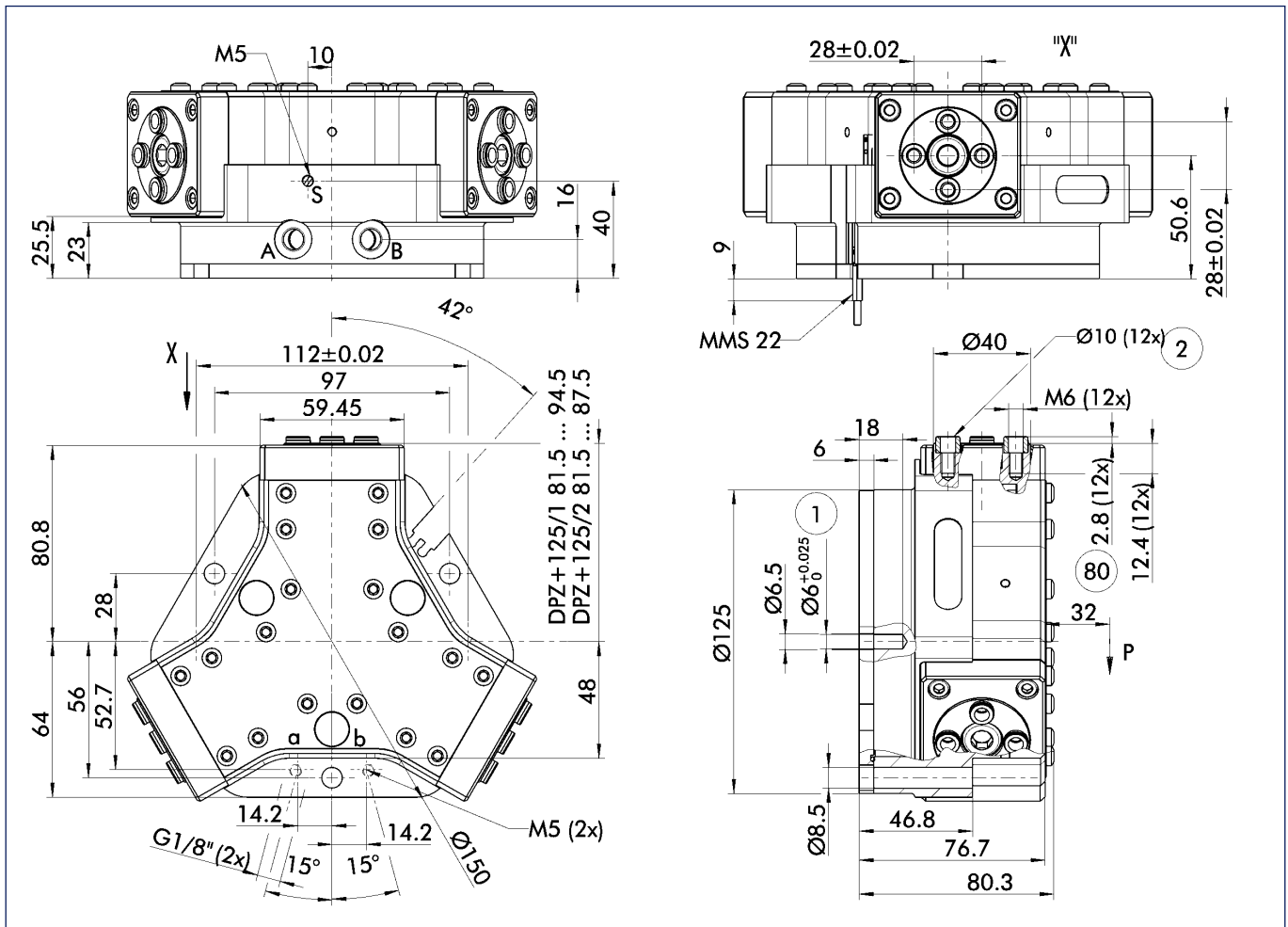
ⓘ Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may reduce.

Technical data

Description		DPZ-plus 125-1	DPZ-plus 125-2	DPZ-plus 125-1-AS	DPZ-plus 125-2-AS	DPZ-plus 125-1-IS	DPZ-plus 125-2-IS
	ID	0304441	0304442	0304443	0304444	0304445	0304446
Stroke per jaw	[mm]	13.0	6.0	13.0	6.0	13.0	6.0
Closing force	[N]	2945.0	5510.0	3940.0	7000.0		
Opening force	[N]	3000.0	6200.0			4015.0	8300.0
Min. spring force	[N]			995.0	1490.0	1015.0	2100.0
Weight	[kg]	3.5	3.5	4.7	4.7	4.7	4.7
Recommended workpiece weight	[kg]	14.7	27.5	14.7	27.5	14.7	27.5
Air consumption per double stroke	[cm ³]	230.0	230.0	383.0	383.0	383.0	383.0
Minimum pressure	[bar]	2.5	2.5	4.0	4.0	4.0	4.0
Maximum pressure	[bar]	8.0	8.0	6.5	6.5	6.5	6.5
Nominal operating pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Closing time	[s]	0.25	0.25	0.22	0.22	0.45	0.45
Opening time	[s]	0.25	0.25	0.45	0.45	0.22	0.22
Max. permitted finger length	[mm]	125.0	100.0	100.0	80.0	100.0	80.0
Max. permitted weight per finger	[kg]	1.75	1.75	1.75	1.75	1.75	1.75
IP class		67	67	67	67	67	67
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0	90.0	90.0	90.0
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01

ⓘ Please note that an additional hose for bleeding ventilation or purging the air is essential for the gripper, i.e. it requires three hoses in total. See the assembly and operating manual for more detailed information.

Main views

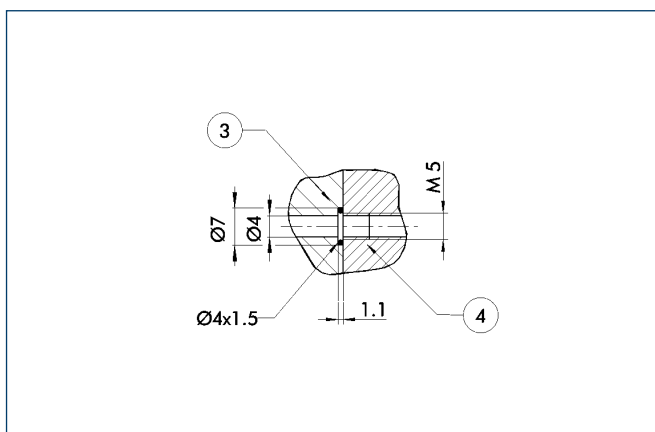


For finger connection, we recommend only using two of the four centering bores for each finger. The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

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

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- S,s Air purge or ventilation hole
- ① Gripper connection
- ② Finger connection
- ⊘ depth of the centering sleeve hole in the matching part

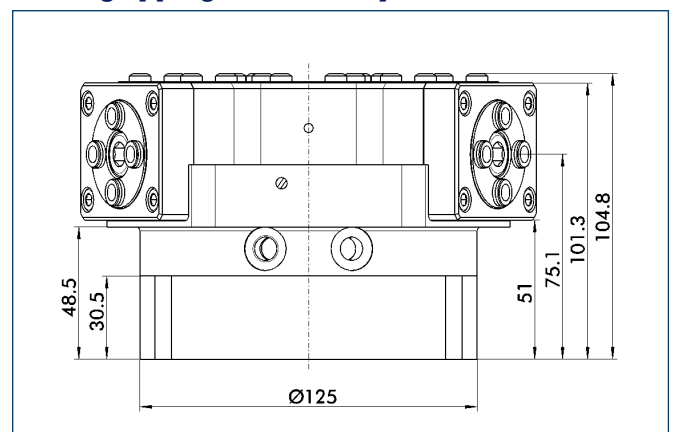
Hose-free direct connection



- ③ Adapter
- ④ Gripper

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

AS/IS gripping force safety device

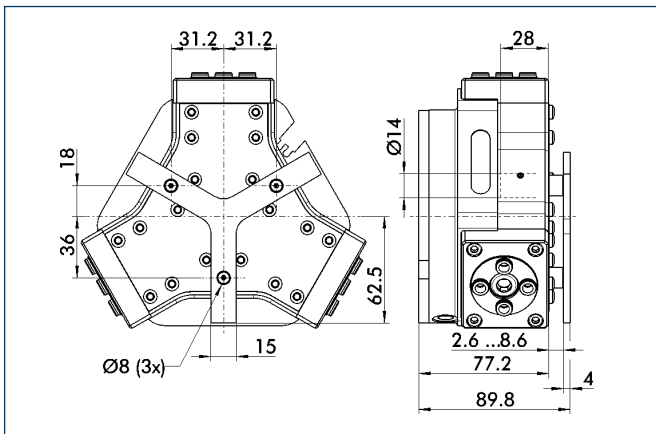


The mechanical gripping force safety device ensures a minimum gripping force even if there is a drop in pressure. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force safety device can also be employed as a gripping force booster or for single-acting gripping.

DPZ-plus 125

Pneumatic · 3-Finger Centric Gripper · Sealed Grippers

Spring-loaded pressure piece



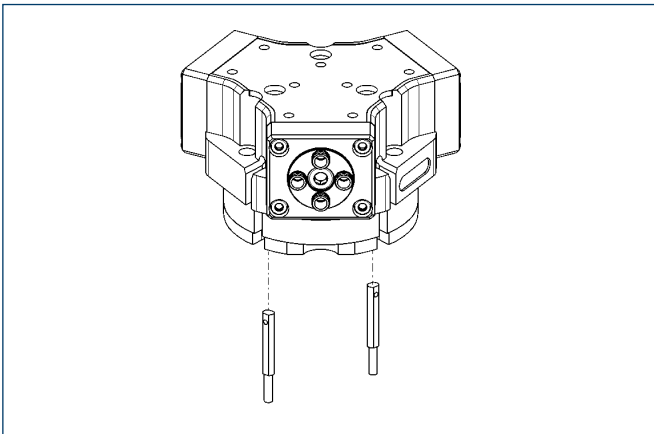
For spring-assisted positioning of the workpiece against a stop after the gripper has opened. Especially developed for loading machines.

Description	Stroke	Min. total force	ID
A-PZN-plus/DPZ-plus 125	6 mm	105 N	0303723



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

Sensor system



End position monitoring:

Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

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

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
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
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

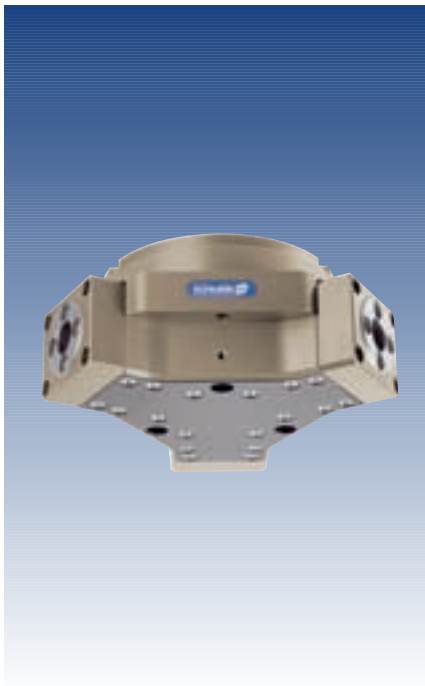
① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



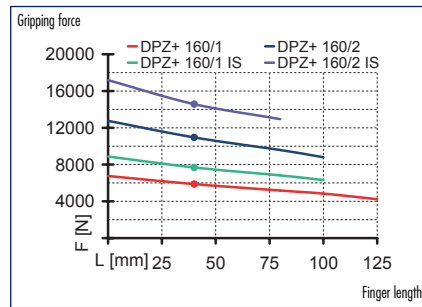
You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

DPZ-plus 160

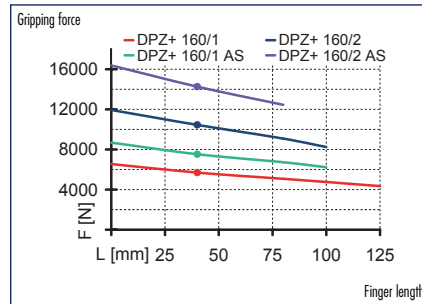
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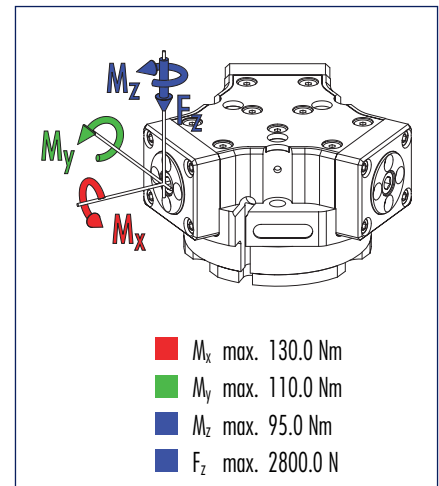
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load



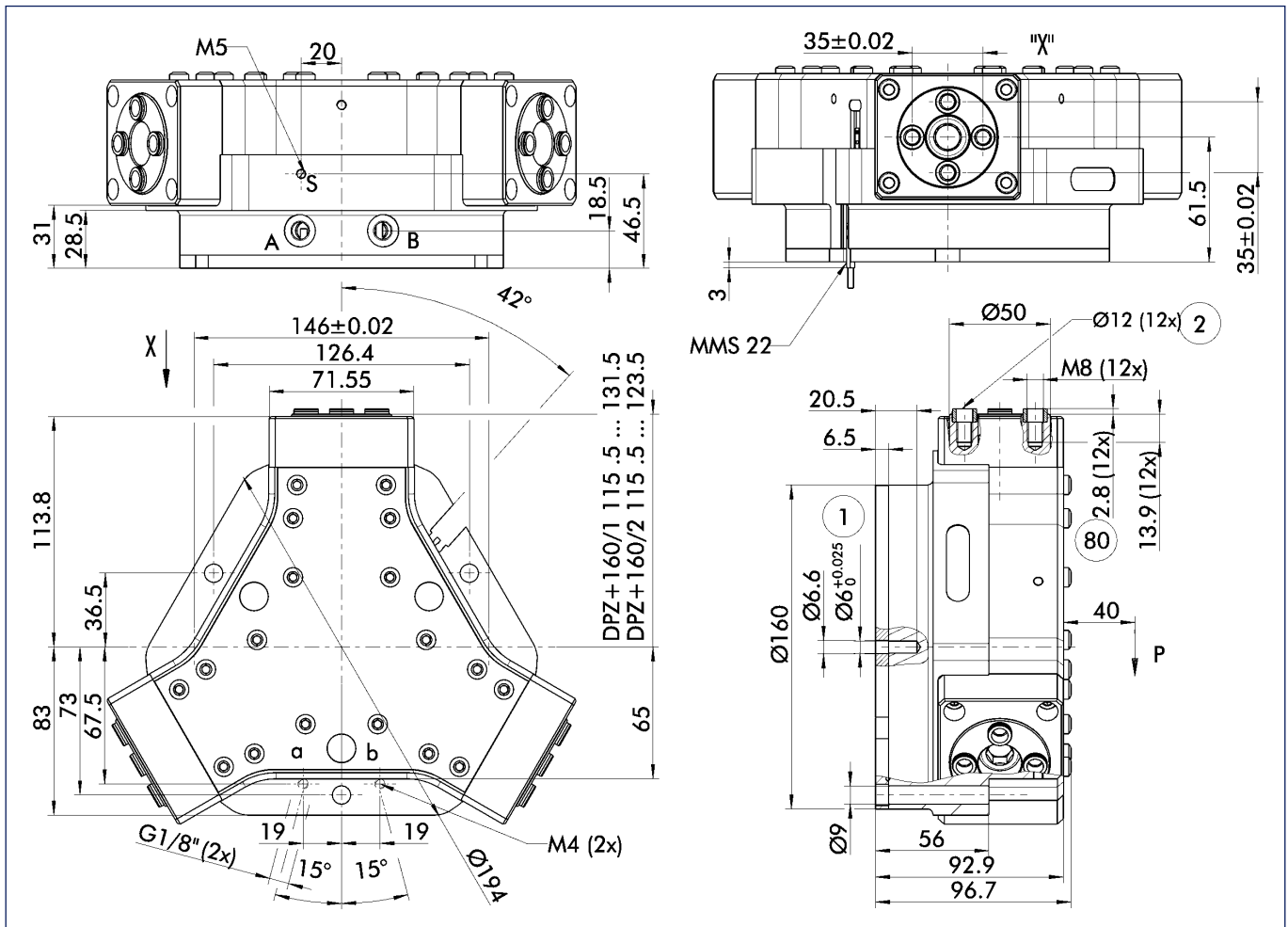
ⓘ Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may reduce.

Technical data

Description		DPZ-plus 160-1	DPZ-plus 160-2	DPZ-plus 160-1-AS	DPZ-plus 160-2-AS	DPZ-plus 160-1-IS	DPZ-plus 160-2-IS
	ID	0304451	0304452	0304453	0304454	0304455	0304456
Stroke per jaw	[mm]	16.0	8.0	16.0	8.0	16.0	8.0
Closing force	[N]	5700.0	10450.0	7530.0	14260.0		
Opening force	[N]	5880.0	10950.0			7865.0	15070.0
Min. spring force	[N]			1830.0	3810.0	1985.0	4120.0
Weight	[kg]	7.9	7.9	9.7	9.7	9.7	9.7
Recommended workpiece weight	[kg]	28.5	52.0	28.5	52.0	28.5	52.0
Air consumption per double stroke	[cm ³]	520.0	520.0	875.0	875.0	875.0	875.0
Minimum pressure	[bar]	2.5	2.5	4.0	4.0	4.0	4.0
Maximum pressure	[bar]	8.0	8.0	6.5	6.5	6.5	6.5
Nominal operating pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Closing time	[s]	0.6	0.6	0.5	0.5	1.0	1.0
Opening time	[s]	0.6	0.6	1.0	1.0	0.5	0.5
Max. permitted finger length	[mm]	125.0	100.0	100.0	80.0	100.0	80.0
Max. permitted weight per finger	[kg]	3.0	3.0	3.0	3.0	3.0	3.0
IP class		67	67	67	67	67	67
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0	90.0	90.0	90.0
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02

ⓘ Please note that an additional hose for bleeding ventilation or purging the air is essential for the gripper, i.e. it requires three hoses in total. See the assembly and operating manual for more detailed information.

Main views

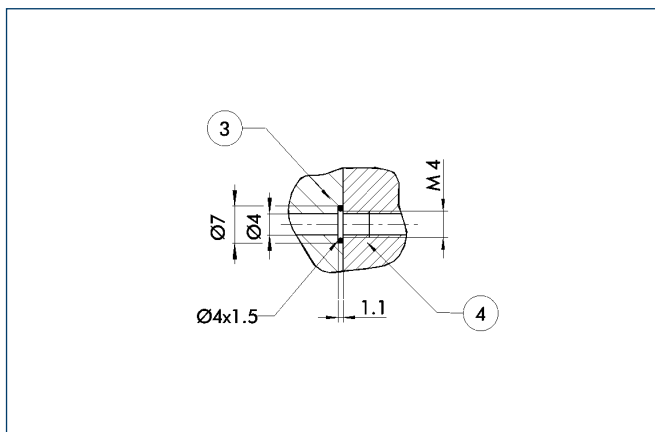


For finger connection, we recommend only using two of the four centering bores for each finger. The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

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

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- S,s Air purge or ventilation hole
- ① Gripper connection
- ② Finger connection
- ⊘ depth of the centering sleeve hole in the matching part

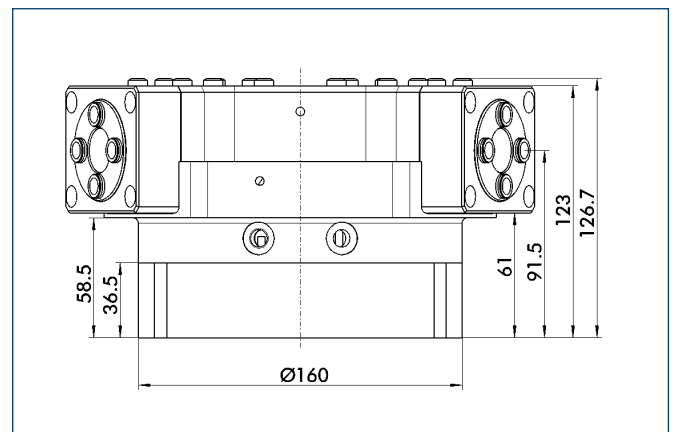
Hose-free direct connection



- ③ Adapter
- ④ Gripper

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

AS/IS gripping force safety device

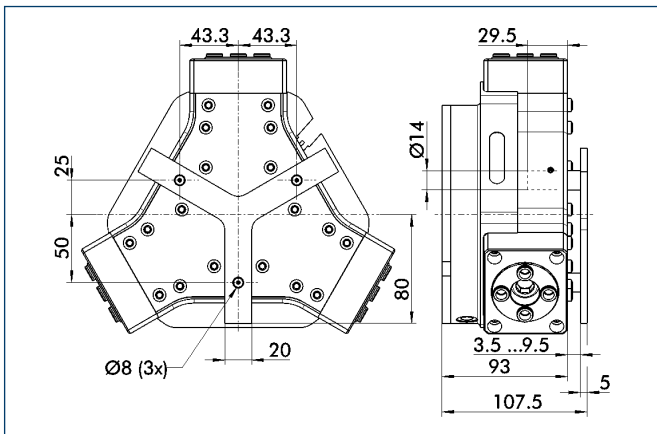


The mechanical gripping force safety device ensures a minimum gripping force even if there is a drop in pressure. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force safety device can also be employed as a gripping force booster or for single-acting gripping.

DPZ-plus 160

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Spring-loaded pressure piece



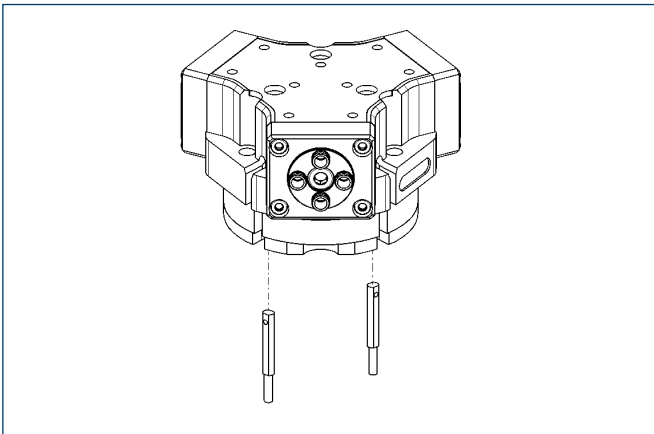
For spring-assisted positioning of the workpiece against a stop after the gripper has opened. Especially developed for loading machines.

Description	Stroke	Min. total force	ID
A-PZN-plus/DPZ-plus 160	6 mm	205 N	0303724



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

Sensor system



End position monitoring:

Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

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

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
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
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

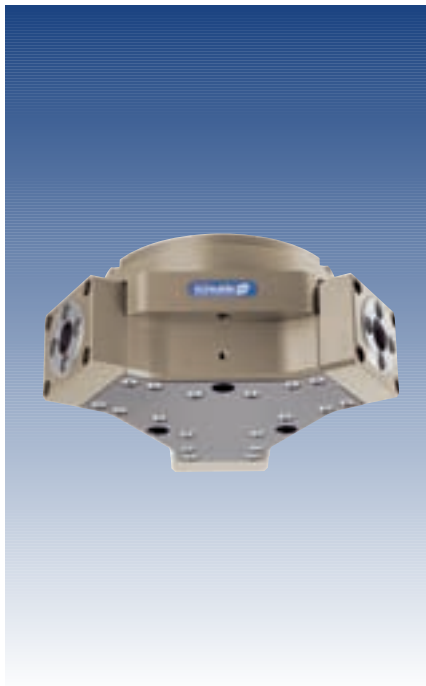
① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



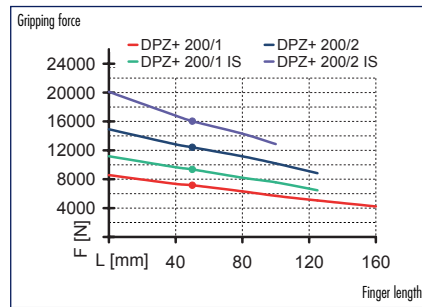
You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

DPZ-plus 200

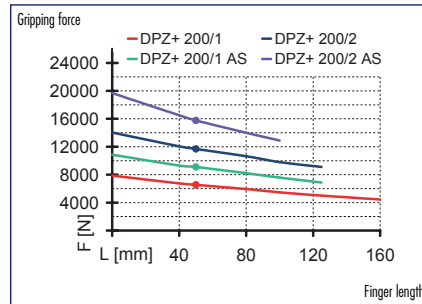
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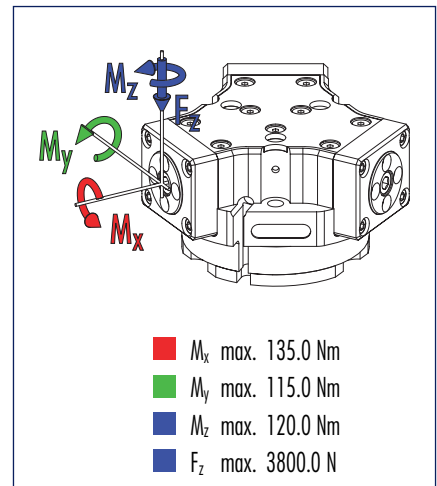
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load



① Moments and forces 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 reduce.

Technical data

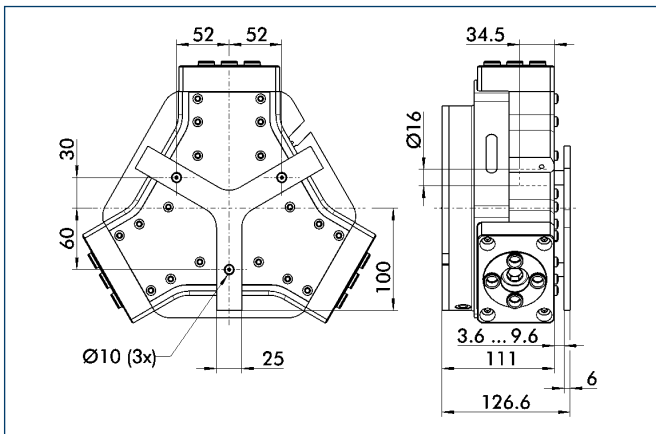
Description		DPZ-plus 200-1	DPZ-plus 200-2	DPZ-plus 200-1-AS	DPZ-plus 200-2-AS	DPZ-plus 200-1-IS	DPZ-plus 200-2-IS
ID		0304461	0304462	0304463	0304464	0304465	0304466
Stroke per jaw	[mm]	25.0	14.0	25.0	14.0	25.0	14.0
Closing force	[N]	6750.0	12060.0	9300.0	16500.0		
Opening force	[N]	7160.0	12410.0			9910.0	17150.0
Min. spring force	[N]			2550.0	4440.0	2750.0	4740.0
Weight	[kg]	15.6	15.6	20.1	20.1	20.1	20.1
Recommended workpiece weight	[kg]	33.5	60.0	33.5	60.0	33.5	60.0
Air consumption per double stroke	[cm ³]	1040.0	1040.0	1725.0	1725.0	1725.0	1725.0
Minimum pressure	[bar]	2.5	2.5	4.0	4.0	4.0	4.0
Maximum pressure	[bar]	8.0	8.0	6.5	6.5	6.5	6.5
Nominal operating pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Closing time	[s]	1.5	1.5	1.2	1.2	1.8	1.8
Opening time	[s]	1.5	1.5	1.8	1.8	1.2	1.2
Max. permitted finger length	[mm]	160.0	125.0	125.0	100.0	125.0	100.0
Max. permitted weight per finger	[kg]	5.5	5.5	5.5	5.5	5.5	5.5
IP class		67	67	67	67	67	67
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0	90.0	90.0	90.0
Repeat accuracy	[mm]	0.05	0.05	0.05	0.05	0.05	0.05

① Please note that an additional hose for bleeding ventilation or purging the air is essential for the gripper, i.e. it requires three hoses in total. See the assembly and operating manual for more detailed information.

DPZ-plus 200

Pneumatic · 3-Finger Centric Gripper · Sealed Grippers

Spring-loaded pressure piece



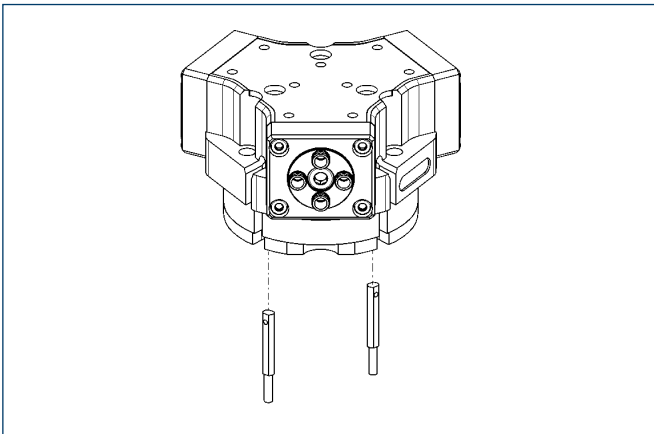
For spring-assisted positioning of the workpiece against a stop after the gripper has opened. Especially developed for loading machines.

Description	Stroke	Min. total force	ID
A-PZN-plus/DPZ-plus 200	6 mm	247 N	0303725



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

Sensor system



End position monitoring: Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

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

Extension cables for proximity switches/magnetic switches

Description	ID
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KA BG08-L 3P-0300-PNP	0301622
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
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

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.