PZN

Sizes
50 .. 200

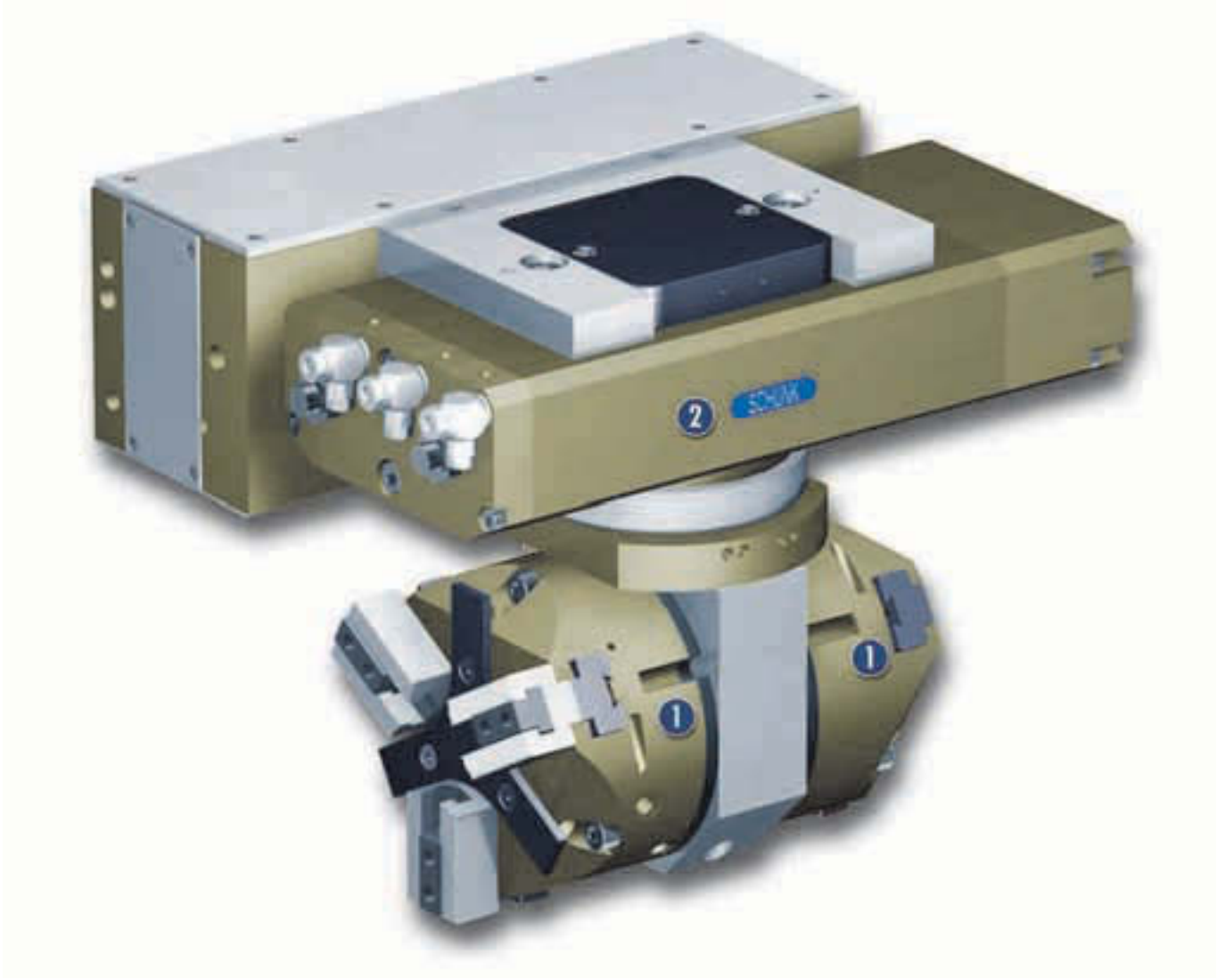
Weight
0.20 kg .. 11.0 kg

Gripping force
260 N .. 16000 N

Stroke per finger
2 mm .. 25 mm

Force-fit gripping
1.3 kg .. 80 kg

Application example



Handling unit for loading and unloading cylindrical blanks and finished parts into a lathe. The pressure plate is used to press the blank securely up to the stop of the chuck.

1 3-Finger Centric Gripper PZN 125 with pressure plate

2 Rotary Actuator OSE-C 45

Universal Gripper

Universal 3-finger centric gripper with high gripping force and robust T-slot guidance

Area of application

For universal use in clean and slightly dirty environments

Your advantages and benefits

High precision T-slot guidance
guarantees enormous versatility

High maximum moments possible
This makes it suitable for the use of long gripper fingers

High gripping forces
for a wide range of applications

Air supply via hose-free direct connection or via threaded joints
for flexible pressure supply in all automated systems

General information on the series

Working principle
Wedge-hook kinematics

Housing material
Aluminum alloy, hard-anodized

Base jaws material
Steel

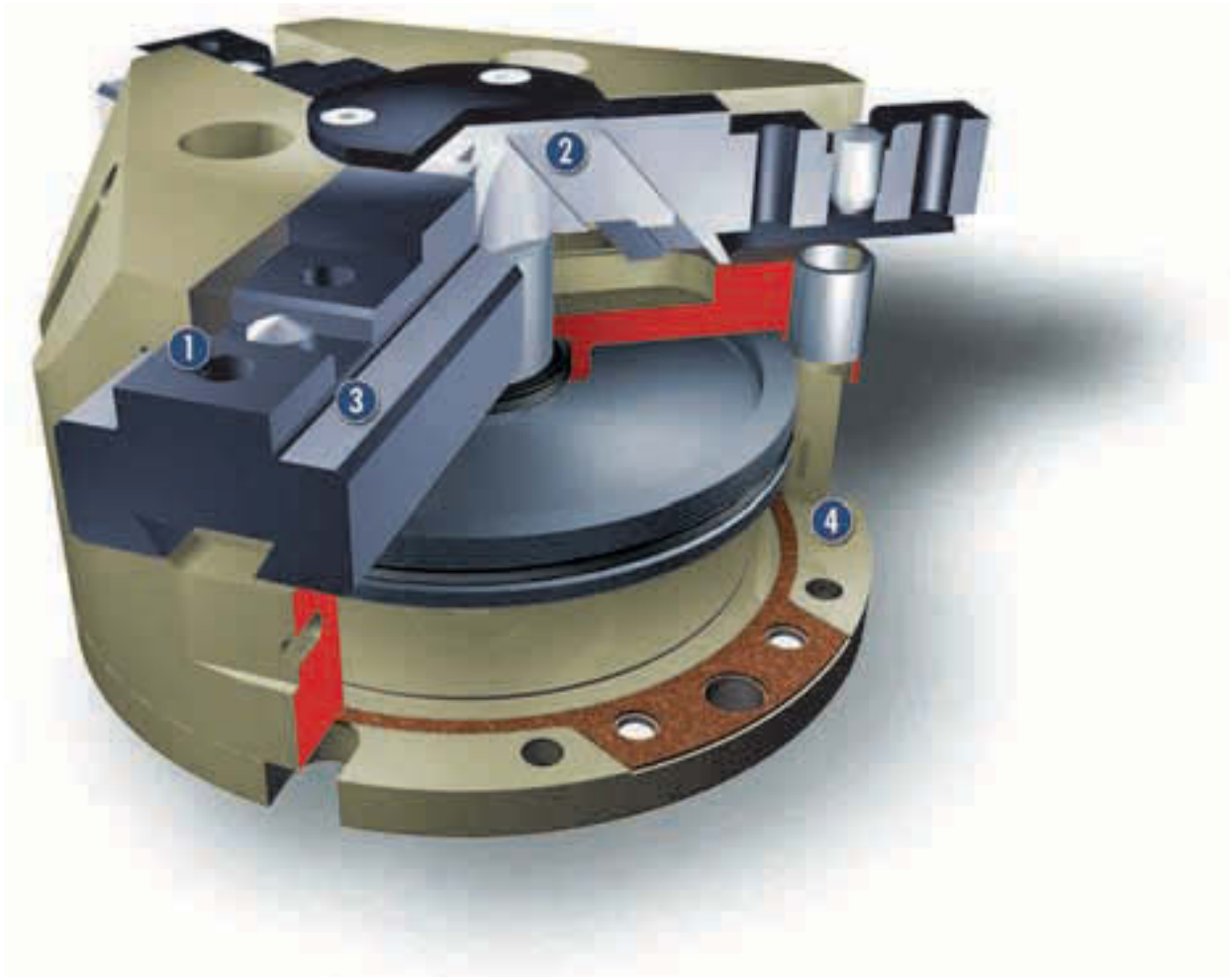
Actuation
Pneumatic, via filtered compressed air (10 µm): Dry, lubricated or non-lubricated
Pressure medium: Requirement on the quality class of compressed air according to DIN ISO 8573-1: Quality class 4

Warranty
24 months

Scope of delivery
Brackets for proximity switches, dowel pins, O-rings for direct connection, assembly and operating manual with manufacturer's declaration

Gripping force safety device
Possible using versions with mechanical gripping force safety device or pressure maintenance valve SDV-P

Sectional diagram



1 Base jaws
for the mounting of workpiece-specific gripper fingers

2 Kinematics
wedge hook design for high power transmission and synchronized gripping

3 T-slot guidance
robust T-slot base jaw guide with minimum play

4 Housing
weight-reduced thanks to the use of a high-strength aluminum alloy

Functional description

The piston is pressed up or down by compressed air. Via its slanted working surfaces, the wedge hook redirects this vertical movement into a horizontal, synchronous gripping motion of the three base jaws.

Options and special information

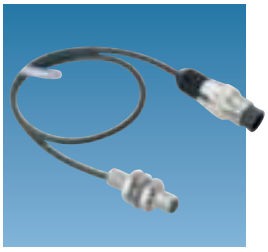
Please use the PZN only for **ordering replacements**; for **new designs**, please use the successor model **PZN-plus**.

Accessories

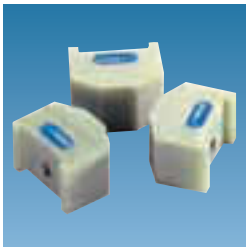
SCHUNK accessories – the suitable complement for the highest level of functionality, reliability and controlled production of all automation modules.

Fittings

Inductive proximity switches IN

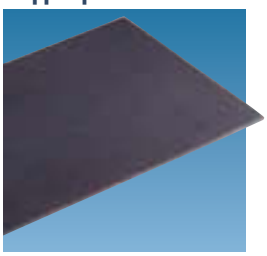


Plastic inserts – Quentes



Sensor cables W/WK/KV/GK

Gripper pads HKI

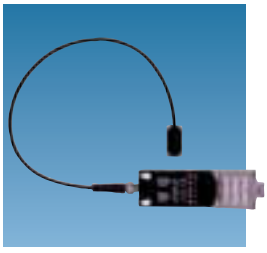


V sensor distributor

Pressure maintenance valves SDV-P

Finger blanks

Flexible position sensor FPS



ⓘ Please refer to the additional views at the end of each size for the specific size of the equired accessory, availability for the gripper size, the description and the ID No. You can find more detailed information on our range of accessories 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.

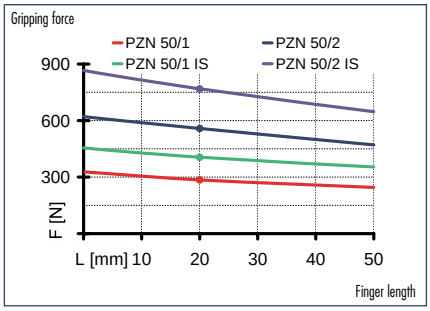
Repeat accuracy
is defined as the variance of the end position after 100 consecutive strokes.

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

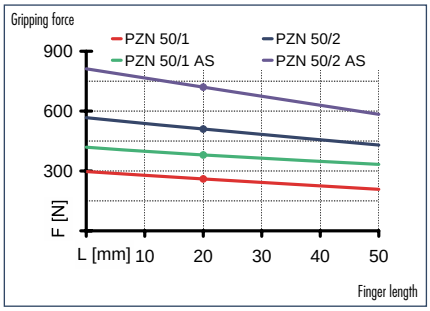
Closing and opening times
Closing and opening times are the pure movement times of the base jaws or fingers. Valve switching times, hose filling times or PLC reaction times are not included and must be taken into consideration when determining cycle times.

PZN 50

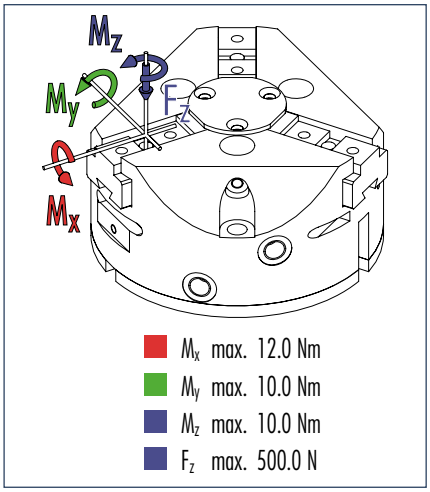
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

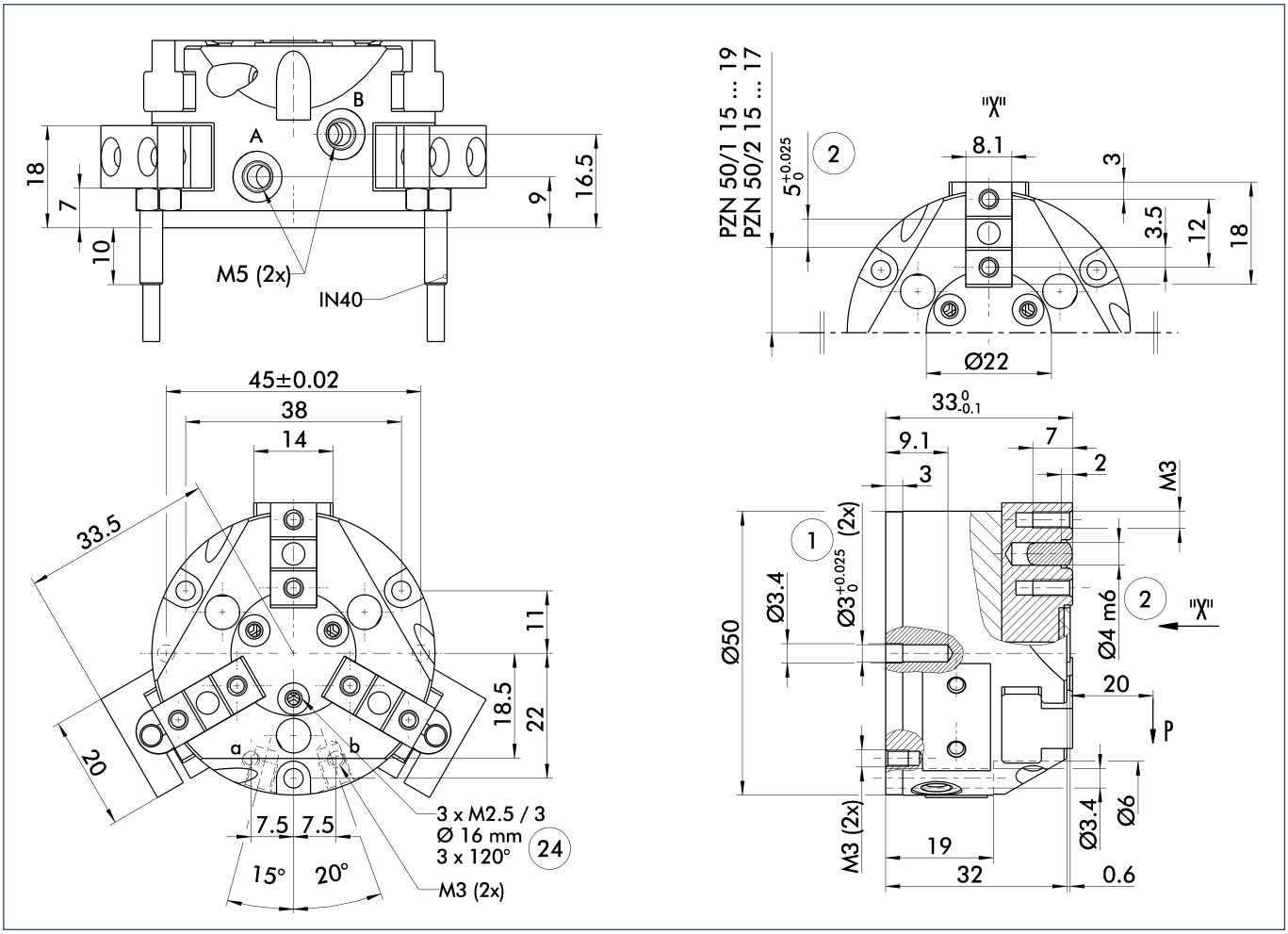


ⓘ Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing.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

Technical data

Designation		PZN 50-1	PZN 50-2	PZN 50-1 AS	PZN 50-2 AS	PZN 50-1 IS	PZN 50-2 IS
	ID	0300309	0300409	0300509	0300609	0300539	0300639
Stroke per jaw	[mm]	4.0	2.0	4.0	2.0	4.0	2.0
Closing force	[N]	260.0	510.0	380.0	720.0		
Opening force	[N]	285.0	550.0			380.0	720.0
Min. spring force	[N]			90.0	170.0	90.0	170.0
Weight	[kg]	0.2	0.2	0.23	0.23	0.23	0.23
Recommended workpiece weight	[kg]	1.3	2.5	1.3	2.5	1.3	2.5
Air consumption per double stroke	[cm^3]	15.0	15.0	15.0	15.0	15.0	15.0
Minimum pressure	[bar]	2.0	2.0	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	0.02	0.02	0.04	0.04
Opening time	[s]	0.03	0.03	0.04	0.04	0.02	0.02
Max. permitted finger length	[mm]	50.0	50.0	50.0	50.0	50.0	50.0
Max. permitted weight per finger	[kg]	0.15	0.15	0.15	0.15	0.15	0.15
IP class		40	40	40	40	40	40
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

Main views

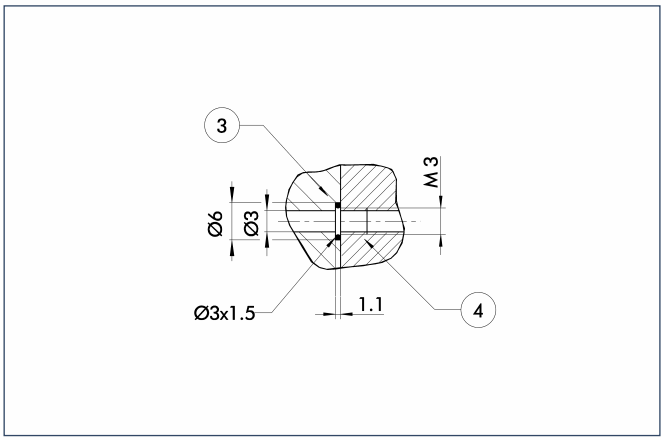


The illustration shows the gripper in the basic version with closed jaws, without taking into account the measurements of the optional extras described below.

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

A,a Main connection, direct connection – Open gripper
B,b Main connection, direct connection – Close gripper
① Gripper connection
② Finger connection
㉔ Screw pitch circle

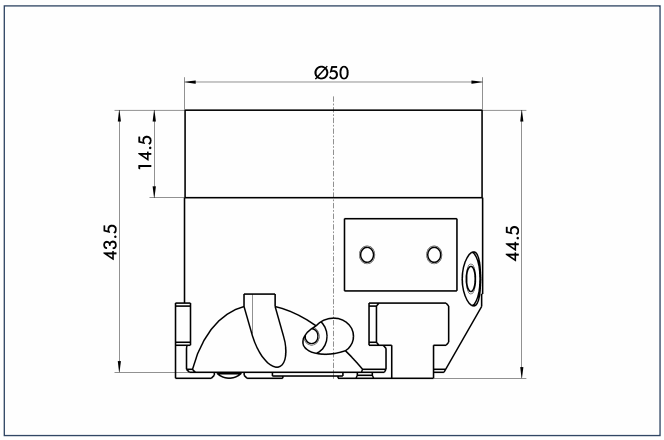
Hose-free direct connection



③ Adapter
④ Gripper

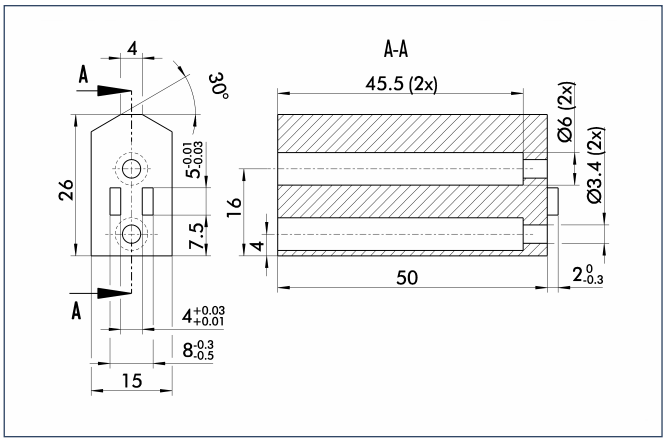
The direct connection supplies pressure to the gripper without a failure-prone hose system. Instead, the pressure medium is guided through holes in the mounting plate.

Gripping force safety device AS/IS



The mechanical gripping force safety device ensures a minimum gripping force, even with a drop in pressure. This works as a closing force for the AS version; for the IS version it works as an opening force. In addition, the gripping force safety device can also be used to increase the grip force or for single actuated gripping.

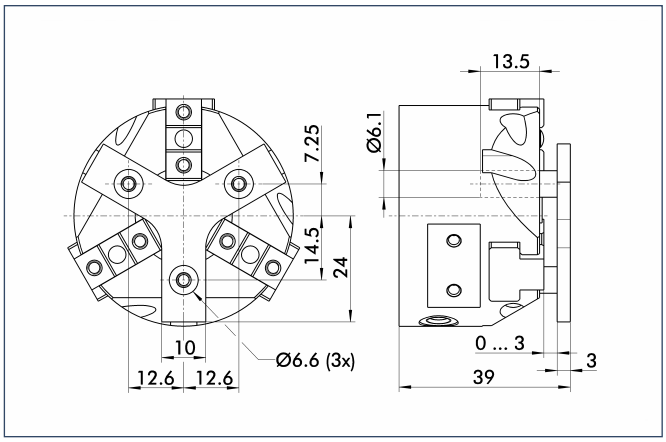
Finger blanks



Finger blanks for customer-specific reworking, incl. screw connection diagram

Designation	Material	Scope of delivery	ID
ABR 50	Aluminum	1	0300714
SBR 50	16 MnCr 5	1	0300715

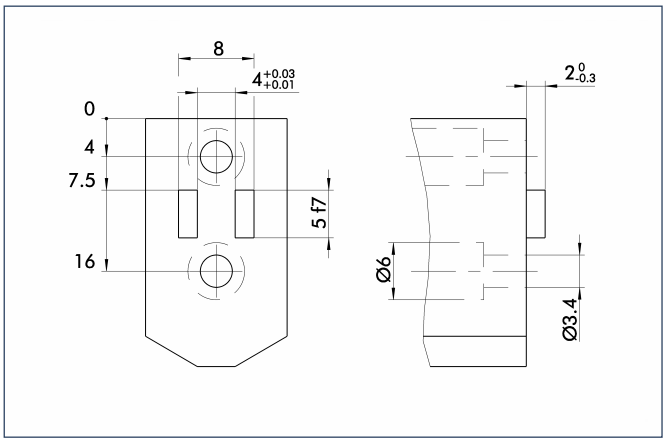
Spring-loaded pressure plate



For spring-mounted positioning of the workpiece against the stop after the gripper has opened. Developed especially for the loading of machining centers.

Designation	Stroke	Min. total force	ID
A-PZN 50	3 mm	9 N	0300719

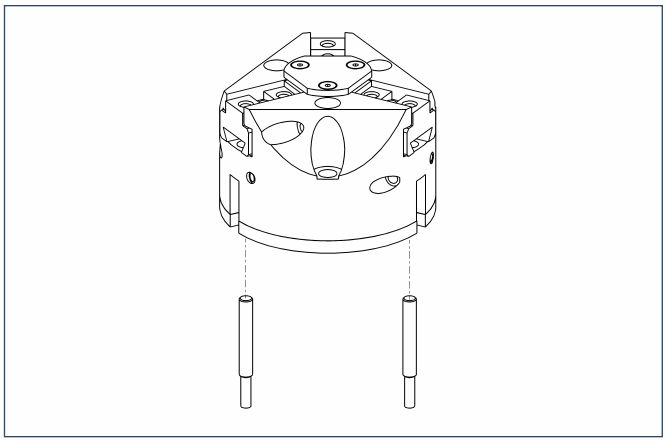
Finger design



Suggestion for connection dimensions – Gripper fingers

You can find detailed information and components of the specified accessory in the "Accessories" catalog section.

Sensor systems



End position monitoring:
Inductive proximity switches, for direct mounting

Designation	ID	Recommended product
IN 40/O-M12	0301584	
IN 40/O-M8	0301484	•
IN 40/S-M12	0301574	
IN 40/S-M8	0301474	•
IN 80/O-M12	0301588	
IN 80/O-M8	0301488	
IN 80/S-M12	0301578	
IN 80/S-M8	0301478	
INK 40/O	0301556	
INK 40/S	0301555	
INK 80/O	0301551	
INK 80/S	0301550	

ⓘ Two sensors are required per gripper; an NO contact (/S) and an NC contact (/O), as well as an optional extension cable.

Extension cables for proximity switches/magnetic switches

Designation	ID
GK 3-M8	0301622
KV 10-M12	0301596
KV 10-M8	0301496
KV 20-M12	0301597
KV 20-M8	0301497
KV 3-M12	0301595
KV 3-M8	0301495
W 3-M12	0301503
W 5-M12	0301507
WK 3-M8	0301594
WK 5-M8	0301502

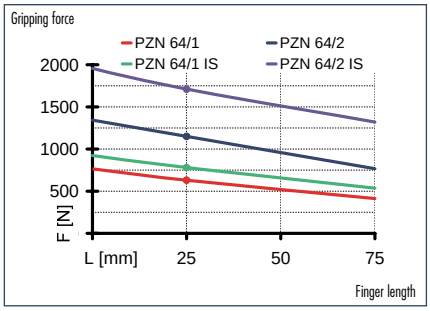
ⓘ For the sensor cables, observe the minimum permitted bending radii. Generally, these are 35 mm.

ⓘ **To be considered when using proximity switch IN 80 instead of IN 40**
The proximity switches can also be mounted using the brackets supplied but without using the eccentric sleeves. Please bear in mind that when using IN 80 instead of IN 40 sensors, the switch position is not adjustable.

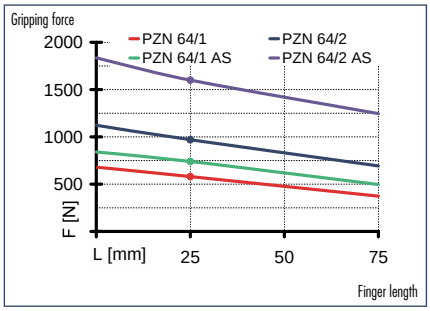
You can find detailed information and components of the specified accessory in the “Accessories” catalog section.

PZN 64

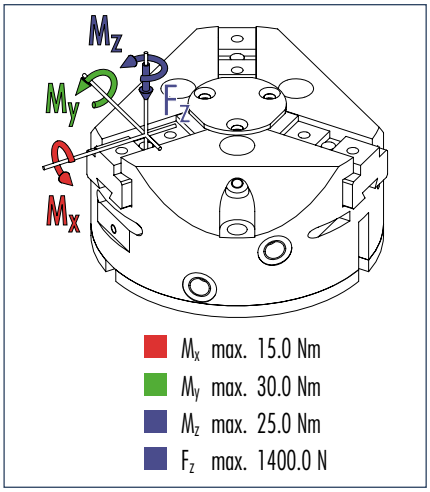
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

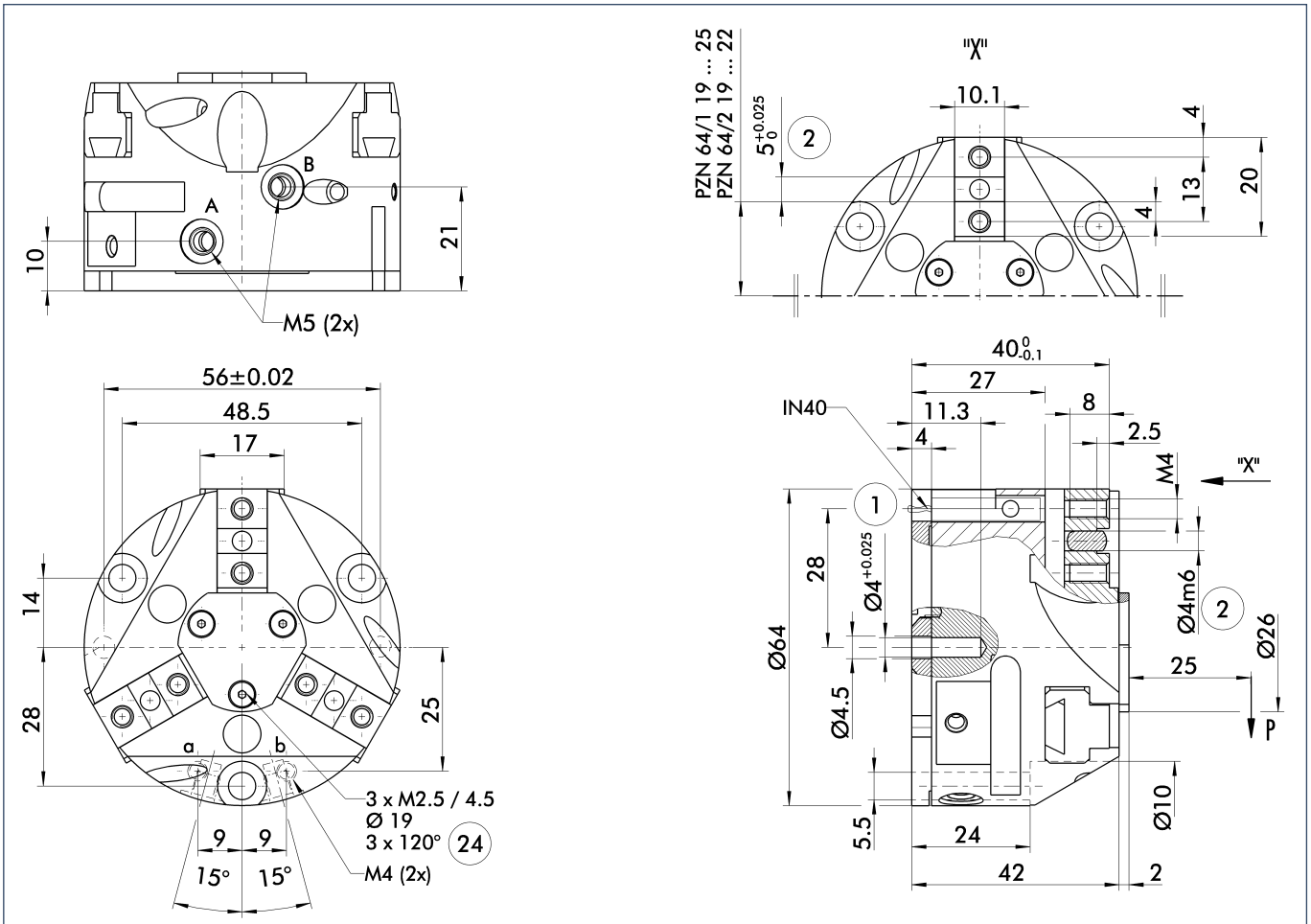


ⓘ Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing.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

Technical data

Designation		PZN 64-1	PZN 64-2	PZN 64-1 AS	PZN 64-2 AS	PZN 64-1 IS	PZN 64-2 IS
	ID	0300310	0300410	0300510	0300610	0300540	0300640
Stroke per jaw	[mm]	6.0	3.0	6.0	3.0	6.0	3.0
Closing force	[N]	580.0	970.0	740.0	1600.0		
Opening force	[N]	630.0	1150.0			720.0	1500.0
Min. spring force	[N]			200.0	320.0	200.0	320.0
Weight	[kg]	0.4	0.4	0.57	0.57	0.65	0.65
Recommended workpiece weight	[kg]	3.0	5.0	3.0	5.0	3.0	5.0
Air consumption per double stroke	[cm^3]	25.0	25.0	25.0	25.0	25.0	25.0
Minimum pressure	[bar]	2.0	2.0	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]	0.01	0.01	0.03	0.03	0.04	0.04
Opening time	[s]	0.01	0.01	0.04	0.04	0.03	0.03
Max. permitted finger length	[mm]	64.0	64.0	64.0	64.0	64.0	64.0
Max. permitted weight per finger	[kg]	0.3	0.3	0.3	0.3	0.3	0.3
IP class		40	40	40	40	40	40
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

Main views

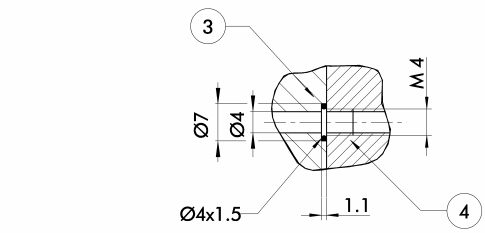


The illustration shows the gripper in the basic version with closed jaws, without taking into account the measurements of the optional extras described below.

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

A,a Main connection, direct connection – Open gripper
B,b Main connection, direct connection – Close gripper
① Gripper connection
② Finger connection
㉔ Screw pitch circle

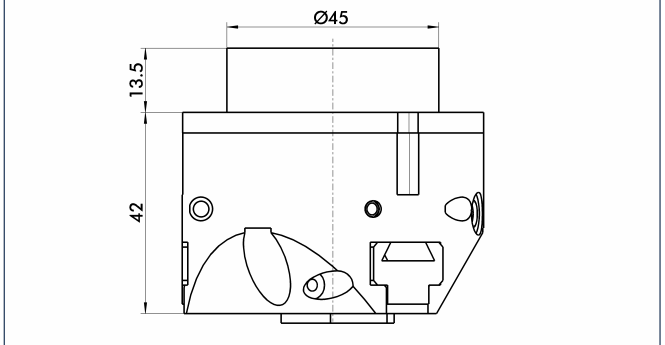
Hose-free direct connection



③ Adapter
④ Gripper

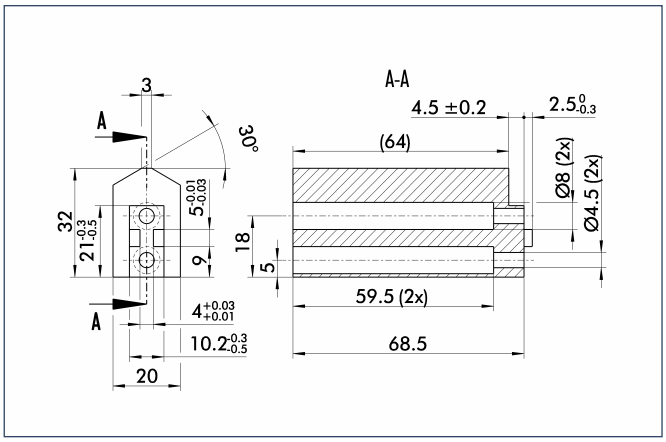
The direct connection supplies pressure to the gripper without a failure-prone hose system. Instead, the pressure medium is guided through holes in the mounting plate.

Gripping force safety device AS/IS



The mechanical gripping force safety device ensures a minimum gripping force, even with a drop in pressure. This works as a closing force for the AS version; for the IS version it works as an opening force. In addition, the gripping force safety device can also be used to increase the grip force or for single actuated gripping.

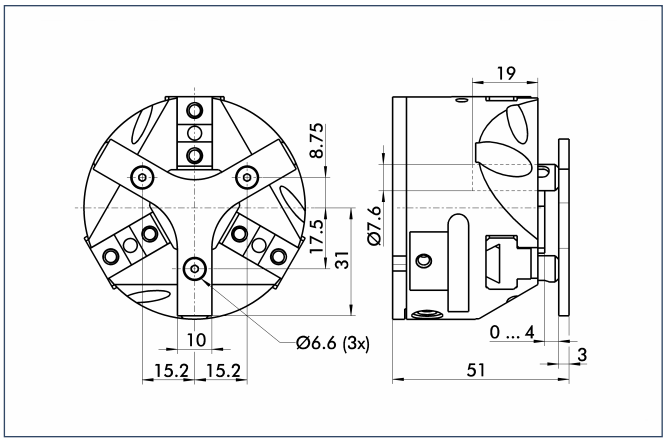
Finger blanks



Finger blanks for customer-specific reworking, incl. screw connection diagram

Designation	Material	Scope of delivery	ID
ABR 64	Aluminum	1	0300725
SBR 64	16 MnCr 5	1	0300734

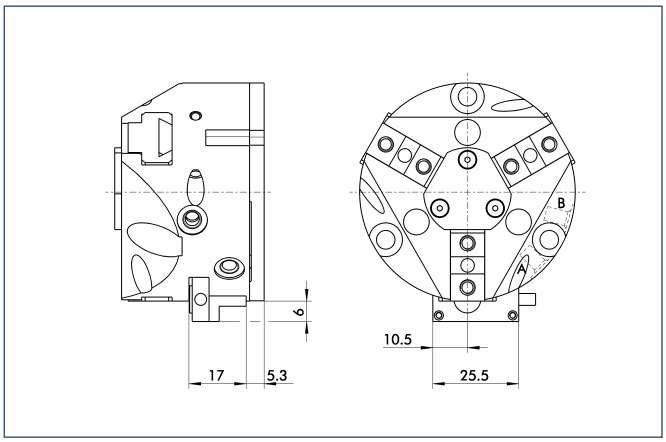
Spring-loaded pressure plate



For spring-mounted positioning of the workpiece against the stop after the gripper has opened. Developed especially for the loading of machining centers.

Designation	Stroke	Min. total force	ID
A-PZN 64	4 mm	18 N	0300720

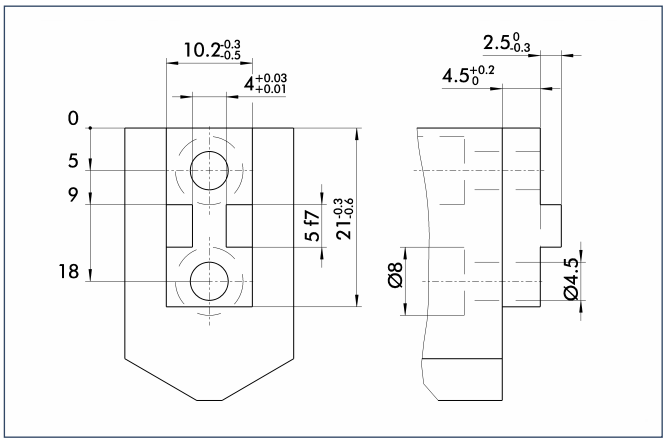
Mounting kit for FPS



The flexible position sensor FPS can distinguish between five freely programmable areas or switching points for the stroke of a gripper and can be used in conjunction with a PC as a measuring system.

Designation	ID
AS-PZN 64	0301712

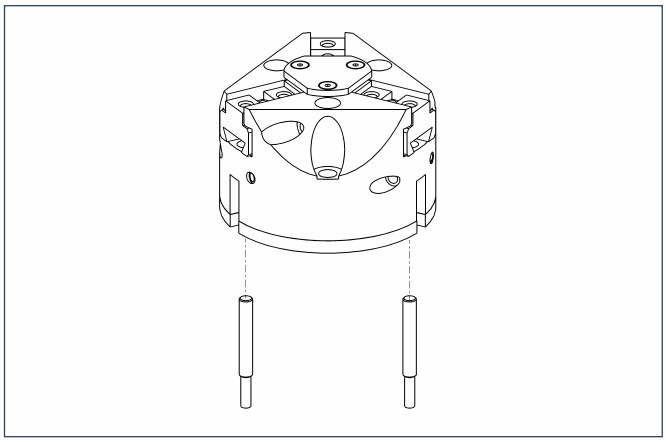
Finger design

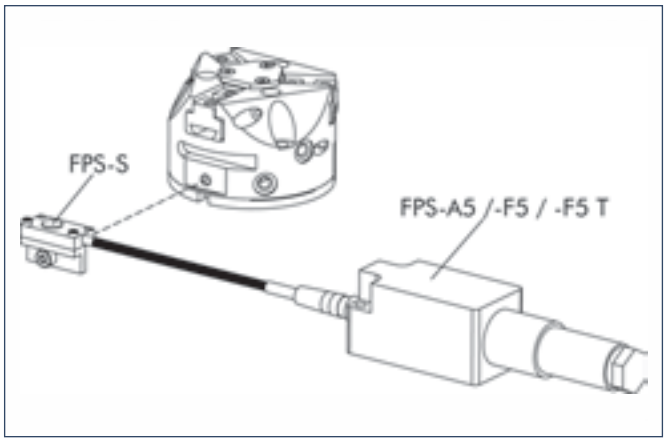


Suggestion for connection dimensions – Gripper fingers

You can find detailed information and components of the specified accessory in the "Accessories" catalog section.

Sensor systems





End position monitoring:
Inductive proximity switches, for direct mounting

Designation	ID	Recommended product
IN 40/S-M12	0301574	
IN 40/S-M8	0301474	•
INK 40/S	0301555	

ⓘ Two sensors (NO contacts/S) are required per gripper as well as an optional extension cable.

Measuring system:
Position monitoring FPS

Designation	ID
AS-PZN 64	0301712
FPS-A5	0301802
FPS-F5	0301805
FPS-F5 T	0301807
FPS-S 13	0301705

When using an FPS system, an FPS sensor (FPS-S) and an electronic processor (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 optional extras in the "Accessories" catalog section.

Extension cables for proximity switches/magnetic switches

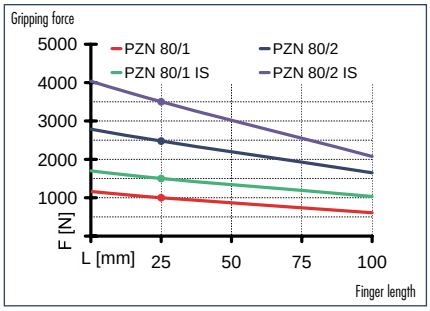
Designation	ID
GK 3-M8	0301622
KV 10-M12	0301596
KV 10-M8	0301496
KV 20-M12	0301597
KV 20-M8	0301497
KV 3-M12	0301595
KV 3-M8	0301495
W 3-M12	0301503
W 5-M12	0301507
WK 3-M8	0301594
WK 5-M8	0301502

ⓘ For the sensor cables, observe the minimum permitted bending radii. Generally, these are 35 mm.

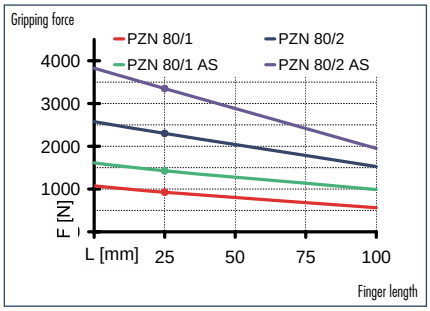
You can find detailed information and components of the specified accessory in the "Accessories" catalog section.

PZN 80

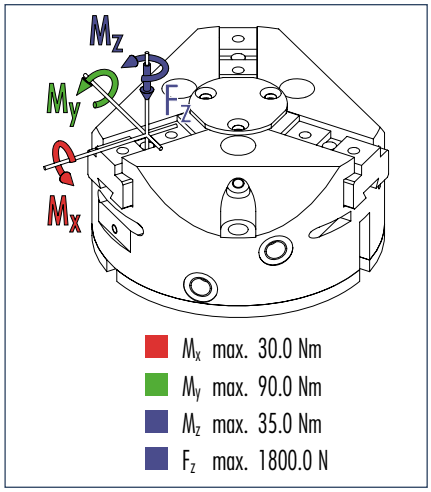
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

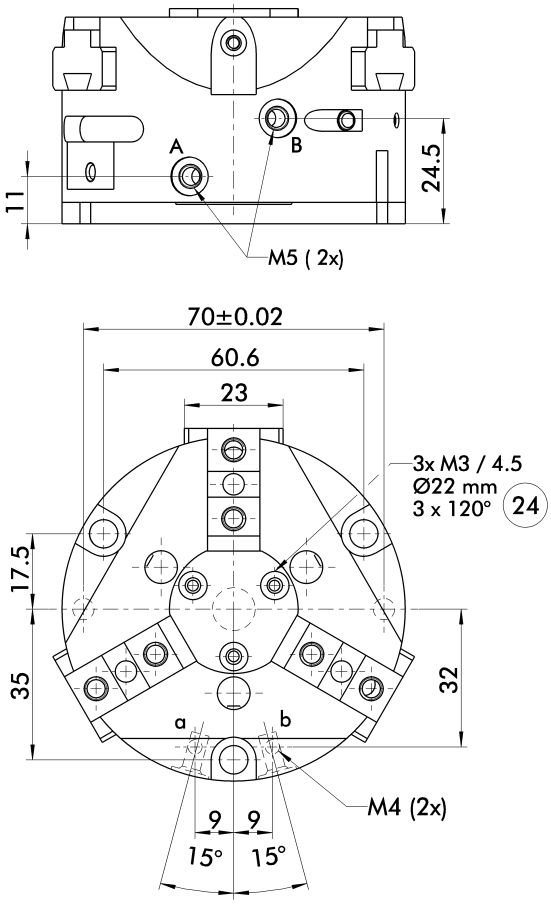


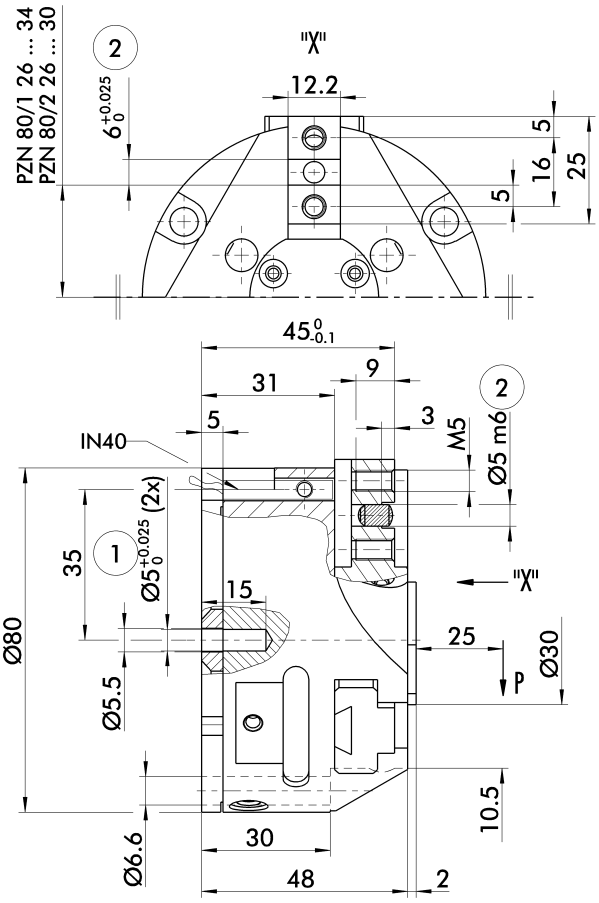
ⓘ Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing.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

Technical data

Designation		PZN 80-1	PZN 80-2	PZN 80-1 AS	PZN 80-2 AS	PZN 80-1 IS	PZN 80-2 IS
	ID	0300311	0300411	0300511	0300611	0300541	0300641
Stroke per jaw	[mm]	8.0	4.0	8.0	4.0	8.0	4.0
Closing force	[N]	925.0	2300.0	1600.0	3400.0		
Opening force	[N]	1000.0	2470.0			1650.0	3500.0
Min. spring force	[N]			330.0	770.0	330.0	770.0
Weight	[kg]	0.75	0.75	0.95	0.95	1.05	1.05
Recommended workpiece weight	[kg]	4.6	11.5	4.6	11.5	4.6	11.5
Air consumption per double stroke	[cm^3]	60.0	60.0	60.0	60.0	60.0	60.0
Minimum pressure	[bar]	2.0	2.0	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]	0.06	0.06	0.05	0.05	0.08	0.08
Opening time	[s]	0.05	0.05	0.08	0.08	0.05	0.05
Max. permitted finger length	[mm]	80.0	80.0	80.0	80.0	80.0	80.0
Max. permitted weight per finger	[kg]	0.5	0.5	0.5	0.5	0.5	0.5
IP class		40	40	40	40	40	40
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

Main views



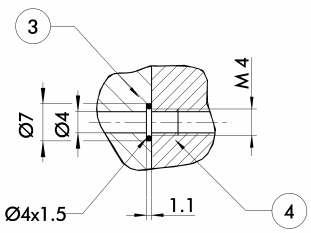


The illustration shows the gripper in the basic version with closed jaws, without taking into account the measurements of the optional extras described below.

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

A,a Main connection, direct connection – Open gripper
B,b Main connection, direct connection – Close gripper
① Gripper connection
② Finger connection
㉔ Screw pitch circle

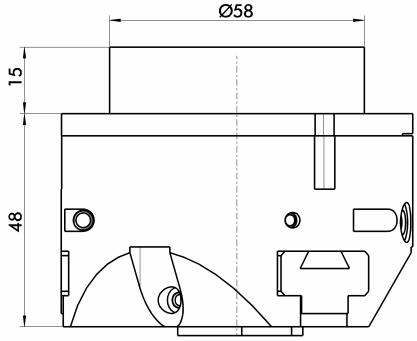
Hose-free direct connection



③ Adapter
④ Gripper

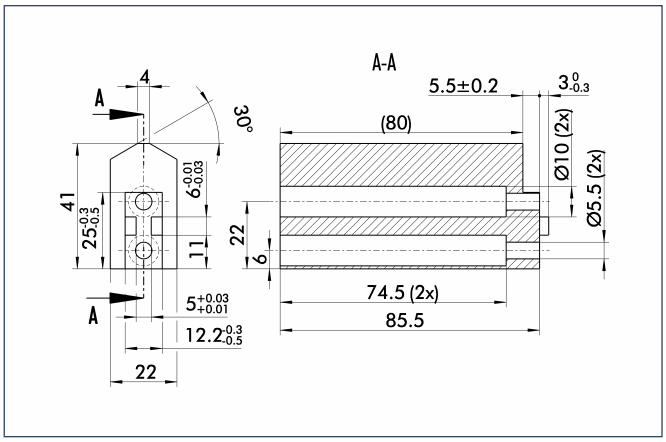
The direct connection supplies pressure to the gripper without a failure-prone hose system. Instead, the pressure medium is guided through holes in the mounting plate.

Gripping force safety device AS/IS



The mechanical gripping force safety device ensures a minimum gripping force, even with a drop in pressure. This works as a closing force for the AS version; for the IS version it works as an opening force. In addition, the gripping force safety device can also be used to increase the grip force or for single actuated gripping.

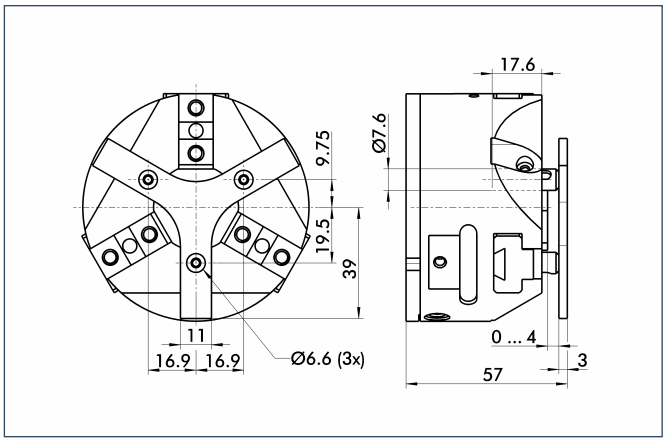
Finger blanks



Finger blanks for customer-specific reworking, incl. screw connection diagram

Designation	Material	Scope of delivery	ID
ABR 80	Aluminum	1	0300726
SBR 80	16 MnCr 5	1	0300735

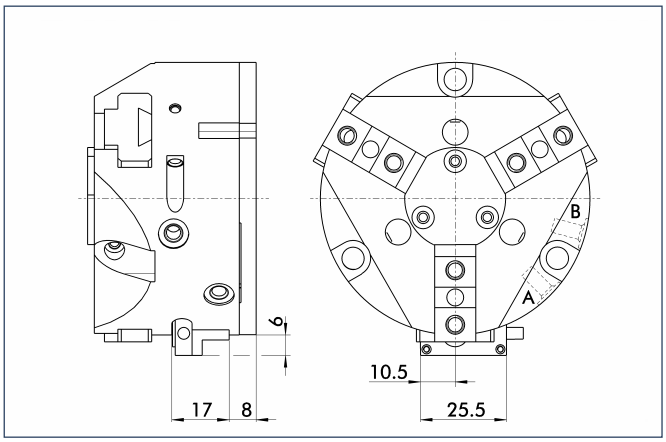
Spring-loaded pressure plate



For spring-mounted positioning of the workpiece against the stop after the gripper has opened. Developed especially for the loading of machining centers.

Designation	Stroke	Min. total force	ID
A-PZN 80	4 mm	17 N	0300721

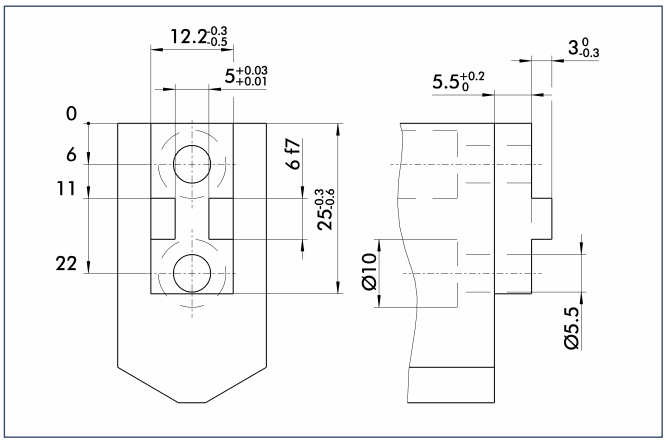
Mounting kit for FPS



The flexible position sensor FPS can distinguish between five freely programmable areas or switching points for the stroke of a gripper and can be used in conjunction with a PC as a measuring system.

Designation	ID
AS-PZN 80-100	0301713

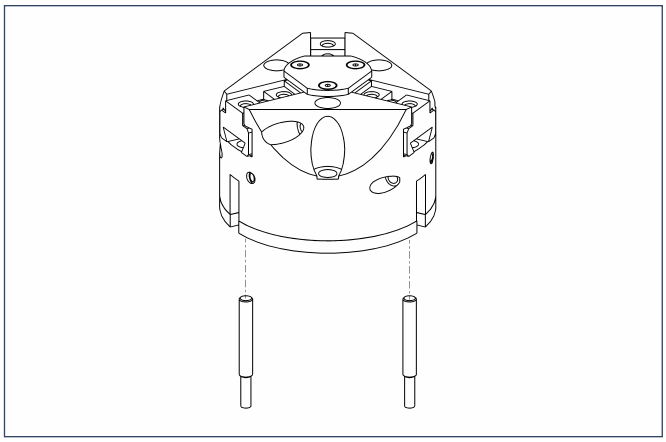
Finger design



Suggestion for connection dimensions – Gripper fingers

You can find detailed information and components of the specified accessory in the “Accessories” catalog section.

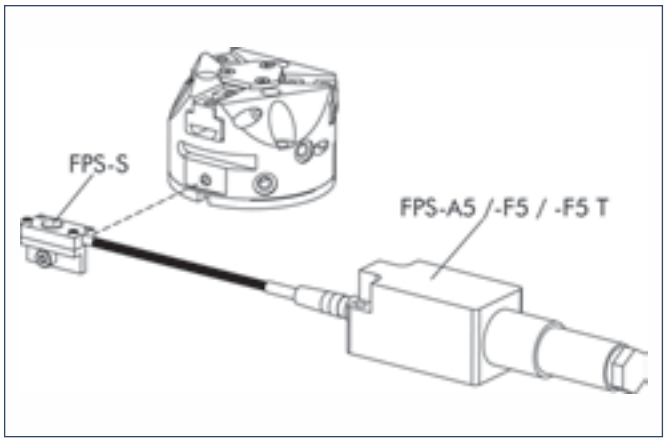
Sensor systems



End position monitoring:
Inductive proximity switches, for direct mounting

Designation	ID	Recommended product
IN 40/S-M12	0301574	
IN 40/S-M8	0301474	•
INK 40/S	0301555	

ⓘ Two sensors (NO contacts/S) are required per gripper as well as an optional extension cable.



Measuring system:
Position monitoring FPS

Designation	ID
AS-PZN 80-100	0301713
FPS-A5	0301802
FPS-F5	0301805
FPS-F5 T	0301807
FPS-S 13	0301705

When using an FPS system, an FPS sensor (FPS-S) and an electronic processor (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 optional extras in the "Accessories" catalog section.

Extension cables for proximity switches/magnetic switches

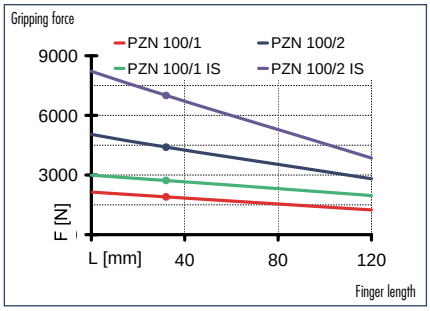
Designation	ID
GK 3-M8	0301622
KV 10-M12	0301596
KV 10-M8	0301496
KV 20-M12	0301597
KV 20-M8	0301497
KV 3-M12	0301595
KV 3-M8	0301495
W 3-M12	0301503
W 5-M12	0301507
WK 3-M8	0301594
WK 5-M8	0301502

ⓘ For the sensor cables, observe the minimum permitted bending radii. Generally, these are 35 mm.

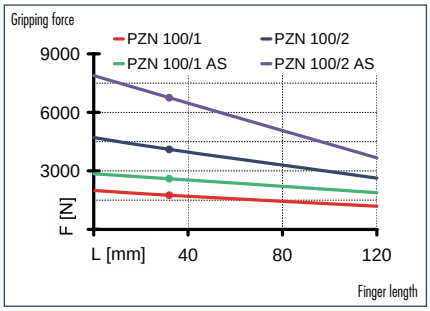
You can find detailed information and components of the specified accessory in the "Accessories" catalog section.

PZN 100

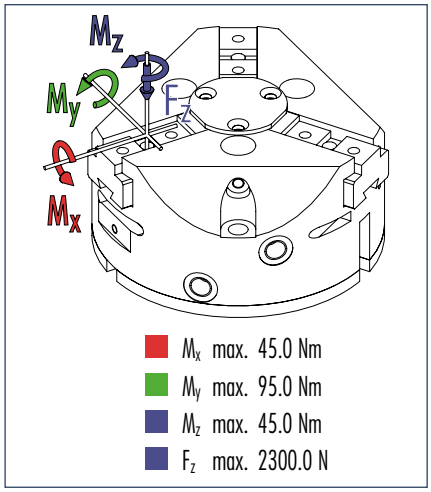
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

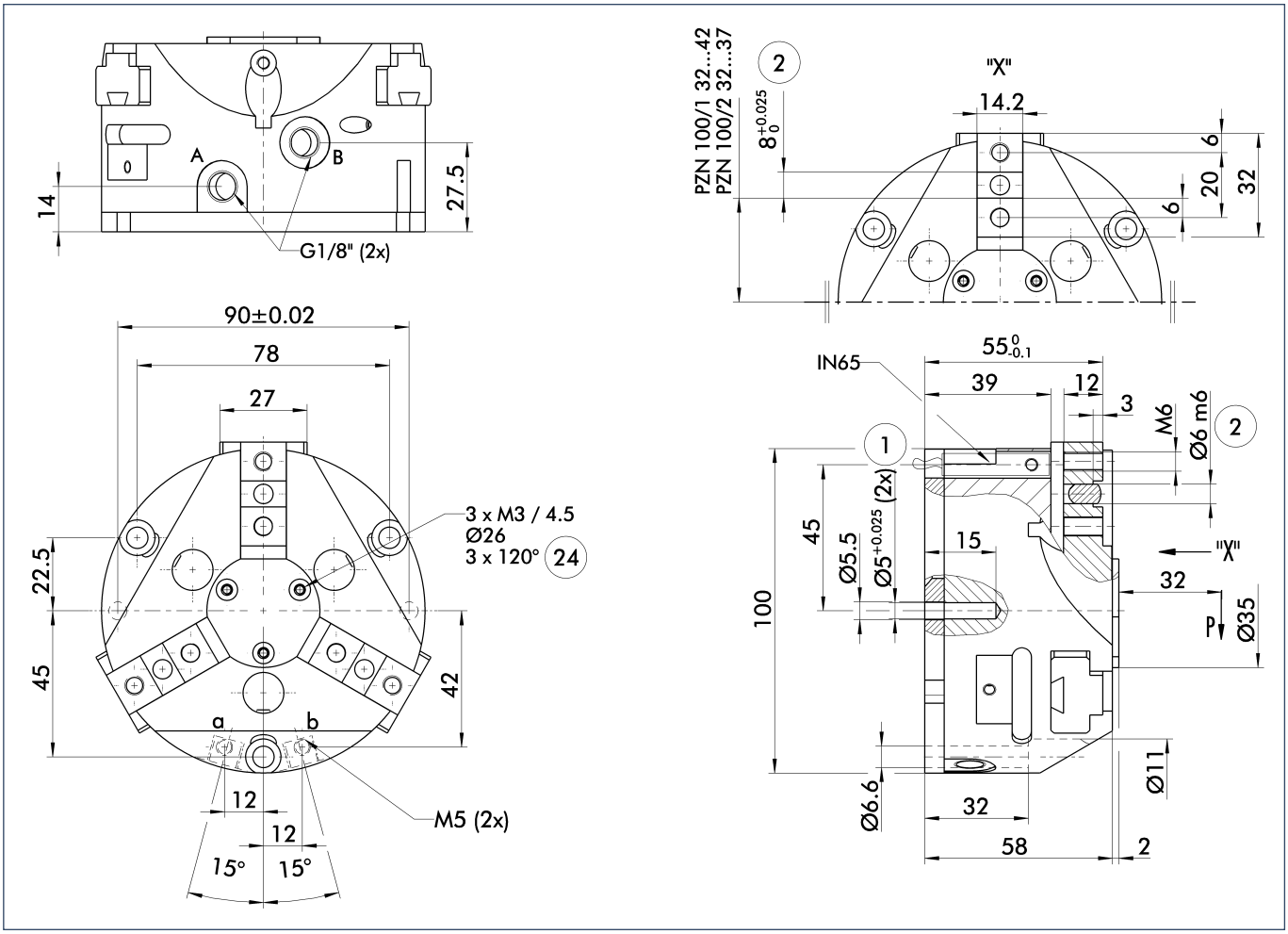


ⓘ Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing.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

Technical data

Designation		PZN 100-1	PZN 100-2	PZN 100-1 AS	PZN 100-2 AS	PZN 100-1 IS	PZN 100-2 IS
	ID	0300312	0300412	0300512	0300612	0300542	0300642
Stroke per jaw	[mm]	10.0	5.0	10.0	5.0	10.0	5.0
Closing force	[N]	1800.0	4000.0	2650.0	6500.0		
Opening force	[N]	1900.0	4400.0			2500.0	6000.0
Min. spring force	[N]			600.0	1350.0	600.0	1350.0
Weight	[kg]	1.35	1.35	1.9	1.9	2.1	2.1
Recommended workpiece weight	[kg]	9.0	20.0	9.0	20.0	9.0	20.0
Air consumption per double stroke	[cm^3]	120.0	120.0	120.0	120.0	120.0	120.0
Minimum pressure	[bar]	2.0	2.0	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]	0.08	0.08	0.1	0.1	0.18	0.18
Opening time	[s]	0.07	0.07	0.18	0.18	0.1	0.1
Max. permitted finger length	[mm]	100.0	100.0	100.0	100.0	100.0	100.0
Max. permitted weight per finger	[kg]	0.95	0.95	0.95	0.95	0.95	0.95
IP class		40	40	40	40	40	40
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

Main views

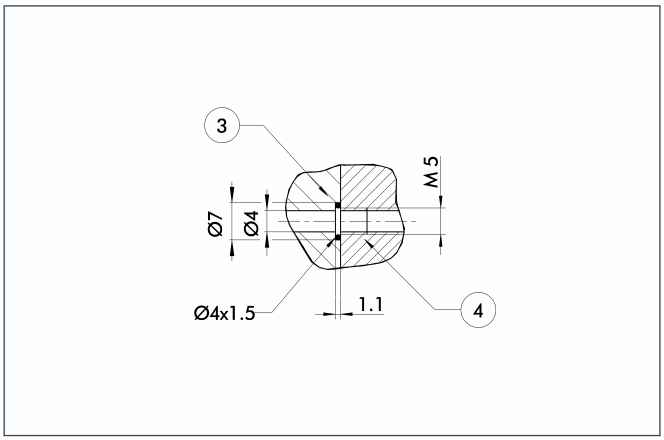


The illustration shows the gripper in the basic version with closed jaws, without taking into account the measurements of the optional extras described below.

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

A,a Main connection, direct connection – Open gripper
B,b Main connection, direct connection – Close gripper
① Gripper connection
② Finger connection
㉔ Screw pitch circle

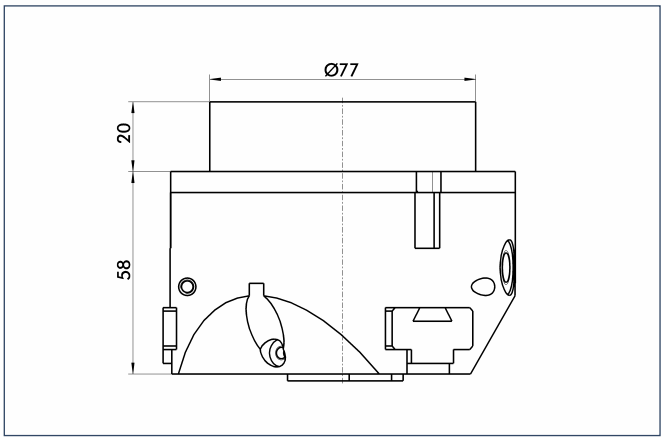
Hose-free direct connection



③ Adapter
④ Gripper

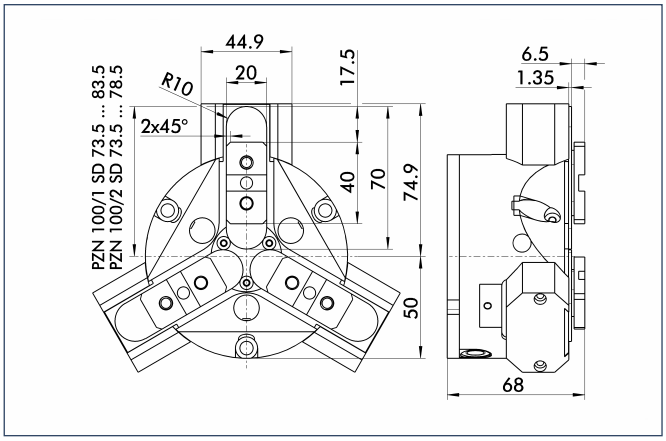
The direct connection supplies pressure to the gripper without a failure-prone hose system. Instead, the pressure medium is guided through holes in the mounting plate.

Gripping force safety device AS/IS



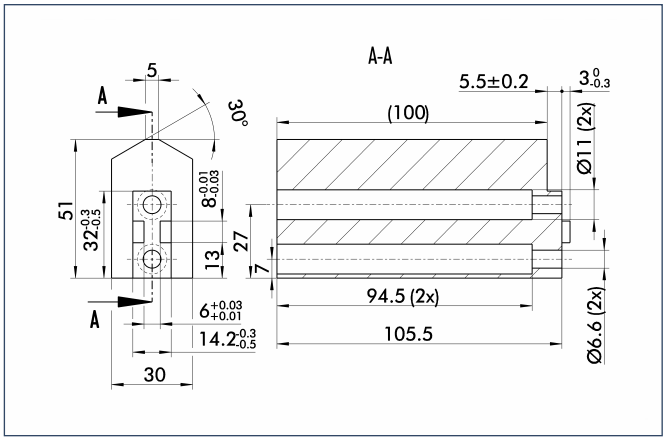
The mechanical gripping force safety device ensures a minimum gripping force, even with a drop in pressure. This works as a closing force for the AS version; for the IS version it works as an opening force. In addition, the gripping force safety device can also be used to increase the grip force or for single actuated gripping.

Dust protection



The "Dust-proof" option increases the degree of protection against penetrating substances. The screw connection diagram moves by the height of the intermediate jaw. The finger length must still be measured from the upper edge of the gripper housing.

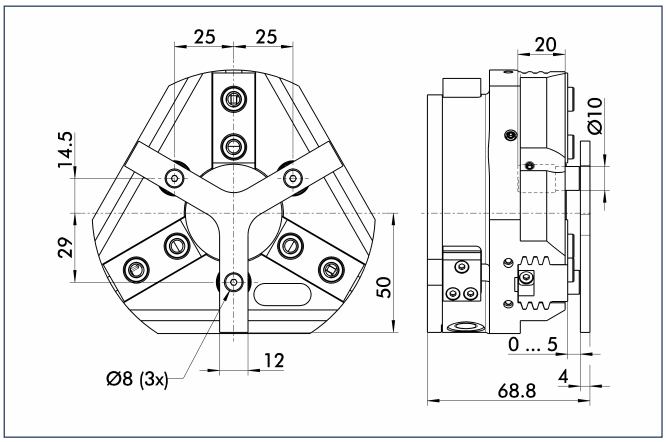
Finger blanks



Finger blanks for customer-specific reworking, incl. screw connection diagram

Designation	Material	Scope of delivery	ID
ABR 100	Aluminum	1	0300727
SBR 100	16 MnCr 5	1	0300736

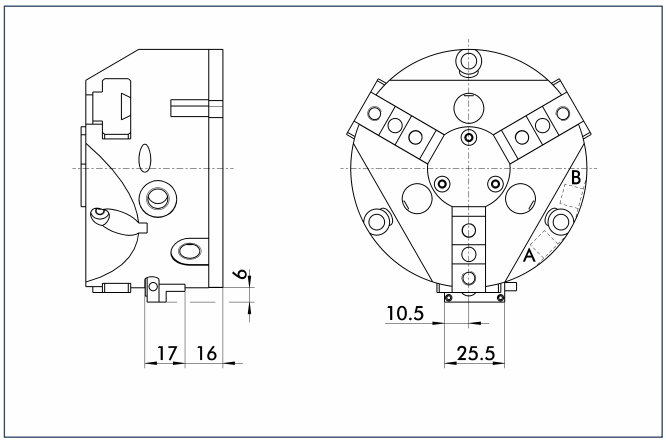
Spring-loaded pressure plate



For spring-mounted positioning of the workpiece against the stop after the gripper has opened. Developed especially for the loading of machining centers.

Designation	Stroke	Min. total force	ID
A-PZN 100	5 mm	35 N	0300722

Mounting kit for FPS

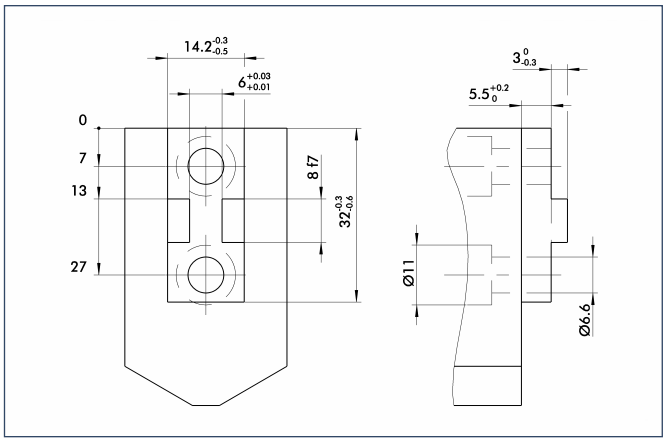


The flexible position sensor FPS can distinguish between five freely programmable areas or switching points for the stroke of a gripper and can be used in conjunction with a PC as a measuring system.

Designation	ID
AS-PZN 80-100	0301713

You can find detailed information and components of the specified accessory in the "Accessories" catalog section.

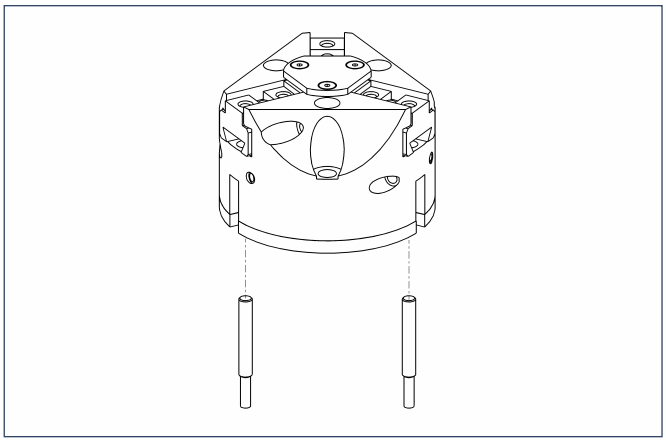
Finger design

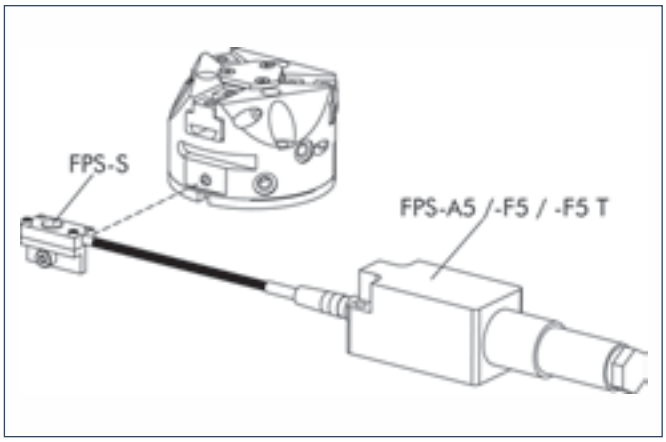


Suggestion for connection dimensions – Gripper fingers

You can find detailed information and components of the specified accessory in the "Accessories" catalog section.

Sensor systems





End position monitoring:
Inductive proximity switches, for direct mounting

Designation	ID	Recommended product
IN 65/S-M12	0301576	
IN 65/S-M8	0301476	•
INK 65/S	0301554	

ⓘ Two sensors (NO contacts/S) are required per gripper as well as an optional extension cable.

Measuring system:
Position monitoring FPS

Designation	ID
AS-PZN 80-100	0301713
FPS-A5	0301802
FPS-F5	0301805
FPS-F5 T	0301807
FPS-S 13	0301705

When using an FPS system, an FPS sensor (FPS-S) and an electronic processor (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 optional extras in the "Accessories" catalog section.

Extension cables for proximity switches/magnetic switches

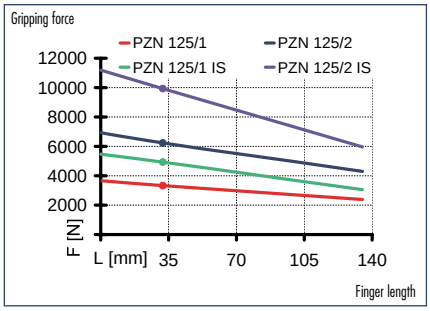
Designation	ID
GK 3-M8	0301622
KV 10-M12	0301596
KV 10-M8	0301496
KV 20-M12	0301597
KV 20-M8	0301497
KV 3-M12	0301595
KV 3-M8	0301495
W 3-M12	0301503
W 5-M12	0301507
WK 3-M8	0301594
WK 5-M8	0301502

ⓘ For the sensor cables, observe the minimum permitted bending radii. Generally, these are 35 mm.

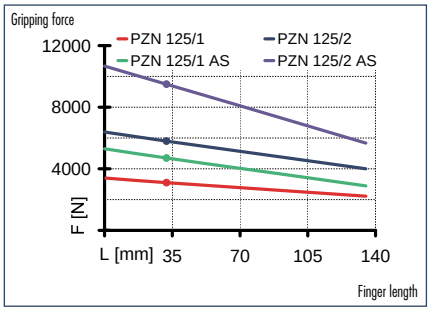
You can find detailed information and components of the specified accessory in the "Accessories" catalog section.

PZN 125

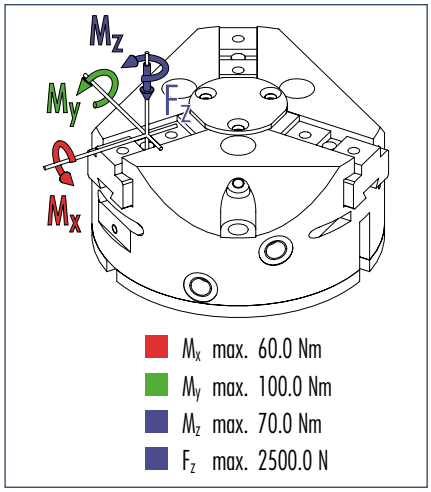
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

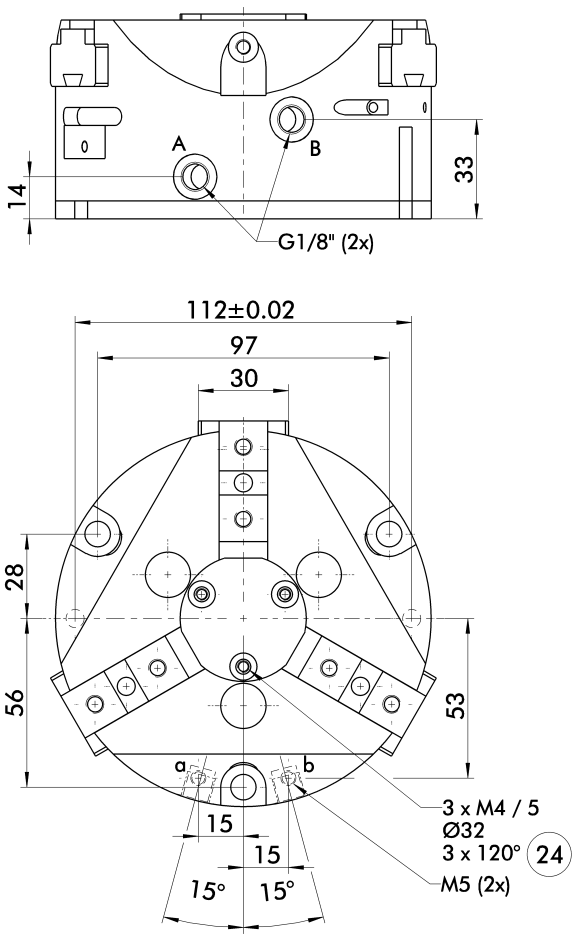


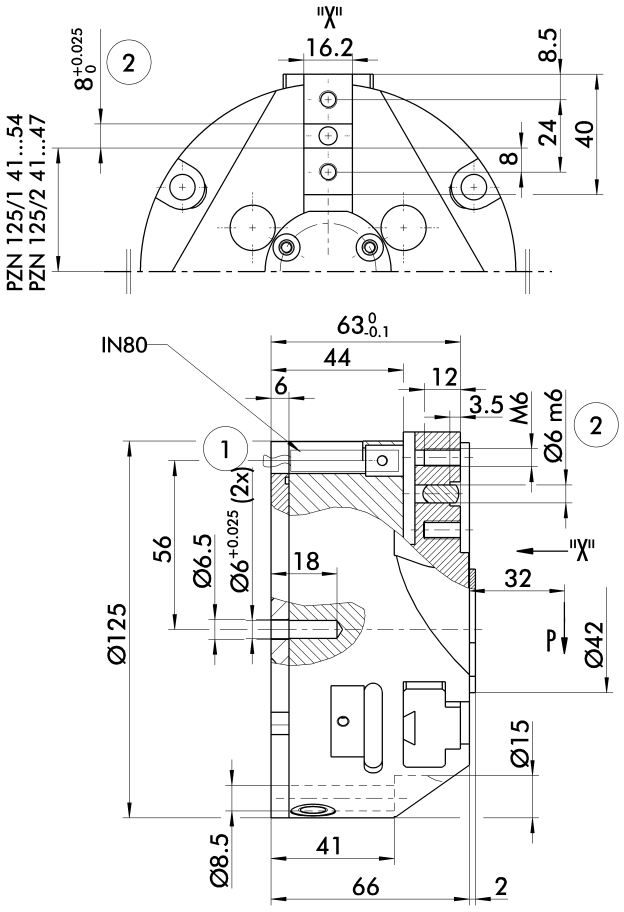
ⓘ Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing.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

Technical data

Designation		PZN 125-1	PZN 125-2	PZN 125-1 AS	PZN 125-2 AS	PZN 125-1 IS	PZN 125-2 IS
	ID	0300313	0300413	0300513	0300613	0300543	0300643
Stroke per jaw	[mm]	13.0	6.0	13.0	6.0	13.0	6.0
Closing force	[N]	3100.0	5800.0	4700.0	9500.0		
Opening force	[N]	3330.0	6230.0			4800.0	9700.0
Min. spring force	[N]			1050.0	1950.0	1050.0	1950.0
Weight	[kg]	2.35	2.35	3.4	3.4	3.7	3.7
Recommended workpiece weight	[kg]	15.5	29.0	15.5	29.0	15.5	29.0
Air consumption per double stroke	[cm³]	230.0	230.0	230.0	230.0	230.0	230.0
Minimum pressure	[bar]	2.0	2.0	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]	0.17	0.17	0.15	0.15	0.32	0.32
Opening time	[s]	0.17	0.17	0.32	0.32	0.15	0.15
Max. permitted finger length	[mm]	125.0	125.0	125.0	125.0	125.0	125.0
Max. permitted weight per finger	[kg]	1.75	1.75	1.75	1.75	1.75	1.75
IP class		40	40	40	40	40	40
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

Main views



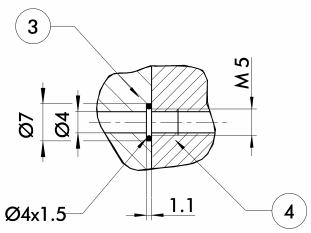


The illustration shows the gripper in the basic version with closed jaws, without taking into account the measurements of the optional extras described below.

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

A,a Main connection, direct connection – Open gripper
B,b Main connection, direct connection – Close gripper
① Gripper connection
② Finger connection
㉔ Screw pitch circle

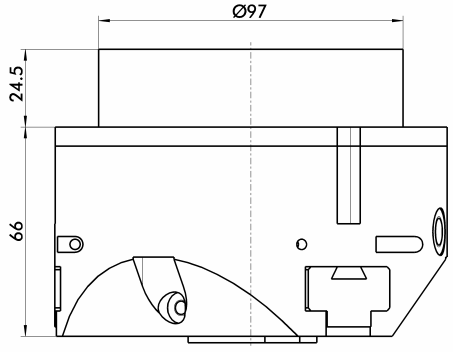
Hose-free direct connection



③ Adapter
④ Gripper

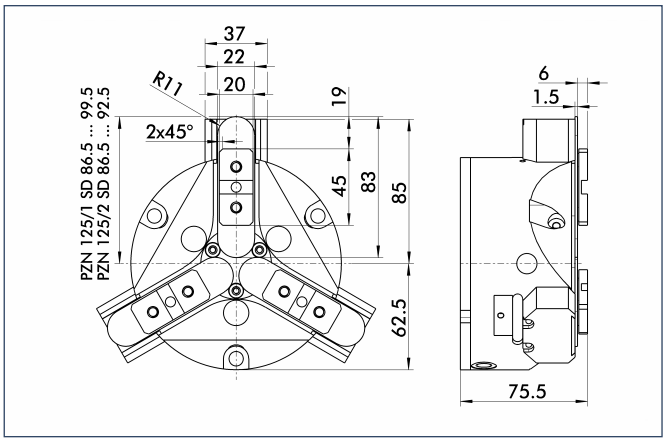
The direct connection supplies pressure to the gripper without a failure-prone hose system. Instead, the pressure medium is guided through holes in the mounting plate.

Gripping force safety device AS/IS



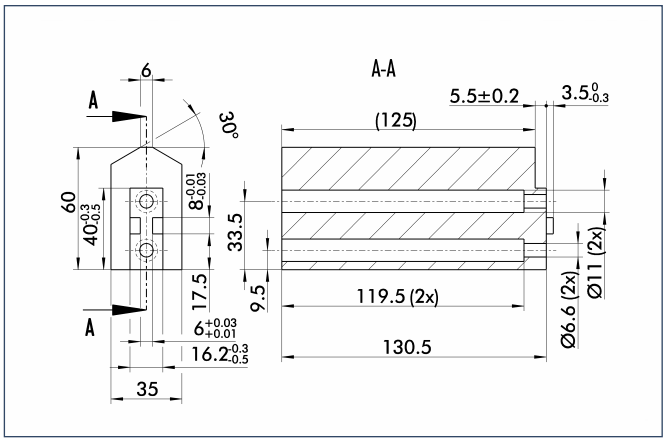
The mechanical gripping force safety device ensures a minimum gripping force, even with a drop in pressure. This works as a closing force for the AS version; for the IS version it works as an opening force. In addition, the gripping force safety device can also be used to increase the grip force or for single actuated gripping.

Dust protection



The "Dust-proof" option increases the degree of protection against penetrating substances. The screw connection diagram moves by the height of the intermediate jaw. The finger length must still be measured from the upper edge of the gripper housing.

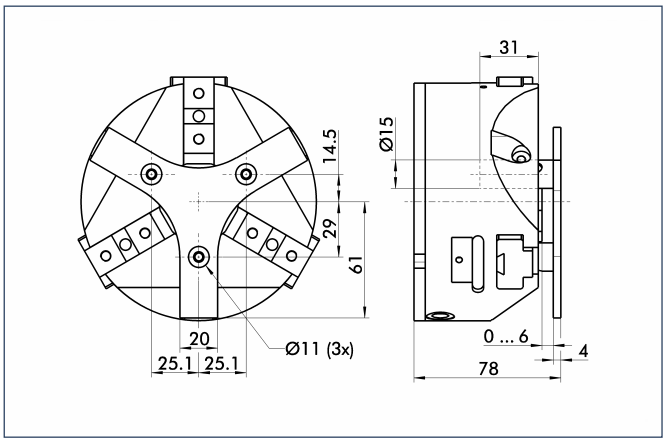
Finger blanks



Finger blanks for customer-specific reworking, incl. screw connection diagram

Designation	Material	Scope of delivery	ID
ABR 125	Aluminum	1	0300728
SBR 125	16 MnCr 5	1	0300737

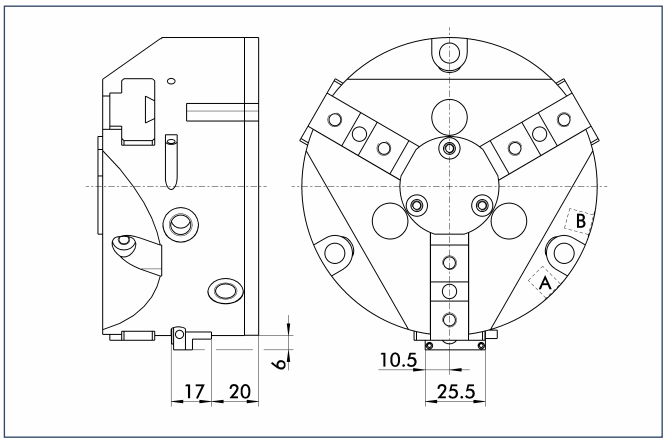
Spring-loaded pressure plate



For spring-mounted positioning of the workpiece against the stop after the gripper has opened. Developed especially for the loading of machining centers.

Designation	Stroke	Min. total force	ID
A-PZN 125	6 mm	130 N	0300723

Mounting kit for FPS

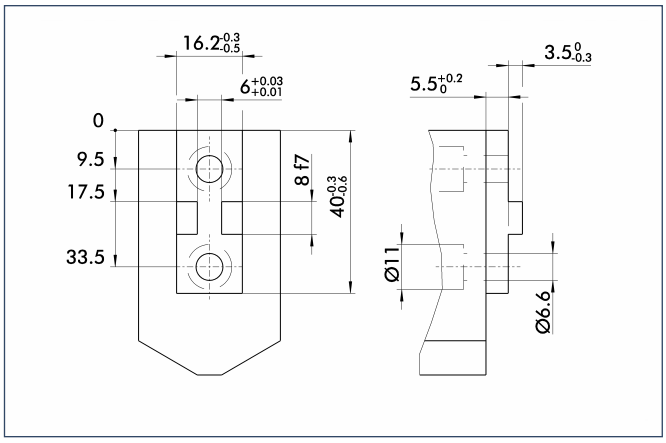


The flexible position sensor FPS can distinguish between five freely programmable areas or switching points for the stroke of a gripper and can be used in conjunction with a PC as a measuring system.

Designation	ID
AS-PZN 125-160	0301714

You can find detailed information and components of the specified accessory in the "Accessories" catalog section.

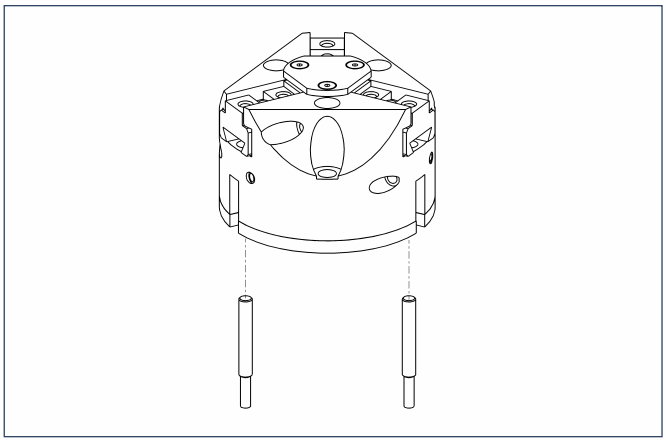
Finger design



Suggestion for connection dimensions – Gripper fingers

You can find detailed information and components of the specified accessory in the "Accessories" catalog section.

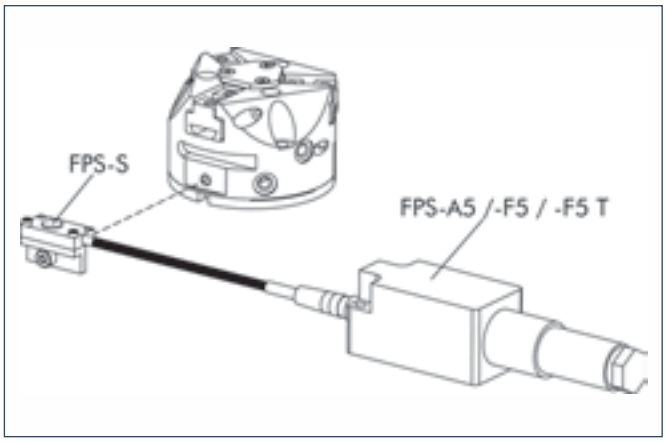
Sensor systems



End position monitoring:
Inductive proximity switches, for direct mounting

Designation	ID	Recommended product
IN 80/S-M12	0301578	
IN 80/S-M8	0301478	•
INK 80/S	0301550	

ⓘ Two sensors (NO contacts/S) are required per gripper as well as an optional extension cable.



Measuring system:
Position monitoring FPS

Designation	ID
AS-PZN 125-160	0301714
FPS-A5	0301802
FPS-F5	0301805
FPS-F5 T	0301807
FPS-S 13	0301705

When using an FPS system, an FPS sensor (FPS-S) and an electronic processor (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 optional extras in the "Accessories" catalog section.

Extension cables for proximity switches/magnetic switches

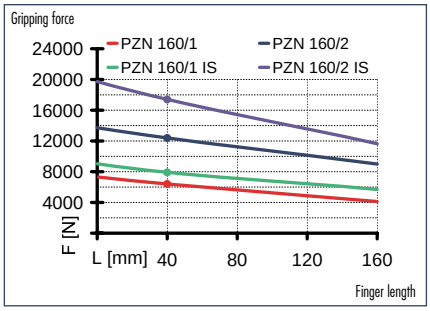
Designation	ID
GK 3-M8	0301622
KV 10-M12	0301596
KV 10-M8	0301496
KV 20-M12	0301597
KV 20-M8	0301497
KV 3-M12	0301595
KV 3-M8	0301495
W 3-M12	0301503
W 5-M12	0301507
WK 3-M8	0301594
WK 5-M8	0301502

ⓘ For the sensor cables, observe the minimum permitted bending radii. Generally, these are 35 mm.

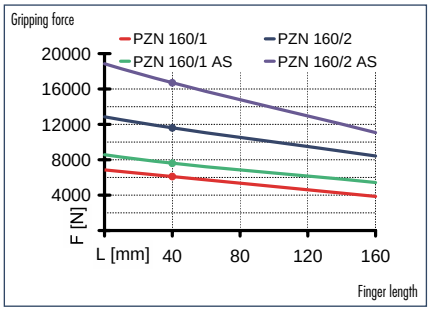
You can find detailed information and components of the specified accessory in the "Accessories" catalog section.

PZN 160

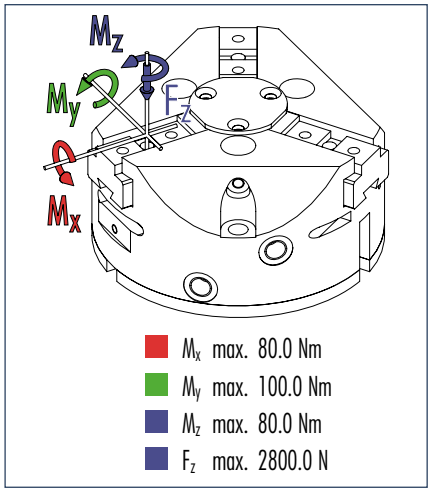
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

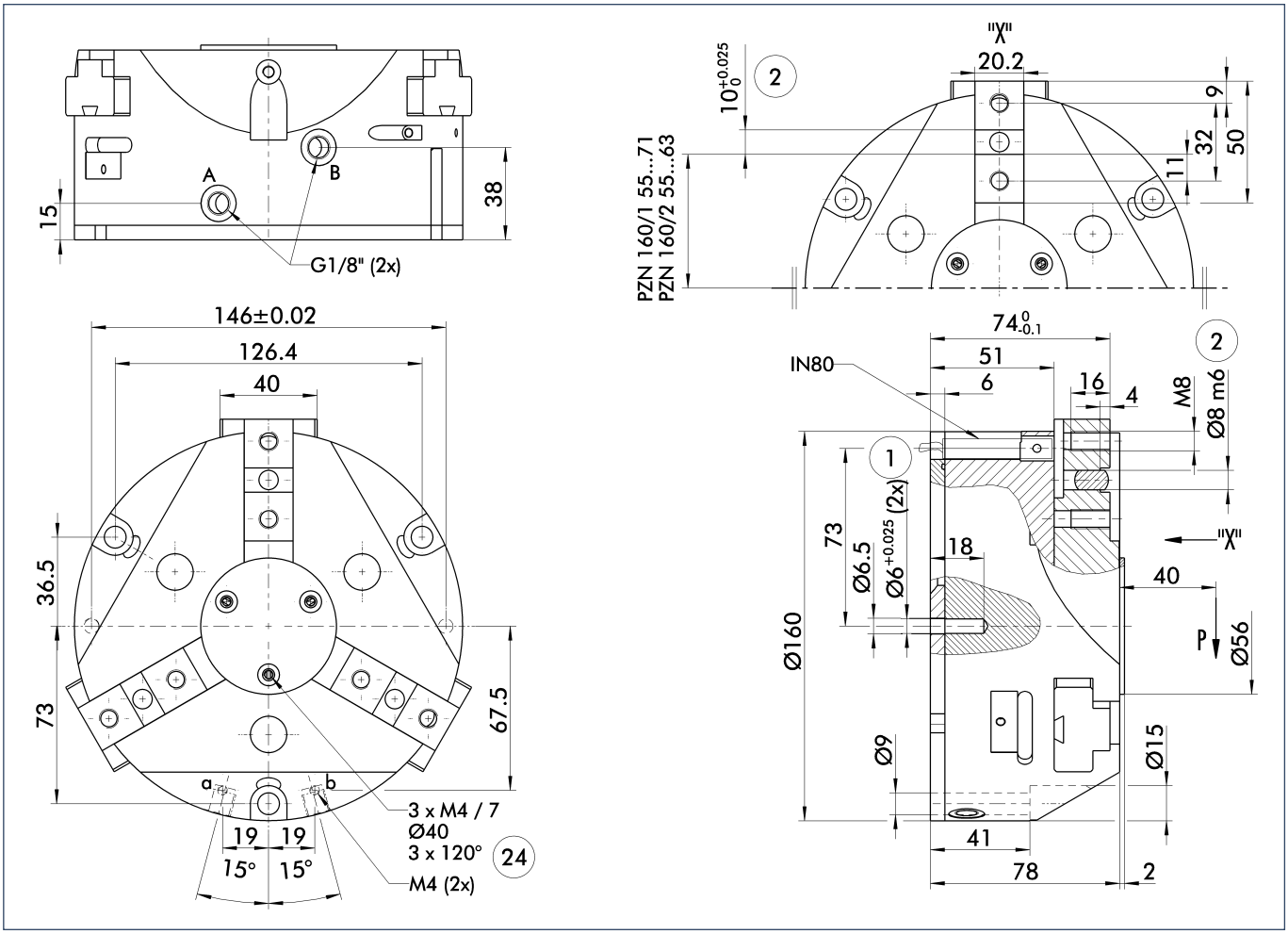


ⓘ Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing.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

Technical data

Designation		PZN 160-1	PZN 160-2	PZN 160-1 AS	PZN 160-2 AS	PZN 160-1 IS	PZN 160-2 IS
	ID	0300314	0300414	0300514	0300614	0300544	0300644
Stroke per jaw	[mm]	16.0	8.0	16.0	8.0	16.0	8.0
Closing force	[N]	6000.0	11000.0	7500.0	16000.0		
Opening force	[N]	6400.0	12380.0			7500.0	16000.0
Min. spring force	[N]			2000.0	3700.0	2000.0	3700.0
Weight	[kg]	4.5	4.5	6.6	6.6	7.2	7.2
Recommended workpiece weight	[kg]	25.0	50.0	25.0	50.0	25.0	50.0
Air consumption per double stroke	[cm^3]	520.0	520.0	520.0	520.0	520.0	520.0
Minimum pressure	[bar]	2.0	2.0	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]	0.4	0.4	0.35	0.35	0.75	0.75
Opening time	[s]	0.4	0.4	0.75	0.75	0.35	0.35
Max. permitted finger length	[mm]	160.0	160.0	160.0	160.0	160.0	160.0
Max. permitted weight per finger	[kg]	3.0	3.0	3.0	3.0	3.0	3.0
IP class		40	40	40	40	40	40
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

Main views

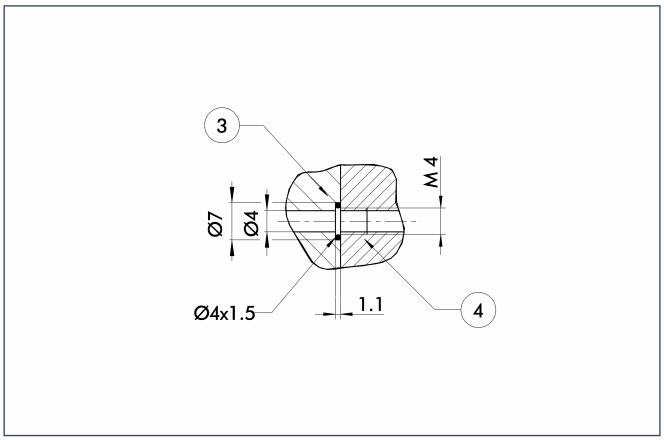


The illustration shows the gripper in the basic version with closed jaws, without taking into account the measurements of the optional extras described below.

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

A,a Main connection, direct connection – Open gripper
B,b Main connection, direct connection – Close gripper
① Gripper connection
② Finger connection
㉔ Screw pitch circle

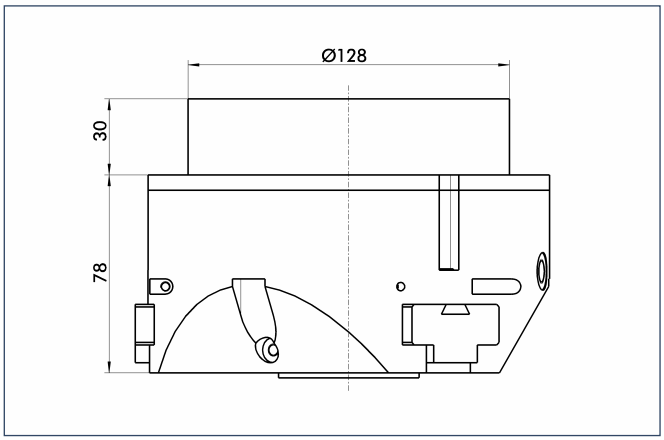
Hose-free direct connection



③ Adapter
④ Gripper

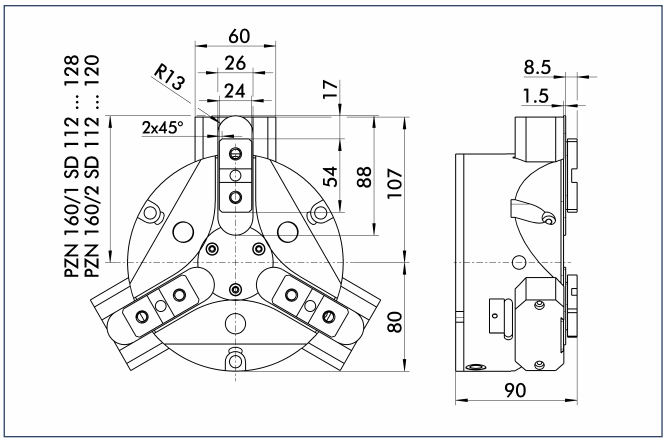
The direct connection supplies pressure to the gripper without a failure-prone hose system. Instead, the pressure medium is guided through holes in the mounting plate.

Gripping force safety device AS/IS



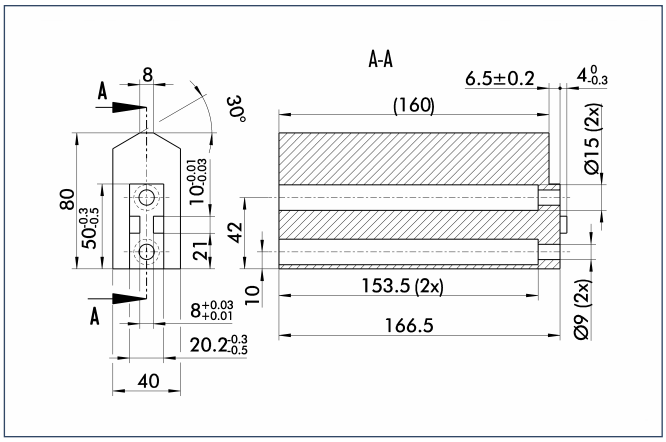
The mechanical gripping force safety device ensures a minimum gripping force, even with a drop in pressure. This works as a closing force for the AS version; for the IS version it works as an opening force. In addition, the gripping force safety device can also be used to increase the grip force or for single actuated gripping.

Dust protection



The "Dust-proof" option increases the degree of protection against penetrating substances. The screw connection diagram moves by the height of the intermediate jaw. The finger length must still be measured from the upper edge of the gripper housing.

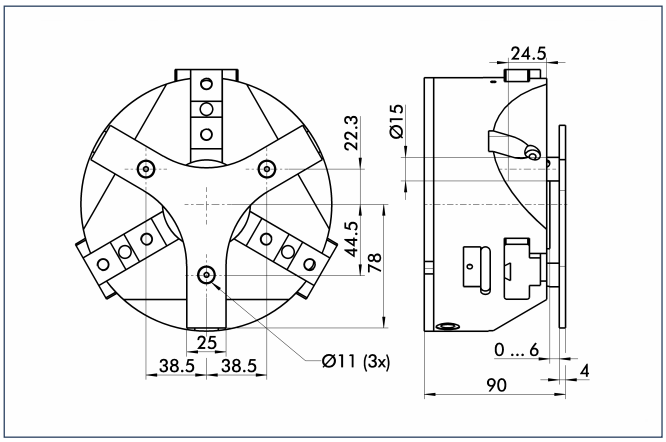
Finger blanks



Finger blanks for customer-specific reworking, incl. screw connection diagram

Designation	Material	Scope of delivery	ID
ABR 160	Aluminum	1	0300729
SBR 160	16 MnCr 5	1	0300738

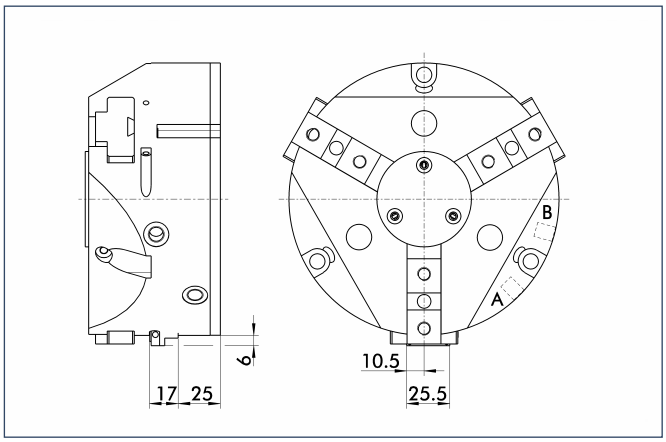
Spring-loaded pressure plate



For spring-mounted positioning of the workpiece against the stop after the gripper has opened. Developed especially for the loading of machining centers.

Designation	Stroke	Min. total force	ID
A-PZN 160	6 mm	180 N	0300724

Mounting kit for FPS

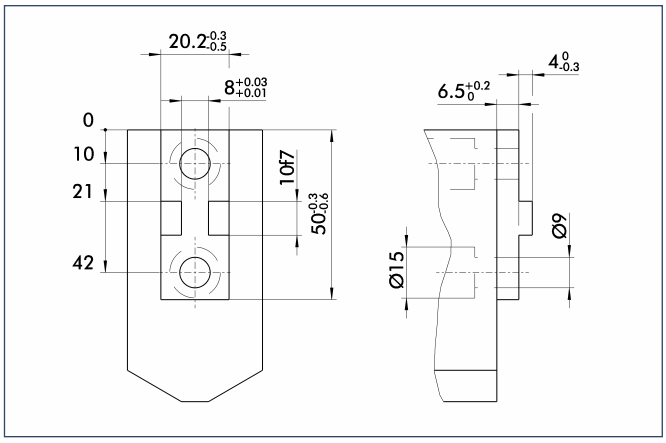


The flexible position sensor FPS can distinguish between five freely programmable areas or switching points for the stroke of a gripper and can be used in conjunction with a PC as a measuring system.

Designation	ID
AS-PZN 125-160	0301714

You can find detailed information and components of the specified accessory in the "Accessories" catalog section.

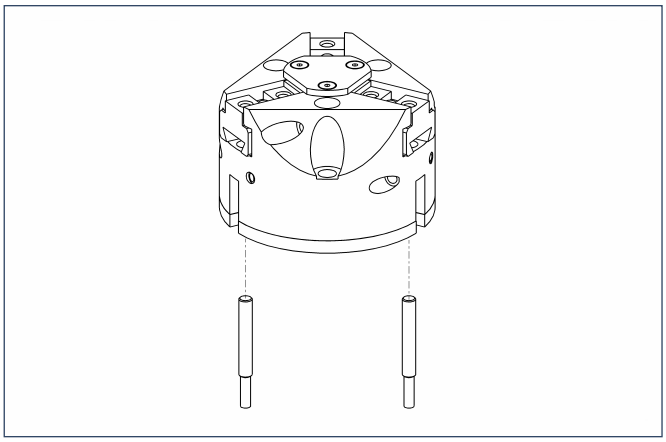
Finger design



Suggestion for connection dimensions – Gripper fingers

You can find detailed information and components of the specified accessory in the "Accessories" catalog section.

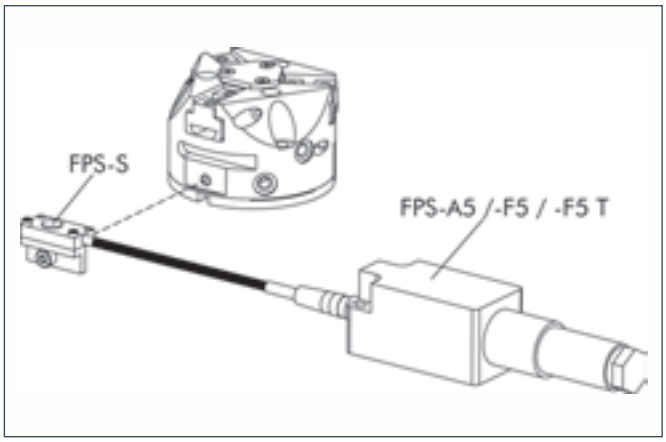
Sensor systems



End position monitoring:
Inductive proximity switches, for direct mounting

Designation	ID	Recommended product
IN 80/S-M12	0301578	
IN 80/S-M8	0301478	•
INK 80/S	0301550	

ⓘ Two sensors (NO contacts/S) are required per gripper as well as an optional extension cable.



Measuring system:
Position monitoring FPS

Designation	ID
AS-PZN 125-160	0301714
FPS-A5	0301802
FPS-F5	0301805
FPS-F5 T	0301807
FPS-S 13	0301705

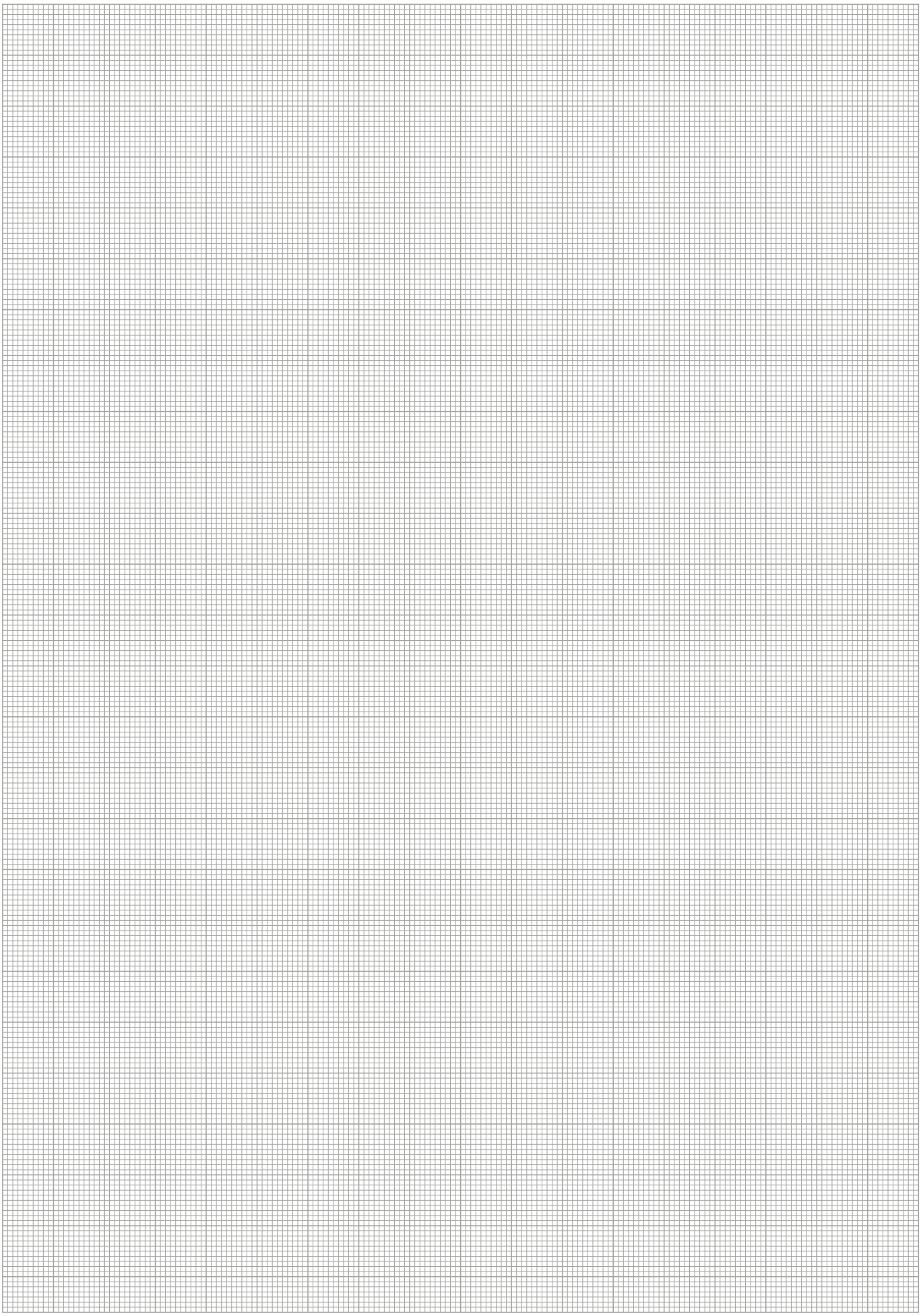
When using an FPS system, an FPS sensor (FPS-S) and an electronic processor (FPS-F5/ F5 T or A5) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are available as optional extras in the "Accessories" catalog section.

Extension cables for proximity switches/magnetic switches

Designation	ID
GK 3-M8	0301622
KV 10-M12	0301596
KV 10-M8	0301496
KV 20-M12	0301597
KV 20-M8	0301497
KV 3-M12	0301595
KV 3-M8	0301495
W 3-M12	0301503
W 5-M12	0301507
WK 3-M8	0301594
WK 5-M8	0301502

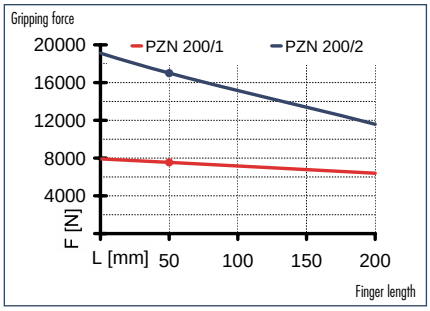
ⓘ For the sensor cables, observe the minimum permitted bending radii. Generally, these are 35 mm.

You can find detailed information and components of the specified accessory in the "Accessories" catalog section.

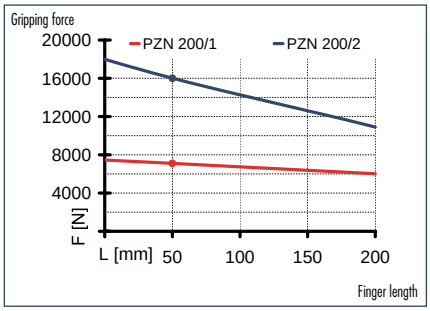


PZN 200

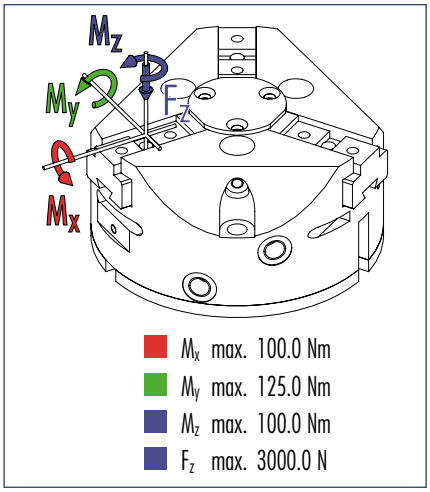
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

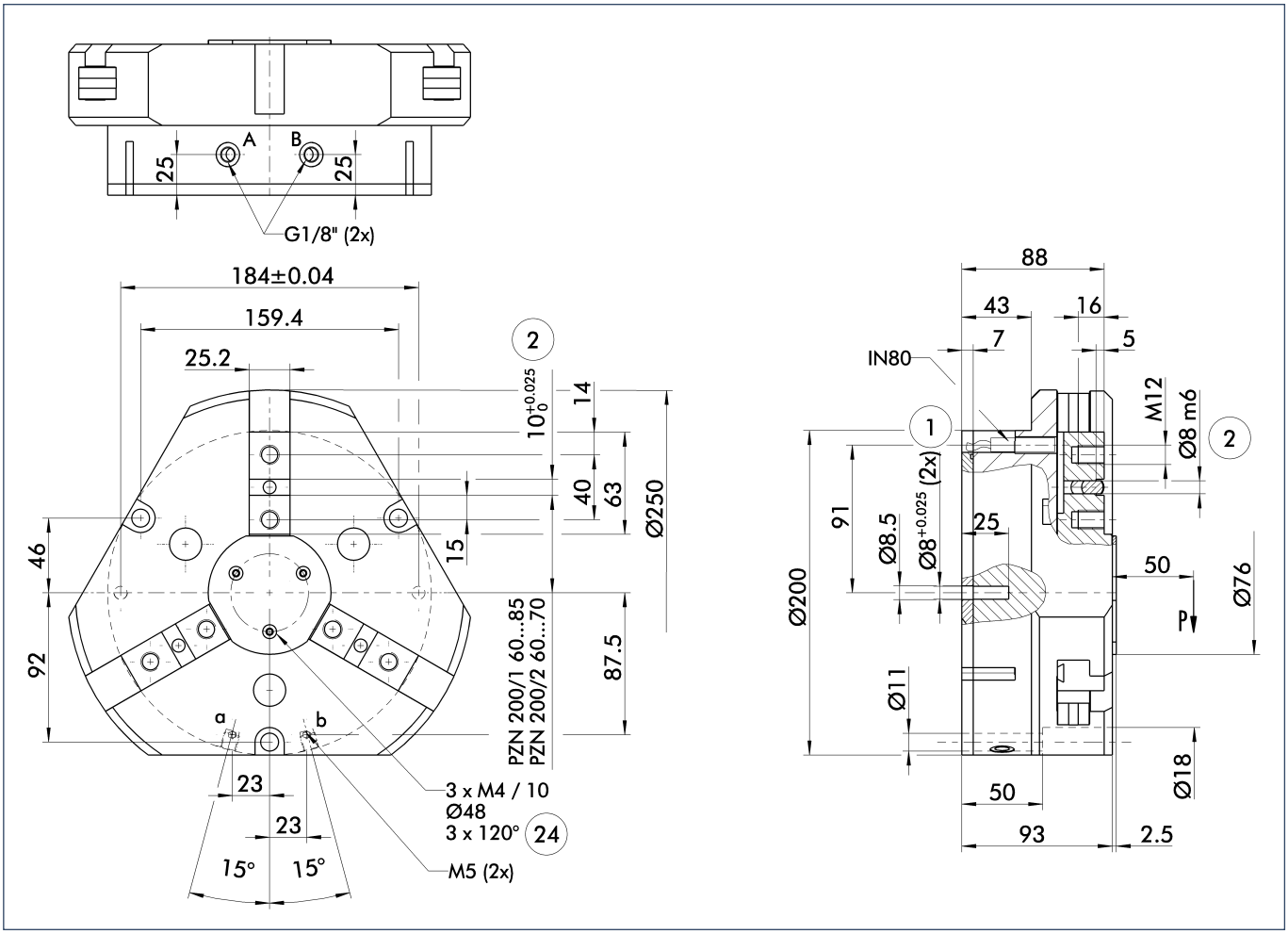


ⓘ Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing.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

Technical data

Designation		PZN 200-1	PZN 200-2
	ID	0300315	0300415
Stroke per jaw	[mm]	25.0	10.0
Closing force	[N]	7100.0	16000.0
Opening force	[N]	7540.0	17000.0
Weight	[kg]	11.0	11.0
Recommended workpiece weight	[kg]	35.0	80.0
Air consumption per double stroke	[cm^3]	1040.0	1040.0
Minimum pressure	[bar]	2.0	2.0
Maximum pressure	[bar]	8.0	8.0
Nominal operating pressure	[bar]	6.0	6.0
Closing time	[s]	1.1	1.0
Opening time	[s]	1.1	1.0
Max. permitted finger length	[mm]	200.0	200.0
Max. permitted weight per finger	[kg]	5.5	5.5
IP class		40	40
Min. ambient temperature	[°C]	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0
Repeat accuracy	[mm]	0.1	0.1

Main views

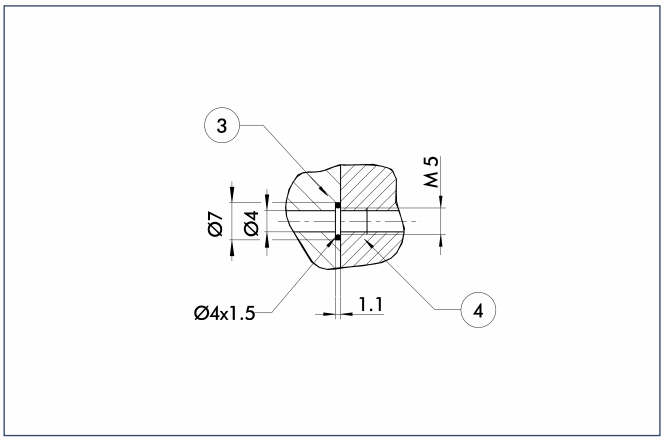


The illustration shows the gripper in the basic version with closed jaws, without taking into account the measurements of the optional extras described below.

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

A,a Main connection, direct connection – Open gripper
B,b Main connection, direct connection – Close gripper
① Gripper connection
② Finger connection
㉔ Screw pitch circle

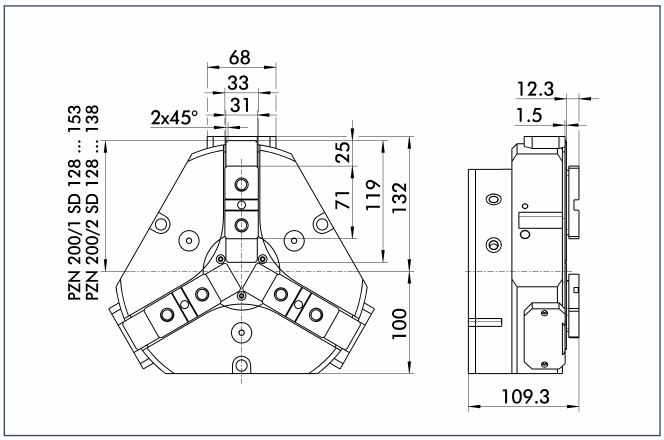
Hose-free direct connection



③ Adapter
④ Gripper

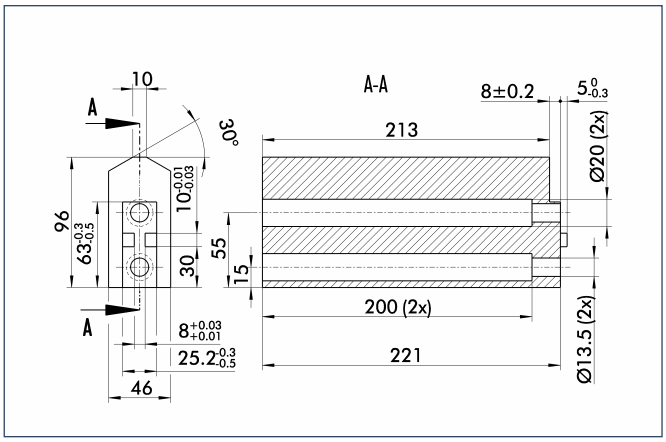
The direct connection supplies pressure to the gripper without a failure-prone hose system. Instead, the pressure medium is guided through holes in the mounting plate.

Dust protection



The "Dust-proof" option increases the degree of protection against penetrating substances. The screw connection diagram moves by the height of the intermediate jaw. The finger length must still be measured from the upper edge of the gripper housing.

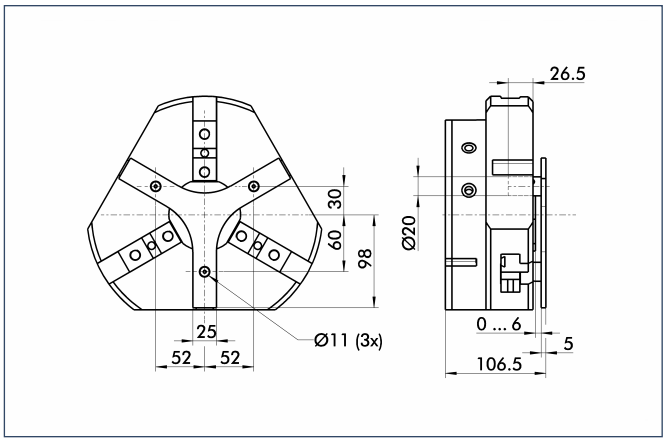
Finger blanks



Finger blanks for customer-specific reworking, incl. screw connection diagram

Designation	Material	Scope of delivery	ID
ABR 200	Aluminum	1	0300751
SBR 200	16 MnCr 5	1	0300739

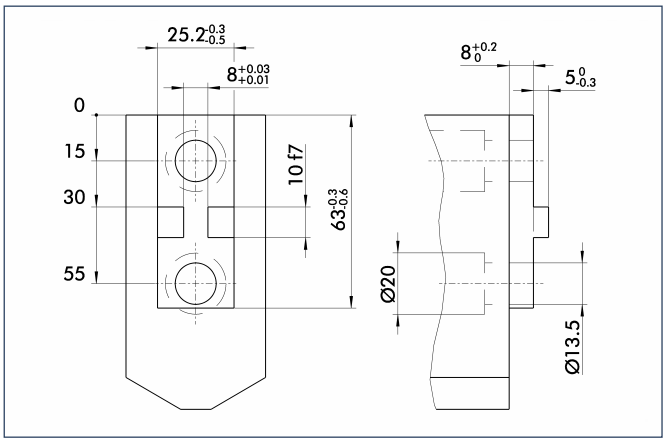
Spring-loaded pressure plate



For spring-mounted positioning of the workpiece against the stop after the gripper has opened. Developed especially for the loading of machining centers.

Designation	Stroke	Min. total force	ID
A-PZN 200	6 mm	280 N	0300718

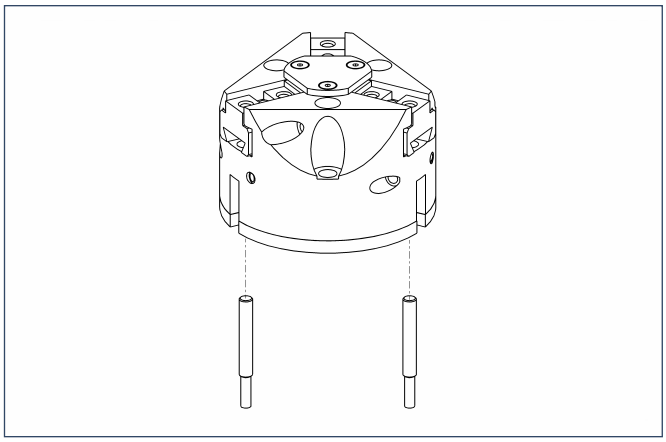
Finger design



Suggestion for connection dimensions – Gripper fingers

You can find detailed information and components of the specified accessory in the "Accessories" catalog section.

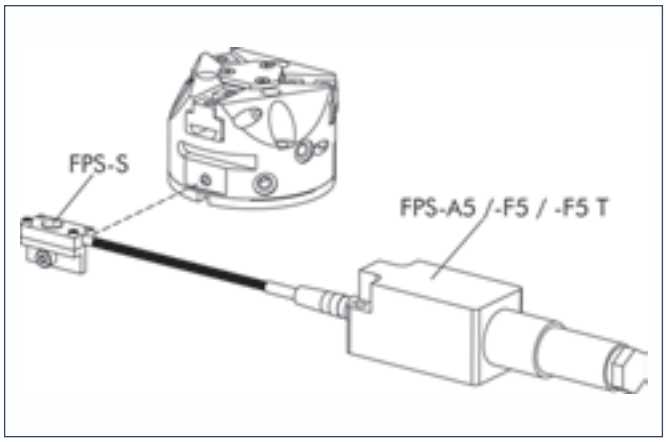
Sensor systems



End position monitoring:
Inductive proximity switches, for direct mounting

Designation	ID	Recommended product
IN 80/S-M12	0301578	
IN 80/S-M8	0301478	•
INK 80/S	0301550	

ⓘ Two sensors (NO contacts/S) are required per gripper as well as an optional extension cable.



Measuring system:
Position monitoring FPS

Designation	ID
AS-PZN 200	0301719
FPS-A5	0301802
FPS-F5	0301805
FPS-F5 T	0301807
FPS-S 13	0301705

When using an FPS system, an FPS sensor (FPS-S) and an electronic processor (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 optional extras in the "Accessories" catalog section.

Extension cables for proximity switches/magnetic switches

Designation	ID
GK 3-M8	0301622
KV 10-M12	0301596
KV 10-M8	0301496
KV 20-M12	0301597
KV 20-M8	0301497
KV 3-M12	0301595
KV 3-M8	0301495
W 3-M12	0301503
W 5-M12	0301507
WK 3-M8	0301594
WK 5-M8	0301502

ⓘ For the sensor cables, observe the minimum permitted bending radii. Generally, these are 35 mm.

You can find detailed information and components of the specified accessory in the "Accessories" catalog section.