



Superior Clamping and Gripping



Product Information

Gripper with shaft interface GSW-B

GSW-B

Gripper with shaft interface

High flow rate. Cost-effective. Powerful. Gripper with shank interface GSW-B

Universal gripper PGN-plus/PZN-plus with GSW-B shank interface

Field of application

Unit for fully automated loading and unloading of machining centres

Advantages – Your benefits

Low-cost module from a universal gripper PGN-plus/PZN-plus and a shank interface

Fast, automated gripper changeover from the gripper to the storage rack

Fully automated workpiece changeover without robot or gantry system



Sizes
Quantity: 4



Suitable for
PGN-plus/PZN-plus

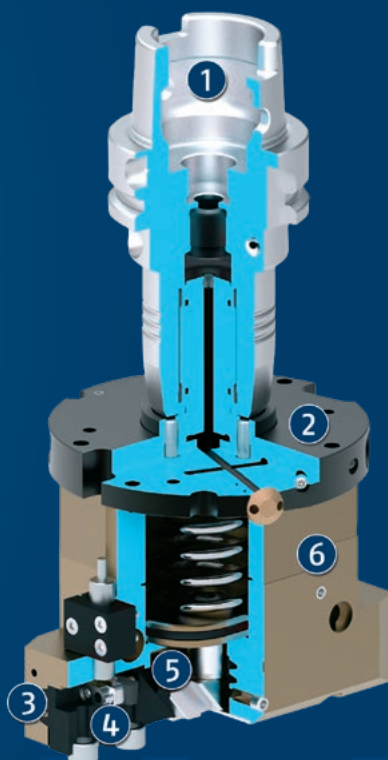


Shank diameter
20 mm

Functional description

The pressure generated by the central machine coolant supply is reduced by the pressure distributor, which is integrated in the adapter plates. The gripper can then be actuated and can actuate the base jaws correspondingly

via the piston and wedge hook. During the gripping operation the gripper continuously supplies coolant or compressed air via the lateral pressure control valve.



- ① **Mounting**
for automatically switching in and out of the spindle
(not included in the scope of delivery)
- ② **Adapter plate with integrated pressure distributor**
for a large pressure range
- ③ **Multi-tooth guidance**
highly loadable, nearly backlash-free base jaw guidance
for long finger lengths
- ④ **Base Jaw**
for the connection of workpiece-specific gripper fingers
- ⑤ **Wedge-hook design**
for high force transmission and centric gripping
- ⑥ **Housing**
is weight-optimized due to the use of high-strength
aluminum alloy

GSW-B

Gripper with shaft interface

Detailed functional description

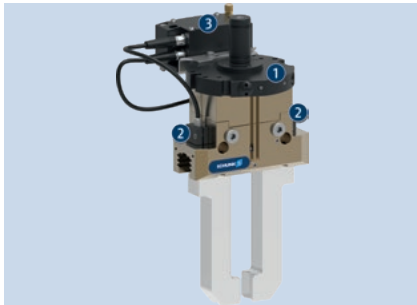
Gripper versions



The gripper with shank interface GSW-B is available as a parallel and centric gripper in the versions AS and IS. Due to the integrated spring, the gripper moves back to its starting position in depressurized state. In the version AS, the spring acts as closing force in the depressurized state; and in the version IS as an opening force.

- 1 Adapter plate with mount for toolholder
- 2 Pressure relief valve
- 3 Piston chamber with spring support
- 4 Wedge-hook design

Gripper monitoring



On option, the gripper can be equipped with a wireless sensor system. Therefore monitoring of the gripper and the wireless transmission of the signals from the machine room are possible.

- 1 Adapter plate with spindle Interface GSW-B
- 2 End-position monitoring with cylindrical reed switches RMS 80
- 3 Transmitter module RSS-T2 for radio sensor system

General notes about the series

Operating principle: Pressure distributor and wedge-hook kinematics

Housing material: Aluminum alloy, anodized

Base jaw material: Blackened steel

Spindle interface material: Aluminum alloy

Actuation: hydraulically with machine coolant (filtered, max. particle size of 30 μm) or pneumatically with filtered compressed air in accordance with ISO 8573-1:2010 [7:4:4].

Warranty: 24 months

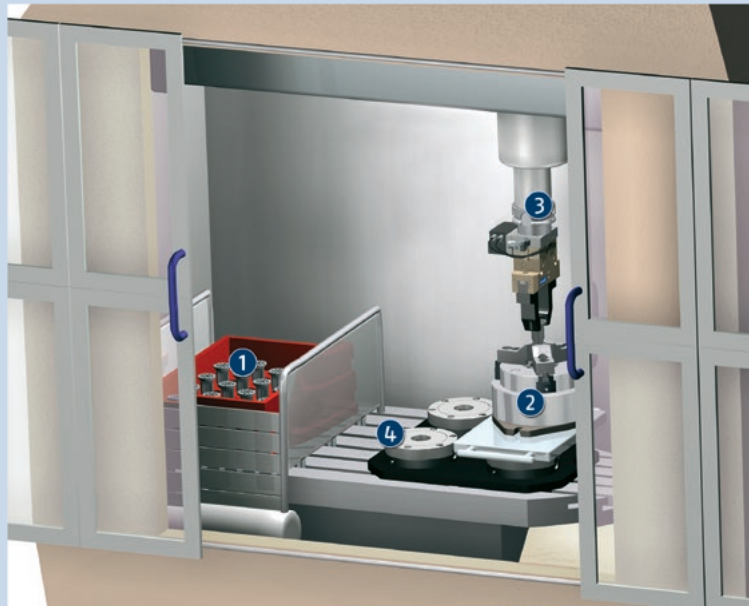
Scope of delivery: Fastening screws, centering elements, assembly instructions (operating manual with declaration of incorporation is available online). The gripper is not included and must be ordered separately in the desired version.

Gripping force: refers to the combination of a GSW-B with a correspondingly named gripper, and represents the minimum sufficient gripping force.

Finger length: is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: is defined as a distribution of the end position for 100 consecutive strokes.

Closing and opening times: the indicated times depend on the flow rate and pressure of the drive medium and the therefrom resulting electrical resistances.



Application example

Use of a gripper with spindle interface in a machine tool for automated loading of raw parts and unloading of finished parts.

- ① Workpiece rack
- ② Quick-change pallet System VERO-S with lathe chuck ROTA TPS
- ③ Gripper with spindle interface PGN-plus at GSW-B, and with wireless sensor System RSS
- ④ Machine table

SCHUNK offers more ...

The following components make the product even more productive – the suitable addition for the highest functionality, flexibility, reliability, and controlled production.



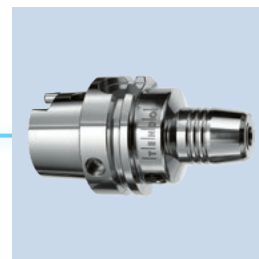
Magnetic gripper



Vacuum Gripper



Cleaning Unit



Toolholder



Finger blank



Universal intermediate jaw



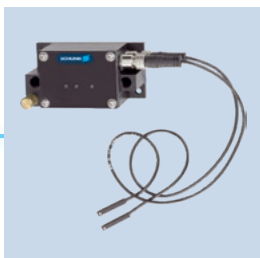
Jaw quick-change system



Protection cover



Reed switch



Wireless sensor system

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

Options and special information

Air connections: Please note that the connection A of IS version grippers or grippers of AS version should not be sealed air-tight.

Diversity of variants: When using the GSW-B with the PGN-plus/-P and PZN-plus grippers, nearly all variants and accessories of these grippers can be used. For more information see the chapter gripper series. Further shaft diameters on request.

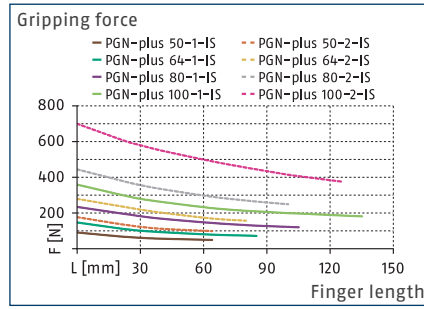
Precondition: If the spindles do not rotate, then the machines have to provide compressed air or coolant.

GSW-B 50-100

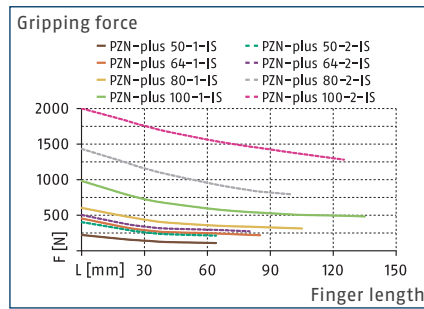
Gripper with shaft interface



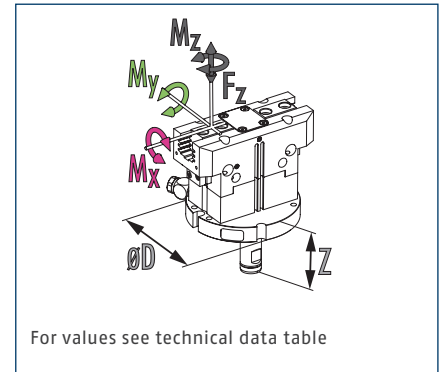
Gripping force O.D. gripping



Gripping force O.D. gripping



Dimensions and maximum loads



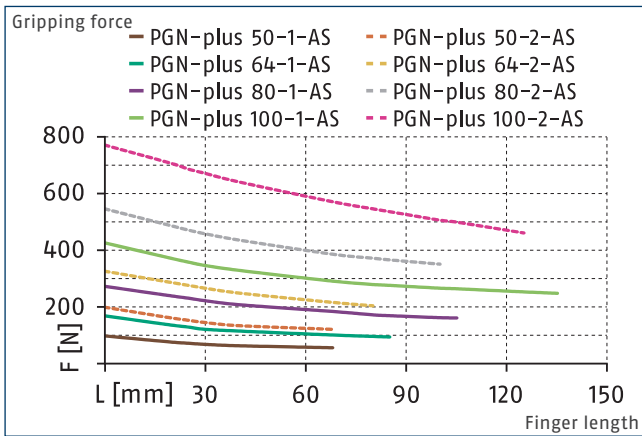
① Refer to the respective size of the gripper for the forces and torques.

Technical data

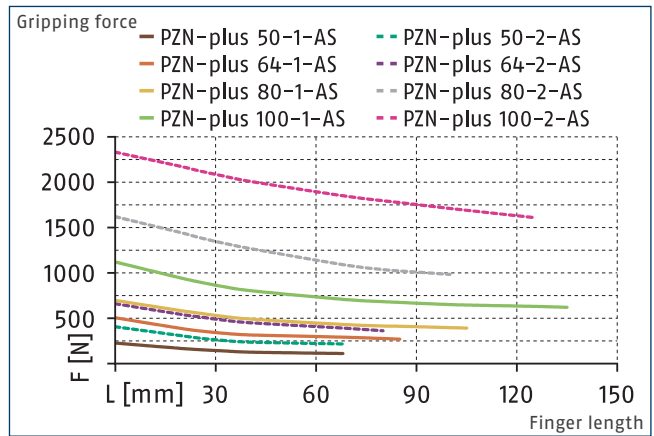
Description		GSW-B 50-P	GSW-B 50-Z	GSW-B 64-PZ	GSW-B 80-PZ	GSW-B 100-PZ
ID		0308420	0308421	0308422	0308423	0308424
General technical data						
Weight	[kg]	0.2	0.2	0.23	0.31	0.42
Max. permissible speed	[1/min]	20	20	20	20	20
Nominal operating pressure compressed air	[bar]	6	6	6	6	6
Min./max. operating pressure, compressed air	[bar]	4/8	4/8	4/8	4/8	4/8
Nominal operating pressure coolant	[bar]	40	40	40	40	40
Min./max. operating pressure, coolant	[bar]	20/50	20/50	20/50	20/50	20/50
IP protection class		40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90
Dimensions Ø D x Z	[mm]	52 x 66	52 x 66	64 x 63	80 x 63	100 x 63
Prepared for parallel grippers		yes	no	yes	yes	yes
Prepared for centric grippers		no	yes	yes	yes	yes

① The values only relate to the adapter GSW-B.
 The appropriate gripper has to be ordered separately.
 Refer to the following pages for gripper-specific values.

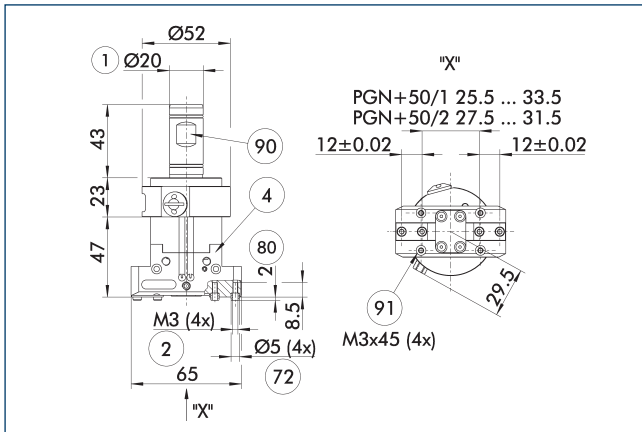
Gripping force I.D. gripping



Gripping force I.D. gripping



GSW-B with PGN-plus 50

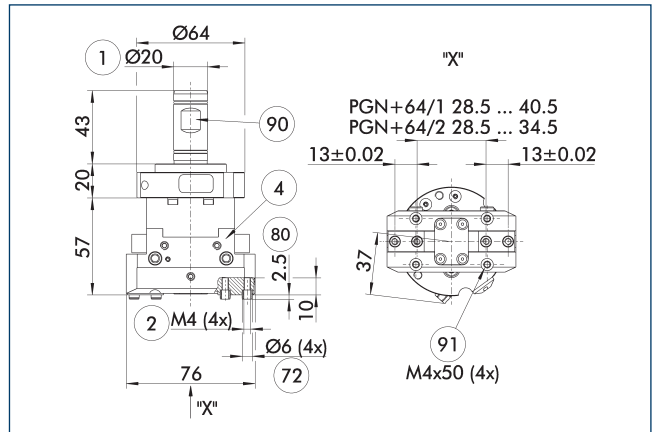


- ① Gripper connection
- ② Finger connection
- ⑧⑩ Depth of the centering sleeve hole in the counter part
- ④ Grippers
- ⑦② Fit for centering sleeves
- ⑨⑩ WELDON clamping surface
- ⑨① Fastening of the gripper on GSW-B (are included in the scope of delivery)

Description	ID	Stroke per jaw	Minimum closing force	Minimum opening force	Max. permissible finger length
		[mm]	[N]	[N]	[mm]
2-finger parallel gripper PGN-plus					
PGN-plus 50-1-AS	0371399	4	45	75	68
PGN-plus 50-1-IS	0371459	4	70	45	68
PGN-plus 50-2-AS	0371449	2	95	160	64
PGN-plus 50-2-IS	0371469	2	140	95	64

① For detailed information, see the corresponding gripper. See the views at the end of the respective gripper size for suitable gripper accessories.

GSW-B with PGN-plus 64



- ① Gripper connection
- ② Finger connection
- ⑧⑩ Depth of the centering sleeve hole in the counter part
- ④ Grippers
- ⑦② Fit for centering sleeves
- ⑨⑩ WELDON clamping surface
- ⑨① Fastening of the gripper on GSW-B (are included in the scope of delivery)

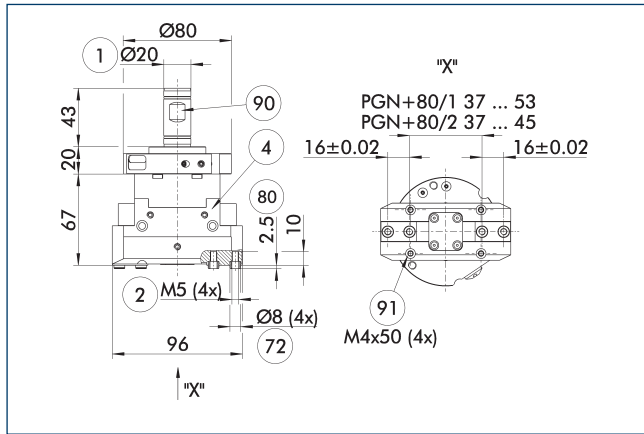
Description	ID	Stroke per jaw	Minimum closing force	Minimum opening force	Max. permissible finger length
		[mm]	[N]	[N]	[mm]
2-finger parallel gripper PGN-plus					
PGN-plus 64-1-AS	0371092	6	90	135	85
PGN-plus 64-1-IS	0371094	6	115	90	85
PGN-plus 64-2-AS	0371093	3	190	285	80
PGN-plus 64-2-IS	0371095	3	240	190	80

① For detailed information, see the corresponding gripper. See the views at the end of the respective gripper size for suitable gripper accessories.

GSW-B 50-100

Gripper with shaft interface

GSW-B with PGN-plus 80

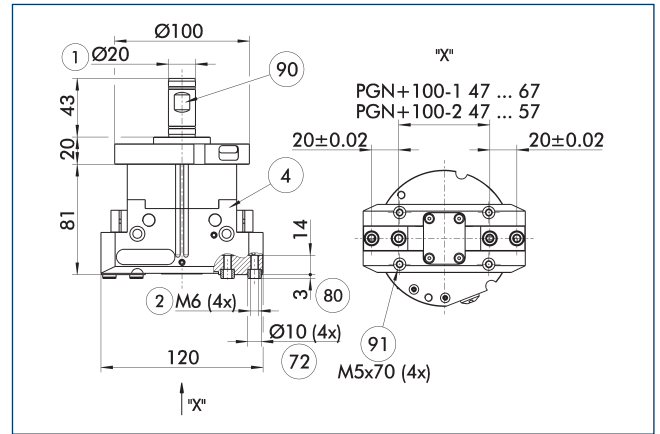


- ① Gripper connection
- ② Finger connection
- ⑧⑩ Depth of the centering sleeve hole in the counter part
- ④ Grippers
- ⑦② Fit for centering sleeves
- ⑨⑩ WELDON clamping surface
- ⑨① Fastening of the gripper on GSW-B (are included in the scope of delivery)

Description	ID	Stroke per jaw	Minimum closing force	Minimum opening force	Max. permissible finger length
		[mm]	[N]	[N]	[mm]
2-finger parallel gripper PGN-plus					
PGN-plus 80-1-AS	0371401	8	155	230	105
PGN-plus 80-1-IS	0371461	8	180	155	105
PGN-plus 80-2-AS	0371451	4	320	470	100
PGN-plus 80-2-IS	0371471	4	370	320	100

① For detailed information, see the corresponding gripper. See the views at the end of the respective gripper size for suitable gripper accessories.

GSW-B with PGN-plus 100

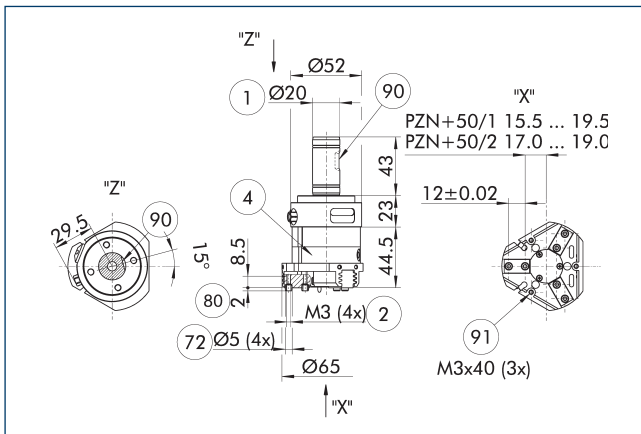


- ① Gripper connection
- ② Finger connection
- ⑧⑩ Depth of the centering sleeve hole in the counter part
- ④ Grippers
- ⑦② Fit for centering sleeves
- ⑨⑩ WELDON clamping surface
- ⑨① Fastening of the gripper on GSW-B (are included in the scope of delivery)

Description	ID	Stroke per jaw	Minimum closing force	Minimum opening force	Max. permissible finger length
		[mm]	[N]	[N]	[mm]
2-finger parallel gripper PGN-plus					
PGN-plus 100-1-AS	0371402	10	240	345	135
PGN-plus 100-1-IS	0371462	10	280	240	135
PGN-plus 100-2-AS	0371452	5	500	710	125
PGN-plus 100-2-IS	0371472	5	580	500	125

① For detailed information, see the corresponding gripper. See the views at the end of the respective gripper size for suitable gripper accessories.

GSW-B with PZN-plus 50

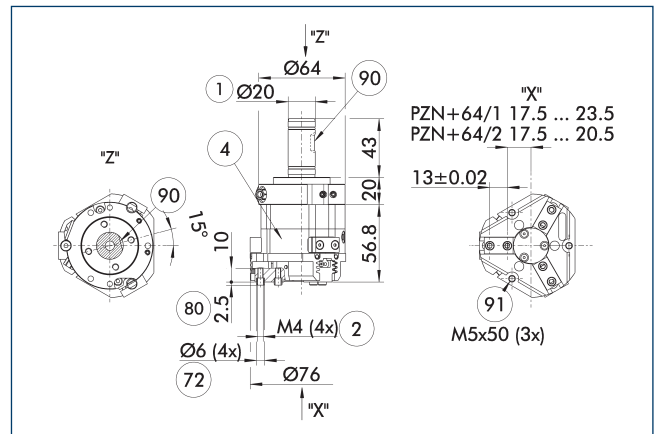


- ① Gripper connection
- ② Finger connection
- ④ Grippers
- ⑦ Fit for centering sleeves
- ⑧ Depth of the centering sleeve hole in the counter part
- ⑨ WELDON clamping surface
- ⑩ Fastening of the gripper on GSW-B (are included in the scope of delivery)

Description	ID	Stroke per jaw	Minimum closing force	Minimum opening force	Max. permissible finger length
		[mm]	[N]	[N]	[mm]
3-finger centric gripper PZN-plus					
PZN-plus 50-1-AS	0303509	4	120	165	68
PZN-plus 50-1-IS	0303539	4	160	150	68
PZN-plus 50-2-AS	0303609	2	245	340	64
PZN-plus 50-2-IS	0303639	2	335	310	64

① For detailed information, see the corresponding gripper. See the views at the end of the respective gripper size for suitable gripper accessories.

GSW-B with PZN-plus 64



- ① Gripper connection
- ② Finger connection
- ④ Grippers
- ⑦ Fit for centering sleeves
- ⑧ Depth of the centering sleeve hole in the counter part
- ⑨ WELDON clamping surface
- ⑩ Fastening of the gripper on GSW-B (are included in the scope of delivery)

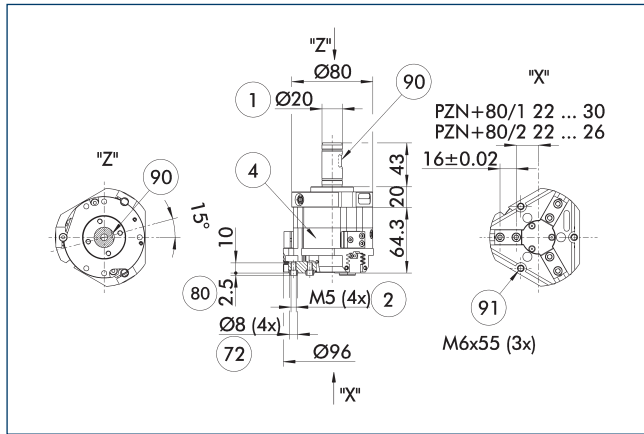
Description	ID	Stroke per jaw	Minimum closing force	Minimum opening force	Max. permissible finger length
		[mm]	[N]	[N]	[mm]
3-finger centric gripper PZN-plus					
PZN-plus 64-1-AS	0303510	6	185	360	85
PZN-plus 64-1-IS	0303540	6	305	220	85
PZN-plus 64-2-AS	0303610	3	315	495	80
PZN-plus 64-2-IS	0303640	3	335	460	80

① For detailed information, see the corresponding gripper. See the views at the end of the respective gripper size for suitable gripper accessories.

GSW-B 50-100

Gripper with shaft interface

GSW-B with PZN-plus 80

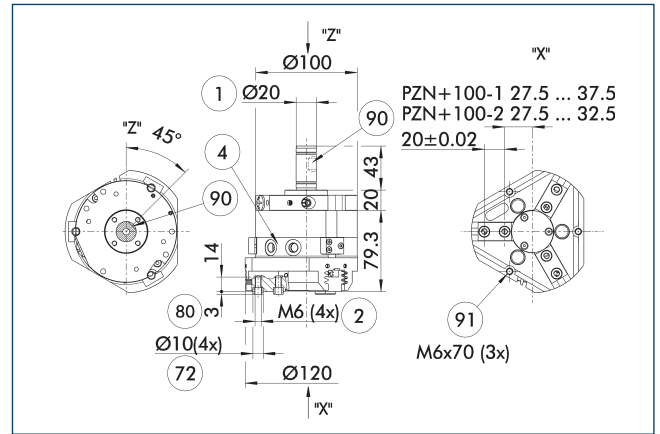


- ① Gripper connection
- ② Finger connection
- ⑧⑩ Depth of the centering sleeve hole in the counter part
- ④ Grippers
- ⑦② Fit for centering sleeves
- ⑨⑩ WELDON clamping surface
- ⑨① Fastening of the gripper on GSW-B (are included in the scope of delivery)

Description	ID	Stroke per jaw	Minimum closing force	Minimum opening force	Max. permissible finger length
		[mm]	[N]	[N]	[mm]
3-finger centric gripper PZN-plus					
PZN-plus 80-1-AS	0303511	8	350	555	105
PZN-plus 80-1-IS	0303541	8	460	370	105
PZN-plus 80-2-AS	0303611	4	730	1390	100
PZN-plus 80-2-IS	0303641	4	1200	760	100

⑩ For detailed information, see the corresponding gripper. See the views at the end of the respective gripper size for suitable gripper accessories.

GSW-B with PZN-plus 100

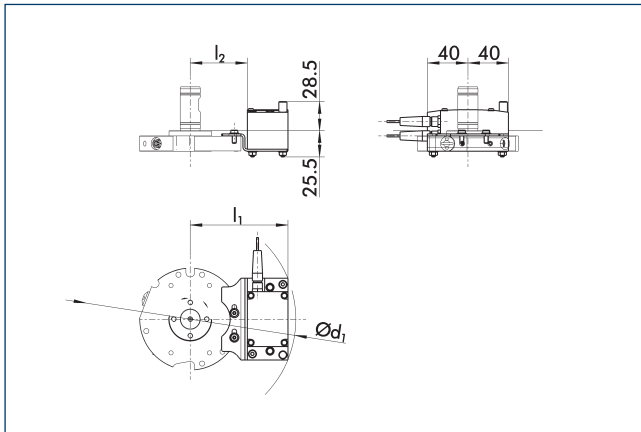


- ① Gripper connection
- ② Finger connection
- ⑧⑩ Depth of the centering sleeve hole in the counter part
- ④ Grippers
- ⑦② Fit for centering sleeves
- ⑨⑩ WELDON clamping surface
- ⑨① Fastening of the gripper on GSW-B (are included in the scope of delivery)

Description	ID	Stroke per jaw	Minimum closing force	Minimum opening force	Max. permissible finger length
		[mm]	[N]	[N]	[mm]
3-finger centric gripper PZN-plus					
PZN-plus 100-1-AS	0303512	10	720	850	135
PZN-plus 100-1-IS	0303542	10	710	780	135
PZN-plus 100-2-AS	0303612	5	1500	2070	125
PZN-plus 100-2-IS	0303642	5	1740	1620	125

⑩ For detailed information, see the corresponding gripper. See the views at the end of the respective gripper size for suitable gripper accessories.

Attachment kit for RSS wireless sensors

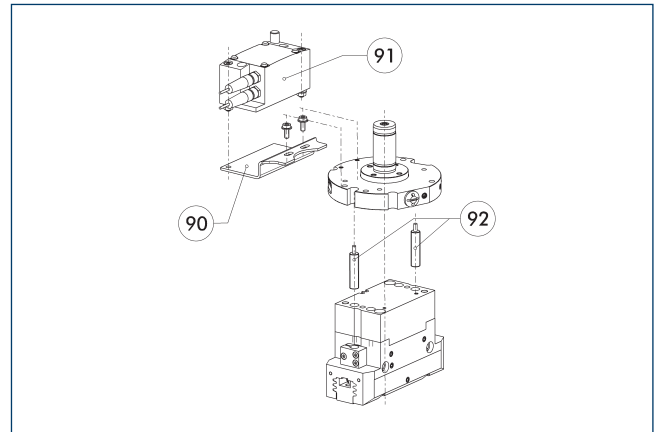


- GSW-B 64-PZ: l1=79 mm; l2=38 mm; d1=177 mm
- GSW-B 80-PZ: l1=87 mm; l2=46 mm; d1=191 mm
- GSW-B 100-PZ: l1=97 mm; l2=56 mm; d1=210 mm

Description	ID
Attachment kit for RSS wireless sensors	
AS-RSS-GSW-H	0308440

- ① The transmitter module RSS-T2 can be mounted using the mentioned mounting kit.

RSS wireless sensors – RMS Reed switch



- ⑨⑩ Mounting kit for RSS
 ⑨① Wireless sensor System RSS
 ⑨② RMS sensors

End position monitoring can be mounted with an attachment kit.

Description	ID
Attachment kit for RSS wireless sensors	
AS-RSS-GSW-H	0308440
Wireless sensor system	
RSS-T2	0377715
RSS-T2-US/CA	0377717

- ① The radio sensor system consists of the specified RSS-T2 (-US/CA) transmitter module, the RSS-R1 (ID 0377700) receiver and the RSS-R-A antenna (ID 0377730). For further information, see Product RSS. You can find the suitable Reed switches and any related mounting kits directly in the product information for the corresponding gripper. Two sensors (closer/S) are required for each unit and extension cables are available as an option. This attachment kit needs to be ordered optionally as an accessory. For sensor cables, note the minimum permissible bending radii. These are generally 35 mm.



SCHUNK GmbH & Co. KG
Spann- und Greiftechnik

Bahnhofstr. 106 - 134
D-74348 Lauffen/Neckar
Tel. +49-7133-103-0
Fax +49-7133-103-2399
info@de.schunk.com
schunk.com

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