

Superior Clamping and Gripping

SCHUNK®

Product Information

Gripper with shaft interface GSW-B

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

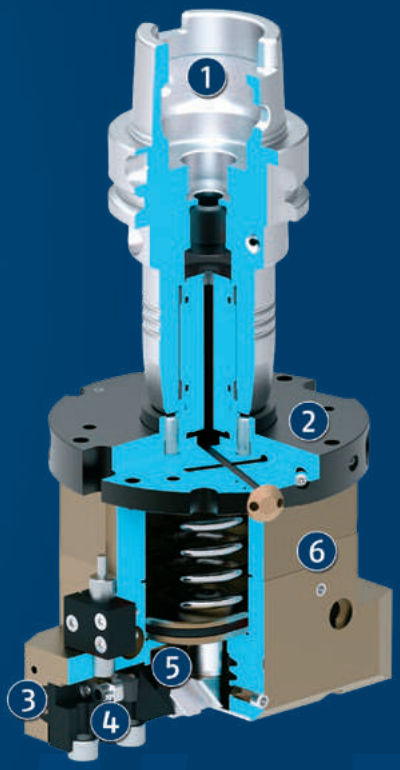
Fully automated workpiece changeover without robot or gantry system



Sizes	Suitable for	Shank diameter
Quantity: 4	PGN-plus/PZN-plus	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 lenghts

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

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

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

Service life characteristics: on request

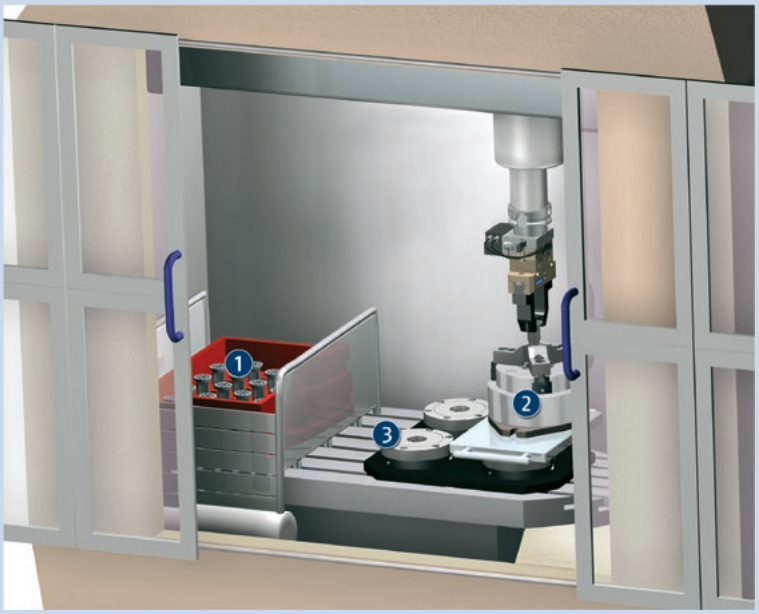
Scope of delivery: Fastening screws, centering elements, assembly instructions (operating manual with declaration of incorporation is available online). The gripper is not included and must be ordered separately in the desired version.

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. 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



Toolholders



Finger blank



Universal intermediate jaw



Jaw quick-change system



Protection cover



Reed switch

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

Options and special information

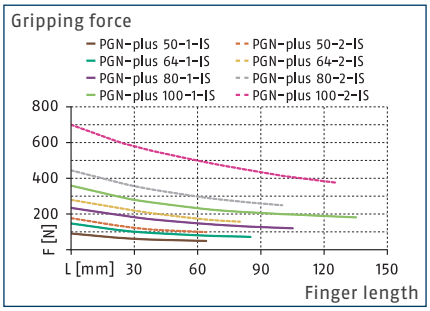
Air connections: Please note that the connection A of IS version grippers or grippers of AS version should not be sealed air-tight.
Diversity of variants: When using the GSW-B with the PGN-plus/-P and PZN-plus grippers, nearly all variants and accessories of these grippers can be used. For more information 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

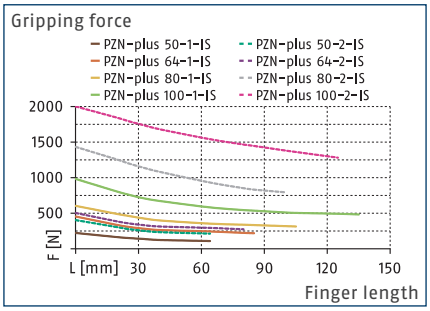
Gripper with shaft interface



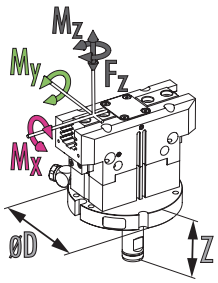
Gripping force O.D. gripping



Gripping force O.D. gripping



Dimensions and maximum loads



For values see technical data table

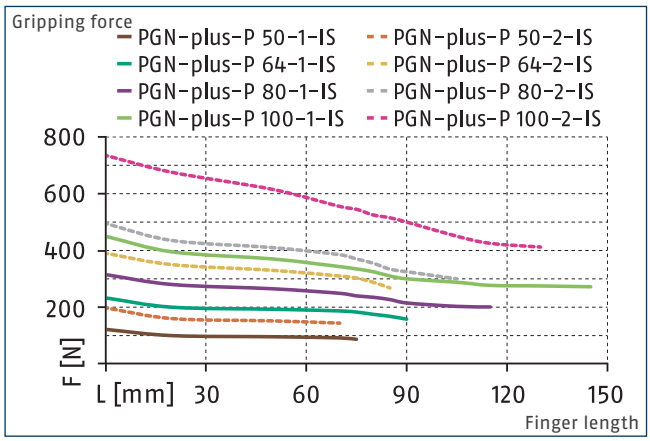
ⓘ Refer to the respective size of the gripper for the forces and torques.

Technical data

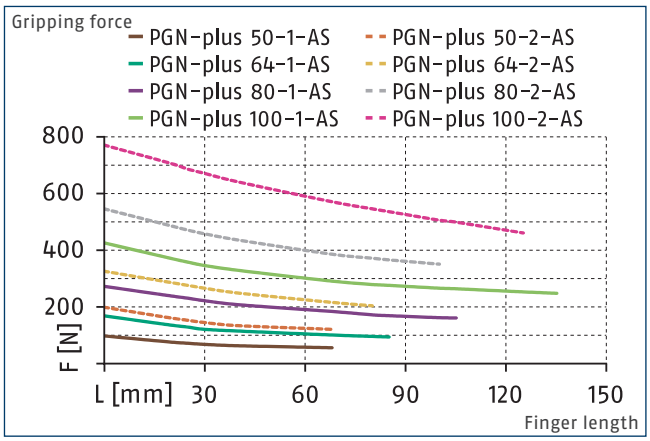
Description		GSW-B 50-P	GSW-B 50-Z	GSW-B 64-PZ	GSW-B 80-PZ	GSW-B 100-PZ
ID		0308420	0308421	0308422	0308423	0308424
General technical data						
Weight	[kg]	0.2	0.2	0.23	0.31	0.42
Max. permissible RPM	[1/min]	20	20	20	20	20
Nominal operating pressure compressed air	[bar]	6	6	6	6	6
Min./max. operating 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

ⓘ 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.

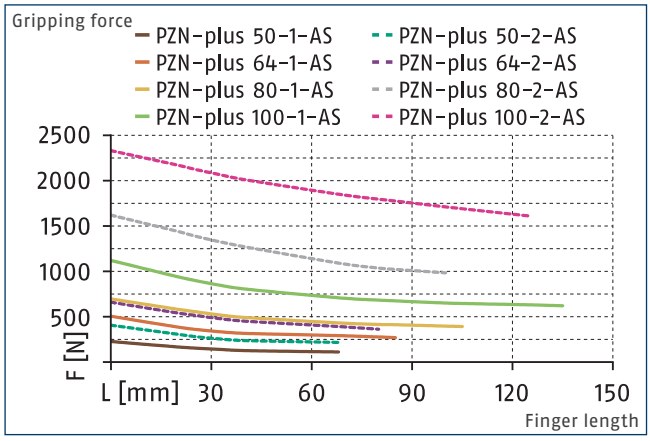
Gripping force O.D. gripping



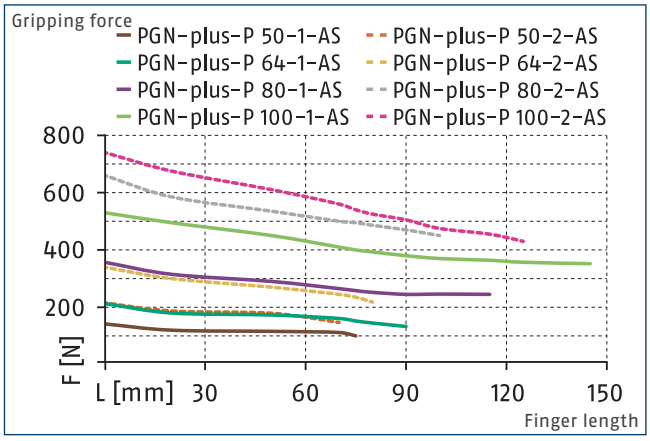
Gripping force I.D. gripping



Gripping force I.D. gripping



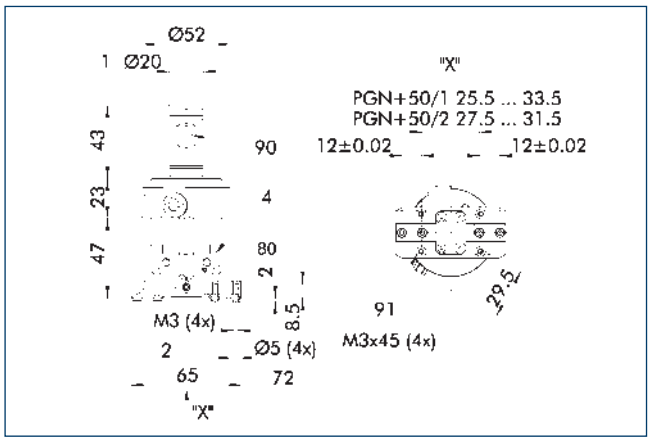
Gripping force I.D. gripping



GSW-B 50-100

Gripper with shaft interface

GSW-B with PGN-plus 50

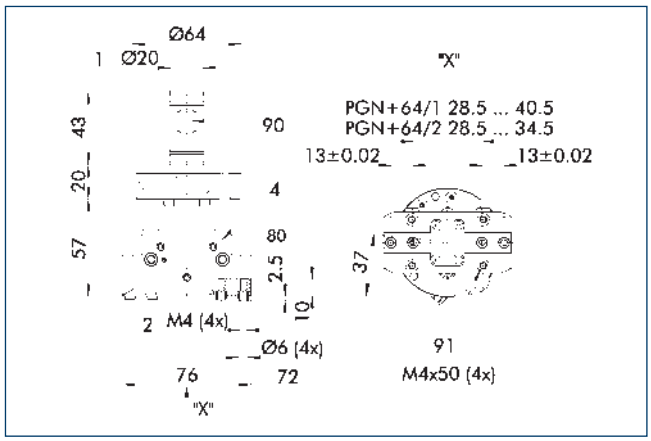


1 Gripper connection
2 Finger connection
4 Grippers
72 Fit for centering sleeves
80 Depth of the centering sleeve hole in the counter part
90 WELDON clamping surface
91 Fastening of the gripper on GSW-B (are included in the scope of delivery)

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

ⓘ 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

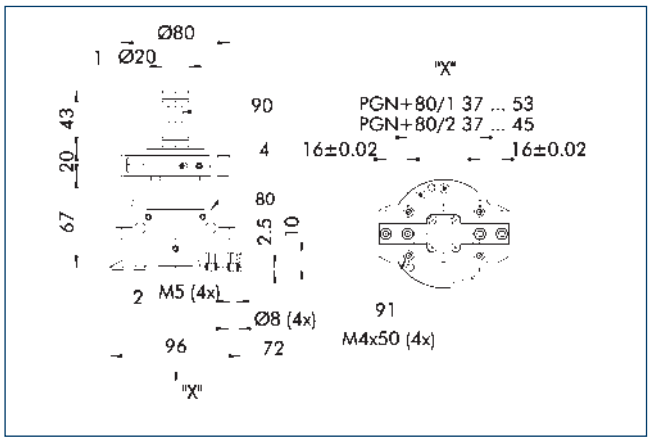


1 Gripper connection
2 Finger connection
4 Grippers
72 Fit for centering sleeves
80 Depth of the centering sleeve hole in the counter part
90 WELDON clamping surface
91 Fastening of the gripper on GSW-B (are included in the scope of delivery)

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

ⓘ 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 80

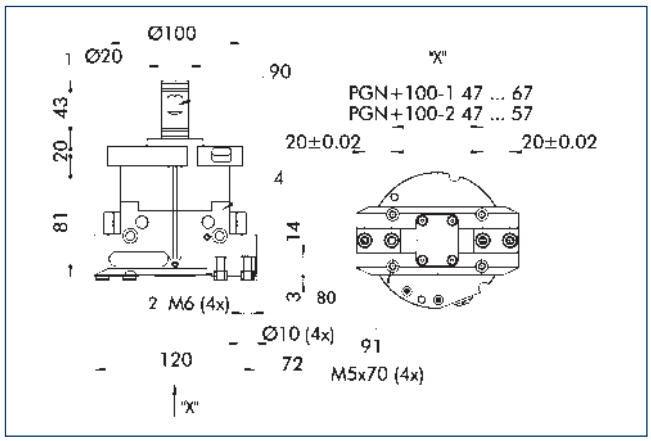


(1) Gripper connection
(2) Finger connection
(4) Grippers
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part
(90) WELDON clamping surface
(91) Fastening of the gripper on GSW-B (are included in the scope of delivery)

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

ⓘ 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
(4) Grippers
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part
(90) WELDON clamping surface
(91) Fastening of the gripper on GSW-B (are included in the scope of delivery)

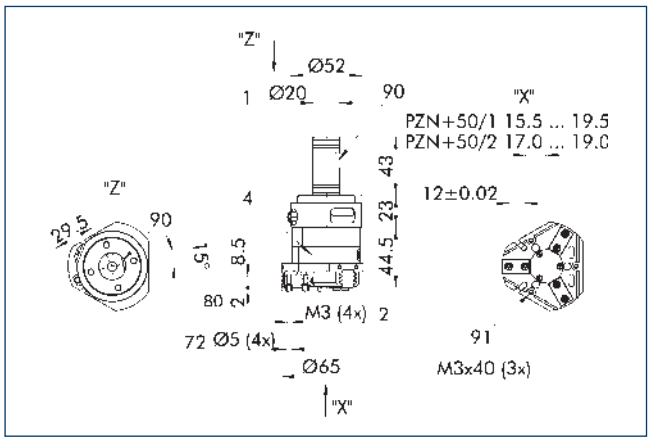
Description	ID	Stroke per jaw	Minimum closing force	Minimum opening force	Max. permissible finger length
		[mm]	[N]	[N]	[mm]
2-finger parallel gripper PGN-plus					
PGN-plus 100-1-AS	0371402	10	240	345	135
PGN-plus 100-1-IS	0371462	10	280	240	135
PGN-plus 100-2-AS	0371452	5	500	710	125
PGN-plus 100-2-IS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

ⓘ 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 50

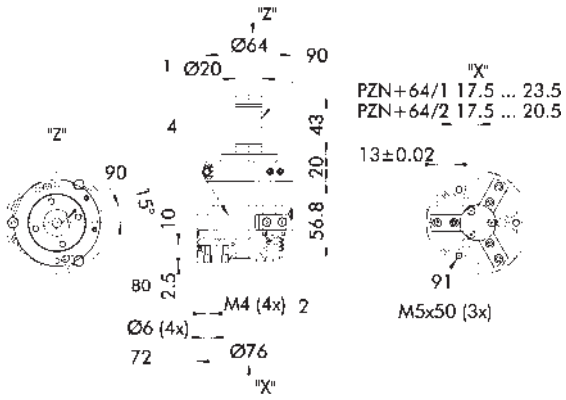


(1) Gripper connection
(2) Finger connection
(4) Grippers
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part
(90) WELDON clamping surface
(91) Fastening of the gripper on GSW-B (are included in the scope of delivery)

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 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

ⓘ 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

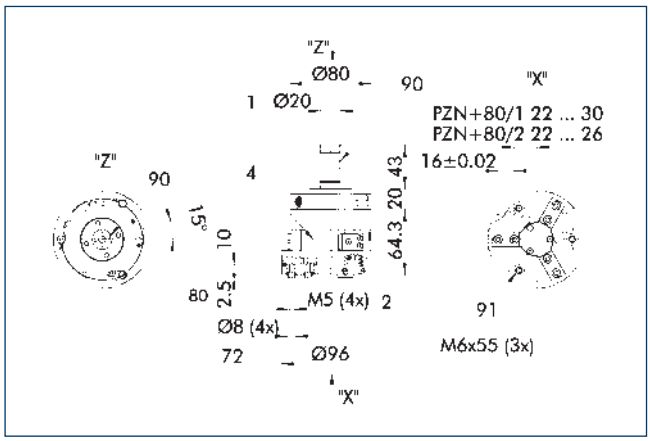


(1) Gripper connection
(2) Finger connection
(4) Grippers
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part
(90) WELDON clamping surface
(91) Fastening of the gripper on GSW-B (are included in the scope of delivery)

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 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

ⓘ 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 80

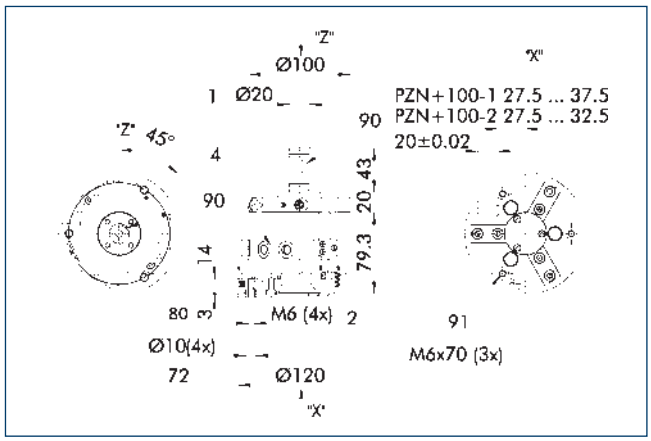


1 Gripper connection
2 Finger connection
4 Grippers
72 Fit for centering sleeves
80 Depth of the centering sleeve hole in the counter part
90 WELDON clamping surface
91 Fastening of the gripper on GSW-B (are included in the scope of delivery)

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

ⓘ 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
4 Grippers
72 Fit for centering sleeves
80 Depth of the centering sleeve hole in the counter part
90 WELDON clamping surface
91 Fastening of the gripper on GSW-B (are included in the scope of delivery)

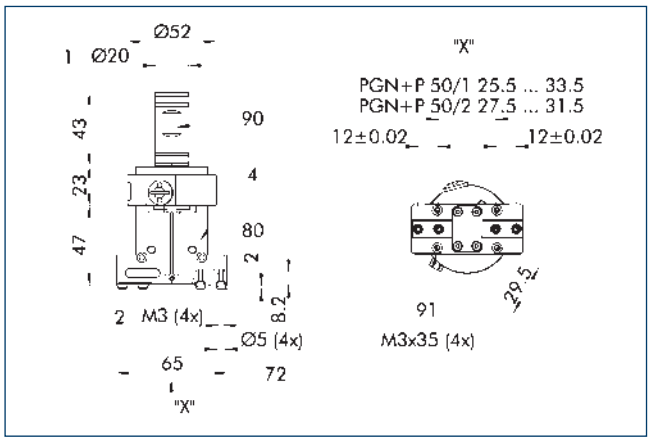
Description	ID	Stroke per jaw	Minimum closing force	Minimum opening force	Max. permissible finger length
		[mm]	[N]	[N]	[mm]
3-finger centric gripper PZN-plus					
PZN-plus 100-1-AS	0303512	10	720	850	135
PZN-plus 100-1-IS	0303542	10	710	780	135
PZN-plus 100-2-AS	0303612	5	1500	2070	125
PZN-plus 100-2-IS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

ⓘ 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-P 50

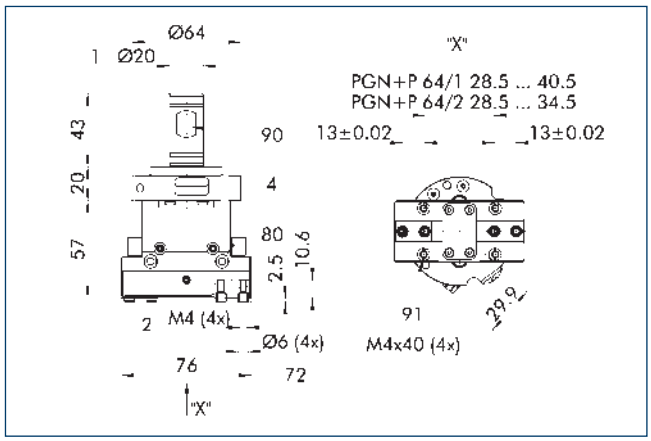


(1) Gripper connection
(2) Finger connection
(4) Grippers
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part
(90) WELDON clamping surface
(91) Fastening of the gripper on GSW-B (are included in the scope of delivery)

Description	ID	Stroke per jaw	Minimum closing force	Minimum opening force	Max. permissible finger length
		[mm]	[N]	[N]	[mm]
Kein Werte für Produktgruppe					
PGN-plus-P 50-1-AS	0318474	4	75	120	75
PGN-plus-P 50-1-IS	0318476	4	100	65	75
PGN-plus-P 50-2-AS	0318475	2	110	187	70
PGN-plus-P 50-2-IS	0318477	2	160	110	70

ⓘ 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-P 64

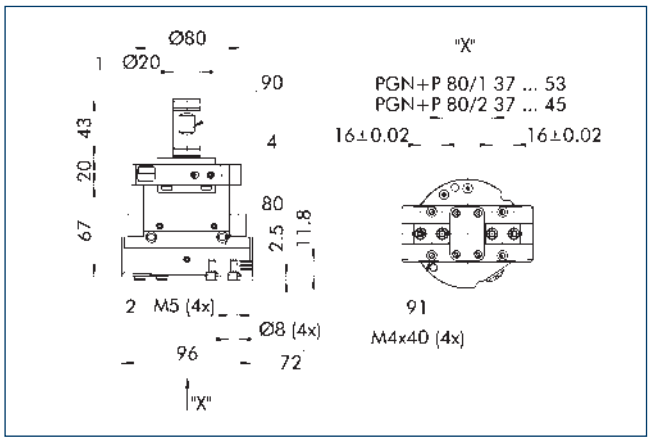


(1) Gripper connection
(2) Finger connection
(4) Grippers
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part
(90) WELDON clamping surface
(91) Fastening of the gripper on GSW-B (are included in the scope of delivery)

Description	ID	Stroke per jaw	Minimum closing force	Minimum opening force	Max. permissible finger length
		[mm]	[N]	[N]	[mm]
Kein Werte für Produktgruppe					
PGN-plus-P 64-1-AS	0318498	6	120	180	90
PGN-plus-P 64-1-IS	0318500	6	200	155	90
PGN-plus-P 64-2-AS	0318499	3	200	300	85
PGN-plus-P 64-2-IS	0318501	3	350	280	85

ⓘ 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-P 80

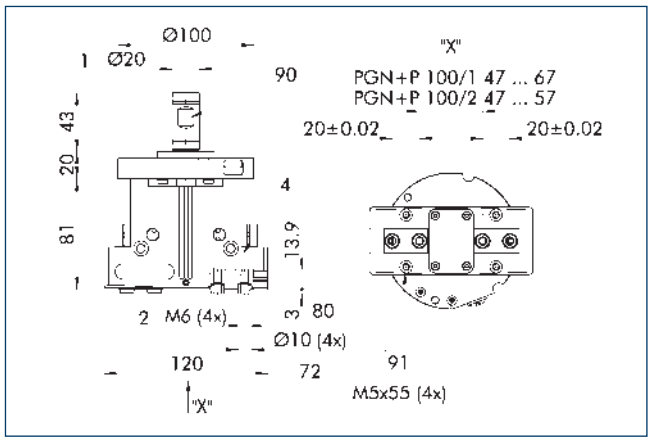


(1) Gripper connection
(2) Finger connection
(4) Grippers
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part
(90) WELDON clamping surface
(91) Fastening of the gripper on GSW-B (are included in the scope of delivery)

Description	ID	Stroke per jaw	Minimum closing force	Minimum opening force	Max. permissible finger length
		[mm]	[N]	[N]	[mm]
Kein Werte für Produktgruppe					
PGN-plus-P 80-1-AS	0318522	8	210	315	115
PGN-plus-P 80-1-IS	0318524	8	280	240	115
PGN-plus-P 80-2-AS	0318523	4	400	585	105
PGN-plus-P 80-2-IS	0318525	4	435	380	105

ⓘ 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-P 100



(1) Gripper connection
(2) Finger connection
(4) Grippers
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part
(90) 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]
Kein Werte für Produktgruppe					
PGN-plus-P 100-1-AS	0318546	10	310	450	145
PGN-plus-P 100-1-IS	0318548	10	370	320	145
PGN-plus-P 100-2-AS	0318547	5	450	640	130
PGN-plus-P 100-2-IS	0318549	5	615	530	130

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

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

Folgen Sie uns | *Follow us*

2023-06-14 © 2023 SCHUNK GmbH & Co. KG