

GSW-B

Special Grippers | Gripper with Shaft Interface

High Flow Rate. Cost Effective. Powerful. Gripper with GSW-B Shaft Interface

PGN-plus / PZN-plus universal gripper with shaft interface GSW-B

Field of Application

Unit for fully automated loading and unloading of machining centres

Advantages – Your benefit

Low-price module from a universal gripper PGN- / PZN-plus and a shaft 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



Shaft diameter
20 mm

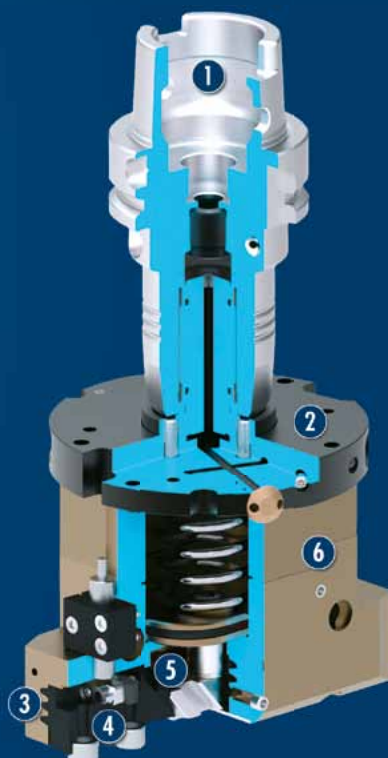


Actuation
pneumatic,
hydraulic

Functional Description

The pressure provided by the central machine coolant supply is reduced by the pressure distributor integrated in the adapter plate. The gripper can be pressurised and the piston and wedge-hook and actuate the base jaw.

During the gripping operation the gripper continuously supplies coolant or compressed air by 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 **Multiple-tooth guidance**
High-loadable base jaw guidance with minimum play for
long fingers
- ④ **Base jaw**
for the connection of workpiece-specific gripper fingers
- ⑤ **Wedge-hook design**
for high power transmission and centric gripping
- ⑥ **Housing**
Weight-optimized through application of high-strength
aluminum alloy

CAD data, operating manuals and other current product documents are available at www.schunk.com

General Notes about the Series

Operating principle: Pressure distributor and wedge-hook kinematics

Housing material: Aluminum alloy, anodized

Base jaw material: Blackened steel

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

Warranty: 24 months (details, general terms and conditions and operating manuals can be downloaded at www.schunk.com)

Scope of delivery: Centering elements, assembly and operating instruction

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 upper edge of the gripper housing in the direction of the main axis. The breach of the max. permitted finger length can bring higher abrasion.

Repeat accuracy: is defined as the spread of the limit position after 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

Exemplary application flow and machining: 1. The raw part is taken out of the rack with a gripper, and is delivered to a clamping station – the part will be clamped then 2. Exchange of tools and machining 3. Exchange of the gripper 4. Depositing the ready-

machined part into the rack, the cycle is restarted from the beginning

- ① Workpiece rack
- ② VERO-S Quick-change Pallet System with ROTA TPS Toolholder

- ③ Gripper with spindle interface PGN-plus at GSW-B and with wireless RSS Sensor System

- ④ Machine table

SCHUNK offers more ...

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



Centering Sleeves



Protection Cover



Jaw Quick-change System



Finger Blanks



Universal Intermediate Jaw



Cylindrical Reed Switches



RSS Radio Sensor System



Reed Switches for C-Nut



Cleaning Unit



Vacuum Gripper



Toolholder



Magnetic Gripper

① Further information regarding the products can be found on the following product pages or at www.schunk.com. Please contact us for further information: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Precision version P: for the highest accuracy

Further shaft diameters on request.

Please note that connection A of grippers in IS-version should not be sealed air-tight. The same applies for connection B of grippers in AS-version.

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

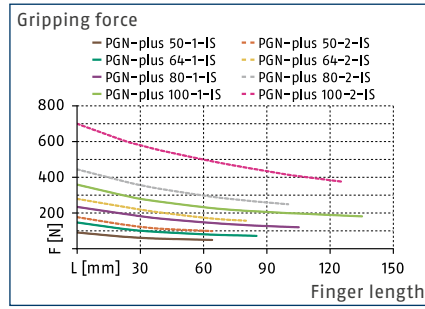
Please note that applications under extreme conditions (e.g. coolant, casting or abrasive dust) will reduce the service lifetime of this product considerably.

GSW-B 50-100

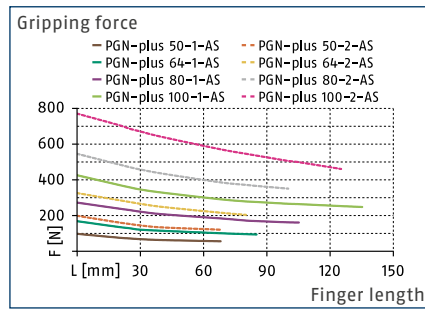
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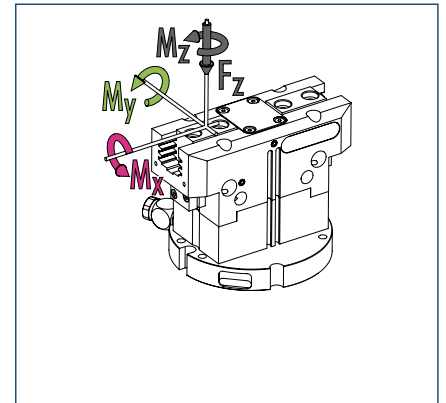
Gripping force, O.D. gripping



Gripping force, I.D. gripping



Forces and moments



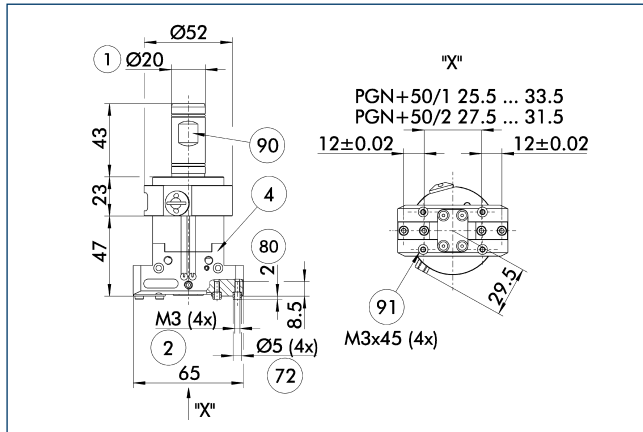
① Refer to the respective size of the gripper for the forces and torques.

Technical data

Description		GSW-B 50-P	GSWB 64-PZ	GSWB 80-PZ	GSWB 100-PZ
ID		0308420	0308422	0308423	0308424
General technical data					
Weight	[kg]	0.2	0.23	0.31	0.42
max. admissible speed	[1/min]	20	20	20	20
Nominal operating pressure compressed air	[bar]	6	6	6	6
min. / max. compressed air operating pressure	[bar]	4/8	4/8	4/8	4/8
Nominal operating pressure coolant	[bar]	40	40	40	40
min. / max. coolant operating pressure	[bar]	20/50	20/50	20/50	20/50
IP class		40	40	40	40
min. / max. ambient temperature	[°C]	5/90	5/90	5/90	5/90

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

GSW-B with PGN-plus 50

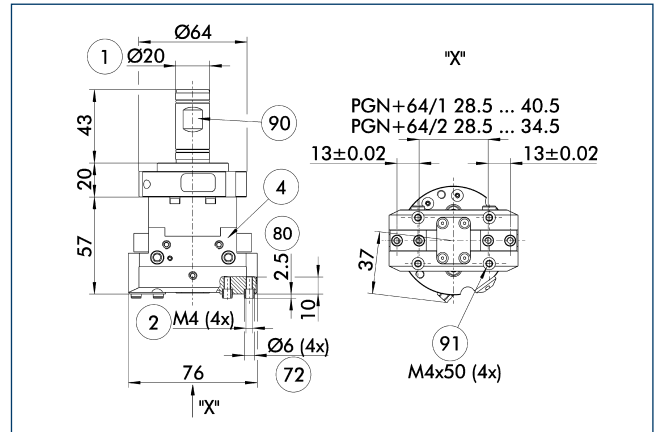


- ① Gripper connection
- ② Finger connection
- ⑧⑩ Depth of the centering sleeve hole in the mating part
- ④ Gripper
- ⑦② Fit for centering sleeves
- ⑨⑩ Weldon clamping surface
- ⑨① Gripper on GSW-B mount (not included in scope of delivery)

Description	ID	Stroke per jaw [mm]	min. closing force [N]	min. opening force [N]	max. permitted finger length [mm]	Types of gripping
PGN-plus 2-Finger Parallel Gripper						
50-1-AS	0371399	4	45	75	68	I.D. gripping
50-1-IS	0371459	4	70	45	68	O.D. gripping
50-2-AS	0371449	2	95	160	64	I.D. gripping
50-2-IS	0371469	2	140	95	64	O.D. gripping

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 mating part
- ④ Gripper
- ⑦② Fit for centering sleeves
- ⑨⑩ Weldon clamping surface
- ⑨① Gripper on GSW-B mount (not included in scope of delivery)

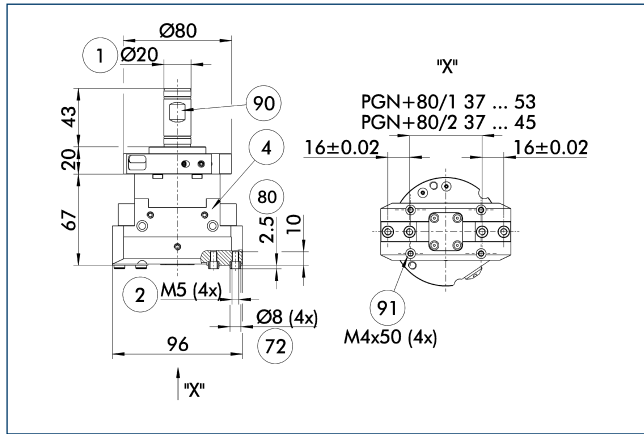
Description	ID	Stroke per jaw [mm]	min. closing force [N]	min. opening force [N]	max. permitted finger length [mm]	Types of gripping
PGN-plus 2-Finger Parallel Gripper						
64-1-AS	0371092	6	90	115	85	I.D. gripping
64-1-IS	0371094	6	115	90	85	O.D. gripping
64-2-AS	0371093	3	190	285	80	I.D. gripping
64-2-IS	0371095	3	240	190	80	O.D. gripping

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

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GSW-B with PGN-plus 80

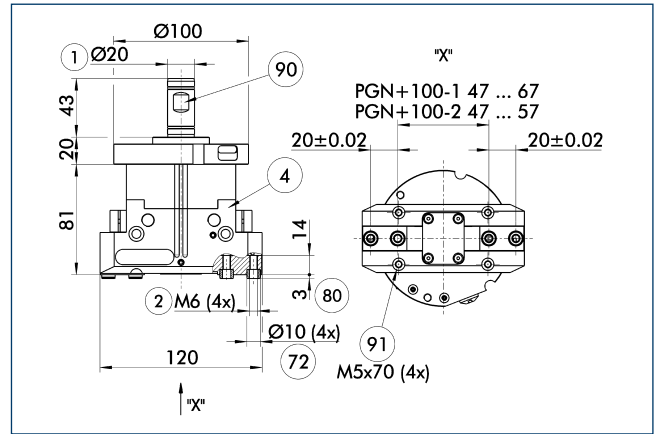


- ① Gripper connection
- ② Finger connection
- ⑧⑩ Depth of the centering sleeve hole in the mating part
- ④ Gripper
- ⑦② Fit for centering sleeves
- ⑨⑩ Weldon clamping surface
- ⑨① Gripper on GSW-B mount (not included in scope of delivery)

Description	ID	Stroke per jaw [mm]	min. closing force [N]	min. opening force [N]	max. permitted finger length [mm]	Types of gripping
PGN-plus 2-Finger Parallel Gripper						
80-1-AS	0371401	8	155	230	105	I.D. gripping
80-1-IS	0371461	8	180	155	105	O.D. gripping
80-2-AS	0371451	4	320	470	100	I.D. gripping
80-2-IS	0371471	4	370	320	100	O.D. gripping

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

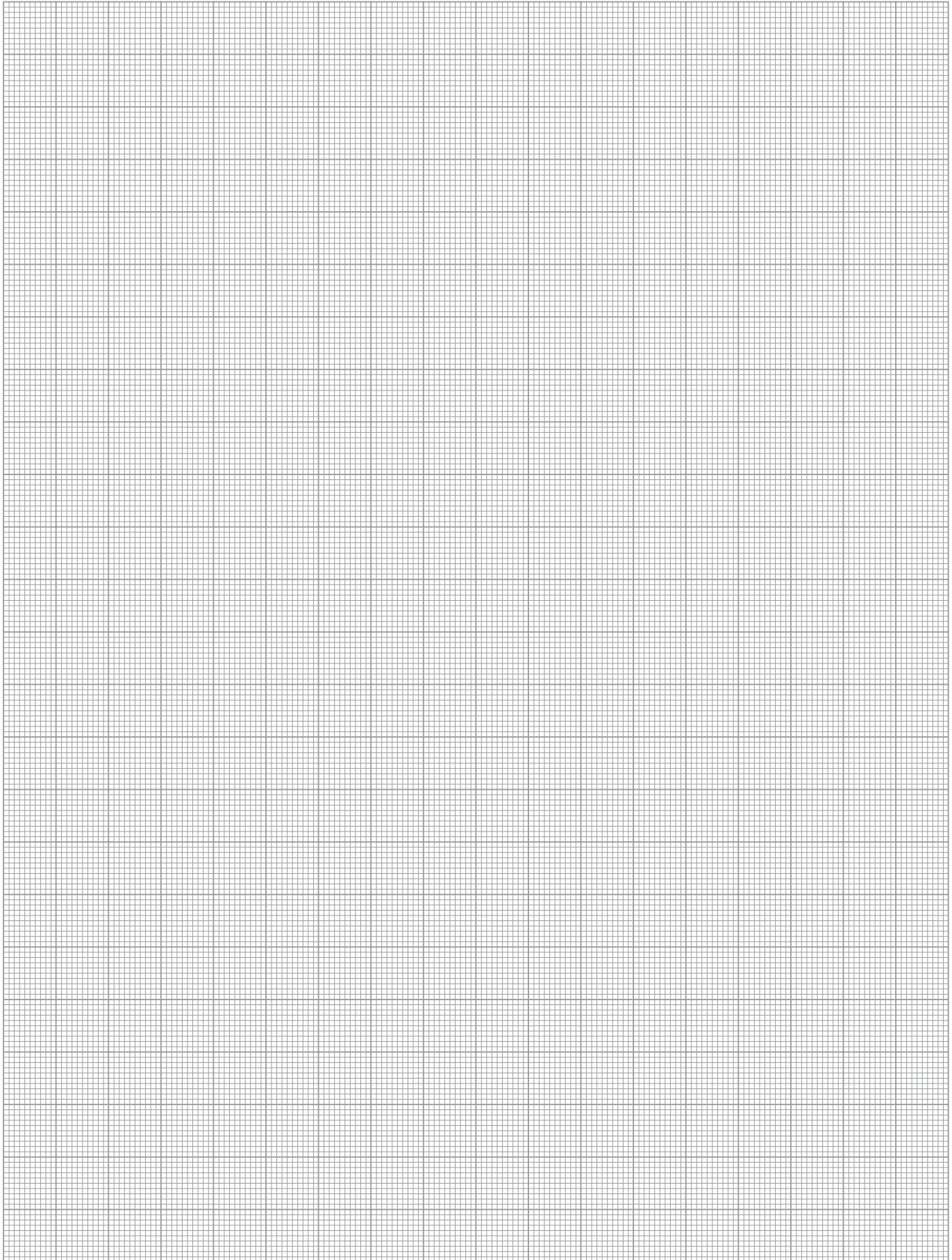
GSW-B with PGN-plus 100



- ① Gripper connection
- ② Finger connection
- ⑧⑩ Depth of the centering sleeve hole in the mating part
- ④ Gripper
- ⑦② Fit for centering sleeves
- ⑨⑩ Weldon clamping surface
- ⑨① Gripper on GSW-B mount (not included in scope of delivery)

Description	ID	Stroke per jaw [mm]	min. closing force [N]	min. opening force [N]	max. permitted finger length [mm]	Types of gripping
PGN-plus 2-Finger Parallel Gripper						
100-1-AS	0371402	10	240	345	135	I.D. gripping
100-1-IS	0371462	10	280	240	135	O.D. gripping
100-2-AS	0371452	5	500	710	125	I.D. gripping
100-2-IS	0371472	5	580	500	125	O.D. gripping

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

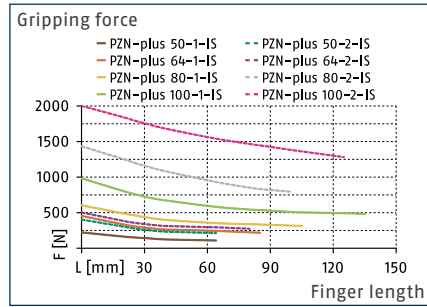


GSW-B 50-100

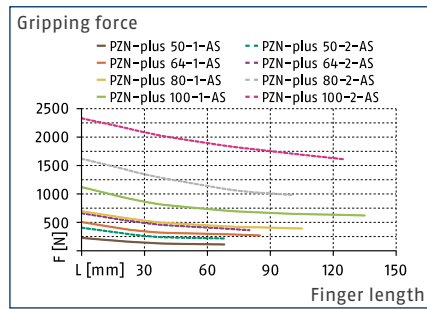
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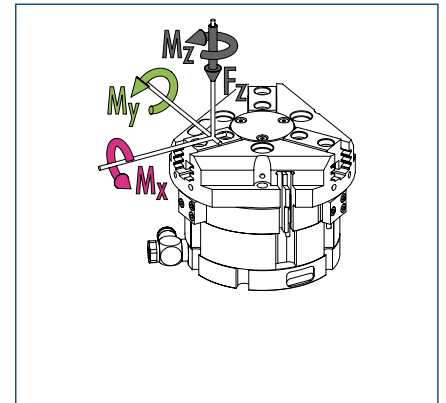
Gripping force, O.D. gripping



Gripping force, I.D. gripping



Forces and moments



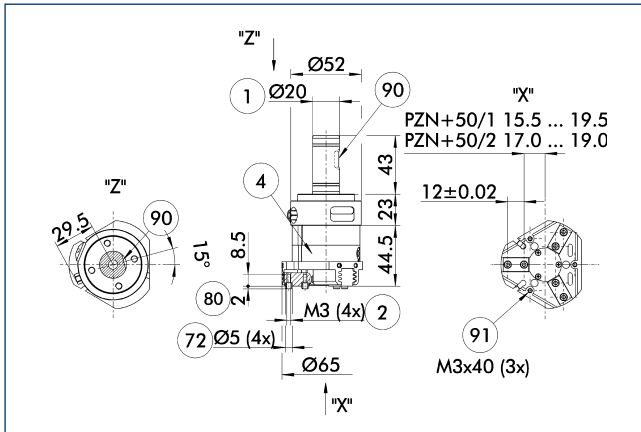
① Refer to the respective size of the gripper for the forces and torques.

Technical data

Description		GSWB 50-Z	GSW-B 64-PZ	GSW-B 80-PZ	GSW-B 100-PZ
ID		0308421	0308422	0308423	0308424
General technical data					
Weight	[kg]	0.2			
max. admissible speed	[1/min]	20	20	20	20
Nominal operating pressure compressed air	[bar]	6	6	6	6
min. / max. compressed air operating pressure	[bar]	4/8	4/8	4/8	4/8
Nominal operating pressure coolant	[bar]	40	40	40	40
min. / max. coolant operating pressure	[bar]	20/50	20/50	20/50	20/50
IP class		40	40	40	40
min. / max. ambient temperature	[°C]	5/90	5/90	5/90	5/90

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

GSW-B with PZN-plus 50

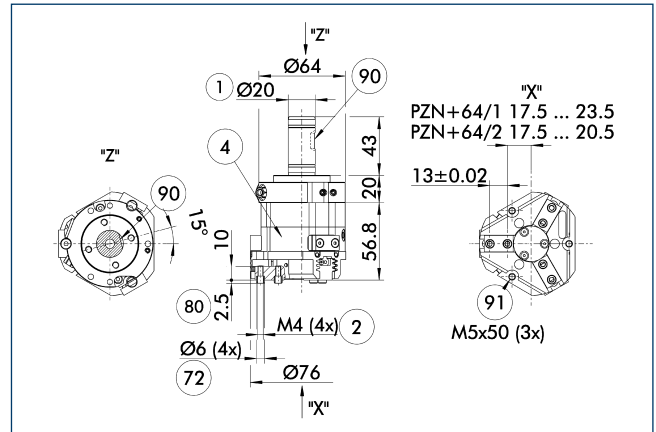


- ① Gripper connection
- ② Finger connection
- ⑧⑩ Depth of the centering sleeve hole in the mating part
- ④ Gripper
- ⑦⑩ Fit for centering sleeves
- ⑨⑩ Weldon clamping surface
- ⑨① Gripper on GSW-B mount (not included in scope of delivery)

Description	ID	Stroke per jaw [mm]	min. closing force [N]	min. opening force [N]	max. permitted finger length [mm]	Types of gripping
3-finger centric gripper PZN-plus						
50-1-AS	0303509	4	120	165	68	I.D. gripping
50-1-IS	0303539	4	160	150	68	O.D. gripping
50-2-AS	0303609	2	245	340	64	I.D. gripping
50-2-IS	0303639	2	335	310	64	O.D. gripping

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
- ⑧⑩ Depth of the centering sleeve hole in the mating part
- ④ Gripper
- ⑦⑩ Fit for centering sleeves
- ⑨⑩ Weldon clamping surface
- ⑨① Gripper on GSW-B mount (not included in scope of delivery)

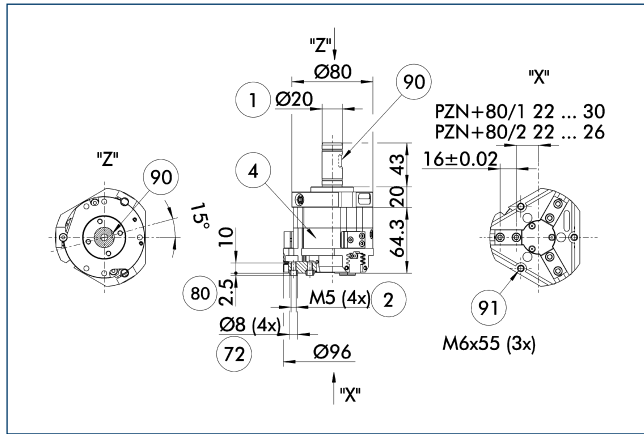
Description	ID	Stroke per jaw [mm]	min. closing force [N]	min. opening force [N]	max. permitted finger length [mm]	Types of gripping
3-finger centric gripper PZN-plus						
64-1-AS	0303510	6	185	360	85	I.D. gripping
64-1-IS	0303540	6	305	220	85	O.D. gripping
64-2-AS	0303610	3	315	495	80	I.D. gripping
64-2-IS	0303640	3	335	460	80	O.D. gripping

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

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GSW-B with PZN-plus 80

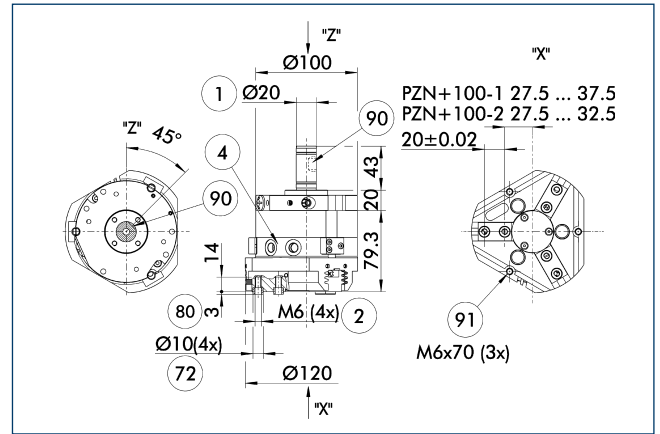


- ① Gripper connection
- ② Finger connection
- ⑧⑩ Depth of the centering sleeve hole in the mating part
- ④ Gripper
- ⑦② Fit for centering sleeves
- ⑨⑩ Weldon clamping surface
- ⑨① Gripper on GSW-B mount (not included in scope of delivery)

Description	ID	Stroke per jaw [mm]	min. closing force [N]	min. opening force [N]	max. permitted finger length [mm]	Types of gripping
3-finger centric gripper PZN-plus						
80-1-AS	0303511	8	350	555	105	I.D. gripping
80-1-IS	0303541	8	460	370	105	O.D. gripping
80-2-AS	0303611	4	730	1390	100	I.D. gripping
80-2-IS	0303641	4	1200	760	100	O.D. gripping

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 100



- ① Gripper connection
- ② Finger connection
- ⑧⑩ Depth of the centering sleeve hole in the mating part
- ④ Gripper
- ⑦② Fit for centering sleeves
- ⑨⑩ Weldon clamping surface
- ⑨① Gripper on GSW-B mount (not included in scope of delivery)

Description	ID	Stroke per jaw [mm]	min. closing force [N]	min. opening force [N]	max. permitted finger length [mm]	Types of gripping
3-finger centric gripper PZN-plus						
100-1-AS	0303512	10	720	850	135	I.D. gripping
100-1-IS	0303542	10	710	780	135	O.D. gripping
100-2-AS	0303612	5	1500	2070	125	I.D. gripping
100-2-IS	0303642	5	1740	1620	125	O.D. gripping

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

