

Superior Clamping and Gripping

SCHUNK®

Product Information

Gripper with shaft interface GSW-B-AGE

High flow rate. Cost-effective. Compliant.

Gripper with shank interface GSW-B and compensation unit

Universal gripper PGN-plus/PZN-plus with GSW-B shank interface and compensation unit AGE

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

Three compensation directions in one unit compact design for minimum installation height

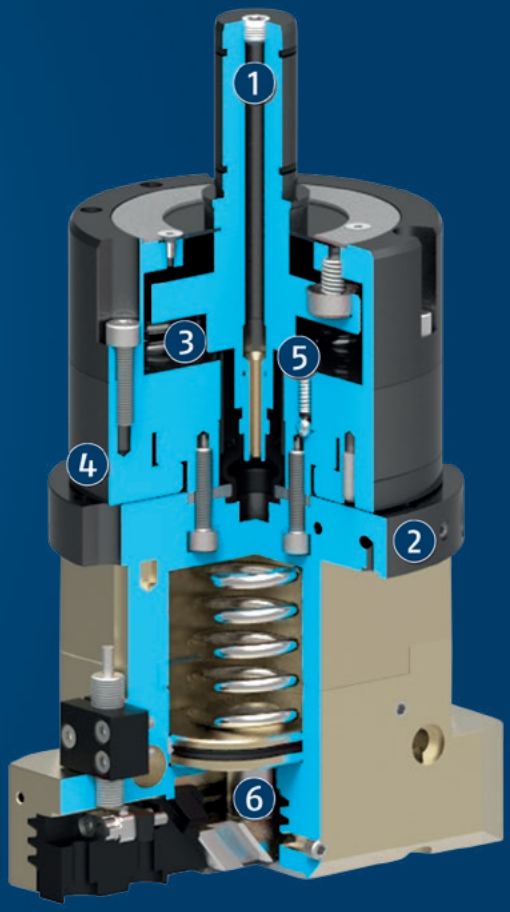
Robust sliding guide for high moment load at minimum space

Compensation of workpiece-related tolerances and position inaccuracies reduced risk of jamming, necessary assembly forces are reduced and wear of the workpiece and handling device is minimized

Sizes	Suitable for	Shank diameter	Compensation XY	Compensation Z
Quantity: 4	PGN-plus/PZN-plus	20 mm	1.5 mm	2.7 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 **Taper shank**
for universal assembly of the gripper

② **Adapter plate with integrated pressure distributor**
for a large pressure range

③ **Axial compensation**
spring-loaded, for pressing workpieces into place

④ **Planar compensation**
for preventing the spindle or axes from wear

⑤ **Angular compensation**
for higher flexibility and compliance

⑥ **Gripper kinematics**
for high force transmission and centric gripping

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

Handling of pinions in a milling center

1. Vacuum gripper GSW-V
2. Magnetic gripper GSW-M
3. Gripper with shaft interface GSW-B and PGN-plus
4. Gripper with shaft interface GSW-B and PZN-plus
5. Cleaning unit RGG

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

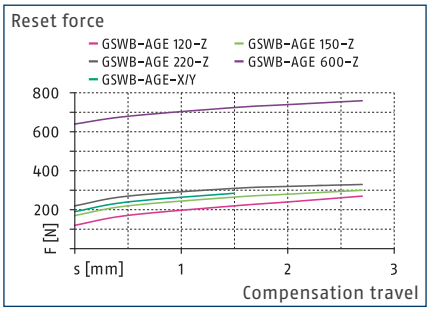
Please note that applications under extreme conditions (e.g. coolant, casting or abrasive dust) will reduce the service life of this product considerably.
Further shaft diameters on request.
Please note that the connection A of IS version grippers or grippers of AS version should not be sealed air-tight.
Precondition: If the spindles do not rotate, then the machines have to provide compressed air or coolant.

GSW-B-AGE 50-100

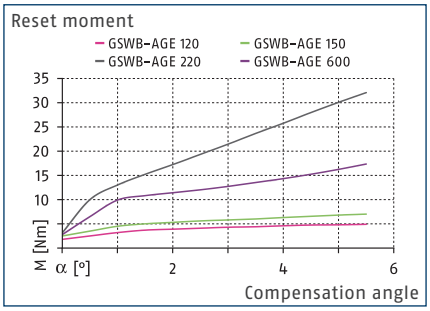
Gripper with shaft interface



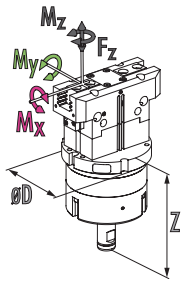
Compensation travel



Compensation angle



Dimensions and maximum loads



For values see technical data table

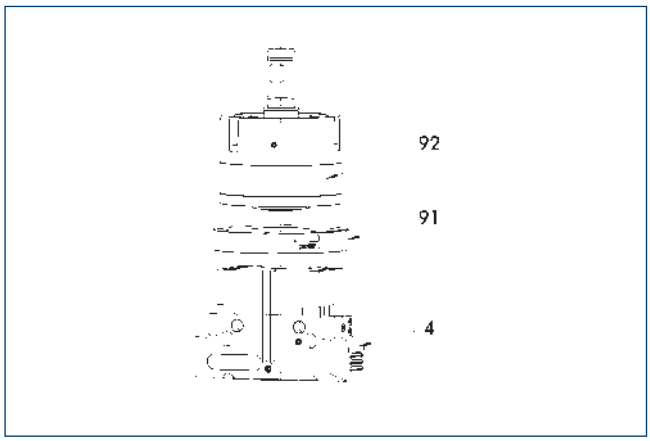
ⓘ Refer to the respective size of the gripper for the forces and torques.

Technical data

Description		GSW-B-AGE-XYZ 120	GSW-B-AGE-XYZ 150	GSW-B-AGE-XYZ 220	GSW-B-AGE-XYZ 600
ID		0308435	0308436	0308437	0308438
General technical data					
Weight	[kg]	1.1	1.1	1.1	1.1
Max. permissible speed	[1/min]	20	20	20	20
Nominal operating pressure compressed air	[bar]	6	6	6	6
Min./max. operating pressure, compressed air	[bar]	4/8	4/8	4/8	4/8
Nominal operating pressure coolant	[bar]	40	40	40	40
Min./max. operating pressure, coolant	[bar]	20/50	20/50	20/50	20/50
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90
Compensation XY	[mm]	1.5	1.5	1.5	1.5
Compensation Z	[mm]	2.7	2.7	2.7	2.7
Angular deflection	[°]	5.5	5.5	5.5	5.5
Deflection rotatory	[°]	3.5	3.5	3.5	3.5
Rotary compensation torque	[Nm]	0.2	0.2	0.2	0.2
Dimensions Ø D x Z	[mm]	90 x 132.1	90 x 129.1	90 x 129.1	90 x 129.1
Moments Mx max./My max./Mz max.	[Nm]	20/25/10	40/60/40	60/95/55	80/115/70
ForcesFz max.	[N]	500	1100	1500	2000

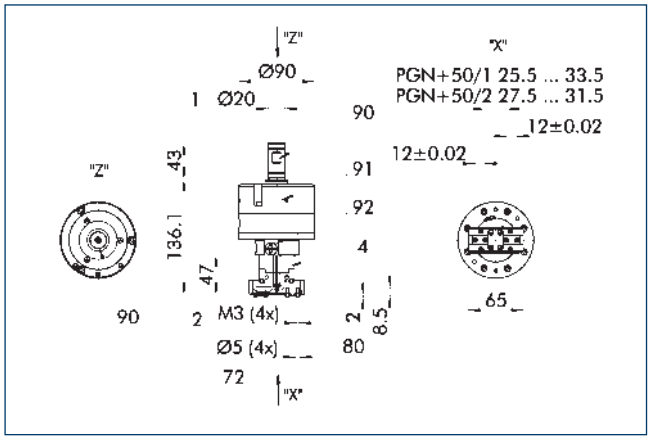
ⓘ The values only refer to the adapter GSW-B-AGE with compensation unit.
The appropriate gripper has to be ordered separately.
Refer to the following pages for gripper-specific values.

Adapter plate



(4) Grippers
(91) Adapter plate
(92) GSW-B-AGE

GSW-B-AGE-XYZ 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) Compensation unit
(92) Adapter plate

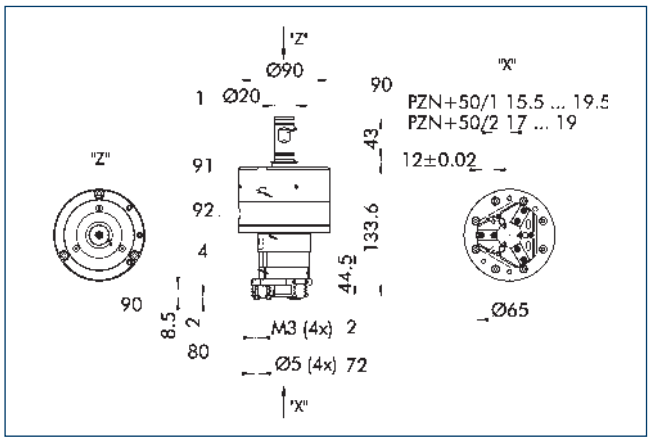
Description	ID	Stroke per jaw	Minimum closing force	Minimum opening force	Max. permissible finger length
		[mm]	[N]	[N]	[mm]
Adapter plate					
A-GSW-B-AGE 50-P	0308425				
2-finger parallel gripper PGN-plus					
PGN-plus 50-1-AS	0371399	4	45	75	68
PGN-plus 50-1-IS	0371459	4	70	45	68
PGN-plus 50-2-AS	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-AGE 50-100

Gripper with shaft interface

GSW-B-AGE-XYZ with PZN-plus 50

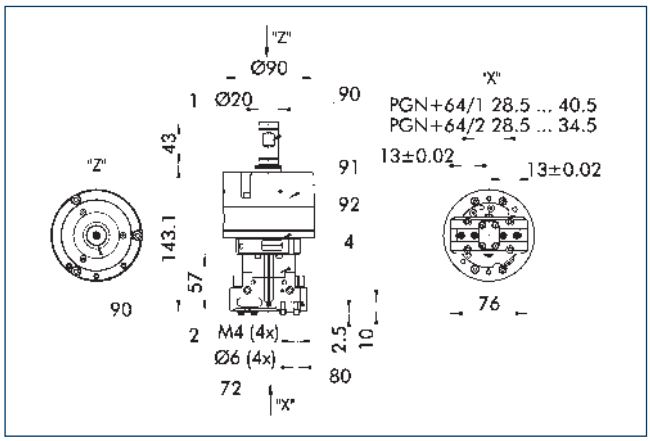


1 Gripper connection
2 Finger connection
4 Grippers
72 Fit for centering sleeves
80 Depth of the centering sleeve hole in the counter part
90 WELDON clamping surface
91 Compensation unit
92 Adapter plate

Description	ID	Stroke per jaw	Minimum closing force	Minimum opening force	Max. permissible finger length
		[mm]	[N]	[N]	[mm]
Adapter plate					
A-GSW-B-AGE 50-Z	0308426				
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

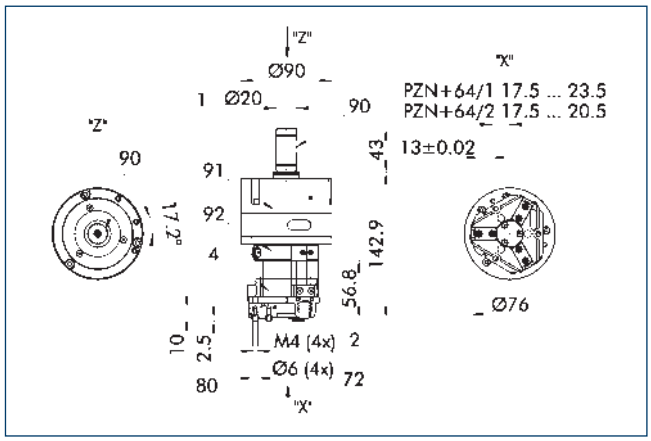
ⓘ For detailed information, see the corresponding gripper. See the views at the end of the respective gripper size for suitable gripper accessories.

GSW-B-AGE-XYZ 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) Compensation unit
(92) Adapter plate

GSW-B-AGE-XYZ 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) Compensation unit
(92) Adapter plate

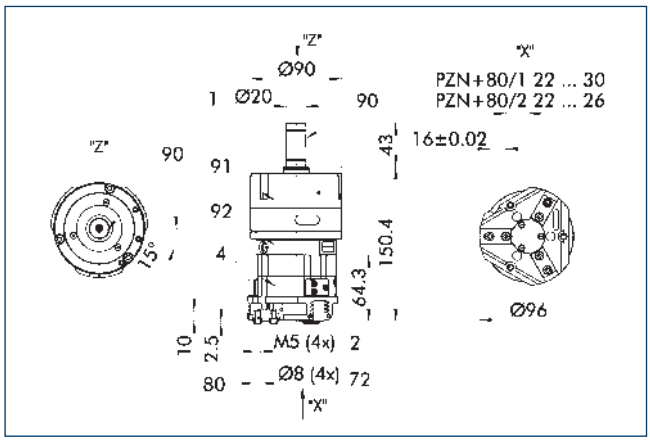
Description	ID	Stroke per jaw	Minimum closing force	Minimum opening force	Max. permissible finger length
		[mm]	[N]	[N]	[mm]
Adapter plate					
A-GSW-B-AGE 64-PZ	0308427				
2-finger parallel gripper PGN-plus					
PGN-plus 64-1-AS	0371092	6	90	135	85
PGN-plus 64-1-IS	0371094	6	115	90	85
PGN-plus 64-2-AS	0371093	3	190	285	80
PGN-plus 64-2-IS	0371095	3	240	190	80
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-AGE 50-100

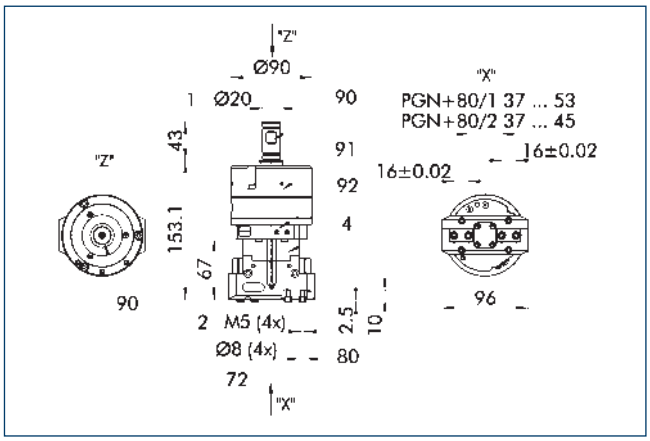
Gripper with shaft interface

GSW-B-AGE-XYZ 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) Compensation unit
(92) Adapter plate

GSW-B-AGE-XYZ with PGN-plus 80

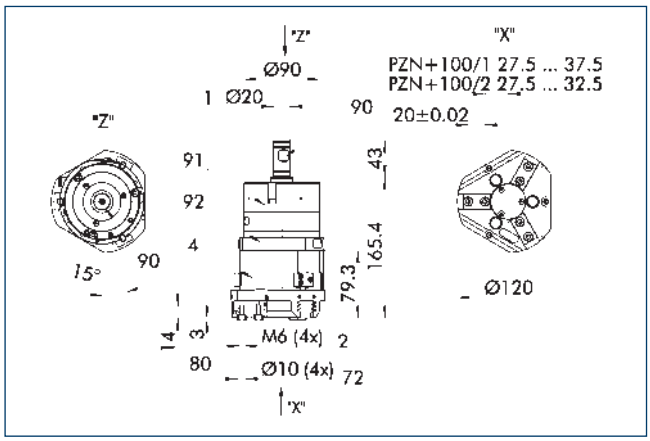


(1) Gripper connection
(2) Finger connection
(4) Grippers
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part
(90) WELDON clamping surface
(91) Compensation unit
(92) Adapter plate

Description	ID	Stroke per jaw	Minimum closing force	Minimum opening force	Max. permissible finger length
		[mm]	[N]	[N]	[mm]
Adapter plate					
A-GSW-B-AGE 80-PZ	0308428				
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
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

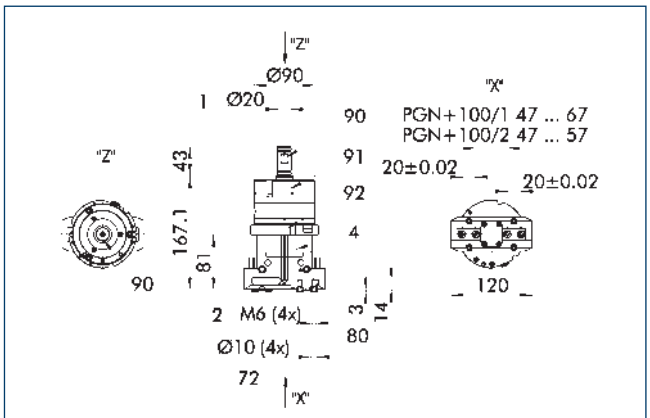
ⓘ For detailed information, see the corresponding gripper. See the views at the end of the respective gripper size for suitable gripper accessories.

GSW-B-AGE-XYZ 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) Compensation unit
(92) Adapter plate

GSW-B-AGE-XYZ 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) Compensation unit
(92) Adapter plate

Description	ID	Stroke per jaw	Minimum closing force	Minimum opening force	Max. permissible finger length
		[mm]	[N]	[N]	[mm]
Adapter plate					
A-GSW-B-AGE 100-PZ	0308429				
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
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.

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