

Parallel gripper with flat guide

SGP14 / SGP25 / SGP35



things worth knowing

Advantages and uses

... fewer parts = low cost design ... compatible with competitive models ...

- ▶ self-locking in closed position (NC - model)
 - ▶ compact design and lightweight
 - ▶ centrally opening and closing
 - ▶ multiple mounting positions
 - ▶ built-in mount for position sensor (Hall effect sensor optional)

Characteristics

Function

Drive: double-acting Pneumatic cylinder
 (depending upon model) double-acting Pneumatic cylinder with built-in spring for grip force safety device

Energy transfer: piston-wedge principle

Guide: strong, stable flatguide for high moment resistance (Mx) during opening and closing

Material

Housing: hard-anodized aluminum

Functional parts: nitrided coated steel

Maintenance

Recommended at: 1.5 million cycles

Actuation: filtered high-pressure air (10 µm), dry or oiled

Maintenance of the mechanics: – see owners' manual –

- Sommer-automatic
- Grippers
- Separators
- Swivel units
- Rotating jaws
- Axial compensators
- Tool changers
- Linear cylinders
- Shock absorbers
- Rotary cylinders
- Air vane motors
- Vacuum components
- Accessories
- Quick finder

Basic explanations

Terms and illustrations

Grip force safety device: required during pressure loss for maintaining position of workpiece

- pneumatic: through pressure retention (one-way valve required DSV 1/8)
- mechanical: through spring pre-tension
- spring power: specifications based on minimum spring pre-tension

Total power: arithmetic sum of the individual elements on the gripper jaws

Closing and opening times: required time for the gripper jaws to cover the maximum stroke length

Schematic: displays static forces and momenta that can additionally affect grip force

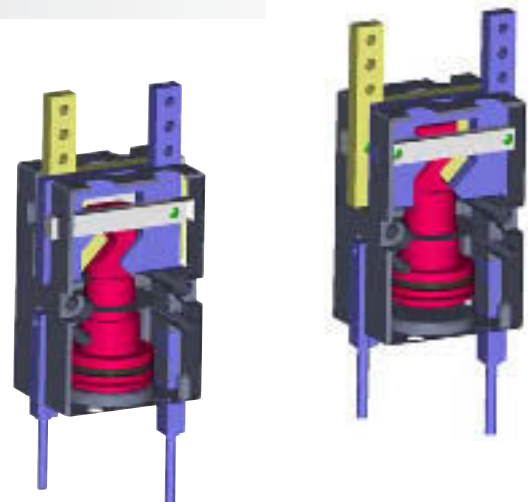
Models

SGP...	Drive	Internal grip	External grip	Built-in grip force safety device
...N	pneumatic	•	•	
...NC	pneumatic		•	•

Accessories

Accessory recommendations:

- ▶ Hall effect sensors by request
- ▶ Pneumatic fittings Page 442
- ▶ Tubing Page 444
- ▶ Control valves Page 445
- ▶ Pressure safety valves Page 447



Parallel gripper

Three-jaw gripper

Angle gripper

Internal-hole gripper

Other grippers

Electric gripper

SGP14

SGP25

SGP35



Sommer-automatic

Grippers

Separators

Swivel units

Rotating jaws

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Tool changers

Linear cylinders

Shock absorbers

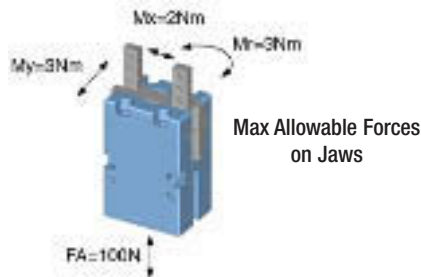
Rotary cylinders

Air vane motors

Vacuum components

Accessories

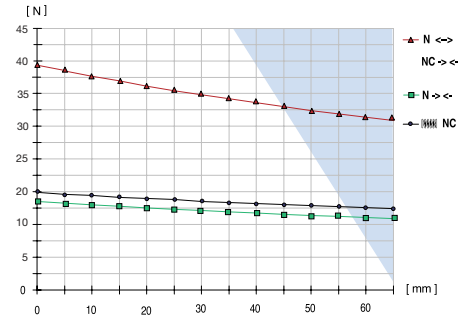
Quick finder



Parallel gripper with flat guide

Advantages, benefits, comparisons and tips! Stacks of information all about this product are on page 100.1

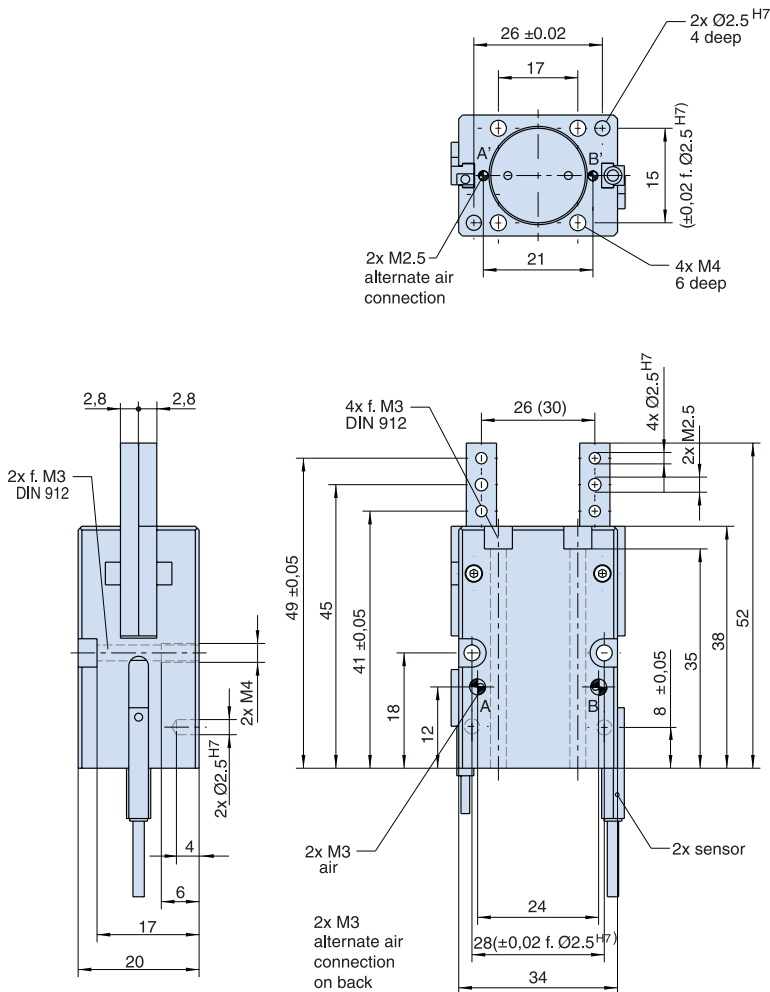
Gripping force as a function of opening angle



measured from top edge of housing

Order no.:		SGP14 N	SGP14 NC				
Drive:		pneum.	pneum.				
Stroke per jaw [mm]:		2	2				
Gripping force in closing [N]:		14	39				
Gripping force in opening [N]:		39	-				
Self-locking via:		DSV1/8	Spring				
Closing time/opening time [s]:		0,01	0,02				
Repeatability ± [mm]:		0,05	0,05				
Min./max. operating pressure [bar]:		3/8	5/8				
Air volume per cycle [cm³]:		0,8	0,8				
Min./max. operating temperature. [°C]:		5/80	5/80				
Temp. resistant version up to 150°C [add to part number]:		T	T				
Piston diameter [mm]:		14	14				
Weight [kg]:		0,05	0,06				

All data measured at 6 bar.



See Page 100.1 for Accessory list.

Parallel gripper Three-jaw gripper Angle gripper Internal-hole gripper Other grippers Electric gripper

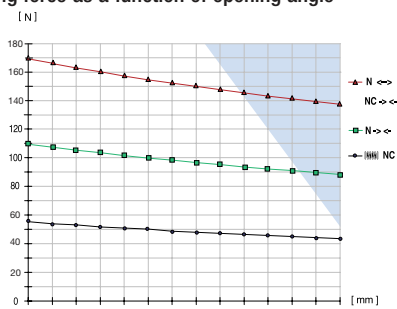
SGP14 **SGP25** SGP35



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measured from top edge of housing

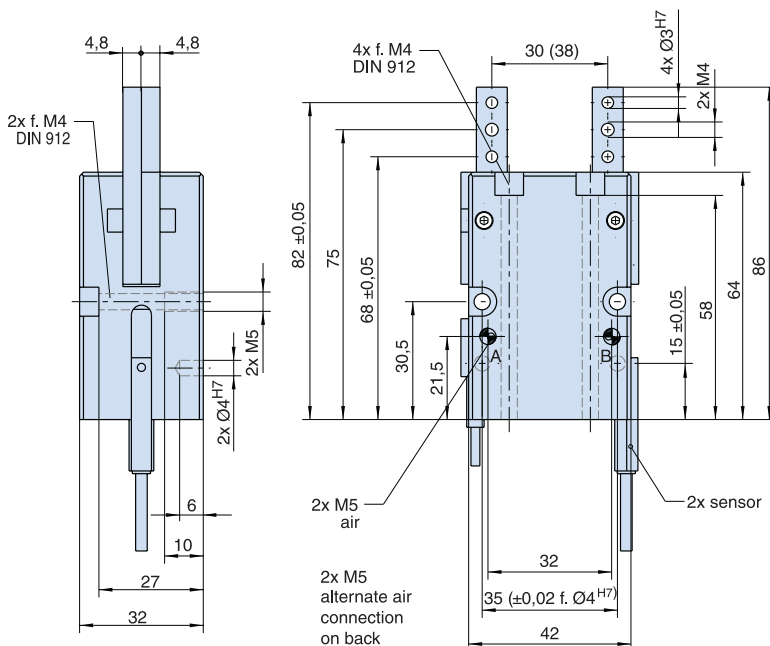
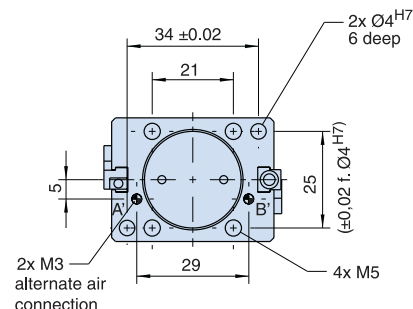


Max Allowable Forces on Jaws

- Sommer-automatic
- Grippers**
- Separators
- Swivel units
- Rotating jaws
- Axial compensators
- Tool changers
- Linear cylinders
- Shock absorbers
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Order no.:	
SGP25 N	SGP25 NC
Drive:	
pneum.	pneum.
Stroke per jaw [mm]:	
4	4
Gripping torque in closing [N]:	
110	170
Gripping torque in opening [N]:	
170	-
Self-locking via:	
DSV1/8	Spring
Closing time/opening time [s]:	
0,02	0,03
Repeatability ± [mm]:	
0,05	0,05
Min./max. operating pressure [bar]:	
3/8	5/8
Air volume per cycle [cm³]:	
5	5
Min./max. operating temperature. [°C]:	
5/80	5/80
Temp. resistant version up to 150°C [add to part number]:	
T	T
Piston diameter [mm]:	
25	25
Weight [kg]:	
0,20	0,25

All data measured at 6 bar.



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Sommer-automatic

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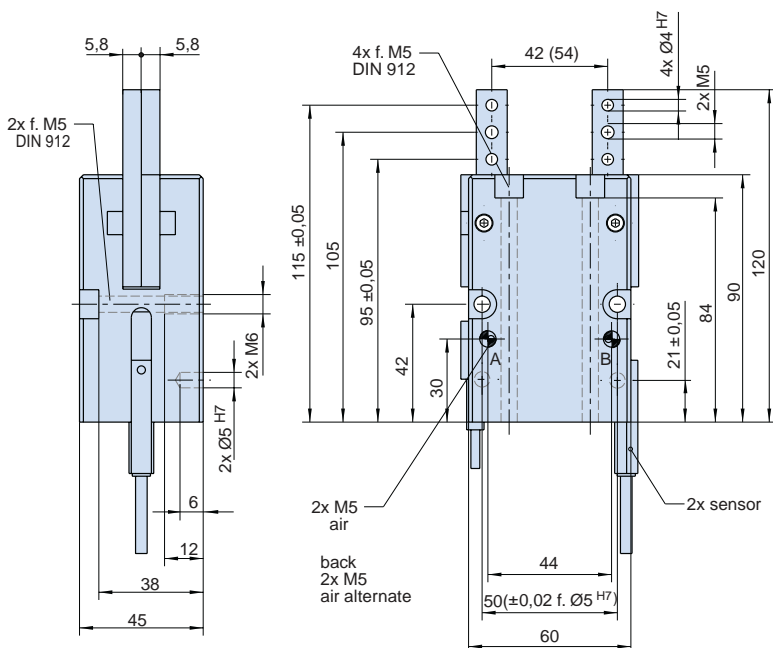
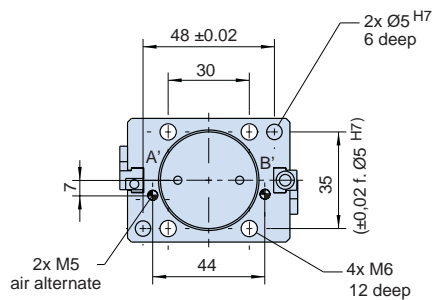
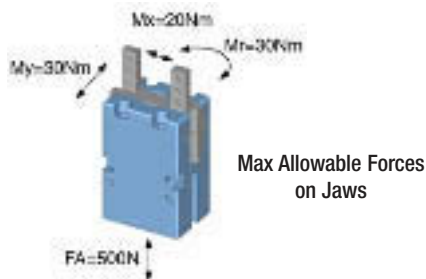
Rotary cylinders

Air vane motors

Vacuum components

Accessories

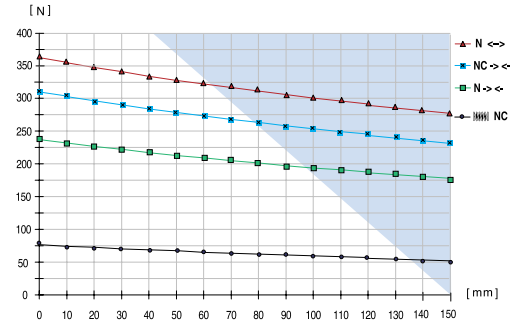
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Gripping force as a function of opening angle



measured from top edge of housing

Order no.:					
SGP35	SGP35				
N	NC				
Drive:					
pneum.	pneum.				
Stroke per jaw [mm]:					
6	6				
Gripping force in closing [N]:					
245	305				
Gripping force in opening [N]:					
305	-				
Self-locking via:					
DSV1/8	Spring				
Closing time/opening time [s]:					
0,05	0,06				
Repeatability ± [mm]:					
0,05	0,05				
Min./max. operating pressure [bar]:					
3/8	5/8				
Air volume per cycle [cm³]:					
14	14				
Min./max. operating temperature. [°C]:					
5/80	5/80				
Temp. resistant version up to 150°C [add to part number]:					
T	T				
Piston diameter [mm]:					
35	35				
Weight [kg]:					
0,45	0,50				

All data measured at 6 bar.

See Page 100.1 for Accessory list.