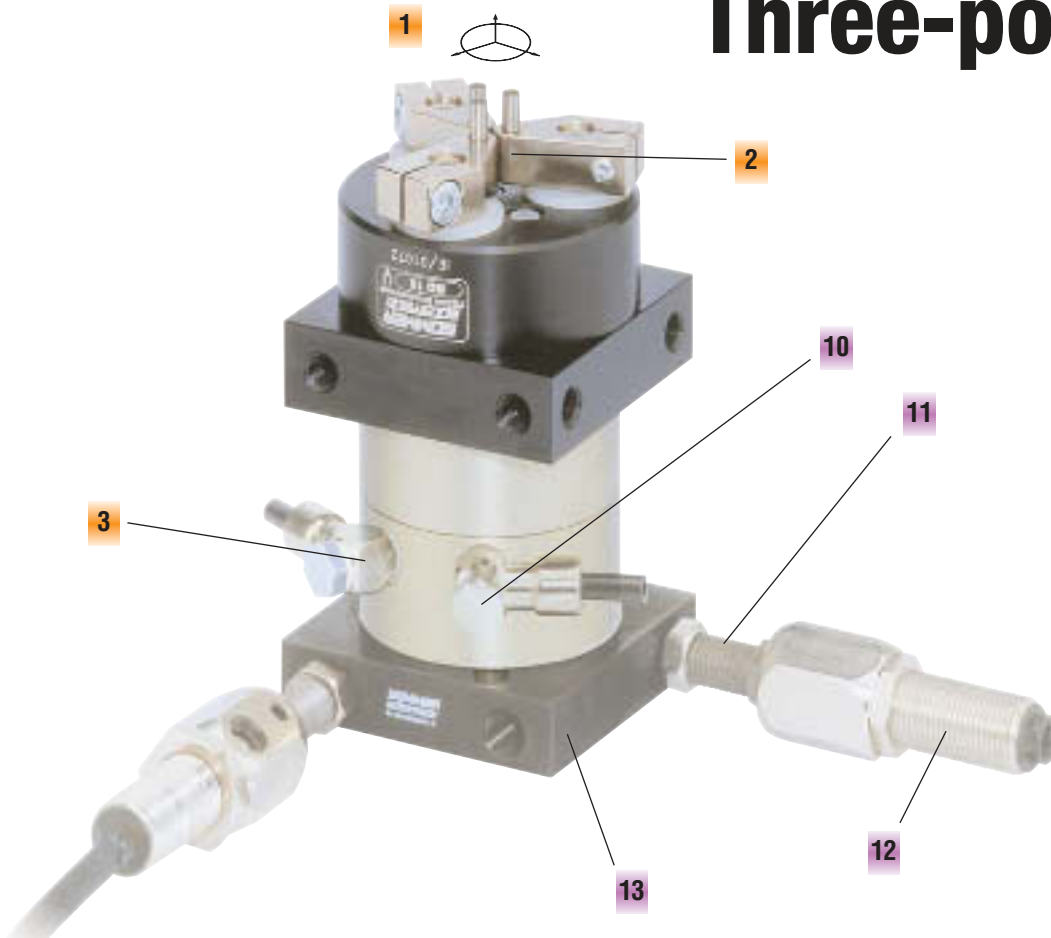


Three-point gripper

with long stroke



Features

- 1 Stroke
- 2 Jaw with gripping pin
- 3 Front air connection (alternate connection at bottom)

Accessories

- 10 Compressed air fitting
- 11 Threaded stop
- 12 Proximity switch
- 13 Swivel limiting flange

GD1 – GD50

Long stroke in a small package...

A double-acting rotary actuator is the driving force for the synchronous movement via a planetary gearhead which rotates the jaws in and out. The pins on the jaws can be extended for larger pieces. To increase friction and gripping force, the pins can be covered with a piece from a pneumatic hose. This also gives added protection to the workpiece.

The rotation limiter and the threaded stop that serve both as stroke adjuster and sensor are available. The air ports are located on the side and to the rear at the rotor. The rear ports are closed on delivery.

The 3-jaw gripper is best used for rings, discs, pieces with varying diameters and large tolerances, and for centering.

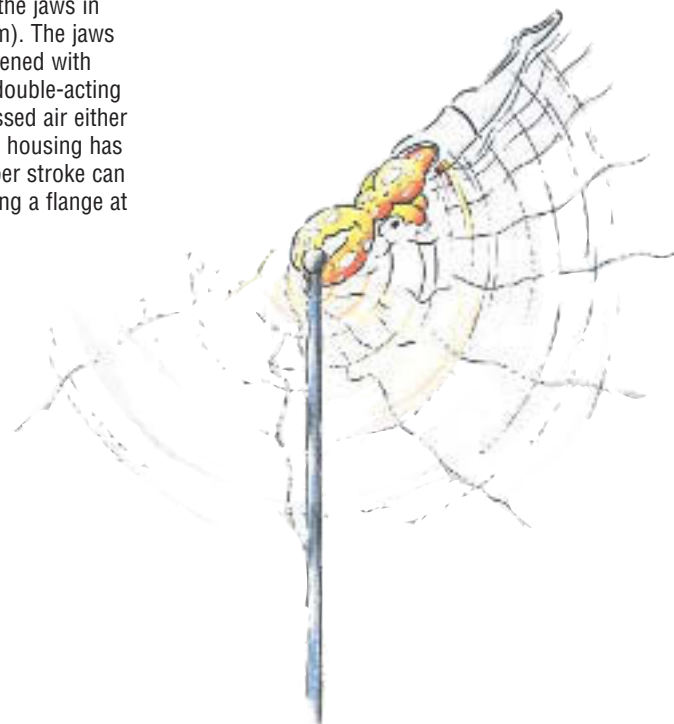
Note:

The stroke is almost as long as the width of the housing. The jaws "swing" as opposed to simple radial motion on conventional 3-jaw grippers.

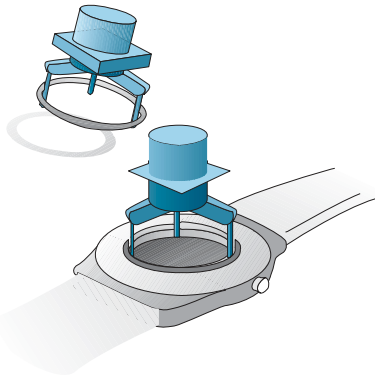
GD 29

T-slot 3-jaw gripper

A cam is turned with a pneumatic rotary actuator. This retracts or extends the jaws in the T-slots (see schematic diagram). The jaws are bolted on from above and fastened with centering sleeves. The gripper is double-acting and can be supplied with compressed air either from the side or from behind. The housing has several mounting holes. The gripper stroke can be adjusted and sensed by installing a flange at the back of the gripper.



Application Ideas



Rings, sealing disks, washers and even watch housings can be gripped from the outside or inside.



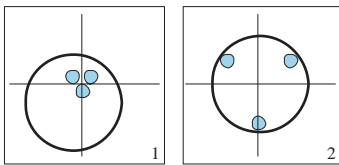
Triangular



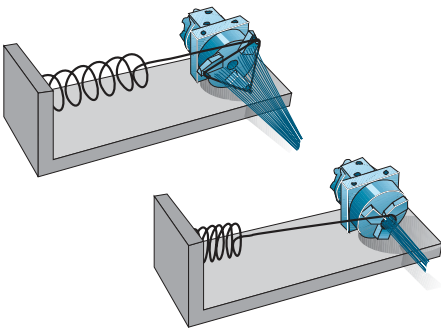
hexagonal



and round parts are no problem.



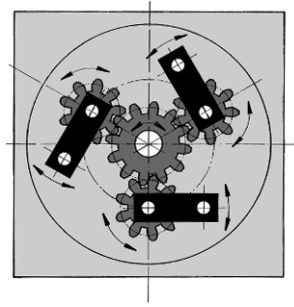
3-jaw grippers as piece centering: an inaccurately positioned cylindrical work piece is centered by opening the jaws..



Application from Mr. Hermann:
GD10: A steel wire tensioned with a spring can be used to grip and transport loose cables, ropes, fibers, etc.

Schematic...

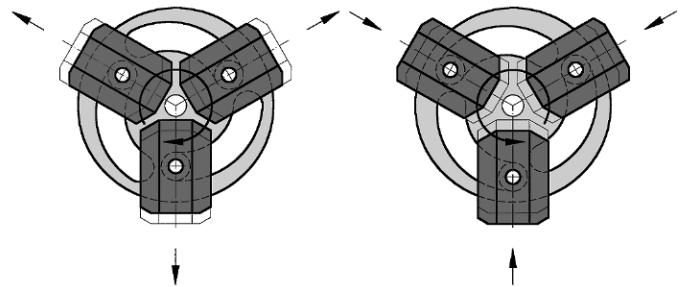
On every product page, you will find the following schematic which helps describe the max allowable forces and movements for that particular model.



Operation for GD1 -GD50

3-jaw gripper:

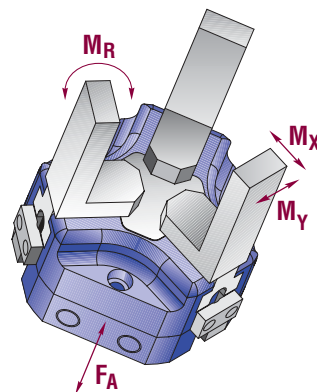
A double-acting rotary cylinder turns the center gear, thus moving the three jaws inward or outward via the planetary gear.



Operation for GD29

GD29 T-slot 3-jaw gripper:

A double-acting rotary cylinder turns a cam, which moves the t-slot jaws inward or outward.



Three-point gripper with long stroke

GD1/GD10/GD50



things worth knowing

Advantages and uses

- ... long stroke with compact design ...
- ... very reliable and long service life ...



... ideal for pieces with varying diameter! ...

- ▶ centrally opening and closing
 - ▶ any desired installation position
 - ▶ position sensing possible through inductive proximity switch

Characteristics

Function

Drive:	pneumatic rotary vane cylinders
Power transfer:	planetary gear
Guide:	round guide

Material

Housing:	hard-anodized aluminum
Moving parts:	steel

Maintenance

Recommended at:	1.5 million cycles
Actuation:	filtered high-pressure air (10µm), 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)
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

Accessories

Accessory recommendation:

▶ Stop levers	Page 372
▶ Rotation limiter & stop-stroke	Page 374
▶ Inductive proximity switch	Page 428
▶ 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

GD1

GD10

GD50



Sommer-automatic

Grippers

Separators

Swivel units

Rotating jaws

Axial compensators

Tool changers

Linear cylinders

Shock absorbers

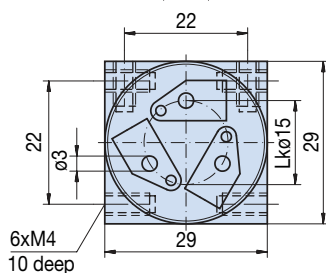
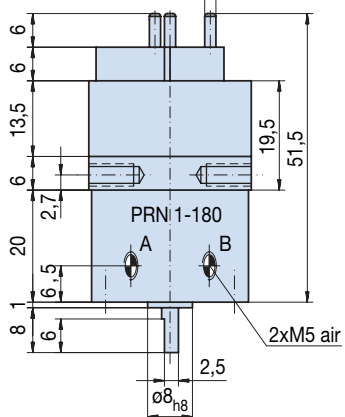
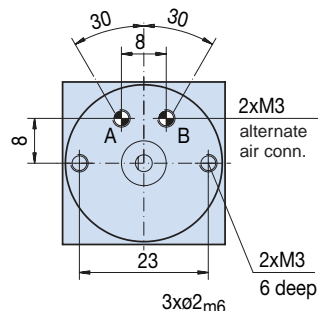
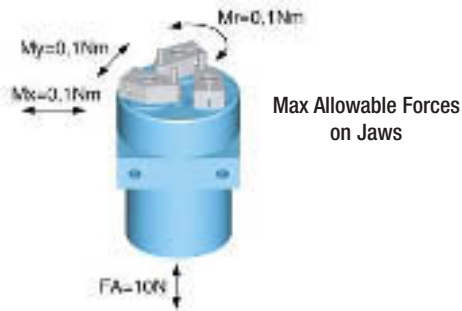
Rotary cylinders

Air vane motors

Vacuum components

Accessories

Quick finder



Three-point gripper with long stroke

Advantages, benefits, comparisons and tips! Stacks of information all about this product are on page 135.

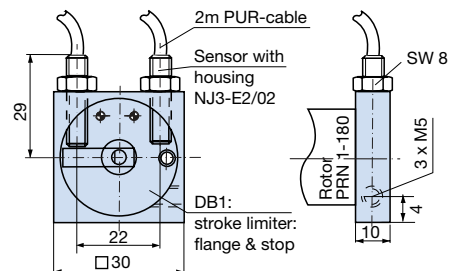
Order no.:	GD1			
Drive:	pneum.			
Stroke per jaw [°]:	130			
Grip diameter in closing, min./max. [mm]:	3 - 22			
Grip diameter in opening, min./max. [mm]:	8 - 25			
Gripping torque in closing a. Öffnen [Nm]:	0,12			
Self-locking via:	DSV1/8			
Closing time/opening time [s]:	0,3			
Repeatability ± [mm]:	0,1			
Min./max. operating pressure [bar]:	3/8			
Air volume per cycle [cm³]:	6			
Min./max. operating temperature. [°C]:	5/60			
Weight [kg]:	0,08			

All data measured at 6 bar.

See Page 135 for Accessory list.

Position inquiry:

- Order no.: DB1
Rotation limitation with stop lever
- Order no.: NJ3-E2/02
Stop with integrated inductive proximity switch



Parallel Gripper	Three-jaw gripper	Angle gripper	Internal-hole gripper	Other grippers	Electric Gripper
GD1	GD10	GD50			



Three-point gripper with long stroke

Advantages, benefits, comparisons and tips! Stacks of information all about this product are on page 135.



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

Order no.:				
GD10				
Drive:				
pneum.				
Stroke per jaw [°]:				
130				
Grip diameter in closing, min./max. [mm]:				
5 - 45				
Grip diameter in opening, min./max. [mm]:				
11 - 50				
Gripping torque in closing a. Öffnen [Nm]:				
1				
Self-locking via:				
DSV1/8				
Closing time/opening time [s]:				
0,3				
Repeatability ± [mm]:				
0,1				
Min./max. operating pressure [bar]:				
3/8				
Air volume per cycle [cm³]:				
17				
Min./max. operating temperature. [°C]:				
5/60				
Weight [kg]:				
0,365				



All data measured at 6 bar.

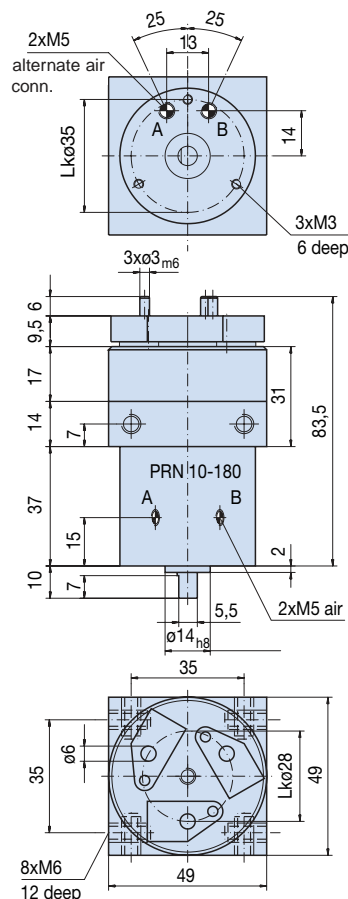
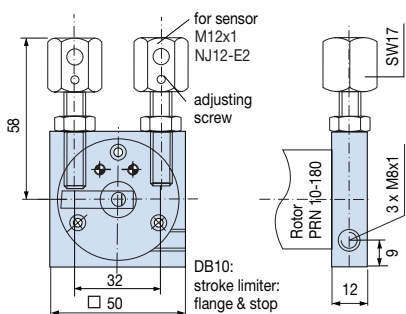
See Page 135 for Accessory list.

Position inquiry:

Order no.: DB10
Rotation limitation with stop lever

Order no.: AI-M8x1-38
Stop-stroke adjusting screw

Order no.: NJ12-E2
Proximity switch



Parallel Gripper

Three-jaw gripper

Angle gripper

Internal-hole gripper

Other grippers

Electric Gripper

GD1

GD10

GD50



Sommer-automatie

Grippers

Separators

Swivel units

Rotating jaws

Axial compensators

Tool changers

Linear cylinders

Shock absorbers

Rotary cylinders

Air vane motors

Vacuum components

Accessories

Quick finder



Max Allowable Forces on Jaws

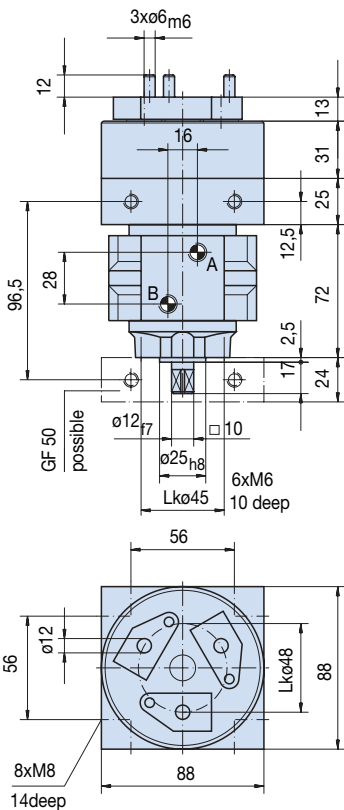
Three-point gripper with long stroke

Advantages, benefits, comparisons and tips! Stacks of information all about this product are on page 135.

Order no.:	GD50			
Drive:	pneum.			
Stroke per jaw [°]:	120			
Gripping diameter for outer gripping min./max. [mm]:	9 - 62			
Gripping diameter for inner gripping min./max. [mm]:	22 - 76			
Gripping torque in closing a. opening [Nm]:	9			
Self-locking via:	DSV1/8			
Closing time/opening time [s]:	0,3			
Repeatability ± [°]:	0,1			
Min./max. operating pressure [bar]:	3/8			
Air volume per cycle [cm³]:	100			
Min./max. operating temperature. [°C]:	5/60			
Weight [kg]:	1,95			

All data measured at 6 bar.

See Page 135 for Accessory list.



Position sensing:

- Order no.: **GF50**
Inquiry with interim position
- Alternate:
- Order no.: **DB50**
Flange with stop lever
- Order no.: **AI-M8x1-38**
Stop-stroke adjusting screw
- Order no.: **NJ12-E2**
Proximity switch

