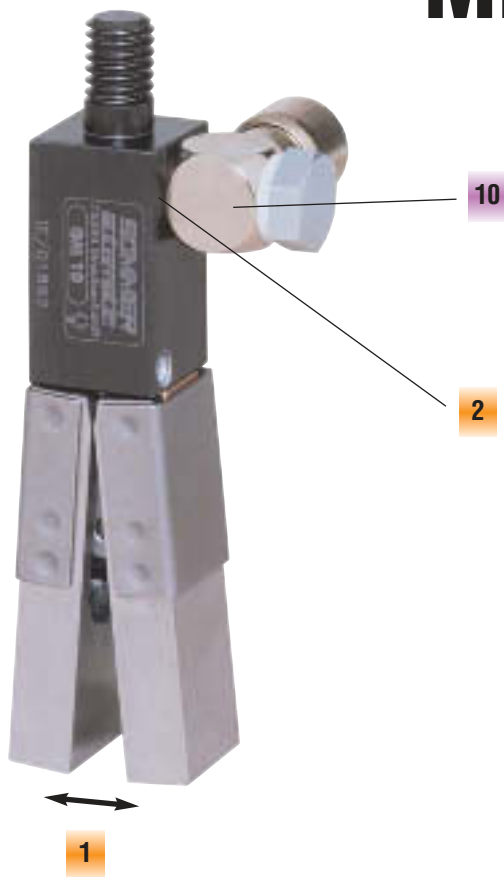


# Mini-finger gripper



## Features

- 1 Stroke
- 2 Air connection at the side

## Accessories

- 10 Compressed air fitting

## Operation

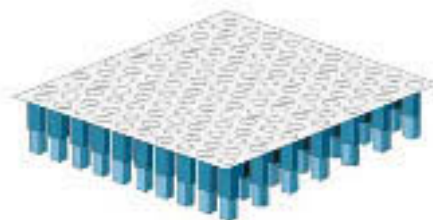
A double-acting pneumatic cylinder drives an internal linkage. The jaws move concentrically and are connected to the center section by links (pivoting arms).

## So simple it's scary

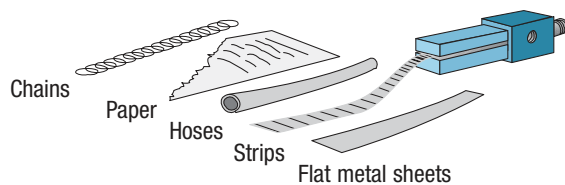
Due to its slim design, it doesn't need much space. By changing the pin linkage configuration, the gripper can be changed from air-closing and spring-opening to air-opening and spring-closing. The jaws are made of steel and the face can be machined up to 10 mm (12 mm in case of the GM16). Depending on the form of the work piece, the jaw can be turned, milled or drilled as shown in the examples. On the GM10 and GM16, the air connections are on the front and side. The GM16 is also available in a double-acting version (without spring) for fast cycles - see GM16D. On this model, the two air connections are located on the front. Sensing is not possible due to the small size of these grippers; it must be done by means of valves. A special gripper, the double-acting GM22D is available as a larger and more powerful size without a spring (closing force = 55 Ncm, opening force = 30 Ncm). A drawing is available upon request.

By the way:

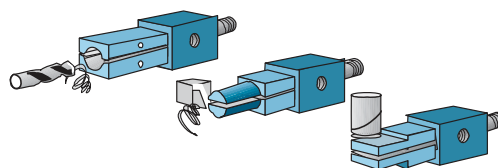
The GM10 is supplied with a spacer with which the gripper fingers can be set exactly parallel for machining. On the GM16, this function is assumed by the grub screw in the right-hand jaw.



The slim design of these grippers allows several of them to be installed side by side.



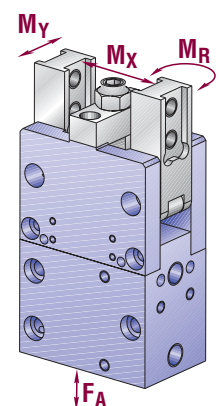
can be gripped without any problems.



The jaws of the grippers can be machined in many different ways, for example, drilling, turning or milling.

## Schematic...

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



# Mini-finger gripper

## GM10/GM16/GM22



### things worth knowing

#### Advantages and uses

... high-grip force with the smallest size ... gripper jaws configured as blank ...  
 ... link adjustable for high power during closing or opening ...



- ▶ centrally opening and closing
  - ▶ any desired installation position
  - ▶ high reliability and long service life

... extremely slender design takes little space!

- 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

#### Characteristics

##### Function

Drive GM10, GM16: single-acting cylinder with spring return  
 Drive GM16D, GM22D: double-acting pneumatic cylinder with integrated spring as grip force safety device  
 Power transfer: toggle type linkage

##### Material

Housing: hard-anodized aluminum  
 Functional parts: steel

##### Maintenance

Recommended at: 1.5 million cycles  
 Actuation: filtered high-pressure air (10 µm), dry or oiled maintenance of the mechanics:  
 Maintenance of the mechanics – see owners' manual –

### Basic explanations

#### Terms and illustrations

Grip force safety device: required during pressure loss for maintaining position of workpiece  
 – pneumatic/hydraulic: through pressure retention (one-way valve required DSV1/8)  
 – 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

Joints convertible for either spring-opening or spring-closing.

### Accessories

#### Accessory recommendations:

- ▶ 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

GM10

GM16

GM22



Sommer-automatic

Grippers

Separators

Swivel units

Rotating jaws

Axial compensators

Tool changers

Linear cylinders

Shock absorbers

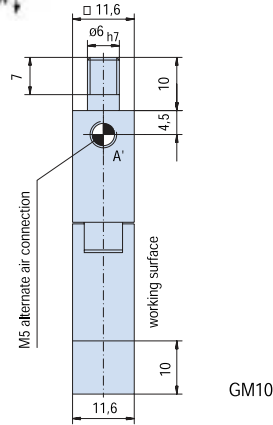
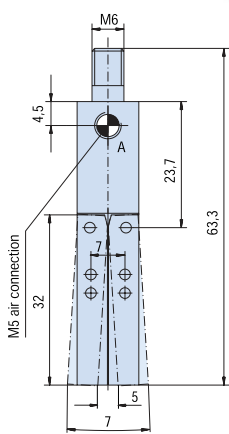
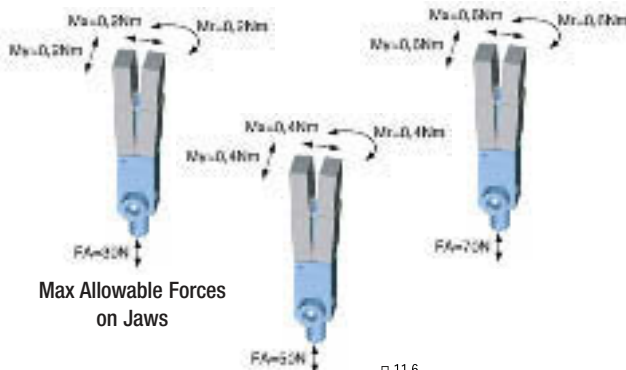
Rotary cylinders

Air vane motors

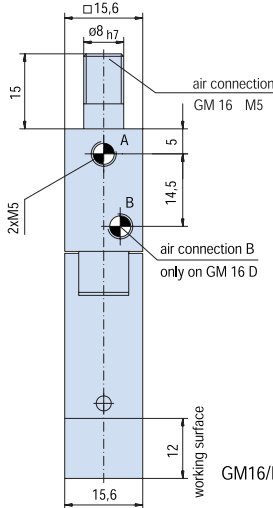
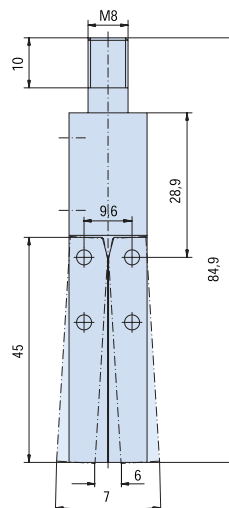
Vacuum components

Accessories

Quick finder



GM10

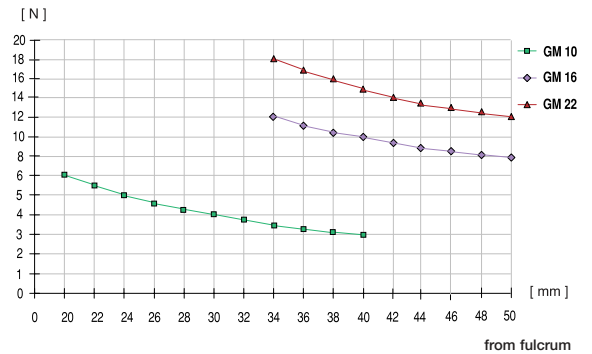


GM16/D

## Mini-finger gripper

Advantages, benefits, comparisons and tips! Stacks of information all about this product are on page 161.

Gripping force as a function of jaw length



Order no.:

GM10	GM16	GM16 D	GM22 D
<b>Drive:</b>			
pneum.	pneum.	pneum.	pneum.
<b>Stroke per jaw [°]:</b>			
3,5	3,5	3,5	3,5
<b>Gripping torque in closing [Nm]:</b>			
0,12	0,2	0,4	0,55
<b>Gripping torque in opening [Nm]:</b>			
0,06	0,08	0,2	0,3
<b>Self-locking via:</b>			
DSV1/8	DSV1/8	DSV1/8	DSV1/8
<b>Closing time/opening time [s]:</b>			
0,2	0,2	0,2	0,2
<b>Repeatability ± [mm]:</b>			
0,1	0,1	0,1	0,1
<b>Min./max. operating pressure [bar]:</b>			
5/8	5/8	5/8	5/8
<b>Air volume per cycle [cm³]:</b>			
2	5	5	8
<b>Min./max. operating temperature [°C]:</b>			
5/80	5/80	5/80	5/80
<b>Temp. resistant version up to 150° C [add to part number]:</b>			
T1	T1	T1	T1
<b>Weight [kg]:</b>			
0,041	0,093	0,095	0,198

All data measured at 6 bar.

See Page 161 for Accessory list.

GM22 drawing available on request