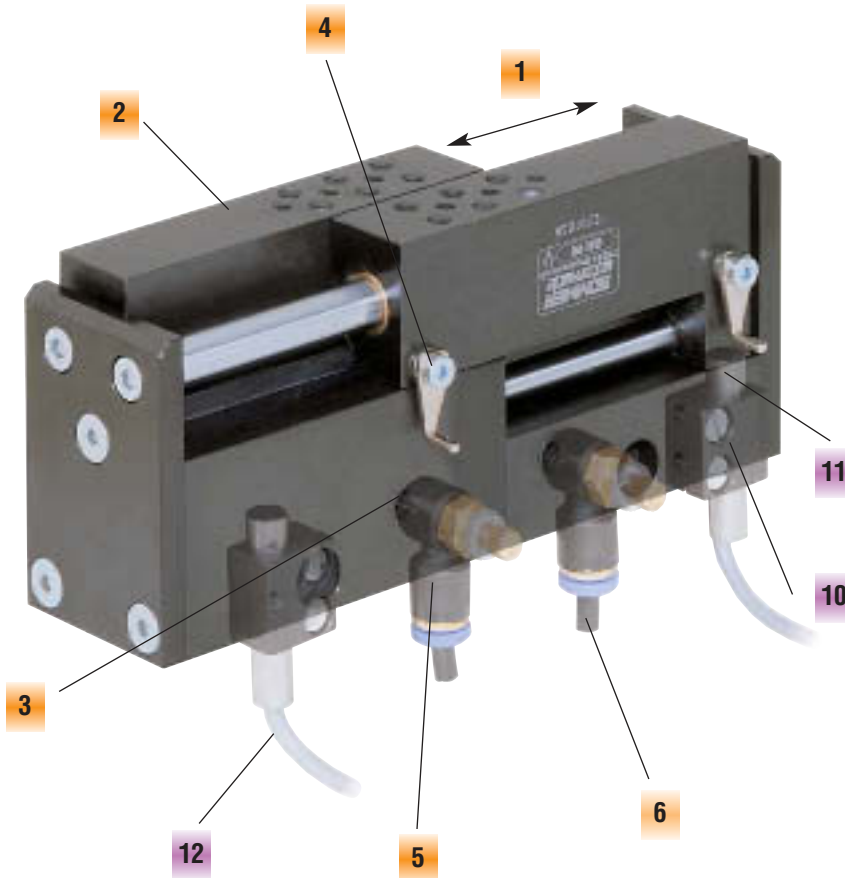


# Long-stroke gripper

## with round guide



### Features

- 1 Stroke
- 2 Jaws
- 3 Hole for cheese head screw
- 4 Trip dog
- 5 Flow control valve (supplied)
- 6 Air connection at the front (alternatively at the bottom)

### Accessories

- 10 Sensor mount
- 11 Proximity switch
- 12 PU hose

## Our original long stroke series...

Two cylinders attached to the jaws are synchronized by two racks and one pinion. The rack also serves as a guide. Types GH100 through GH200 are also equipped with a guide shaft to prevent rotation and for mounting trip dogs on the jaws.

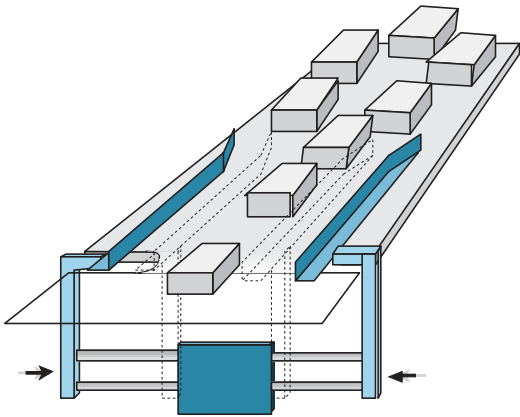
The M3 threaded holes in the housing are provided for attaching sensor mounts for proximity switches, which can be used for sensing the opened and closed positions. These can range from  $\varnothing$  6.5 to 12 mm, depending upon the size of the gripper - see accessories section.

The air connections for the double-acting cylinders are combined so that only two air connections are necessary. These are located at the front on the GH100 through GH200, and on the GH90 air connections are also provided at the bottom.

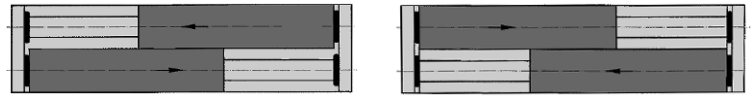
On this gripper model, the jaws run past each other and operate within the outline of the housing. This saves valuable space. Suitable rotating jaws, "SB32", are available for the GH90. With these, it is possible to rotate the workpiece up to 90° or 180° during gripping. For more information see rotating jaws.



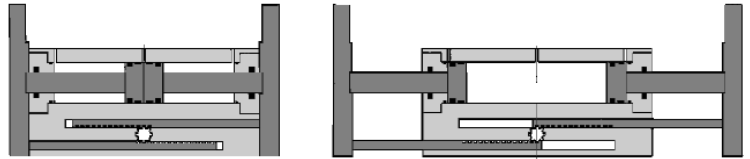
## Application Ideas



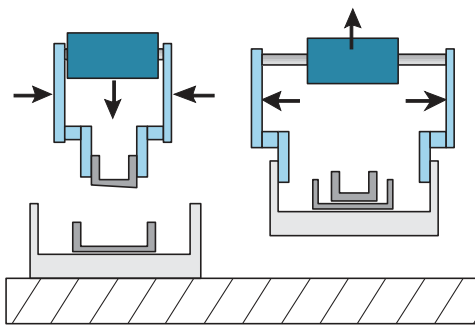
Parts which may have been laid at random on a conveyor belt can be pushed by the gripper to the middle to a properly centered position.



GH90



GH100, GH150, GH200



Because of its long stroke and compact design, this gripper can handle a wide range of part shapes and sizes without having to change jaws.

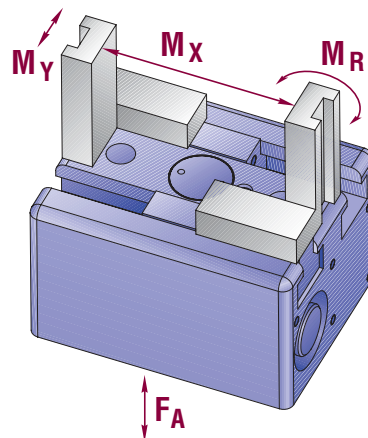
## Operation

Two double-acting pneumatic cylinders close and open the jaws in parallel. The jaws are synchronized by a pinion and two racks attached to the cylinders. An additional two guide shafts secure against rotation and give more guiding stability.



### Schematic...

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



## Long-stroke gripper with round guide GH90-GH200



things worth knowing

### Advantages and uses

... round guide ... long stroke ...



Highlight

... compact construction  
saves valuable space! ...

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

### Characteristics

#### Function

Drive: two double-acting pneumatic cylinders  
 Power transfer: through synchronized rack-and-pinion drive  
 Guide: round guide

#### Material

Housing: hard-anodized aluminum  
 Functional parts: steel and nonferrous metal

#### 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

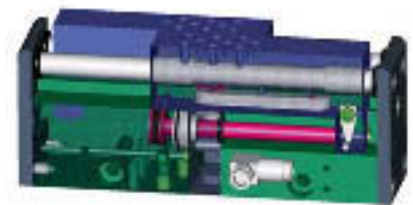
#### Terms and illustrations

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:

- ▶ Universal jaws Page 98
- ▶ Inductive proximity switch Page 428
- ▶ Bracket for inductive proximity switch Page 432
- ▶ 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

**GH90**

GH100

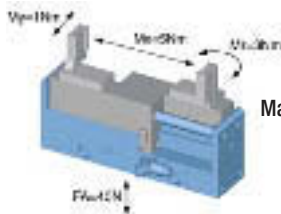
GH150

GH200

Universal jaw



- 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

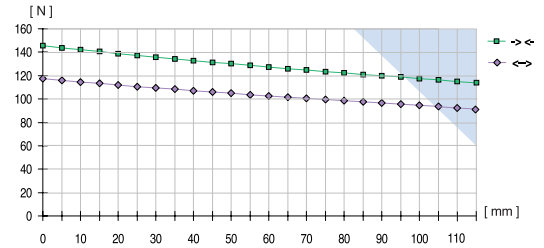


Max Allowable Forces on Jaws

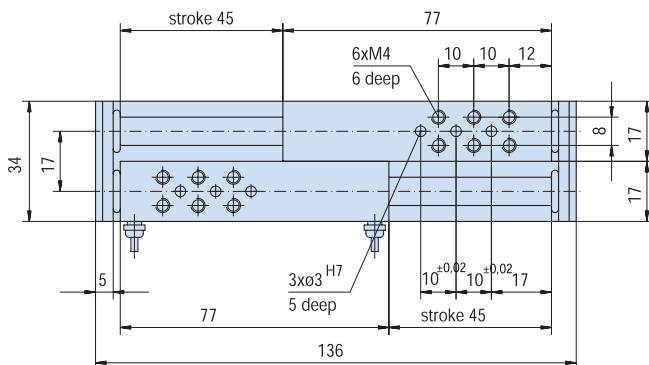
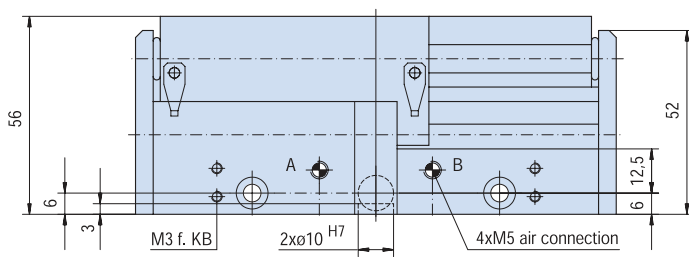
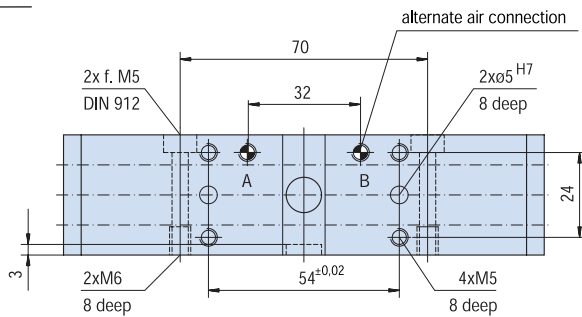
## Long-stroke gripper with round guide

Advantages, benefits, comparisons and tips! Stacks of information all about this product are on page 95.

### Gripping force as a function of jaw length



Colored area: increased wear and tear to be expected



Order no.:				
<b>GH90</b>				
Drive:				
pneum.				
Stroke per jaw [mm]:				
45				
Gripping force in closing [N]:				
115				
Gripping force in opening [N]:				
140				
Self-locking via:				
DSV1/8				
Closing time/opening time [s]:				
0,25				
Repeatability ± [mm]:				
0,1				
Min./max. operating pressure [bar]:				
4 / 10				
Air volume per cycle [cm <sup>3</sup> ]:				
22				
Min./max. operating temperature [°C]:				
5 / 80				
Temp. resistant version up to 150° C [add to part number]:				
T3				
Piston diameter [mm]:				
14				
Weight [kg]:				
0,7				

All data measured at 6 bar.

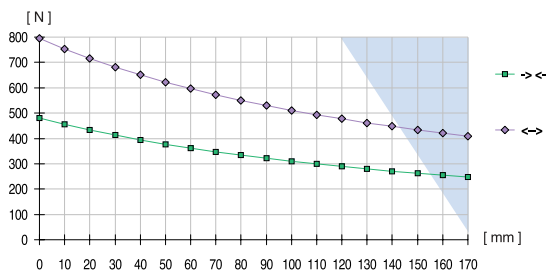
See Page 95 for Accessory list.

<b>Parallel gripper</b>	Three-jaw gripper	Angle gripper	Internal-hole gripper	Other grippers	Electric gripper
GH90	<b>GH100</b>	<b>GH150</b>	<b>GH200</b>	Universal jaw	

## Long-stroke gripper with round guide

Advantages, benefits, comparisons and tips! Stacks of information all about this product are on page 95.

Gripping force as a function of jaw length



Colored area: increased wear and tear to be expected



Sommer-automatik

Grippers

Separators

Swivel units

Rotating jaws

Axial compensators

Tool changers

Linear cylinders

Shock absorbers

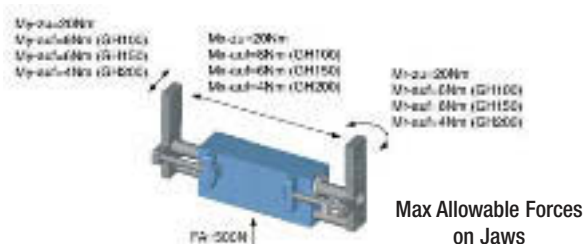
Rotary cylinders

Air vane motors

Vacuum components

Accessories

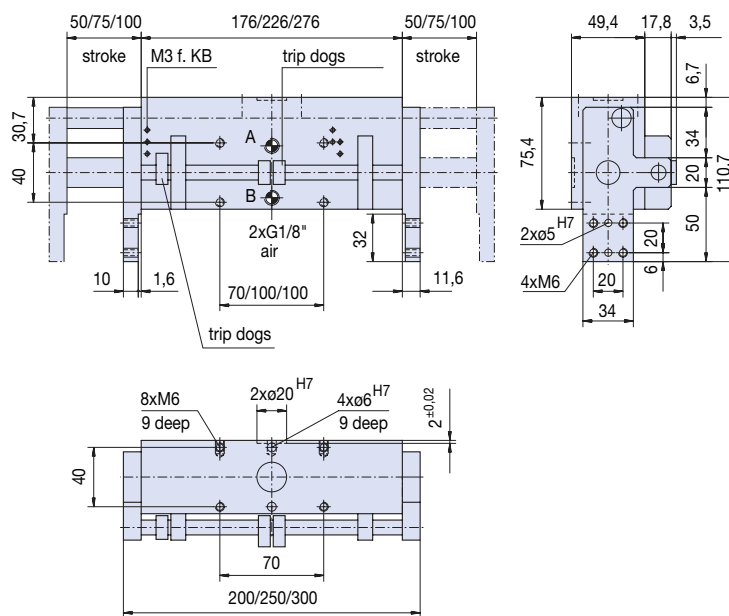
Quick finder



Order no.:			
<b>GH100</b>	<b>GH150</b>	<b>GH200</b>	
Drive:			
pneum.	pneum.	pneum.	
Stroke per jaw [mm]:			
50	75	100	
Gripping force in closing [N]:			
480	480	480	
Gripping force in opening [N]:			
800	800	800	
Self-locking via:			
DSV1/8	DSV1/8	DSV1/8	
Closing time/opening time [s]:			
0,3	0,35	0,4	
Repeatability ± [mm]:			
0,5	0,5	0,5	
Min./max. operating pressure [bar]:			
4 / 7	4 / 7	4 / 7	
Air volume per cycle [cm³]:			
125	187	250	
Min./max. operating temperature [°C]:			
5 / 80	5 / 80	5 / 80	
Temp. resistant version up to 150° C [add to part number]:			
T3	T3	T3	
Piston diameter [mm]:			
32	32	32	
Weight [kg]:			
2,7	3,0	3,9	

All data measured at 6 bar.

See Page 95 for Accessory list.



**Parallel gripper**

Three-nov gripper

Angle gripper

Internal-hole gripper

Other grippers

Electric gripper

GH90

GH100

GH150

GH200

**Universal jaw**



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

Save time!  
Just give our universal jaws  
a quick machining.  
That's all.



## Universal jaw

for long-stroke gripper with round guide

### Steel

Universal jaw version	Material	Addition to order
	Steel (16MnCr5)	-

### Or individual solutions?

Our universal jaws fit almost always and everywhere. If you need more individual solutions, give us a call

### Order no.: UB90

for gripper type GH90

