

Three-jaw long-stroke gripper with T-slot guide

GD530/GD540/GD560

things worth knowing

Advantages and uses

... long stroke combined with robust T-slot guide ...
 ... optimal guide relationship allows the use of long gripper jaws ...

- ▶ high reliability and long service life
 - ▶ centrally opening and closing
 - ▶ high precision
 - ▶ any desired installation position
 - ▶ position sensing possible through inductive proximity switch



... ultraflat design! ...

Characteristics

Long-stroke ... small package

Function

Drive: three double-acting cylinders
 Power transfer: via piston driving cam disk
 Guide: T-slot guide for high momenta absorption from all sides

Material

Housing: hard-anodized aluminum
 Moving parts: nitrided steel

Maintenance

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

When you need a larger stroke and only have a small space to put it in, these grippers will save the day!

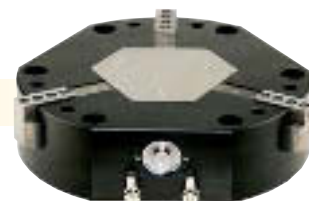
The GD540 and GD560 are only 100 mm thick but offer up to 60 mm per jaw of stroke and 2480 N of gripping force (with pneumatic versions) and 12,400 N in hydraulic versions.

The T-slot guides help to make it rigid against load deflections giving you high torque and load capacity.

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 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



Models

| GD5... | Drive | Stroke | Power | Internal gripping | External gripping |
|--------|-----------|--------|--------|-------------------|-------------------|
| ...N | pneumatic | large | normal | ● | ● |
| ...NH | hydraulic | large | high | ● | ● |

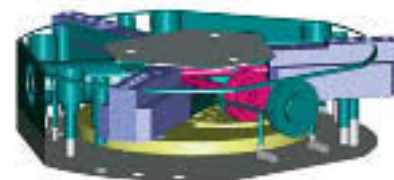
Accessories

Included with purchase:

- ▶ Centering sleeves
- ▶ Bracket for inductive proximity switch

Accessory recommendation:

- ▶ 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

GD530

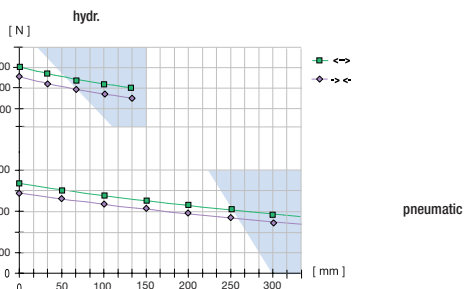
GD540

GD560

Three-jaw long-stroke gripper with T-slot guide

Advantages, benefits, comparisons and tips! Stacks of information all about this product are on page 124.

Gripping force as a function of jaw length



Colored area: increased wear and tear to be expected - possibly reduce pressure

| | |
|--|-------|
| Order no.: | |
| GD530 | GD530 |
| - | H |
| Drive: | |
| pneum. | hydr. |
| Stroke per jaw [mm]: | |
| 30 | 30 |
| Gripping force in closing and opening [N]: | |
| 1300 | 6900 |
| Self-locking via: | |
| DSV 1/8 | - |
| Closing time/opening time [s]: | |
| 0,3 | 0,5 |
| Repeatability ± [mm]: | |
| 0,05 | 0,05 |
| Min./max. operating pressure [bar]: | |
| 3/6 | 10/40 |
| Air volume per cycle [cm³]: | |
| 170 | - |
| Oil volume per cycle [cm³]: | |
| - | 170 |
| 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]: | |
| 32 | 32 |
| Weight [kg]: | |
| 8,00 | 8,00 |

All data measured at 6 bar (hydr. 30 bar).

See Page 124 for Accessory list.



Sommer-automatic

Grippers

Separators

Swivel units

Rotating jaws

Axial compensators

Tool changers

Linear cylinders

Shock absorbers

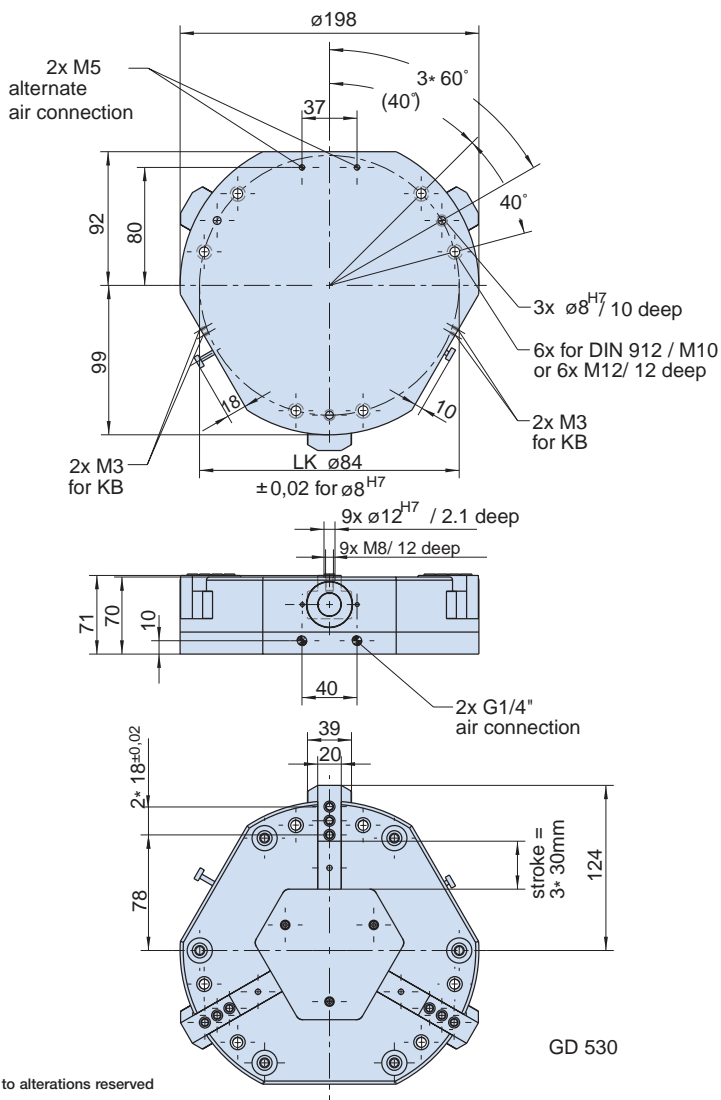
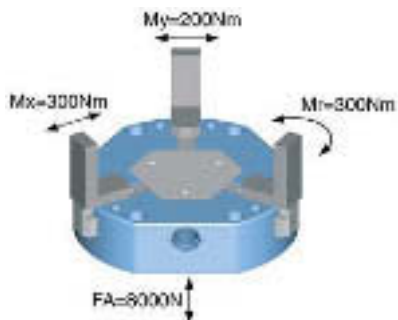
Rotary cylinders

Air vane motors

Vacuum components

Accessories

Quick finder



GD 530

Right to alterations reserved

Parallel Gripper

Three-jaw gripper

Angle gripper

Internal-hole gripper

Other grippers

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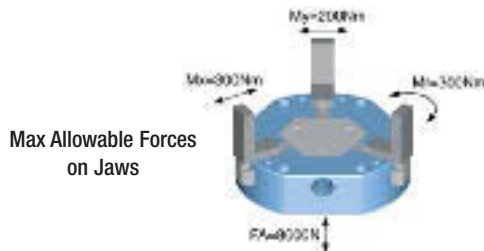
Rotary cylinders

Air vane motors

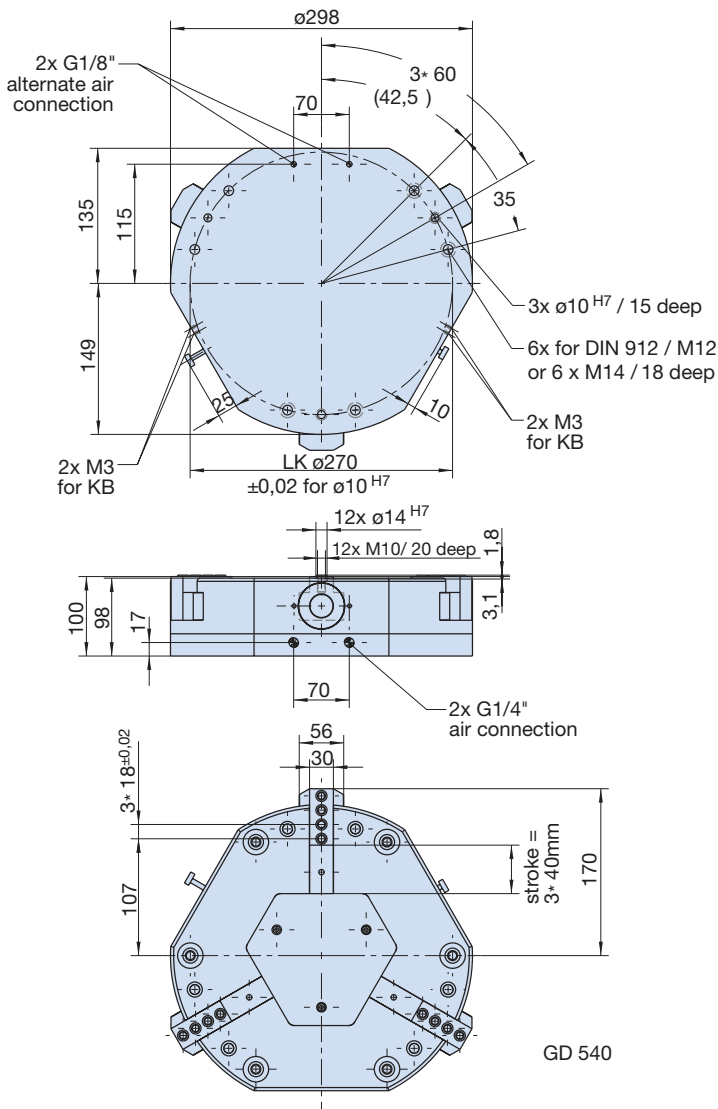
Vacuum components

Accessories

Quick finder



Max Allowable Forces on Jaws

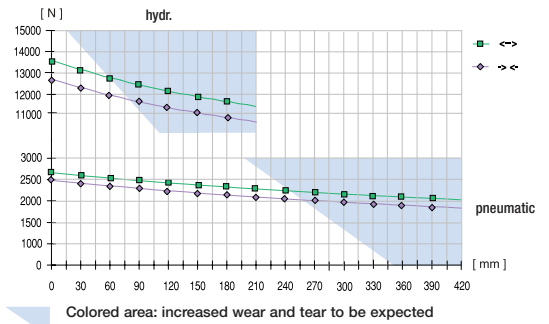


GD 540

Three-jaw long-stroke gripper with T-slot guide

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Gripping force as a function of jaw length



Order no.:

GD540

GD540

Drive:

pneum.

hydr.

Stroke per jaw [mm]:

40

40

Gripping force in closing and opening [N]:

2480

12400

Self-locking via:

DSV 1/8

-

Closing time/opening time [s]:

0,35

0,6

Repeatability \pm [mm]:

0,05

0,05

Min./max. operating pressure [bar]:

3/6

10/40

Air volume per cycle [cm³]:

440

-

Oil volume per cycle [cm³]:

-

440

Min./max. operating temperature [°C]:

5-80

5-80

Temp. resistant version up to 150°C [add to part number]

T6

T6

Piston diameter [mm]:

45

45

Weight [kg]:

19,0

19,0

All data measured at 6 bar (hydr. 30 bar).

See Page 124 for Accessory list.

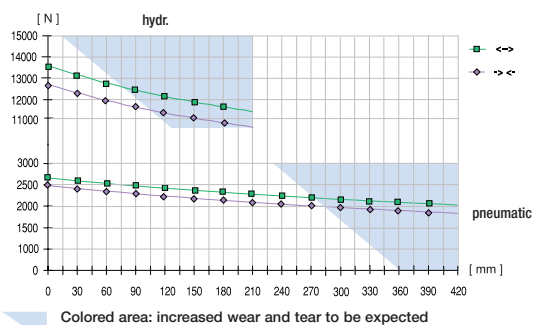
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|------------------|--------------------------|---------------|-----------------------|----------------|------------------|
| Parallel Gripper | Three-jaw gripper | Angle gripper | Internal-hole gripper | Other grippers | Electric Gripper |
| GD530 | GD540 | GD560 | | | |



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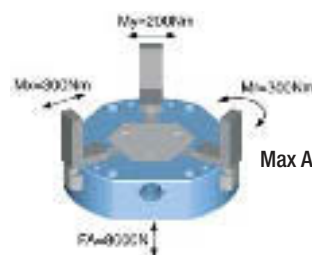
Gripping force as a function of jaw length



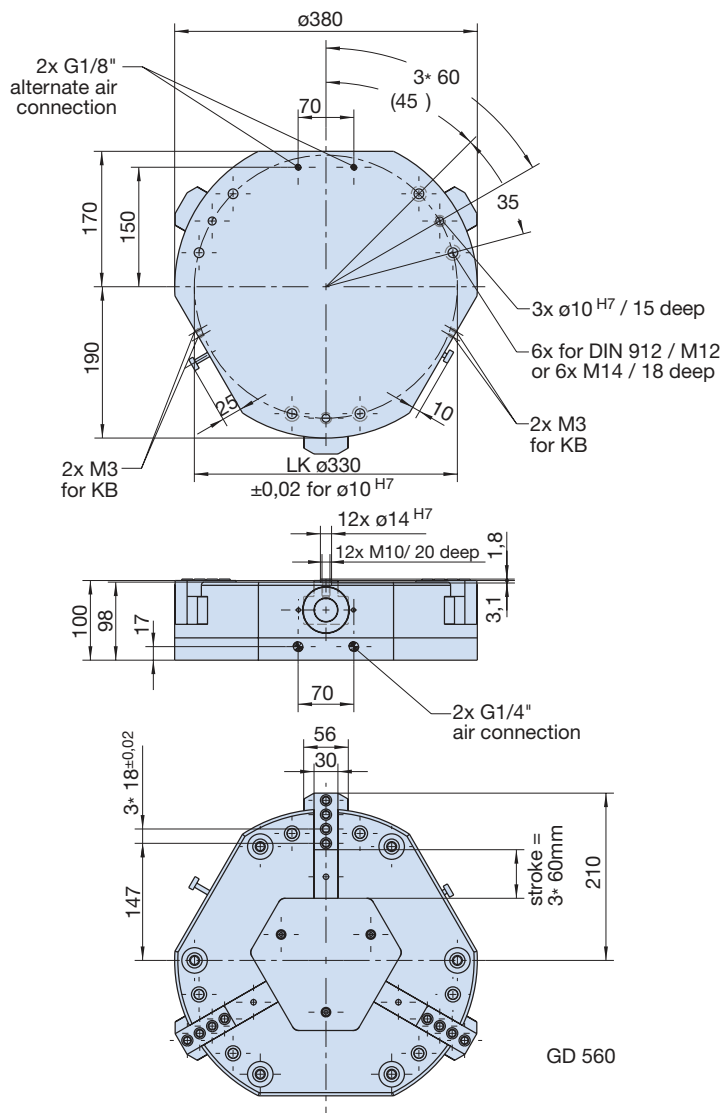
| | |
|--|-------|
| Order no.: | |
| GD560 | GD560 |
| - | H |
| Drive: | |
| pneum. | hydr. |
| Stroke per jaw [mm]: | |
| 60 | 60 |
| Gripping force in closing and opening [N]: | |
| 2480 | 12400 |
| Self-locking via: | |
| DSV 1/8 | - |
| Closing time/opening time [s]: | |
| 0,45 | 0,8 |
| Repeatability ± [mm]: | |
| 0,05 | 0,05 |
| Min./max. operating pressure [bar]: | |
| 3/6 | 10/40 |
| Air volume per cycle [cm³]: | |
| 650 | - |
| Oil volume per cycle [cm³]: | |
| - | 650 |
| Min./max. operating temperature [°C]: | |
| 5-80 | 5-80 |
| Temp. resistant version up to 150°C [add to part number] | |
| T6 | T6 |
| Piston diameter [mm]: | |
| 45 | 45 |
| Weight [kg]: | |
| 29,0 | 29,0 |

All data measured at 6 bar (hydr. 30 bar).

See Page 124 for Accessory list.

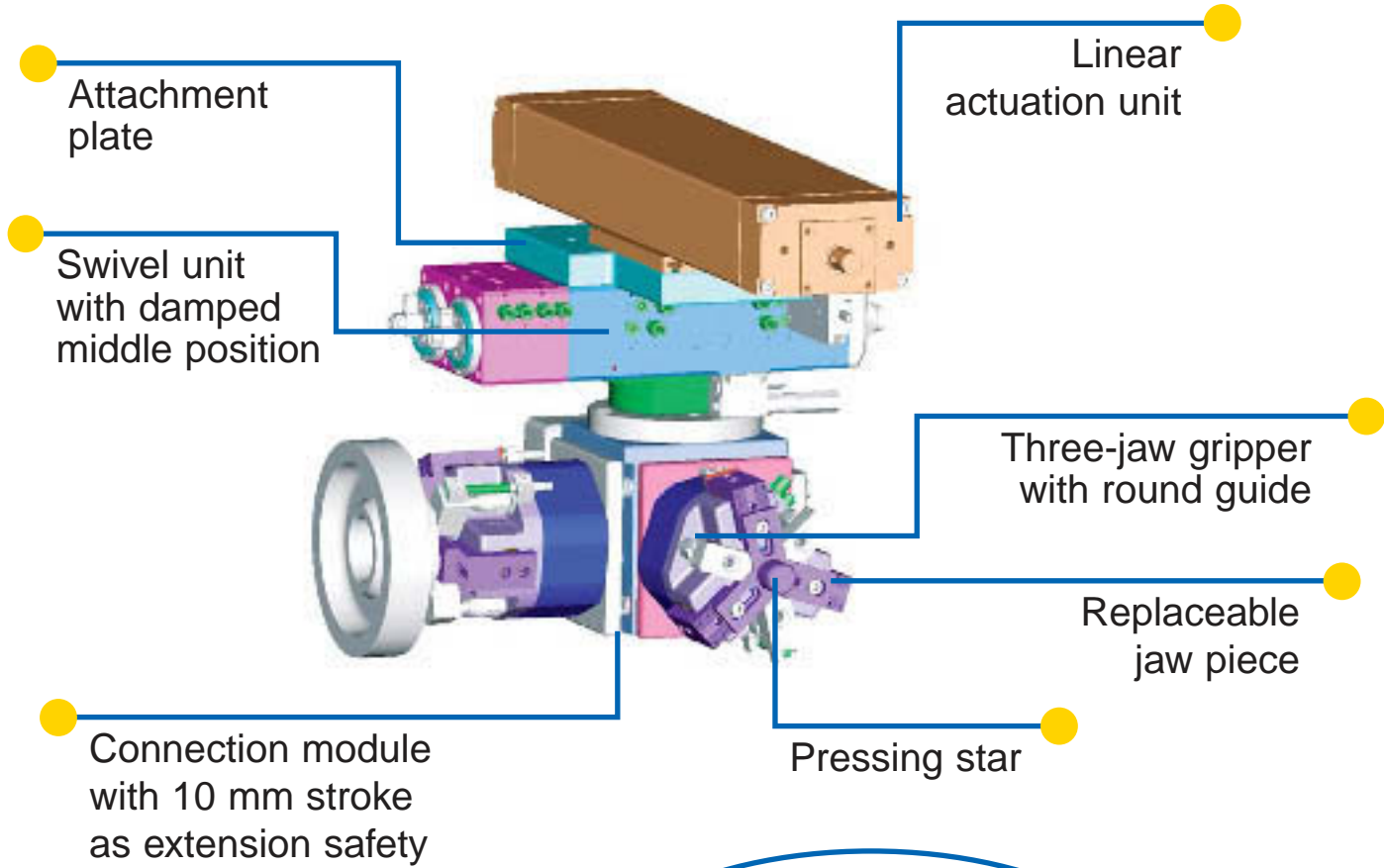


| |
|--------------------|
| Sommer-automatic |
| Grippers |
| Separators |
| Swivel units |
| Rotating jaws |
| Axial compensators |
| Tool changers |
| Linear cylinders |
| Shock absorbers |
| Rotary cylinders |
| Air vane motors |
| Vacuum components |
| Accessories |
| Quick finder |



GD 560

How individual pieces become components



It's easy with Sommer-automatic. You give our engineers your individual requirements and we give you a solution with the components in the catalog. (You see here one of many practical solutions.)

