

Parallel gripper with T-slot guide

Features

- 1 Stroke
- 2 Hole for socket head screw
- 3 Lubricating nipple for mechanism
- 4 Removable centering sleeves
- 5 Spring-loaded trip dogs
- 6 Sensor mount
- 7 Air connection at the front (alternatively on the back and bottom)

Accessories

- 10 Universal Jaws
- 11 Proximity Switch
- 12 Cable for proximity switch
- 13 Pneumatic fittings
- 14 Pneumatic hose

Explanations

The following abbreviations mean;

Opening / closing by spring:

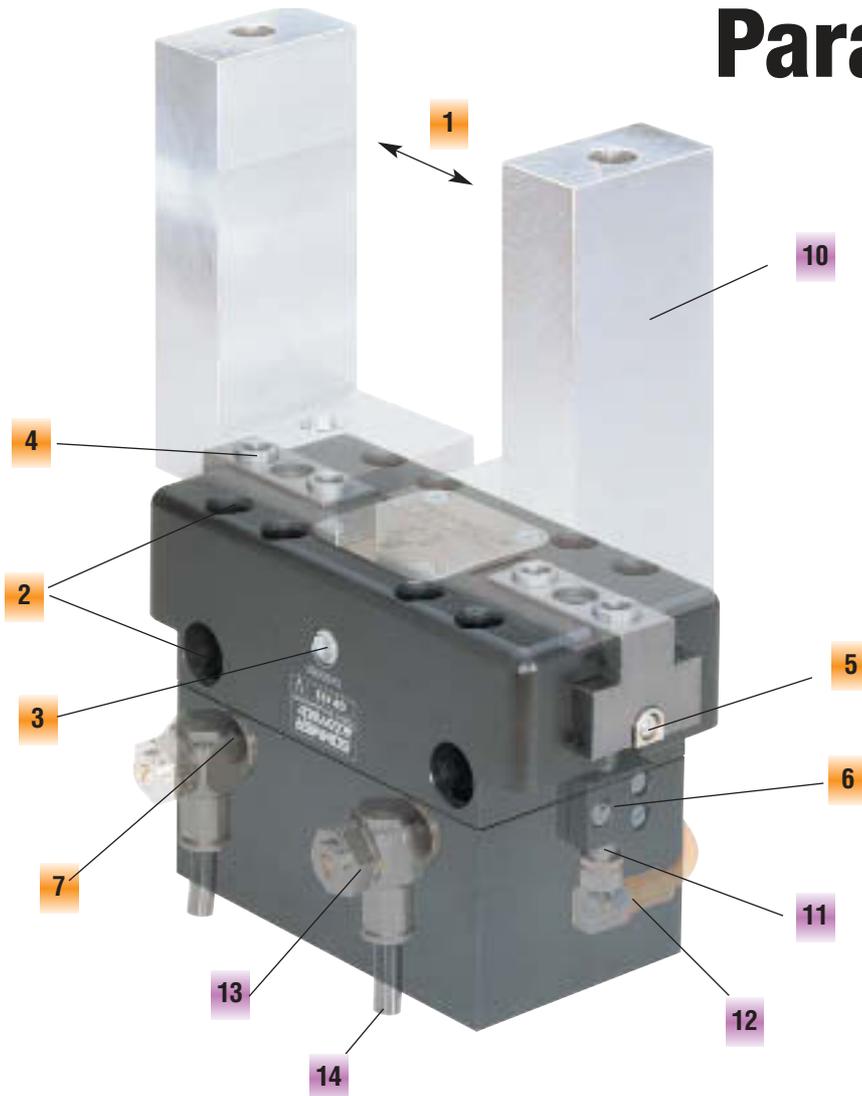
- NO** = Standard design, self-locking, spring opening (long stroke, standard force)
- NC** = Standard design, self-locking, spring closing (long stroke, standard force)
- SC** = Heavy-duty design, self-locking, spring closing (short stroke, large force)
- SO** = Heavy-duty design, self-locking, spring opening (short stroke, large force)

Without spring:

- N** = Standard design, (long stroke, standard force)
- S** = Heavy-duty design, (short stroke, large force)

Hydraulic Version:

- NH** = Standard design, hydraulic up to 40 bar (long stroke, large force)



The final tests ...

...have long been aced, and in several circles, declared the winner: The T-slot guide, good old traditional engineering. Rugged and dependable no matter which way you look at it. All of which are made from hard-coated aluminum and have hardened and ground T-slot steel jaws.

We offer the sizes GP406 to GP430 in up to 7 different models - with springs (for self-locking, opening and closing) and without. Except for the three smallest sizes, the standard version (without spring, large stroke, small force) is available as a hydraulic model with 30 bar operating pressure. All grippers are also available temperature-resistant up to 150°C.

All grippers are maintenance-free up to 1.5 million cycles, after which they can be regreased at the lubricating nipple between the jaws. If oil-free air is used, we recommend lubricating the cylinder with Renolit. Several attachment holes allow for added mounting convenience.

The centering sleeves on the jaws ensure a precise mounting of the tooling fingers, which is important if they are changed often. In this case, we can also supply universal jaws made of steel

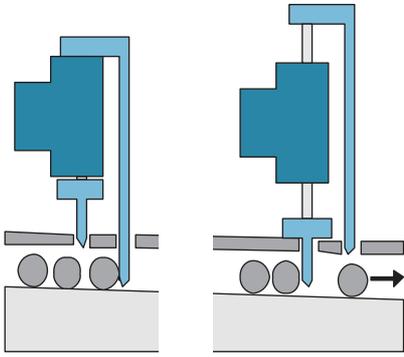
and aluminum. For more details, see accessories on page 17. The pneumatic ports for opening and closing are located on the front, back and bottom. At the bottom, the ports are closed with grub screws and can be used for tubeless connections.

For part-sensing, we have something very special, indeed: Under the jaws, there are spring-actuated trip dogs, which can be adjusted precisely and infinitely with a screw. The setting can be fixed with the grub screws located on the side of the jaws. Sensor mounts are located beneath the trip dogs, allowing optimum mounting of a proximity switch.

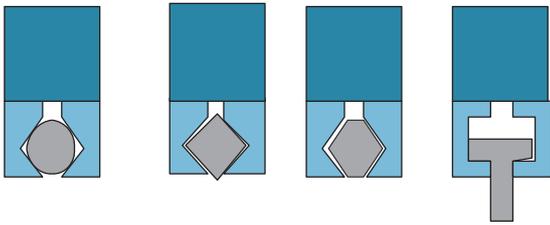
Note:

If the gripper is used as a single-acting device, the unused port must be vented or an air filter must be installed to prevent a vacuum in the piston chamber from hindering operation.

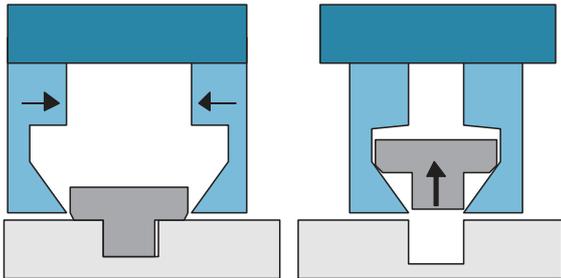
Application Ideas



Parallel grippers can be used for separating parts.
 A Gripper closing - all the balls are retained
 B Gripper opening - one ball is released, the others are retained.
 (Also see our separator).



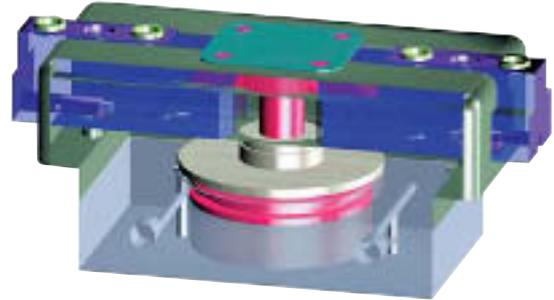
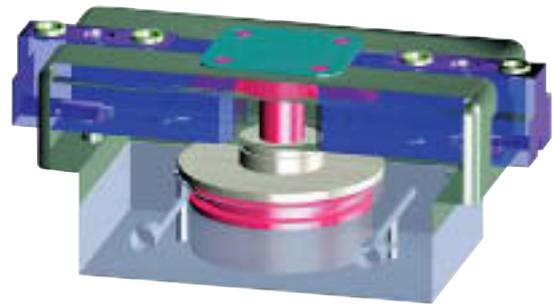
Different profiles may be gripped using prism-shaped jaws (larger holding force).



The 45° slope of the jaws allows the part to be lifted out of the hole when the gripper closes. This eliminates the need for a retraction mechanism even with the parallel grippers.

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

A double-acting pneumatic cylinder drives a slide (red). The guided T-slot jaws (blue) are moved linearly to open and closed positions by the slope on the slide. On the "S" version, the slopes are steeper. The translation allows more force with a shorter stroke. In the NC and SC models, a compression spring is installed at the top of the piston chamber, which can be used for self-locking and boosting power during closing or for single-acting operation. Conversely, the NO and SO models have a spring, which supports opening, installed at the bottom of the piston chamber.

